

Passive Restoration in the Alpine Zone: A Photomonitoring Baseline for the Mount Mansfield Natural Area



Matt Larson

2004 Field Season

Green Mountain Club



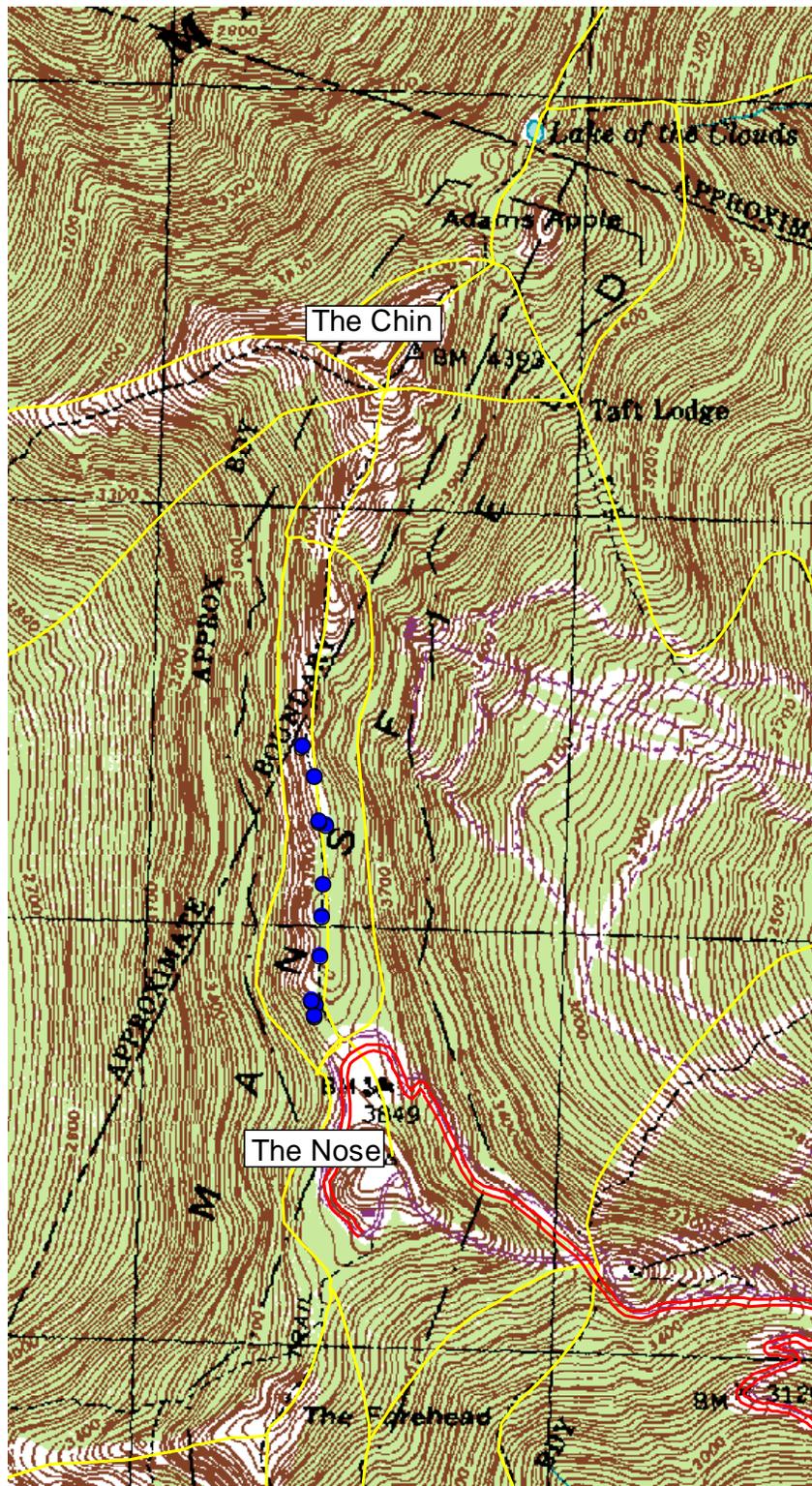
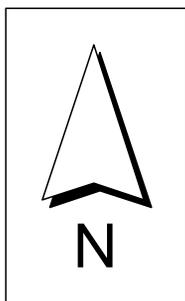
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Mt. Mansfield Natural Area

Photomonitoring Study Site:
Nose to Chin

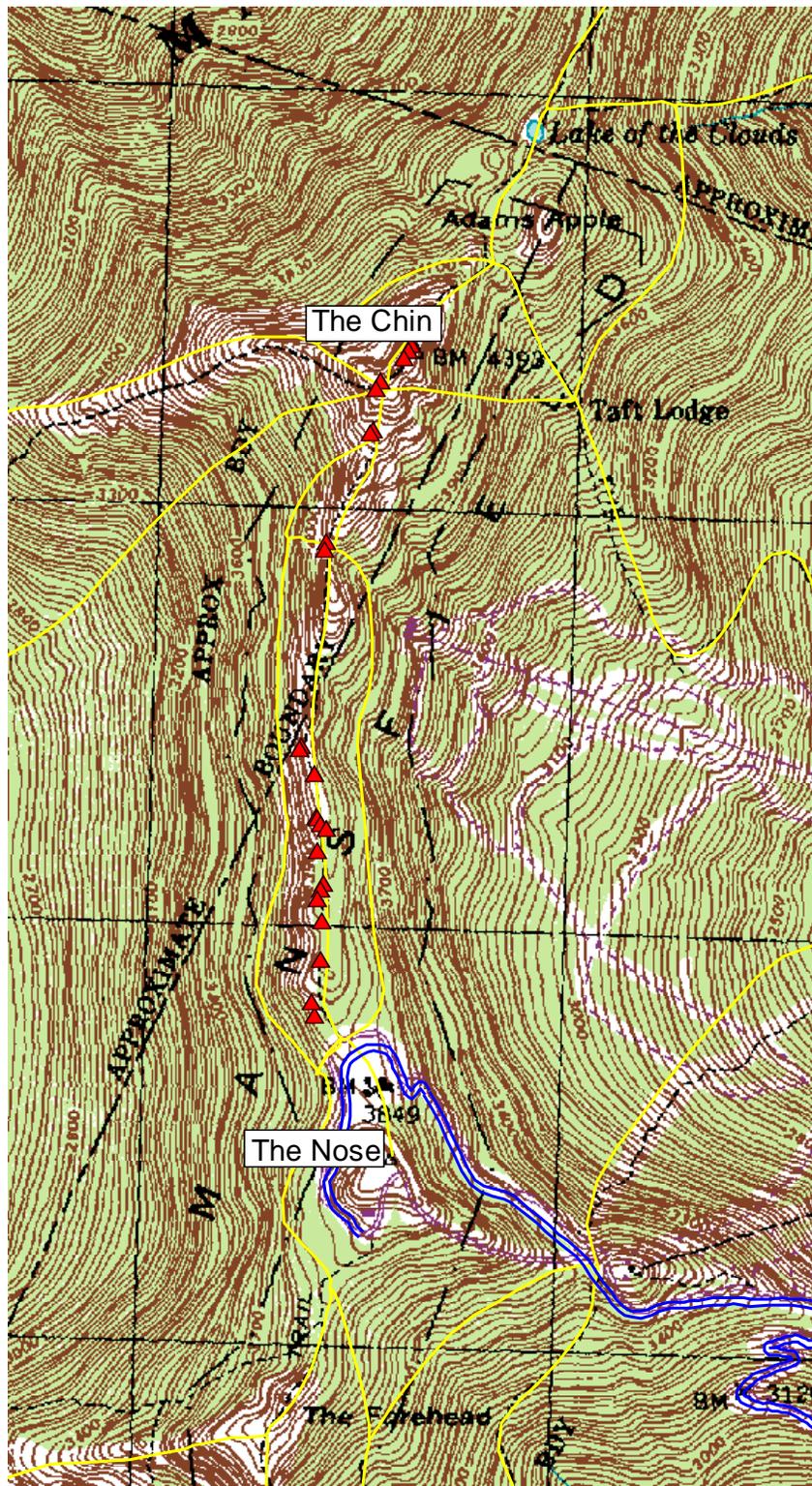
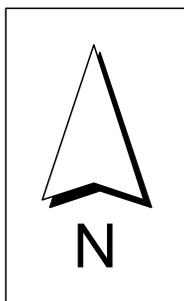
Long Trail System in Yellow
Quadrat Sites in Blue
Toll Road in Red



Mt. Mansfield Natural Area

Photomonitoring Study Site:
Nose to Chin

Long Trail System in Yellow
Transect Locations in Red
Toll Road in Blue



1. Introduction



Mount Mansfield ridgeline: Upper Lip, Chin, and Adam's Apple (left to right).

1.1 Site History

Mount Mansfield, the highpoint of Vermont (elev. 4393 ft., 1340 m) is formed of calcium-poor, acidic bedrock initially deposited as layers of sediment when the inland ocean Iapetus covered the region in Cambrian and Ordovician time, then metamorphosed and uplifted by the Taconic Orogeny to form the Green Mountains 460 million years ago. In more recent times—geologically speaking—the advance and retreat of the Wisconsinan continental ice sheet left large expanses of this bedrock uncovered on Mount Mansfield, scoured of organic soils and devoid of plant or animal life. The predominantly treeless ridgeline is exposed throughout the year to abundant rates of

precipitation and fog interception, persistent high winds, sub-freezing temperatures, heavy cloud and fog cover, and intense solar radiation. Mount Mansfield's upper slopes are cold enough to facilitate freeze-thaw phenomena (needle ice and frost-churning of soils) in any month of the year—as well as to sustain seasonal ground ice—but not so cold as to allow permanent snowfields or glaciers. Elevation is the foremost factor influencing climate here, restricting the growing season above treeline to less than 90 days. Soil formation on Mount Mansfield is slow because of the abundant moisture and cold temperatures, leaving alpine soils shallow, poorly developed, and weakly anchored (Thompson and Sorenson 2000).

Most of the Mount Mansfield ridgeline, including virtually the entire mountain above treeline, has been owned by the University of Vermont since the mid-1850's. Traversed by the Long Trail, a nearly century-old hiking trail following the spine of the Green Mountains from Massachusetts to Canada, Mount Mansfield has long been visited by hikers and naturalists. The impact of increasing recreational use in the mountains of Vermont in the 1960's led to the creation of a “ranger-naturalist” program on Mount Mansfield in 1969. Over time this program evolved into the current management partnership comprised of the Green Mountain Club; the University of Vermont; the Vermont Department of Forests, Parks, and Recreation; and Stowe Mountain Resort. An extensive network of hiking trails, a toll road, and an aerial tramway combine to bring upwards of 40,000 visitors each year to the 1.4 mile (2.3 kilometer) segment of the Long Trail bisecting the Mount Mansfield Natural Area, making it perhaps the most heavily used hiking trail in the state..

1.2 Community Composition

The flora of Mount Mansfield is dominated by the three growth-forms that commonly characterize alpine areas: bunch-forming grasses and sedges, low-lying dwarf shrubs, and broad-leaved flowering herbs (Korner 1995). Mosses and lichens are also prevalent here, as they are in other alpine communities of the northeastern U.S. (Bliss 1963). The species present in Mount Mansfield's alpine zone reveal an obvious floristic connection to the eastern Canadian Arctic and coastal barrens, brought about by the many species that migrated south with the Wisconsin glacial expansion (Billings 1988, Sperduto and Cogbill 1999). Alpine plants display broad habitat tolerances, appearing in multiple seral stages and in a diversity of roles within these stages (Bliss 1963), possibly due to the small suite of species able to tolerate the harsh

environment above treeline. These species, although adapted to the extreme climate and limited physical resources of the alpine zone, are not well adapted to trampling by recreational users. This is to be expected, perhaps, of species which have evolved almost entirely without the presence of humans (Billings 1988).

1.3 Biodiversity and Vulnerability

The primary natural communities of the Mount Mansfield Natural Area are:

- **subalpine krummholz:** found in tangled mats where snow accumulates in winter and protects the stunted spruce and fir;
- **alpine peatland:** found on moderate slopes or in bedrock depressions where moisture can accumulate and a multitude of *Sphagnum* moss species thrive; and
- **alpine meadow:** patchy and variable mosaics of arctic and alpine plants found where shallow pockets of soil have accumulated in a matrix of frost-shattered, lichen-strewn bedrock. Sedge meadows typically occur where fog is most prevalent; small *Diapensia* barrens indicate where winds are most extreme and snowcover in winter is lacking; and dwarf shrublands are found throughout a wide range of environmental conditions.

All are recognized as the finest occurrences of their community-type in the state and are classified as “extremely rare” by the Vermont Nongame and Natural Heritage Program. Of the 28 state-listed rare, threatened, or endangered plant species found on Mount Mansfield, 12 are of global or regional conservation importance under the guidelines of *Flora Conservanda: New England* (Brumback and Mehrhoff 1997).

- One, Boott’s rattlesnake root (*Prenanthes boottii*), is endemic to northeastern U.S. alpine areas and imperiled globally.
- Several, including black sedge (*Carex atratiformis*), and diapensia (*Diapensia lapponica*), are found nowhere else in the state other than on Mount Mansfield.
- And many, including mountain sandwort (*Arenaria groenlandica*), Bigelow’s sedge (*Carex bigelowii*), black crowberry (*Empetrum nigrum*), and highland rush (*Juncus trifidus*), are high peak occurrences disjunct to such a degree that genetic isolation is likely.

At least five plant species known historically from the Mount Mansfield massif are now presumed extirpated and one species currently listed as threatened, alpine sweet-grass

(*Hierochloe alpina*), was not relocated in the course of rare plant monitoring in 2004. Bearing in mind that recreational use in the northeastern U.S. has been known to play a role in the loss of more than a few plant species (Cole and Monz 2002), the vulnerability of the rare lifeforms of Mount Mansfield is quite clear.

1.4 Alpine Zone Education

Summit caretakers staff the Mount Mansfield ridgeline from Memorial Day through Columbus Day, conversing with visitors and advocating minimum-impact skills to be used not only while in the alpine zone but wherever they may travel. Caretakers have no enforcement powers and rely upon the authority of the landscape itself—the unique contribution and inherent value of each individual species and community to the ecosystem as a whole—to motivate appropriate behavior. Interactions are informal and typically focus on the inadequate resistance and resilience of alpine plant species to concentrated human trampling and, consequently, the importance of staying on the trail. The approach is for the most part indirect—visitors retain the freedom to choose a course of action, but caretakers attempt to influence these choices via information and persuasion. When time allows, longer discussions may take place and a deeper ecological awareness is often pursued, but typically the interaction is simply a quick assessment of prior knowledge and experience, followed by a concise message crafted to meet the visitor at their level. The minimum-impact message is reinforced by informational signs at trailheads and junctions, in particular at the Toll Road terminus, which has a high proportion of first-time visitors to a “Natural Area” in which ecosystem processes are meant to prevail.

1.5 Adaptive Trail Maintenance

Maintenance of the trail system in Mount Mansfield’s alpine zone is for the most part carried out by the summit caretakers, as well. Caretakers use a variety of devices—scree wall, low-lying white nylon string “cordons”, painted blazes, and brush obstructions, for example—to delineate the established treadway and concentrate use on its hardened surface. Site-shielding practices using these tools are both intuitive and qualitative, drawing on observational skills to identify early stages of off-trail damage and experience or intuition to craft a response. Acquired knowledge and specific concerns are passed on from caretaker to caretaker through the years, gradually forming a site-specific wisdom. The trailside zone is kept rough and/or “natural”,

because a visible contrast between it and the hardened treadway reduces the likelihood of impact expansion. Perceptions of trailside aesthetics might, in fact, be a more significant constraint than perceptions of more profound ecological impacts, which most recreational users do not recognize (Hammit and Cole 1998). The summit caretaker program—by addressing both the causes of recreational impact via a minimum-impact message, and the symptoms of these impacts by way of on-site maintenance—appears to be making progress, for although the cumulative ridgeline count has surpassed one million visits since the “ranger-naturalist” program began more than three decades ago, researchers and land managers assert the native vegetation of the Mount Mansfield ridgeline has shown an ability to recover naturally over this time (Paradis 2003).

1.6 Disturbance Categories and Trampling

Natural disturbances in alpine communities can be categorized as gap-type or severe (Chambers 1987). Gap-type disturbances are by far the most common, occurring as the result of soil freeze-thaw activity, small mammal burrowing, and gravity-assisted creep of saturated soil (Chambers 1987). These disturbances create small patches of exposed soil within a matrix of undisturbed vegetation, ideal safe-sites for plant recolonization (Urbanska 1997). Winter dieback of exposed alpine plants opens similar gaps. Wind-swept dwarf shrub communities can lose in excess of one-third of their mass annually, rejuvenating vegetation by creating safe-sites for new plant growth (Kammer and Mohl 2002).

Severe natural disturbances in alpine communities are, as a rule, the result of landslides or avalanches and are characterized by the loss of surface soil horizons (Chambers 1987). This disturbance type is restricted to moderately inclined slopes—steep enough to compel gravity to discharge accumulated soil or snow, but shallow enough to accumulate the requisite load—and dependent on episodes of heavy precipitation. The large and essentially soil-free openings that ensue after a severe disturbance are unlike gap-type disturbances because of their loss of nutrient pools and cycling abilities (Chambers and others 1990), seed banks and safe-sites for plant establishment (Urbanska 1997). Severe disturbances are much slower to recover than gap-type disturbances, delayed by problems common to primary succession including interrupted species immigration and deficiencies of crucial nutrients, as well as the physical hostilities of alpine sites (Bradshaw 1997).

Concentrated trampling above treeline creates disturbances best categorized as severe-

type, for surface soils are typically lost to wind and water erosion once vegetation has been destroyed (Hammitt and Cole 1998). Erosion in the alpine zone more often than not leaves only exposed bedrock or loose gravel—the substrate most susceptible to soil freeze-thaw activity (Roach and Marchand 1984, Ketchledge and others 1985, Doucette and Kimball 1990, Sperduto and Cogbill 1999, Conlin and Ebersole 2001). Freeze-thaw activity, when unchecked by the stabilizing root structure of mature vegetation, allows few seedlings to survive (Roach and Marchand 1984). The loss of surface soils due to concentrated trampling carries all of the repercussions of severe-type disturbances: nutrient deficiencies and cycling interruptions, safe-site alterations, dispersal distance increases, and seed bank losses. Community revitalization subsequent to severe-type disturbances can be assumed to be exceptionally slow, for system recovery rates are inversely related to disturbance severity (Chambers 1987).

1.7 Alpine Recovery Patterns in the Northeastern U.S.

A restoration study conducted on Mt. Colden (elev. 4714 ft., 1437 m) in New York State described alpine succession there as initiated by the establishment of mosses, which were in turn colonized by mountain sandwort seedlings, which were then followed by other native species spreading via rhizomes (Ketchledge and others 1985). Two studies near New Hampshire's Mt. Lafayette (elev. 5260 ft., 1605 m) revealed that mountain sandwort and highland rush were the only species with significant success recolonizing a severely disturbed alpine ridgeline (Marchand and Spencer 1979, Roach and Marchand 1984). A more recent study at this site showed revegetation to still be dominated by pioneer species—haircap moss (*Polytrichum juniperum*) and mountain sandwort in particular—even after twelve years had passed (Doucette and Kimball 1990).

Revegetation in the Mount Mansfield Natural Area appears to follow a similar pattern. Observation of disturbed sites adjacent to the Long Trail indicate they too are colonized first by mosses, which are then invaded by mountain sandwort and, in some instances, highland rush. Although present in all stages of vegetation development, mountain sandwort and highland rush can be characterized as early-seral dominants, for high rates of seed production and rapid root growth allow these species alone to colonize severely disturbed areas in great numbers (Roach and Marchand 1984). These structurally simple plants are relatively short-lived, however, and other vascular plant species must depend on episodes of essentially flawless environmental

conditions to successfully colonize severe disturbances without succumbing to freeze-thaw phenomena. Establishment by more competitive and longer-lived species—such as alpine bilberry (*Vaccinium uliginosum*) or Bigelow’s sedge—is not so readily observed. These species are clearly predominant in areas with no evidence of severe-type disturbances and can therefore be considered late-seral dominants. Succession in the alpine zone of Mount Mansfield appears to be of the “tolerance” type: climax species being the most competitive, longest lived, and largest, although these late-seral dominants may be present even in early-seral vegetation.

1.8 Implications of Human-Induced Meta-Disturbances

Cole and Hammitt (2000) note that the most profound challenges to natural areas management—acid deposition and global climate change, for example—originate off-site. Changes to biodiversity as the result of such stresses are likely to initially appear as subtle changes in the relative frequency of existing species (Callaghan and Jonasson 1995). Acid deposition has been implicated in species damage (the dieback of subalpine red spruce, for example) in Vermont’s Green Mountains (Gawell and others 1996), even as more pollution-tolerant species have prospered as a result of release from competition (Bormann 1985). This suggests a significant risk for the natural communities of the Mount Mansfield Natural Area, for airborne pollutants associated with acid deposition—heavy metals in particular—are deposited in ever greater amounts as elevation increases. Species such as mosses and lichens, highly vulnerable to the high sulfur dioxide and heavy metal concentrations associated with acid deposition, are critical to ecosystem functioning due to their ability to stabilize soils and instigate recovery following severe disturbances. Heavy metals are known to thwart the ability of mosses and lichens to colonize severe disturbances (Salemaa and others 2001) while allowing other species—black crowberry most prominently—to form single-species stands (Monni and others 2000). The tolerance of black crowberry for heavy metal stress and acidic soils may explain why it shows vigorous growth in several of Mount Mansfield’s trailside locales while neighboring dwarf shrub community dominate species—alpine bilberry and mountain cranberry (*Vaccinium vitis-idaea*) in particular—show little success.

2. Objectives and Methodology

2.1 Monitoring Objectives

Restoration approaches based on the assumption that the stabilization of soils and the establishment of early-seral vegetation will allow successional processes to reinstate the structure and function found in late-seral alpine communities are increasingly disputed (Chambers 1997). If the goal of environmental restoration is to produce self-sustaining systems with species, structure, and function comparable to native communities prior to disturbance (Parker and Pickett 1997)—and post-disturbance studies of northeastern U.S. alpine areas have shown little evidence of the return of late-seral dominant species—the following questions must be asked:

- Is natural revegetation occurring in the Mount Mansfield Natural Area where recreational use has led to the loss of vegetation and/or soils?
- Is this revegetation restoring the late-seral dominant species which provide the structural and functional integrity needed to make possible a self-sustaining community?
- And how is the species composition of severely disturbed alpine communities changing and what might such shifts indicate for the future?

McDougald and others (2003) describe three monitoring purposes relevant to these concerns: describing current conditions (baseline monitoring), detecting and documenting change (trend monitoring) and assessing the effectiveness of management practices (effectiveness monitoring). They propose that photomonitoring is a valuable tool for these purposes, perhaps even superior to other monitoring forms because it is comparatively simple, inexpensive and rapid. Noss and Cooperrider (1994) reinforce this claim, stating that ground-level photo images are effective as community-level indicators, providing data on ecosystem composition, structure, and function. This data can include the relative diversity, frequency and abundance of species and guilds; proportions of native, invasive and threatened or endangered species; foliage density, layering and seral stage; and substrate and soil variables. Fine-scale disturbance dynamics, colonization success and local extinction rates are other potential applications when baseline images are compared with those of subsequent photomonitoring sessions.

A recent report to the Vermont Nongame and Natural Heritage Program (Paradis 2003) advised that a research and monitoring program examining the progress of alpine community recovery in Vermont should be designed and implemented. The intent of this study is to provide

a baseline photographic database of disturbed alpine communities in the trailside zones of the Mount Mansfield Natural Area and thereby to begin to address this need. This data—when compared with that of follow-up studies—will provide a means to better assess the effectiveness of current management practices in returning severely disturbed sites in the Mount Mansfield alpine zone to their historic trajectories, the ultimate goal of ecological restoration (SER 2002).

2.2 Transect and Quadrat Selection and Photomethodology

Twenty-four 5-meter phototransects and sixty-four 50 cm by 50 cm photoquadrats were subjectively sited in trampling-disturbed trailside sectors of the Mount Mansfield Natural Area. Selection criteria included site homogeneity, ease of access, and ability to accurately relocate sites for comparative purposes. All transects and quadrats showed evidence of trampling-induced vegetation and/or soil loss with disturbance levels ranging from slight to extreme.

Photomethodology was adapted from Lucey and Barraclough (2001) and McDougald and others (2003). All photographic products were digitized and stored on CD to generate a long-term permanent record of landscape conditions transcending the program disruptions that may come with periodic changes in staffing levels or expertise.

Phototransect images were standardized by using a 35 mm camera, a stock 50 mm lens, a precise focal distance (5 meters), a constant aperture (16 or 22), and an in-photo reference scale (a yellow and black-striped meter board). Camera to meter board compass bearings were recorded for each transect. A second camera was used to capture an image of the entire photopoint landscape—camera, tripod, meter board and all—generating a reference print for each site to be used in the field to ensure follow-up photomonitoring images depict the same scene. The on-site routine for phototransects was as follows:

- a. Locate a “distinctive” location for the meter board, keeping (1.) the desired transect, (2.) the site configuration, and (3.) a viable camera location in mind.
- b. Position the 35 mm camera and tripod 5 meters away.
- c. Adjust the angle of the camera to capture desired plot.
- d. Measure the distance from lens mid-point to ground.
- e. Determine the compass bearing from camera to meter board.
- f. Shoot 2 or 3 exposures with aperture set at 16.
- g. Shoot 1 landscape photo with digital camera, capturing tripod and meter board locations.

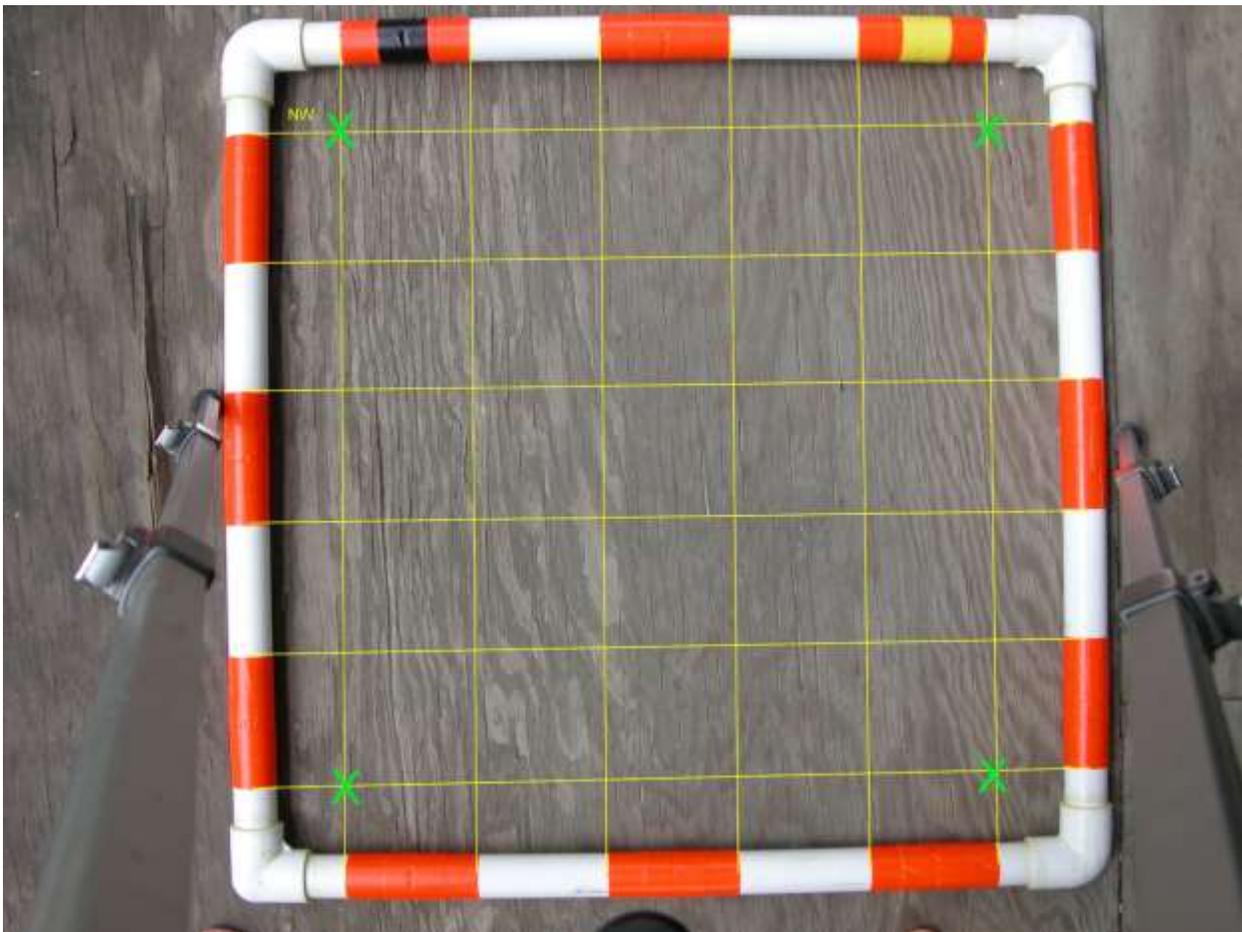
- h. Record all photopoint information on field data form.
- i. Add any other notes to field data form that might facilitate photo-image replication.



Standard phototranssect setup: Camera and tripod on right, meter board 5 meters away on left.

Photoquadrats were permanently marked by fixing stainless steel “pins” (#6 Phillips head screws) in exposed bedrock for each quadrat cluster. Images were standardized by embedding a 50 cm by 50 cm quadrat frame in each photograph. This frame was placed true to compass points, with the steel location pin denoting a specific corner. After capturing the quadrat image the camera was removed from the tripod to photograph the photopoint landscape—tripod and quadrat frame in particular—and thereby generate reference prints to be used in the field to ensure follow-up photomonitoring images depict the same scene. The on-site routine for photoquadrats was as follows:

- a. Locate the stainless steel pin marking the quadrat cluster.
- b. Position the quadrat frame as shown below: yellow band to northeast, black band to northwest.
- c. Place the desired corner of the 50 cm by 50 cm quadrat (corners are indicated by a green “x”) directly above steel location pin. (note: yellow grid in photo is a digital overlay.)
- d. Place camera and tripod with two legs straddling quadrat frame.
- e. Measure distance from lens mid-point to ground.
- f. Shoot digital image of quadrat site **including entirety of quadrat frame** (to make possible precise comparison of chronosequence images and facilitate digital grid overlay).
- g. Remove camera from tripod and shoot 1 landscape photo, capturing tripod and quadrat frame locations.
- h. Record all photopoint information on field data form.
- i. Add any other notes to field data form that might facilitate photo-image replication.



Quadrat frame with digitally superimposed yellow grid.

3. Stewardship Considerations

The natural ecological processes that passive-style management employs are the basis for long-term solutions, for in time soil and vegetation development will generate an appropriately structured and functioning ecosystem (Bradshaw 1997). These processes take place with little human assistance or funding, conserving persistently limited funds while increasing the likelihood of self-sustaining communities. Chambers (1997) proposes two categories of restoration goals for severely disturbed alpine areas: immediate and long-term. The immediate goals specified—soil surface stabilization and increased vegetation production—are apparently being met, according to researchers and managers familiar with Mount Mansfield’s alpine zone (Paradis 2003). Whether long-term goals, in particular:

- The revitalization of a serally-diverse, self-organizing natural landscape where trampling has degraded soils and vegetation; and
- The preservation of the irreplaceable native species and natural communities of Mount Mansfield’s alpine zone

are being fulfilled is somewhat less certain. It can be assumed, however, that if the late-seral dominant species that once populated Mount Mansfield’s trampling-disturbed trailside areas are returning then self-sustaining communities both structurally and functionally similar to the pre-disturbance state will follow as well (Chambers 1997).

Long-term systematic monitoring is the “cornerstone of adaptive management” and the *only* way to judge if management practices are conserving biodiversity (Noss and Cooperrider 1994). Without such a monitoring system managers cannot fully comprehend how landscape conditions change in response to their actions or accurately predict how landscape conditions might respond to new treatments (McDougald and others 2003). To be effective, however, the monitoring program must be fully integrated with management. Explicitly, monitoring results must drive management decisions (Noss and Cooperrider 1994). Measurable objectives and clear statements that designate what and where to monitor are essential components of adaptive management (McDougald and others 2003). This study proposes the proportional balance of early-seral and late-seral dominant plant species and the abundance of rare plant species and communities be used as indicators of ecosystem integrity. Nevertheless, comparative analysis of the qualitative and quantitative data supplied by this photomonitoring inventory and that of subsequent photostudies will provide a useful means to analyze other management goals as well.

4. Field Data and Images

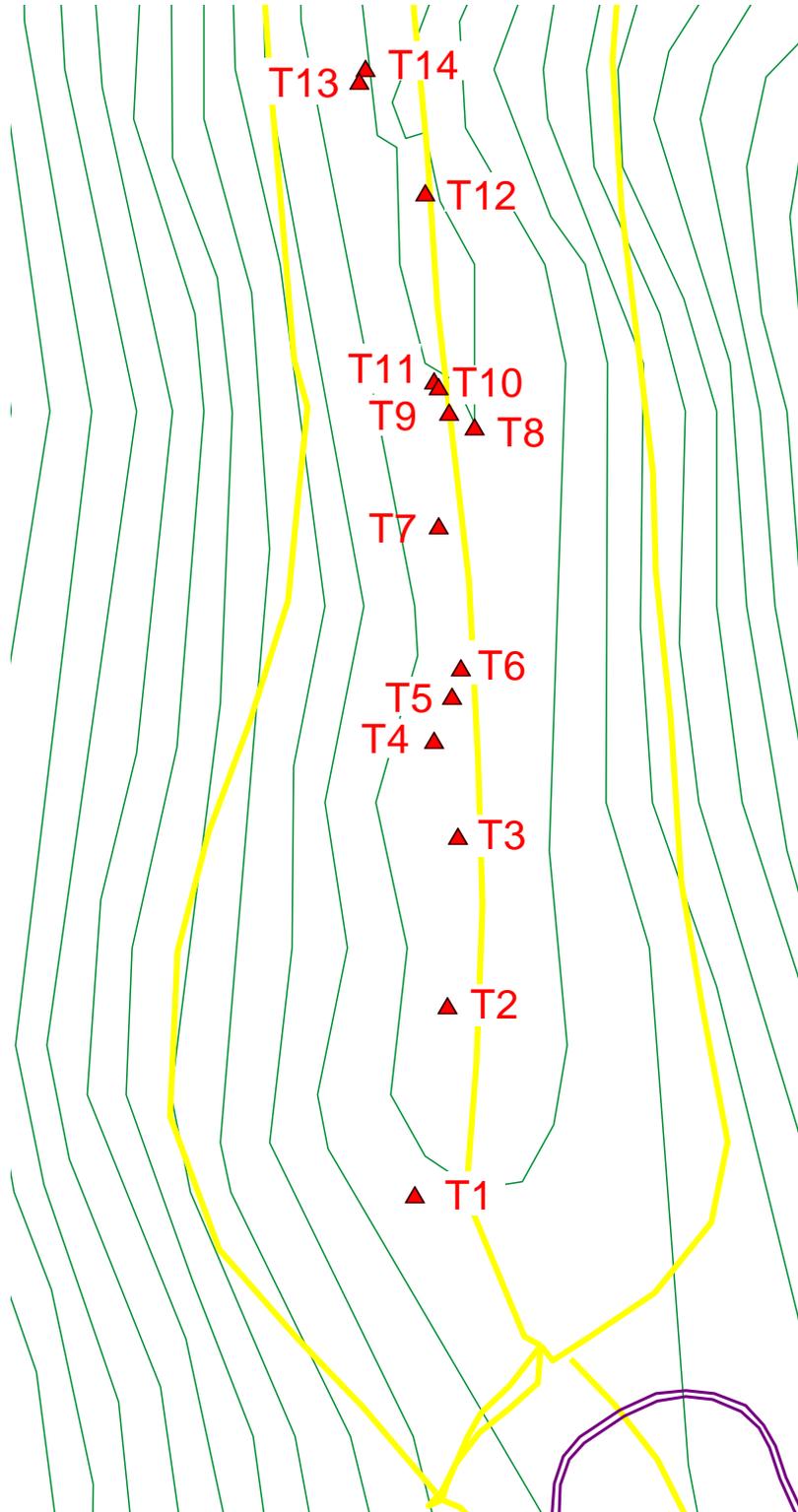
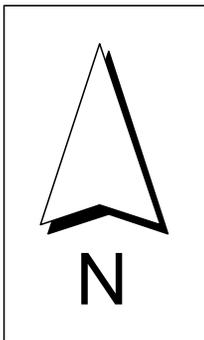
4.1 Transects 1 to 14: Halfway House to Upper Lip

Mt. Mansfield Natural Area

Transects 1 to 14

Long Trail:
Halfway House to
Upper Chin

Transect Sites in Red
Long Trail System in Yellow
WCAX Road in Purple
50 ft. Contours in Green



Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #1
Image Date: July 2nd, 2004
Image Time: 09:41

Transect 1 Narrative:

Take Long Trail north from the Halfway House Trail junction. Transect #1 is low area to west of trail, just prior to entering krummholz. Set up meter board in low-lying flat area to west of scree wall and string cordon. Set up camera directly above scree wall, on trail side of string cordon.

Transect 1 GPS Coordinates:

Northing: 225554.444
Easting: 474780.089

Transect 1 Landscape Photograph:

HHCN_1



Transect Photograph:

HH_CN1pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 1

Transect 1 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	112 cm
Aperture Used:	16
Exposure Number:	003_3.jpg
Camera Location in Relation to Trail:	Just to west; on scree wall; trail (east) side of string cordon
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	322° NNW (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #2
Image Date: July 2nd, 2004
Image Time: 10:00

Transect 2 Narrative:

Continue north on Long Trail. Just beyond Frenchman's Pile look for narrowing trail through sedge meadow, bordered by scree wall, just before extensive exposed bedrock. Set up camera to east of trail. Meter board location is currently brushed in, although brush was removed for photographs.

Transect 2 GPS Coordinates:

Northing: 225657.674
Easting: 474798.201

Transect 2 Landscape Photograph:

HHCN_2



Transect Photograph:

HH_CN2pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 2

Transect 2 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	116 cm
Aperture Used:	16
Exposure Number:	005_5.jpg
Camera Location in Relation to Trail:	On trail; east margin; exposed bedrock
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	34° NNE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #3
Image Date: July 2nd, 2004
Image Time: 10:19

Transect 3 Narrative:

Continue north as Long Trail narrows through krummholz. Upon entering opening, transect #3 is east of the string cordon delineating trail corridor. Set up camera to south, tucked in by krummholz edge. Meter board goes to north, in low gravel flanked by exposed bedrock to the east and west.

Transect 3 GPS Coordinates:

Northing: 225749.469
Easting: 474803.779

Transect 3 Landscape Photograph:

HHCN_3



Transect Photograph:

HH_CN3pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 3

Transect 3 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	114 cm
Aperture Used:	16
Exposure Number:	009_9.jpg
Camera Location in Relation to Trail:	on exposed bedrock; south end of clearing; near krummholz
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	20° NNE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #4
Image Date: July 2nd, 2004
Image Time: 10:32

Transect 4 Narrative:

Continue north on Long Trail, past puncheon bridge in krummholz narrows. Stop at next puncheon bridge grouping (to north) and set up camera on exposed bedrock to west of blaze. Meter board goes on 1st section of puncheon (south end, that is), on support beam, northwest corner.

Transect 4 GPS Coordinates:

Northing: 225801.599
Easting: 474790.801

Transect 4 Landscape Photograph:

HHCN_4



Transect Photograph:

HH_CN4pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 4

Transect 4 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	115 cm
Aperture Used:	16
Exposure Number:	010_10.jpg
Camera Location in Relation to Trail:	west margin of trail
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	42° NE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #5
Image Date: July 2nd, 2004
Image Time: 10:59

Transect 5 Narrative:

Continue north on Long Trail to next grouping of puncheon. Set up camera on bedrock just west of last (most northerly) puncheon section. Meter board is set up to west of string cordon.

Transect 5 GPS Coordinates:

Northing: 225825.616
Easting: 474800.152

Transect 5 Landscape Photograph:

HHCN_5



Transect Photograph:



HH_CN5pp

Long Trail Corridor, Halfway House to Upper Lip, Transect 5

Transect 5 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	115 cm
Aperture Used:	16
Exposure Number:	015_15.jpg
Camera Location in Relation to Trail:	on bedrock to west of final (most northerly) puncheon segment
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	36° NE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #6
Image Date: July 2nd, 2004
Image Time: 11:38

Transect 6 Narrative:

Transect is a very short distance to north of transect # 5, just before entering krummholz. Set up camera to west of Long Trail, facing south, close to krummholz. Meter board goes to west of string cordon.

Transect 6 GPS Coordinates:

Northing: 225841.195
Easting: 474804.983

Transect 6 Landscape Photograph:

HHCN_6



Transect Photograph:

HH_CN6pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 6

Transect 6 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	121 cm
Aperture Used:	16
Exposure Number:	018_18.jpg
Camera Location in Relation to Trail:	to west, just south of krummholz
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	206° SSW (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #7
Image Date: July 3rd, 2004
Image Time: 08:57

Transect 7 Narrative:

Continue north on Long Trail to next grouping of puncheon. Set up meter board on northwest corner support beam of 1st (southerly) section of puncheon. Set up camera on exposed bedrock to southwest of puncheon, tripod front support on blaze.

Transect 7 GPS Coordinates:

Northing: 225918.224
Easting: 474792.779

Transect 7 Landscape Photograph:

HHCN_7



Transect Photograph:

HH_CN7pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 7

Transect 7 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	116 cm
Aperture Used:	22
Exposure Number:	065_1.jpg
Camera Location in Relation to Trail:	west margin of trail, tripod front support on blaze
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	34° NNE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #8
Image Date: July 3rd, 2004
Image Time: 09:20

Transect 8 Narrative:

Continue north on Long Trail to Amherst Trail junction. Take Amherst just to east side of Drift Rock. Set up camera on bedrock, trail (south) side of string cordon. Reach meter board location via tongue of exposed bedrock extending north beyond string cordon.

Transect 8 GPS Coordinates:

Northing: 225972.155
Easting: 474812.419

Transect 8 Landscape Photograph:

HHCN_8



Transect Photograph:

HH_CN8pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 8

Transect 8 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	115 cm
Aperture Used:	22
Exposure Number:	069_6.jpg
Camera Location in Relation to Trail:	north margin of Amherst Trail, trail side of string
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	38° NE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #9
Image Date: July 2nd, 2004
Image Time: 12:21

Transect 9 Narrative:

Return west towards Long Trail, just to west side of Drift Rock. Set up camera on open bedrock to south of string cordon, meter board in revegetation area to north of string cordon.

Transect 9 GPS Coordinates:

Northing: 225980.102
Easting: 474799.020

Transect 9 Landscape Photograph:

HHCN_9



Transect Photograph:

HH_CN9pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 9

Transect 9 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	114 cm
Aperture Used:	16
Exposure Number:	019_19.jpg
Camera Location in Relation to Trail:	east of Long Trail, north of Amherst Trail
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	4° N (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #10
Image Date: July 2nd, 2004
Image Time: 12:41

Transect 10 Narrative:

Return to Long Trail and continue north, stop short of next puncheon grouping. Set up meter board in revegetation area inside of scree wall, camera on trail side of scree wall. Transect points toward Drift Rock.

Transect 10 GPS Coordinates:

Northing: 225994.183
Easting: 474793.457

Transect 10 Landscape Photograph:

HHCN_10



Transect Photograph:

HH_CN10pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 10

Transect 10 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	116 cm
Aperture Used:	16
Exposure Number:	025_25.jpg
Camera Location in Relation to Trail:	on east margin of trail not far from scree wall
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	158° SSE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #11
Image Date: July 3rd, 2004
Image Time: 09:41

Transect 11 Narrative:

Continue north just a few meters to next puncheon grouping. Set up camera on west margin of trail, meter board on the northwest end support beam of first (most southerly) puncheon piece.

Transect 11 GPS Coordinates:

Northing: 225997.521
Easting: 474790.469

Transect 11 Landscape Photograph:

HHCN_11



Transect Photograph:

HH_CN11pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 11

Transect 11 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	117 cm
Aperture Used:	22
Exposure Number:	075_12.jpg
Camera Location in Relation to Trail:	on west margin of trail, on bedrock but near gravel
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	10° N (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #12
Image Date: July 3rd, 2004
Image Time: 10:06

Transect 12 Narrative:

Continue north on Long Trail through krummholz, past big step (down to single plank, currently) between exposed bedrock segments, then up to clearing. Look for glacial erratic to west of trail near low scree wall and brush. Set up to face south with camera on east margin of bedrock and meter board in revegetation area beyond scree wall.

Transect 12 GPS Coordinates:

Northing: 226099.308
Easting: 474785.951

Transect 12 Landscape Photograph:

HHCN_12



Transect Photograph:

HH_CN12pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 12

Transect 12 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	117 cm
Aperture Used:	16
Exposure Number:	076_13.jpg
Camera Location in Relation to Trail:	on east margin of bedrock just northeast of blaze
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	208° SSE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Halfway House to Upper Lip

Transect Number: HHCN #13
Image Date: July 4th, 2004
Image Time: 12:57

Transect 13 Narrative:

Continue north on Long Trail almost to Canyon North/Canyon North Extension junction. Look for tongue of rock that overlooks Champlain Valley just south of two large rocks. Set up camera on bedrock overlook, meter board between large rocks towards trail.

Transect 13 GPS Coordinates:

Northing: 226160.225
Easting: 474749.743

Transect 13 Landscape Photograph:

HHCN_13



Transect Photograph:

HH_CN13pp



Long Trail Corridor, Halfway House to Upper Lip, Transect 13

Transect 13 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	113 cm
Aperture Used:	16
Exposure Number:	055_8A.jpg
Camera Location in Relation to Trail:	to west: see narrative
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	52° NE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor from Halfway House to Upper Lip

Transect Number: HHCN #14
Image Date: July 3rd, 2004
Image Time: 10:40

Transect 14 Narrative:

Return to Long Trail and set up just before re-entering krummholz. Shoot across trail, camera on bedrock to west of trail near glacial erratic, meter board on a rock near krummholz edge. Note: krummholz might conceal this rock fairly soon.

Transect 14 GPS Coordinates:

Northing: 226167.341
Easting: 474753.041

Transect 14 Landscape Photograph:

HHCN_14



Transect Photograph:

HH_CN14pp

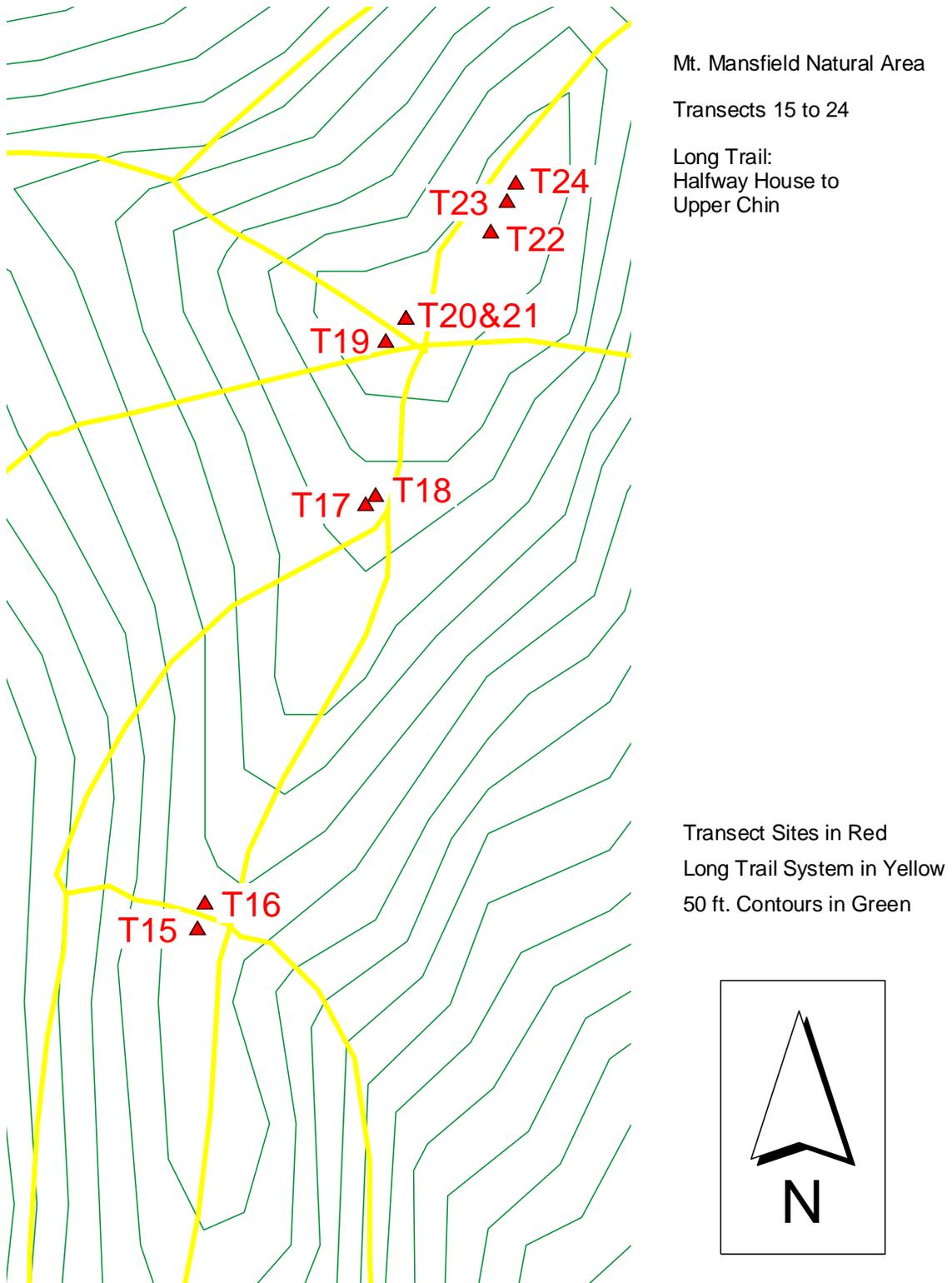


Long Trail Corridor, Halfway House to Upper Lip, Transect 14

Transect 14 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	113 cm
Aperture Used:	16
Exposure Number:	080_17.jpg
Camera Location in Relation to Trail:	west of trail near glacial erratic
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	84° E (magnetic north)

4.2 Transects 15 to 24: Cliff Trail Jct. to Chin



Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #15
Image Date: July 3rd, 2004
Image Time: 11:17

Transect 15 Narrative:

Transect #15 is at the junction of the Cliff Trail and the Long Trail. Meter board is just beyond (that is, northeast of) the scree wall that defines the north and east borders of this junction. Camera location is to the north alongside the Long Trail, to the east of the scree wall and facing south.

Transect 15 GPS Coordinates:

Northing: 226639.110
Easting: 474808.436

Transect 15 Landscape Photograph:

CLCH_1



Transect Photograph:

CL_CH1pp



Long Trail Corridor, Cliff Trail to Chin, Transect 15

Transect 15 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	112 cm
Aperture Used:	16
Exposure Number:	083_20.jpg
Camera Location in Relation to Trail:	to the east of the scree wall, where bedrock widens and trail ascends
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	202° S (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #16
Image Date: July 3rd, 2004
Image Time: 11:53

Transect 16 Narrative:

Ascend the Long Trail to the north just to where the trail first narrows (approx. halfway to the Subway trail junction). Look for a pocket of vegetation to the east of the Long Trail bordered by scree wall and string cordon. Meter board placement is inside (north of) string cordon where trail once bisected this pocket. Camera is to south of string cordon atop fracture in bedrock.

Transect 16 GPS Coordinates:

Northing: 226655.758
Easting: 474812.777

Transect 16 Landscape Photograph:

CLCH_2



Transect Photograph:

CL_CH2pp



Long Trail Corridor, Cliff Trail to Chin, Transect 16

Transect 16 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	115 cm
Aperture Used:	16
Exposure Number:	088_25.jpg
Camera Location in Relation to Trail:	to east of trail on exposed bedrock before trail narrows
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	12° N (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #17
Image Date: July 3rd, 2004
Image Time: 12:18

Transect 17 Narrative:

Continue on the Long Trail north just past the Profanity Trail junction. Set up at far (north) end of puncheon. Camera placement is to the west of the trail just before it ascends, meter board is placed close alongside puncheon (also to west of trail).

Transect 17 GPS Coordinates:

Northing: 226917.376
Easting: 474918.299

Transect 17 Landscape Photograph:

CLCH_3



Transect Photograph:

CL_CH3pp



Long Trail Corridor, Cliff Trail to Chin, Transect 17

Transect 17 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	115 cm
Aperture Used:	16
Exposure Number:	029_5.jpg
Camera Location in Relation to Trail:	west of trail, north end of puncheon
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	194° S (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #18
Image Date: July 3rd, 2004
Image Time: 12:36

Transect 18 Narrative:

This transect does not have a five meter focal distance. Set up meter board on flat rock found where Profanity and Long Trail puncheon intersects in sedge meadow. Set up camera on bedrock ledge that overlooks this sedge meadow from the northeast. Ascent to this ledge is east from the Transect #17 camera location, past (east of) the string cordon.

Transect 18 GPS Coordinates:

Northing: 226923.206
Easting: 474924.979

Transect 18 Landscape Photograph:

CLCH_4



Transect Photograph:

CL_CH4pp



Long Trail Corridor, Cliff Trail to Chin, Transect 18

Transect 18 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	113 cm
Aperture Used:	16
Exposure Number:	033_9.jpg
Camera Location in Relation to Trail:	to east of trail on bedrock ledge overlooking Profanity Jct.
Distance from Camera to Meter Board:	not specified
Bearing from Camera to Meter Board:	232° NE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #19
Image Date: July 4th, 2004
Image Time: 09:17

Transect 19 Narrative:

Continue north on Long Trail until trail exits krummholz and Chin first comes into view. Set up to east of trail, both camera and meter board beyond (east of) string cordon.

Transect 19 GPS Coordinates:

Northing: 227023.727
Easting: 474931.974

Transect 19 Landscape Photograph:

CLCH_5



Transect Photograph:

CL_CH5pp



Long Trail Corridor, Cliff Trail to Chin, Transect 19

Transect 19 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	116 cm
Aperture Used:	16
Exposure Number:	034_10.jpg
Camera Location in Relation to Trail:	east of trail, south of "West Chin" sign
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	44° NE (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #20
Image Date: July 4th, 2004
Image Time: 09:49

Transect 20 Narrative:

Continue north on Long Trail to primary *Diapensia lapponica* population. Set up camera to west of trail, beyond (northwest of) string. Set up meter board to east of trail on ledge near *Diapensia* (also beyond string, but to the southeast).

Transect 20 GPS Coordinates:

Northing: 227039.315
Easting: 474944.713

Transect 20 Landscape Photograph:

CLCH_6



Transect Photograph:

CL_CH6pp



Long Trail Corridor, Cliff Trail to Chin, Transect 20

Transect 20 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	117 cm
Aperture Used:	16
Exposure Number:	038_14.jpg
Camera Location in Relation to Trail:	just off trail to west, opposite <i>Diapensia lapponica</i>
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	192° S (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #21
Image Date: July 4th, 2004
Image Time: 10:11

Transect 21 Narrative:

Transect #21 is near Transect #20. Set up camera on west margin of trail opposite *Diapensia lapponica*. Meter board is in center of trail (to east of camera).

Transect 21 GPS Coordinates:

Northing: 227039.236
Easting: 474944.713

Transect 21 Landscape Photograph:

CLCH_7



Transect Photograph:

CL_CH7pp



Long Trail Corridor, Cliff Trail to Chin, Transect 21

Transect 21 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	118 cm
Aperture Used:	16
Exposure Number:	040_16.jpg
Camera Location in Relation to Trail:	west margin, across from <i>Diapensia</i>
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	90° E (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #22
Image Date: July 4th, 2004
Image Time: 10:32

Transect 22 Narrative:

Continue north on Long Trail. Look for short narrow section through sedge while still ascending towards summit. Set up camera and meter board on east margin of trail, camera facing back towards Long Trail South.

Transect 22 GPS Coordinates:

Northing: 227095.347
Easting: 475000.211

Transect 22 Landscape Photograph:

CLCH_8



Transect Photograph:

CL_CH8pp



Long Trail Corridor, Cliff Trail to Chin, Transect 22

Transect 22 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	118 cm
Aperture Used:	16
Exposure Number:	044_20.jpg
Camera Location in Relation to Trail:	east margin of trail where bedrock widens
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	238° SW (magnetic north)

Phototranssect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #23
Image Date: July 4th, 2004
Image Time: 11:55

Transect 23 Narrative:

Continue north on Long Trail. Where trail widens just before summit set up meter board. Set up camera off trail, north of scree wall, facing towards the Nose. Turtle Rock is to magnetic south of camera.

Transect 23 GPS Coordinates:

Northing: 227115.037
Easting: 475011.313

Transect 23 Landscape Photograph:

CLCH_9



Transect Photograph:

CL_CH9pp



Long Trail Corridor, Cliff Trail to Chin, Transect 23

Transect 23 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	111 cm
Aperture Used:	16
Exposure Number:	053_6a.jpg
Camera Location in Relation to Trail:	to west of trail on bedrock
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	204° SSW (magnetic north)

Phototransect Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: Cliff Trail to Chin

Transect Number: CLCH #24
Image Date: July 4th, 2004
Image Time: 10:54

Transect 24 Narrative:

Continue to summit. Set up to east of USGS summit marker facing towards Camel's Hump, meter board well inside scree wall, camera over north end of scree wall.

Transect 24 GPS Coordinates:

Northing: 227127.313
Easting: 475016.987

Transect 24 Landscape Photograph:

CLCH_10



Transect Photograph:

CL_CH10pp



Long Trail Corridor, Cliff Trail to Chin, Transect 24

Transect 24 Photodata:

Camera Type:	35 mm
Lens Type:	50 mm
Film Type:	200 ISO color print
Camera Height:	115 cm
Aperture Used:	16
Exposure Number:	046_22.jpg
Camera Location in Relation to Trail:	to west of trail at north end of revegetation area scree wall
Distance from Camera to Meter Board:	5 meters
Bearing from Camera to Meter Board:	212° S (magnetic north)

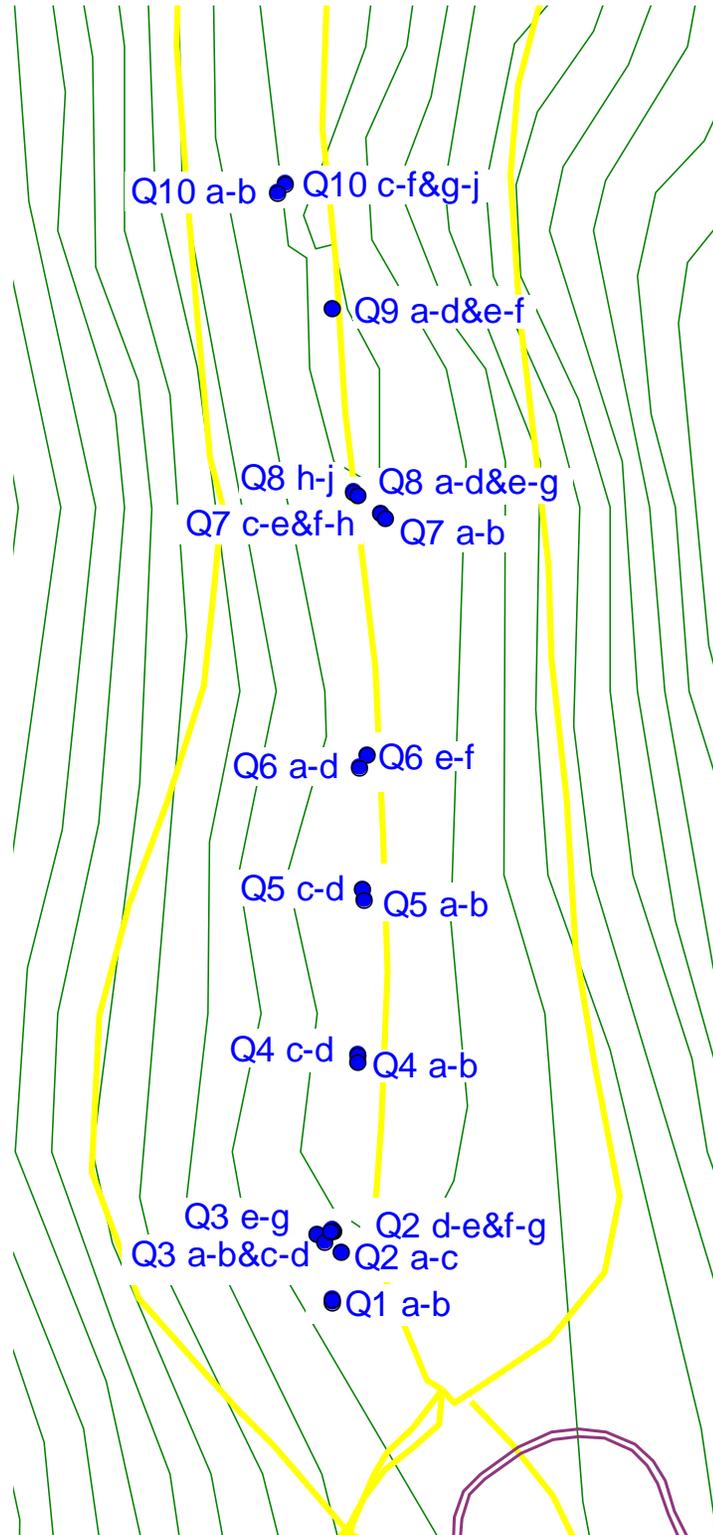
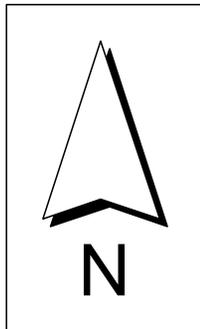
4.3 All Quadrats: WCAX Road to Upper Lip

Mt. Mansfield Natural Area

Quadrats 1 to 10

Long Trail:
WCAX Road to
Upper Lip

Quadrat Clusters in Blue
Long Trail System in Yellow
50 ft. Contours in Green
WCAX Road in Purple



Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 1
Quadrats: a, b
Pin: 1 a-b

Pin 1 a-b Narrative:

Take the Long Trail north from WCAX Road. When the trail emerges from krummholz (to south of the Halfway House Trail Jct.) continue west on open bedrock to point where the trail turns to north. Cluster is approximately 3 meters to northwest of the northerly end of the scree wall that defines the trail.

Pin 1 a-b GPS Coordinates:

Northing: 225020.929
Easting: 474784.803

Landscape Photograph:

VCCN_L1a,b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 1a-b Pin Location

Image Date: July 17th, 2004
Image Time: 11:07
Location Pin in NE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_1a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 1a

Quadrat Photodata:

Cluster Number:	1
Quadrat ID:	a
Image Date:	July 17 th , 2004
Image Time:	10:42
Camera Height:	100 cm
Distance from Location Pin to Trail:	pin is \approx 3 meters NW of north end of scree wall
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_1b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 1b

Quadrat Photodata:

Cluster Number:	1
Quadrat ID:	b
Image Date:	July 17 th , 2004
Image Time:	11:07
Camera Height:	99 cm
Distance from Location Pin to Trail:	same as 1a
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 2
Quadrats: a, b, c
Pin: 2 a-c

Pin 2 a-c Narrative:

Continue north on Long Trail. At “National Natural Landmark” plaque ascend to east of trail, towards State of Vermont radio tower. First pin for Cluster 2 is approximately 5 meters NNE of the rock mass in which plaque is fixed.

Pin 2 a-c GPS Coordinates:

Northing: 225550.106
Easting: 474790.841

Landscape Photograph:

VCCN_L2a,b,c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2a-c Pin Location

Image Date: July 26th, 2004
Image Time: 08:44
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_2a

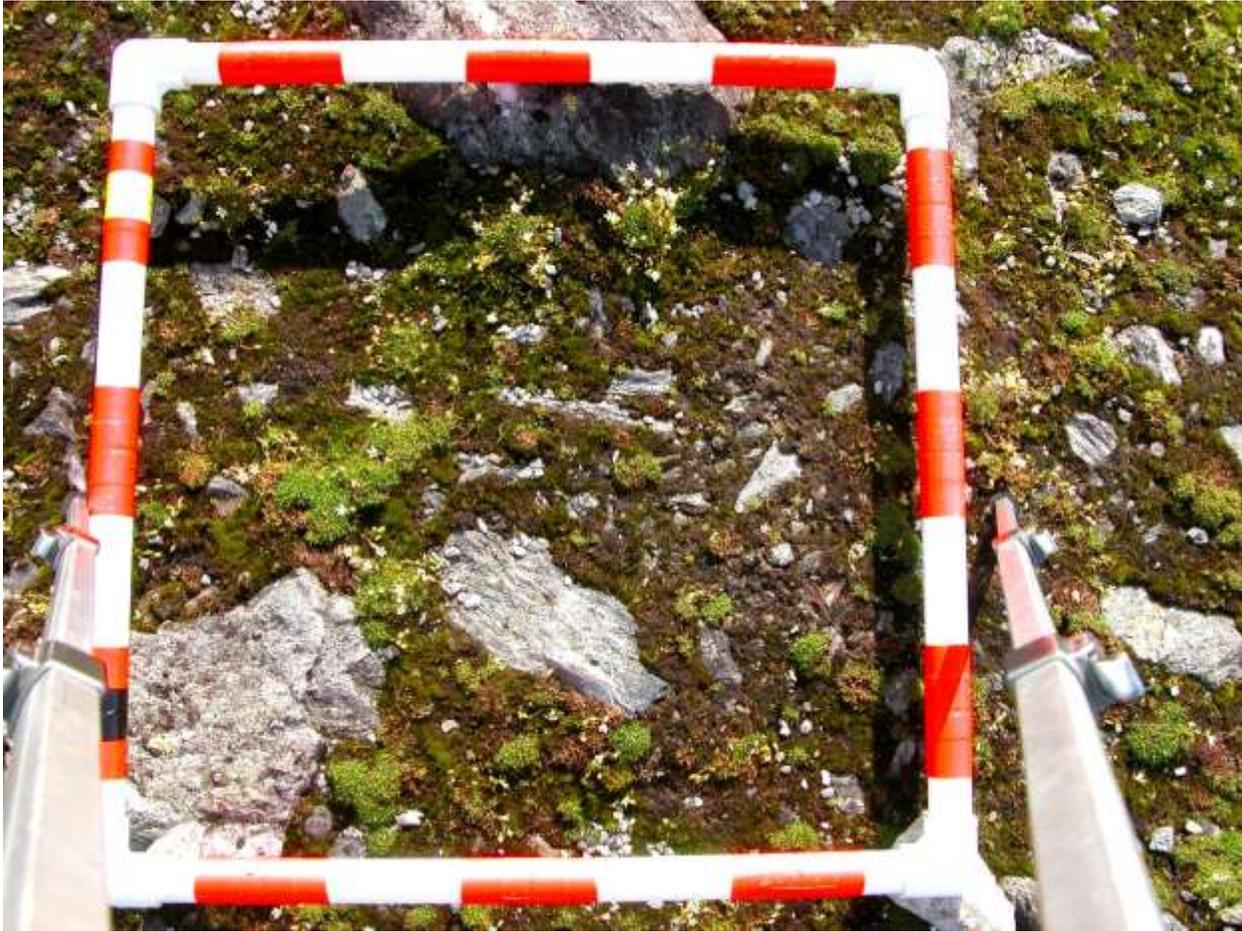


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2a

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	a
Image Date:	July 26 th , 2004
Image Time:	08:23
Camera Height:	98 cm
Distance from Location Pin to Trail:	pin is \approx 8 meters east of blazed trail
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_2b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2b

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	b
Image Date:	July 26 th , 2004
Image Time:	08:35
Camera Height:	104 cm
Distance from Location Pin to Trail:	same as 2a
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_2c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2c

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	c
Image Date:	July 26 th , 2004
Image Time:	08:42
Camera Height:	97 cm
Distance from Location Pin to Trail:	same as 2a
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 2
Quadrats: d, e
Pin: d-e

Pin 2 d-e Narrative:

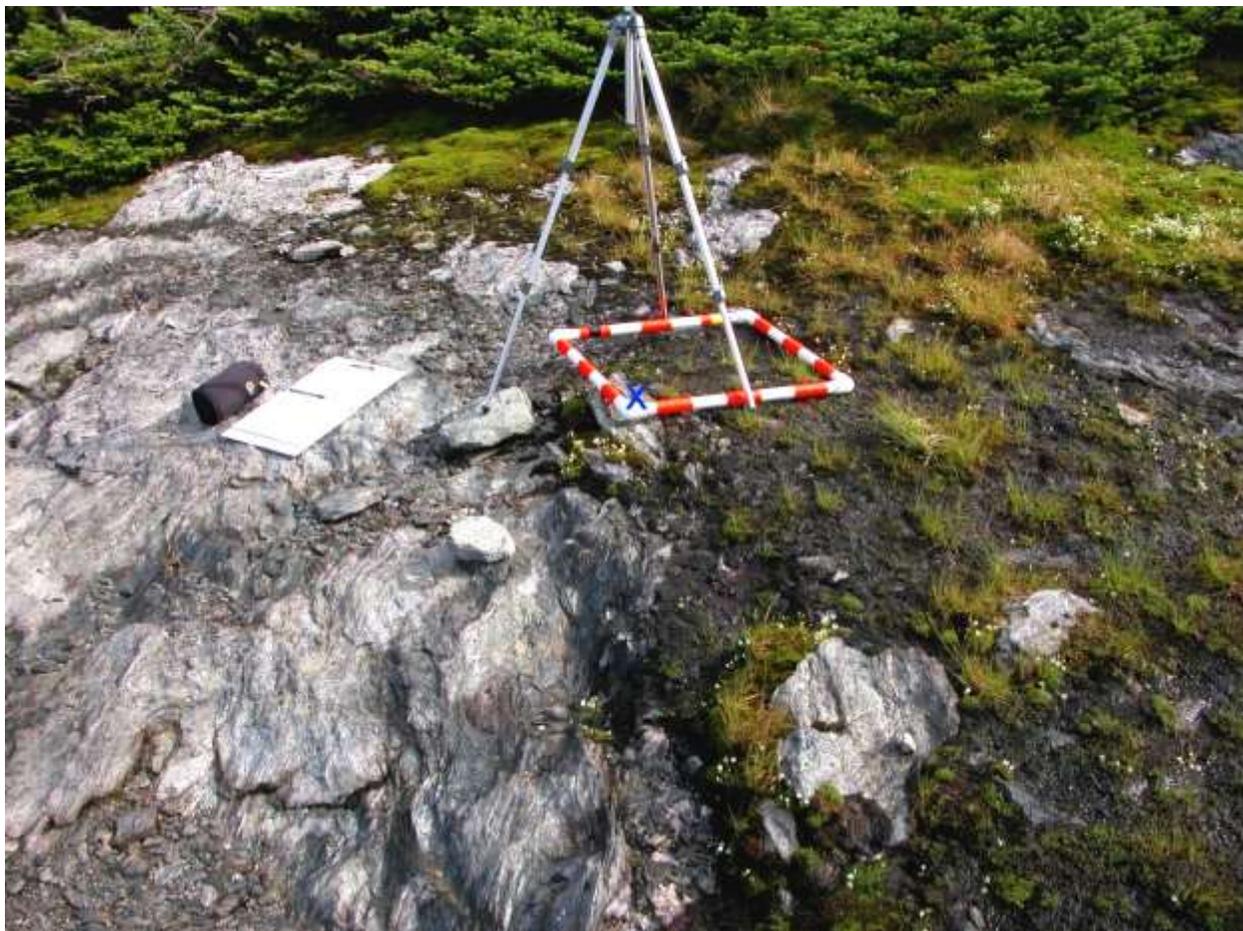
Next pin for Cluster 2 is to the north of 2 a-c pin, approximately 3.5 meters south of krummholz and 6 meters up (to the east) of the blazed trail.

Pin 2 d-e GPS Coordinates:

Northing: 225562.899
Easting: 474785.191

Landscape Photograph:

VCCN_L2d,e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2d-e Pin Location

Image Date: July 26th, 2004
Image Time: 08:59
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_2d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2d

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	d
Image Date:	July 26 th , 2004
Image Time:	08:54
Camera Height:	99 cm
Distance from Location Pin to Trail:	pin is \approx 6 meters east of blazed trail
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_2e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2e

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	e
Image Date:	July 26 th , 2004
Image Time:	08:59
Camera Height:	103 cm
Distance from Location Pin to Trail:	same as 2d
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 2
Quadrats: f, g
Pin: f-g

Pin 2 f-g Narrative:

Next pin is approximately 1.5 meters to NE (40° east of magnetic north) of pin 2d-e.

Pin 2 f-g GPS Coordinates:

Northing: 225564.404
Easting: 474784.323

Landscape Photograph:

VCCN_L2f,g



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2 f-g Pin Location

Image Date: July 26th, 2004
Image Time: 09:21
Location Pin in NW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_2f

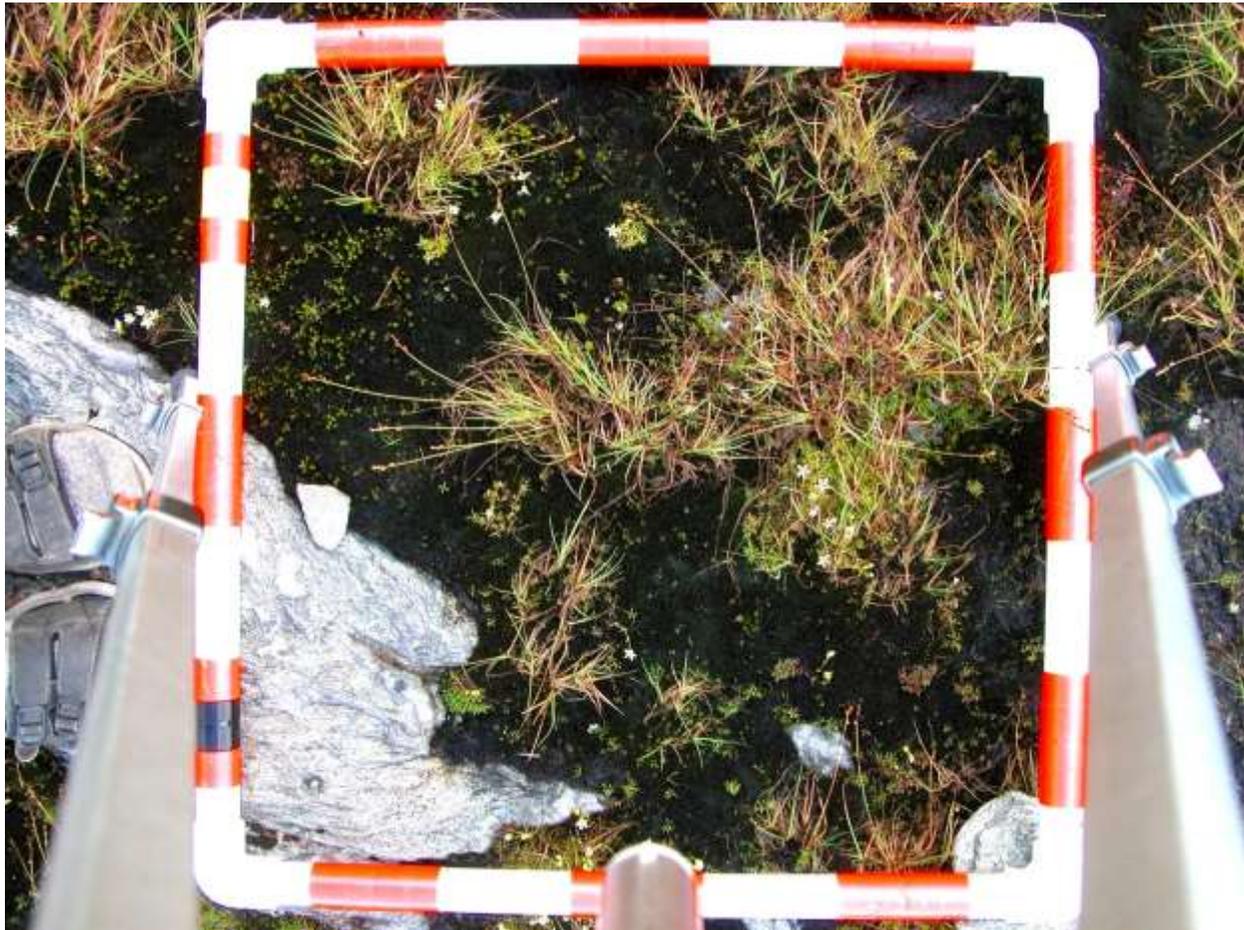


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2f

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	f
Image Date:	July 26 th , 2004
Image Time:	09:09
Camera Height:	102 cm
Distance from Location Pin to Trail:	pin is \approx 7 meters up (to ENE) from trail
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_2g



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 2g

Quadrat Photodata:

Cluster Number:	2
Quadrat ID:	g
Image Date:	July 26 th , 2004
Image Time:	09:21
Camera Height:	98 cm
Distance from Location Pin to Trail:	same as 2f
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 3
Quadrats: a, b
Pin: 3 a-b

Pin 3 a-b Narrative:

Cluster 3 is to west of Cluster 2. Look for low area to west of trail, bordered by krummholz to north and south, protected by low scree wall and string cordon to east. First pin for Cluster 3 is on first “step” down (to west) at southern end of cluster.

Note: same location as Transect HHCN #1.

Pin 3 a-b GPS Coordinates:

Northing: 225555.913
Easting: 474780.745

Landscape Photograph:

VCDR_L3a,b



Long Trail Corridor, WCAX Road to Upper Lip, Cluster 3 a-b Pin Location

Image Date: July 26th, 2004
Image Time: 09:43
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:
VCDR_3a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3a

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	a
Image Date:	July 26 th , 2004
Image Time:	09:36
Camera Height:	96 cm
Distance from Location Pin to Trail:	pin is \approx 1.7 meters to west of scree wall
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCDR_3b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3b

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	b
Image Date:	July 26 th , 2004
Image Time:	09:43
Camera Height:	99 cm
Distance from Location Pin to Trail:	same as 3a
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

**Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip**

Cluster Number: 3
Quadrats: c, d
Pin: 3 c-d

Pin 3 c-d Narrative:

Next pin is approximately 1.3 meters west (280° from magnetic north) of pin 3a-b.

Pin 3 c-d GPS Coordinates:

Northing: 225556.795
Easting: 474778.136

Landscape Photograph:

VCDR_L3c,d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3 c-d Pin Location

Image Date: July 26th, 2004
Image Time: 10:01
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:

VCDR_3c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3c

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	c
Image Date:	July 26 th , 2004
Image Time:	09:53
Camera Height:	98 cm
Distance from Location Pin to Trail:	pin is \approx 3 meters west of trail
Location Pin Corner, Quadrat Frame:	
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCDR_3d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3d

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	d
Image Date:	July 26 th , 2004
Image Time:	10:01
Camera Height:	100cm
Distance from Location Pin to Trail:	same as 3c
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004
Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 3
Quadrats: e, f, g
Pin: 3 e-g

Pin 3 e-g Narrative:

Next pin is approximately 3.5 meters to north (0° from magnetic north) of pin 3c-d.

Pin 3 e-g GPS Coordinates:

Northing: 225560.420
Easting: 474776.640

Landscape Photograph:

VCDR_L3e,f,g



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3e-g Pin Location

Image Date: July 26th, 2004
Image Time: 10:29
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:

VCDR_3e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3e

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	e
Image Date:	July 26 th , 2004
Image Time:	10:09
Camera Height:	103 cm
Distance from Location Pin to Trail:	pin is \approx 4 meters to west of trail
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCDR_3f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3f

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	f
Image Date:	July 26 th , 2004
Image Time:	10:17
Camera Height:	105 cm
Distance from Location Pin to Trail:	same as 3e
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCDR_3g



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 3g

Quadrat Photodata:

Cluster Number:	3
Quadrat ID:	g
Image Date:	July 26 th , 2004
Image Time:	10:29
Camera Height:	104 cm
Distance from Location Pin to Trail:	same as 3e
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 4
Quadrats: a, b
Pin: 4 a-b

Pin 4 a-b Narrative:

Continue north on Long Trail. Just beyond Frenchman's Pile look for narrowing trail through sedge meadow, bordered by scree wall to east and west, just before extensive exposed bedrock. First pin for Cluster 4 is located where sedge meadow to east of trail is bisected by bedrock.

Note: same location as Transect HHCN #2.

Pin 4 a-b GPS Coordinates:

Northing: 225659.286
Easting: 474800.455

Landscape Photograph:

VCDR_L4a,b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 4a-b Pin Location

Image Date: July 17th, 2004
Image Time: 11:39
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:
VCDR_4a

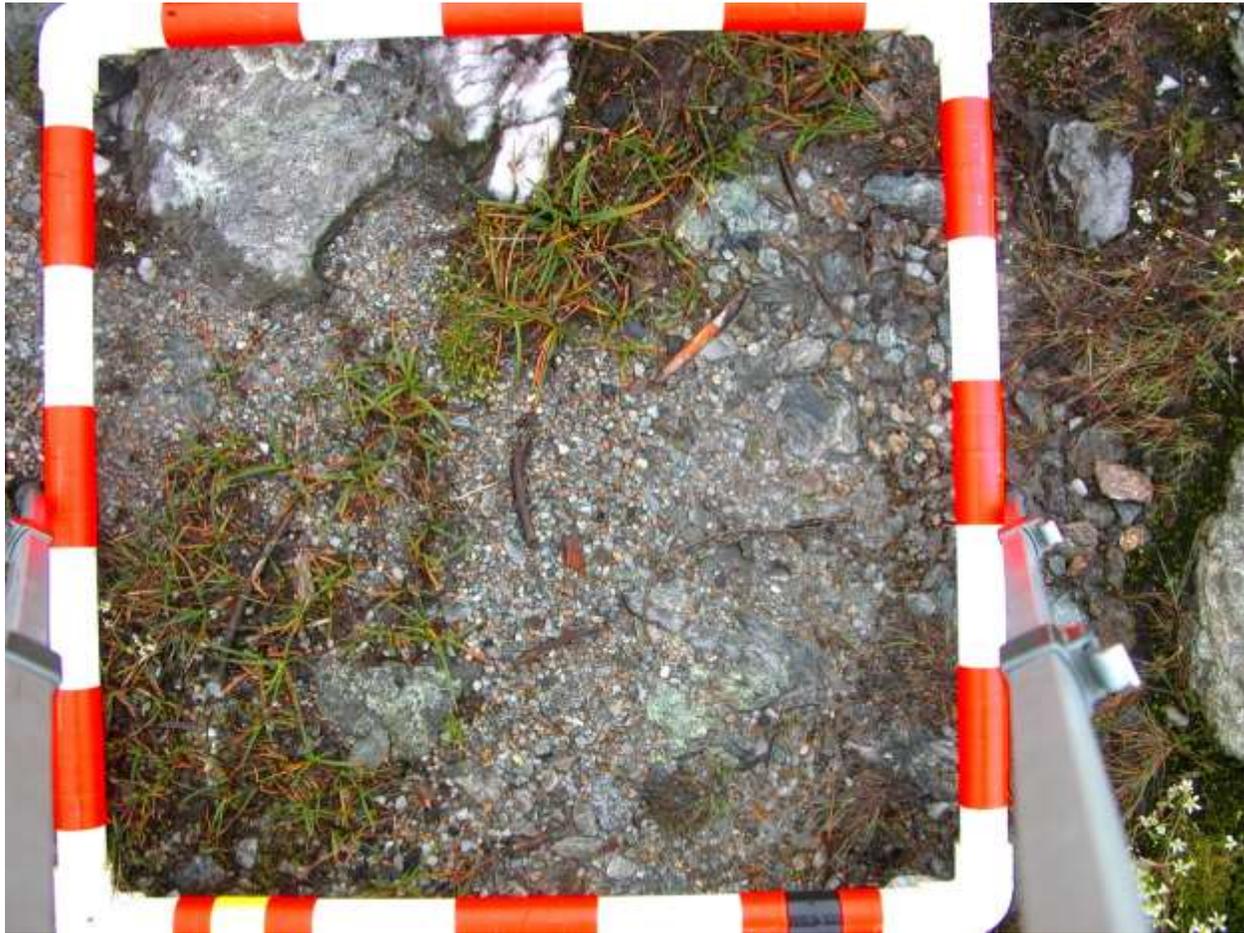


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 4a

Quadrat Photodata:

Cluster Number:	4
Quadrat ID:	a
Image Date:	July 17 th , 2004
Image Time:	11:29
Camera Height:	97 cm
Distance from Location Pin to Trail:	pin is approximately 85 cm east of scree wall
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCDR_4b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 4b

Quadrat Photodata:

Cluster Number:	4
Quadrat ID:	b
Image Date:	July 17 th , 2004
Image Time:	11:39
Camera Height:	96 cm
Distance from Location Pin to Trail:	same as 4a
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Long Trail Corridor: WCAX Road to Upper Lip

Cluster Number: 4
Quadrats: c, d
Pin: 4 c-d

Pin 4 c-d Narrative:

Next pin is approximately 3.1 meters north (10° east of magnetic north) of pin 4a-b.

Pin 4 c-d GPS Coordinates:

Northing: 225663.694
Easting: 474800.118

Landscape Photograph:

VCDR_L4c,d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 4c-d Pin Location

Image Date: July 17th, 2004
Image Time: 12:02
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:

VCDR_4c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 4c

Quadrat Photodata:

Cluster Number:	4
Quadrat ID:	c
Image Date:	July 17 th , 2004
Image Time:	11:53
Camera Height:	95 cm
Distance from Location Pin to Trail:	pin is \approx 25 cm east of scree wall
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCDR_4d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 4d

Quadrat Photodata:

Cluster Number:	4
Quadrat ID:	d
Image Date:	July 17 th , 2004
Image Time:	12:03
Camera Height:	97 cm
Distance from Location Pin to Trail:	same as 4c
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 5
Quadrats: a, b
Pin: 5 a-b

Pin 5 a-b Narrative:

Continue north as Long Trail narrows through krummholz. Upon entering opening, Cluster 5 is east of the string cordon delineating trail corridor. First pin for Cluster 5 is just to the east of the most southerly of the two large “string cordon” rocks, approximately 110 centimeters east of trail bedrock.

Note: same location as Transect HHCN #3.

Note: Quadrat frame bearing for 5b is **110° E** (magnetic north).

Pin 5 a-b GPS Coordinates:

Northing: 225753.507
Easting: 474803.851

Landscape Photograph:

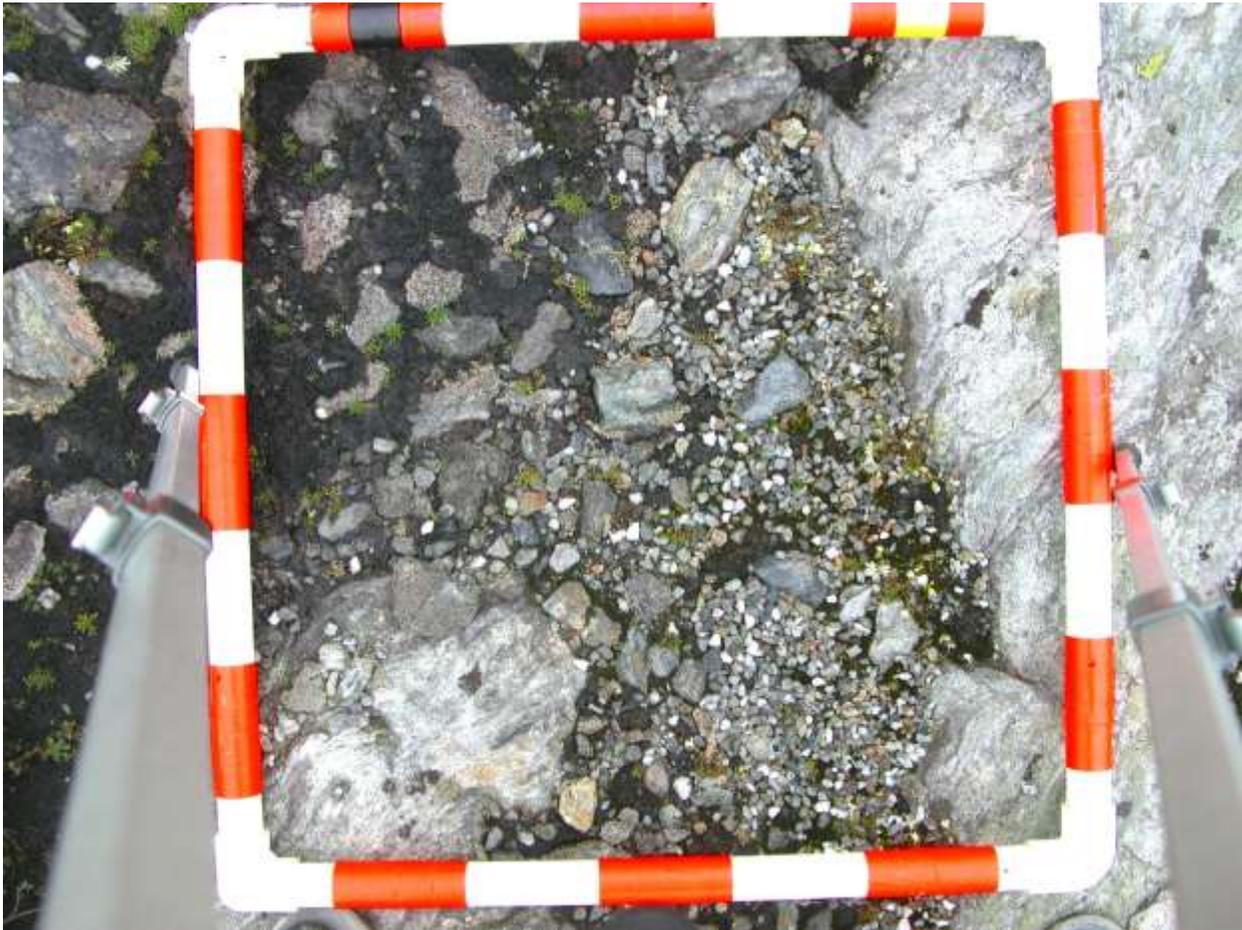
VCCN_L5a,b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 5 a-b Pin Location

Image Date: July 17th, 2004
Image Time: 12:31
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_5a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 5a

Quadrat Photodata:

Cluster Number:	5
Quadrat ID:	a
Image Date:	July 17 th , 2004
Image Time:	12:24
Camera Height:	98 cm
Distance from Location Pin to Trail:	pin is \approx 110 cm east of exposed bedrock
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_5b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 5b

Quadrat Photodata:

Cluster Number:	5
Quadrat ID:	b
Image Date:	July 17 th , 2004
Image Time:	12:31
Camera Height:	95 cm
Distance from Location Pin to Trail:	same as 5a
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	110° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 5
Quadrats: c, d
Pin: 5 c-d

Pin 5 c-d Narrative:

Next pin is approximately 4.6 meters north (10° east of magnetic north) of pin 5a-b. Location is at midpoint between the northernmost “string cordon” rock and the nearest krummholz fir.

Pin 5 c-d GPS Coordinates:

Northing: 225759.780
Easting: 474803.167

Landscape Photograph:

VCCN_L5c,d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 5 c-d Pin Location

Image Date: July 17th, 2004
Image Time: 13:07
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_5c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 5c

Quadrat Photodata:

Cluster Number:	5
Quadrat ID:	c
Image Date:	July 18 th , 2004
Image Time:	09:15
Camera Height:	100 cm
Distance from Location Pin to Trail:	pin is \approx 80 cm east of bedrock
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_5d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 5d

Quadrat Photodata:

Cluster Number:	5
Quadrat ID:	d
Image Date:	July 17 th , 2004
Image Time:	13:07
Camera Height:	97 cm
Distance from Location Pin to Trail:	same as 5c
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 6
Quadrats: a, b, c, d
Pin: 6 a-d

Pin 6 a-d Narrative:

Continue north on Long Trail, past puncheon bridge in krummholz narrows, past a three-piece puncheon grouping over sedge meadow, and then over a three-piece puncheon grouping along krummholz. Cluster 6 is beyond (north of) the northern end of this puncheon grouping in gap between exposed bedrock slabs to the west of trail.

Note: same location as Transect HHCN #5.

Pin 6 a-d GPS Coordinates:

Northing: 225829.751
Easting: 474801.202

Landscape Photograph:

VCCN_L6a,b,c,d

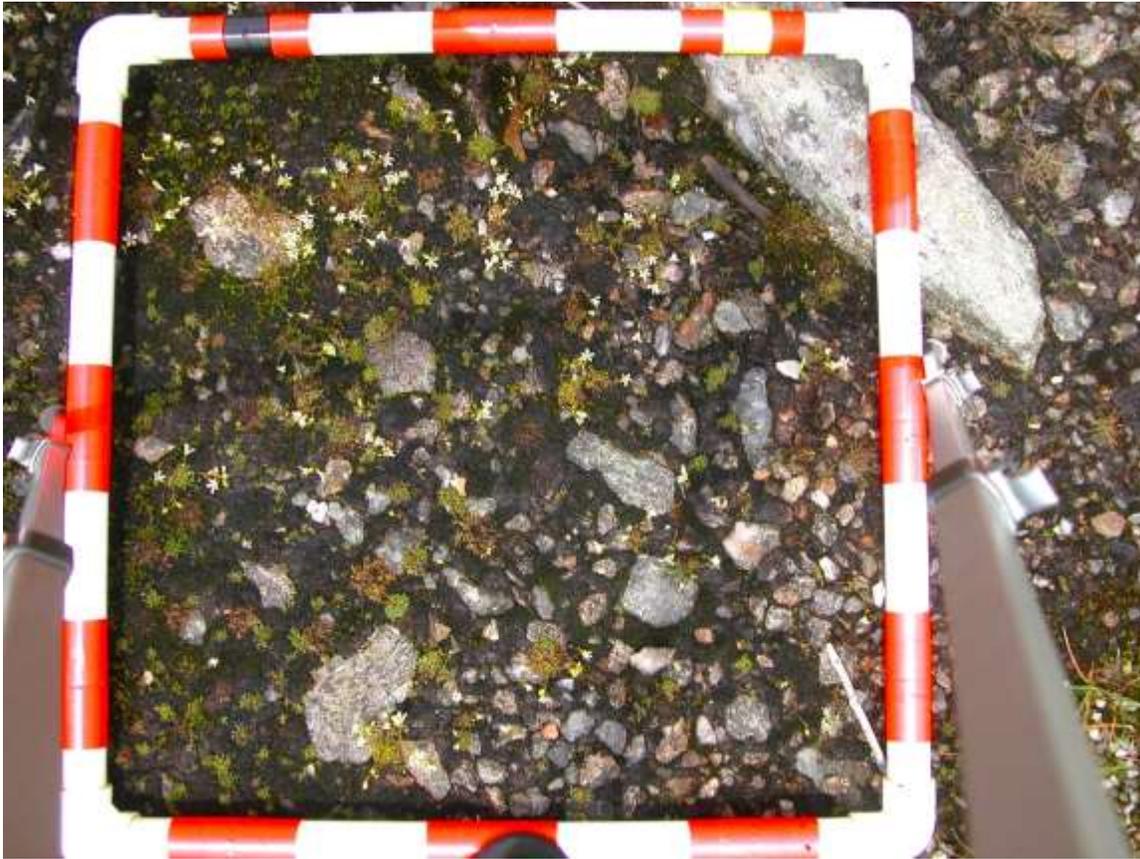


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6 a-d Pin Location

Image Date: July 17th, 2004
Image Time: 13:31
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:

VCCN_6a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6a

Quadrat Photodata:

Cluster Number:	6
Quadrat ID:	a
Image Date:	July 17 th , 2004
Image Time:	13:17
Camera Height:	96 cm
Distance from Location Pin to Trail:	pin is \approx 80 cm west of bedrock
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_6b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6b

Quadrat Photodata:

Cluster Number:	6
Quadrat ID:	b
Image Date:	July 17 th , 2004
Image Time:	13:31
Camera Height:	97 cm
Distance from Location Pin to Trail:	same as 6a
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_6c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6c

Quadrat Photodata:

Cluster Number:	6
Quadrat ID:	c
Image Date:	July 22 nd , 2004
Image Time:	13:33
Camera Height:	105 cm
Distance from Location Pin to Trail:	same as 6a
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_6d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6d

Quadrat Photodata:

Cluster Number:	6
Quadrat ID:	d
Image Date:	July 22 nd , 2004
Image Time:	13:42
Camera Height:	104 cm
Distance from Location Pin to Trail:	same as 6a
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 6
Quadrats: e, f
Pin: 6 e-f

Pin 6 e-f Narrative:

Return to Long Trail and proceed north approximately halfway to the point where trail reenters krummholz. Pin is to west of scree wall, approximately 60 cm west of trail bedrock.

Pin 6 e-f GPS Coordinates:

Northing: 225836.657
Easting: 474805.091

Landscape Photograph:

VCCN_L6e,f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6 e-f Pin Location

Image Date: July 17th, 2004
Image Time: 13:55
Location Pin in NE Corner of Quadrat Frame

Quadrat Photograph:

VCCN_6e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6e

Quadrat Photodata:

Cluster Number:	6
Quadrat ID:	e
Image Date:	July 17 th , 2004
Image Time:	13:42
Camera Height:	99 cm
Distance from Location Pin to Trail:	pin is \approx 60 cm west of trail bedrock
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_6f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 6f

Quadrat Photodata:

Cluster Number:	6
Quadrat ID:	f
Image Date:	July 17 th , 2004
Image Time:	13:55
Camera Height:	99 cm
Distance from Location Pin to Trail:	same as 6e
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 7
Quadrats: a, b
Pin: 7 a-b

Pin 7 a-b Narrative:

Continue north on Long Trail to Amherst Trail junction. Take the Amherst Trail just to the east side of Drift Rock. First pin is to the east of the tongue of rock that extends north of string cordon, approximately 2 meters north of the large expanse of exposed bedrock that extends from Drift Rock to krummholz.

Note: same location as Transect HHCN #8.

Pin 7 a-b GPS Coordinates:

Northing: 225973.683
Easting: 474816.284

Landscape Photograph:

VCCN_L7a,b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7 a-b Pin Location

Image Date: July 18th, 2004
Image Time: 09:41
Location Pin in NE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_7a

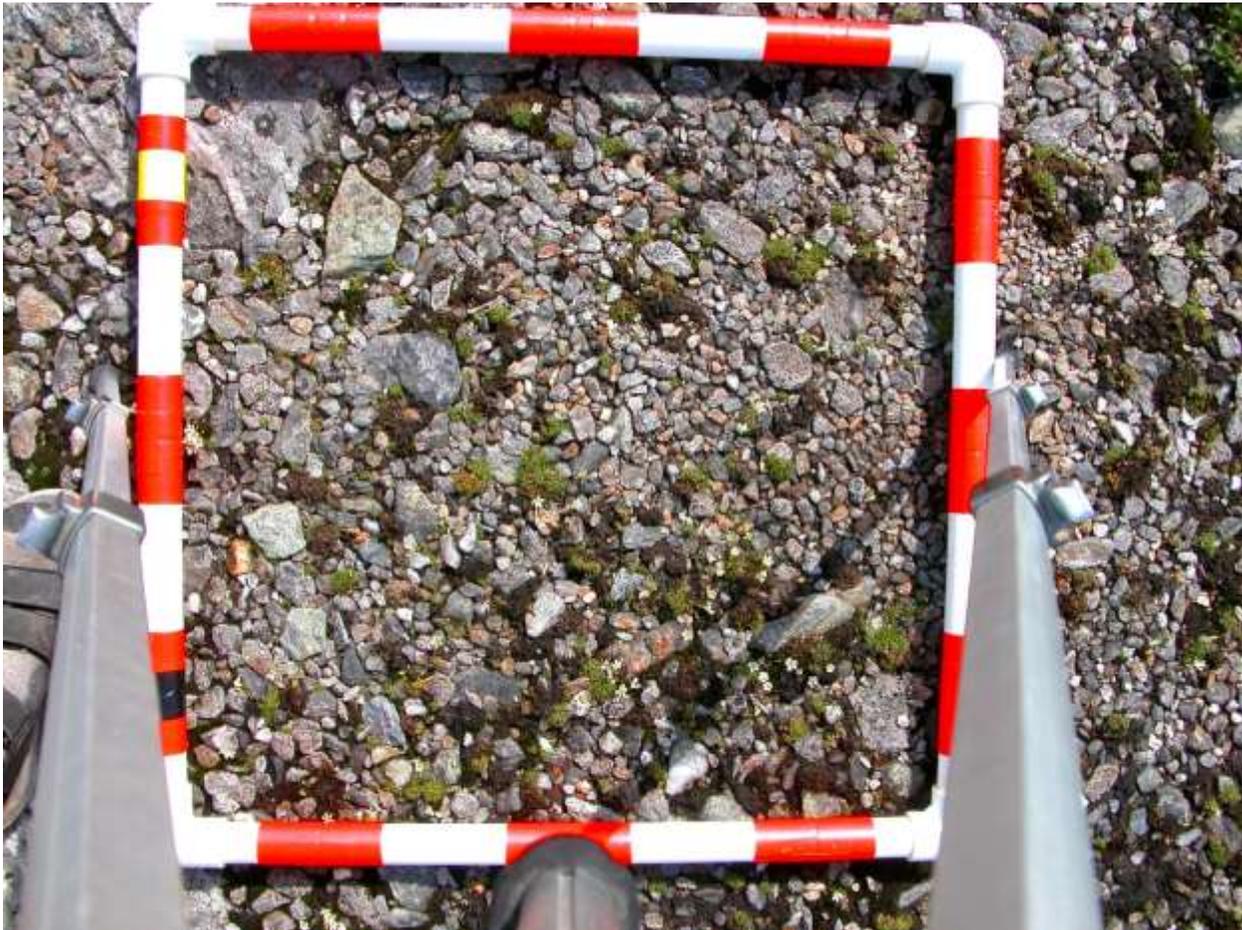


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7a

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	a
Image Date:	July 18 th , 2004
Image Time:	09:35
Camera Height:	106 cm
Distance from Location Pin to Trail:	pin is \approx 2 meters north of exposed bedrock trail margin
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_7b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7b

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	b
Image Date:	July 18 th , 2004
Image Time:	09:41
Camera Height:	104 cm
Distance from Location Pin to Trail:	same as 7a
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 7
Quadrats: c, d, e
Pin: 7 c-e

Pin 7 c-e Narrative:

Next pin is to the west of the tongue of rock that extends to the north of string cordon, approximately 4.1 meters to northwest (320° from magnetic north) of Pin 7a-b. It is not far from Pin 7f-h, which lies approximately 1.3 meters further to the northeast.

Pin 7 c-e GPS Coordinates:

Northing: 225976.455
Easting: 474813.150

Landscape Photograph:

VCCN_L7c,d,e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7 c-e Pin Location

Image Date: July 18th, 2004
Image Time: 10:03
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_7c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7c

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	c
Image Date:	July 18 th , 2004
Image Time:	09:51
Camera Height:	109 cm
Distance from Location Pin to Trail:	pin is \approx 2.8 meters to north of exposed bedrock trail margin
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_7d

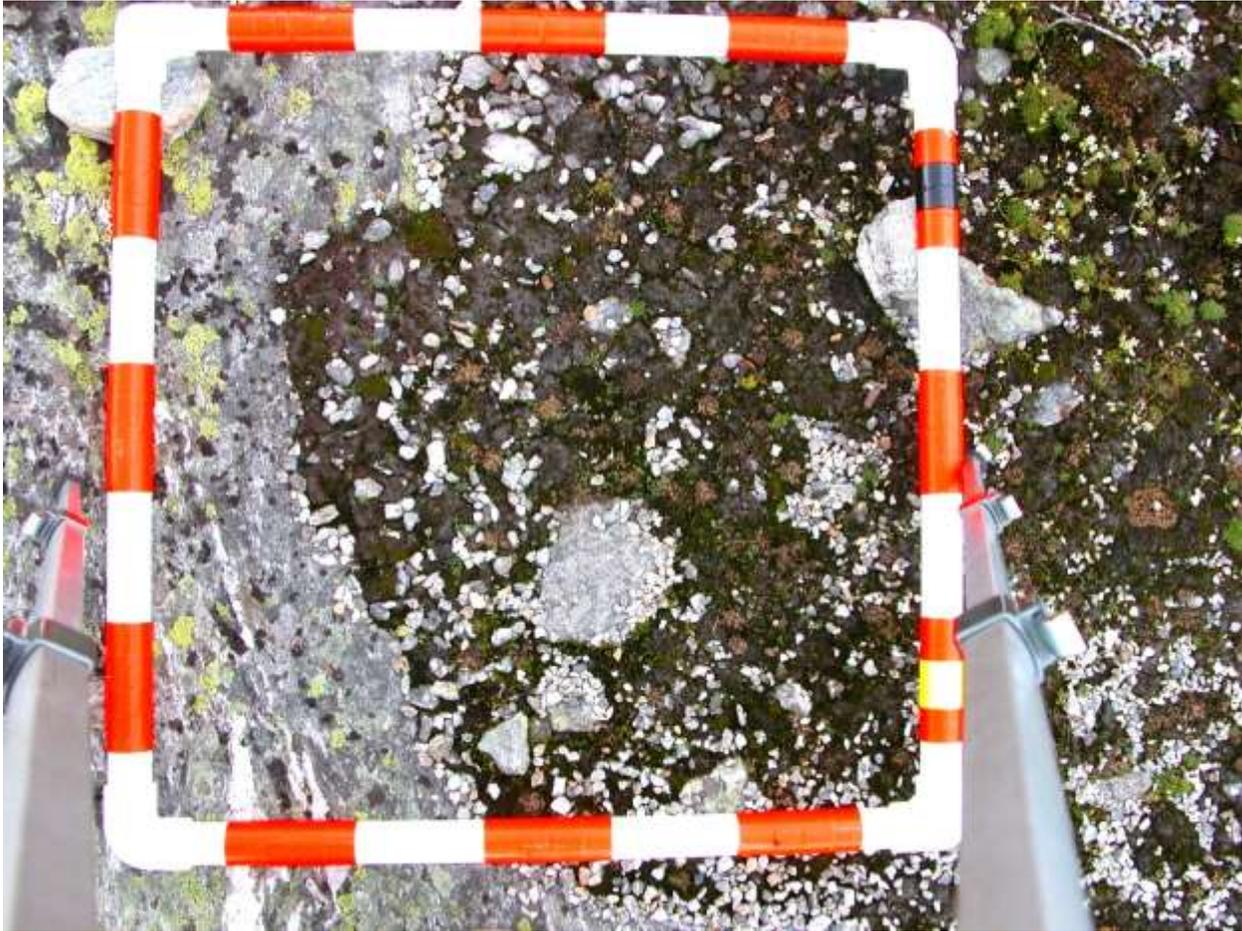


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7d

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	d
Image Date:	July 18 th , 2004
Image Time:	10:02
Camera Height:	103 cm
Distance from Location Pin to Trail:	same as 7c
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_7e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7e

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	e
Image Date:	July 22 nd , 2004
Image Time:	12:47
Camera Height:	107 cm
Distance from Location Pin to Trail:	same as 7c
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 7
Quadrats: f, g, h
Pin: 7 f-h

Pin 7 f-h Narrative:

Next pin is also on west side of bedrock tongue that extends to north of string cordon, approximately 1.3 meters to the northeast (45° from magnetic north) of Pin 7 c-e.

Pin 7 f-h GPS Coordinates:

Northing: 225976.707
Easting: 474812.329

Landscape Photograph:

VCCN_L7f,g,h



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7 f-h Pin Location

Image Date: July 18th, 2004
Image Time: 10:29
Location Pin in NE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_7f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7f

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	f
Image Date:	July 22 nd , 2004
Image Time:	12:55
Camera Height:	101 cm
Distance from Location Pin to Trail:	pin is \approx 4 meters to the north of exposed bedrock trail margin
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_7g

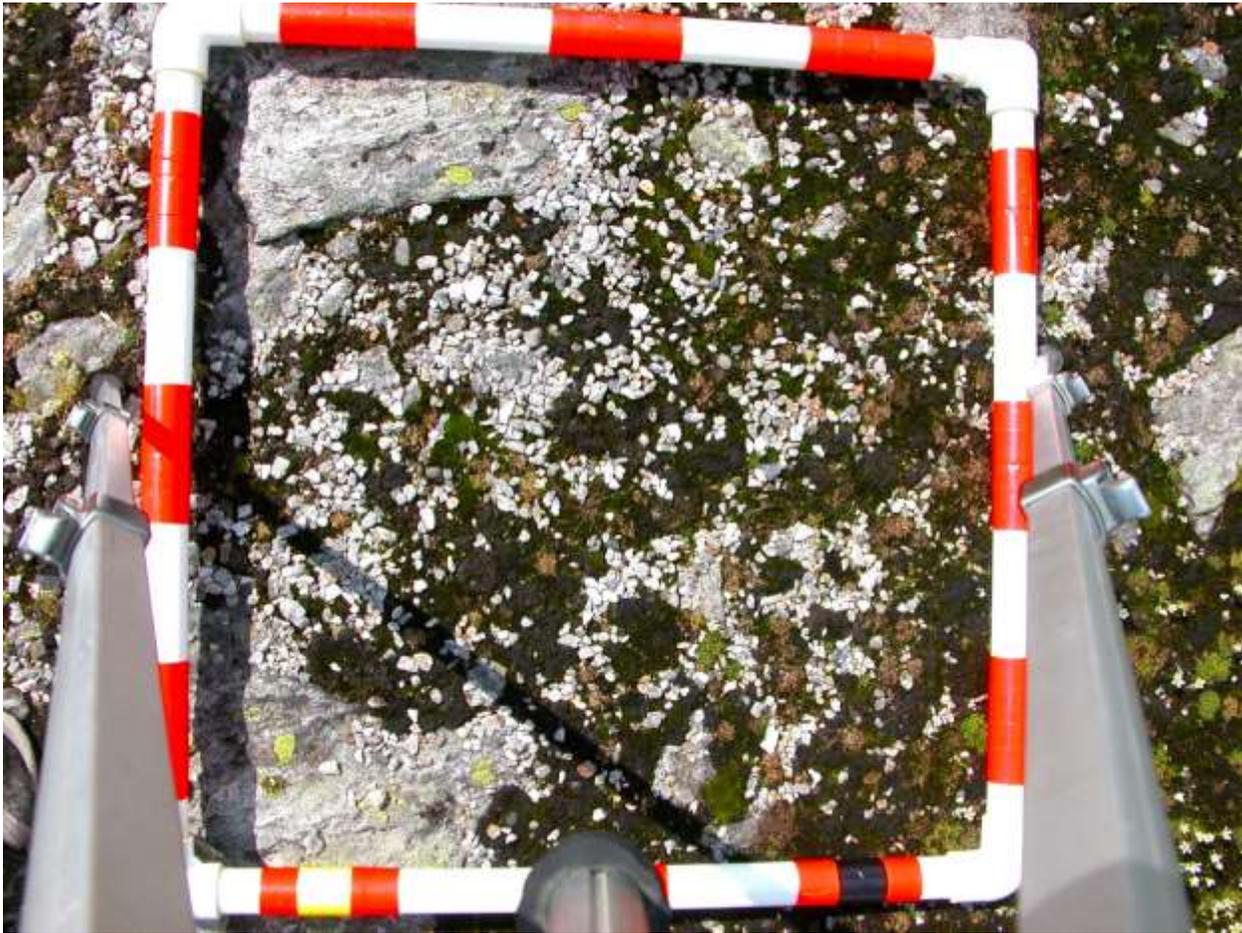


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7g

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	g
Image Date:	July 18 th , 2004
Image Time:	10:13
Camera Height:	99 cm
Distance from Location Pin to Trail:	same as 7f
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_7h



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 7h

Quadrat Photodata:

Cluster Number:	7
Quadrat ID:	h
Image Date:	July 18 th , 2004
Image Time:	10:29
Camera Height:	101 cm
Distance from Location Pin to Trail:	same as 7f
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 8
Quadrats: a, b, c, d
Pin: 8 a-d

Pin 8 a-d Narrative:

Return to west side of Drift Rock and take Long Trail north. Cluster 8 is approximately halfway to the first puncheon grouping to the north of Drift Rock, beyond scree wall to east in revegetation area. All three Cluster 8 location Pin are within 2.5 meters of each other, forming a triangle. Pin 8 a-d is the furthest east.

Note: same location as Transect HHCN #10.

Pin 8 a-d GPS Coordinates:

Northing: 225986.767
Easting: 474800.373

Landscape Photograph:

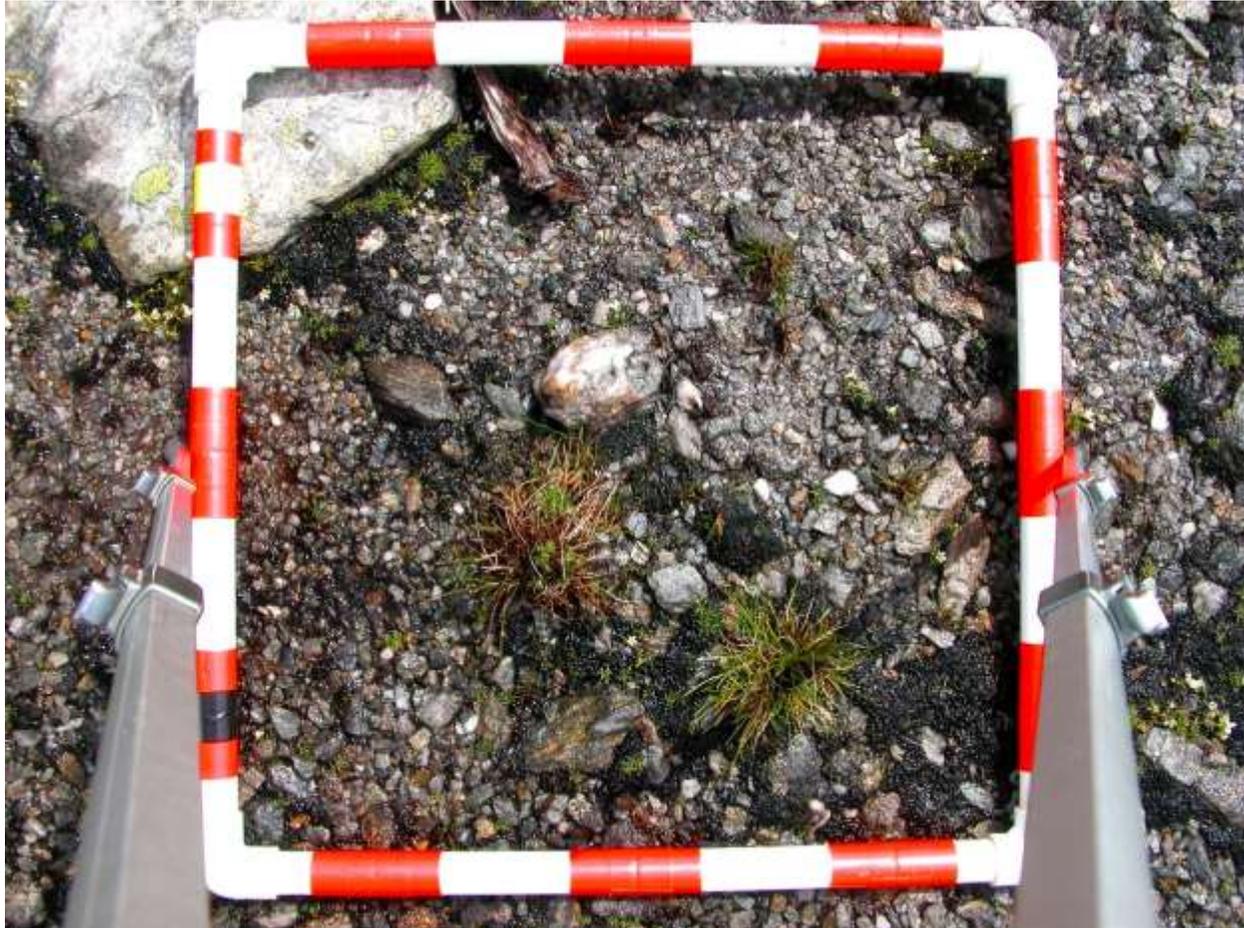
VCCN_L8a,b,c,d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8 a-d Pin Location

Image Date: July 18th, 2004
Image Time: 11:05
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_8a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8a

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	a
Image Date:	July 18 th , 2004
Image Time:	10:46
Camera Height:	103 cm
Distance from Location Pin to Trail:	pin is \approx 3.2 meters east (100° from magnetic north) of the south end of scree wall
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8b

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	b
Image Date:	July 18 th , 2004
Image Time:	10:55
Camera Height:	102 cm
Distance from Location Pin to Trail:	same as 8a
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8c

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	c
Image Date:	July 18 th , 2004
Image Time:	11:05
Camera Height:	102 cm
Distance from Location Pin to Trail:	same as 8a
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8d

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	d
Image Date:	July 22 nd , 2004
Image Time:	13:08
Camera Height:	103 cm
Distance from Location Pin to Trail:	same as 8a
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 8
Quadrats: e, f, g
Pin: 8 e-g

Pin 8 e-g Narrative:

The next pin is approximately 2.4 meters to the west (280° from magnetic north) of Pin 8a-d.

Pin 8 e-g GPS Coordinates:

Northing: 225986.142
Easting: 474796.637

Landscape Photograph:

VCCN_L8e,f,g



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8 e-g Pin Location

Image Date: July 18th, 2004
Image Time: 11:23
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:

VCCN_8e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8e

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	e
Image Date:	July 18 th , 2004
Image Time:	11:15
Camera Height:	104 cm
Distance from Location Pin to Trail:	pin is \approx 1 meter from south end of scree wall
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8f

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	f
Image Date:	July 22 nd , 2004
Image Time:	13:19
Camera Height:	100 cm
Distance from Location Pin to Trail:	same as 8e
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8g



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8g

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	g
Image Date:	July 18 th , 2004
Image Time:	11:23
Camera Height:	102 cm
Distance from Location Pin to Trail:	same as 8e
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 8
Quadrats: h, i, j
Pin: 8 h-j

Pin 8 h-j Narrative:

Next pin is approximately 2.1 meters to the northeast (40° from magnetic north) of pin 8 e-g.

Pin 8 h-j GPS Coordinates:

Northing: 225988.894
Easting: 474797.316

Landscape Photograph:

VCCN_L8h,i,j



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8 h-j Pin Location

Image Date: July 18th, 2004
Image Time: 11:52
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_8h

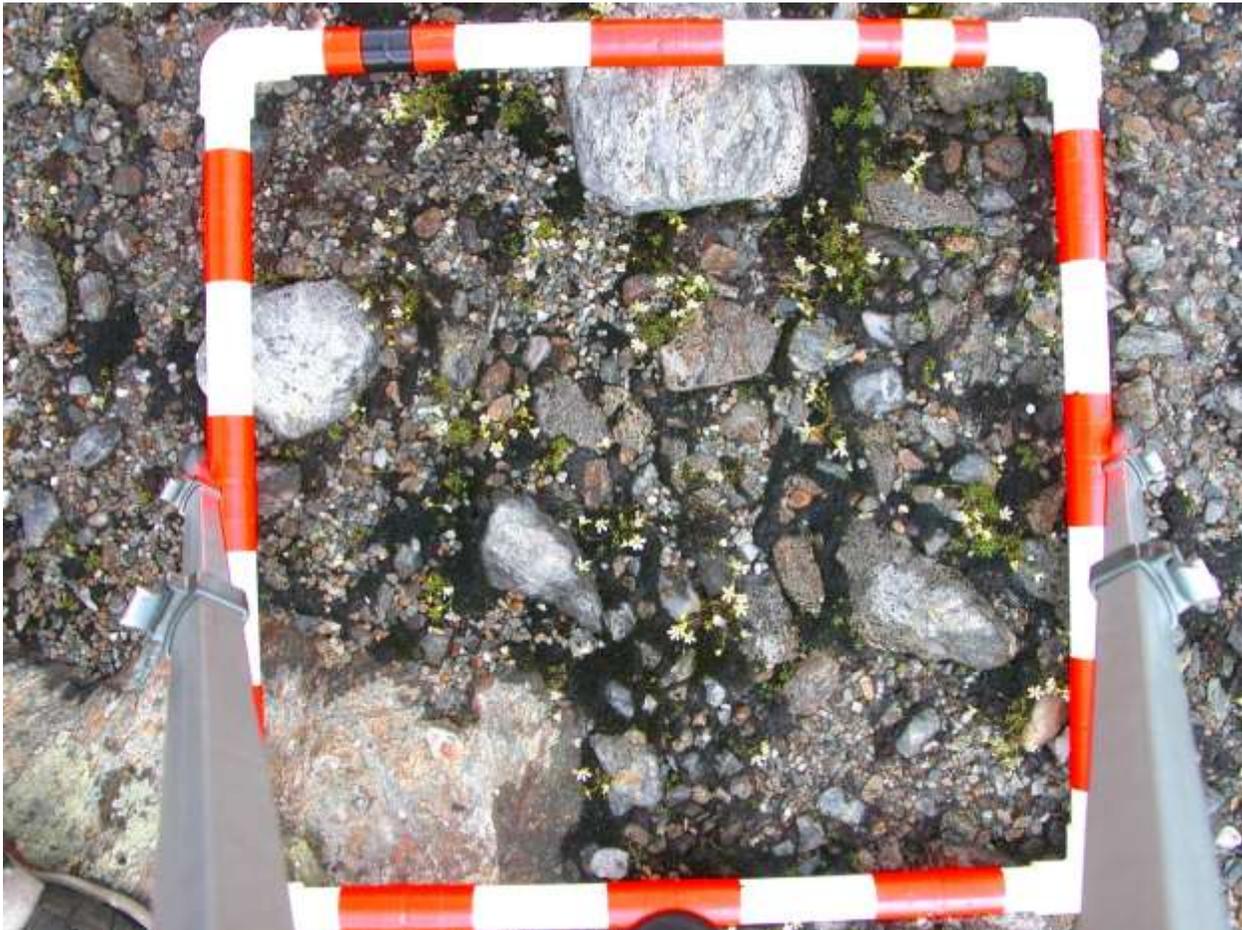


Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8h

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	h
Image Date:	July 18 th , 2004
Image Time:	11:46
Camera Height:	105 cm
Distance from Location Pin to Trail:	pin is \approx 1.6 meters east of scree wall
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8i



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8i

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	i
Image Date:	July 18 th , 2004
Image Time:	11:52
Camera Height:	102 cm
Distance from Location Pin to Trail:	same as 8h
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_8j



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 8j

Quadrat Photodata:

Cluster Number:	8
Quadrat ID:	j
Image Date:	July 18 th , 2004
Image Time:	12:02
Camera Height:	107 cm
Distance from Location Pin to Trail:	same as 8h
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 9
Quadrats: a, b, c, d
Pin: 9 a-d

Pin 9 a-d Narrative:

Continue north on Long Trail through krummholz, past big step (down to single plank, currently) between exposed bedrock segments, then up to clearing. Look for glacial erratic to west of trail beyond (to west of) low scree wall and brush. First pin is the furthest to the west of the two Cluster 9 Pin, to the west of the rounded scree wall that ends (at northwest end) at glacial erratic.

Note: same location as Transect HHCN #12.

Pin 9 a-d GPS Coordinates:

Northing: 226094.576
Easting: 474785.345

Landscape Photograph:

VCCN_L9a,b,c,d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9 a-d Pin Location

Image Date: July 18th, 2004
Image Time: 12:34
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_9a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9a

Quadrat Photodata:

Cluster Number:	9
Quadrat ID:	a
Image Date:	July 18 th , 2004
Image Time:	12:26
Camera Height:	105 cm
Distance from Location Pin to Trail:	pin is \approx 1.4 meters southwest of scree wall
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_9b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9b

Quadrat Photodata:

Cluster Number:	9
Quadrat ID:	b
Image Date:	July 18 th , 2004
Image Time:	12:34
Camera Height:	103 cm
Distance from Location Pin to Trail:	same as 9a
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_9c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9c

Quadrat Photodata:

Cluster Number:	9
Quadrat ID:	c
Image Date:	July 22 nd , 2004
Image Time:	12:03
Camera Height:	101 cm
Distance from Location Pin to Trail:	same as 9a
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_9d



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9d

Quadrat Photodata:

Cluster Number:	9
Quadrat ID:	d
Image Date:	July 22 nd , 2004
Image Time:	12:12
Camera Height:	100 cm
Distance from Location Pin to Trail:	same as 9a
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 9
Quadrats: e, f
Pin: 9 e-f

Pin 9 e-f Narrative:

Next pin is approximately 1.7 meters to the southeast (140° from magnetic north) of Pin 9a-d.

Pin 9 e-f GPS Coordinates:

Northing: 226093.576
Easting: 474786.574

Landscape Photograph:

VCCN_L9e,f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9 e-f Pin Location

Image Date: July 18th, 2004
Image Time: 13:00
Location Pin in NE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_9e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9e

Quadrat Photodata:

Cluster Number:	9
Quadrat ID:	e
Image Date:	July 18 th , 2004
Image Time:	12:39
Camera Height:	103 cm
Distance from Location Pin to Trail:	pin is \approx 30 centimeters from scree wall (towards southwest end)
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_9f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 9f

Quadrat Photodata:

Cluster Number:	9
Quadrat ID:	f
Image Date:	July 18 th , 2004
Image Time:	13:00
Camera Height:	101 cm
Distance from Location Pin to Trail:	same as 9e
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 10
Quadrats: a, b
Pin: 10 a-b

Pin 10 a-b Narrative:

Continue north on the Long Trail. Before reaching Canyon North/Canyon North Extension Jct. look for 3 glacial erratics along the west margin of the trail. Pin 10a-b is between and a short distance to the west (about 1 meter) of the two most northerly of these large erratics.

Pin 10 a-b GPS Coordinates:

Northing: 226161.591
Easting: 474753.738

Landscape Photograph:

VCCN_L10 a,b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10 a-b Pin Location

Image Date: July 22nd, 2004
Image Time: 10:44
Location Pin in NW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_10a



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10a

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	a
Image Date:	July 22 nd , 2004
Image Time:	10:31
Camera Height:	108 cm
Distance from Location Pin to Trail:	pin is \approx 1.1 meters west of the smaller rock between the 2 larger erratics
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_10b



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10b

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	b
Image Date:	July 22 nd , 2004
Image Time:	10:44
Camera Height:	102 cm
Distance from Location Pin to Trail:	same as 10a
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 10
Quadrats: c, d, e, f
Pin: 10 c-f

Pin 10 c-f Narrative:

Next pin is on the opposite (east) side of the Long Trail, approximately 1.5 meters to the north-northwest of the large rock defining trail and approximately 2.8 meters south of the krummholz near the Canyon North/Canyon North Extension Jct.

Pin 10 c-f GPS Coordinates:

Northing: 226166.667
Easting: 474758.045

Landscape Photograph:

VCCN_L10c,d,e,f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10 c-f Pin Location

Image Date: July 22nd, 2004
Image Time: 11:19
Location Pin in SE Corner of Quadrat Frame

Quadrat Photograph:
VCCN_10c



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10c

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	c
Image Date:	July 22 nd , 2004
Image Time:	10:53
Camera Height:	105 cm
Distance from Location Pin to Trail:	pin is \approx 85 cm southeast of sloping bedrock trail margin
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_10d



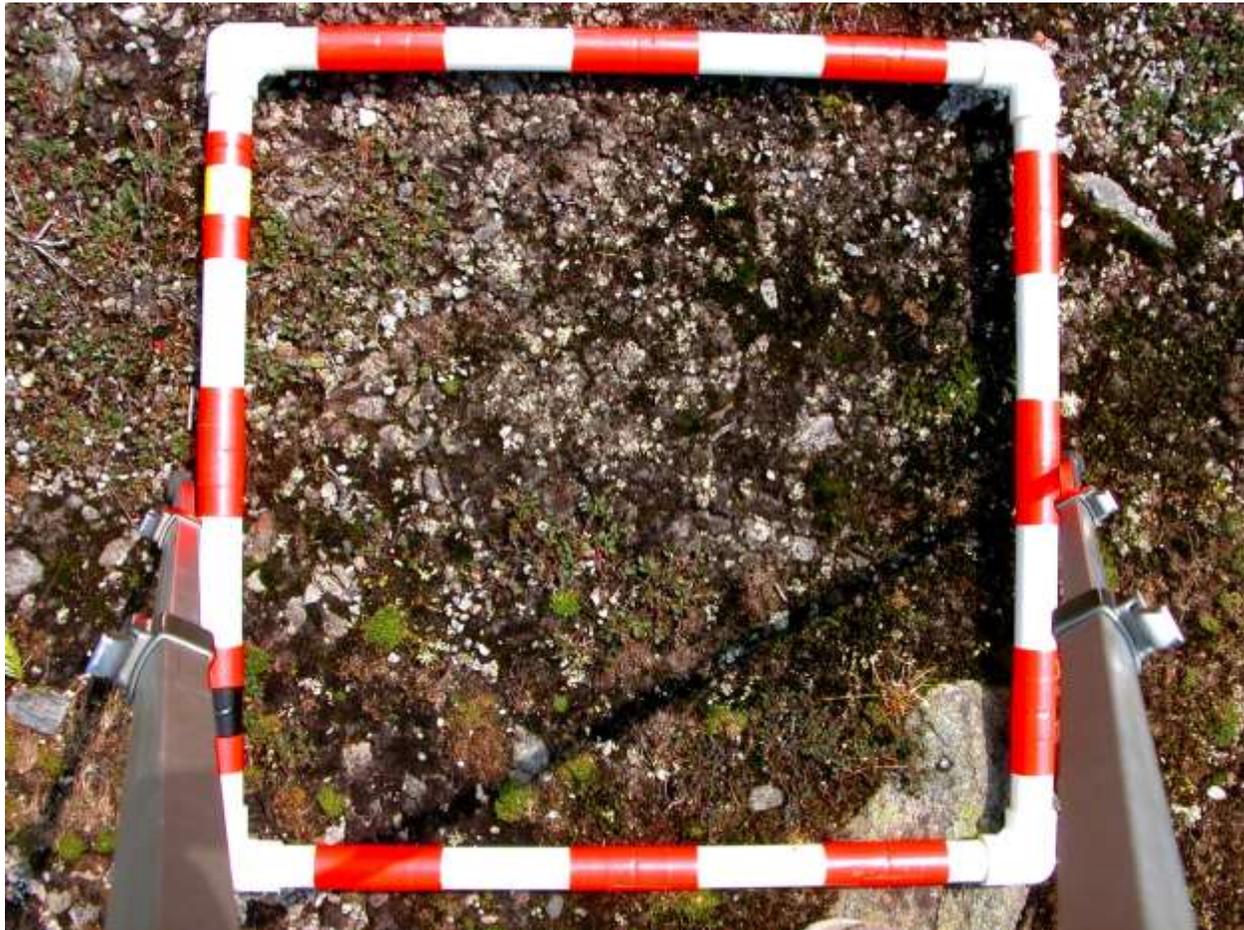
Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10d

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	d
Image Date:	July 22 nd , 2004
Image Time:	11:07
Camera Height:	104 cm
Distance from Location Pin to Trail:	same as 10c
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_10e



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10e

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	e
Image Date:	July 22 nd , 2004
Image Time:	11:15
Camera Height:	105 cm
Distance from Location Pin to Trail:	same as 10c
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_10f



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10f

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	f
Image Date:	July 22 nd , 2004
Image Time:	11:19
Camera Height:	99 cm
Distance from Location Pin to Trail:	same as 10c
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Photoquadrat Baseline Data; Mount Mansfield Ridgeline; July 2004

Site Name: Long Trail Corridor: WCAX Road to Upper Lip
Cluster Number: 10
Quadrats: g, h, i, j
Pin: 10 g-j

Pin 10 g-j Narrative:

Next pin is approximately 2 meters to the north-northeast (25° from magnetic north) of Pin 10c-f, and about 75 centimeters to the southeast of the bedrock trail margin.

Pin 10 g-j GPS Coordinates:

Northing: 226168.524
Easting: 474757.249

Landscape Photograph:

VCCN_L10g,h,i,j



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10 g-j Pin Location

Image Date: July 22nd, 2004
Image Time: 11:47
Location Pin in SW Corner of Quadrat Frame

Quadrat Photograph:
VCCN_10g



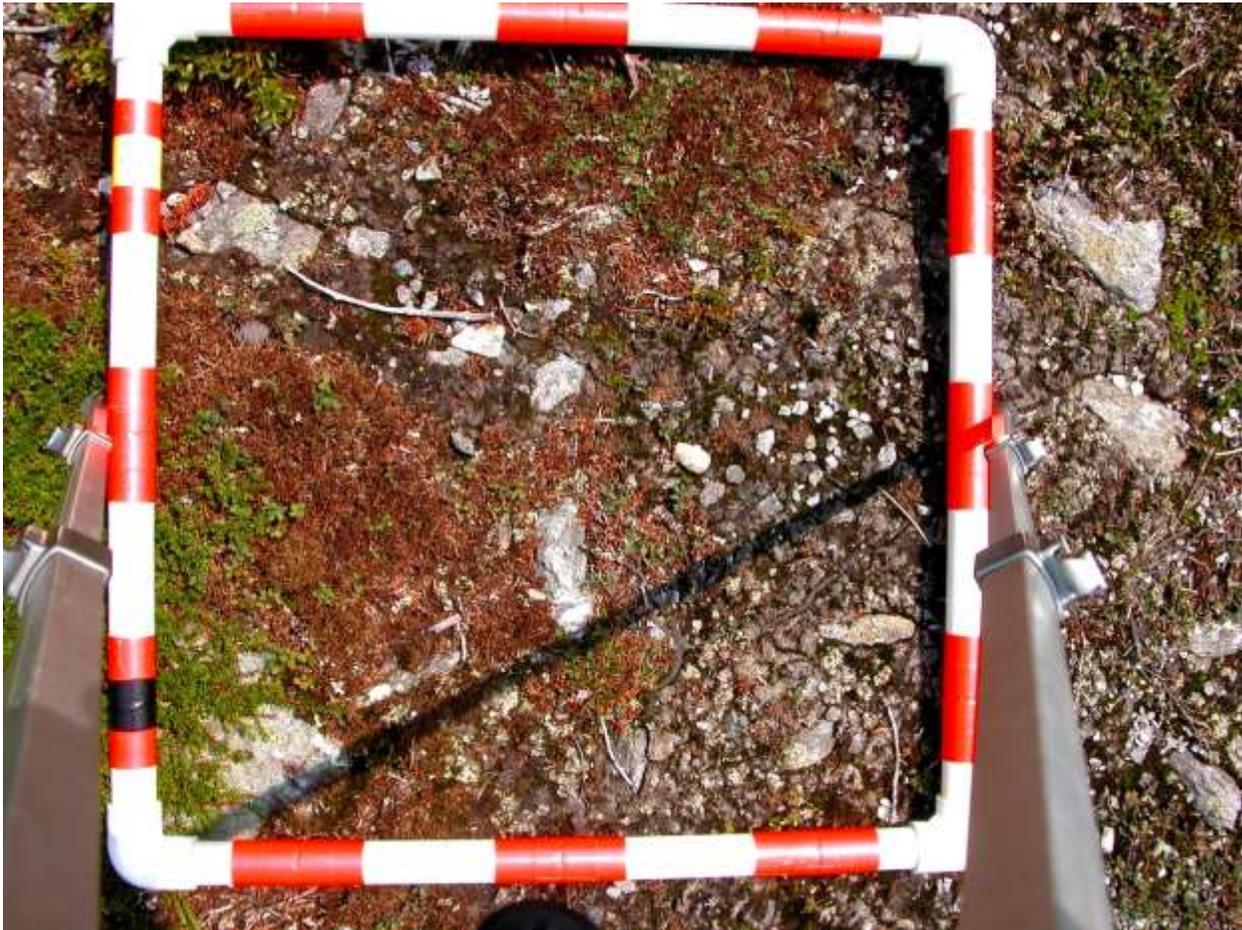
Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10g

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	g
Image Date:	July 22 nd , 2004
Image Time:	11:29
Camera Height:	103 cm
Distance from Location Pin to Trail:	pin is \approx 75 cm east of the bedrock trail margin
Location Pin Corner, Quadrat Frame:	NE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_10h



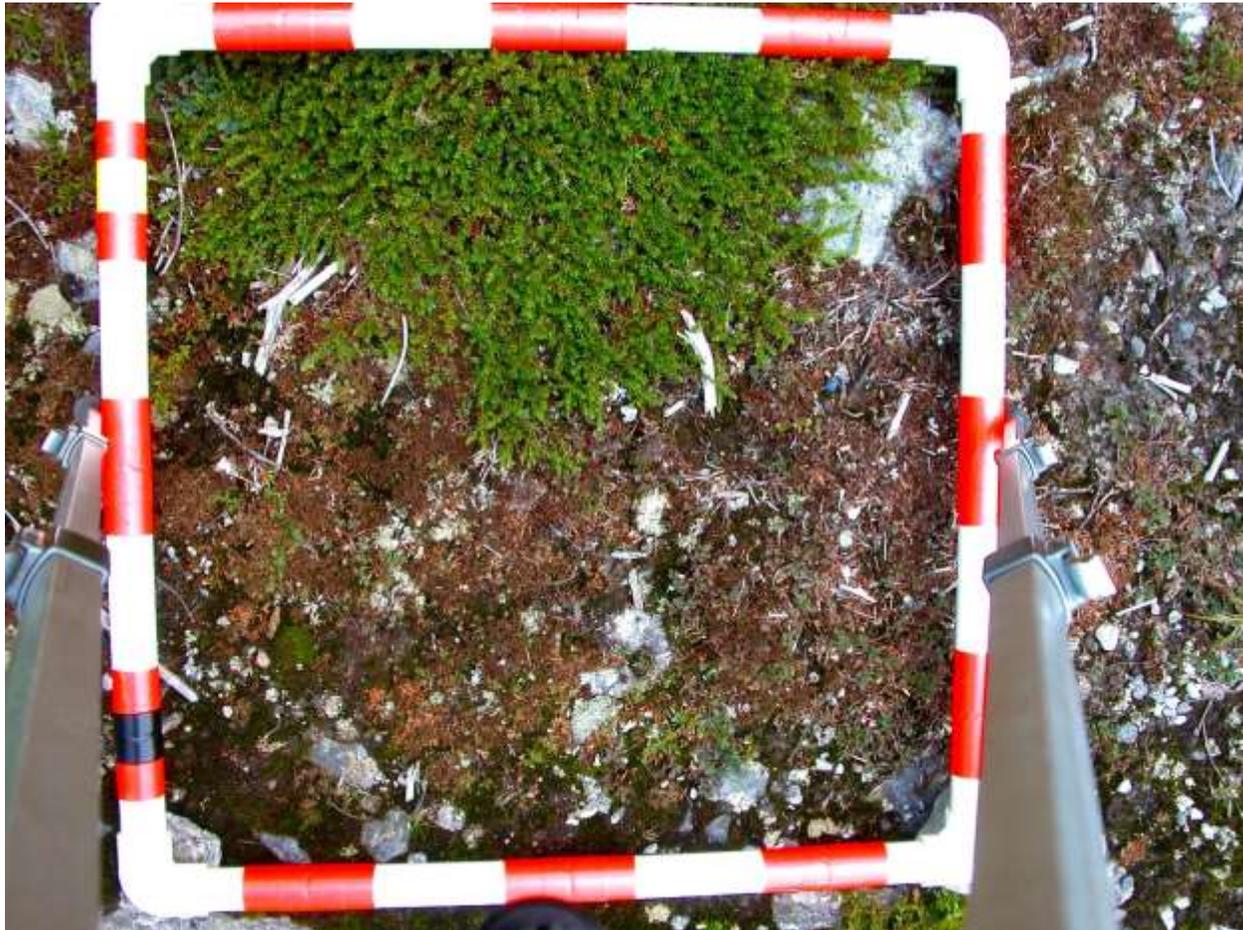
Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10h

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	h
Image Date:	July 22 nd , 2004
Image Time:	11:37
Camera Height:	101 cm
Distance from Location Pin to Trail:	same as 10g
Location Pin Corner, Quadrat Frame:	NW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:

VCCN_10i



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10i

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	i
Image Date:	July 22 nd , 2004
Image Time:	11:44
Camera Height:	99 cm
Distance from Location Pin to Trail:	same as 10g
Location Pin Corner, Quadrat Frame:	SE
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

Quadrat Photograph:
VCCN_10j



Long Trail Corridor, WCAX Road to Upper Lip, Quadrat 10j

Quadrat Photodata:

Cluster Number:	10
Quadrat ID:	j
Image Date:	July 22 nd , 2004
Image Time:	11:47
Camera Height:	101 cm
Distance from Location Pin to Trail:	same as 10g
Location Pin Corner, Quadrat Frame:	SW
Quadrat Frame Bearing, NW to NE:	90° E (of magnetic north)
Camera Type:	Nikon E5700 digital
Lens Type:	Nikkor ED 8.9-71.2 Zoom (5.0 megapixels)

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