

## Baseline Documentation Report:

### Rattlesnake Hill Conservation Restriction

Owner: the Inhabitants of Leverett acting through its Select Board

Holder of Conservation Restriction: Rattlesnake Gutter Trust

November 6, 2011

# Baseline Documentation Report: Rattlesnake Hill Conservation Restriction

## Table of Contents

*Note: all maps were created in ArcGIS 9 and 10 (saved on CD as TIF files), all charts in Microsoft Excel, all text and pages of photographs in Microsoft Word*

1. Location of Rattlesnake Hill Conservation Restriction on Hemenway Road
  - p. 1.1 Maps with directions
  - p. 1.3 Chart with directions, brief land description
  
2. Maps of Rattlesnake Hill Conservation Restriction
  - p. 2.1 Map with both the property and Nearby Protected Areas
  - p. 2.2 2005 Orthophoto
  - p. 2.3 Topographic map
  - p. 2.4 Map of the property with Natural Heritage Priority Habitat (NHESP, 2008) and NHESP/TNC Biomap2 (2011) overlays
  - p. 2.5 Survey
  
3. Brief History of the Conservation Restriction
  - p. 3.1 History and Description of the Land
  
4. Conservation Restriction (*separate document*) and Abstract
  
5. Relevant Deeds: Henry G. Berry to the Inhabitants of Leverett, Franklin County  
Registry of Deeds: Franklin Registry of Deeds, Book 5869, page 171
  
6. Boundary Information and Photographs of Property Lines and Sites of Special Interest
  - p. 6.1 Monitoring Map: Lines, Corners, Sites of Special Interest
  - p. 6.2 Map of Location of Boundary Photographs
  - p. 6.3 Map of Sites of Special Interest Photographs
  - p. 6.4 Chart of Boundary and Photo Reference
  - p. 6.6 Photographs of Boundaries and Sites of Special Interest

## 7. Signature Pages

- p. 7.1 Photographers
- p. 7.3 Report Writers
- p. 7.5 Land Owner and Rattlesnake Gutter Trust Representative

## Appendices Rattlesnake Hill Baseline Documentation

### A1. Log of contact with land and land owner

- p. A1.1 Dates of Baseline Documentation Visits
- p. A1.2 Dates of Rattlesnake Gutter Board Discussions and meetings with Conservation Commission and Selectboard

### A2. Assessor's Map

### A3. Neighboring Deeds

- p. A3.1 Map
- p. A3.2 Chart

#### Deeds

#### A3.3 Berry, Henry G

Note: also see CR Exhibit A. Deed to Town Book 5869, page 171, Book 6095, page 193 and 194, Plan Book 132, page 12

#### A3.6 Adams, Steven

#### A3.9 Stringer, Thomas

#### A3.11 Sckolnick. Lewis B.

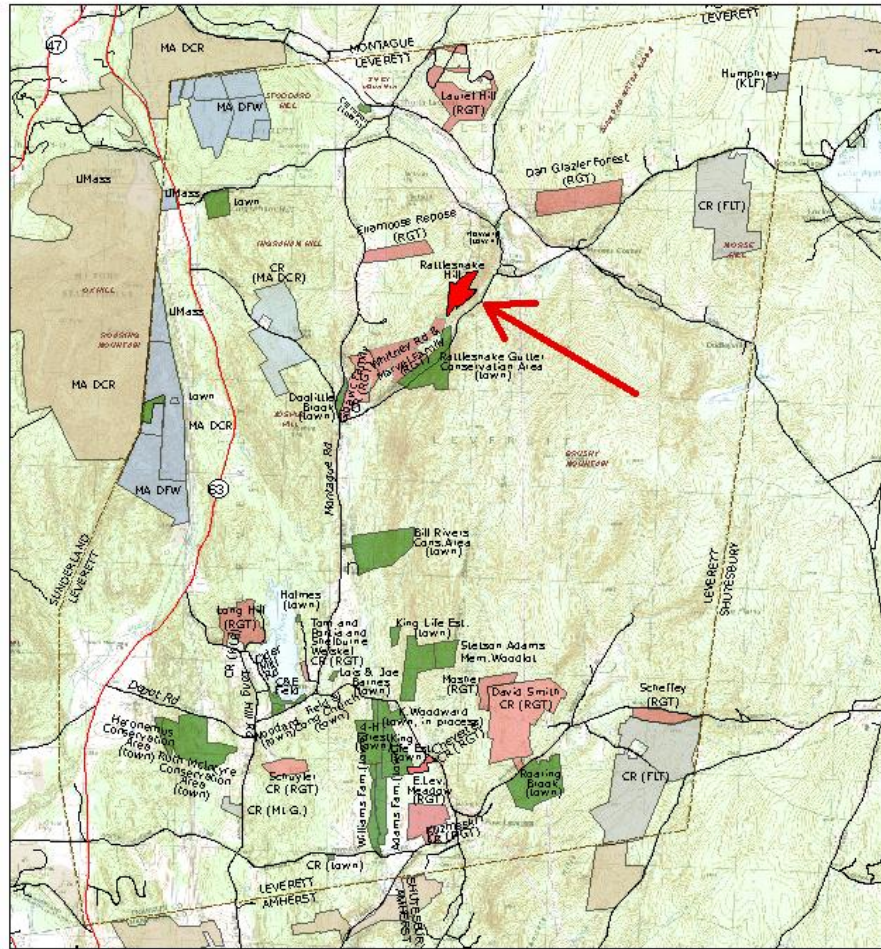
#### A3.13 Blinn, Stephen

#### A3.16 Roberts, Hugh and Cianne

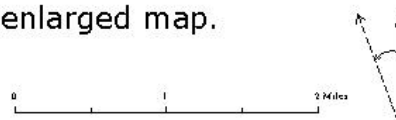
#### A3.20 Pueschell, David and Jacqueline

### A4. Rattlesnake Hill Conservation Restriction: Forest Description

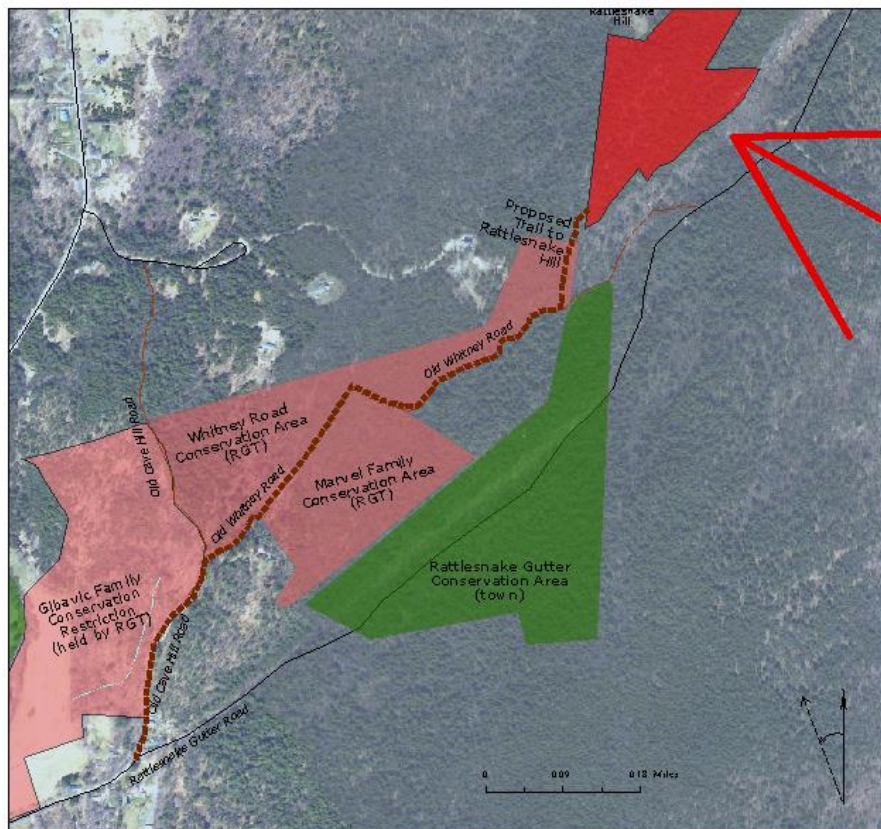
# Directions to the Rattlesnake Hill Conservation Restriction



For directions, see enlarged map.



## Directions to the Rattlesnake Hill Conservation Restriction

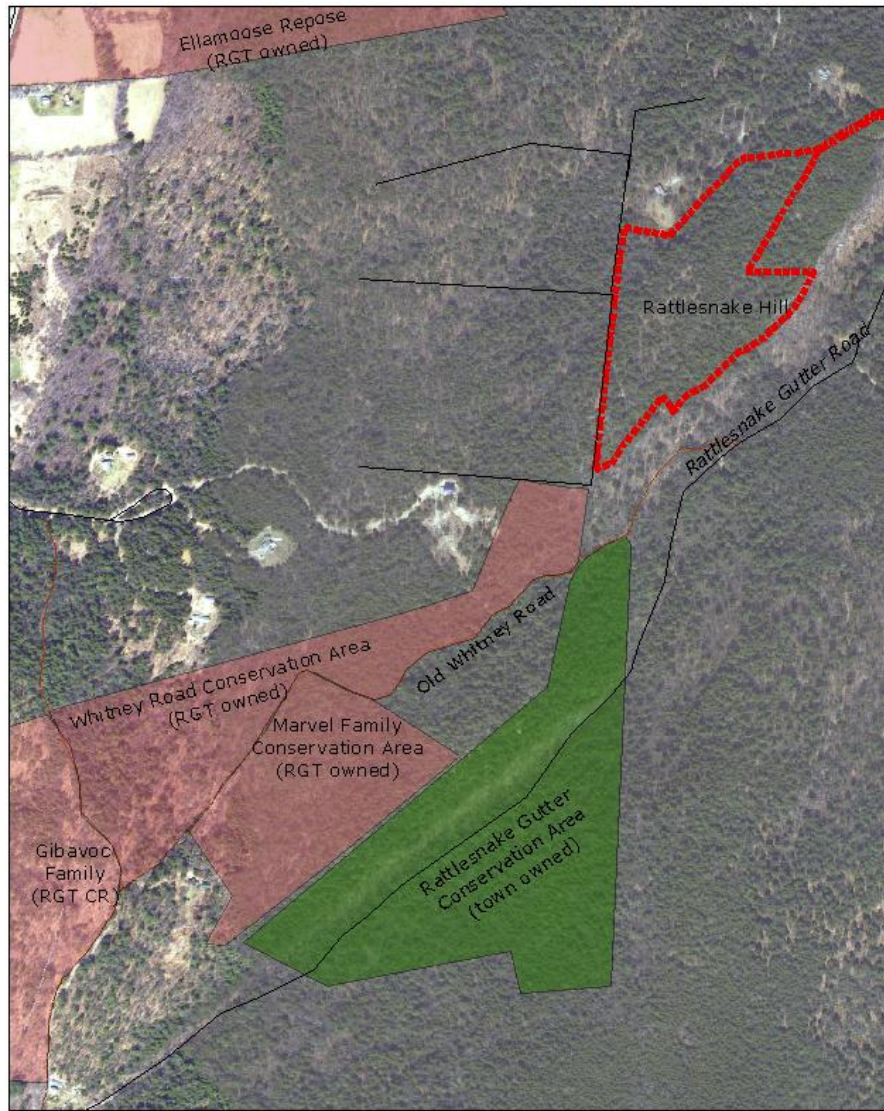


Directions. Please note: signage on trails, boundary markers, and written permission to cross private land will be completed in the next few months.

From the Leverett Town Hall, go north 2 miles on Montague Road.  
 Turn right on Rattlesnake Gutter Road. Park by the gate.  
 Walk about 200 feet back down Rattlesnake Gutter Road  
 Turn right/north on Old Cave Hill Road; there will be a stone wall  
 on your left and the last house on Rattlesnake Gutter Road on your right.  
 Walk up the dirt road to a crossroads.  
 Take the middle path. You are now on Old Whitney Road.  
 Walk on. You will pass an old cellar hole (Whitney family) on your left.  
 The land on your left is the Whitney Road Conservation Area.  
 The land on your right is the Marvel Family Conservation Area.  
 Both are owned by the Rattlesnake Gutter Trust.  
 Continue on the road passing a vernal pool on your left until you come  
 to a trail on your left across from a wetland.  
 Take this trail as it goes through the Whitney Road Conservation Area,  
 and then crosses private land to the Rattlesnake Hill Conservation Area.

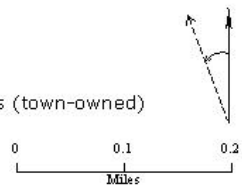
<b>Rattlesnake Hill</b>	<b>Land Description</b>
location/street address	Hemenway Road
directions to site	<p>Directions. Please note: signage on trails, boundary markers, and written permission to cross private land will be completed in the next few months.</p> <p>From the Leverett Town Hall, go north 2 miles on Montague Road.  Turn right on Rattlesnake Gutter Road. Park by the gate.  Walk about 200 feet back down Rattlesnake Gutter Road.  Turn right/north on Old Cave Hill Road; there will be a stone wall on your left and the last house on Rattlesnake Gutter Road on your right.  Walk up the dirt road to a crossroads.  Take the middle path. You are now on Old Whitney Road.  Walk on. You will pass on old cellar hole (Whitney family) on your left.  The land on your left is the Whitney Road Conservation Area.  The land on your right is the Marvel Family Conservation Area.  Both are owned by the Rattlesnake Gutter Trust.  Continue on the road passing a vernal pool on your left until you come to a trail on your left across from a wetland.  Take this trail as it goes through the Whitney Road Conservation Area and then crosses private land to the Rattlesnake Hill Conservation Area.</p>
acreage	18 acres
structures	none
physical description	Top of hill. The east side is along the principal ledge above Rattlesnake Gutter. The property extends over a central ridge, and down the more gradual slope on the western side.
special habitat(s)	On the eastern side a series of almost parallel ledges above principal cliff make growing conditions difficult. There are many downed or gnarled trees (see Appendix 4). Most of property is within the NHESP/TNC BioMap 2: Critical Natural Landscape (Feb 2011). See Baseline #2. Map of Natural Heritage Priority Habitats.
special species(s)	No systematic survey done. Ravens who nest on the cliffs below are resident - giving alarm calls during baseline visits in mid-October, indeed throughout the year. Hikers report having seen porcupines and coyotes and having found deer scat and snowshoe hare tracks.
special views(s)	Eastern edge views over the Gutter to Brushy Mountain and Morse Hill. Western side, cleared view to the west with the Peace Pagoda nearby and Mt. Greylock in the distance. See Baseline #6. Photographs of Property and Sites of Special Interest.
special other	Adds to the 126 acres already protected land along The Gutter: the town-owned Rattlesnake Gutter and Doolittle Brook Conservation Areas (total 46 acres) plus the Rattlesnake Gutter's Whitney Road and Marvel Family Conservation Areas and the Gibavic Family Conservation Restriction (total 86 acres). See Baseline #2 , Map of Nearby Protected Areas.

## Rattlesnake Hill and Nearby Protected Areas

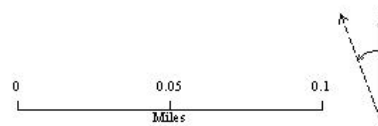
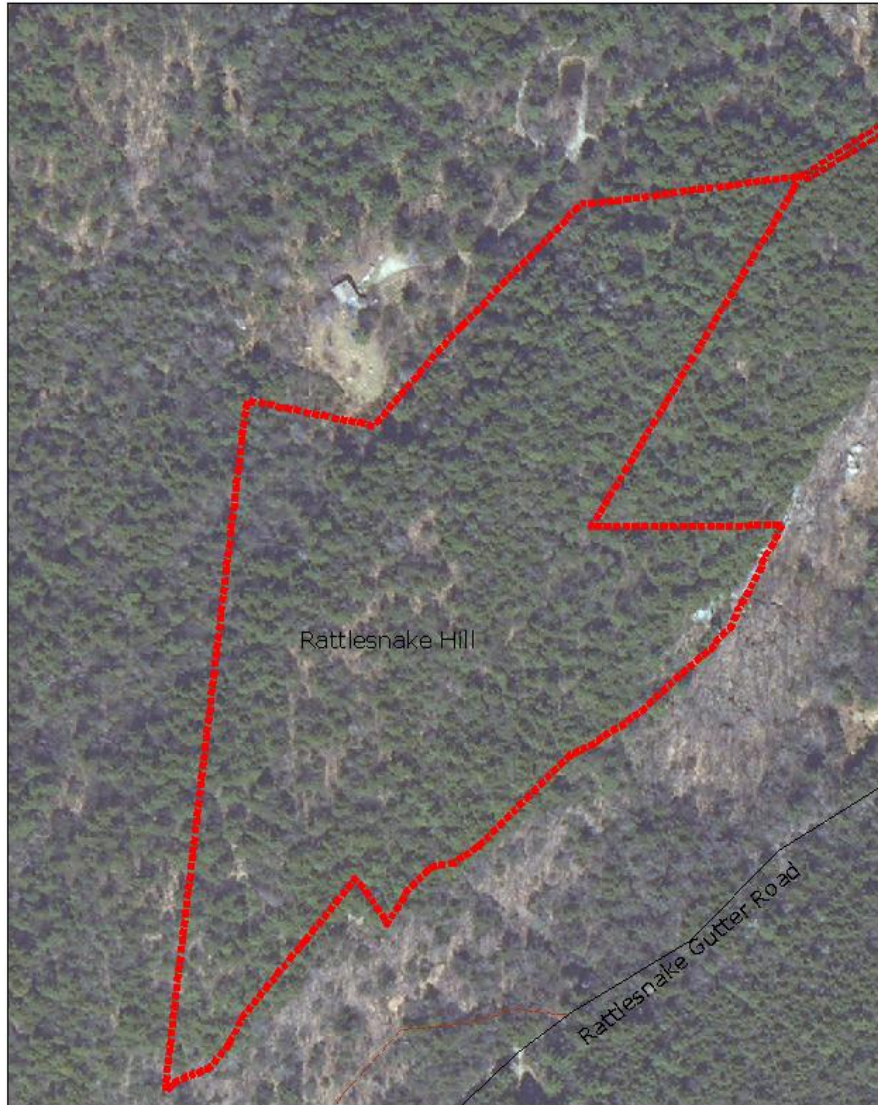


Rattlesnake Gutter Conservation Area, 40 acres (town-owned)  
 Whitney Road Conservation Area, 26 acres (RGT-owned)  
 Marvel Family Conservation Area, 20 acres (RGT-owned)  
 Gibavoc Family Conservation Restriction, 40 acres (RGT-held CR)  
 just beyond Gibavoc CR, Doolittle Brook Conservation Area, 6 acres (town-owned)

to north: Ellamoose Repose, 24 acres (RGT-owned)

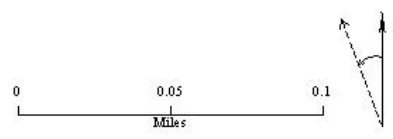
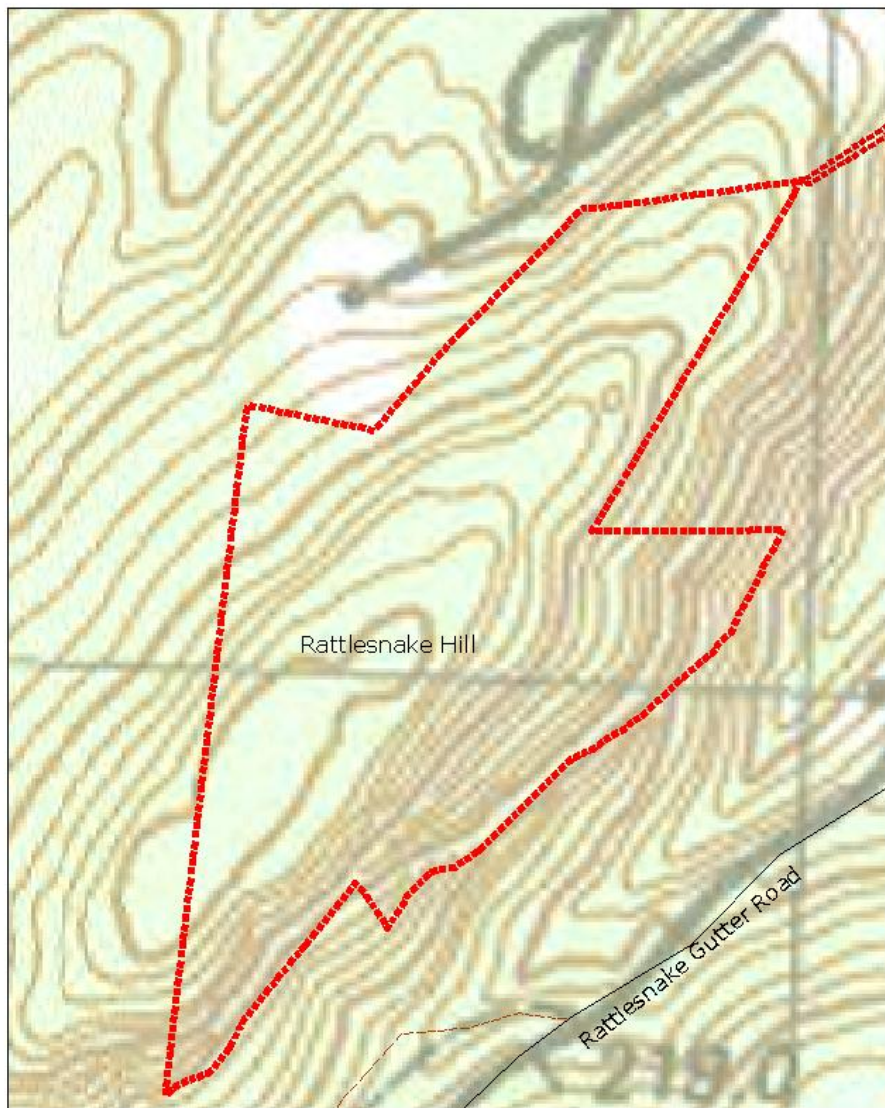


# Rattlesnake Hill Conservation Restriction

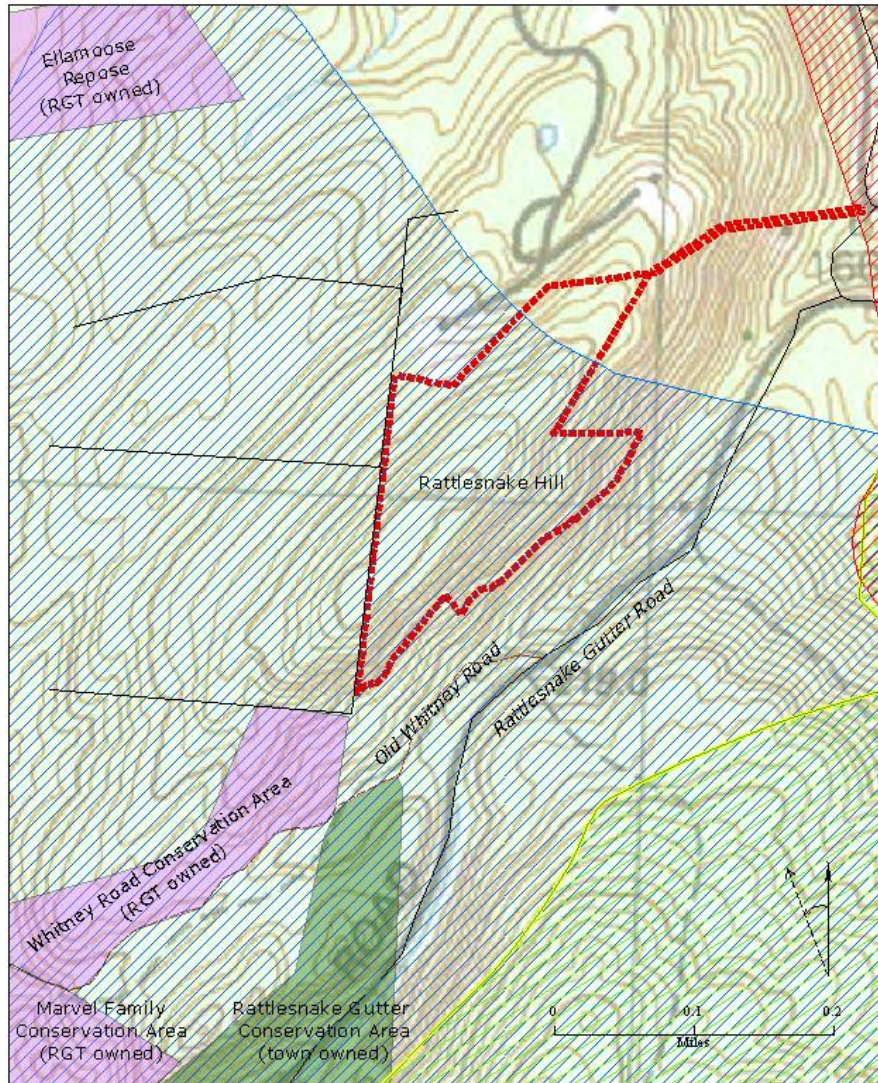




# Rattlesnake Hill Conservation Restriction



## Rattlesnake Hill Conservation Restriction Priority Habitat and NHESP/TNC Biomap2



red= Priority Habitats of Rare Species (NHESP, 10/1/200)  
yellow =NHESP/TNC -Biomap 2: Core Habitat, (Feb 2011)  
blue =NHESP/TNC BioMap 2: Critical Natural Landscape (Feb 2011)

APPROVAL UNDER THE SUBDIVISION CONTROL LAW NOT REQUIRED  
LEVERETT, MASSACHUSETTS

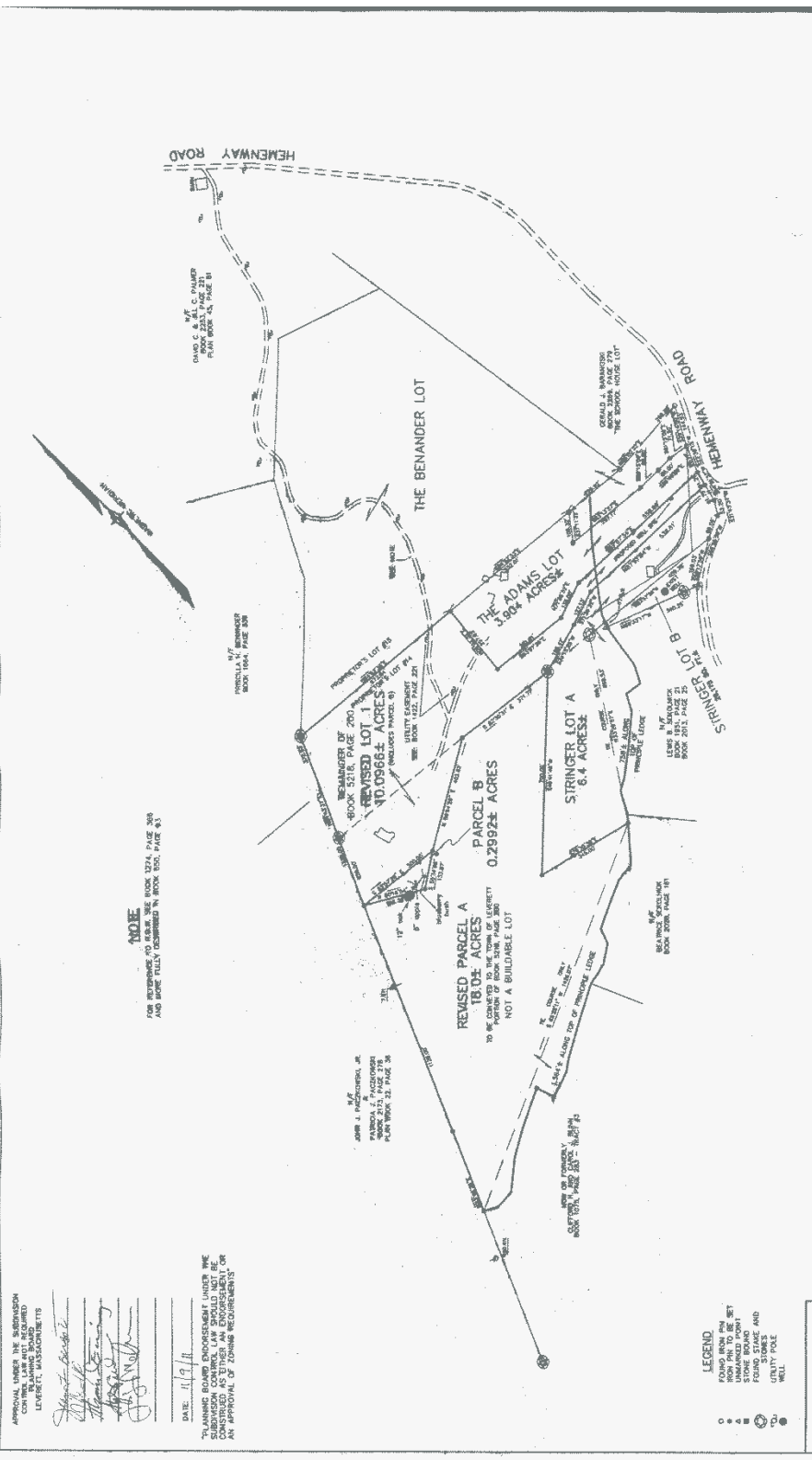
PLANNING BOARD DISCRETION UNDER THE SUBDIVISION CONTROL LAW SHOULD NOT BE CONSIDERED AS AN APPROVAL OF ZONING REQUIREMENTS.

DATE: 11/9/11

FOR REFERENCE TO GRAB THE BOOK 274, PAGE 208 AND MORE FULLY DESCRIBED IN BOOK 200, PAGE 83

**NOTE**

FOR REFERENCE TO GRAB THE BOOK 274, PAGE 208 AND MORE FULLY DESCRIBED IN BOOK 200, PAGE 83



PLAN OF LAND IN  
**LEVERETT, MASSACHUSETTS**  
PREPARED FOR  
**THE INHABITANTS OF THE TOWN OF LEVERETT**  
SCALE: 1"=100' SUPERSEDES 14, 2011  
DRAWN BY: JAMES J. HANCOCK  
REGISTERED PROFESSIONAL LAND SURVEYOR  
210 NUBBELL STREET - MAULEY - MASSACHUSETTS



**NOTE**  
FOR REFERENCE TO LOCUS SEE:  
CONFORMITY TO ACRES 18.02 BOOK 348 & 349  
SEE ALSO: EASEMENT DEED IN BOOK 278A, PAGES 348 & 349  
PLAN BOOK 261, PAGE 87

THIS REPORT HAS BEEN PREPARED IN CONFORMITY WITH THE REQUIREMENTS OF THE SUBDIVISION CONTROL LAW OF THE COMMONWEALTH OF MASSACHUSETTS.

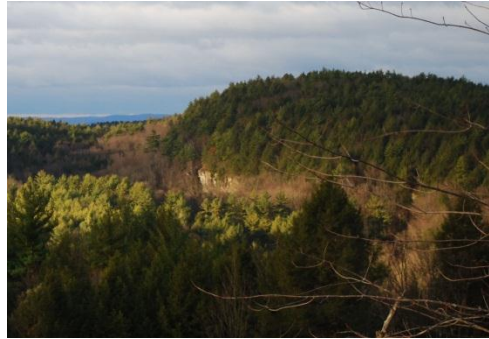
JAMES J. HANCOCK  
RANDALL E. IZER #10032

**LEGEND**  
FOUNDED IRON PIN  
IRON PIN TO BE SET  
STONE BOUNDARY  
FOUR CORNERS AND  
STONES  
UTILITY POLE  
WELL

## Rattlesnake Hill Conservation Restriction



*From the left: Brushy Mountain, Rattlesnake Gutter, Rattlesnake Hill*



*Close-up of Rattlesnake Hill - both pictures taken from Dan Glazier Forest (owned by RGT) 11/27/2009*

### Land History

The complex geologic history of the area is demonstrated by the M.S. thesis of Lisa Oxboel, completed in 1998 under the advisorship of Peter Robinson, in the Department of Geosciences at the University of Massachusetts. While her study area was a transect across the lower end of Rattlesnake Gutter, the Pelham Dome formation continues well beyond the Gutter – in fact into the present Quabbin Reservoir (Figure 1).

In more recent geologic time, the present Sawmill River Valley was surely a melt-water lake during the various glacial eras and, probably more than once, these lakes ruptured, sending water cascading down the Gutter – helping to create the valley we see today.

There is evidence of the active use of the area by Native Americans. Some archaeology research has been done, especially the upper section of the Gutter just below the Rattlesnake Hill property. On September 21, 1990, Professor Mitchell Mullholand, then Archaeological Director, Environmental Institute, University of Massachusetts, wrote the Leverett Selectboard,

... I would like to make you aware that this area is also an important cultural resource inhabited by Native Americans as long as 8,000 years ago. The Rattlesnake Gutter Rockshelter is registered on the prehistoric site inventory at the Massachusetts Historical Commission in Boston and the prehistoric site files at the University of Massachusetts in Amherst. . . .

Brona Simon, State Archeologist, confirmed in a letter to the Selectboard, dated October 19, 1990, that the rockshelter was registered on the Inventory of Historic and Archeological Assets of the Commonwealth. There has been additional work on the cultural use of Brushy Mountain which is just east of the Gutter. Very little work has yet been done above the cliff on the western side of the Gutter (the site of the Rattlesnake Hill CR).

One of the best sources of information about land use in the 19<sup>th</sup> and 20<sup>th</sup> century is maps:

The 1830 town map (Figure 2) has both a Grist Mill and Saw Mill in Moore's Corner, but does not show location of homes.

Interestingly, the 1858 H.F. Walling map (Figure 3) shows a road that appears to be a continuation of the old Brushy Mountain Road, which crosses Rattlesnake Gutter and goes in the general direction of the property.

The F. W. Beers, Atlas of Franklin County, 1871, page 59 (Figure 4) shows the same mills plus labeled houses. The road on the 1858 map leading in the direction of the property is not present on the Beers Atlas and there is no remaining evidence of this road.

There are no houses in the area on the 1883 USGS topographic map (Belchertown quadrangle, Figure 5), with the exception of a camp just below the cliffs, which burned in the mid 1980's. There are no houses in the area on the 1964 USGS topographic map (now Shutesbury quadrangle, Figure 6.) There is a trail on the 1964 map coming from the north which appears to have ended approximately where the geodesic dome was later built (see below).

The maps match the experience walking the land: there are no foundations or old roads to indicate occupation on this specific section the land, but there are stone walls on nearby land to the northeast and it is presumed that in the past the CR property was a portion of land owned by occupants of Hemenway Road, perhaps stretching all the way to Rattlesnake Gutter. It does not seem that Rattlesnake Hill was used for grazing (no stone wall, no stone piles, no stone bases for Virginia rail fences have been found). The cliffs that comprise the southeast boundary of the present land would present a danger for grazing animals and the rocky ledges present on much of the land would discourage farming. The land might have been logged to feed the coke ovens nearby. One common source of land use, old photographs, has not been helpful. While there are photographs of various cleared hills in the area, we have not yet found any that include a view of Rattlesnake Hill.

The first dwelling on Rattlesnake Hill, a geodesic dome was built by Jerry and Kitty Axelson who moved to the land with their infant in 1971. At that time there was a road passable only in the temperate months. In describing the dome, Kitty Axelson recalled that the 60 foot diameter dome was made of triangular and hubs, and she remembers that the five wood stoves that they had barely compensated for the plastic flapping in the wind on cold winter nights. Another small but tall octagonal structure, divided by a yin/yang curve, utilized car doors for windows. One of these sections, including a car door along with a cement chimney, remains on the land today along with other remains described in #6 (pictures H3 and H4). The couple raised animals and gardened. Many people came to the land and stayed for periods of time, as evidenced by the remains of some camping equipment on the land. The geodesic dome burned in January of 1974 presumably a malfunctioning of one of the woodstoves. During the summer of 1974, the Axelsons

built the current house, now owned by Henry (Hank) Berry and which is now on the subdivided property.

Further building came in the 1990's with multiple-houses sharing the same driveway from Hemenway Road to the north and on Ryans Hill Road to the west. (See Neighboring Deeds, Appendix A3). Today the Rattlesnake Hill property, like much of the nearby property, is wooded. There is some cutting for firewood and some gardening near homes, but no large scale agricultural or forestry activities.

## **Land Described**

To quote from the Forest Description, Appendix A.4,

A flat-topped ridge runs down the long axis of the 18 acre property from its high point (890 ft) near the southwest edge to its low point (807 ft) near the northeast corner. The land slopes steeply away from the ridge to the southeast and moderately to the northwest. The slopes, particularly the southeast slope, have occasional horizontal ledges with small cliffs followed by almost-flat shelves that make both walking and tree growth difficult.

For those conducting the annual monitoring of this Conservation Restriction, the surveyor's pins are invaluable. (There is 1 stone bound and 1 drill hole; the other 9 points are all metal rods). As of the date of this report, the corners and lines are marked only with surveyor's tape. The tape needs to be replaced with paint and, ideally, with metal tags as well. Monitors need to check the condition of these markers each year. Marking the eastern (cliff) edge (except for the surveyor's pins and drill hole) will always be problematic. In addition, the survey (#2, page 2.5) shows a difference between two survey lines on the west side (#6, see G2 on maps, chart, and photograph.) Monitors will also need to check the various debris piles shown in #6 (H3-4; J4, K5-7, L1), plus others that may be scattered around.

At the present time, walking through the property is relatively easy along the ridge where there are hemlock trees with little undergrowth. The forest will surely change if the wooly adelgid continues its expected progress. (See Forest Description, Appendix A.4). The east/cliff side is steep and therefore difficult to walk. The area near the Berry house is difficult because of the young, crowded saplings. Cutting a narrow path along that part of the line would be helpful, but the area will continue to be difficult because there will be regular cuttings to keep open the view to the west (see #6, L3.). Monitors might consider planning their trip so that they can end their time sitting on the bench enjoying the view to the west.

PLATE 2. EXPLANATION FOR GEOLOGIC AND STRUCTURE MAPS AND GEOLOGIC CROSS SECTION A-A', LEVERETT AREA, MASSACHUSETTS

EXPLANATION		SYMBOLS
Lower Jurassic	<b>Jd</b> Jdi: Fine-grained, buff-weathering dark gray diabase dikes.	— Contact, location accurate
Devonian	<b>Dea</b> Dea: Finely layered fine- to coarse-grained hornblende-plagioclase-epidote amphibolite.	- - - Contact, location approximate
	<b>Deg</b> Deg: Interlayered granular feldspar-biotite rock.	· · · · · Contact, location inferred
Silurian	<b>Scq</b> Scq: Quartzite-Schist Member: Well bedded and foliated fine-grained pure quartzite and quartz-pebble conglomerate, micaceous quartzite, and quartz-garnet-muscovite schist.	— Normal fault, location approximate
	<b>Scsc</b> Scsc: Schist Coticule Member: biotite-feldspar granulate with interbedded quartzite and minor coticule, locally garnetiferous biotite granulate, and feldspathic biotite schist.	- - - Normal fault, location inferred
	<b>Scs</b> Scs: Amphibolite Member: dark gray, fine-grained, massive hornblende-plagioclase amphibolite.	19 ↘ Strike and dip of foliation
Late Ordovician	<b>Ops</b> Ops: Rusty-weathering quartz-biotite-muscovite-garnet schist, generally well foliated with local amphibolite and feldspathic schist. Closely associated with pervasive pegmatitic and granitic intrusions.	23 ↘ Strike and dip of bedding
	<b>Ofm</b> Ofm: Massive to well layered, light- to dark-gray, fine- to medium-grained interlayered biotite-plagioclase-quartz gneiss and amphibole which tend to produce differentially weathered outcrops.	12 ↘ Trend and plunge of mineral lineation
Late Proterozoic	<b>Zpmg</b> Zpmg: Gneiss Member - brown to dark-gray, well foliated biotite-muscovite-feldspar gneiss with large white microcline megacrysts.	↔ Trend of horizontal mineral lineation
	<b>Zpmq</b> Zpmq: Quartzite Member - gray to buff, fine- to medium-grained quartzite with local actinolite layers. At or near contact with Dry Hill Gneiss.	12 ↘ Trend and plunge of minor fold axis, rotation sense shown
	<b>Zdh</b> Zdh: Light-gray to pink, medium- to coarse-grained, foliated quartz-feldspar-biotite ± hornblende gneiss with pink microcline and white plagioclase megacrysts. Commonly well layered, but locally massive.	

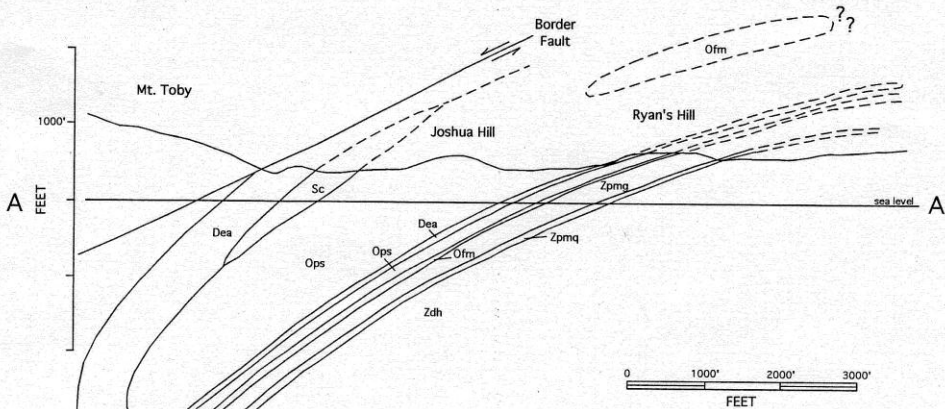


Figure 1. The Pelham Dome

Oxboel, Lisa D, *Transition Between Neo-Acadian and Late Pennsylvanian Ductile Deformation and Metamorphism, West Limb of the Pelham Dome West-Central Massachusetts*, MS thesis, UMass Amherst, 1998

- Dea = Erving Formation
- Zdh = Dry Hill Gneiss
- Zpmg = Poplar Mountain Gneiss
- Ops = Partridge Schist
- Ofm = Four Mile Gneiss
- Zpmq = Poplar Mountain Quartzite

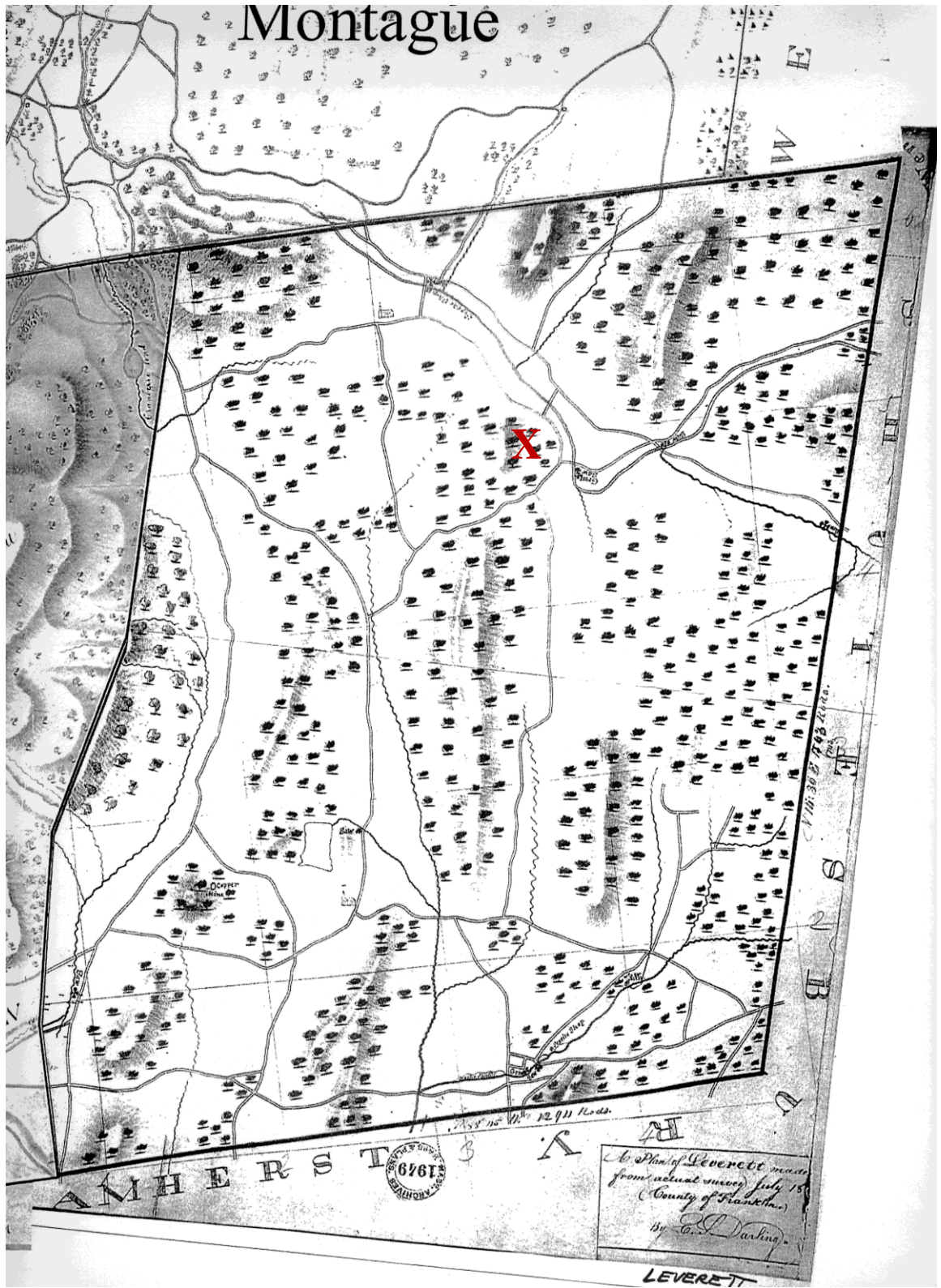


Figure 2. Leverett from Town Plans, Massachusetts, 1830, Source [www.old-maps.com](http://www.old-maps.com).  
**X** marks approximate location of Rattlesnake Hill.



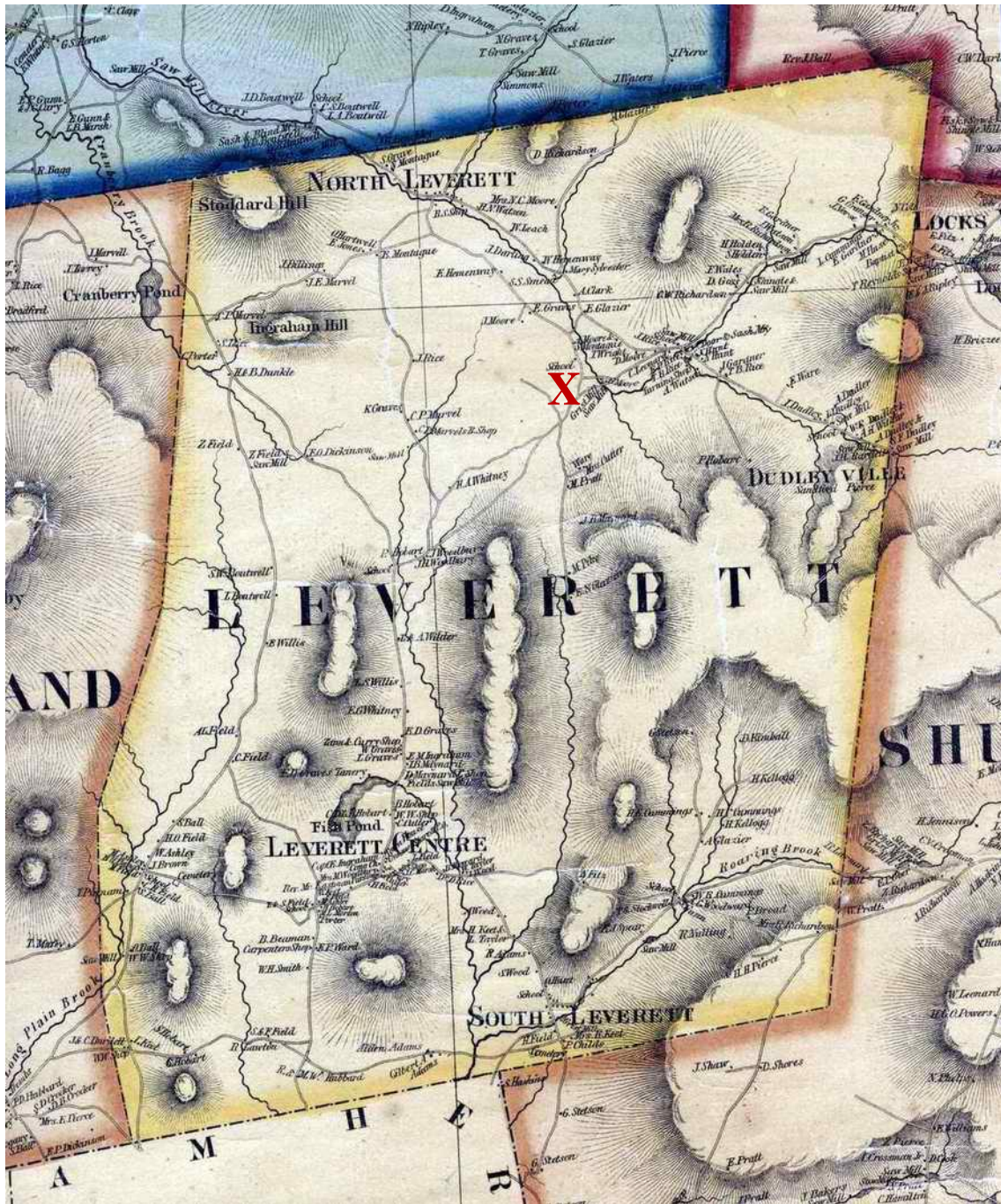


Figure 3. H.F. Walling, Map of Franklin County, Massachusetts, 1858, page 34  
CD ROM edition, 2005, [www.old-maps.com](http://www.old-maps.com)  
X marks approximate location of Rattlesnake Hill

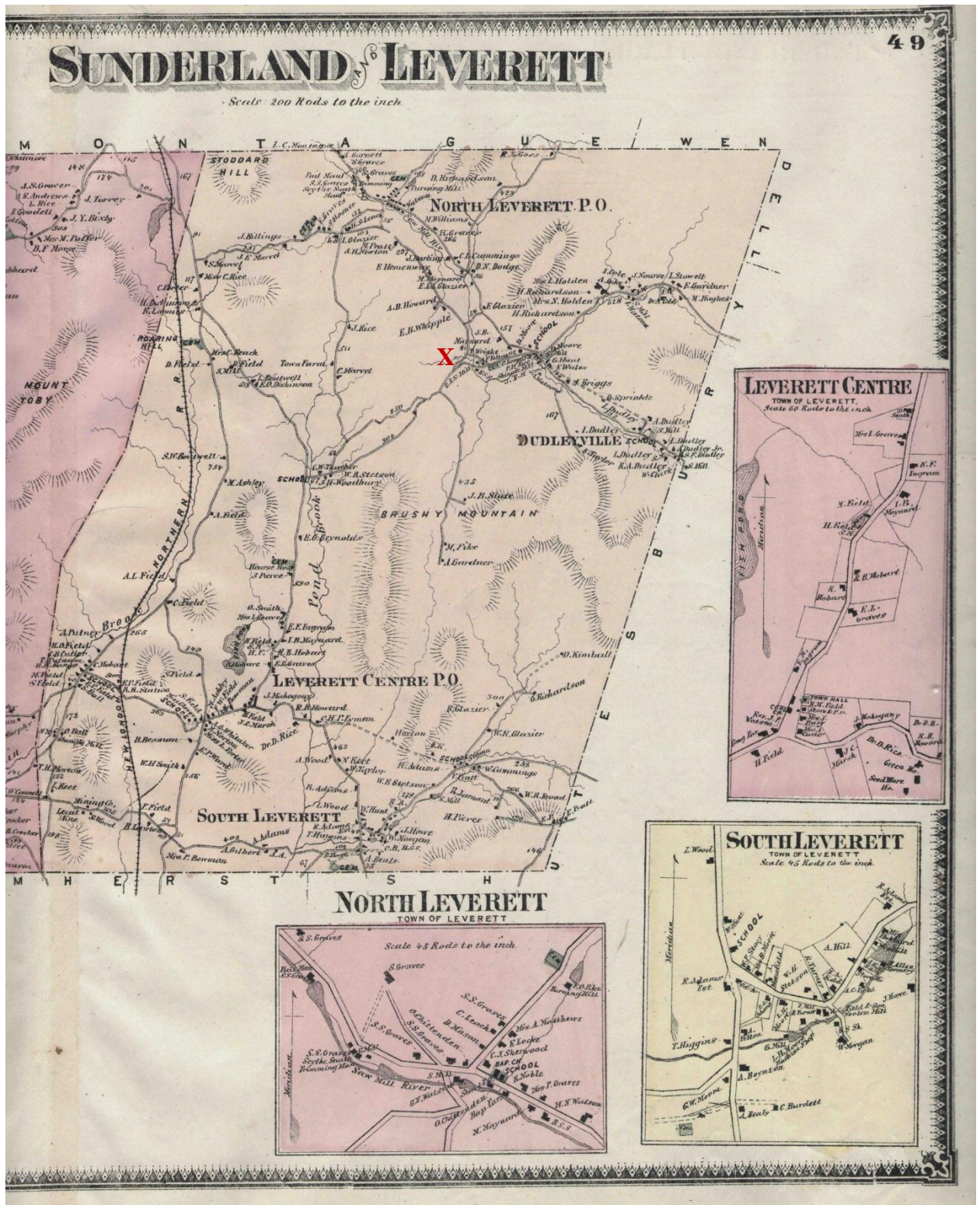
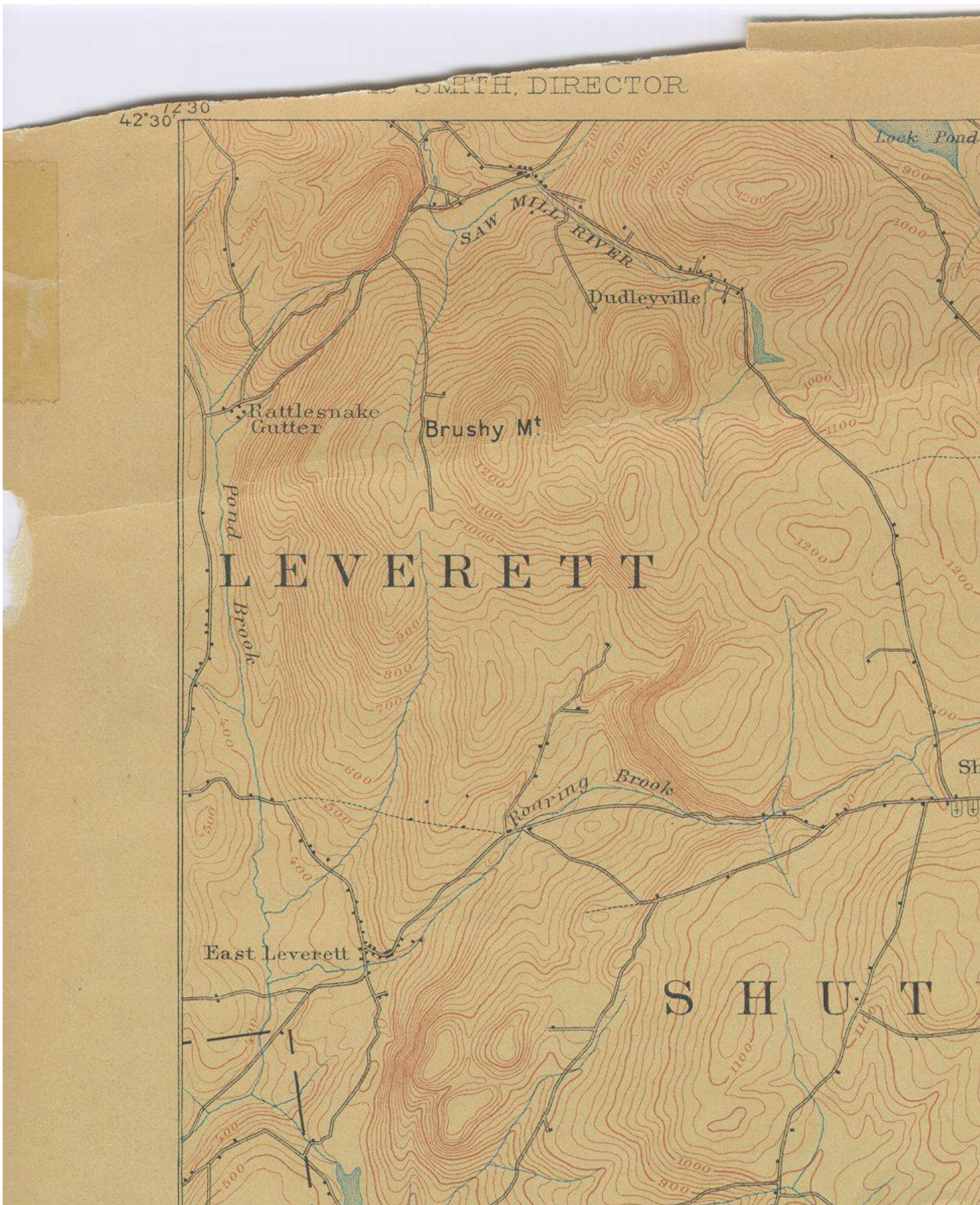


Figure 4. F. W. Beers, Atlas of Franklin County, 1871, p 59.  
 CD ROM edition, 2001, [www.old-maps.com](http://www.old-maps.com)  
 X marks approximate location of Rattlesnake Hill

Figure 5. Section from the 1883 topographic map, Belchertown quadrangle  
source: University of New Hampshire Library, Government Information Department







- Public use. Access on foot to existing trails to the Premises will provide vistas to the east and west. The deed provides for legal access on a right-of-way through property currently owned by Henry Berry. The Premises will be available to the public for hiking and other passive recreational and educational activities, so long as such activities do not negatively impact the ecological health of the Premises or the conservation purposes of this Conservation Restriction.
- Protection of Native American Cultural Resources, Native American Burials, and Interment of Ceremonial Objects. There are cultural resources in the vicinity.
- Furtherance of Government Policy. Goals of Leverett Conservation Commission: rural character, natural resource protection, public education about open space, wider recreational use of natural resources.

## **II. PROHIBITED ACTS AND USES, EXCEPTIONS THERETO, AND PERMITTED USES**

### **A. Prohibited Acts and Uses**

1. temporary or permanent buildings, signs, facilities
2. mining, excavating, dredging
3. dumping, storing of rubbish
4. destroying trees, vegetation
5. activities detrimental to drainage, flood control, water quality
6. use, parking or storage of recreational/motorized vehicles
7. disruption or removal of stone walls, or any stone structures or alignments
8. conduct of archeological activities including removal of artifacts
9. subdivision of Premises
10. any use inconsistent with protection for conservation

### **B. Reserved Rights and Exceptions:**

1. Recreational Activities: non-motorized that do not degrade environment.  
Owner can limit or prevent hunting.
2. Vegetation Management: for forest health or to preserve present conditions including vistas toward Brushy Mt and Prospect Hill to the east and Jackson Hill and Mt Toby to the west. With all plans avoiding stone structures of traditional cultural properties. Pruning/cutting for astronomical line of sight, under supervision of Tribal Historical Preservation Officer or representative.

3. Non-native/invasive flora: can be removed in manner that minimizes damage to surrounding, non-target species and preserves water quality.
4. Composting: of biodegradable materials from the premises if does not impact protection and or scenic views
5. Wildlife Habitat Improvement: with prior written permission to enhance or restore
6. Trails: new or maintenance (including handicapped accessible trails) as long as not materially altering landscape or degrading environmental quality.
7. Excavation: with prior approval if incidental to trails, drainage, conservation (see #9)
8. Motorized Vehicles: for maintenance, safety, mobility as long as not detrimental to environment.
9. Archeological Excavations: non-destructive field investigations with approval of state archeologist and, if Native American site, of Tribal Historic Preservation Office.
10. Subsurface Disturbance: subsurface or surficial rock disturbance, only with appropriate approvals from state archaeologist and Tribal Historic Preservation Officer or representative.
11. Signs: to protect conservation values, information
12. Permits: needed as appropriate

### **C. Notice and Approval**

If needed, owner must notify Trust 60 days before approval needed. If no response in 60 days, deemed to be approved.

### **IV Access**

Public Access included: passive only.