

Brief report of field review of proposed mountain bike trail route through the Goodwin Town Forest, Hanover, NH

Date/time of visit: 18 May 2011 approx. 8:45am – 3:15pm

Botanical review by Alice Schori in consultation with & guided by John Taylor of UVTA

No State-listed rare, threatened or endangered plants were observed during this spring review of the outer flagged trail loop at Goodwin Town Forest. The presence of rare species that would appear later in the season cannot be ruled out by this visit but seems unlikely.

The only **invasive alien species** seen was coltsfoot (*Tussilago farfara*), which is abundant in the wet log landing area adjacent to Goose Pond Road. Since this population is not affecting a rare plant population, the considerable and sustained effort it would take to get rid of it is probably not worth the effort.

Two additional trail sections that parallel Goose Pond Road from the log landing to Tunis Road, and one further upslope and marked in blue on a field map, were not reviewed. Those trail sections are not proposed for work in 2011.

There were a few **suggested minor edits** of the trail to accommodate findings of rich soil indicator plant species [blue cohosh (*Caulophyllum thalictroides*), downy yellow violet (*Viola pubescens*), baneberry (*Actaea* sp.), and miterwort (*Mitella diphylla*)] and a moderate edit already proposed by UVMBA due to additional water crossings and rocky terrain on the eastern slope that had a higher incidence of moose sign suggesting a possible yarding area under hemlocks.

Additional observations:

Although no rare species were found, some of the rich soil indicator species are somewhat uncommon in New Hampshire, so it is nice to avoid going through patches of them, if possible.

There is a nice **diversity of habitats** in the areas traversed by the proposed trail, with mixed northern hardwoods, some at least semi-rich mesic forest with much sugar maple (*Acer saccharum*) and yellow birch (*Betula alleghaniensis*), areas dominated by beech (*Fagus grandifolia*), hemlock (*Tsuga canadensis*) groves, younger areas dominated by white birch (*Betula papyrifera*) and striped maple (*Acer pensylvanicum*), some spruce-fir (*Picea rubens* and *Abies balsamea*) areas, and occasional red oak (*Quercus rubra*), white pine (*Pinus strobus*), and black cherry (*Prunus serotina*). Old stone walls, occasional rock outcrops, old snags, and the occasional fallen, hollow log add interest for visitors and habitat for various animals.

The forest has a **good variety of shrubs, wildflowers, and ferns**, so the trail should be of interest to pedestrians as well as bikers. Some of the species observed include:

Shrubs –

beaked hazelnut (*Corylus cornuta*), bush honeysuckle (*Diervilla lonicera*), fly honeysuckle (*Lonicera canadensis*), hobblebush (*Viburnum lantanoides*), maple-leaved viburnum (*Viburnum acerifolium*), witch hazel (*Hamamelis virginiana*)

Flowers –

blue-stemmed goldenrod (*Solidago caesia*), bristly sarsaparilla (*Aralia hispida*), bunchberry (*Cornus canadensis*), Canada mayflower (*Maianthemum canadense*), dwarf raspberry (*Rubus pubescens*), false Solomon's seal (*Maianthemum racemosum*), foamflower (*Tiarella cordifolia*), goldthread (*Coptis trifolia*), Indian cucumber-root (*Medeola virginiana*), Jack-in-the-pulpit (*Arisaema triphyllum*), painted trillium (*Trillium undulatum*), partridgeberry (*Mitchella repens*), pink lady's-slipper (*Cypripedium acaule*), rattlesnake-root (wild lettuce) (*Nabalus/Prenanthes* sp.), red trillium (*Trillium erectum*), Solomon's seal (*Polygonatum pubescens*), starflower (*Trientalis borealis*), twinflower (*Linnaea borealis*), trout lily (*Erythronium americanum*); violets: arrow-leaved (*Viola sagittata*), common blue (*V. sororia*), dog (*V. labradorica*), downy yellow (*V. pubescens*), round-leaved (*V. rotundifolia*), smooth or northern white (*V. pallens*), sweet white (*V. blanda*); white wood aster (*Eurybia divaricata*), whorled aster (*Oclemea acuminata*), wild oats (*Uvularia sessilifolia*), wild sarsaparilla (*Aralia nudicaulis*), wintergreen (*Gaultheria procumbens*)

Ferns and clubmosses –

bracken (*Pteridium aquilinum*), Christmas fern (*Polystichum acrostichoides*), evergreen woodfern (*Dryopteris intermedia*), interrupted fern (*Osmunda claytoniana*), lady fern (*Athyrium filix-femina*), long beech fern (*Phegopteris connectilis*), New York fern (*Thelypteris noveboracensis*), oak fern (*Gymnocarpium dryopteris*), sensitive fern (*Onoclea sensibilis*), common (or wolf's claw) clubmoss (*Lycopodium clavatum*), princess pine (*Dendrolycopodium dendroideum*), shining clubmoss (*Huperzia lucidula*), southern ground cedar (*Diphasiastrum digitatum*), and along the road also cinnamon fern (*Osmundasterum cinnamomea*) and ostrich fern (*Matteuccia struthiopteris*).



NEW HAMPSHIRE NATURAL HERITAGE BUREAU

DRED - DIVISION OF FORESTS & LANDS
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To: Jeffrey Smith
Butternut Hollow Forestry
1153 Tucker Hill Road
Thetford, Center, VT, 05075

From: Sara Cairns, NH Natural Heritage Bureau

Date: 2017-06-29

Re: Review by NH Natural Heritage Bureau of request dated 2017-06-12

NHB File ID: 2795

Town: Hanover, NH

Project type: Landowner Request

Location: Map 14 Lots 9 & 12 (Town of Hanover)

I have searched our database for records of rare species and exemplary natural communities on the property(s) identified in your request. Our database includes known records for species officially listed as Threatened or Endangered by either the state of New Hampshire or the federal government, as well as species and natural communities judged by experts to be at risk in New Hampshire but not yet formally listed.

NHB records on the property(s): None

NHB records within one mile of the property(s):

	Last Reported	Listing Status		Conservation Rank	
		Federal	NH	Global	State
Natural Community					
Red maple - black ash swamp	2008	--	--		S3
Plant species					
Squirrel Corn (<i>Dicentra canadensis</i>)	2003	--	--	G5	S3

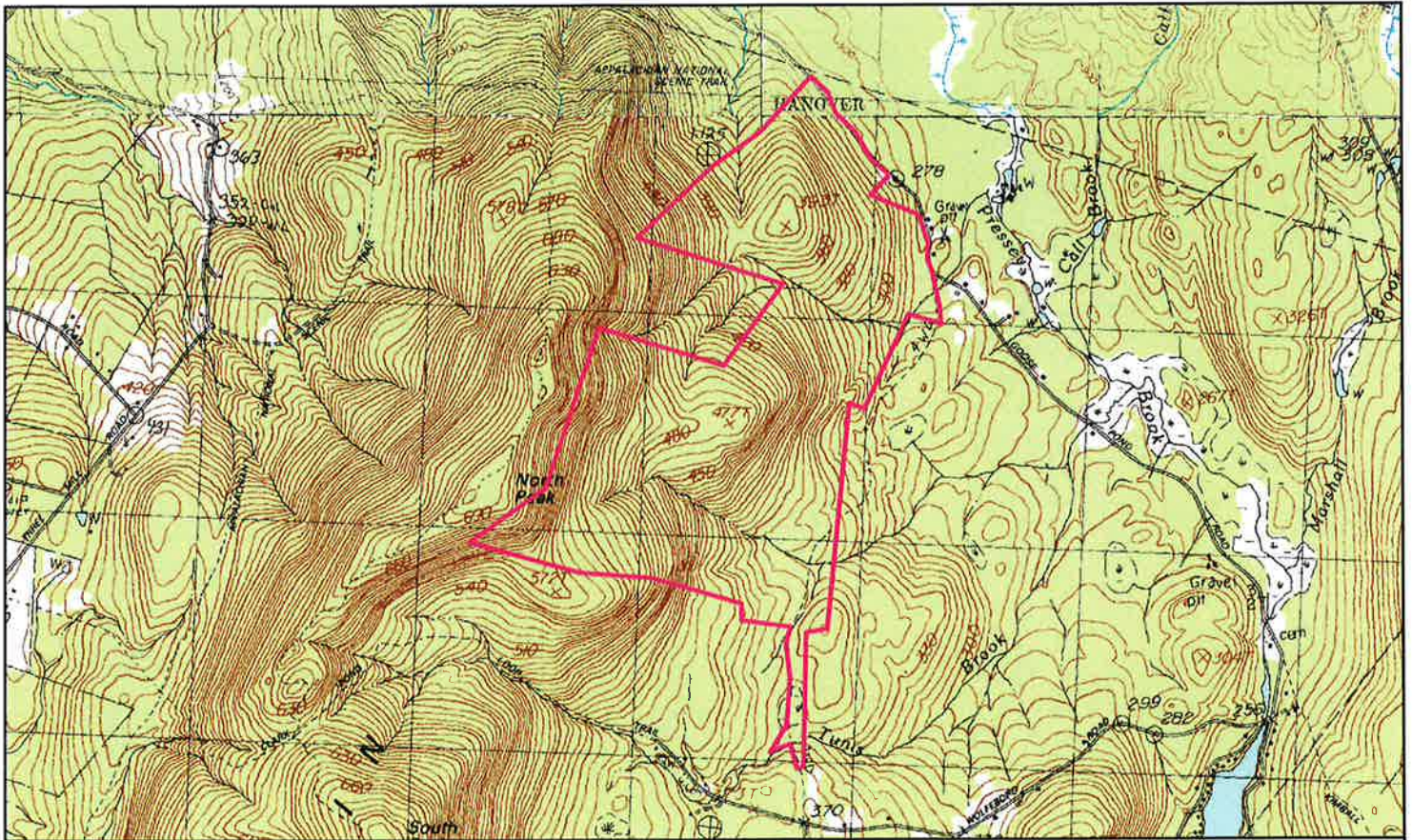
Listing codes: T = Threatened, E = Endangered, SC = Special Concern

Rank prefix: G = Global, S = State, T = Global or state rank for a sub-species or variety (taxon)

Rank suffix: 1-5 = Most (1) to least (5) imperiled, "--", U, NR = Not ranked, B = Breeding population, N = Non-breeding, H = Historical, X = Extirpated.

A negative result (no record in our database) does not mean that no rare species are present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

NOTE: This review *cannot* be used to satisfy a permit or other regulatory requirement to check for rare species or habitats that could be affected by a proposed project, since it provides detailed information only for records actually on the property.








Natural Heritage Bureau Landowner Report

Project ID Number: 2795

NOTE: Any rare species and/or exemplary natural communities in this area are not shown unless they occur, at least in part, within the property bounds.

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 Property Bounds	# of Records
 Plant Occurrence:	0
 Animal Occurrence:	0
 Natural Community:	0
 Ecological System:	0

