

ECOLOGICAL INVENTORY
OF THE MONIQUE AND LESTER ANDERSON LANDS
LINCOLN, VERMONT

FOREST AND WETLAND ECOSYSTEMS AND FLORA

prepared by
Marc Lapin, Forest Ecologist
239 Cider Mill Road
Cornwall, Vermont

October, 1998

Table of Contents

Scope of Work	2
What are Ecosystems?	3
Location, Geology and Soils	4
Literature Cited	6
1998 Results	6
Partial Vascular Plant Species Lists	7
Woody Plants	
Herbs	
Mosses	
Guthrie-Bancroft Farm	15
Overview	
The Forested Landscape	
Ecosystem Descriptions	
Fred Pierce Farm	23
Overview	
The Forested Landscape	
Ecosystem Descriptions	
Wells Farm	28
Overview	
The Forested Landscape	
Ecosystem Descriptions	
Conclusions	35
Ecosystem Classification and Future Work	
A Regional Context	
Appendices	37
Species by Common Name	
Maps	

Scope of Work

Initial ecological inventory of the Guthrie-Bancroft, Pierce, and Wells Farms, in the Quaker Street and Colby Hill areas of Lincoln and Bristol, Addison County, Vermont, was undertaken June through September 1998. Ecosystem and floristic surveys were conducted by Marc Lapin and are the focus of this summary; herpetological and mammalian inventory was conducted by Jeremy Herzig and bird surveys were conducted by Warren King.

The intent of the research was to provide introductory information about ecosystems and some of their biota. Ecosystem components that were observed include topography and landform, soils, vascular flora, and in a broad manner forest history.

The products of the 1998 ecosystem and floristic fieldwork include general descriptions of the forest and wetland ecosystems and a species list of vascular flora. Forest management stand units have been correlated with ecosystem descriptions to suggest the variety of ecosystem types included within the various management units. Ecosystem descriptions document topography, physiography and soils, as well as vegetation composition (dominant plants of the tree canopy, understory, shrub and herb layers) and, briefly, vegetation structure (sizes of dominant trees and abundances of the various layers). Observations regarding forest history and wildlife use are noted.

What are Ecosystems?

To aid the reader, I provide a brief paragraph outlining my perspective on ecosystems, also commonly referred to as natural communities. An *ecosystem* is the expression on the land of interrelationships among climate, bedrock geology, geomorphology, soil and biota (plants, animals, fungi, microbes). As such it is spatial in nature, that is, it occupies a certain space on earth. It is defined by stable physical factors (i.e. geology, climate) to which living organisms respond, and it is a geographical unit that can be described and mapped for any given piece of land or water. The spatial units--the ecosystems--occur repeatedly within the landscape, and ecosystems with very similar to nearly identical characteristics (both physical and biotic) form an *ecosystem type*. Characteristics of some of Vermont's ecosystem types have been documented in "Natural Communities of Vermont" (Thompson, 1995). Ecosystems come in a wide range of sizes; size is dependent upon physical factors, particularly, the shape of the land and the underlying rock and soil. For instance, a red maple swamp or an open bog may be large or small, depending upon the physical shape and the hydrology of the basin in which it occurs. Similarly a rich northern hardwood forest is usually small in area, but if soil, topographic and hydrologic factors are right, the rich forest may be more extensive.

The science of landscape interpretation and ecosystem classification and description requires repeated observation of the landscape and its vegetation, and repeated re-working of the classification and maps to reflect new understanding in the relationships among what appear to be discrete, repeating ecosystem units. The relationships to which I refer may be thought of as ecologically meaningful similarities and differences in ecosystem characteristics, such as topography, soil, vegetation, microclimate and landscape position.