Descriptive and quantitative vegetation data in these areas are critical for improving Audubon Vermont's understanding of how birds respond to natural disturbances and forest processes, in addition to those caused by management activities. Comparing birds' responses to natural vs. human-caused changes in forest habitat will allow Audubon Vermont to best make and demonstrate bird-friendly forestry management practices in the future.

Scope of Work

- Document the current condition of an approximately 80-acre forested portion of the GMAC property (map to follow) through a timber inventory. This portion of the property is currently being passively managed for the continued development of interior forest habitat critical for many wildlife species and as an area for researching birds' responses to natural forest processes, including a recent wind disturbance
- Make recommendations for silvicultural treatments that could be implemented in these stands as a demonstration for other small woodland owners and the public of how to co-manage for forest products and wildlife habitat.

Deliverables

1. **Written report on current condition of the forest** in the study area, including:
    - Descriptive narrative <u>for each delineated stand</u> including:
        - Physical features (slope, aspect, soils, topography, hydrology, geology)
        - Access
        - Age class
        - Species composition
        - Successional stage
        - Timber quality
        - Coarse woody debris
        - Natural community type
        - Signs of past human land use and/or management
        - Wildlife sign and critical habitat features
        - Trails
    - Digital spreadsheet of raw plot data and summarized stand statistics, including:
        - Mean stand diameter
        - Total basal area
        - % species composition
        - # stems/acre (living and dead)
        - Merchantable Volume

        ** Distinguish between AGS and UGS where appropriate

2. **Written recommendations for silvicultural treatments that meet the dual goals of improving wildlife habitat and generating forest products** to be implemented in the stands for demonstration purposes, including:
    - Description of treatments that includes justification and explanation of links to the GMAC goal of :

        managing for forest products as a demonstration of how to conduct these activities while simultaneously promoting a diversity of wildlife habitats.
    - Suggested timeline for the implementation of the treatment(s).

3. **On-site presentation of methods, findings, and recommendations to Audubon staff with Q&A** at the GMAC.

Audubon VERMONT

January 24, 2008

Letter of Request

From: Audubon Vermont, Green Mountain Audubon Center
Contact: Kristen Sharpless, Teacher/Naturalist

To: Small Woodland Management students, Forestry Program, Rubenstein School of Environment and Natural Resources, UVM

Introduction

Audubon Vermont is a non-profit organization whose mission is to protect birds, other wildlife and their habitat by creating a culture of conservation through education, science, and advocacy. Audubon Vermont is particularly concerned about the documented decline in the populations of many migrant songbird species that return every spring to breed in Vermont's forests. Audubon Vermont's *Forest Bird Initiative* is a program that is working to conserve forests within Vermont that are important to birds, by identifying, monitoring and stewarding a network of Important Bird Areas (IBA) that support a significant number of breeding forest birds. Small woodland owners comprise a large proportion of the landowners in these IBAs. Therefore, an important component of the *Forest Bird Initiative* is helping these individual landowners to plan and implement bird-friendly forest management practices in their woodlands.

The 225-acre Green Mountain Audubon Center (GMAC) in Huntington has been identified as an IBA and is managed by Audubon Vermont for its ecological, scientific research, and educational values. The parcel is dominated by northern hardwood forest, and also includes coniferous forests, wetlands, open fields and meadows, ponds, and the Huntington River and some of its tributaries.

A detailed inventory of the natural and cultural features of the GMAC property was conducted by a group of UVM graduate students in 2005, which informed the writing of a management plan for the property by Audubon Vermont conservation biologist, Steve Hagenbuch, in 2007. The GMAC Management Plan calls for the

> *maintenance and/or enhancement of a diversity of habitat types for wildlife, with a focus on breeding forest birds, thereby creating opportunities for scientific research, environmental education, demonstration of bird-friendly land management practices that include the production of agricultural and forest products, and low-impact outdoor recreation.*

The GMAC is currently in the process of planning for and implementing the management activities and treatments prescribed in the plan ranging from a 2-acre clearcut that will create additional early-successional habitat, to invasive plant species removal along the Huntington River, to small-scale crop tree release in the GMAC sugarbush.

Problem and Project Justification

One of the goals identified in the GMAC Management Plan calls for the monitoring of wildlife responses – particularly those of breeding forest birds – to changes in forest habitat conditions. Bird populations are monitored at the GMAC in a variety of habitats throughout the year. Vegetation data have been collected for the areas of the property where active management has been prescribed, but not for those areas where no active management has been recommended.