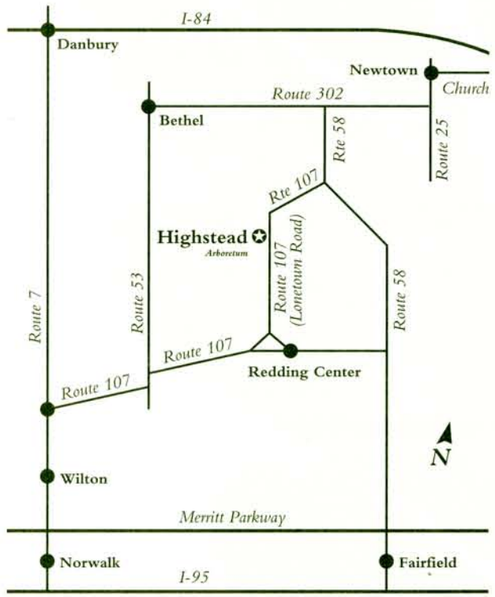
Facility Notes

For the protection of the fragile plant environment, please note:

- No dogs, bicycles, play equipment, food or beverages
- Stay on the paths and boardwalks
- Please refrain from picking plants and flowers
- No smoking

As the Woodland Project site is located in an isolated area, viewing of the site is only offered as a guided walk. Please call ahead to make a reservation, in order to ensure the availability of staff.



Individuals or groups interested in visiting Highstead may make arrangements by writing or calling:

Highstead*Arboretum*
P.O. Box 1097
Redding, Connecticut 06875-1097
203-938-8809

cover illustration by Redenta Soprano

HAQP04/00

Introduction

The Woodland

Our present woodlands look as if they have been here "forever," when actually they are less than one hundred years old. Only our older residents have witnessed the dramatic change of open farmland of the early part of the 20th century to the dense, wooded growth we see today.

As our woodland becomes fractured with more housing developments, land management practices must change. Tree work has replaced field mowing, and although the arborist is quite knowledgeable in the care of trees around the home, little is known about the management of our woodlands. The relative youth of this woodland is providing the Arboretum with fertile ground for research and education.

For these reasons, Highstead has begun a long-term woodland demonstration, focusing on an appropriately sized wooded area, similar in size to the typical building lot of towns in the immediate area. In this way, the local landowner will be able to make an estimate on the viability of such a project on his/her own property.

Establishing Goals

The size of most properties in this area is insufficient for profitable timber or firewood production. Most landowners will be inspired to undertake such a project for aesthetic reasons, but as aesthetics are a personal determination, it is best to further define your objectives. Do you hope to attract a greater diversity of plants or wildlife? Would you like to remove or control invasive, non-native plants? Install a woodland path for contemplation, or simply take an active hand in the stewardship of your property? The more specifically you are able to define your goals, the easier it will be to determine the methods and resources to utilize.

In advance of any action, two books worth reading are: *Working with Your Woodland: A Landowner's Guide,* by Mollie Beattie, Charles Thompson, and Lynn Levine, and *The Woodlot Management Handbook,* by Stewart Hills and Peter Mitchell.

Assessing the Site

Before beginning any property-based project, it is important to assess the site. First and foremost, know your boundaries. A good survey can go a long way in ensuring a peaceful coexistence with your neighbors.

Transferring your site survey to graph paper, and locating major structures, will provide a basis for locating the most significant plant material. Be sure to walk the site in several seasons, in order to avoid inadvertently damaging or destroying any rare or unusual plants.

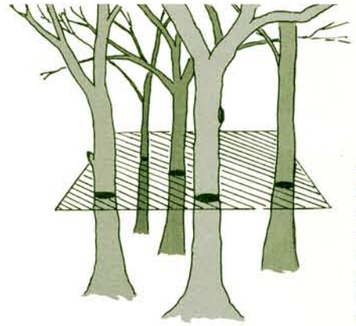
For the truly inspired, a complete stem map of the woody plants may be made, taking time to record the species, size, condition and location of each. Recording this information will be of great assistance when evaluating the site for removals or thinning, and for assessing the results of your management efforts.

Measuring Up

Two methods of measurement used by the forestry industry are *diameter-at-breast-height* (DBH) and *basal area coverage* (usually expressed in square feet per acre). It is the relative ease with which these measurements are obtained that helps to account for their popularity.

Diameter-at-breast-height is as straightforward as its name. A measurement of the diameter of the trunk or leader is made at four and a half feet above ground level. If you do not have a calibrated tape measure made for this purpose, a device called a Biltmore stick is just as effective, and easily made. Ask for instructions at the Arboretum office.

Basal area coverage is the sum of the cross sectional area of all trees on a particular acre. This measurement is also taken at four and a half feet above ground level in order to assure uniformity. It is interesting to



The illustration to the left is a visual depiction of basal area coverage at 4½ feet. The darkened circular trunk portions, representing the basal area of each trunk, would be added together to arrive at a one acre basal area coverage value.

note that the number of trees alone do not equate with greater basal area coverage. Using our woodland as an example, Plot C, which represents a thirty year old woodland, has 172 trees with a basal coverage per half acre of 91.81 square feet. Plot A, which represents an eighty year old woodland, has only 70 trees, yet has a basal coverage of 110.44 square feet over the same sized area. There is a point of diminishing return in the woodland, when the basal coverage will begin to decrease again, as age and competition take their toll on the weaker specimens.

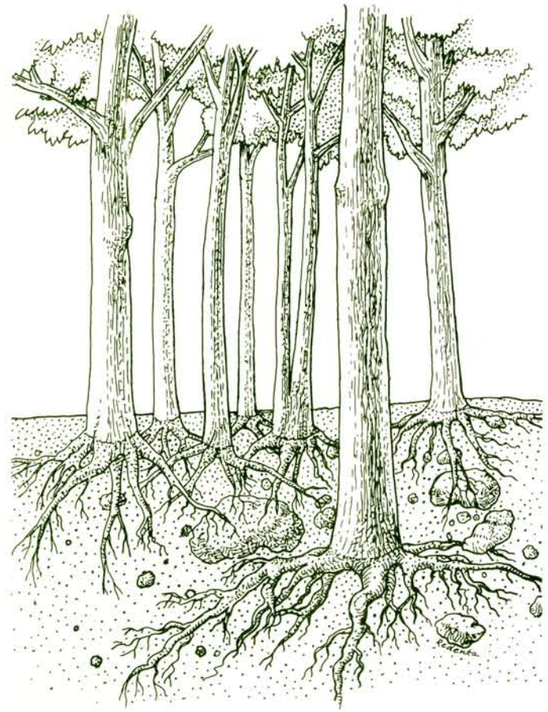
Surely, but Safely

These steps are the beginning of a process of evaluation that should include a decision as to how much of this work you can safely take on yourself, and what is best left to a professional. As a scientific institution, the Arboretum has been able to work closely with the professional staff at Harvard Forest. As a private homeowner, professional advice is best sought from local resources such as a Cooperative Extension Service Forester, a local tree warden, or a licensed arborist.

Remember, the key to the greatest enjoyment of your own property is observation and familiarity. Stewardship is a fortunate link to the woodlands around us, not a burden.

The Woodland Project

A Demonstration of Woodland Management Techniques



Highstead*Arboretum*