



Highstead Log

Autumn
News 1998

Highstead Arboretum

A Common Mistake

Pursuit of a well-manicured landscape leads many to the use of an electric- or gas-powered string trimmer. Many well-meaning homeowners and landscapers inflict irreparable damage on trees and shrubs through the misuse of these weed-whackers. Allowing the cord to travel too near the trunk inflicts repeated damage to the bark and the wood layer beneath. The layer of wood beneath the bark is called the *cambium*. Easily damaged, and hard for the plant to repair, this layer is critical to the good health of the plant.

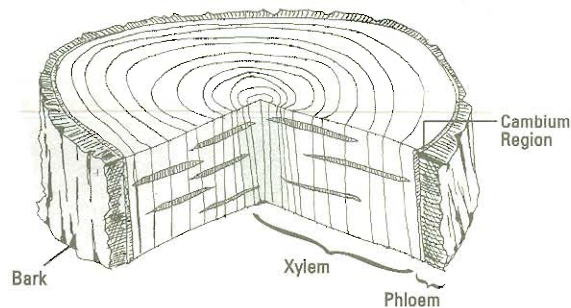
To protect your trees and shrubs from this type of damage, consider the use of hand-shears, mulch, or groundcovers around your landscape plantings. Save the weed-whacker for tougher sites such as stone walls, fence posts, and field edges.

Tree Plumbing

The plumbing systems of trees are an intricate and specialized series of cells and tissue types. The *xylem*, *phloem*, and *cambium region* are three of the primary elements of this system.

The cambium region, directly beneath the bark, is a single layer of cells responsible for cell division and development. The yearly growth of a tree is dependent on the proper functioning of these cells.

Cross Section of a Log



Inside the cambium ring is the xylem layer. This tissue makes up the largest portion of the trunk and branch, and is easily recognized as the wood displaying growth rings, the rings we count to approximate a tree's age. The xylem is both a support (skeleton) and one half the plumbing system. Water and raw nutrients are transported up the xylem to the leaves where, through photosynthesis, the nutrients are converted into starches and sugars usable by the living cells of the plant.

Once converted, these refined products are translocated from the leaves to all living cells through the

phloem tissue. The phloem tissue is just under the bark, and just outside the cambium layer. In fact, bark is, for the most part, old phloem tissue. Phloem tissue, just like the cambium region, is easily damaged by the improper use of weed-whackers, lawn mowers, and cables, as well as rodents feeding on the bark at ground level, and stags removing the felt from their antlers. If damaged, the tree cannot provide enough food to the cells of the root system and, over a period of time, will show the effects of this stress and may eventually die.

An easy way to remember this plumbing system is through a simple rhyme used by many students of botany:

*"Up the xylem, down the phloem,
That's the way the water go'em."*

Plantings from the Woods

In keeping with the character of our habitat, much of the lawn surrounding the Barn at Highstead has been removed and replanted with indigenous plants. Native plants have been teased out of the landscape to better reflect the personality of the Arboretum, offering a more gradual transition from the Barn to the woodland.

Sweetfern, Maple-leaved Viburnum and Ostrich Fern now fill the bed nearest the parking area. Along the walkway to the Barn, Witch Hazel, Blueberry (Highbush and Lowbush), Huckleberry, Bearberry and Bayberry have joined an existing Pin Oak and Winterberry. In this bed you will also find a number of Mountain Laurel which are unnamed cultivars (the product of work done by Dr. Richard Jaynes). These Kalmia have been moved from their previous site in the Laurel Collection to make room for additional named cultivars added to the Collection this spring.

Many of the beds have been softened with the introduction of wildflowers and ferns from the property; Milkweed, Goldenrod, Purple Coneflower and a variety of ferns can be found alongside Black-eyed Susans and Queen Anne's Lace.

Another attractive change was the introduction of Wood and Field Strawberries as a groundcover between the terrace and greenhouse. Locating native plants to utilize as a groundcover can be difficult, but with a little imagination and a willingness to experiment, an effective and unique planting can be achieved.

Special Notes



For further information on this special program, please call Highstead Arboretum at 203 938 8809 9am-4pm Monday-Friday.

Highstead Saturday Walk Programs

Highstead Arboretum invites members and guests for walks and talks on the second Saturday of each month. Come dressed to walk and plan to stay 1 to 2 hours. Reservations are suggested; call ahead for weather-related rescheduling.

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127 Lonetown Road
P.O. Box 1097
Redding, CT 06875



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AABGA Northeast Conference

Highstead Arboretum is pleased to be the host of the 1998 Northeast Regional Conference of the American Association of Botanical Gardens and Arboreta.

Into the Woodland

For many botanic gardens and arboreta, the woodland is considered excess or fringe property. This year's Northeast Regional Conference of the AABGA will bring this often overlooked habitat to the forefront.

Geared toward the professional community, this conference will delve into the mysteries of the woodland, the lessons to be learned, and future considerations.

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Photographing Nature

Saturday, September 12th, 10am

Capture the fleeting beauty of nature with your camera. Whether you take photos to record your own personal plant collection, or to celebrate nature, learn the fundamentals of garden photography. Subject matter, lighting, framing and lens selection will be discussed in this demonstrative lecture by Murth Murthy. Bring your camera and film!

Proper Pruning Technique

Saturday, October 10th, 10am

Don't go out on a limb when pruning. The Highstead staff will discuss and demonstrate the correct methods for pruning a branch with bypass pruners, lopping shears, and pruning saws. Learn how to make the

kindest cut possible for maximum healing and minimal disturbance to your trees.

Highstead Leaf Hunt

Saturday, November 14th, 10am

Learn to identify some of our native trees while sharing an outdoor adventure with your child. After a brief orientation to leaf shapes and margins, parents and children will search the trails for fallen leaves. The child wins who matches the greatest variety of leaves to the Highstead Leaf Guide. Open to all ages. Reservations required.

For further information, call Highstead Arboretum at 203 938 8809, 9am-4pm Monday-Friday.

There is a non-member fee of \$5.00 per program.