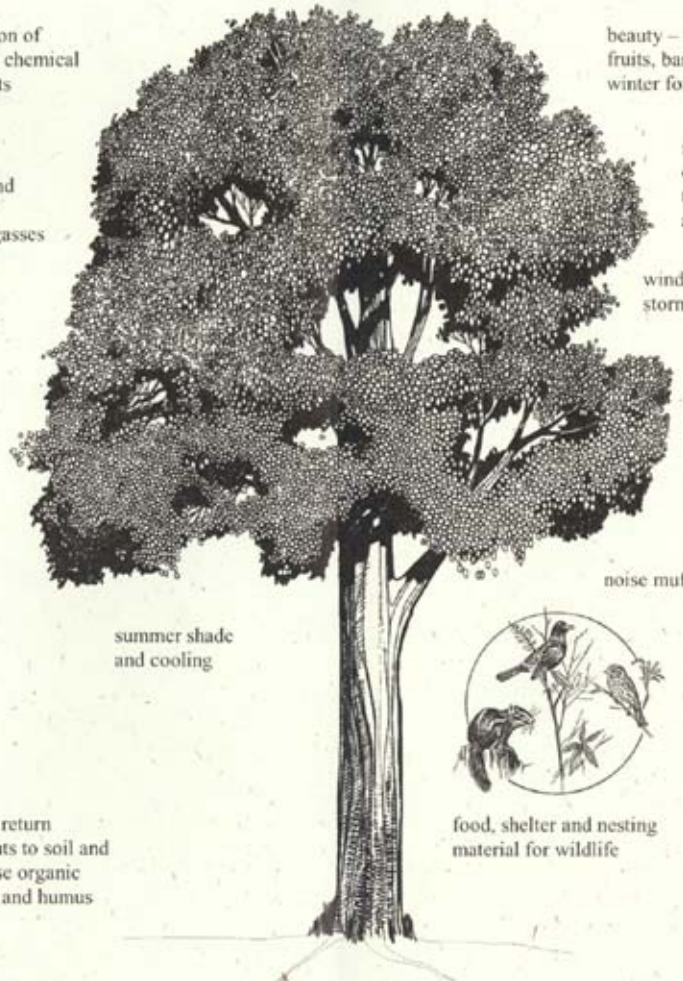
# THE VITAL ROLE OF TREES




### *The Biodiversity Education Initiative*

Biodiversity is an indicator of health for the ecological systems we depend on for all aspects of our lives. Biodiversity maintains the atmospheric and soil conditions that support all forms of life. Reduced biodiversity in an ecological system is like a weakened immune system in our body; it makes us vulnerable to disease. The loss of biological diversity has been recognized by the international community as a serious threat to human health and well being, and it has called for urgent action to reverse the alarming destruction of local, regional and global biodiversity. **The Biodiversity Education Initiative** includes projects addressing: sustainable agriculture, ecosystem health and restoration, watershed protection, sustainable landscaping and public health.

### *Why Inventory Trees?*

- **Biodiversity**
- **Management**
- **Education**
- **Landscape design**

The UNH campus tree inventory informs decisions about tree care and provides a wealth of information on the function of the natural systems that encompass our community.

For additional information about the Office of Sustainability Programs, please visit our website at: www.sustainablecunh.unh.edu (tree inventory link soon!). Or contact us at 107 Nesmith Hall, Durham, NH 603-862-4088.

Feedback encouraged: heidis@cisunix.unh.edu

The University of New Hampshire's
Office of Sustainability Programs

Presents

# A Self-Guided Tour of Campus Trees

The Durham campus of the University of New Hampshire is home to many exceptional trees. This tour was designed to invite you outside and visit these special residents and get to know them, their characteristics, locations, place within our eco-system and how they contribute to biodiversity. As a program of the **Biodiversity Education Initiative**, the **OSP Tree Inventory** has selected these trees for their unique contributions to our shared habitat. *ENJOY!!*

**1. Scarlet Oak - *Quercus coccinea***
Measuring in at 8', 8" in diameter, this is the largest Scarlet Oak known in the state of N.H.' All oaks are a tremendous food resource for birds and mammals.

**2. Katsuratree – *Cercidiphyllum japonicum***
A beautiful tree in every season – spring leaves emerge brilliant purple/red, summer turns those leaves placid blue/green and fall brings the most amazing shades of yellow, orange and apricot, with a spicy-sweet scent that laces the air as they fall. Winter reveals the medium grey, slightly shaggy bark.

**3. American Sycamore – *Platanus occidentalis***
A massive tree often reaching heights of 150', American Sycamore is perfectly at home on flood plains or river banks. . Another common name, Buttonwood, refers to the dry, round fruits that are densely packed into a hard brown ball that with some imagination, resemble buttons.

**4. Black Gum/Tupelo – *Nyssa sylvatica***
Another spectacular fall color tree, Black Gum turns the most brilliant shades of red. Given its choice, Black Gum prefers wet soil. The largest and oldest Black Gum trees in America are located right here in New Hampshire.

**5. White Ash – *Fraxinus americana***
Rivaled only by sugar maple for fall color, ash leaves turn vibrant shades of purple, apricot, yellow and orange. Ash wood has many uses, most notably as baseball bats.

**6. Dawn Redwood – *Metasequoia glyptostroboides***
Scientists believed this species to be extinct. In the early 1940s, Harvard University's Arnold Arboretum sponsored a plant-hunting expedition to China, where a small population of wild trees was found. Seeds were collected for propagating and sharing with other arboreta and botanic gardens.
Dawn Redwood is a deciduous conifer whose needles turn dazzling shades of yellow and orange before they fall.

**7. Tuliptree – *Liriodendron tulipifera***
Along with American Sycamore (*Platanus occidentalis)* Tuliptree is amongst our tallest native deciduous trees, reaching heights of 150'. Like Sycamore, Tuliptree is most happy growing in soil that is moist to wet. The common name comes from the tulip-shaped yellow and green flowers that emerge in May to early June and are reminiscent of Magnolia flowers, since the two genera are closely related. Better grab a ladder, though – Tuliptree flowers tend to bloom in the upper canopy.

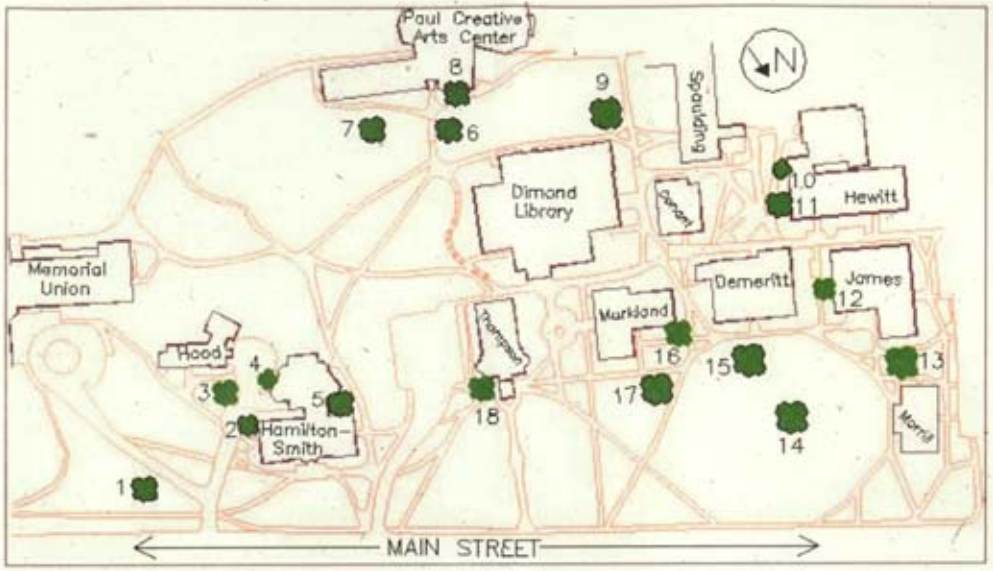
**8. Eastern Hemlock – *Tsuga canadensis***
Eastern Hemlock is an important food source for wildlife and provides shelter, especially during bitter New Hampshire winters. As snow piles on the branches and weighs them down, tents are formed where deer and other mammals seek shelter throughout the winter months.
Hemlock wooly adelgid (*Adelges tsugae),* a tiny, fuzzy, white insect accidentally imported from Asia in the 1920s, has devastated hemlock populations in Massachusetts and other more southerly states. Hemlock wooly adelgid was found in N.H.'s seacoast in September, 2000 and in the Monadnock region in 2001.

**9. American Elm – *Ulmus americana***
Once, every town in America including Durham had streets lined with American Elm trees, creating the beautiful signature arching canopy that made them so spectacular and popular. Unfortunately, trees planted in a "monoculture" (all one species) are more subject to unchecked infestation by insects and disease. Dutch elm disease first came to America from Asia via Europe in the 1930s and has subsequently killed millions of trees.

**10. Pagoda Dogwood – *Cornus alternifolia***
Pagoda Dogwood is typically a forest understory tree, happy with life at the knees of other trees, absorbing whatever sunlight filters through – its horizontal branching habit adapted for this purpose.

**11. European Beech – *Fagus sylvatica***
Until recently, the Higher Grounds coffee and snack wagon was parked immediately atop this tree's root system. Beeches do not tolerate soil compacting around their roots and the tree was showing signs of related stress, thus owner Vinny Cirasole agreed to move the wagon to a less damaging location, just a few feet away. Thanks Vinny!

**12. Indian Quassiawood – *Picrasma ailanthoides***
A rare and unusual tree, this is the only Indian Quassiawood on campus and perhaps the only one in New Hampshire. One reason for its rarity may be its lack of cold hardiness, only to zone 6. Durham is a cooler zone 5, but here among heated buildings, it is in a warmer "microclimate".




**13. Ginkgo – *Ginkgo biloba***
Touted for its many medicinal properties, Ginkgo is an ancient tree that dates back 150 million years. Interestingly, it is also a great tree for the harsh urban settings of the 21st century. Ginkgo is native to China and, in geological history, was native to North America as well.

**14. Sugar Maple – *Acer saccharum***
At one time in UNH's past, the Durham Rail Station was located in this section of the great lawn and these trees were planted alongside. Sugar Maple is best known for its fall color and its sweet sap. Between 30 and 40 gallons of sap are required to produce 1 gallon of syrup.

**15. Red Oak – *Quercus rubra***
Red oak has taken over as our dominant forest species on warm upland sites, filling the void left by American chestnut (*Castanea dentata*) which has been virtually wiped out of existence by a fungal blight accidentally imported in 1904.
Squirrels are primarily responsible for planting the red oak forests that cover the eastern seaboard – acorns are gathered, stored in the ground for later use and frequently forgotten, only to sprout and grow into new trees.

**16. Horsechestnut – *Aesculus hippocastanum***
Horsechestnut's best season is spring, when the large, creamy, pyramidal flowers bloom atop the branches, draping the tree in color. The chestnut-like fruits are mildly poisonous.

**17. Eastern White Pine – *Pinus strobus***
Mast Road in Durham was named for the enormous 150' – 200' Eastern White Pine trees that colonists shipped to England for use by King George as ship masts. Today, Eastern White Pine is our most valuable lumber species.
Our Durham campus has more Eastern White Pine trees than any other species, representing 17% of the total tree population. Urban foresters, aware of the importance of biodiversity, suggest that a single species should comprise no more than 5% of the total tree population.

**18. Kentucky Coffeetree – *Gymnocladus dioicus***
Another state champion, with a trunk diameter of 14.6", Kentucky Coffeetree gets its common name from the large seeds that the early settlers used as a coffee substitute. Kentucky Coffeetree leaves can reach 3' long!