



Memorials of gratitude were offered the *Dea Ardinna* for her protection and beneficence to woods, as shown in this Roman memorial stone found in a southeastern, German part of the Ardennes forest, named after her.

Jonesborough has dedicated this arboretum to the spirit of Ardinna, Celtic deity venerated in ancient times as guardian of woods that perpetually nourish ample trees, water and wildlife, as of travelers in the dense forests of those, bygone days.

As large numbers of trees disappear from the urbanized landscape, the arboretum provides an opportunity for Town citizens and visitors to learn about tree diversity once common in the Appalachian region, to enjoy the beauty of trees over the seasons and their environmental benefits in such settings, and to appreciate, as well, their importance to diverse, small-creature wildlife.

Jonesborough's Ardinna Woods

This arboretum comprises one of several sites where the Town, a certified "Tree City" maintains significant numbers of diverse trees. The park surrounds of the International Storytelling Center, for example, or Stage Road Park contain distinct collections. Main Street and the "town-escape" are graced by many large trees. Along trails in the woods of Persimmon Ridge a variety of native Appalachian trees of ridge top or cove-forest habitat can be seen. In the Town as a whole, various kinds of trees can be found which, in earlier days, clothed the Appalachian mountain sides and greened its cultivated landscapes.



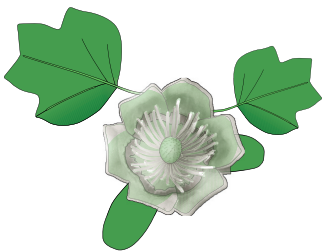
Ardinna Woods Arboretum

Where Appalachian Native Trees
and Shrubs Abound

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Pliny Fisk Environmental Services Site
Hwy 81 South and Britt Drive
Jonesborough, TN 37659



The arboretum contains two main tree collections. Shade trees, mainly, extend from the Butterfly Garden, east to west below Britt Drive. They represent species of medium to large size some of which, when mature, can attain considerable height of trunk and spread of crown. Urban small trees, appropriate for confined yard environments or under-power-line spaces are seen along the driveway and in the bank area along Highway 81.

- demonstrating use of site-appropriate trees for different landscape settings, including for hard-to-plant and near-power-line areas.
 - educating about importance of native-plant gardening in conservation of butterflies, avian and other wildlife
 - assisting and motivating viewers toward landscaping with non-invasive, native trees and plants
 - demonstrating the diversity of trees that are native to the Southern Appalachian region
 - providing a viewing area for identification and learning about such trees
- While adding to many trees and other plantings which enhance life quality and esthetics in the Town's environment, the arboretum serves several purposes, through

Purpose Certification and Funding

Funds for many of the arboretum's trees were obtained through a Community Tree Planting Projects grant from the Division of Forestry, Tennessee Department of Agriculture, from the Town of Jonesborough's Tree and Townscape Board, and from the Johnson City Power Board through its Small-Tree Demonstration Program.

Donations from community members have also supported acquisition of trees for this site.



**"Who looks at a birch tree
or a tuft of grass with
loving regard is speaking to God."**

Cossack proverb.



Don't make "hat-racks" of your trees.

Strongly discouraged by the Tennessee Department of Agriculture and the Urban Forestry Council, the practice of topping trees to reduce their height is a dangerous and ineffective form of tree care. When large trees are topped, new sprouts that will originate from the cut limb surfaces are weakly attached, making the trees vulnerable to broken branches and much decay. As a profusion of new growth leads to need of further removal every several years, the repeated cutting saps a tree's strength, often leading to failure and early death.

Site-Appropriate Trees Supporting Wildlife

Landscapes with diverse, native vegetation help support many animals' need for food, cover, moisture and nesting places, for part or perhaps much of the year. The plantings in this arboretum were selected in part for this purpose--to enhance habitat for visiting butterflies, for resident or transient songbirds, diverse pollinator insects, or perhaps small mammal creatures such as chipmunks or squirrels.

Among trees, for example, American Beech, Green Ash, Red Mulberry, Scarlet and White Oak and the hickories are important for providing hard or soft mast, and cover, for many birds, mammals and other creatures. Hummingbirds, other birds and butterfly larvae use Yellow-Poplar, Black Cherry, Dogwood and other trees seen here. Smooth Sumac, American Basswood and Yellow-Poplar provide prime nourishment in form of nectar to honeybees and numerous other insects. Thus, of our region's butterflies, the Eastern Tiger Swallowtail can here seek nectar on butterfly weed or bee-balm in the Butterfly Garden while its caterpillar offspring feed on White Ash, Black Cherry or Common Chokecherry leaves. Chokecherry also feeds the larvae of Coral and Streaked Hairstreaks plus dozens of moths and other butterfly species. Banded Hairstreaks can seek nectar among the Garden's milkweed or purple coneflowers while its caterpillars munch on leaves of the Southern Red Oak or White Oak.

To support public viewing experiences, and advance the knowledge of these relationships are among the arboretum's principal goals.

Among the many native trees of small and medium size assembled here, it is the Town's hope that viewers may find suggestions for selection that can meet the needs and site requirements of particular trees, as well as an owner's purposes and expectation of their enjoyment.

Tree Families and Species Represented

Legend

- Deciduous Tree
- Evergreen Tree
- Shrub

Each tree species is identified with one numbered specimen; many trees, however, are represented by two or more specimen at this site.



Maple Family (*Aceraceae*)

- [1] **Striped Maple** (*Acer pensylvanicum*)
- [2] **Sugar Maple** (*Acer saccharum*)
- [63] **Boxelder** (*Acer negundo*)

Nearly unrivaled among the hardwoods for knot-free wood, the Sugar Maple is also a stately street tree with magnificent autumn foliage, and beloved for its sweet sap, maple syrup. With winged seeds like the familiar shade trees, Striped Maple has leaves arranged in opposite position on the twigs, and hanging clusters of green flowers in late spring. The Boxelder, considered a highly adaptable tree in urban landscapes, is the only one among the maple trees that has multi-leaflet (compound) leaves.

Sumac Family (*Anacardiaceae*)

- [3] **American Smoketree** (*Cotinus obovatus*)
- [4] **Smooth Sumac** (*Rhus glabra*)

Large clusters of small flowers and masses of smokelike fruit clusters give the Smoketree its name. Smooth Sumac, with brilliant fall color and berries that persist into late winter, provides nectar and caterpillar food for several butterflies and emergency food for many bird species.

Custard-Apple Family (*Annonaceae*)

- [5] **Common Pawpaw** (*Asimina triloba*)

Its bell flowers emerging before the leaves, the Pawpaw tree bears banana-shaped fruits with custard-like texture; the fruit is relished, as well, by many birds and small mammals.

Holly Family (*Aquifoliaceae*)

- [6] **American Holly** (*Ilex opaca*)
- [7] **Winterberry Holly** (*Ilex verticillata*)

Contrasting with the glossy, evergreen foliage of the American Holly, the Winterberry Holly is a deciduous, small tree or shrub which bears a multitude of bright, orange berries prized by birds in the winter months.

Ginseng Family (*Araliaceae*)

- [8] **Devils-Walkingstick** (*Aralia spinosa*)

This spiny and aromatic, shrub or small tree is distinctive for very large, compound leaves with numerous leaflets; upright clusters of white flowers develop into juicy berries attractive to birds; it tends to form thickets.

Birch Family (*Betulaceae*)

- [9] **Yellow Birch** (*Betula allegheniensis*)
- [10] **American Hornbeam** (*Carpinus caroliniana*)
- [11] **Hophornbeam** (*Ostrya virginiana*)

The Yellow Birch, judged as among the tallest trees during pioneer days has spring flowering catkins and small, pendulous “cones” that disintegrate for seed dispersal. The American Hornbeam, also called Blue Beech because of distinctively colored, muscle-sinewy bark, is a round-canopied small tree whose catkins and nutlets are eaten by squirrels and birds. The nutlets and buds of Hophornbeam also serve as food for rabbits, deer and several birds.

Catalpa Family (*Bignoniaceae*)

- [12] **Northern Catalpa** (*Catalpa speciosa*)

The Northern Catalpa, with growing range broadly overlapping that of the Southern Catalpa, has showy, late-spring blossoms, large heart-shaped leaves and long, dangling seed capsules on which its popular names as cigar tree or Indian bean tree are based.

Honeysuckle Family (*Caprifoliaceae*)

- [13] **Arrowwood** (*Viburnum dentatum*)
- [14] **Blackhaw Viburnum** (*Viburnum prunifolium*)
- [15] **Possumhaw Viburnum** (*Viburnum nudum*)

This family includes the elders and viburnums. Several viburnum species can attain tree size and may be pruned as trees; the Arrowwood [13] and Possumhaw [15] are classified as shrubs. Creamy-white flower clusters are conspicuous and fruits are eaten by chipmunks, squirrels and many songbirds.

Bittersweet Family (*Celastraceae*)

- [16] **Eastern Wahoo** (*Euonymus atropurpureus*)

The Eastern Wahoo, a shrub or small tree has showy, light purple berries that are attractive to many birds; all parts of the plant are poisonous to humans, however, if ingested.

Dogwood Family (*Cornaceae*)

- [17] **Flowering Dogwood** (*Cornus florida*)
- [18] **Alternate-Leaf Dogwood** (*Cornus alternifolia*)

The “Appalachian Series” variety makes up the row of Flowering Dogwood to the left of the driveway. Contrasting with the Alternate-Leaf Dogwood, the former species bears its leaves in opposite pairs. Botanically, the Flowering Dogwood’s stunningly profuse spring blossoms represent “a flower that isn’t” since the most visible and showy, petal-like bracts are “only” the outer scales of the flower bud. The berries are an important food source for dozens of bird and small-mammal species.

Cedar Family (*Cupressaceae*)

- [19] **Eastern Redcedar** (*Juniperus virginiana*)

While this family contains cedars, cypresses and junipers and the Redcedar is botanically in the latter group, this eastern species grows especially well in limestone soils.

Ebony Family (*Ebenaceae*)

- [20] **Common Persimmon** (*Diospyros virginiana*)

This tree, which also grows in Jonesborough largest, the “Persimmon Ridge” park, ranges back in geologic age more than fifty million years. Its fruit was an important article of diet among the Indians; its dark wood is classed among the very hardest of woods.

Heath Family (*Ericaceae*)

- [21] **Sourwood** (*Oxydendrum arboreum*)

This family also contains the Mountain Laurel and Rhododendron. The Sourwood tree bears lovely clusters of urn-shaped flowers whose nectar is highly sought after by honeybees.

Bean Family (*Fabaceae*)

- [22] **Yellowwood** (*Cladrastis kentukea*)
- [23] **Black Locust** (*Robinia pseudoacacia*)
- [24] **Kentucky Coffeetree** (*Gymnocladus dioica*)
- [25] **Redbud** (*Cercis canadensis*)
- [26] **White Eastern Redbud** (*Cercis canadensis* ‘Alba’)

The legislature, in 1991, designated Yellowwood as the state’s official bicentennial tree, noting its unsurpassed beauty [and worthiness] of being grown in yards and public spaces across Tennessee. With the Kentucky Coffeetree, it is among the rarest eastern trees. Striking clusters of magenta, pink or white pea-like flowers, on naked branches as in the Redbud or in long pendant racemes as in the Yellowwood are characteristic of the trees in this family, as are compound leaf structure and fruits in bean-like pods.

Beech Family (*Fagaceae*)

- [27] **American Beech** (*Fagus grandiflora*)
- [28] **White Oak** (*Quercus alba*)
- [29] **Chestnut Oak** (*Quercus prinus*)
- [30] **Southern Red Oak** (*Quercus falcata*)
- [31] **Shumard Oak** (*Quercus shumardii*)
- [32] **Bur Oak** (*Quercus macrocarpa*)

This large family, containing beeches, chestnuts and oaks, includes the major trees prized for quality of wood, admired for their stature, longevity and beauty, and of immense importance of mast for wildlife. The large-scale felling of beech trees is judged among the two principal reasons for extinction of the passenger pigeon early in the 20th century.

Witchhazel Family (*Hamamelidaceae*)

- [33] **Sweetgum** (*Liquidambar styraciflua*)
- [34] **Common Witchhazel** (*Hamamelis virginiana*)
- [35] **Vernal Witchhazel** (*Hamamelis vernalis*)

Notable in the Sweetgum are corky ridges on the twigs and large, star-shaped leaves which turn brilliantly red-and-gold colored in the fall. The Witch hazels’ faintly fragrant flowers “venture forth” in the winter months, when other trees are bare, during November through February. The Vernal Witchhazel [35] is classified as shrub.

Horsechestnut Family (*Hippocastanaceae*)

- [36] **Red Buckeye** (*Aesculus pavia*)

Trees in this group have large, compound leaf shape with leaflets radiating from a central point; the dark red flowers of this Buckeye form a showy, candle-like upright panicle in late spring.

Walnut Family (*Juglandaceae*)

- [37] **Black Walnut** (*Juglans nigra*)
- [38] **Bitternut Hickory** (*Carya cordiformis*)
- [39] **Pignut Hickory** (*Carya glabra*)

Hickories and walnuts are the North American trees in this family; their hard-husked, nut fruits are important food for wildlife and their wood valued for fine cabinetry and many other uses.

Laurel Family (*Lauraceae*)

- [40] **Sassafras** (*Sassafras albidum*)

The only American member of this group of tropical, aromatic trees and shrubs, Sassafras is distinctive for glossy leaves in three shapes-unlobed elliptical, mitten-shaped, and 3-lobed, all on the same tree. The odorous oils of its bark, leaves and roots were long used in soaps, perfumes, as “spring-tonic” tea and in flavoring for candy.

Magnolia Family (*Magnoliaceae*)

- [41] **Tuliptree** (*Liriodendron tulipifera*)
- [42] **Sweetbay Magnolia** (*Magnolia virginiana*)

Tennessee’s state tree, also called Yellow-Poplar or Tulip-Poplar for its tulip-like flowers, is considered the tallest eastern hardwood tree and of great commercial value for furniture, musical instruments and many other uses of its wood. Shining evergreen leaves, large, cup-shaped and fragrant flowers characterize the Sweetbay Magnolia, whose natural habitat is swamp areas.

Mulberry Family (*Moraceae*)

- [43] **Red Mulberry** (*Morus rubra*)

The Red Mulberry’s edible and juicy, blackberry-like fruits are cherished by squirrels and many birds. With broad leaves that can be 2- or 3-lobed and with a wide crown of foliage, it is considered a “shade umbrella scoring high on most tests for an urban tree.”

Tupelo Family (*Nyssaceae*)

- [44] **Black Tupelo** (*Nyssa sylvatica*)

Its wood, extremely hard, is found in gunstocks, pistol grips, scaffolding and floors of factories which receive the roughest usage. The Tupelo’s foliage turns a deep burgundy color in fall; its fruit is relished by birds.

Olive Family (*Oleaceae*)

- [45] **White Ash** (*Fraxinus americana*)
- [46] **Green Ash** (*Fraxinus pennsylvanica*)
- [47] **White Fringetree** (*Chionanthus virginicus*)

The familiar jasmine, lilac and forsythia shrubs are members of this family, as are olive trees native to the Mediterranean basin. With showy, “ethereal” and fragrant flowers the Fringetree, closely related to the Ashes, is also called “Flowering Ash.” For toughness, pliancy and light weight the wood of White Ash is preferred for baseball bats and mallets.

Pine Family (*Pineaceae*)

- [48] **Eastern White Pine** (*Pinus strobus*)
- [49] **Virginia Pine** (*Pinus virginiana*)

Hemlocks, Pines, Spruces and Larches, among our principal coniferous trees, are in this family. Conifers have needle-like leaves, resinous wood and naked seeds attached to scales of the cones. White pine wood is said to have “built this nation, literally and figuratively,” in uses from matches and hobby horses, interior flooring and roof shingles, and many of the famed covered bridges.

Sycamore Family (*Platanaceae*)

- [50] **American Sycamore** (*Platanus occidentalis*)

Sycamore, or plane trees, native to the United States are the only members of this family. Sycamore is readily recognized by a smooth, scaly bark that sheds in irregular patches as the trunk expands.

Buckthorn Family (*Rhamnaceae*)

- [51] **Carolina Buckthorn** (*Rhamnus caroliniana*)

Member of a large family of subtropical and tropical shrubs and small trees, the Carolina Buckthorn has greenish-white flowers and dark purple berries much relished by robins and other birds.

Rose Family (*Rosaceae*)

- [52] **Black Cherry** (*Prunus serotina*)
- [53] **Common Chokecherry** (*Prunus virginiana*)
- [54] **White Sweet Crabapple** (*Malus coronaria*)
- [55] **Green Hawthorn** (*Crataegus viridis*)
- [56] **Cockspur Hawthorn** (*Crataegus crus-galli*)
- [57] **Allegheny Serviceberry** (*Amelanchier laevis*)
- [58] **Downy Serviceberry** (*Amelanchier arborea*)

The many trees, shrubs and herbaceous plants in this family grow primarily in temperate-climate regions; they are important sources of nutrition, through nectar or colorful fruits, for many species of wild animals.

Storax Family (*Styracaceae*)

- [59] **Carolina Silverbell** (*Halesia carolina*)

Also called snowdrop-tree or opossum-wood, this under-story tree of Southern Appalachian hardwood forests, with a liking for moist soils, can live to 100 years.

Willow Family (*Salicaceae*)

- [60] **Pussy Willow** (*Salix discolor*)
- [61] **Dragon’s Claw Willow** (*Salix matsudana* ‘Tortuosa’)

Among the trees in this family, the Pussy Willow delights with silky catkin flowers in the earliest months of spring, soon followed by golden pollen-laden stamens, before the leaves appear. The Dragon’s Claw Willow, also known as Corkscrew Willow is native to China and North-east Asia and the only non-native tree species in this arboretum.

Linden Family (*Tiliaceae*)

- [62] **American Basswood** (*Tilia americana*)

The Basswood, or Linden Tree, widely distributed in eastern and southeastern parts of the United States, with large, heart-shaped leaves and a broad crown is valued as a shade tree. In bloom, its yellow flower clusters are worked ceaselessly by honey bees and other insects, the honey valued for its fine flavor.

Elm Family (*Ulmaceae*)

- [64] **Common Hackberry** (*Celtis occidentalis*)

The Common Hackberry, with rounded crown when mature at 50 to 70 feet high, likes to grow along riverbanks but tolerates a wide range of soil and moisture conditions, even drought. Its purple fruit, with sweet, orange-colored flesh is important to the winter birds.