



Haverford Township Recommended Native Tree & Habitat Guide

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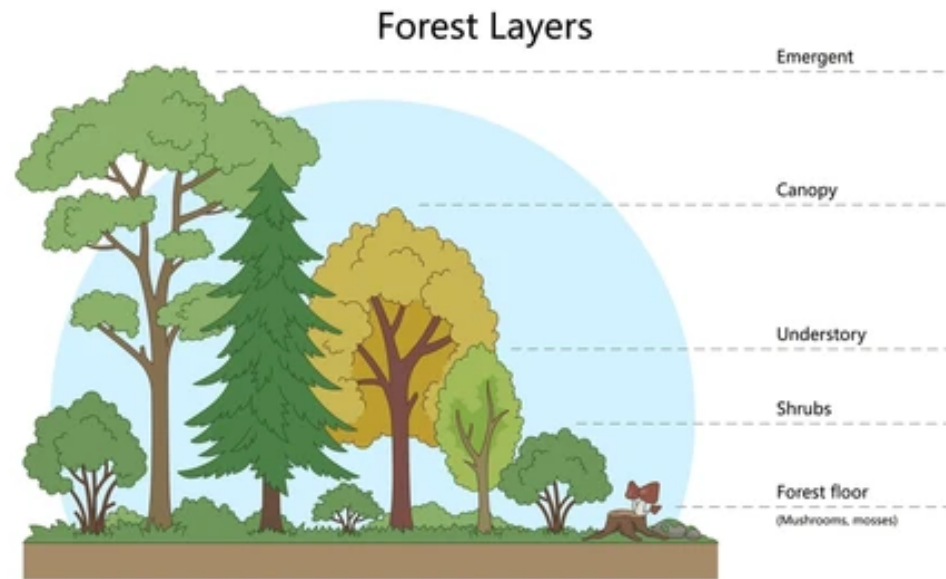
A Resident's Guide to Cultivating a Resilient Tree Canopy

This guide provides residents with a strategic framework for selecting native trees that thrive in Zone 7b while maximizing local biodiversity.

Maintaining a healthy tree canopy is essential to the health of our community; trees act as living filters that clean the air we breathe and the water we drink. Beyond environmental health, a robust canopy enhances our quality of life by cooling our streets and providing the inspiration and beauty that define Pennsylvania. This guide identifies the top 10 native deciduous trees for Haverford Township, selected for their structural integrity, aesthetic beauty, and immense ecological and property value. This guide also includes preferred native understory trees and native perennial pairings for each tree.

Understanding Canopy Trees

In forestry and urban landscaping, a **canopy tree** refers to a mature, large-stature tree whose uppermost branches and leaves form the primary overhead layer—the protective "ceiling"—of a forest or residential landscape. Sitting completely above understory trees, shrubs, and the forest floor, these giants catch the most direct sunlight, making them the dominant photosynthetic engine of our ecosystem. By establishing a broad, spreading crown, canopy trees physically map out our local environment, casting deep shade, intercepting rainfall, and establishing the foundational framework for the life beneath them.



Forest Layer Diagram

Defining Ecological Value

In the context of "Penn's Woods," ecological value refers to a tree's ability to serve as a reservoir of biological diversity and a functional component of the ecosystem.

- **Biodiversity Support:** Native trees serve as essential host plants for indigenous caterpillars, which in turn support the local food web. For example, the White Oak supports 557 species of Lepidoptera (butterflies and moths).
- **Living Filters:** Trees act as natural infrastructure that cleans the air and filters the water within our watershed.
- **Habitat and Shelter:** Mature native trees provide critical nesting sites, food, and protection for songbirds, game birds, and small mammals.
- **Climate Regulation:** A dense canopy helps mitigate the "heat island" effect by cooling our streets and helping to heat our homes through wind protection.

The Value of Canopy Trees to Your Property

Investing in a resilient tree canopy is an investment in your home's long-term financial value.

- **Enhanced Financial Worth:** Data from the Arbor Day Foundation indicates that mature canopy trees can elevate residential market appraisals by 3% to 15%.
- **Energy Savings:** Strategically placed trees help cool homes in the summer and provide insulation against winter winds, reducing utility costs.
- **Aesthetic Appeal:** Trees define the character of Pennsylvania landscapes, providing the beauty and inspiration that make residential areas more desirable.
- **Structural Longevity:** Selecting trees with high structural integrity, such as Hickories or White Oaks, ensures that your property's "green assets" can thrive for 400 years or more.
- **Sustainable Sourcing:** By planting native species, you reduce the need for intensive chemical management often required by introduced species, protecting your soil and local biodiversity.

Top 10 Native Canopy Trees

Large canopy trees are the primary filters for our air and water. These "Top 10" are selected for their dominance in Southeastern Pennsylvania and provide high ecological value.

Canopy Tree	Size Range	Growth Rate	Ecological & Landscape Value	Native Perennial Pairing
White Oak (<i>Quercus alba</i>)	80'–100' H x 50'–80' W	Slow to Moderate	Supports 557 caterpillar species . A dominant forest staple that can live 400+ years.	Pennsylvania Sedge : A grass-like "living mulch" that thrives in dry oak shade.
Black Cherry (<i>Prunus serotina</i>)	50'–75' H x 35'–50' W	Moderate to Rapid	Supports 456 caterpillar species . Highly prized for furniture and consumed by birds and bears.	Blue-Stemmed Goldenrod : Adds late-season color to dappled light.
Birch Tree / Sweet Birch (<i>Betula lenta</i>)	50'–60' H	Moderate	Birches support 411 caterpillar species . Tight bark breaks into large plates as it ages; twigs emit a strong wintergreen scent.	Foamflower (<i>Tiarella cordifolia</i>): Thrives in the cool, moist, and rocky settings where native birches often grow.

Canopy Tree	Size Range	Growth Rate	Ecological & Landscape Value	Native Perennial Pairing
Poplar tree / Bigtooth Aspen (<i>Populus grandidentata</i>)	75'–125'+ H x 60'–100' W	Rapid	Poplars support 367 caterpillar species . Important for generating rapid forest cover and protecting soils.	Wild Blue Phlox (<i>Phlox divaricata</i>): Adds stunning early color before the aspen fully leaves out.
Sugar Maple (<i>Acer saccharum</i>)	60'–80' H x 40'–60' W	Slow to Moderate	Supports 297 caterpillar species . Renowned for brilliant fall colors. Its sap is the primary source for maple syrup production.	Wild Columbine : Thrives in the rich, well-drained soils maples prefer.
Bitternut Hickory (<i>Carya cordiformis</i>)	60'–75' H x 40'–50' W	Moderate	Supports 235 caterpillar species . Thrives on moist, fertile bottomlands.	White Wood Aster : Handles the dry root competition of mature hickories.
Canopy Tree	Size Range	Growth Rate	Ecological & Landscape Value	Native Perennial Pairing

Linden or Basswood (<i>Tilia americana</i>)	60'–80' H x 30'–60' W	Moderate to Rapid	Lindens support 149 caterpillar species . Features fragrant, yellowish-white spring flowers.	Virginia Bluebells (<i>Mertensia virginica</i>): Loves the rich, moist valley soils where Lindens naturally grow.
Black Walnut (<i>Juglans nigra</i>)	70'–100' H x 60'–80' W	Moderate	Supports 131 caterpillar species . Prized for rich brown heartwood used in quality furniture.	Coral Bells : A hardy native that tolerates the specific soil chemistry under walnuts.
Honey-locust (<i>Gleditsia triacanthos</i>)	40'–50' H to 100' H	Rapid	Supports 46 caterpillar species . Lacy leaflets create light shade, allowing ground covers to thrive underneath.	Wild Geranium (<i>Geranium maculatum</i>): Thrives perfectly under the dappled light of its airy canopy.
Tulip Tree (<i>Liriodendron tulipifera</i>)	80'–140' H x 40'–60' W	Rapid	Supports 21 caterpillar species . The tallest eastern hardwood. Provides vital nectar for pollinators via large tulip-like flowers.	Wild Geranium : Flourishes in the filtered light beneath the canopy.

Top 10 Native Understory Trees

To completely mimic the multi-layered structure of Pennsylvania's natural ecosystems, the forest understory requires high-performing native small trees. Based on local entomological metrics and regional forestry data, these ten understory

species support a significant number of insect species and supply vital fruit and browse to native wildlife:

- **Crabapples** (*Malus spp.*): Growing as highly ornamental small trees, this foundational native understory genus **supports 308 caterpillar species** and produces abundant spring blossoms followed by persistent autumn fruits that serve as a critical winter food source for birds and small mammals.
- **Flowering Dogwood** (*Cornus florida*): Peaking precisely at 30' H, this quintessential understory tree supports **118 caterpillar species** and features distinctive silvery, button-shaped winter flower buds, showy spring bracts, and wine-red autumn foliage.
- **Eastern Redbud** (*Cercis canadensis*): Maturing at 15'–20' H, this edge-loving tree supports **19 caterpillar species** and is famous for its bright rose-colored spring flowers and heart-shaped leaves.
- **Serviceberry** (*Amelanchier spp.*): Growing as a small tree typically under 40' high, this multi-season star supports **124 caterpillar species** and produces showy white spring flowers followed by sweet, edible berries relished by wildlife and humans alike.
- **American Hornbeam** (*Carpinus caroliniana*): Maturing at 30' H along stream banks and floodplains, this understory tree supports **68 caterpillar species** and features smooth, slate-gray bark with rounded vertical ridges that resemble muscles.
- **American Bladdernut** (*Staphylea trifolia*): Reaching a compact maximum of 10'–15' H, this multi-stemmed understory choice supports multiple native insect species and features hanging clusters of bell-shaped white spring flowers that develop into unique, inflated, paper-like seed capsules.
- **Sweetbay Magnolia** (*Magnolia spp.*): This native understory genus supports **21 caterpillar species** and is highly valued for its beautifully fragrant, lemon-scented spring flowers that thrive in wet or swampy woodland soils.
- **Witch-hazel** (*Hamamelis virginiana*): Reaching up to 25' H, this exceptionally shade-tolerant native supports **63 caterpillar species** and is famously the last woody plant to bloom in Pennsylvania, producing ribbon-like yellow petals in late fall.
- **Red Buckeye** (*Aesculus pavia*): Belonging to the native buckeye genus (*Aesculus*) which supports **33 caterpillar species**, this striking deciduous understory selection grows 15'–25' H and is celebrated for its showy spikes of bright red spring flowers that serve as an early nectar source for returning hummingbirds.
- **Pawpaw** (*Asimina triloba*): Remaining safely under the 30-foot threshold at maturity, this large-leafed,

tropical-looking native understory tree supports **12 caterpillar species**. It produces large, edible, mango-like fruit, prefers rich, moist, shaded areas, and grows natively in thickets.

Top 10 Native Woody Shrubs

To completely mimic the multi-layered structure of Pennsylvania's natural ecosystems, the forest understory requires high-performing native shrubs. Based on local entomological metrics, these ten non-tree woody species support the greatest number of insect species and supply vital fruit and browse to native wildlife:

- **Blueberries** (*Vaccinium spp.*): Reaching 3'–8' H x 3'–8' W, these low-growing shrubs support **294 caterpillar species** and provide sweet summer fruits that feed a vast network of birds and mammals.
- **Alders** (*Alnus spp.*): Growing 8'–15' H x 5'–10' W, these multi-stemmed wetland edge shrubs support **255 caterpillar species** and work brilliantly to stabilize loose soil along streambanks and drainage swales.
- **Hawthorns** (*Crataegus spp.*): Maturing at 15'–25' H x 10'–20' W, these dense shrubs support **168 caterpillar species** and feature thick, thorny branches that create perfect nesting cover for songbirds against neighborhood predators.
- **Berries / Brambles** (*Rubus spp.*): Spreading 3'–6' H x 4'–8' W, these quick-growing native thickets support **163 caterpillar species** while supplying critical soft summer berries and heavy winter browse.
- **Roses** (*Rosa spp.*): Reaching 3'–6' H x 3'–5' W, native species (such as the Pasture Rose) support **135 caterpillar species** and offer nectar-rich spring flowers followed by winter-persistent seed hips.
- **Filberts / Hazelnuts** (*Corylus spp.*): Growing 8'–12' H x 8'–12' W, these broad, multi-stemmed deciduous shrubs support **131 caterpillar species** and drop rich, highly sought-after nuts for native small mammals.
- **Bayberries** (*Myrica spp.*): Reaching 5'–10' H x 5'–10' W, these aromatic, multi-stemmed shrubs support **108 caterpillar species**; their persistent berries are a critical cold-weather resource for returning songbirds.
- **Viburnums** (*Viburnum spp.*): Growing 6'–12' H x 6'–10' W, these highly adaptable options support **104 caterpillar species** and feature flattened spring flower heads, colorful summer berries, and dramatic fall foliage.
- **Spireas** (*Spiraea spp.*): Maintaining a compact 3'–5' H x 3'–5' W profile, these shrubs support **89 caterpillar**

species and deliver long-lasting summer blooms perfectly suited for native bees on residential garden margins.

- **Sweetfern** (*Comptonia peregrina*): Growing as a low, mounding option at 2'–4' H x 3'–5' W, this fern-like aromatic shrub supports **64 caterpillar species** and thrives on tough, dry, or gravelly slopes where it actively fixes soil nitrogen.

Tree Planting Tips

- **Root Health:** Ensure the "trunk flare" is visible above the soil; buried flares lead to long-term rot.
- **Layering:** Mimic natural forests by planting understory trees and perennials within the "drip line" of larger canopy trees.
- **Pocket Planting:** When planting under existing trees, dig small individual holes between structural roots to avoid root damage.
- **Avoid Volcano Mulching:** Mulch should be 2–3 inches deep but must never touch the trunk. Piling mulch against the bark promotes decay, traps moisture, and attracts pests.
- **Plant Native:** Native species provide significantly higher ecological value. While introduced species like Norway Spruce offer shelter, a native White Oak supports 557 caterpillar species, fueling the entire local food web.

Additional Recommendations

To give Haverford residents even more high-performing choices to expand their home landscapes, here is a supplemental selection of the **next 20 native canopy trees (30 feet or taller)**.

Large Canopy Trees (60' to 100'+) — The Next 10

These are primary canopy-forming giants. They require plenty of space to spread their roots and crowns, serving as the dominant architectural ceiling for a property.

- **1. Northern Red Oak** (*Quercus rubra*)
 - **Size:** 60'–75' H x 60'–75' W | **Growth Rate:** Fast (for an oak)
 - **Ecological Value:** Part of the ultimate **557-species** oak keystone group. It is one of the fastest-growing oaks, features a clean, straight trunk, and handles urban soil compaction remarkably well.
- **2. Swamp White Oak** (*Quercus bicolor*)
 - **Size:** 60'–80' H x 60'–80' W | **Growth Rate:** Moderate
 - **Ecological Value:** High-volume oak host (**557 species**). As a champion of the floodplain, its aggressive, wide root system makes it the single best large tree for locking down loose, wet clay or managing heavy backyard stormwater runoff.
- **3. Pin Oak** (*Quercus palustris*)
 - **Size:** 60'–70' H x 25'–40' W | **Growth Rate:** Fast
 - **Ecological Value:** Supports **557 caterpillar species**. Known for its distinctive pyramidal shape and descending lower branches, it drops small acorns heavily targeted by wood ducks, wild turkeys, and songbirds. (*Note: Requires strictly acidic soil*).
- **4. Shagbark Hickory** (*Carya ovata*)
 - **Size:** 70'–90' H x 50'–70' W | **Growth Rate:** Slow
 - **Ecological Value:** Supports **235 caterpillar species**. Famous for its dramatic, peeling gray bark plates that peel outward, creating safe summer roosting micro-habitats underneath the bark for native bats. It also drops sweet, edible hickory nuts.
- **5. American Beech** (*Fagus grandifolia*)
 - **Size:** 50'–80' H x 50'–70' W | **Growth Rate:** Slow
 - **Ecological Value:** Supports **127 caterpillar species**. Instantly recognizable by its smooth, skin-like silver bark and golden-bronze autumn leaves that cling to branches through winter. It yields small, highly nutritious beech nuts for local wildlife.
- **6. Common Hackberry** (*Celtis occidentalis*)
 - **Size:** 40'–60' H x 40'–60' W | **Growth Rate:** Moderate to Fast
 - **Ecological Value:** Supports **43 caterpillar species**. A phenomenal wildlife tree that serves as the exclusive host for the Hackberry Emperor butterfly. Its winter-persistent berries are a lifesaver for returning spring songbirds.

- **7. American Elm (*Ulmus americana*)**
 - **Size:** 70'–90' H x 50'–70' W | **Growth Rate:** Fast
 - **Ecological Value:** Supports **215 caterpillar species**. Classic vase-shaped silhouette. Residents looking to plant an elm should specifically select modern, disease-resistant native cultivars (like 'Princeton' or 'Valley Forge') to safeguard against Dutch Elm Disease.
- **8. River Birch (*Betula nigra*)**
 - **Size:** 40'–70' H x 40'–60' W | **Growth Rate:** Fast
 - **Ecological Value:** Belongs to the highly productive birch family (**411 caterpillar species**). It features spectacular, papery, exfoliating cream-and-tan bark and thrives beautifully in wet garden low-spots where other trees struggle.
- **9. Black Willow (*Salix nigra*)**
 - **Size:** 30'–60' H x 30'–50' W | **Growth Rate:** Fast
 - **Ecological Value:** Belongs to the third-highest biodiversity group on the master list (**455 caterpillar species**). An absolute moisture lover, its sprawling root system stabilizes wet banks and provides critical early-season nectar for native pollinators.
- **10. Silver Maple (*Acer saacharinum*)**
 - **Size:** 50'–80' H x 40'–60' W | **Growth Rate:** Fast
 - **Ecological Value:** Part of the heavy-hitting maple group (**297 caterpillar species**). Named for the shimmering silver undersides of its leaves, it features an expansive root system tailored for handling severe, periodic riparian flooding.

Medium Canopy & Evergreen Trees (30' to 60') — The Remaining 10

These mid-sized trees perfectly fit standard residential lots in Haverford. They clear the 30-foot canopy minimum, provide vital shade, and introduce necessary seasonal evergreen cover.

- **11. Eastern White Pine (*Pinus strobus*)**
 - **Size:** 50'–80' H x 20'–40' W | **Growth Rate:** Fast
 - **Ecological Value:** Supports **201 caterpillar species**. The tallest native evergreen in PA; its soft, bluish-green needles offer essential, year-round windbreaks, thermal insulation, and nesting shelter for owls and migrating songbirds.
- **12. Eastern Hemlock (*Tsuga canadensis*)**
 - **Size:** 40'–70' H x 25'–35' W | **Growth Rate:** Slow to Moderate

- **Ecological Value:** Supports **92 caterpillar species**. As Pennsylvania's official State Tree, this elegant, shade-tolerant evergreen thrives in cool, damp, north-facing woodland pockets, casting deep shade that keeps local forest soils and streams cool.
- **13. Pitch Pine (*Pinus rigida*)**
 - **Size:** 40'–60' H x 30'–50' W | **Growth Rate:** Moderate
 - **Ecological Value:** Out of the **201 pine-hosting species**, this rugged native is exceptionally drought-hardy. It features thick, fire-resistant, chunky bark and gnarled branches that add unique, rugged character to a property.
- **14. Black Locust (*Robinia pseudoacacia*)**
 - **Size:** 30'–50' H x 20'–35' W | **Growth Rate:** Fast
 - **Ecological Value:** Supports **72 caterpillar species**. It features deeply furrowed bark and cascading clusters of intensely fragrant white spring flowers that draw massive numbers of native bees. Its dense wood is naturally rot-resistant.
- **15. American Hornbeam / Musclewood (*Carpinus caroliniana*)**
 - **Size:** 20'–35' H x 20'–35' W | **Growth Rate:** Slow
 - **Ecological Value:** Supports **68 caterpillar species**. A remarkably shade-tolerant tree that thrives under the shadow of larger oaks. It features smooth, slate-gray bark that naturally ripples out into vertical ridges resembling flexed muscle tissue.
- **16. Hop-Hornbeam / Ironwood (*Ostrya virginiana*)**
 - **Size:** 25'–40' H x 20'–30' W | **Growth Rate:** Slow
 - **Ecological Value:** Supports **94 caterpillar species**. Noted for its shreddy, flaky bark and unique, hop-like papery seed pods that dangle from the branches through winter, offering cold-weather food for local birds.
- **17. American Persimmon (*Diospyros virginiana*)**
 - **Size:** 30'–60' H x 20'–35' W | **Growth Rate:** Slow to Moderate
 - **Ecological Value:** Supports **46 caterpillar species**. It features distinctive, dark-gray blocky bark that resembles alligator skin. Female trees produce sweet, bright-orange autumn fruits heavily prized by local wildlife.
- **18. Sassafras (*Sassafras albidum*)**
 - **Size:** 30'–60' H x 25'–40' W | **Growth Rate:** Medium to Fast
 - **Ecological Value:** Supports **38 caterpillar species**, including the stunning Spicebush Swallowtail butterfly. It is famous for growing highly aromatic, bright green leaves in three distinct shapes (mitten, three-lobed, and oval) all on the same branch.

- **19. Sweet Birch / Black Birch** (*Betula lenta*)
 - **Size:** 40'–50' H x 35'–45' W | **Growth Rate:** Medium
 - **Ecological Value:** Supports **411 caterpillar species**. Its tight, dark bark breaks into handsome plates as it ages. Scraping a small twig releases an unmistakable, refreshing wintergreen scent.
- **20. Sourwood** (*Oxydendrum arboreum*)
 - **Size:** 25'–35' H x 20'–25' W | **Growth Rate:** Slow
 - **Ecological Value:** Thrives safely right at the 30-foot canopy mark. It produces striking lily-of-the-valley-like white flower panicles in mid-summer when few other canopy trees are blooming, providing a vital mid-season food source for pollinators before turning a brilliant, fiery crimson in the fall.

References

Bringing Nature Home / National Wildlife Federation Native Plant Finder * *Data Source:* Dr. Douglas Tallamy (University of Delaware, Department of Entomology)

Pennsylvania Department of Conservation and Natural Resources (DCNR) * *Reference:* Bureau of Forestry Native Tree Database.

The Morton Arboretum & Lady Bird Johnson Wildflower Center * *Reference:* Plant Profiles and Native Plant Databases.

Penn State Extension * *Reference:* *From the Woods: Community Forests* and *Pennsylvania Tree Identification Guides*.

Haverford Township Municipal Code * *Reference:* Chapter 170 (Shade Trees) and Chapter 4, Section 518 (Shade Tree Commission).

Pennsylvania First Class Township Code * *Reference:* Act of June 24, 1931 (P.L. 1206, No. 331), Article XXX (Shade Tree Commission)

Federal Emergency Management Agency (FEMA) / USDA NRCS * *Reference:* *Riparian Buffer Design Guidelines* and *The Plants Database*.

This guide was prepared by the Haverford Township Shade Tree Commission using data from the PA DCNR Bureau of Forestry and University of Delaware research.