

Learn the Trees of The Grove

at St. Xavier Nature Preserve

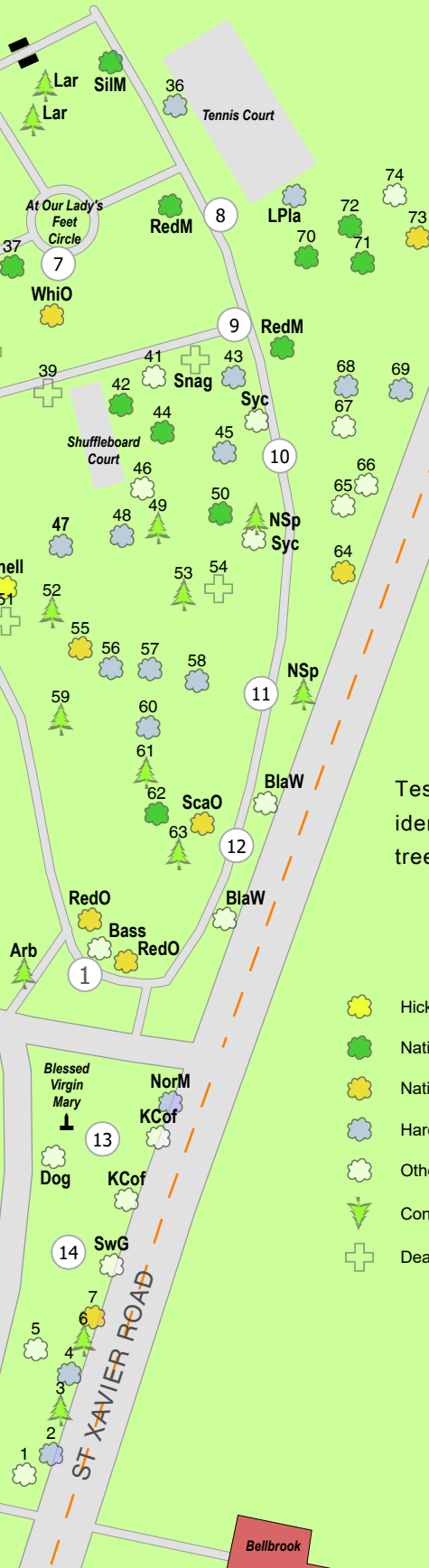
Visit each numbered Station (Stations 1 through 16) and use the guide inside to discover identification tips and facts about trees.

Test your knowledge by identifying the numbered trees. Answer key is inside.

AmB	American Beech		
AmElm	American Elm		
Arb	Arborvitae		
Bass	American Basswood	RedO	Northern Red Oak
BlaL	Black Locust	ScaO	Scarlet Oak
BlaW	Black Walnut	Shag	Shagbark Hickory
CheO	Chestnut Oak	Shell	Shellbark Hickory
Dog	Flowering Dogwood	SiLM	Silver Maple
Hem	Eastern Hemlock	Snag	Snag
Hor	Horsechestnut	SugM	Sugar Maple
KCof	Kentucky Coffeetree	SwG	Sweet Gum
Lar	European Larch	Syc	American Sycamore
LPla	London Planetree	Tul	Tulip Tree
NorM	Norway Maple	WhiO	White Oak
NSp	Norway Spruce		
Pec	Pecan		
PinO	Pin Oak		
RedM	Red Maple		

-  Hickories and Walnuts
-  Native Maples
-  Native Oaks
-  Hardwoods from across the World
-  Other Native Hardwoods
-  Conifers
-  Dead or Dying Trees

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Feet



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Station ① is dominated by a large, 3 ft diameter, **Red oak**. The bark has smooth lighter-colored ridges that extend down the trunk, intersecting like ski tracks. Red oak leaves have lobes tipped with a bristle, and separated by shallow sinuses. Red oak acorns feed squirrels, deer, wild turkey, and woodpeckers.

Basswood, with drooping branches, casts a deep shade in summer. Its leaves are unequally heart-shaped at the base, and the leaf tips are abruptly pointed. Larvae of several butterfly species eat the leaves. Fruits are pea-sized balls attached to a strap-like leafy bract; squirrels and chipmunks eat the fruits. Long, tough fibers from the inner bark were stripped by Native Americans for ropes, thread, fishnets, and baskets.

The evergreen conifer is **Arborvitae**. Short horizontal branches turn upward to form a narrow and compact crown. The beautifully textured bark has thin narrow strips; red squirrels use these strips to build their nests. Though Arborvitae occurs naturally in Ohio and New York, there are no native stands in Pennsylvania.

At Station ② we can observe two hickory trees native to the eastern U.S., but very uncommon in Pennsylvania. Hickories have compound leaves composed of 7, or 9, or even 15 leaflets. The length of **Shellbark hickory** leaves range from one to two feet long! The five leaflets at the end of the leaf are much longer than the four at the bottom. It produces a large nut, one to two inches long. Bats will roost behind its loose strips of bark (as they do in our common Shagbark hickory).

The leaves of stately tall **Pecan** hickory are also long, but the leaflets are not symmetrical, and have a distinct, curved, crescent-like form resembling the blade of a sickle. Lightly scratch a bud in late summer for a pleasant scent. It is native to the Mississippi Valley and cultivated for its sweet nuts.

At Station ③, we see low sprawling branches of a **Sugar maple**. Sugar maple

trees are tapped in spring to collect sap that is processed into sweet maple syrup. Think of pointed tips of the leaf lobes as Sugar maple's "sweet tooth". Red and gray squirrels gnaw branch tips or eat bark in early spring when sap is flowing.

The leaves of the **Chestnut oak** are hard to see, but the tall, soldierly tree trunk harbors a unique bark pattern. The bark is incredibly thick; note the deep V-shaped valleys between flat-topped ridges that are broken horizontally into a series of rectangles. Look up to see leaves with coarse, rounded teeth and compare those with the bristle-tipped lobes of Red oak.

Note the line of three **Norway spruces**. A valuable timber tree of Europe, this is the most commonly planted spruce in Pennsylvania.

At Station ④, pass under the branches of Sugar maple (remember the pointed tips of the leaf lobes as Sugar maple's "sweet tooth") to examine the compound and opposite leaves of **Horsechestnut**; its "palmate" leaflets are arranged like the fingers of a hand. Touch the sticky dark bud. Horsechestnut produces a thick, leathery, spiny ball-like capsule; inside are smooth shiny (poisonous!) nuts. Horsechestnut is native to southern Europe. It has a handsome rounded-topped crown.

The lateral spreading branches of **Eastern hemlock**, the state tree of Pennsylvania, form flattened sprays. Look for the whitened lines on the lower surface of the needles. Small cones of this conifer hang from branches and persist throughout the winter. When hemlocks grow in a dense stand, they create a cooler moist microclimate, and create winter cover for deer, grouse, and turkey. Native Americans and pioneers made tea from young branch tips.

At Station ⑤, note the **Pin oak** at the corner. The lower branches droop and soon die when shaded by the tree's crown. Once they break off they leave short stubs, or "pins". The leaves with bristle-tipped teeth are very similar to Red and Scarlet oak; look for small tufts of reddish hairs in the axils of the leaf veins on the lower leaf surface of Pin oak.

Station ⑥ is a half-circle of **European larches**. Larches are deciduous conifers (cone-bearers); the soft needles fall in autumn. Blue-green, 1-inch-long needles are clustered on very short lateral shoots. Larches have an alluring, irregular non-geometric form.

Toward the road is a lone **Silver maple**. Its leaves are silver-white beneath. Silver and red maples have similar toothed leaves; the center lobe of a silver maple slopes inward (looking like a keystone, or wedge). Silver maple trunks are often short and divided into sub-trunks. This Silver maple lost its subtrunk in a storm. Twigs, when bruised, have a disagreeable odor.

Step into the Circle for Station ⑦ to examine the large **White oak**, with massive gnarly lower branches, that leave the trunk at right angles. White oak bark tends to be a lighter ashy-gray compared to the dark barks of Red, Scarlet and Pin oaks. White oak leaves have seven to nine rounded lobes, without a bristle-tip.

At Station ⑧, look at the leaves of the **Red maple**. The toothed leaf is similar to Silver maple, but the center lobe slopes outward. Red maple is always red! In summer, look for reddish leaf stalks, in autumn, glorious red leaves, in late winter, red buds, in spring-time, red flowers. Red maple bark is light gray and smooth, but becomes scaly and shaggy as it ages.

At Station ⑨ is a **snag**, a standing dead or dying tree that continues to help local wildlife. Holes in the tree provide shelter to birds and mammals, protecting them from predators below. Hawks and owls can perch on leafless branches for an unobstructed view of hunting grounds.

Across the walk, note the typical upright branches of **Red maple**.

A **London planetree**, a hybrid of American and Oriental sycamores, stands at the edge of the old tennis court. Note the gnarly lower trunk with large knobby bulges and the smooth upper trunk. The London plane tree regularly sheds pieces of bark whose lenticels (or botanical "breathing" holes) have been blocked by air pollution, thus

exposing fresh open lenticels on younger whitish bark.

At Station ⑩, the one can look forward and back to observe the smooth whitish bark of **American sycamore**. Leaves of sycamores are maple-like; the leaf stalk is stouter with a swollen base. The lower trunks of the American sycamores are mottled with a reddish-brown, earthy color which contrast with the striking bone white bark of the upper trunk and branches. Note an adventurous Norway spruce growing at the trunk of the sycamore.

A **Norway spruce** stands at Station ⑪, with distinctive drooping branches and branchlets. Norway spruces grow much larger, to 200 feet, in their native northern European home. The needles are sharp-pointed.

The **Scarlet oak** at Station ⑫ has bristle-tipped leaves like the wide-ranging Red oak, but the sinuses of Scarlet oak are deeper, more “scooped” out. In the fall, leaves turn a brilliant scarlet. Note the persistent, drooping and dead side branches of Scarlet oak; they are not great self-pruners that drop lower branches cleanly, leaving a neat even surface (like the Red oak).

The compound leaves of **Black walnuts** are clustered and radiate at the ends of branches, like a feather duster or pom-pom. The center of the pom-pom may hold one or two walnuts in a yellow-green warty husk. Squirrels bury a multitude of heavy walnuts; those left unearthed in the winter spread this common tree throughout the woods. The bark of Black walnut is a rough diamond pattern. Crushed leaflets give off a strong pungent aroma.

At Station ⑬, long horizontal branches of a **Flowering dogwood** brush the statue of Mary, forming a low, flat-topped crown. The bark is broken into small, squarish blocks, like the hide of an alligator. Its opposite entire leaves are whitened beneath and its leaf veins curve so strongly that the veins parallel the leaf margin.

To distinguish the **Norway maple** from the native Sugar maples, note the very, very pointed teeth at the end of the lobes. Norway maple's pin-like tip is almost thread-like. Leaf stalks often exude a milky sap, and the bark has a smoother pattern of small diamond-shaped furrows. This maple grows well in compacted, nutrient-poor soils, and is now deemed invasive in our urban forests.

The **Kentucky coffeetree's** leaves are the largest of our compound-leaved trees, extending to 3 feet long and 2 feet wide. Look carefully, as the leaf is “twice-compound”; each primary leaf stalk bears five to nine compound leaves. Each leaflet is a small oval with a sharp, pointed tip. Kentucky coffeetree is a tree of the Midwest, and is naturalized in Pennsylvania. Seeds in the thick flat fruiting pods were ground for a coffee-like beverage.

Station ⑭ presents a **Sweet gum**. The upper surface of its unique star-shaped leaves glistens, and is pleasantly fragrant when crushed. Sweet gums produce a spherical, spiky fruit that hangs on a slender stem. Look for broad corky wings on older twigs.

Between the Sugar maples at Station ⑮ is an **American elm**. The main trunk forks as it rises, separating into large branches that sweep outward into a classic vase or fountain shape. Note the lop-sided base of its leaf. Elms produce flowers and fruits in early spring, and is an early supply of food for birds, squirrels and opossums.

At Station ⑯ stand two long column-like trunks, rising 60 feet until a branch is reached. **Tulip Trees** are the tallest of our eastern forest hardwoods. Look for whitish or light gray coloring in the furrows of the bark. Leaves are of an unusual squarish shape; the broad square base and the indented summit are said to look like a “keystone,” a “cat's head” or a “cut-off mitten.”

INFORMATION ABOUT ST XAVIER,
GROVE, WESTMORELAND LAND TRUST

Key to Numbered Trees

ID	Common Name	Species
1	American Basswood	<i>Tilia americana</i>
2	London Planetree	<i>Platanus x hispanica</i>
3	Norway Spruce	<i>Picea abies</i>
4	London Planetree	<i>Platanus x hispanica</i>
5	American Basswood	<i>Tilia americana</i>
6	Norway Spruce	<i>Picea abies</i>
7	Scarlet Oak	<i>Quercus coccinea</i>
8	Sugar Maple	<i>Acer saccharum</i>
9	Norway Spruce	<i>Picea abies</i>
10	Norway Spruce	<i>Picea abies</i>
11	Red Oak	<i>Quercus rubra</i>
12	Sugar Maple (Black)	<i>Acer nigrum</i>
13	Shagbark Hickory	<i>Carya ovata</i>
14	American Elm	<i>Ulmus americana</i>
15	Red Maple	<i>Acer rubrum</i>
16	Red Oak	<i>Quercus rubra</i>
17	Sugar Maple (Black)	<i>Acer nigrum</i>
18	Norway Spruce	<i>Picea abies</i>
19	Norway Spruce	<i>Picea abies</i>
20	Red Oak	<i>Quercus rubra</i>
21	Horsechestnut	<i>Aesculus hippocastanum</i>
22	Chestnut Oak	<i>Quercus montana</i>
23	Red Oak	<i>Quercus rubra</i>
24	Sugar Maple	<i>Acer saccharum</i>
25	Horsechestnut	<i>Aesculus hippocastanum</i>
26	Sugar Maple	<i>Acer saccharum</i>
29	Red Oak	<i>Quercus rubra</i>
30	American Beech	<i>Fagus grandifolia</i>
31	Sugar Maple (Black)	<i>Acer nigrum</i>
32	Pecan	<i>Carya illinoensis</i>
33	Sugar Maple	<i>Acer saccharum</i>
34	Sugar Maple (Black)	<i>Acer nigrum</i>
35	Eastern Hemlock	<i>Tsuga canadensis</i>
36	Horsechestnut	<i>Aesculus hippocastanum</i>
37	Red Maple	<i>Acer rubrum</i>
38	Norway Spruce (Dead)	<i>Picea abies</i>
39	Red Maple (Dying)	<i>Acer rubrum</i>
40	Tulip Tree	<i>Liriodendron tulipifera</i>
41	Tulip Tree	<i>Liriodendron tulipifera</i>
42	Sugar Maple	<i>Acer saccharum</i>
43	Horsechestnut	<i>Aesculus hippocastanum</i>
44	Red Maple	<i>Acer rubrum</i>
45	Horsechestnut	<i>Aesculus hippocastanum</i>
46	Tulip Tree	<i>Liriodendron tulipifera</i>
48	Norway Maple	<i>Acer platanoides</i>
49	Norway Spruce	<i>Picea abies</i>
50	Sugar Maple (Black)	<i>Acer nigrum</i>
51	Norway Spruce (Dead)	<i>Picea abies</i>
52	Norway Spruce	<i>Picea abies</i>
53	Norway Spruce	<i>Picea abies</i>
54	Horsechestnut	<i>Aesculus hippocastanum</i>
55	Red Oak	<i>Quercus rubra</i>
56	Horsechestnut	<i>Aesculus hippocastanum</i>
57	Norway Maple	<i>Acer platanoides</i>
58	Horsechestnut	<i>Aesculus hippocastanum</i>
59	Norway Spruce	<i>Picea abies</i>
60	Horsechestnut	<i>Aesculus hippocastanum</i>
61	Norway Spruce	<i>Picea abies</i>
62	Red Maple	<i>Acer rubrum</i>
63	Norway Spruce	<i>Picea abies</i>
64	Red Oak	<i>Quercus rubra</i>
65	Black Locust	<i>Robinia pseudoacacia</i>
66	Black Locust	<i>Robinia pseudoacacia</i>
67	Black Locust	<i>Robinia pseudoacacia</i>
68	Horsechestnut	<i>Aesculus hippocastanum</i>
69	Horsechestnut	<i>Aesculus hippocastanum</i>
70	Red Maple	<i>Acer rubrum</i>
71	Red Maple	<i>Acer rubrum</i>
72	Red Maple	<i>Acer rubrum</i>
73	Red Oak	<i>Quercus rubra</i>
74	American Basswood	<i>Tilia americana</i>