

Bronx River Forest Tree Identification Guide

The Bronx River Forest is one of the oldest forests in New York City and remains a remnant of the magnificent hardwood forest that once blanketed our region; even after decades of industrialization and social change. Today, thanks to the Bronx River Alliance's aim to improve, protect and restore the Bronx River and its corridor; it is the home to many native wildlife and plant species located in the Bronx Area. The Bronx River Corridor with its immense history is not only a part of our past, but also a part of our present, and ultimately our future. Therefore it is important to enjoy the wonders that it has to offer not only by providing us with bountiful education resources, but also with peace and tranquility.



Damian Griffin
Education Director
Bronx River Alliance
One Bronx River Parkway
Bronx, NY 10462
P: 718-430-4614
Damian.Griffin@parks.nyc.gov

Floritza Gomez
Education Intern
Bronx River Alliance
One Bronx River Parkway
Bronx, NY 10462
P: 646-225-1756
Floritza.Gomez@parks.nyc.gov

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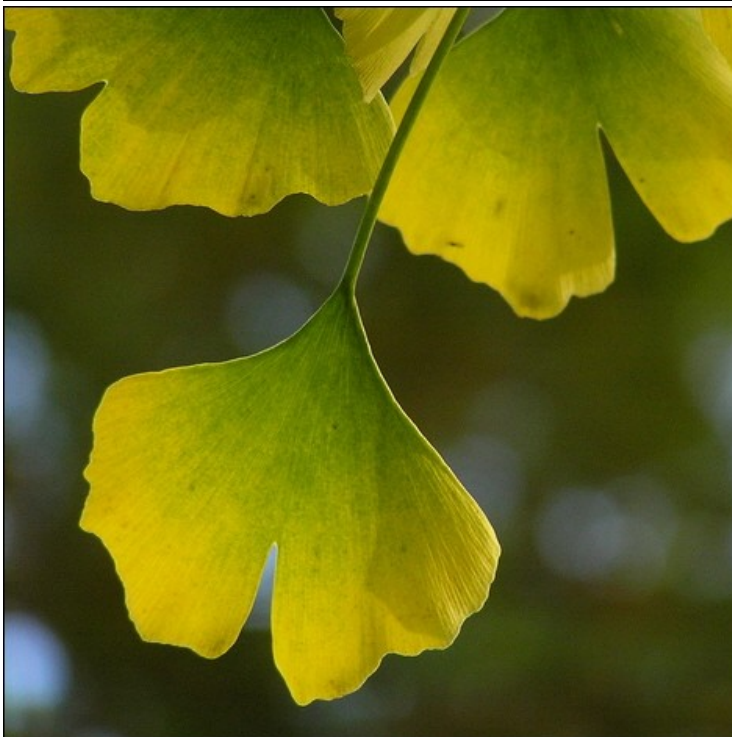




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To successfully be able to identify trees one must first understand that trees are not only diverse in name. There are many factors found in a forest that can help in identifying trees, such as habitat. Trees just like animals grow and thrive in different climates and habitats, for example pin oaks are often found in swampy poorly drained floodplains. While going through this tree guide you will not only learn the names of many of the native trees found in the Bronx River Corridor, but basic identification techniques that will help you group and easily remember them. By following the table of contents below you will slowly find yourself becoming more confident about your tree identification skills, good luck and enjoy!



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Deciduous or Coniferous



Deciduous plants are those that lose their leaves for part of the year. This process is called abscission. Abscission is more technically defined as the shedding of a body part. For plants, this would mean the shedding of important parts such as leaves, fruit, flowers and seeds. In the case of cool climate plants, the period of abscission would occur in the winter, while for tropical plants it would occur in the dry season. Unlike deciduous trees, conifers or evergreens, are trees with needle like leaves and cones, which normally keep foliage throughout the entire year.

Silver Maple is a Deciduous tree

Acer saccharinum



Eastern Hemlock is a Conifer

Tsuga canadensis





Identify by
Leaf

One of the easiest ways to identify trees is by identifying the types of leaves they have. Leaves come in different shapes, colors and sizes. When identifying leaves by type they can be either simple or compound.

Simple



Compound



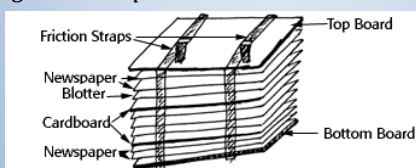
A very useful reference for proper plant identification is a collection of dry plant specimens. Plant specimens are obtained from plant presses which remove all the moisture from a plant, leaving it dry and well preserved. Below is a detailed description of how to make a plant press and what to do with your specimen once dry. For more information and an extended version of this lesson please go to <http://watershed.csumb.edu/ron/roncor/cor/press.htm>

Instructions

Have students place the plants in a once-folded newspaper. Write the student's name, date and plant collected on a slip of paper. Instruct students to arrange the plant so the floral parts and other identifying characters are well displayed.

Place the folded newspaper with its plant specimen enclosed between blotters of approximately the same size as the folded newspaper and enclose in plant press. (Plant press and divider cardboard should also be this size or slightly larger).

Apply weight or pressure to plant press by use of weights, straps or tightened rope.



<http://biology.arizona.edu/scionn/lessons2/Barber/Activity3a.htm>

When identifying leaves by arrangement, they can be either opposite or alternate

Opposite



Alternate



Based on these leaf types and arrangements, leaves can be classified into four large groups.

Simple and Opposite



Simple and alternate



Compound and Opposite



Compound and alternate





Identify by
Leaf

After classifying leaves by arrangement or type it becomes important to a detailed look at some more specific characteristics, such as leaf shape, leaf margin, leaf apexes and leaf base. These four characteristics will distinguish for example two trees that both have simple leaves with an opposite arrangement from one another, allowing one to do a more specific identification.

Leaf Shapes



Linear



Elliptical



Oval



Lanceolate



Deltoid



Ovate



Orbicular



Obviate



Star-shaped

Leaf Margins



Entire



Dentate



Toothed



wavy



Double serrate



Lobed



Incised

Leaf Apexes



Acuminate



Acute



Obtuse



Truncate



Bristled pointed



Rounded

Leaf Bases



Wedge Shaped



Oblique



Rounded



Heart Shaped



Truncate

Identify by
Bark

Tree species are not only diverse in the types of leaves they have, but they also have different types of bark. The bark of a tree acts as a protective coat for its sensitive cambium layer. The porous layer allows the tree to breathe and protects it from extreme weather conditions, intense sunlight, disease and/or lacerations. These are some basic bark types which differentiate one of the trees from another and will allow you to have another method of identifying a tree.

Tree Bark Rubbing

Give each student a sheet of paper and a crayon, and have each student peel off the paper around the crayon.

Have the students pick a tree that they want to identify and have them place the sheet of paper over the tree's bark, either by holding it with their hands or attaching it with tape onto the tree.

Once that is done they can start to rub the crayon on the paper so that the pattern of the bark can print onto the paper.

Once every student has their tree rubbing have them sit and compare the differences and similarities between the bark of each tree.

Although bark rubbing can be an excellent way to properly identify trees, it is not the best, due to the fact that not all trees have the best surface texture. An example of this is:



River Birch

<http://homepage.mac.com/cohora/plants/birch.html>

Scaly

Sweet Gum Tree
Liquidambar styraciflua



Shaggy

Shag Bark Hickory Tree
Carya ayata



Spiky

Honey Locust tree
Gleditsia triacanthos



Furrowed

Black Cherry tree
Prunus Serotina



Papery

River Birch Tree
Betula Nigra



Smooth

Black Cherry tree (Young)
Prunus Serotina





Identify by
Fruit

Although identifying trees by their fruit is not the easiest, it helps to know what type of fruit a tree bears. There are four general fruit types simple, aggregate, multiple, and accessory.





Simple Fruits: Fruits that develop from a single ovary and flower. Within this category are fleshy fruits and dry fruits.

Aggregate Fruits: fruits that develop from the fusion of many individual reproductive organs in an individual flower; these reproductive units can also be referred to as carpel's. Carpels are comprised of an ovary, a style and a stigma, which collects the pollen at its tip. A fruit can contain more than one carpel depending on what type of fruit it is.




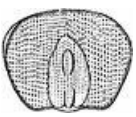
Multiple Fruits: fruits that develop from the ovaries of individual flowers which are all on the same style or stalk.

Accessory Fruits: Fruits that develop from and the ovary of an individual flower, but also from tissue surrounding it.





Simple Fleshy Fruits

Berry <i>Persimmon</i>	Drupe <i>Plum</i>	Pepo <i>Pumpkin</i>	Hesperidium <i>Lemon</i>
			




Simple Dry Fruits

Samara <i>Maple Samara</i>	Nuts <i>Acorn</i>	Legumes <i>Tamarin</i>	Grain <i>Corn</i>
			

Aggregate Fruits/Multiple Fruits

<i>Strawberry</i>	<i>Berry</i>	<i>Pineapple</i>	<i>Blackberry</i>
			

Accessory Fruits

Pome <i>Apple</i>	Pome <i>Pear</i>	Pome <i>Quince</i>
		

Common Trees

In this section we will use some of the basic tree identification techniques that have been addressed throughout this guide and apply them to some of the common trees found in the Bronx River Corridor. When identifying trees it is very important to write down detailed descriptions and gather as much information possible so that each tree can be uniquely distinguished and easier to identify in the future.

River Birch

Betula nigra

Alternate leaves

Leaf Shape: deltoid

Leaf Margin: toothed

Leaf Apex: acute

Leaf Base: wedge shaped

Papery bark

Mostly tolerant to both wet and dry soils

Bronx River location: Shoelace Park, South Forest and North Forest



Cottonwood

Populus fremontii

Alternate leaves

Leaf Shape: deltoid

Leaf Margin: dentate

Leaf Apex: bristle pointed

Leaf Base: truncate

Furrowed bark

Tolerant to flooding and erosion/flood deposits surrounding the wood.

Bronx River location: Soundview



Red Maple

Acer Rubrum

Opposite leaves

Leaf Shape: star shaped

Leaf Margin: incised

Leaf apex: truncate

Leaf Base: heart Shaped

Shaggy bark

Bronx River location: North Forest, South Forest, and Shoelace Park



White Oak

Quercus Alba

Alternate leaves
Leaf Shape: Obviate
Leaf Margin: Lobed
Leaf Apex: Rounded
Leaf Base: Wedge shaped
Scaly bark



Red Oak

Quercus Alba

Alternate leaves
Leaf Shape: obviate
Leaf Margin: incised
Leaf Apex: truncate
Leaf Base: wedge shaped
Scaly bark
A good street tree that tolerates pollution and compacted soil
Bronx River Location: Shoelace Park



Black Willow

Salix Nigra

Alternate leaves
Leaf Shape: elliptical
Leaf Margin: entire
Leaf Apex: acuminate
Leaf Base; wedge shaped
Scaly bark
Aid in stream bank stabilization
Bronx River location: Shoelace Park



Sassafras

Albidum

Opposite leaves
Leaf Shape: elliptical outline
Leaf Margin: entire, 2or 3 lobed
Leaf Apex: acute, or obtuse
Leaf Base: wedge shaped or rounded
Furrowed bark
Can be used for medicinal purposes and its roots can be used to make a flavorful tea.
Bronx River location: Fort Knox



Pussy Willow
Glaucous Willow

Alternate leaves
Leaf Shape: elliptical
Leaf Margin: entire
Leaf Apex: rounded
Leaf Bases: rounded
Furrowed bark
Its natural growth is in wet habitats
Bronx River location: Shoelace Park,
South Forest, 233rd Street.



Sycamore
Platanus racemosa

Opposite leaves
Leaf Shape: orbicular
Leaf Margin: dentate
Leaf Apex: truncate
Leaf Base: heart shaped
Furrowed bark
Lives best in moist soils
Bronx River Location: Cricket Pitch, North Forest



Honey Locust
Gleditsia triancanthos

Opposite leaves
Leaf Shape: elliptical
Leaf Margin: entire
Leaf Apex: rounded
Leaf Base: rounded
Spiky bark
Tolerant to pollution salt and drought
Bronx River location: Behind French Charlie

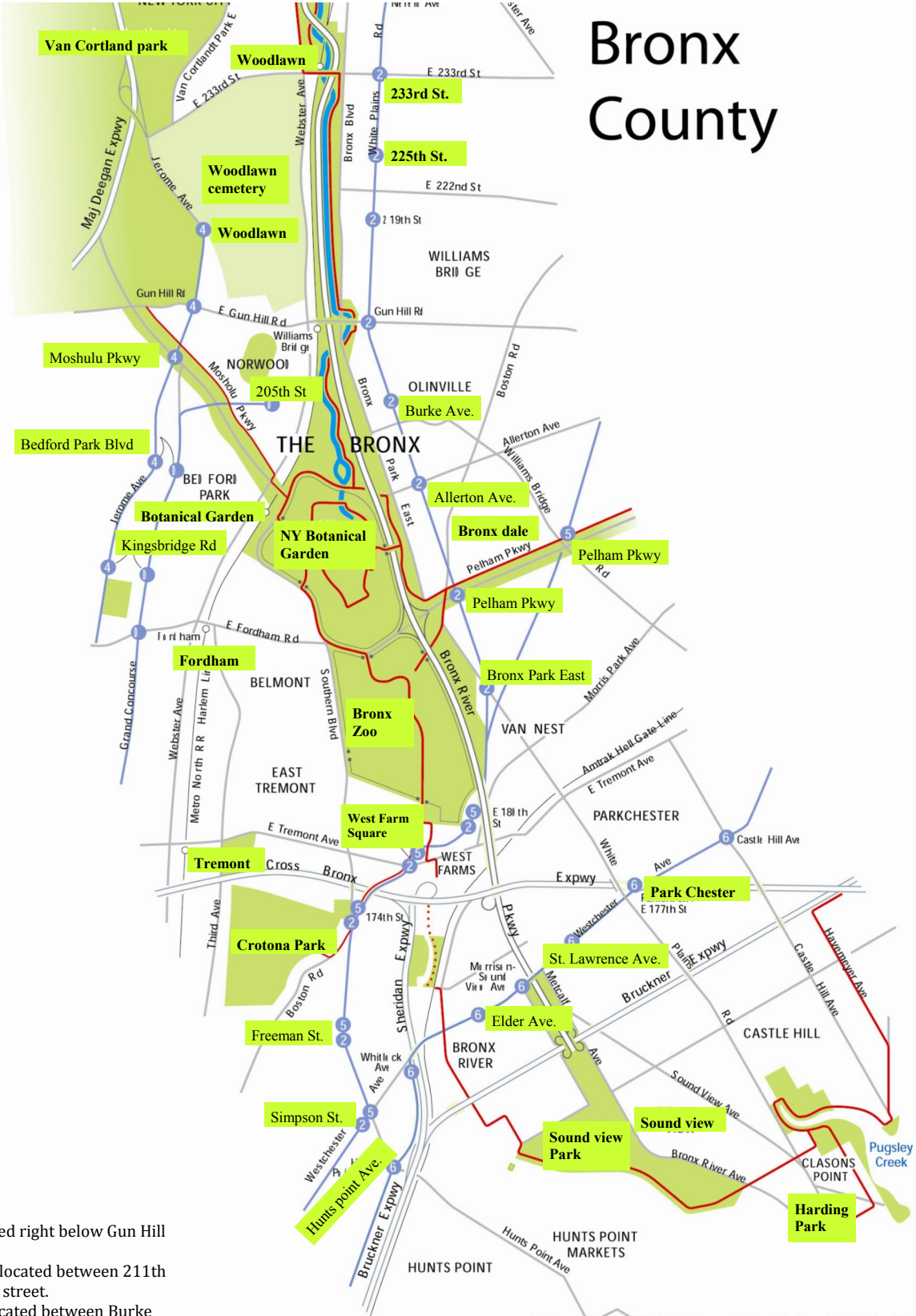


Sweet gum
Liquidambar Styraciflua

Alternate leaves
Leaf Shape: star shaped
Leaf Margin: toothed
Leaf Apex: acuminate
Leaf Base: truncate
Scaly bark
Does not tolerate polluted sites
Bronx River Location: North Forest



Bronx County



Location Key:
Fort Knox: located right below Gun Hill Rd.
Shoelace Park: located between 211th street and 233rd street.
North Forest: located between Burke Ave. (Burke Bridge) and Fort Knox
South Forest: located between Burke Ave. (Burke Bridge) and Kazimiroff Blvd.



EAST RIVER

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