

Distinctive Leaf Scars

Observe the design of the leaf scars



Black Walnut
bundle scar
forms a “U”
shape



Butternut
“velvet eye-brow”
above leaf scar



Maple
crescent with 3 scars
(Sugar Maple shown)



Sumac
scar almost
encircles bud



Sycamore
scar encircles
bud



Catalpa
“suction cup”
bundle scar forms a
circle



Ash
bundle scar forms
a crescent
(White Ash shown)



Oak
bundle scar
forms a crescent
(White Oak
shown)



Birch
bundle of three
scars

Thorns

Thorns - are an adaptation that trees developed as a way to ward off predators.



Black Locust

Buds: mostly hidden, found under leaf scar
Thorns: in pairs at each leaf node

Some varieties of honey locust and hawthorn trees have thorns.



Honey Locust
Buds: small & sunken
Thorns: three forked
spines
1 1/2-3 inches long



Hawthorn
Buds: round & red
Thorns: 1 1/2-2
inches long

URBAN FORESTRY CENTER

The Urban Forestry Center is one of the largest preserved open spaces in the New Hampshire Seacoast. The purpose of the Center is to educate the community and increase awareness of the importance of natural resources. The 182 acre property features several trails including a Tree Identification Trail, a Discover the Forest Trail, and a Salt Marsh Trail. It also has several demonstration gardens, a utility arboretum designed to aid in tree selection for urban areas, and a community garden.

Access to the Center is free and open to the public 7:30 am - 8:00 pm daily to walk, explore, and experience nature. It is a great place for the entire family to experience a scenic setting where wildflowers, birds, and animals can be seen in a forest and a salt marsh. Year-round activities include biking, walking/hiking, bird watching, snowshoeing and cross country skiing. Amenities include picnic tables, restrooms and free parking. Leashed pets are welcome.

In 1976 John Elwyn Stone gifted the Urban Forestry Center to the people of New Hampshire. He was a direct descendent of John Langdon who was the first elected governor of the state of New Hampshire and signer of the U.S. Constitution. The original gift consisted of several buildings, a trust fund, and nearly 160 acres of land. The New Hampshire Division of Forests and Lands manages the property and offers educational programs for community leaders and the general public, as well as professional training. A meeting facility is available for use by conservation groups and their partnering organizations.

For more information please contact our office at (603) 431-6774.

Directions:

If using GPS or Google Maps please use “27 Elwyn Road”. This will bring you to the main entrance of the property.

From the Spaulding Turnpike, stay in the left lane to the Portsmouth Traffic Circle. From the Circle follow the directions below.

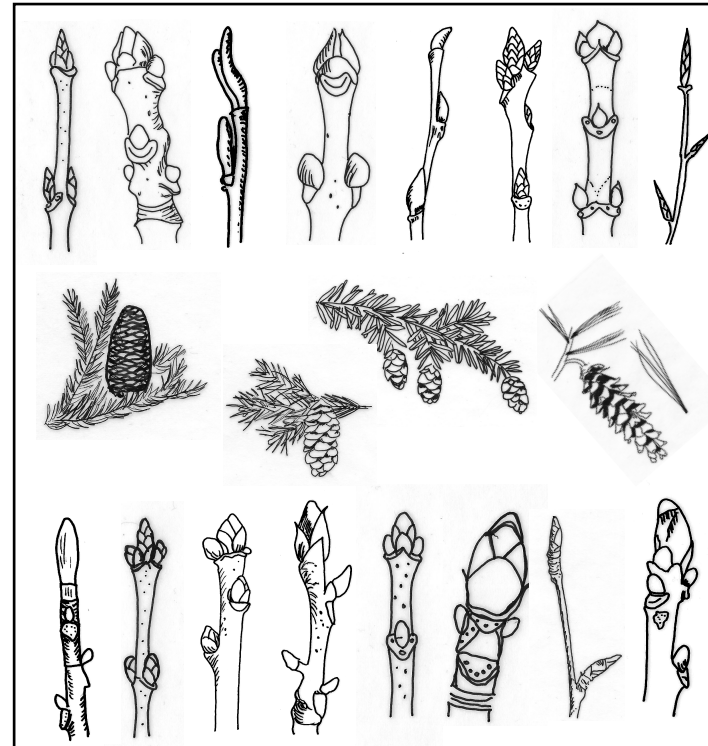
From Interstate 95 take Exit #5 to the Portsmouth Traffic Circle. From the Circle proceed on the Route 1 Bypass/Route 1 South about 2 miles through a series of six traffic lights. Before the 7th set of traffic lights you should be in the left turn only lane. Market Basket will be on your right. Turn left onto Elwyn Road. Proceed approximately 500 feet and take the first left into the Urban Forestry Center. Look for the brown gate and iconic large brown sign. Follow the road to the parking area.



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Designed & illustrated by Kate Zamarchi

Winter Twig Tree Identification



*A guide to identify some of
the common deciduous
and coniferous trees in
New Hampshire*

Even with the leaves all crunchy and dry on
the ground there is still plenty to see. You can
identify trees by the details of their twigs!

Material Provided by
NH Urban & Community Forestry Program
NH Division of Forests and Lands

Contact: Urban Forestry Center
603-431-6774
www.nhdfl.org

HOW TO USE THIS GUIDE

1. Observe a typical twig from the tree you wish to identify.
2. Compare this twig with the “Twig Parts Defined” and identify each part of your selected twig.
3. Proceed to the inside section of this guide to help narrow down your identification by looking at:
 - a. “Distinctive Leaf Scars”
 - b. “Thorns”
 - c. “Branching and Buds”
 - d. “Coniferous”
4. Compare your selected twig with the images in this pamphlet.
5. When you have made the final choice, consider looking at other tree identification resources listed below to further confirm your discovery!

More Tree ID Resources for you to check out!

Forest Trees of Maine

ISBN-13: 978-1-88219-016-4

www.maineforestservice.org

This book contains information on 78 different tree species that are found in both Maine and New Hampshire. It is very descriptive and provides color pictures for leaves, buds, bark and cones.

National Audubon Society Field Guide to North American Trees: Eastern Region

ISBN-13: 978-0394507606

By Elbert L. Little

This photo rich guidebook describes 364 species and is organized by shape of leaf or needle, by the fruit, by the flower or cone, and by autumn coloration.

Peterson Field Guide to Eastern Trees

ISBN: 0-395-90455-2

By George A. Petrides and Janet Weher

This book contains detailed descriptions of 455 species of trees native to eastern North America.

Manual of Woody Landscape Plants

ISBN-13: 978-1588748683

By Michael Dirr

This large reference book has identification details, characteristics, methods of propagation, and uses of ornamental trees, shrubs, and ground covers.

Online Resources

iTree: www.itreetools.org

vTree: <http://appcrawlr.com/ios/vtree>

Tree Owner's Manual: <http://bit.ly/2no8mDn>

How to Help Trees Recover from Drought: <http://bit.ly/2nrvaDQ>

Tree Benefits Calculator: <http://www.treebenefits.com/calculator/>

Tree and Shrub Planting Guidelines: <http://bit.ly/2mw3LBu>

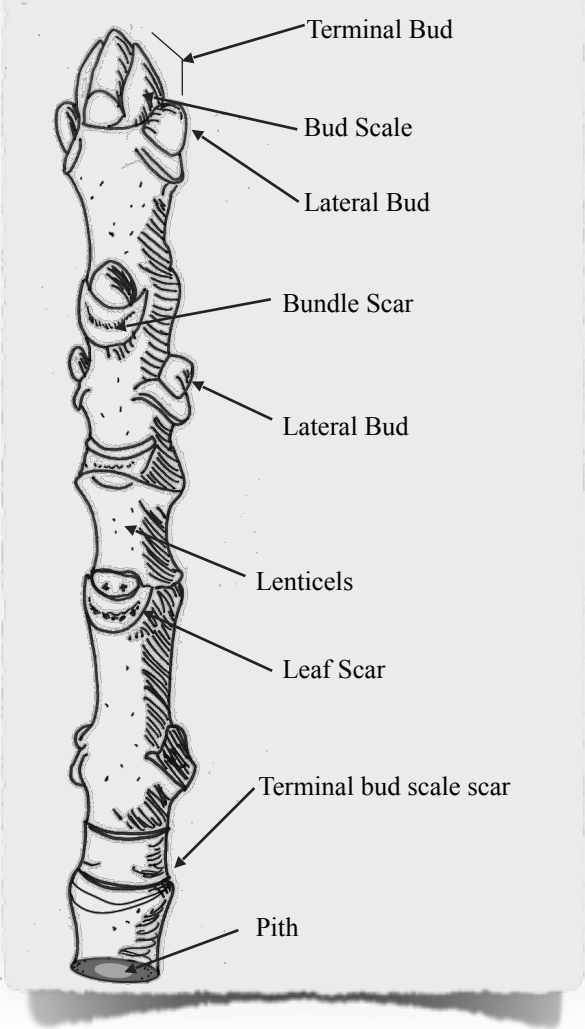
Arbor Day Foundation -Trees: <http://bit.ly/1IJlciv>

NHBugs-Protecting Trees & Forests: <https://nhbugs.org>

NH State Forest Nursery: <http://www.nhnursery.com>

Twig Parts Defined

White Ash Twig



Terminal Bud - bud on the tip of the twig.

Bud Scale - provides protection to buds in winter. They fall off in spring.

Lateral Bud - buds on each side of the twig.

Bundle Scar - scars within the leaf scar can be viewed as visible dots or lines. They were once tubes that supplied the leaf with nutrients.

Lenticel - pores on trees that permit inner bark to breath.

Leaf Scar - scar on the twig of leaf attachment. When the leaf drops, a scar is left under the bud.

Terminal Bud Scale Scar - found a few inches from the twig tip, lines/rings close together. They are left when bud scales of last year’s terminal bud fall off, indicating a year’s growth.

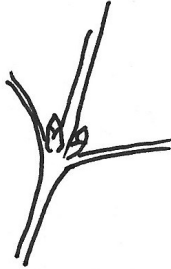
Pith - soft inner core of the twig.

Node – the base of a bud, leaf, twig or branch

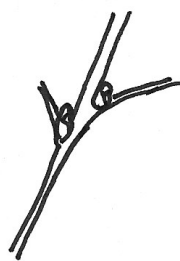
Deciduous *Observe the bud and twig arrangement*



Alternate - leaves and buds are spaced in alternating fashion along the axis of the stem



Opposite - leaves and buds directly across from each other on the stem



Sub opposite - leaves and buds are not spaced sufficiently far apart to be considered alternate nor are they perfectly opposite

Alternate Branching: one unique leaf at each leaf node and typically alternate direction along the stem. (Here are some typical trees you may find: Willow, Shadbush, Beech, Tulip, Witch-Hazel, Oaks, Shagbark Hickory, Sassafras, Black Birch)



Willow
Bud: single hood-like scale
Twig: dark & hairless



Shadbush
Bud: long and narrow, scales fringed with hair
Twig: brownish gray



Beech
Bud: long and narrow
Twig: smooth



Tulip
Bud: duck-bill terminal bud
Twig: reddish brown



Witch-Hazel
Bud: scalpel-shaped
Twig: gray, zigzag



White Oak
Bud: blunt point
Twig: gray to purple



Black Oak
Bud: hairy
Twig: smooth



Shagbark Hickory
Bud: large with loose outer scales
Twig: brown with light color lenticels



Sassafras
Bud: green
Twig: green & smooth, aromatic when broken



Black Birch
Bud: brown
Twig: small spur branches & tastes like wintergreen

Opposite Branching: two leaves at each leaf node and typically across from each other along the stem. (Maples, Box Elder, White & Green Ash, most Dogwoods, Horse Chestnut)



Sugar Maple
Bud: pointed & brown
Twig: brown



Norway Maple
Bud: rounded & greenish red
Twig: milky sap if pressed



Red Maple
Bud: rounded & red
Twig: grayish brown



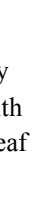
Silver Maple
Bud: long & red
Twig: fetid odor when crushed



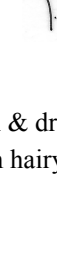
Boxelder
Bud: green or reddish with silky hairs
Twig: smooth green or purple with a white chalky bloom



White Ash
Bud: rough & dry
Twig: hairless with deeply notched leaf



Green Ash
Bud: rough & dry
Twig: often hairy



Red Osier Dogwood
Bud: hairy
Twig: bright red to green with tiny hairs



Horse Chestnut
Bud: sticky with large terminal bud
Twig: light brown & stout

Catkins in Winter *Catkins - slim, cylindrical flower cluster found on Birch and Alder in the winter*



White Birch
Catkin: greenish
1-1 1/4 inches
Bark: white & peeling

Yellow Birch
Catkin: yellow
1-1 1/2 inches
Bark: golden & peeling



Gray Birch
Catkin: single at end of twig
Bark: chalky to whitish gray and not peeling



Speckled Alder
Catkin: mahogany-colored



Hornbeam
Catkin: mahogany-colored

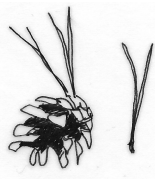
Coniferous *Observe the needles and cones*



White Pine
Needles: 5 per cluster; 3-5 inches long
Cone: 4-8 inches

Red Pine

Needles: 2 per cluster; 4-6 inches long
Cone: 1 1/2-2 1/4 inches



Scotch Pine
Needles: 2 per cluster; twisted 1 1/2-3 inches long
Cone: 1-2 inches

Hemlock

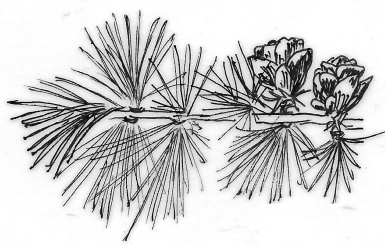
Needles: 1/4-2/3 inches long
Cone: 1/2-1 inches



White Spruce
Needles: 1/2-3/4 inches long; dull with waxy bloom
Cone: 2 inches, slender

Balsam Fir

Needles: 1 inch long; shiny on top, two white lines underneath
Cone: 2-4 inches, grow upright



Larch
Needles: 3/4-1 1/2 inches, drop in winter!
Cone: 1/2-1 inches