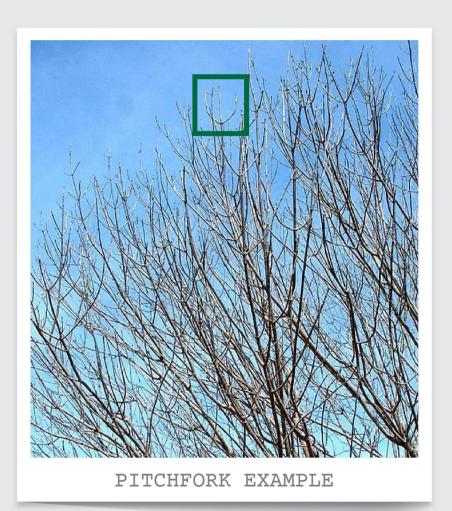


Dormant Season Characteristics



- Ash (Fraxinus spp.)
 Opposite branched
- Shield-shaped leaf scar
- Tall, pointed bud
- Pitchfork like limb tips
- Long and narrow clustered winged seed
- Continuous bundle scars inside leaf scar

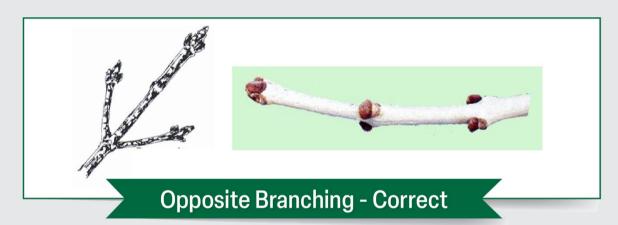




"Pitchfork" Opposite branching



Opposite Branching Pattern



All ash trees (Fraxinus sp.)





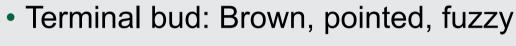
Vegetative Structures DORMANT TWIGS PITH FEATURES axillary bud terminal bud leaf scar stem tip axillary bud leaf scar axillary buds diaphragmed leaf scars bundle scars 5-angled stipule scar 0 triangled lenticels chambered pith circular

Twig Structures



- The Terminal Bud: Bud on the tip of every twig where growth occurs.
- The Lateral Buds: These are buds on each side of the branch.
- The Leaf Scar: When the leaf drops, a scar is left just under the bud;
- Ash have shield shaped scars
- The Lenticel: Pores that permit the living inner bark to breath.
- The Bundle Scar: Scars within the leaf scar; supply the leaf with water.
- Ash: Continuous bundle scars
- The Stipule Scar: Scar of a leaf like attachment just off the leaf stem.
- The Pith: The pith is the soft inner core of the twig.

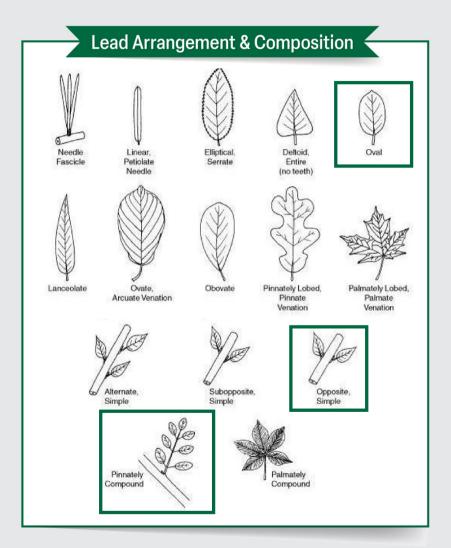
Ash Twig Structure



Leaf scars: "shield shaped"

Leaf scars: "Opposite" sides of twigs







Leaf Arrangement & Composition

- Oval leaf blades
- Pinnately compound leaves
- Opposite leaves and twigs

Ash Compound Leaves

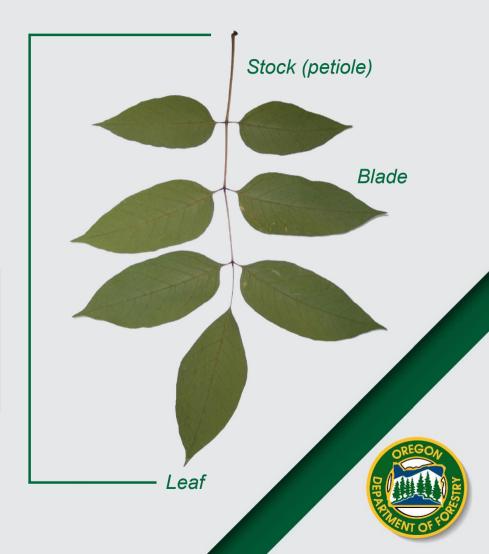
- 5-13 blades on compound leaf
- Single winged fruit (Samara)





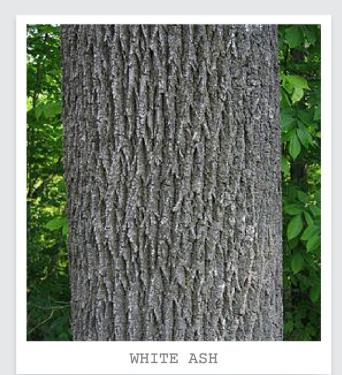






Ash Bark

• Forms diamond-shaped furrows on main bole









Ash Trees in Oregon

Name	а	Wild	Urban	Origin
Fraxinus latifolia	Oregon ash	Yes	Yes	OR, WA, CA
Fraxinus americana	White ash	No	Yes	Eastern U.S.
Fraxinus angustifolia	Narrow-leaf ash	No	Yes	Eurasia
Fraxinus excelsior	European ash	No	Yes	Europe
Fraxinus pennsylvanica	Green ash	No	Yes	Eastern U.S.



^{*}Six additional species may occur in small numbers in urban landscapes.

Oregon Ash

- Wetland edges up to 3,000' elevation
- Green flowers, no petals
- · Leaf underside covered in dense velvet
- 80' H, 12 30" DBH
- Leaves 5 13" long, 5 9 blades per leaf
- Blades 3 7" long, 1 1.5" wide
- Samaras 1 2" long







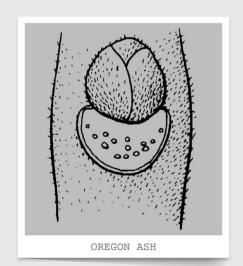


Other Ash Species

Trait	White Ash	Green Ash	European Ash
Buds	Brown or Red	Brown or Red	Jet Black
Leaves		Slightly Hairy	
Leaf Color	Lower Side Lighter	Both Sides Green	
Twigs, Petioles	Smooth, Glossy, Flaky		
Leaf Scars	Deeply Curved on Top	Straight on Top	
Leaf Length	8-15"	6-12"	7-14"
# Blades per Leaf	5-9	7-9	7-13
Blade Length		2-6"	2-5"
Samara Length	1-2"	1-3"	1-2"
Height	\$ 50-80 Feet	50-80 Feet	65-115 Feet
DHB 3		Up to 2 Feet	6 Feet

Ash Leaf Scars

- Opposite
- "Shield" shaped
- Top of shield can be flat or deeply indented





DEEPLY CURVED

STRAIGHT ALONG TOP



Look Alike: Box Elder (Acer negundo)

- Also 'Opposite' twigs and leaves, but...
- 3-5 blades on compound leaf
- Samaras in pairs





Other Oregon Trees with 'Opposite' Arrangement:

- Amur cork *
- Amur maple *
- Bee-bee *
- Bigleaf maple
- Bigtooth maple
- Black elderberry
- Boxelder
- Brown dogwood
- California buckeye

- Horse chestnut *
- Mexican elder
- Northern catalpa *
- Ohio buckeye *
- Pacific dogwood
- Red elderberry
- Red maple *
- Rocky Mountain maple *
- Silver maple *



*Not native to Oregon. Landscaping tree or escaped & weedy

Other Oregon Trees with Compound Leaves but Alternate Branching:

- Amur maackia *
- Black walnut *
- English walnut *
- European mountain ash *
- Honey locust *
- Greene's mountain ash
- Western mountain ash
- Yellowwood *



^{*}Not native to Oregon. Landscaping tree or escaped & weedy