

North Carolina  
**Extension Gardener**  
 Plant Toolbox

## *Fraxinus americana*

**Common Name(s):** American Ash; White Ash

### Phonetic Spelling

FRAK-si-nus a-mer-ih-KAY-nah

### Description

*Fraxinus americana*, or White Ash, is a deciduous tree, native to North Carolina and found throughout the state except for the lower coastal region (it does not tolerate exposure to salt air). It usually grows to 60 to 90 feet tall with a 2 to 3 foot trunk diameter, but it can reach 120 feet tall and is the largest of the native ashes. The White Ash grows best in the rich moist soils of mountain coves or river bottom lands. In the eastern part of the state, White Ash can typically be found with swamp chestnut, willow, cherrybark oak, loblolly pine, and sweet gum. In the west, it is more likely to be found among yellow poplar, black cherry, basswood, and oak. It can also extend into the beech-birch-maple forests at 4000 to 5000 foot elevations.

In open areas, the White Ash crown is ovoid, in forested areas the crown is more narrow and pyramidal. The leaves are opposite and pinnately compound with 5 to 9 (mostly 7) leaflets. The bark is yellow-brown to light gray and corky with deep furrows that separate short, pointed ridges. Small, light green to purple flowers, with no petals, mature in loose panicles in the spring. The tree produces a one-winged, dry, flattened samara with a full, rounded, seed cavity that matures in the fall.

Ash trees have male and female flowers on separate trees and only the female flowers develop into fruits. Purchasing male trees will prevent you from having to deal with the fruits which can be a bit of a nuisance near a walkway. It is worth considering planting female ash trees though, because the fruits are born in clusters among the foliage and add a sophisticated note of unusual dimension to the trees in late summer. The cultivars of White Ash are generally much more desirable than seedling trees and are well worth seeking out. White ash tends to be easily transplanted and established.

**Insects, Diseases, and Other Pest Problems:** Planting new ash trees is no longer recommended due to the trees susceptibility to the emerald ash borer, a pest that feeds under the bark and bores into the wood. Emerald ash borer will typically kill an ash tree within 3 to 5 years after infestation and, once infestation occurs, it is difficult to eradicate. Other potential problems are ash borer, lilac borer, carpenter worm, oyster shell scale, leaf miners, fall webworms, ash sawflies and ash leaf curl aphid. Potential disease problems include fungal leaf spots, powdery mildew, rust, anthracnose, cankers and ash yellows. General ash decline is also a concern. Brittle branches are susceptible to damage from high winds, snow and ice.

VIDEO Created by Elizabeth Meyer for "[Trees, Shrubs and Conifers](#)" a plant identification course offered in partnership with [Longwood Gardens](#).

### Cultivars / Varieties:

'Autumn Applause', 'Autumn Blaze', 'Autumn Purple', 'Chicago Regal', 'Greenspire', 'Jeffnor', 'Rose Hill', 'Skycole'



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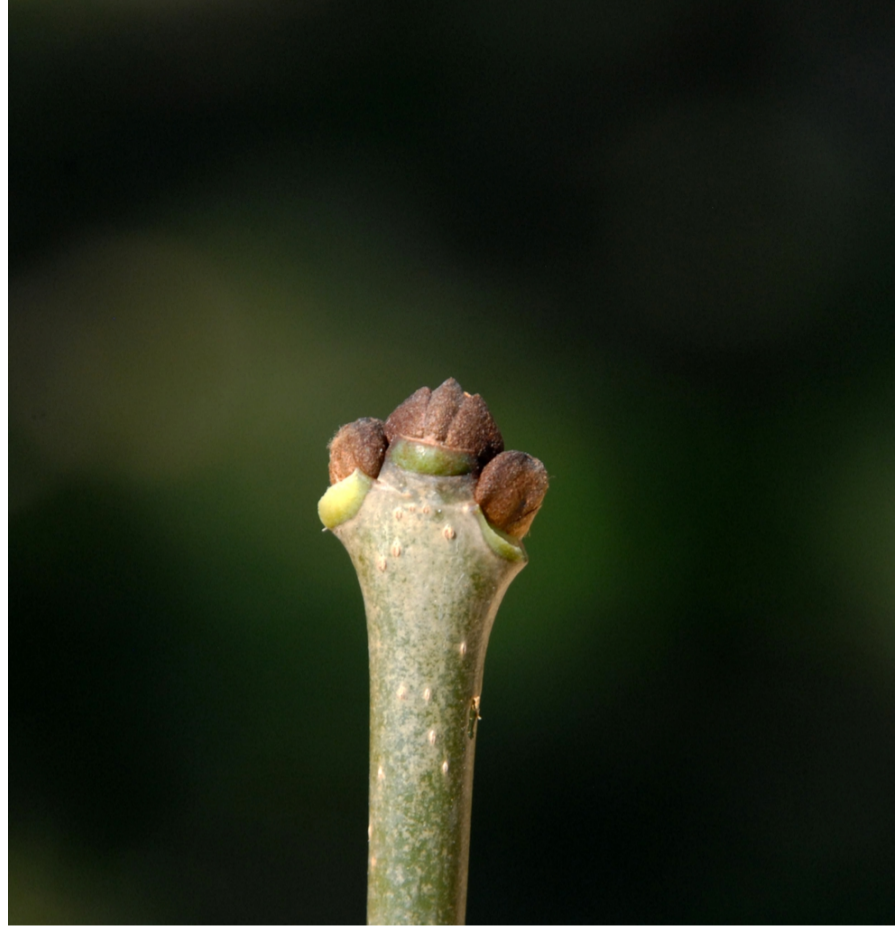
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'Autumn Purple' Fall Color Form  
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**Attributes:****Genus:**

Fraxinus

**Species:**

americana

**Family:**

Oleaceae

**Uses (Ethnobotany):**

The juice from leaves used on mosquito bites for relief of swelling and itching and are a prophylactic measure for snake bites. The wood is tough, elastic, with a pleasing grain, and is used to make tennis racquets, hockey sticks, oars, furniture, and interior floors. White ash is the wood used for the Louisville Slugger baseball bat.

**Life Cycle:**

Woody

**Recommended Propagation Strategy:**

Seed

**Country Or Region Of Origin:**

Eastern North America and Mexico

**Distribution:**

Eastern Canada to Minnesota to west Colorado south to Texas east to Florida north up through Maine

**Fire Risk Rating:**

low flammability

**Wildlife Value:**

This plant supports the larvae of Eastern Tiger Swallowtail (*Papilio glaucus*). They have three flights from February-November in the deep south and March-September in the north. The adult Eastern Tiger Swallowtail butterflies feed on milkweed, joe pye weed, wild cherry, and lilac. The seeds of the White ash are enjoyed by birds, squirrel, and other small mammals. White ash is a larval plant for tiger swallowtail and mourning cloak butterflies. The bark is eaten by rabbits, porcupines and beavers. The foliage is browsed by white-tailed deer.

**Play Value:**

Edible fruit

**Dimensions:**

Height: 60 ft. 0 in. - 120 ft. 0 in.

Width: 50 ft. 0 in. - 75 ft. 0 in.

**Whole Plant Traits:****Plant Type:**

Native Plant

Tree

**Woody Plant Leaf Characteristics:**

Deciduous

**Habit/Form:**

Oval

Pyramidal

Rounded

**Growth Rate:**

Rapid

**Maintenance:**

Medium

**Texture:**

Medium

**Cultural Conditions:****Light:**

Deep shade (Less than 2 hours to no direct sunlight)

Full sun (6 or more hours of direct sunlight a day)

Partial Shade (Direct sunlight only part of the day, 2-6 hours)

**Soil Texture:**

Clay

High Organic Matter

Loam (Silt)

Sand

**Soil pH:**

Acid (&lt;6.0)

Alkaline (&gt;8.0)

Neutral (6.0-8.0)

**Soil Drainage:**

Good Drainage

Moist

**Available Space To Plant:**

more than 60 feet

**Fruit:****Fruit Color:**

Brown/Copper

Cream/Tan

Green

**Fruit Value To Gardener:**

Edible

**Display/Harvest Time:**

Summer

**Fruit Type:**

Samara

**Fruit Length:**

1-3 inches

**Fruit Description:**

Male flowers wither away while fertilized female flowers give way to drooping, 6 to 8 inch long clusters of one winged dry flattened samara (to 2 inches long) that ripen in fall and may persist on the tree throughout the winter. Fruit displays from August to October.

**Flowers:****Flower Color:**

Green

Purple/Lavender

**Flower Inflorescence:**

Panicle

**Flower Value To Gardener:**

Showy

**Flower Bloom Time:**

Spring

**Flower Shape:**

Tubular

**Flower Description:**

The flowers are primarily dioecious (separate male and female trees) grow in tight panicals. Clusters of apetalous purplish male and female flowers appear on separate trees in April-May before the late-to-emerge foliage. The flowers lack petals.

## EDIBLE FRUIT

Wildlife Cover/Habitat

Wildlife Food Source

Wildlife Nesting

**Particularly Resistant To  
(Insects/Diseases/Other Problems):**

Resistant to fire in landscape.

Generally tolerant of urban conditions.

**NC Region:**

Mountains

Piedmont

**USDA Plant Hardiness Zone:**

3a, 3b, 4a, 4b, 5b, 5a, 6a, 6b, 7a, 7b,  
8a, 8b, 9b, 9a

**Leaves:**

**Woody Plant Leaf Characteristics:**

Deciduous

**Leaf Color:**

Gold/Yellow

Purple/Lavender

**Leaf Feel:**

Smooth

**Deciduous Leaf Fall Color:**

Gold/Yellow

Purple/Lavender

Red/Burgundy

**Leaf Type:**

Compound (Pinnately , Bipinnately,  
Palmately)

**Leaf Arrangement:**

Opposite

**Leaf Shape:**

Lanceolate

Oblong

Obovate

Ovate

**Leaf Margin:**

Entire

Serrate

**Hairs Present:**

No

**Leaf Length:**

> 6 inches

**Leaf Description:**

The 8 to 12 inch long leaves of the white ash are odd-pinnate compound leaves with 7 leaflets (less frequently 5 or 9). Oval to oblong-lanceolate leaflets (3 to 5 inches long) are dark green above and whitish green below with smooth margins. The foliage turns yellow with purple shading in the fall.

**Bark:**

**Bark Color:**

Light Brown

Light Gray

**Surface/Attachment:**

Furrowed

Ridges

**Bark Description:**

The ashy bark is yellow-brown to light gray and corky with deep furrows that separate short, pointed ridges in a net-like pattern.

**Stem:**

**Stem Is Aromatic:**

No

**Stem Form:**

Straight

**Stem Leaf Scar Shape:**

C-shaped, Crescent shaped

**Stem Description:**

Upright, spreading stems. Stout twigs somewhat flattened at the point of leaf origin.

**Landscape:**

**Landscape Location:**

Recreational Play Area

**Landscape Theme:**

Butterfly Garden

Children's Garden

Edible Garden

Native Garden

Pollinator Garden

**Design Feature:**

Shade Tree

Street Tree

**Attracts:**

Butterflies

Pollinators

Small Mammals

Songbirds

**Resistance To Challenges:**

Deer

Drought

Fire

Rabbits

Urban Conditions

Wet Soil