

# OREGON ASH

## *Fraxinus latifolia* Benth.

Plant Symbol = FRLA

Scientific Names: *Fraxinus oregona* Nutt., *F. pennsylvanica* subsp. *oregona* (Nutt.) G.N. Mill.

### Description

**General:** Oregon ash is a member of the olive family (Oleaceae) (USDA, NRCS,2019). This native, deciduous tree is variable in shape and form. Forest trees can reach a height of 75 feet in height with narrow crowns, while trees on the edges of rivers are shorter and broader with round-topped crowns and large limbs. Forest trees have straight trunks with a diameter of 16 to 30 inches, while broader trees have diameters to 54 inches (Rosatti and Henrickson, 2012; Sudworth, 1908). The trunk is grey brown and furrowed, twigs of new growth are frequently covered with whitish or brownish woolly hairs or may be smooth. The compound leaves are 6 to 12 inches in length and consist of 5 or 7 yellow green leaflets, 2 -5 inches long and 1 to 3 inches wide. The terminal leaflet is largest. The leaflet shape is ovate or oblong-and wedge shaped, rounded at the base and pointed at the tip. Male and female inflorescences are borne in clusters on separate trees. The male flower has a calyx and 2 anthers and female flowers consist of a calyx, pistil and stigma. Flowers are produced from March to April in California and through May further north and at higher elevations. The winged fruits are 1¼ - 2 inches in length and ¼ - ½ inches wide, the wing is flat extending down ½ to ¾ of the body and extended at the tip. The fruits are wind dispersed. The chromosome number is  $2n = 46$  inches (Rosatti and Henrickson, 2012).



Figure 1. Oregon ash tree, Corvallis, Oregon. Photo by Amy Bartow, Corvallis Plant Materials Center.



Figure 2. Female inflorescence of Oregon ash. Photo by Amy Bartow, Corvallis Plant Materials Center.



Figure 3. Male inflorescence of Oregon ash. Photo by Amy Bartow, Corvallis Plant Materials Center.

**Distribution:** Oregon ash is found from British Columbia, through Washington and Oregon as far as the western slopes of the Cascade Range and south to California (USDA, 2019; Sudworth, 1908). In north west California, Oregon ash is in the Cascade and Sierra Nevada Ranges, the Modoc Plateau, the Great Central Valley to the Tehachapi Mountains and the San Francisco Bay (Rosatti and Henrickson, 2012). For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

**Habitat:**

Oregon ash is found in mild climates characterized by wet, mild winters but very little rain in July and August. The bottomlands where Oregon ash is most common provide a relatively cool, moist environment, even in hot interior valleys. Oregon ash has a fairly high tolerance to summer drought; however, it generally ceases growth and drops its leaves when conditions become hot and dry. (OSU, OWIC, 2020). Oregon ash is found sometimes in pure stands. It is also found in association with red alder (*Alnus rubra*), bigleaf maple (*Acer macrophyllum*), bay laurel (*Umbellularia californica*), Oregon oak (*Quercus garryana*), red osier dogwood (*Cornus sericea*), willows (*Salix* spp.), and black cottonwood (*Populus balsamifera* spp. *trichocarpa*) (Sudworth, 1908). In California, it is most commonly found in wetland riparian areas and plant communities of Yellow Pine, Foothill Woodland, Chaparral and Valley Grassland (Calflora, 2019).



Figure 4. Fruits of Oregon ash, Sierra Foothills, California. Photo by Margaret Smither-Kopperl, Lockeford Plant Materials Center.

**Adaptation**

Oregon ash is found in wetlands, woodlands, canyons and streambanks. It can grow in a wide range of soil types including clay soils that are frequently flooded, sandy, gravelly and rocky soils with significant available moisture; particularly alluvial bottoms and flats. Fertile soils with higher organic matter support the growth of larger trees. Oregon ash grows at elevations up to 2000 to 3000 feet on the western slopes of the Cascade Range in Oregon and to 5000 feet in California (Rosatti and Henrickson, 2012).

**Uses**

**Timber:** Oregon ash is the only timber ash in the Pacific Region. It is recognized as one of the most important hardwoods due to its strength and workability (Sudworth, 1908).

**Erosion Control and Habitat Restoration:** Oregon ash is widely planted in California and Oregon as a component of riparian habitats, including riparian forest buffer, wetland creation, restoration and enhancement erosion control and waterline stabilization as part of critical area plantings in appropriate locations (USDA, NRCS, 2020). Oregon ash is important to wildlife, particularly birds and a variety of insects and may be included as a component of riparian and upland wildlife habitat (USDA, NRCS, 2020).

**Ethnobotany**

Oregon ash is an abundant tree in the western United States and was valued by local tribes for a variety of functions including timber, fuel, medicine and basketry. Chestnut (1906) describes the Yuki in Round Valley, California using the wood for fuel and it being valuable because it would burn while still green. Tools were also produced including walking sticks, handles, and long pipes for smoking (Chestnut, 1906). Oregon ash roots were also used to make baskets (Schenk and Gifford, 1952). Medicinal use is documented by the Costanoan Indians, who used steeped twigs as a fever reducer (Harrington and Bocek, 1984), and the Yokia, who mashed fresh roots to produce a salve that was particularly effective for healing wounds from bear fights (Chestnut, 1906).

**Status**

**Wetland Indicator:** FACW. Usually occurring in wetlands and occasionally in non-wetlands.

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

## **Planting Guidelines**

Oregon ash is rated as easy to grow and establish under sufficiently moist conditions (USDA, NRCS, 2020). Container or bare root stock is to be planted at a 14-foot spacing for riparian forest buffer, hedgerows, tree and shrub establishment and wetland creation, enhancement and restoration (USDA, NRCS, 2020)

## **Management**

Weed control recommended for the first year or two after establishment.

## **Pests and Potential Problems**

Emerald ash borer (*Agrilus planipennis*) is an exotic invasive pest that targets ash trees. Trees are killed by larvae feeding on the inner bark. First detected in Michigan in 2002, it has spread widely in the eastern United States (Emerald Ash Borer Information Network, 2020).

Weevils (*Thysanocnemis* spp.) destroy significant amounts of seed (up to 60 percent). Various other insects feed on twigs and foliage and may be pests in ornamental plantings. A variety of fungi cause leaf spot and powdery mildew. True mistletoe grows on Oregon ash. A heart rot causes extensive defect in older trees, and hollow “stovepipe” ash are prevalent in some stands (OSU, OWIC, 2020).

## **Environmental Concerns**

Ash seedlings establish in wet grasslands or fields, particularly after disturbance such as plowing (in the absence of fire or grazing) (OSU, OWIC, 2020). Oregon ash can be weedy specifically in wet prairie restoration in Oregon, the wind dispersed seeds establish naturally and can dominate these sites, turning a wetland prairie into an ash forest.

## **Control**

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

## **Seeds and Plant Production**

Seed is typically abundantly produced and may be collected from established stands in the fall. Samaras can be picked by hand or shaken from the tree onto tarps spread under the tree. (Sudworth 1908). There are approximately 10,000-14,000 seeds per pound. Seeds can be dried and stored in cool dry conditions (Bonner 1974).

## **Cultivars, Improved, and Selected Materials (and area of origin)**

Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

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#### **Citation**

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