

Alnus glutinosa - Common or European Alder (*Betulaceae*)

Alnus glutinosa is an underutilized shade tree that is excellent for wet or dry sites. European Alder has glossy dark green summer foliage, a pyramidal shape and rapid growth in youth, and ornamental fruits and catkins in winter.

Form



FEATURES

- large shade tree, doubling as an ornamental tree in youth
- maturing at 60' tall x 30' wide
- upright pyramidal growth habit in youth, becoming upright oval or open and irregular with maturity, sometimes losing its strong central leader with age, and also sometimes found in multi-trunked form
- rapid to medium growth rate

Culture

- full sun to partial sun
- prefers moist to wet soils of average fertility in full sun, but is adaptable to poor soils, dry soils, and soils of various pH
- sensitive to heat and drought
- forms a nitrogen-fixing association with microorganisms
- sensitive to branch cankers and tent caterpillars as occasional minor disease and pest problems, respectively
- low availability, in B&B form

Foliage

- alternate, densely foliated, and dark glossy green
- leaf blades are 3" long x 3" wide, oval to orbicular, doubly serrated, and distinctly notched at the apex when fully expanded, with impressed veins
- autumn color is green, yellowish-green, or yellow-brown, and ornamentally ineffective



Flowers

- monoecious (separate male and female flowers on the same plant)
- clustered reddish-brown male catkins are present in winter, to about 1" long, but elongate up to 4" in Mar., swaying in the early spring winds
- miniature oval purple female flowers are barely noticeable in Mar., without any corolla but emerging with exerted pistils to accept pollen from the nearby catkins

Fruits

- small brown winged nutlet seeds are borne in green ovoid rough fruits that are about 0.5" long, changing to dark brown in autumn
- the winter persistent clusters of opened fruits (strobiles) that



resemble miniature pine cones are very characteristic of Alders, and often persist into the following season

Twigs

- green-brown to brown and smooth

Trunk

- bark is green-brown in youth, changing to brown and slightly ridged with maturity
- trees can be single leader or multi-trunked, and are strongly pyramidal in youth, but more upright oval and sometimes losing the central leader with age

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Function

- shade, specimen, wet site, or deciduous windbreak tree, effective in solitary, group, or linear plantings

Texture

- medium texture in foliage and when bare
- thick density in foliage and when bare

Assets

- wet site or dry site tolerant; an alternative to Willows and Poplars for wet and difficult sites
- rapid growth and establishment
- dark glossy green foliage that flutters in the breeze
- can also be considered an ornamental tree in youth (due to its strongly pyramidal habit, winter persistent cone-like fruits, and late winter elongated catkins)
- wood more resistant to storm damage as compared to other rapidly growing landscape trees

Liabilities

- none serious, although branch cankers and tent caterpillars occasionally occur

Habitat

- Zones 3 to 7
- Native to Europe, Western Asia, and Northern Africa
- naturalizes along wet sites where it has escaped and self-propagated by seeds

SELECTIONS

Alternates

- rapidly growing shade trees (*Acer x freemanii*, *Betula nigra*, *Liquidambar styraciflua*, *Quercus acutissima*, *Zelkova serrata*, etc.)

- shade trees for wet sites (*Betula nigra*, *Celtis occidentalis*, *Populus deltoides*, *Quercus bicolor*, *Salix alba*, *Taxodium distichum*, etc.)

- pyramidal trees (at least in youth) (*Abies fraseri*, *Picea abies*, *Liquidambar styraciflua*, *Quercus palustris*, *Taxodium distichum*, etc.)

Cultivars - Variants - Related species

- Alnus glutinosa* 'Imperialis' - a cutleaf form, with light green leaves that have sinuses cut over halfway to the midrib, somewhat awkward looking in youth but maturing into a fine specimen tree
- Alnus glutinosa* 'Pyramidalis' - an extremely upright columnar form, maturing at 40' x 10', which can be used in rows as a deciduous privacy screen or individually as a distinct focal point or specimen tree; this columnar form (actually not a pyramidal form, as the cultivar name implies) is a possible substitute for the disease-prone and readily suckering Lombardy Poplar (*Populus nigra* 'Italica'), but unfortunately is rarely available in the nursery trade