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.

FEATURES

Form
-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 foliaged, 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
-summer color is green, yellowish-green, or yellow-brown, and ornamentally ineffective

Flowers
-monoeccious (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

USAGE

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