

Invasive Plants in Pennsylvania

European Black Alder

Alnus glutinosa



Robert H. Mohlenbrock. USDA NRCS. 1995.
Northeast wetland flora: Field office guide to
plant species. Northeast National Technical Center

Background:

European black alder was introduced in colonial times. It tolerates low-lying, wet soils and has been planted for use as shelter belts, reclamation areas, landscaping and biomass production.

Range:

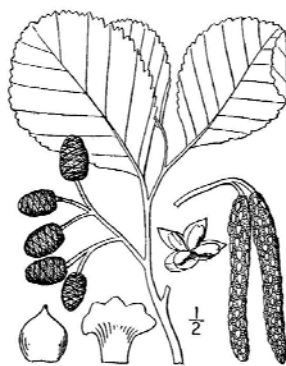
Native to Europe and western Asia, North Africa and Asia Minor. In North America, it is locally naturalized in the northeastern United States and maritime Canada.



Image courtesy of [USDA PLANTS Database](#)

Description:

A deciduous tree with narrow pyramidal or columnar shape, typically multi-stemmed. It grows 40 to 60 feet tall and 20 to 40 feet wide. Leaves are simple and alternate, two to four inches long and three to four inches wide, rounded with a crenate or shallow toothed margin. Flowers are catkins, four inches long. Fruit are egg-shaped nutlets that mature in October. Bark is greenish-brown and young stems are smooth. Buds are stalked, purplish and valvate.



USDA-NRCS PLANTS Database / Britton, N.L.,
and A. Brown. 1913. *An illustrated flora of the
northern United States, Canada and the British
Possessions*. 3 vols. Charles Scribner's Sons, New
York. Vol. 1: 613.

Habitat:

This tree grows well on acid soils; growth is reduced on alkaline and near-neutral soils. It prefers low-lying soils with high fertility and moisture, often along stream, flood-plains, as well as lake and marsh edges.

Biology and Spread:

It reproduces primarily by seed; vegetative reproduction (root-suckering) is rare. Seeds are wind dispersed (for short distances of 100 to 200 feet) and water dispersed (possibly for long-distances).



Paul Drobot, University of Wisconsin—
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Ecological Threat:

This plant's ability to disperse by water and establish monospecific stands causes it to colonize wetland soils and displace native plants. Its ability to fix nitrogen allows it to establish on sites with very poor soils.

How to Control this Species:

Manual

Cutting of stems, with herbicide treatment of stumps, will help prevent stump sprouting.

Chemical Control

Treat this species using readily available herbicides such as a 50 percent solution of glyphosate and water. Follow the label and all state herbicide regulations.

Biocontrol

Many insects and diseases have been observed on European alder. Those known to cause significant damage include striped alder sawfly (*Hernichroa crocea*), European alder leafminer (*Fenusa dohrnii*), alder flea beetle (*Altica ambiens alni*) and woolly alder aphid (*Prociphilus tessalatus*).

Native alternatives:

There are a variety of native shrubs that can replace this invasive, including speckled or gray alder (*Alnus incana*), smooth or hazel alder (*Alnus serrulata*) and green alder (*Alnus viridis*).



Mary Ellen Harte, www.forestryimages.org

Look-A-Likes:

The native alternatives listed above do resemble European alder in their foliage and fruit. However, European alder is taller and less shrub-like, often appearing as a small to medium-sized tree.



Smooth Alder

G. Suanne Bacque, School of Renewable Natural Resources, LSU AgCenter



Green Alder

Susan McDougall ©
USDA-NRCSPLANTS Database

References:

USDA PLANTS Database: <http://plants.usda.gov/java/profile?symbol=alg12>

Missouri Botanical Garden Plant Profiles:

<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a929/alnus-glutinosa.aspx>

For More Information:

DCNR Invasive Exotic Plant Tutorial for Natural Lands Managers:

<http://www.dcnr.state.pa.us/forestry/invasivetutorial/index.htm>

Plant Invaders of Mid-Atlantic Natural Areas, National Park Service:

<http://www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf>

Invasive Plants Field and Reference Guide, U.S. Forest Service:

http://na.fs.fed.us/pubs/misc/ip/ip_field_guide.pdf