GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Elaeagnus pungens***

Elaeagnus pungens 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Rhamnales	Elaeagnaceae

Common name

Synonym

Elaeagnus pungens , Thunb. subsp. *eupungens*
Elaeagnus pungens , Thunb. var. *typica* C.K. Schneid.
Elaeagnus pungens , Thunb. forma *aurea* (Servett.) Rehder
Elaeagnus pungens , Thunb. forma *masculata* Veitch
Elaeagnus pungens , Thunb. var. *variegata* Rheder
Elaeagnus pungens , Thunb. var. *simonii* (Carrière) G. Nicholson
Elaeagnus reflexa , E. Morren & Decne.
Elaeagnus pungens , Thunb.var. *reflexa*(E. Morren & Decne.) Rehder
Elaeagnus pungens , Thunb. var. *aureovariegata*Bean
Elaeagnus pungens , Thunb.var. *frederici*Bean
Elaeagnus simonii , Carrière
Elaeagnus pungens , Thunb.subsp. *simonii*(Carrière) Servett.

Similar species

Elaeagnus angustifolia, Elaeagnus umbellata

Summary

Originally from eastern Asia, *Elaeagnus pungens* has found its way to the United States, New Zealand and Europe. It is a plant that may out-compete other plants for sunlight because of its outward growth (it can grow as tall as 8 m). Its ability to grow in most soils makes it easy to move into natural areas and take over the native vegetation. This particular species can be controlled with the herbicides.

view this species on IUCN Red List

Species Description

Elaeagnus pungens is an evergreen shrub that can grow 1-8 m. There are multiple dense stems with short shoots and small leaves that become branched or unbranched thorns 1-4cm long. In the second year, lateral branches are produced and are followed by flowers in the fall. The lateral branches, in the summer, ascend into surrounding trees and have dark bark and thorns. Twigs have brown scales, but when young are hairy (Miller, 2003). The leaves are thick, silver-brown, alternate, oval, and scaly underneath. Leaves can reach lengths from 1-10cm and .5-5cm width. There are irregular wavy margins. Spring blade surface is silver-scaly eventually turning dark green with dense silver-scaly and brown scales scattered. Petioles are 4-5mm long (Miller, 2003). There are axillary clusters of flowers (1-3 flowers; 1cm long). Silvery-white to brown. Tubular, four lobes and fragrant (Miller, 2003). Fruits are oblong and 1-1.5cm. Contains one nutlet. They ripe from white to red with dotted brown scales (Miller, 2003).

Uses

Elaeagnus pungens is often planted in highway medians. It is also used for ornamental purposes (Richmond, undated).

Habitat Description

Elaeagnus pungens is drought tolerant (Stamps, 2001) and can grow in most soils (BSA, 2002).

Reproduction
The seeds of *Elaeagnus pungens* are dispersed by animals (Miller, 2003).

General Impacts
Elaeagnus pungens moves into natural areas and takes over native vegetation (BSA, 2002).

Management Info
Chemical: Douce and Hudson (undated) state, \"thoroughly wet the leaves with Arsenal AC or Vanquish as a 1-percent solution in water with a surfactant (April to October).\" If the stem is too high, spray the leaves with Garlon 4 as a 20% solution with basal oil, diesel fuel, or kerosene. Cut large stems and treat the stumps with Arsenal AC (10% solution) or glyphosate (20% solution) in water (Douce and Hudson, undated).

Principal source: Miller , J.H. 2003. Nonnative invasive plants of southern forests: a field guide for identification and control. Gen. Tech. Rep. SRS-62. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 93p.;

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

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ALIEN RANGE

[1] BRITISH ISLES
[1] SWITZERLAND
[1] NEW ZEALAND
[10] UNITED STATES

BIBLIOGRAPHY
23 references found for **Elaeagnus pungens**

Managment information
Akerson, J., K. Gounaris. 2000. Strategic Plan for Managing Alien Invasive Vegetation: Colonial National Historical Park, Yorktown, Virginia.
Summary: This paper looks at everything necessary to keep the historic site of Yorktown, VA, preserved.
Available from: http://home.nps.gov/applications/nature/documents/ACF34.pdf [Accessed May 8, 2007]
Douce, G.K., W. Hudson. Undated. Trees: Forest Tree Insect Control.
Summary: Available from: http://pubs.caes.uga.edu/caespubs/PMH/PMH-COM-trees.pdf [Accessed May 8, 2007]

General information
Berger S., Soehlke G., Walther G.-R. & Pott, R. 2007. Bioclimatic limits and range shifts of cold-hardy evergreen broad-leaved species at their northern distributional limit in Europe. Phytocoenologia, 37(3-4): 523-539.
Summary: Abstract: The few native evergreen broad-leaved species occurring in central Europe have attracted the interest of generations of scientists; thus, the factors limiting their northern distribution have been well studied. For investigation of climate change-driven range shifts, these climate-sensitive species are particularly well suited. We here analyse recent range shifts of some of the cold-hardiest evergreen broad-leaved species, including both native and introduced species in Europe.
Based on updated field data and outputs from bioclimatic models, we show that the milder winter conditions of the last few decades are consistent with the northward expansion of potential ranges and an increase in the number of evergreen broad-leaved species. At the landscape scale, these species indicate a considerable change in the composition and structure of temperate deciduous forests in various parts of Europe.

Berger S. & Walther G.-R. 2006. Distribution of evergreen broad-leaved woody species in Insubria in relation to bedrock and precipitation. Botanica Helvetica 116/1: 65-77.
Summary: Abstract: An increasing number of evergreen broad-leaved species has naturalised in deciduous lowland forests near the lakes of southern Switzerland and northern Italy (Insubria), favoured by rising winter temperatures of the last few decades.We investigated how the abundance of these species varies across the Insubrian region, and whether distribution patterns can be explained by the responses of particular species to local environmental constraints. Species composition, cover values and maximal size of exotic and indigenous evergreen broad-leaved species were recorded at 22 study sites throughout the Insubrian region and analysed in relation to the regional precipitation gradient and geological bedrock.The survey revealed distinct differences in the distribution and composition of evergreen broad-leaved species: some species were restricted to the moister western part of Insubria, probably due to low drought tolerance, whereas other species were mainly found in the drier eastern part of Insubria or on calcareous rock, probably due to competitive exclusion from more fertile sites.These ecological preferences generally correspond to those reported from the core range of the species, but some local limitations suggest a restricted ecological breadth of species occurring at their northern range margin.
Berger S. & Walther G.-R. 2007 Immergr�ne Laubgeh�lze – Indikatoren des Klimawandels? Berichte der Reinhold-T�xen-Gesellschaft 19: 44-59 (in German).
Summary: Climate is an important factor limiting plant species' ranges. In recent years a global warming trend has been observed, hence, impacts on the distribution of plants and the composition of the vegetation are expected. Evergreen broad-leaved species are at their northern boundary of distribution in Central Europe. Their northern range margins are limited by low winter temperatures. However, limiting parameters are species specific due to the species' biological traits. It is essential to investigate and discuss these species specific parameters in detail to understand recent range shifts of the respective species. The limiting parameters and relevant biological traits of selected evergreen broad-leaved woody species are discussed in this paper. Furthermore it provides an overview of the current distribution of the species in a Central European perspective, regarding indigenous as well as some exotic species known to naturalise.
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Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
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Summary: The Central European forests are relatively species-poor compared with the analogue vegetation of North America or East Asia. Only few woody, evergreen broad-leaved species were able to recolonize Central Europe after the last glaciation. Nowadays, exotic species are spreading with increasing frequency. Especially evergreen broad-leaved (laurophyllous) species become more and more established in the indigenous vegetation. The process of their introduction and spread, in the context of potential causal factors, are discussed in the following paper.
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