

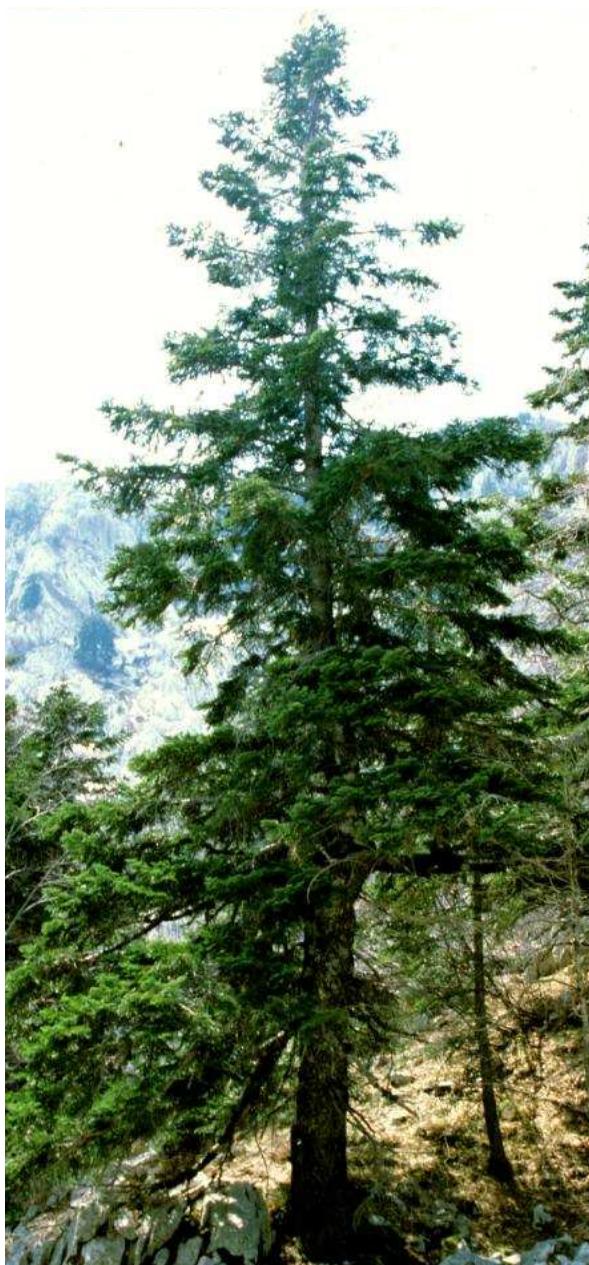
Tree factsheet

images at pages 3 and 4

Abies alba Miller

habitat	
natural distribution in N.W. Europe since	Mid and South Europe 1603 in U.K. cultivated
natural areas The Netherlands	not indigenous
geological landscape types The Netherlands (Hoek 1997)	coversand area, ice-pushed ridges
forested areas The Netherlands	sandy soils; former heath fields
area Netherlands	<1700 ha (2002, Probos)
area natural area	-
% of forest trees in the Netherlands	<0,7 (2002, Probos)
pH-KCl	4,5-5 (4-7)
soil type	
soil fertility	medium to nutrient rich
light	highly shade tolerant
shade tolerance (0=no tolerance to 5=max. tolerance)	4.6
drought tolerance (0=no tolerance to 5=max. tolerance)	1.8
waterlogging tolerance (0=no tolerance to 5=max. tolerance)	1.0
plant communities in the Netherlands	Vaccinio-Piceetea (klasse der naaldbossen)
management	
status Europe, natural range	frequent indigenous species in forests
status The Netherlands	rare exotic species, mainly in botanical gardens and forest estates
application	timber tree
propagation	seed
regeneration	planting, natural regeneration
optimal gap size for regeneration	< 1 x tree length
first plantation Netherlands	
resprouting after cutting	yes, but not always successful
growth rate (M.A.I. in $m^3\text{ha}^{-1}\text{j}^{-1}$)	
diseases	<i>Melampsonella caryophyllaceanum</i> , cancer on buds (Dutch: kanker die heksenbezems vormt)
insects	<i>Dreyfusia nordmannianae</i> , woolly aphid (Dutch: wolluis)
wood	
wood	Fir, Silver Fir (Dutch: Dennen)
wood structures key characteristics of pores	Tracheids. No resin canals. Rays without tracheids
density heartwood (kg/m ³)	(350)-450(-550)
elastic modulus (N/mm ²)	10.800
durability heartwood	fungus 4
heartwood colour	yellowish to grey-white
sapwood colour	yellowish to grey-white
contents	no resin in the wood, but bark has resin blisters
products	construction timber, cladding, pulpwood for paper, resonance boxes for musical instruments
non-timber products	
seeds	raw edible
essential oil	from foliage

① Ülo Niinemets and Fernando Valladares. 2006. Tolerance to shade, drought, and waterlogging of temperate Northern Hemisphere trees and shrubs. Ecological Monographs 76:521–547



Old specimen in Montenegro, Mount Orjen (Wikipedia)



branch



leaves and buds

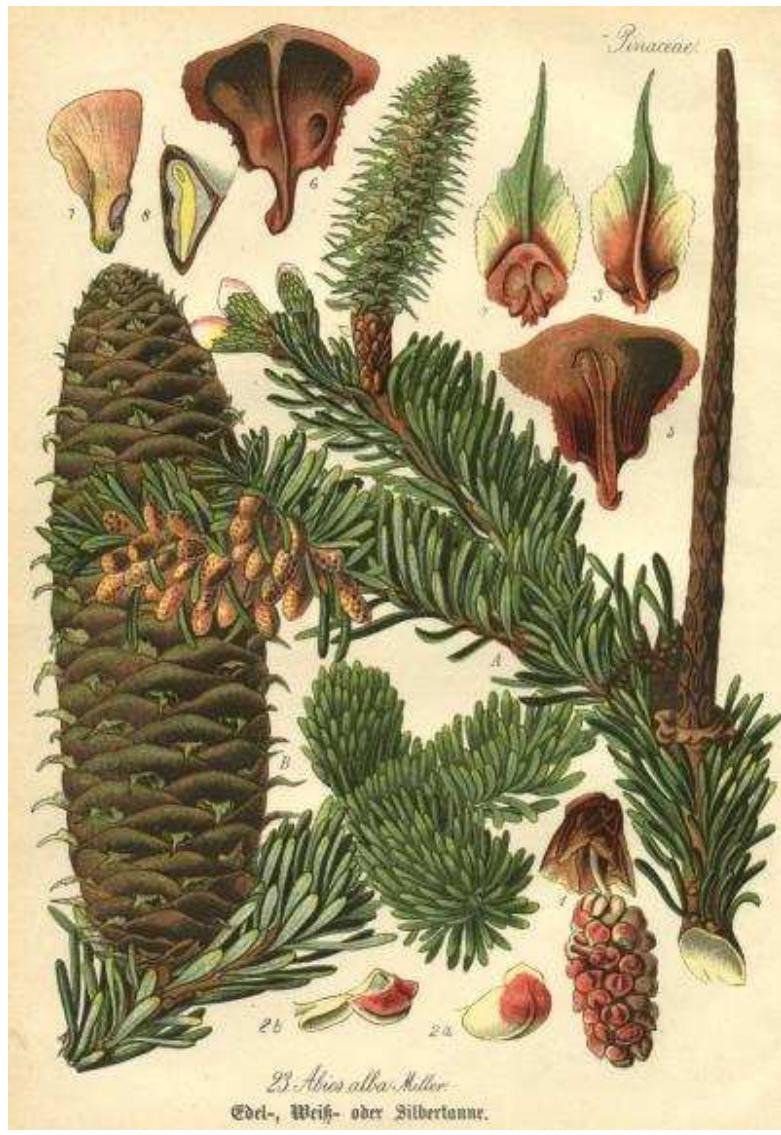


seedling of *Abies* spec. Schovenhorst Pinetum
(photo © Leo Goudzwaard, Wageningen University)



seedlings (Gil Wojciech, Polish Forest Research Institute,
www.forestryimages.org)

UGA1261061



Thomé, 1885



Bark of a young tree, Hinkeloord
Arboretum, Wageningen
photo ©Leo Goudswaard
Wageningen University