



Tree factsheet

images at pages 3, 4, 5

Populus tremula L.

taxonomy	
author, year	Linnaeus 1753
synonym	
Family	Salicaceae
Eng. Name	Aspen, European Aspen
Dutch name	Ratelpopulier, Esp
subspecies	
varieties	
hybrids	<i>Populus x canescens</i> (<i>P. alba</i> x <i>P. tremula</i>)
cultivars, frequently used	
'Erecta'	street tree
references	
	Weeda, E.J. 2003. Nederlandse Oecologische Flora, deel 1
	OECD, 2001. Concensus document on the biology of Populus (online document) Series on Harmonisation of Regulatory Oversight in Biotechnology, No. 16
	Schotveld, A. 1987. Populier (in Dutch). in: Schmidt, P. 1987. Nederlandse boomsoorten I, Syllabus Vakgroep Bosbouw Landbouwniversiteit Wageningen
	Plants for a Future Database; www.pfaf.org/index.html
morphology	
crown habit	tree, oval to round
max. height (m)	30
max. dbh (cm)	...
actual size Europe	
actual size Netherlands	
leaf length (cm)	3-8
leaf petiole (cm)	4-10
leaf colour upper surface	green
leaf colour under surface	grayish-green
leaves arrangement	alternate
flowering	March
flowering plant	dioecious
flower	monosexual
flower diameter (cm)	
flower male catkins length (cm)	8-12
flower female catkins length (cm)	8-12
pollination	wind
fruit; length	capsule (doosvrucht); 0,1-0,2 cm
fruit petiole (cm)	<0,1
seed; length	seed; .. cm
seed-wing length (cm)	pappus: approx 0,5
weight 1000 seeds (g)	<i>P. tremula</i> : 0,2
seeds ripen	June
seed dispersal	wind, water

habitat	
natural distribution	Europe, Atlas mountains
in N.W. Europe since	approx 11.000 B.C.
natural areas The Netherlands	forest edges, gaps, kapvlakten, open fields
geological landscape types The Netherlands (Hoek 1997)	dune area; river valleys
forested areas The Netherlands	frequent to scattered, tree at limy, sandy soils.
area Netherlands	Populus+Salix: 16.290 (2002, Probos)
% of forest trees in the Netherlands	Populus+Salix: 6,3 (2002, Probos)
soil type	
pH-KCl	indifferent
soil fertility	nutrient rich to moderate
light	light demanding
① shade tolerance (0=no tolerance to 5=max. tolerance)	2.2
① drought tolerance (0=no tolerance to 5=max. tolerance)	2.9
① waterlogging tolerance (0=no tolerance to 5=max. tolerance)	2.1
plant communities in the Netherlands	Klasse der Eiken-beukenbossen op voedselrijke grond: -Fraxino-Ulmetum – Essen-iepenbos -Crataego-Betuletum pubescentis – Meidoorn-Berkenbos -Stellario-Carpinetum – Eiken-haagbeukenbos
management	
status Europe	scattered, locally frequent, indigenous species in forests
status The Netherlands	infrequent, indigenous species in forests
application	nature tree
propagation	seed, cuttings or rootings
regeneration	planting; natural regeneration from seed and up-rootings
optimal gap size for regeneration	2-3x tree length
first plantation Netherlands	
resprouting after cutting	good
growth rate (M.A.I. in $m^3ha^{-1}j^{-1}$)	moderate (data unknown)
diseases	
insects	
wood	
wood	Poplar (Dutch: populieren)
wood structures key characteristics of pores	diffuse porous. Uniseriate, homogeneous rays.
vol. mass heartwood (kg/m ³)	(380-)440 (-530) (12% moisture content)
elastic modulus (N/mm ²)	9.700
durability heartwood	fungus 5
heartwood color	?
sapwood color	white
contents	
products	pulpwood, veneerwood
non-timber products	leaves for fodder

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



leaves



winter buds



young uprootings



mature tree, Wageningen



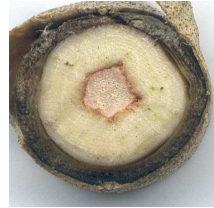
young tree, Wageningen



female catkin



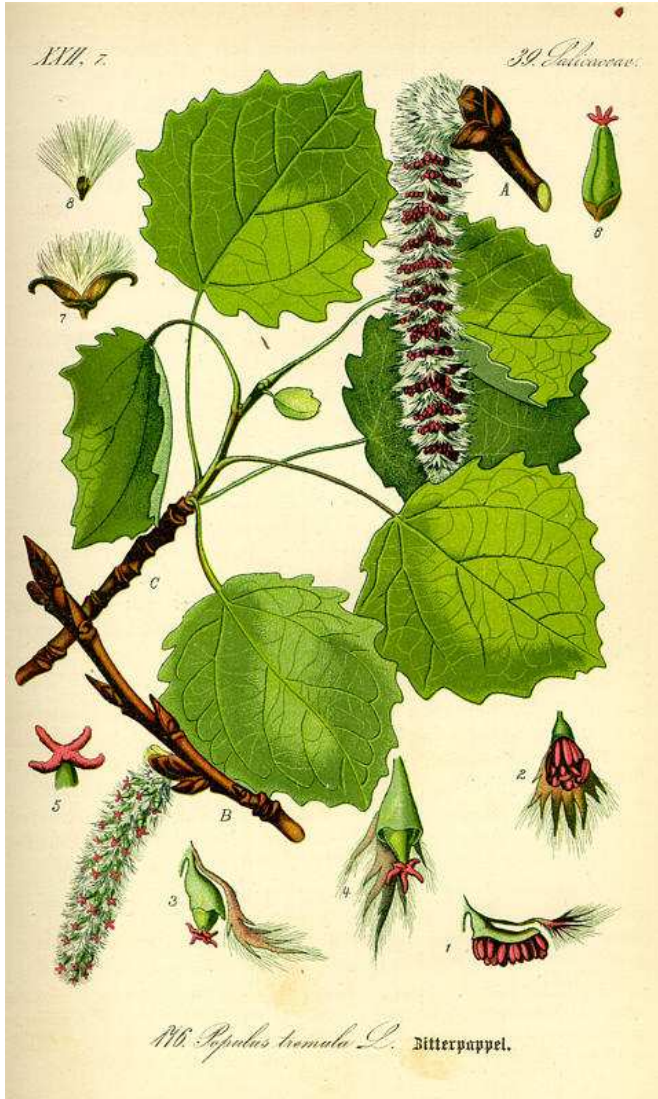
bark



2-years old twig showing pith, wood and bark



European aspen woodland, © Robert Mohlenbrock, USDA plants database



Thomé, 1885