

Study day on the genera

Carpinus, *Ostryopsis*, *Ostrya*

Belgian Dendrology Society, Bokrijk Arboretum,
13 September 2009



Ostryopsis, *Ostrya*, *Carpinus* in Belgian collections
and in arboreta and wild stand in the World
Philippe de Spoelberch,

Ostryopsis



Ostryopsis davidiana, Jardin Botanique Strasbourg (photo Tom Stein)



Ostryopsis davidiana
- 543-82 Rock coll. -
Morton Arboretum,
Lisle, Illinois, USA.

Ostrya

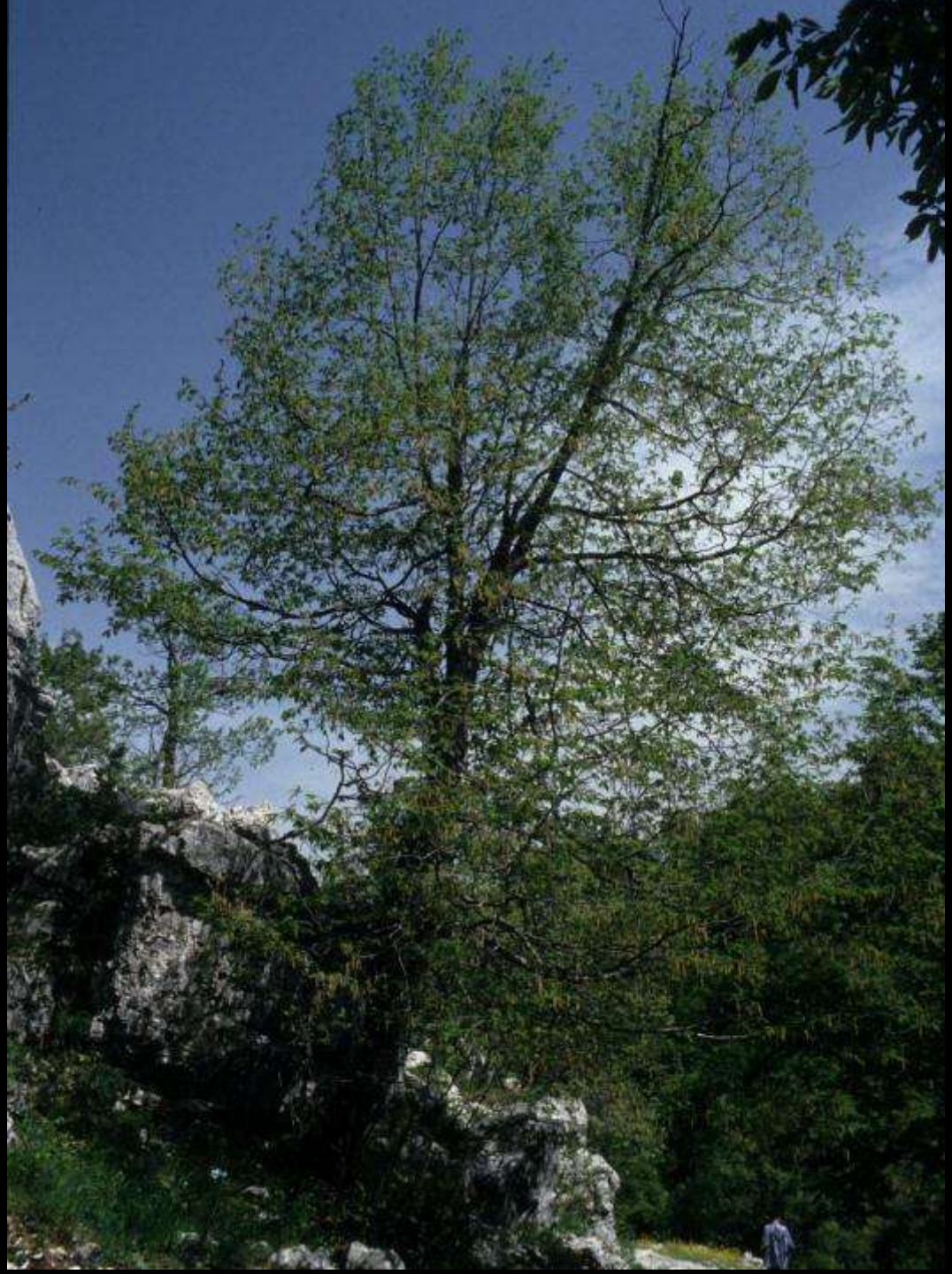
O. carpinifolia

O. japonica

O. virginiana

Ostrya compared : *carpinifolia*, *virginiana*, *japonica*

Ostrya
carpinifolia



Ostrya carpinifolia
Monodendri, N. Greece
1994.0519



Ostrya carpinifolia with *Cornus mas*, *Carpinus betulus* and *orientalis*- Monodendri, N. Greece









Ostrya carpinifolia - Vikos Gorge, N.W. Greece -1994.0529

Ostrya carpinifolia - ARDEN
BD.1615 – Cépée 460 cm
2001.1013



Ostrya carpinifolia ARCIT,
BD.11974 –
Namur, Arb. de la Citadelle
265 cm - 2009.0607



Ostrya carpinifolia -
ARCIT, BD.11974 -
2009.0607



Ostrya carpinifolia – 147 cm
AGRO - BD.4069





Ostrya carpinifolia - Arboretum d'Amance, INRA Nancy - 2006.0526



Ostrya carpinifolia - BD.1303, ARTER, in 27- 2006.1027



Ostrya carpinifolia - Arboretum d'Amance, INRA Nancy - 2006.0526- Bark on mature tree

A close-up photograph of a tree trunk with a white identification tag. The bark is a mix of green and brown, showing a fine, fibrous texture. The tag is rectangular and has a hole at the top, with a black string tied through it. The text on the tag is printed in black ink. The background is a blurred forest scene with green leaves and brown tree trunks.

Ostrya
carpinifolia
WAA 93143

Ostrya carpinifolia - 93143-waa-113 - 2006.1125, Bark on young tree



Ostrya carpinifolia - BD775 –JBOLG-2004.1002, Bark on old tree



Ostrya carpinifolia - De Dreijen,
Wageningen (NL)
1993.0912 – 155 cm -



Ostrya carpinifolia – ARWES 93143-waa-113 - 2006.1125

Ostrya japonica





Ostrya japonica – ARWES 98513-esv-163 – 2004.1025



Ostrya japonica - Wakehurst - 1995.1111



Ostrya japonica – 2 500 m, Shashung river, Danba, Sichuan – 2009.0701



Ostrya japonica – 2 500 m, Shashung river, Danba, Sichuan 2009.0701



Ostrya japonica – ARWES 98514-esv-279 - 2008.0106 (male catkins)



Ostrya japonica Späth
Arboretum, Berlin –
2002.0907



Ostrya japonica
Nikko Botanical Garden
Japan, with IDS
2008.1010



Ostrya japonica
RHS Wisley – 1996.08

Ostrya japonica
RHS Wisley – 999.1018



Ostrya japonica
RHS Wisley – 1995.07 -





Ostrya japonica - J.B. Saverne (Strasbourg) - BDB - 2006.0528 – (Pierre Lhoir)



Ostrya virginiana
92583-waa-463

Ostrya virginiana
(El Butano, Mexico, 1500m) -
95060-wld-463

Ostrya japonica
98513-esv-462 -

Ostrya japonica compared to *virginiana* and *virginiana* Mexican origin

Ostrya virginiana



Ostrya virginiana – Herkenrode, 74077-hil- 24 - 2006.0916



Ostrya virginiana – Herkenrode, 74077-hil- 24 - 2001.1001

Ostrya virginiana –
Herkenrode, 74077-hil- 24
- 2001.1001





Ostrya virginiana - Herkenrode 74077-hil- 24 - 1990.07



Ostrya virginiana - 74077-hil- 24 - 2006.0910



Ostrya virginiana (El Butano, Mexico) - ARWES 95058-wld-113 - 2004.1124



Ostrya virginiana – 92583-waa- x2 (left)- vs-*virginiana* (El Butano, Mexico) 95060 (righty)



Ostrya japonica -
98513-esv-162 -

Ostrya virginiana -
92583-waa-163 -

Ostrya virginiana (El Butano, Mexico)
- 95060-wld-163 -

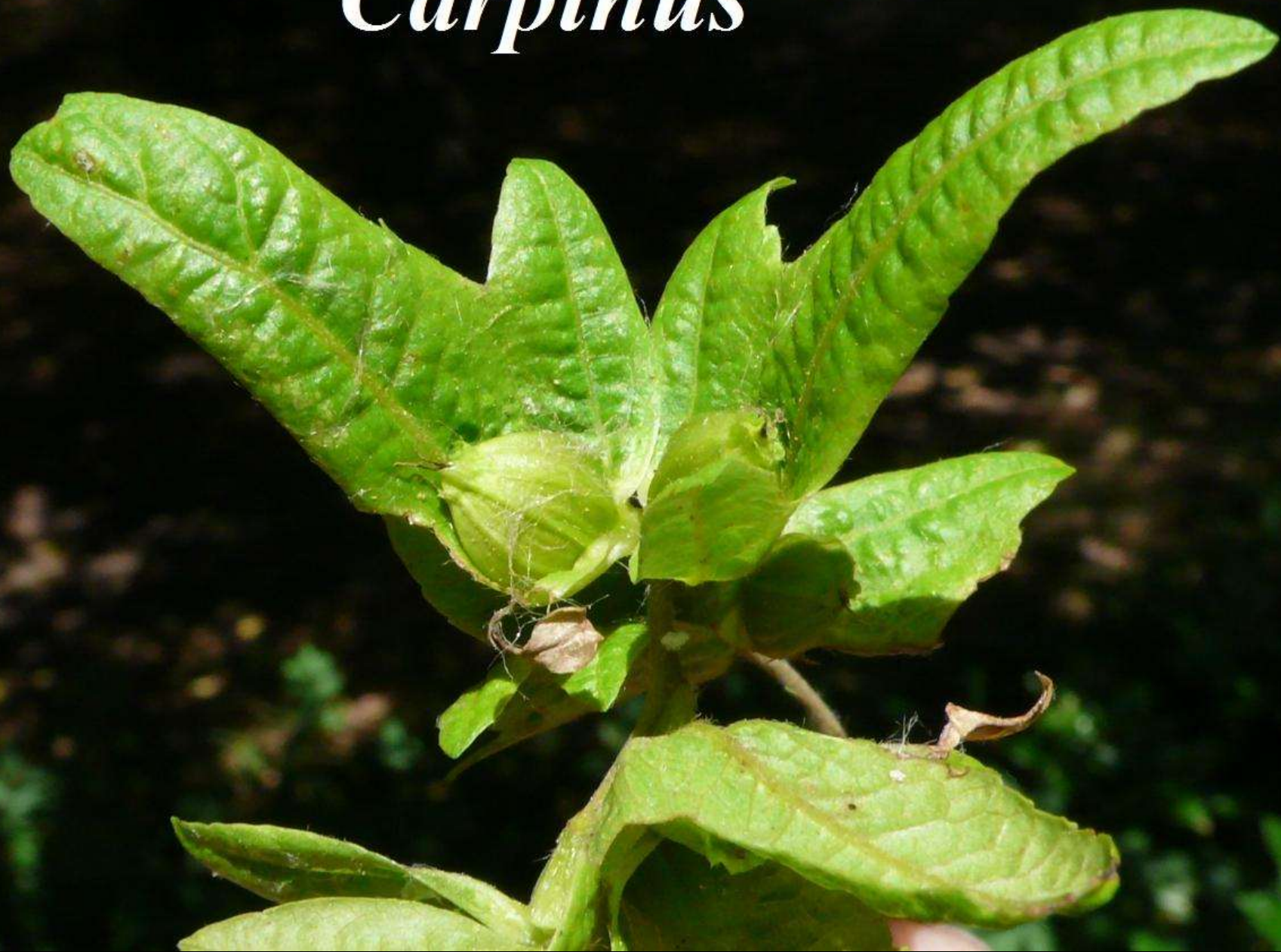
Ostrya virginiana (El Butano, Mexico) - Herkenrode 95060-wld-463 - 2006.1115



Ostrya virginiana (El Butano, Mexico) - 2003.0825y



Carpinus

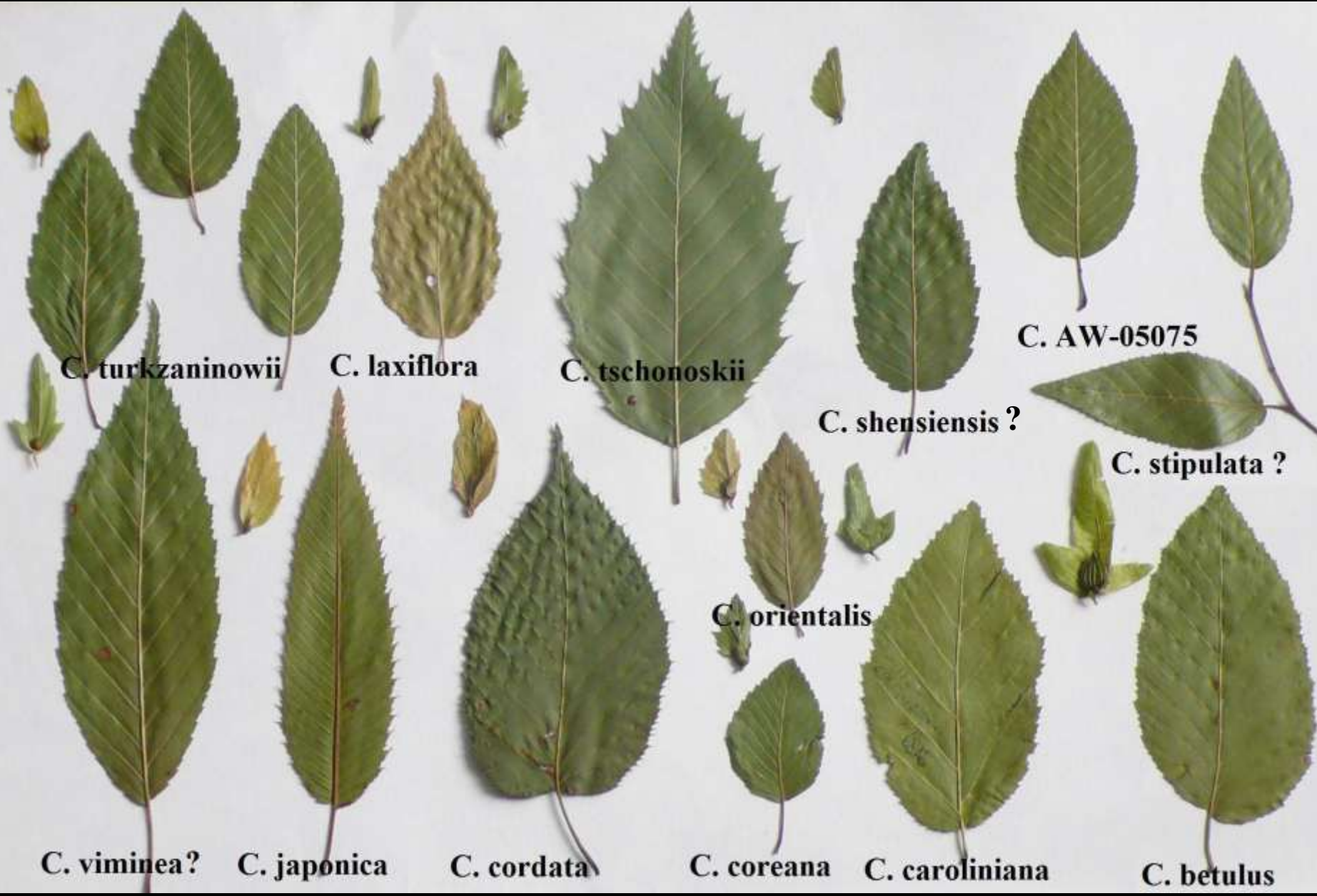


Taxa which are mentioned in the BELTREES database, & quantity

259	<i>CARPINUS BETULUS</i>
3	<i>CARPINUS BETULUS 'COLUMNARIS'</i>
15	<i>CARPINUS BETULUS 'FASTIGIATA'</i>
1	<i>CARPINUS BETULUS 'HORIZONTALIS'</i>
15	<i>CARPINUS BETULUS 'INCISA'</i>
1	<i>CARPINUS BETULUS 'PENDULA'</i>
2	<i>CARPINUS BETULUS 'QUERCIFOLIA'</i>
2	<i>CARPINUS BETULUS 'QUERCIFOLIA INCISA'</i>
2	<i>CARPINUS CAROLINIANA</i>
2	<i>CARPINUS CAUCASICA (C. betulus var.)</i>
2	<i>CARPINUS CORDATA</i>
1	<i>CARPINUS COREANA (C. turczaninowii var.)</i>
2	<i>CARPINUS HENRYANA</i>
14	<i>CARPINUS JAPONICA</i>
2	<i>CARPINUS LAXIFLORA</i>
3	<i>CARPINUS ORIENTALIS</i>
1	<i>CARPINUS x SCHUSCHAENSIS (C. betulus x orientalis)</i>
1	<i>CARPINUS SHENSIENSIS</i>
3	<i>CARPINUS TSCHONOSKII</i>
5	<i>CARPINUS TURCZANINOWII</i>
1	<i>CARPINUS TURCZANINOWII var. 'OVALIFOLIA'</i>



Carpinus leaves from Arboretum Wespelaar



C. turkzaninowii

C. laxiflora

C. tschonoskii

C. AW-05075

C. shensiensis ?

C. stipulata ?

C. orientalis

C. viminea ?

C. japonica

C. cordata

C. coreana

C. caroliniana

C. betulus



Carpinus betulus - ROEUL, BD.233, 636 cm - 2007.1010



Carpinus betulus - ROEUL, BD.233, 636 cm - 2007.1010



Carpinus betulus - ROEUL, BD.233, 636 cm - 2007.1010



Carpinus betulus forest , near Pecz, Hungary, 3 July 1988, with Jelena de Belder



Carpinus betulus forest , near Pecz, Hungary, 3 July 1988.



Carpinus betulus ssp. *caucasica*, with one *Fagus orientalis* (left) - Lagodechi -
DDG in Georgia - 20 Aug 2001

Carpinus betulus ssp.
caucasica

Lagodechi Forest -
DDG in Georgia

20 Aug 2001



Carpinus betulus ssp.
caucasica forest –
40 m high tree

after recent storm in
Lagodechi - DDG in
Georgia – 20 Aug 2001





Carpinus betulus - near Sagaredzo, DDG in Georgia - 2 001.0818



Carpinus betulus - Monodendri, N.W. Greece



Carpinus betulus & *Carpinus orientalis* - Monodendri, N.W. Greece - 1994.0606



Carpinus betulus -
Monodendri,
NW Greece -
19 May 1994





Carpinus betulus (ex - Lanzhot Forest, Tcheck Rep.) – ARWES 93068-wld-117 - 2006.1115



Carpinus betulus - AMERO - 2000.0820 – Les Amerois, Bouillon



Carpinus betulus - FCOUR, BD.6114 - 1989.07 – Froidcour, Stoumont



Carpinus betulus 'Columnaris' - CLOSR, BD.16069 - 1994.10.20

Carpinus betulus 'Columnaris'
CLOSR, BD.16069 – 1994.10.20
Esneux





Carpinus betulus 'Columnaris Nana' — ARWES 91356-waa-211 - 2009.0419



Carpinus betulus 'Columnaris Nana' - ARWES 91356-waa-211 - 2004.1104





Carpinus betulus 'Columnaris Nana' aff. BD 2931- BEVER- 29 mai 05



Carpinus betulus 'Frans Fontaine'- 98260-79 -



Carpinus betulus 'Fastigiata' - Herkenrode 70003-vp - 9 - 1996.1113 -



Carpinus betulus 'Fastigiata' - Herkenrode 70003-vp - 9, 2008.0315



Carpinus betulus 'Fastigiata' - Remparts de Tournai - 1990.09 -



Carpinus betulus 'Incisa' - AA131-div- 9 - 13 Oct 05



Carpinus betulus 'Incisa' - Herkenrode AA131-div- 9 - 13 Oct 05



Carpinus betulus 'Incisa' – Herkenrode AA131-div- 9 - 13 Oct 05



Carpinus betulus 'Quercifolia' - VWALF, BD.6771 - 1997.05 — Château de Vieux-Walleffe



Carpinus betulus 'Pendula' - Bever - 29 mai 05

Carpinus caroliniana -



Ferne Clyffe State Park, BDB in Illinois. 2004.1012



Carpinus caroliniana (Bartolomew's Cob., Mass.) – ARWES 95063-wld-211 - 8 Oct 05



Carpinus caroliniana (Bartolomew's Cob., Mass.) – ARWES 95063-wld-211 - 2005.1008



Carpinus caroliniana - 88009-pds- T



Carpinus caroliniana - 91189-pds-211 - 13 Oct 05





Carpinus caroliniana - ARWES 91189-pds-211 - 2006.1016



Carpinus caroliniana - ARWES 88009-pds- T -



Carpinus caroliniana (Bartolomew's Cob., Mass.) - 95063-wld-211 - 2009.0419



Carpinus caroliniana (Bartolomew's Cob., Mass.) - 95063-wld-211 - 2009.0522



Carpinus caroliniana (Bartolomew's Cob., Mass.) - 95063-wld-211 - 2009.0522

Carpinus cordata





Carpinus cordata - ARWES 89103-waa-211 - 2009.0423



Carpinus cordata - ARWES 89103-waa-211 - 2006.1105



Carpinus cordata - Kwangnung Royal Tombs, South Korea - 1989.0510



Carpinus cordata - ARWES 89103-waa-211 - 2006.1105



Carpinus cordata - Hillier's Arboretum UK - 1996.10 -



Carpinus cordata - 89103-waa-211 - 2009.0419



Carpinus cordata -

89103-waa-211 - 2009.0419



Carpinus cordata (Korea) - ARWES 96270-wld-211 - 2007.0417



Carpinus cordata - 89103-waa-211 - 2009.0517



Carpinus cordata - 89103-waa-211



Carpinus cordata - (long green bud) - Hof ter Saksen - 2004.1024



Carpinus cordata - 89103-waa-211 - 2009.0718

Carpinus cordata
Lake Hibara, Honshu,
IDS in Japan - 1992.



Carpinus coreana

Syn. *Carpinus turczaninowii* var. *coreana*



Carpinus coreana - low growing shrub, Ferris Miller, Chollipo Arb., Korea - 1989.0513



Carpinus coreana - Chollipo Arboretum, Korea, dunes, sea side



Carpinus coreana - Chollipo



Carpinus coreana - ARWES 94167-mal-211 - 2009.0522



Carpinus coreana - ARWES 95167-div-211 2009.0522



Carpinus coreana - ARWES 95167-div-211 - 2007.0417



Carpinus coreana – ARWES 95167-div-211 - 2009.0423



Carpinus coreana - 95167-div-211 - 2009.0423



Carpinus coreana - 95167-div-211 - 2009.0423



Carpinus coreana (Kugyedung, Wando Isl. Korea) - 99167c-wld-140 - 11 Dec 05



Carpinus coreana (Kugyedung, Wando Isl. Korea) - 99167c-wld-140 - 11 Dec 05



Carpinus coreana (Kugyedung, Wando Isl. Korea) - 99167c-wld-140 - 11 Dec 05



Carpinus coreana (Taehuksan island, Korea) - 02064-wld-212 - 2006.1126-



Carpinus coreana (Taehuksan island, Korea) - 02064-wld-212 - 2006.1126



Carpinus coreana (Taehuksan island, Korea) - 02064-wld-212 - 2006.1126



Carpinus coreana (Taehuksan island, Korea) - 02064-wld-212 - 2006.1126



Carpinus coreana as hedging material - Hemelrijk – 2009.0911

Carpinus fangiana



Carpinus fangiana - UBG BC, Vancouver - 2004.0804



Carpinus fangiana - UBG BC, Vancouver -

92
08
Carp
fang

Carpinus fangiana – ARWES-PROP 9208 - 2008.0313 - S Sichuan, Shiguxuela, Heping village, 2214m, 28°48'706, 102°58'115, KC#8, DT #22

Carpinus japonica



Carpinus cordata versus *Carpinus japonica* - Karlsaue, Kassel - 2002.0913

Carpinus japonica –
Shirafu Onsin,
Mt Azuma, Honshu,
Japan – IDS- 28 Oct 1992





Carpinus japonica - ARTER 39, BD.22965, 49 cm - 2006.1027



Carpinus japonica - Lake Chosenji, Nikko, Japan - 2008.1009



Carpinus japonica (YK 141) - ARWES 89528-wld-289 - 2009.0523



Carpinus japonica - ARWES 92738-waa-211 - 2009.0718



Carpinus japonica - ARWES 90047-pds-211 - 2006.1119





Carpinus japonica
Herkenrode
90048-pds- 35 -
2006.0420



Carpinus japonica - Herkenrode 90048-pds- 35 - 2006.0420



Carpinus japonica – Herkenrode 90048-pds- 35 - 2006.0420



Carpinus japonica –
Herkenrode,
90048-pds- 35 -
2006.0420



Carpinus japonica – ARWES 90047-pds-211 - 2007.0417



Carpinus japonica - ARWES 92738-waa-211 - 2009.0718



Carpinus japonica - ARWES 90047-pds-211 - 13 nov 04

Carpinus laxiflora



Carpinus laxiflora - Kwangnung Arboretum, Korea - 2002.0529

Carpinus laxiflora –
Kwangnung Arboretum,
woods

South Korea
2002.0529 -



Carpinus laxiflora –
Kwangnung Arboretum,
South Korea –
2002.0529 -





Carpinus laxiflora - Von Gimborn Arboretum – 2004.0904



Carpinus laxiflora var. *macrostachya* - Hillier's Arboretum, UK - 1996.1026 -



Carpinus laxiflora - 92443 - waa - 145 - 1996.1101

*Carpinus
omeiensis*



Carpinus omeiensis -
Von Gimborn Arb.
2004.RD744 -



Carpinus omeiensis - Von Gimborn Arboretum. 2004.RD744 - 2008.0527



Carpinus omeiensis - Hemelrijk - 2009.0911

Carpinus omeiensis – Hemelrijk – 2009.0911



Carpinus orientalis



Carpinus orientalis- with Helmut Pirc, dry slope - Mzsheta,- Georgia - 16 Aug 2001



Carpinus orientalis, dry slope - Mzsheta, - Georgia - 16 Aug 2001



Carpinus orientalis, dry slope - Mzsheta, - Georgia - 16 Aug 2001



Carpinus orientalis - Monodendri, N.W. Greece - 19 May 1994



Carpinus orientalis - Wisley Arboretum - Aug 1996



Carpinus orientalis – Hemelrijk 2009.0912



Carpinus orientalis – Hemelrijk 2009.0911

Carpinus pubescens



Carpinus pubescens - Arboretum Waasland – 2004.1024



Carpinus pubescens - Arboretum Waasland – 2004.1024



Carpinus pubescens (Western Hills Kunming) - at Maurice Foster's (Kent, UK)

Carpinus
shensiensis



Carpinus shensiensis
L&S.1183 –
Hergest Croft.1362 –
UK



Carpinus shensiensis - 92445-waa-134 - 2006.0628




Carpinus shensiensis - ARWES 92445-waa-134 - 2006.1119 -



Carpinus shensiensis - 92445-waa-134 - 2006.0628 -



Carpinus shensiensis - 92445-waa-134 - vs. *Carpinus turczaninowii* - 91364-waa-211



Carpinus shensiensis
ARWES 92445-waa-134 -
2006.0628 -

Carpinus
stipulata



Carpinus stipulata
(Mt. Mai, Gansu, China,
1 900 m) –
ARWES 03293-wld-149



Carpinus stipulata (Mt. Mai, Gansu, China, 1900m) – ARWES 03293-wld-149 - 2009.0522



Carpinus stipulata (Mt .Mai, Gansu, China, 1900m) – ARWES 03293-wld-149 - 2009.0522

Carpinus tschonoskii



Carpinus tschonoskii - Polly Hill Arboretum, Martha's Vineyard - 2001.1025



Carpinus tschonoskii - Polly Hill Arboretum, Martha's Vineyard - 2004.1004



Carpinus tschonoskii (Mt. Halla, 1350m) - ARWES 92085-wld-211 - 2004.0912



Carpinus tschonoskii (Mt.Halla,1350m) - ARWES 92085 - wld - 211 - 1998.06



Carpinus tschonoskii (Chiri San, Korea) - ARWES 99158-wld-140 - 2006.1115



Carpinus tschonoskii (Chiri San, Korea) - 99158-wld-140 - 2008.1102



Carpinus tschonoskii (Chiri San, Korea) - ARWES 99158-wld-140 - 2008.1102 1



Carpinus tschonoskii (Mt.Halla,Cheju-Do,S.Korea,1 350 m) - 92086-wld-286 - 2009.0423



Carpinus tschonoskii (Mt.Halla, 1 350 m) - 92085-wld-211 - 2007.0417

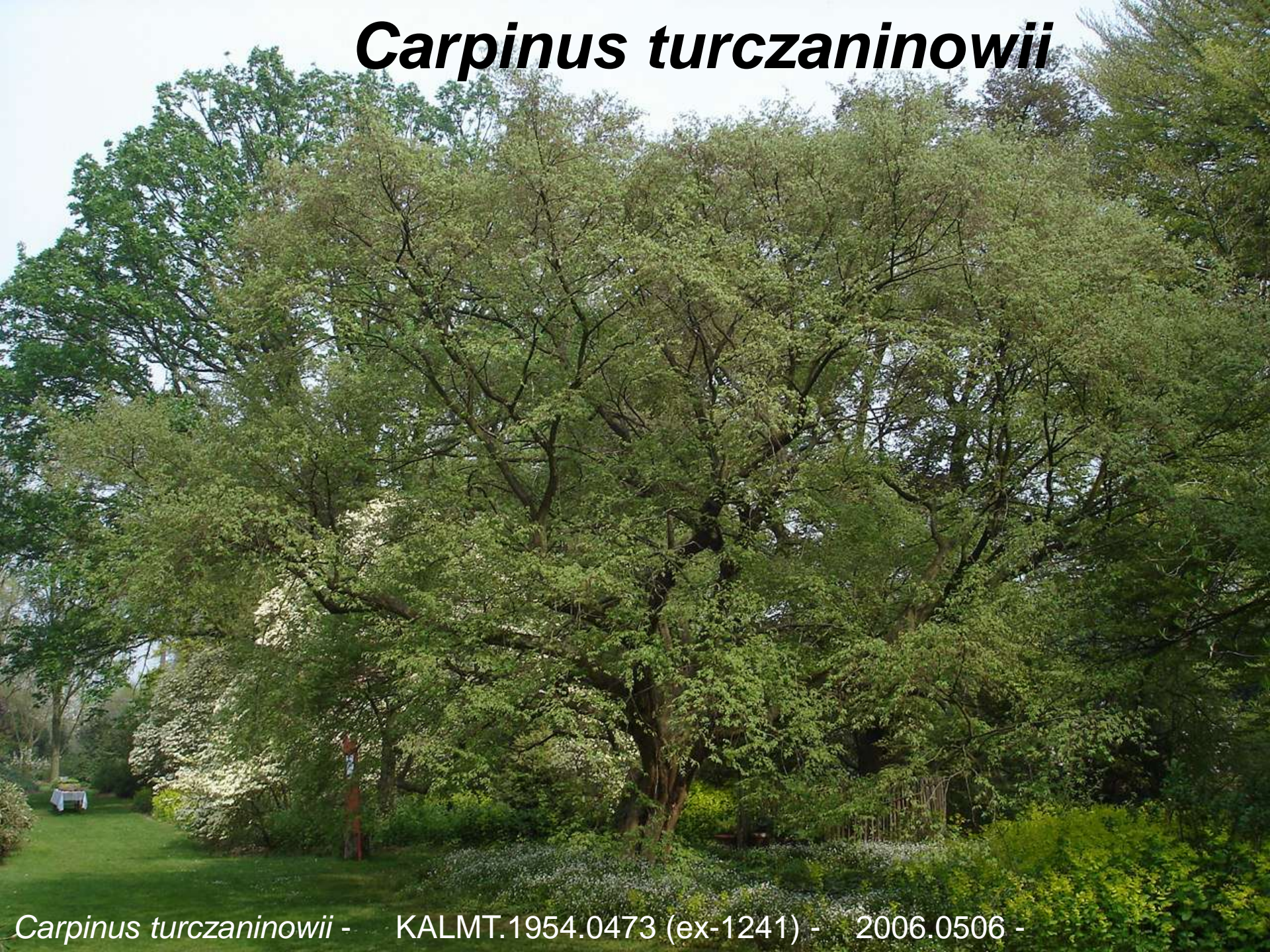


Carpinus tschonoskii (Mt.Halla,Cheju-Do,S.Korea,1 350 m) - 92085-wld-211 - 2009.0423



Carpinus tschonoskii (Mt.Halla,Cheju-Do,S.Korea,1 350 m) - 92085-wld-211 - 2009.0423

Carpinus turczaninowii



Carpinus turczaninowii - KALMT.1954.0473 (ex-1241) - 2006.0506 -



Carpinus turczaninowii - KALMT.1954.0473 (ex-1241) - 2006.0506 -



Carpinus turczaninowii - KALMT.1954.0473 (ex-1241) - 2006.0506

Carpinus turczaninowii -
Les Barres -
1997.0519 -





Carpinus turczaninowii - ARWES 91364-waa-211 - 2006.0628



Carpinus turczaninowii - 91652-waa-289 - 2006.0624 -



Carpinus turczaninowii -
91364 - waa - 211 -
1993.0503 -



Carpinus turczaninowii - 91364-waa-211 -
2006.0628



Carpinus turczaninowii - ARWES 86237-esv-211 - 2009.0423



Carpinus turczaninowii

91652-waa-289 -

2006.0624 -



Carpinus turczaninowii - 86237-esv-211 - 13 nov 04



Carpinus turczaninowii - ARWES 91364-waa-211 - 2009.0423

Carpinus
viminea

Carpinus viminea
ARWES 02060-ddh-149
2009.0522





Carpinus viminea - ARWES 01074 - ddh - 211 - 2000.0601



Carpinus viminea - ARWES 02060-ddh-149 - 2007.0908



Carpinus viminea — ARWES 02060-ddh-149 - 2007.0908



The End