



Ghent University Botanical Garden

***AESCULUS* L. (Sapindaceae)**

VEGETATIVE KEY TO SPECIES IN CULTIVATION

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Vegetative identification key.

Introduction:

This key is based on vegetative characteristics, and therefore also of use when flowers and fruits are absent.

- Use a 10x hand lens to check leaf margin incisions and venation pattern in general.
- Look at the entire plant
- Beware of hybridisation, especially with plants raised from seed other than wild origin.

Abbreviations used in this key:

- **L/W** = length/width
- **LS** = lower surface
- **US** = upper surface

Taxa treated in this key: see page 3.

Taxa referred to synonymy in this key: see page 3.

References:

- JDL herbarium and [illustrations](#)
- living specimens, in various arboreta, botanic gardens and collections
- literature:

Bean, W.J. & Clarke, D.L. - (1976) - *Aesculus* in Bean's Trees and Shrubs hardy in the British Isles, VOL.1, p.249-263. – and [Trees and Shrubs Online](#)

Hardin, J.W. - (1957) - *Aesculus* in A revision of the American Hippocastanaceae - in Brittonia 9, p.145-171.

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Hardin, J.W. - (1960) - *Aesculus* in Studies in the Hippocastanaceae V, species of the Old World - in Brittonia 12, p.26-38.

Krüssmann, G. - (1976) - *Aesculus* in Handbuch der Laubgehölze, VOL.1, p.123-129.

Lancaster, R. - (2019) - *Aesculus* in The Hillier Manual of Trees & Shrubs 9th Edition – Royal Horticultural Society, p.32-33.

Xia, N. & Turland, N.J. - (2007) – *Aesculus* in Flora of China, VOL 12, p.2-4. - and [online edition](#)

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[Arboretum Wespelaar](#)

- 01 a Spreading, multi stemmed suckering shrub, with ground covering foliage. ... *A. parviflora*
b Single stemmed shrub to (small) tree. 02
- 02 a Secondary veins with short intercalary veins present (10× LENS). 03
b Secondary veins without intercalary veins. 08
- 03 a Terminal leaflet secondary veins predominantly <20/side. *A. californica*
b Terminal leaflet secondary veins predominantly >20/side. 04
- 04 a Basal leaflet petiolule rather short, predominantly (0-)1-3(-5) mm. 05
b Basal leaflet petiolule rather long, predominantly 5-10(-more) mm. 06
- 05 a Petiolules stout and thick. *A. wangii*
b Petiolules rather slender. *A. assamica*
- 06 a Leaflets 5-7(-9), margin sharply serrulate, teeth apices often acute and spreading (10× LENS). *A. indica*
b Leaflets 5-7, margin rather crenulate to serrulate, teeth apices predominantly curved and bent towards lamina. 07
- 07 a Shoot, petiole and leaflet LS glabrous or soon so (10× LENS). *A. chinensis*
b Shoot, petiole and leaflet LS tomentose. *A. wilsonii*
- 08 a Leaflets (3-)5-7 AND always sessile. 09
b Leaflets (3-)5, OR/IF 5-7(-11), then clearly petiolate at least in part of the foliage. 10
- 09 a Leaflet margin rather irregularly double serrate (10× LENS). *A. hippocastanum*
b Leaflet margin rather serrate. *A. turbinata*
- 10 a Leaflets 7-11. *A. glabra* var. *arguta*
b Leaflets 5 or 5-7. 11
- 11 a Bruised foliage and scratched shoot emit foetid scent AND/OR fruit prickly!
..... *A. glabra* var. *glabra*
b Bruised foliage and scratched shoot without foetid scent, OR fruit smooth (warted in hybrids). 12
- 12 a Shrub, predominantly 1-4m (rarely small tree) AND bark smooth. *A. pavia*
b Shrub to large tree, up to 15(-25)m AND/OR bark fissured, or separating into plates and rough. 13
- 13 a Large tree. Petiolule predominantly <5mm! (avoid strong growth). *A. flava*
b Shrub to small tree up to 15m. At least terminal leaflet petiolule predominantly clearly >5mm. *A. sylvatica*

Taxa treated in this identification key.

A. assamica
A. californica
A. chinensis
A. flava
A. glabra var. *arguta*
A. glabra var. *glabra*
A. hippocastanum

A. indica
A. parviflora
A. pavia
A. sylvatica
A. turbinata
A. wangii
A. wilsonii

Taxa referred to synonymy in this identification key.

A. georgiana = *A. sylvatica*
A. octandra = *A. flava*
A. splendens = *A. pavia*

