



Hamamelidaceae (& Altingiaceae*)

Altingia Noronha*

Corylopsis Siebold & Zucc.

Disanthus Maxim.

Distylium Siebold & Zucc.

Exbucklandia R.W.Br.

Fortunearia Rehder & E.H.Wilson

Fothergilla L.

Hamamelis L.

Liquidambar L.*

Loropetalum R.Br. ex Rchb.

Parrotia C.A.Mey.

Parrotiopsis (Nied.) C.K.Schneid.

Rhodoleia Champ. ex Hook.

Sinowilsonia Hemsl.

×*Sycoparrotia* Endress & Anliker

Sycopsis Oliv.

Trichocladus Pers.

*Uocodendron*¹

VEGETATIVE KEY TO SPECIES CULTIVATED IN WESTERN EUROPE

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Vegetative key.

This key is based on vegetative characteristics, and therefore also usable beyond the flowering/fruitletting period.

Taxa treated in this key: see page 7.

Taxa referred to synonymy in this key: see page 7.

Questionable/frequently misapplied names: see page 7.

To improve accuracy:

- Use a hand lens to judge pubescence in general.
- Start counting veins at base of the lamina with first clearly ascending secondary vein, do not include veins ending in the apex.
- Look at the entire plant. Young specimens and strong shoots give an atypical view.
- Beware of hybridisation, especially with plants raised from seed gathered in collections.

Background information:

- JDL herbarium specimens
- living specimens, in various arboreta, botanic gardens and collections
- selected literature:

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KEY TO FAMILIES

- 01 a Bruised lamina with sharp scent **AND** leaf arrangement spirally. **ALTINGIACEAE**
- b Bruised lamina scentless **AND** leaf arrangement two-ranked (except *Rhodoleia*).
..... **HAMAMELIDACEAE**

KEY TO ALTINGIACEAE

- 01 a Lamina venation pinnate (secondary veins scattered along midvein). 02
- b Lamina venation palmate (strong veins predominantly radiating from base). 04
- 02 a Lamina midvein length <8 cm, margin entire to irregularly serrate, often with only a few tiny teeth/side. ***Altingia gracilipes***
- b Lamina midvein length >10 cm, margin regularly serrate over the whole length. 03
- 03 a Petiole +/- pubescent, non-glandular. Lamina apex caudate. ***Altingia excelsa***
- b Petiole glabrous, glandular to stipitate glandular. Lamina apex acuminate.
..... ***Altingia poilanei***
- 04 a Mature leaves with lamina predominantly 3-lobed (on young and strong shoots also 5-lobed laminas occur). 05
- b Mature leaves with lamina predominantly 5-(7)-lobed (on young shoots 3-lobed laminas may occur). 06
- 05 a Lamina lobe apex predominantly gradually caudate. ***Liquidambar acalycina***
- b Lamina lobe apex predominantly acuminate to abruptly caudate. ***Liquidambar formosana***
- 06 a Terminal lobe with small lateral lobes. ***Liquidambar orientalis***
- b Terminal lobe not lobed or only occasionally (slightly) lobed in part of the leaves. 07
- 07 a Plant deciduous, 3-lobed laminas absent. ***Liquidambar styraciflua***
- b Plant evergreen or almost so, young/strong growth often with 3-lobed laminas.
..... ***Liquidambar macrophylla***

KEY TO GROUPS of the HAMAMELIDACEAE

- 01 a Lamina venation palmate (strong veins predominantly radiating from base).
..... **GROUP A: see page 3**
- b Lamina venation pinnate (secondary veins scattered along midvein). 02
- 02 a Most secondary veins curving and anastomosing before margin. .. **GROUP B: see page 3**
- b Most secondary veins ending at margin. **GROUP C: see page 4**

GROUP A

LAMINA VENATION PALMATE (strong veins predominantly radiating from base):

- 01 a Lamina always unlobed, papery, apex obtuse to acute. Stipules free.
..... *Disanthus cercidifolius*
- b Lamina unlobed (or lobed in young trees/part of shoots), leathery, apex acuminate to caudate. Stipules united. *Exbucklandia populnea*

GROUP B

LAMINA VENATION PINNATE (secondary veins scattered along midvein).

MOST SECONDARY VEINS CURVING AND ANASTOMOSING BEFORE MARGIN:

- 01 a Shoot, petiole and lamina pubescent with long-armed stellate hairs (10× LENS). 02
- b Shoot, petiole and lamina glabrous, OR pubescent with +/- scale-like to short-armed stellate hairs (10× LENS). 04
- 02 a Lamina midvein length predominantly <7 cm. *Loropetalum chinense*
- b Lamina midvein length >7 cm. 03
- 03 a Leaves alternate. *Trichocladus ellipticus*
- b Leaves often opposite. *Trichocladus crinitus*
- 04 a Petiole length 3-6 cm. 05
- b Petiole length <2 cm. 06
- 05 a Leaf arrangement spirally. Lamina LS minutely dotted (10× LENS).
..... *Rhodoleia championii* sensu lato
- b Leaf arrangement two-ranked. Lamina LS not dotted (10× LENS). *Uocodendron whartonii*
- 06 a Lamina apex predominantly gradually acuminate to (sub-)caudate. *Sycopsis sinensis*
- b Lamina apex predominantly obtuse to (abruptly) acute or abruptly acuminate. 07
- 07 a Petiole ≤4 mm. Lamina predominantly narrowly oblong (-oblanceolate). 08
- b Petiole 5-10 mm. Lamina predominantly elliptic to obovate. 09
- 08 a Lamina base narrowly cuneate, midvein length predominantly <5 cm. *Distylium buxifolium*
- b Lamina base cuneate to rounded, midvein length variable: 4-8 cm.
..... *Distylium myricoides* Hort.
- 09 a Mature lamina US dark green and LS pale green. *Distylium racemosum*
- b Mature lamina US and LS +/- yellowish green. 10

- 10 a Lamina apex obtuse, margin entire (width 3,5-5 cm). *Distylium macrophyllum*
- b Lamina apex (abruptly) acute to abruptly acuminate, margin entire or with few tiny apical teeth (width 2-4 cm). *Distylium myricoides*

GROUP C

LAMINA VENATION PINNATE (secondary veins scattered along midvein).

MOST SECONDARY VEINS ENDING AT MARGIN:

- 01 a Lamina margin predominantly with 25-60 teeth/side. 02
- b Lamina margin predominantly with ≤25 teeth or vein endings/side. 03
- 02 a Lamina base rounded to cuneate (margin irregularly dentate from finely serrate-dentate to coarsely dentate). *Fortunearia sinensis*
- b Lamina base cordate to obliquely cordate (margin predominantly regularly finely serrate).
..... *Sinowilsonia henryi*
- 03 a Lamina base cordate AND margin dentate with ≤25 teeth/side bristly at apex. 04
- b Lamina base not cordate, OR teeth not bristly at apex. 14
- 04 a Mature lamina with largest width predominantly in or above the middle: obovate to oblong elliptic, OR obovate to broadly ovate. 05
- b Mature lamina with largest width predominantly in or below the middle: (broadly) ovate, OR ovate to suborbicular. 06
- 05 a Lamina midvein length 7-12 cm AND apex with acute tip. *Corylopsis sinensis*
- Lamina LS and petiole predominantly pubescent. *Corylopsis sinensis* var. *sinensis*
- Lamina LS and petiole predominantly glabrous to glabrescent. *Corylopsis sinensis* var. *calvescens*
- b Lamina midvein length 7-15 cm AND apex with acute to caudate tip. *Corylopsis multiflora*
- 06 a Lamina midvein length predominantly ≤6 cm. *Corylopsis pauciflora*
- b Lamina midvein length variable, 5-15 cm. 07
- 07 a Lamina apex acute to acuminate. *Corylopsis multiflora*
- b Lamina apex abruptly acute to acute. 08
- 08 a Petiole 3-6 cm. *Corylopsis himalayana*
- b Petiole ≤3 cm. 09
- 09 a Lamina predominantly ovate to broadly ovate. 10
- b Lamina predominantly broadly ovate to orbicular. 11
- 10 a Lamina base conspicuously asymmetrical and often auriculate. *Corylopsis willmottiae*
- b Lamina base cordate to slightly asymmetrical. *Corylopsis platypetala*

- 11 a Lamina LS softly pubescent, also detectable to the touch. *Corylopsis spicata*
b Lamina LS pubescence restricted to venation (10× LENS). 12
- 12 a Lamina margin slightly revolute. Secondary veins ≤8/side. *Corylopsis coreana*
b Lamina margin flat. Secondary veins (7-)8-10/side. 13
- 13 a Lamina US sparsely pubescent (stamens 8-10 mm, anthers yellow). .. *Corylopsis gotoana*
b Lamina US glabrous (stamens 4-5 mm, anthers red). *Corylopsis glabrescens*
- 14 a Lamina LS with lowermost secondary vein completely surrounded by leaf tissue. 15
b Lamina LS with lowermost secondary vein often marginal for at least basal 2-10 mm. .. 21
- 15 a Lamina apex, at least in part of the leaves, acuminate to caudate (semi-evergreen shrub or tree). 16
b Lamina apex obtuse to acute (deciduous shrub or tree). 17
- 16 a Shoot glabrous to slightly stellate pubescent. ×*Sycoparrotia semidecidua*
b Shoot densely stellate pubescent. *Hamamelis mollis* × *Sycopsis sinensis*
- 17 a Lamina LS pubescence restricted to veins or absent. *Hamamelis virginiana*
b Lamina LS +/- densely pubescent. 18
- 18 a Lamina base (at least at one side) predominantly entire or almost so (basal tertiary veins anastomosing before margin). 19
b Lamina base predominantly undulate to minutely dentate (basal tertiary veins ending at margin). 20
- 19 a Lamina midvein length predominantly >12 cm. *Hamamelis ovalis*
b Lamina midvein length <12 cm. *Hamamelis mexicana*
- 20 a Shoot moderately pubescent to glabrescent. Lamina US glabrous or glabrescent, LS stellate pubescent with hairs touching. *Hamamelis ×intermedia*
b Shoot densely pubescent. Lamina US (densely) stellate pubescent, LS densely stellate pubescent with hairs overlapping. *Hamamelis mollis*
- 21 a Lamina margin predominantly +/- undulate or dentate with obtuse teeth. 22
b Lamina margin predominantly dentate with acute teeth. 25
- 22 a Lamina LS secondary vein axils with tiny membranous domatia. *Parrotia persica*
b Lamina LS secondary vein axils without membranous domatia. 23
- 23 a Lamina variable but often ovate to elliptic. *Fothergilla ×intermedia*
b Lamina variable but usually roundish to obovate or oblong elliptic to obovate. 24
- 24 a Lamina roundish to rhombic, OR oblong elliptic to obovate; LS usually shiny (yellowish-) green. Shrub to small tree. *Hamamelis japonica*
b Lamina oblong elliptic to obovate AND LS dull, often glaucous or greyish green. Stoloniferous shrub. *Hamamelis vernalis*

- 25 a Lamina often suborbicular, sometimes broader than midvein length **AND** simultaneously margin +/- crenate to coarsely dentate with >15 teeth/side. .. ***Parrotiopsis jacquemontiana***
- b Lamina ovate, elliptic or obovate, **IF** (rarely) suborbicular then with <10 teeth or vein endings/side. 26
- 26 a Petiole usually <5 mm. ***Parrotia subaequalis***
- b Petiole usually >6 mm. 27
- 27 a Lamina midvein length predominantly <6 cm **AND** with ≤5 secondary veins/side (low shrub <1m). ***Fothergilla gardenii***
- b Lamina midvein length predominantly >6 cm, **OR** lamina with >5 secondary veins/side at least in part of the leaves (shrub to small tree). 28
- 28 a Lamina margin with teeth predominantly acute. ***Fothergilla major***
- b Lamina margin with teeth variable from obtuse to acute. ***Fothergilla ×intermedia***

Taxa treated in this key.

Altingia excelsa
Altingia gracilipes
Altingia poilanei
Corylopsis coreana
Corylopsis glabrescens
Corylopsis gotoana
Corylopsis himalayana
Corylopsis multiflora
Corylopsis pauciflora
Corylopsis platypetala
Corylopsis sinensis
- var. *calvescens*
- var. *sinensis*
Corylopsis spicata
Corylopsis willmottiae
Disanthus cercidifolius
Distylium buxifolium
Distylium macrophyllum
Distylium myricoides
Distylium racemosum
Exbucklandia populnea
Fortunearia sinensis
Fothergilla gardenii
Fothergilla xintermedia

Fothergilla major
Hamamelis xintermedia
Hamamelis japonica
Hamamelis mexicana
Hamamelis mollis
Hamamelis mollis × *Sycopsis sinensis*
Hamamelis ovalis
Hamamelis vernalis
Hamamelis virginiana
Liquidambar acalycina
Liquidambar formosana
Liquidambar macrophylla
Liquidambar orientalis
Liquidambar styraciflua
Loropetalum chinense
Parrotia persica
Parrotia subaequalis
Parrotiopsis jacquemontiana
Rhodoleia championii sensu lato
Sinowilsonia henryi
× *Sycoparrotia semidecdua*
Sycopsis sinensis
Trichocladus ellipticus
*Ucodendron whartonii*¹

Taxa referred to synonymy in this key.

Altingia gracilipes var. *serrulata* = *A. gracilipes*
Corylopsis griffithii = *C. himalayana* var. *griffithii*

Corylopsis wilsonii = *C. multiflora*

Questionable/frequently misapplied names.

¹ *Ucodendron whartonii* is the tentative name of a plant from N. Vietnam, brought into cultivation by Bleddyn Wyn Jones.

Plants in collections named *Rhodoleia henryi* and *R. parvipetala* are not reliably distinguishable from each other nor from *R. championii*, certainly not by vegetative characters and belong in this key to *Rhodoleia championii* sensu lato.

Plants in collections named *Sycopsis tutcheri* and *Distyliopsis tutcheri* (with lamina US secondary veins indistinct to slightly raised and apex abruptly acute to acuminate) are *Distylium racemosum*, and not *Distyliopsis tutcheri* (taxon not seen yet and not in this key: with lamina US secondary veins impressed and apex obtuse to +/- acute).

Part of the plants in collections named *Distylium myricoides* (with lamina +/- oblong, in part of the leaves >50 × 15 mm and apex obtuse to +/- acute) are provisionally named *D. myricoides* Hort. in this key (maybe it are *D. buxifolium* hybrids similar to the American selections *D. 'Blue Cascade'*, *D. 'Emerald Heights'* and *D. 'Vintage Jade'*).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	cm
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