



Ghent University Botanical Garden

Corylus L. (Betulaceae)

VEGETATIVE KEY TO SPECIES
CULTIVATED IN WESTERN EUROPE

Jan De Langhe

(21 September 2011 - 26 January 2017)

Vegetative identification key.

Introduction:

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

- Use a hand lens to check 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 other than wild origin.

Taxa treated in this key: see page 4.

Taxa referred to synonymy in this key: see page 4.

Questionable/frequently misidentified names: see page 4.

References:

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

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- 01 a Shoot and petiole densely tomentose **AND** simultaneously with many spreading glandular hairs (10× LENS) [involucre +/- as long as nut]. **C. yunnanensis**
- b Shoot and petiole different (10× LENS). 02
- 02 a Lamina margin usually +/- irregularly dentate, rarely with 1 shallow lobe/side usually in basal half. 03
- b Lamina margin at least in part of the leaves shallowly lobed, with several shallow lobes/side especially in upper half. 05
- 03 a Lamina apex clearly caudate [involucre densely spiny, often several together and resembling a *Castanea* bur]. **C. ferox**
- Involucre densely spiny.
- Lamina ovate oblong to obovate oblong, LW ratio +/- 2/1. **C. ferox** var. *ferox*
- Lamina elliptic to obovate, LW ratio <2/1. **C. ferox** var. *tibetica*
- Involucre +/- linearly divided and partly spiny, *C. avellana* hybrid. **C. xspinescens**
- b Lamina apex acute to acuminate or slightly caudate [involucre spineless, enclosing nut - except hybrids]. 04
- 04 a Lamina >10 × 6 cm. Shoot and petiole clearly glandular pubescent (10× LENS). Bark fissured [involucre prominently ribbed]. **C. chinensis**
- Involucre not or partly enclosing nut, *C. avellana* hybrid. **C. xvilmorinii**
- b Lamina predominantly ≤10 × 6 cm. Shoot and petiole eglandular pubescent or almost so (10× LENS). Bark exfoliating to fissured [involucre slightly ribbed]. **C. fargesii**
- 05 a Shoot clearly more tomentose than glandular pubescent (10× LENS). 06
- b Shoot +/- glabrous, OR clearly more glandular pubescent than tomentose (10× LENS). 07
- 06 a Shoot with large raised lenticels (10× LENS). Shrub or small tree, bark fissured to shaggy [involucre tubular, enclosing nut and narrowing at apex]. **C. sieboldiana**
- Secondary veins except these ending in acumen 6-10/side. Lamina ovate to ovate-oblong, LW ratio usually +/- 2/1. **C. sieboldiana** var. *sieboldiana*
- Secondary veins except these ending in acumen ≤7/side. Lamina broadly ovate, LW ratio often <2/1. **C. sieboldiana** var. *mandshurica*
- b Shoot with inconspicuous lenticels (10× LENS). Shrub or small tree, bark smooth [involucre tubular, enclosing nut and widening at apex]. **C. cornuta**
- 07 a Lamina apex often appearing truncate and simultaneously with a prominent acumen. Midvein length often almost as long as largest lamina width [involucre with +/- erect and +/- entire lobes]. **C. heterophylla**
- b Lamina apex gradually or abruptly narrowing, rarely appearing truncate. Midvein length usually clearly >largest lamina width [involucre tubular or with dentate lobes]. 08
- 08 a Lamina base variable from roundish to cordate. 09
- b Lamina base variable from clearly cordate to deeply cordate. 10
- 09 a Secondary veins 6-10/side [involucre bristly pubescent, tubular and enclosing nut]. **C. sieboldiana**
- b Secondary veins ≤7/side [involucre not bristly pubescent, ≤2 × longer than nut, deeply divided]. **C. americana**

- 10 a** Petiole 2-4(-5) cm. Tree, bark scaly to corky [involucre linearly divided >middle, lobes +/- spreading]. **C. colurna**
- Leaves more sharply serrate and involucre not glandular. **C. jacquemontii**
- b** Petiole 1-2(-3) cm. Shrub or tree, bark smooth, peeling or fissured [involucre linearly divided ≤middle, or enclosing nut]. **11**
- 11 a** Shoot with a few large raised lenticels (10× LENS). Shrub [involucre bristly pubescent, tubular, enclosing nut]. **C. sieboldiana** var. **mandshurica**
- b** Shoot with a few to many minute lenticels (10× LENS). Shrub or tree [involucre not bristly pubescent, linearly divided ≤middle, or enclosing nut]. **12**
- 12 a** Midvein length average lamina usually ≥10 cm [involucre enclosing nut, ≤2 × longer than nut]. **13**
- b** Midvein length average lamina usually ≤10 cm [involucre not enclosing nut, narrowly lobed]. **14**
- 13 a** Shrub with all laminas similarly shaped. **C. maxima**
- Purple leaved form (reddish green by summer), involucre purplish. **C. maxima 'Purpurea'**
- Involucre in part of the fruits slightly >nut and/or splitting towards base. **C. avellana** × **C. maxima**
- b** Tree with laminas variably shaped, reminiscent of both parents. **C. ×vilmorinii**
- 14 a** Tree (or large shrub). Lamina margin sharply serrate [involucre lobes +/- spreading and +/- glandular pubescent]. **C. ×columnoides**
- b** Shrub, rarely tree. Lamina margin coarsely serrate [involucre lobes +/- erect]. ... **C. avellana**
- Very similar, but involucre pubescent and with glandular hairs at base. .. **C. heterophylla** var. **sutchuenensis**

Taxa treated in this identification key.

C. americana
C. avellana
C. avellana × *C. maxima*
C. chinensis
C. colurna
C. xcolumnoides (= *C. avellana* × *C. colurna*)
C. cornuta
C. fargesii
C. ferox
C. ferox var. *ferox*

C. ferox var. *tibetica*
C. heterophylla
C. heterophylla var. *sutchuenensis*
C. maxima
C. maxima 'Purpurea'
C. sieboldiana
C. sieboldiana var. *mandshurica*
C. xspinescens (= *C. avellana* × *C. ferox* var. *tibetica*)
C. xvilmorinii (= *C. avellana* × *C. chinensis*)
C. yunnanensis

Taxa referred to synonymy in this identification key.

C. colchica = *C. avellana* (GRIN)
C. iberica = *C. colurna* (GRIN)
C. jacquemontii ~ *C. colurna* (Flora of Pakistan)

C. pontica = *C. avellana* (GRIN)
C. tibetica = *C. ferox* var. *tibetica* (Flora of China)

Questionable/frequently misapplied names.

Several trees in collections labelled *Corylus chinensis* are *C. xvilmorinii*, several specimens labelled *C. ferox* are *C. xspinescens*.

