

WINTER KEY TO WOODY PLANT GENERA OF SOUTHERN ONTARIO
(including commonly cultivated genera)

- 1. Plants deciduous.
- . . . 2
- Plants evergreen. (Group
- 1) . . 3
- 2. Leaf scars and axillary buds predominantly opposite or whorled
(or nearly
so). (Group
- 2) . . 48
- Leaf scars and axillary buds alternate, either spiral or
distichous (Group
- 3) . . 90

Group 1. Evergreen trees, shrubs, and vines

- 3. Rosette plants with sword-shaped leaves over 30 cm long
- . *Yucca*
- Ordinary trees, shrubs, and vines with leaves less than 30 cm
long. . . 4
- 4. Leaves minute, scale-like, pressed against the twigs.
- . . . 5
- Leaves not scale-like, sticking out from the twigs
- . . . 13
- 5. Scale leaves alternate.
- Tamarix*
- Scale leaves opposite or whorled.
- . . . 6
- 6. Branchlets in flattened sprays.
- . . . 7
- Branchlets not flattened.
- Juniperus*
- 7. Scale leaves in opposite pairs.
- . . . 8
- Scale leaves in whorls of 4.
- Calocedrus*
- 8. Branchlet sprays held vertically.
- Platycladus*
- Branchlet sprays horizontal or drooping
- . . . 9
- 9. Scale tips blunt; branchlets with conspicuous, often whitened,
stomatal
areas on lower surface; cones oblong.
- . . . 10
- Scale tips sharp-pointed; branchlets without conspicuous stomatal
areas

on lower surface; cones spherical
 . . . 11
 10. Branchlets with lateral leaves 2-4(-5) mm wide.
 . *Thuja*
 Branchlets with lateral leaves 5-6 mm wide.
Thujopsis
 11. Pointed scale tips 1-2 mm long
Microbiota
 Pointed scale tips usually less than 1 mm long
 . . . 12
 12. Seed cones with 4(-6) scales
Callitropsis
 Seed cones with 8 or more scales.
Chamaecyparis
 13. Leaves needlelike, narrow
 . . . 14
 Leaves not needlelike, broader
 . . . 31
 14. Needles opposite to subopposite or whorled
 . . . 15
 Needles alternate.
 . . . 23
 15. Needles opposite to subopposite.
 . . . 16
 Needles whorled.
 . . . 19
 16. Needles 1 cm or more long.
Cephalotaxus
 Needles less than 5 mm long.
 . . . 17
 17. Needles stalked.
Cassiope
 Needles sessile
 . . . 18

 18. Needles lobed at the base
Calluna
 Needles without lobes at the base *Chamaecyparis*
 ('retinospora')
 19. Needles in definite whorls of 3 or 4
 . . . 20
 (15) Needles in pseudowhorls of 5 or more
 . . . 21
 20. Needles in whorls of 3.
Juniperus
 Needles in whorls of 4.
 . *Erica*

21. Needles less than 3 cm long	22
Needles more than 5 cm long	
<i>Sciadopitya</i>	
22. Needles less than 1 cm long, evenly spaced along the twig.	
<i>Empetrum</i>	
Needles up to 3 cm long, concentrated on short, woody stubs.	
<i>Cedrus</i>	
23. Seeds in long-stalked capsules	24
(14) Seeds in short-stalked cones or berries.	25
24. Needle margins rolled under.	
<i>Phyllodoce</i>	
Needle margins flat.	
<i>Cassiope</i>	
25. Needles clustered at the end of a short, woody stub.	
<i>Cedrus</i>	
Needles not so arranged.	26
26. Needles attached to the twigs in bundles of 2, 3, or 5.	
<i>Pinus</i>	
Needles attached to the twigs singly	27
27. Needle bases running down onto the twigs	28
Needle bases not running down onto the twigs	30
28. Needles arrayed in flat rows on either side of the twig.	29
Needles arrayed all around the twigs.	
<i>Picea</i>	
29. Needles predominantly less than 1 cm long	
<i>Tsuga</i>	
Needles predominantly more than 1 cm long	
<i>Taxus</i>	
30. Needles arrayed in flat rows or swept upward.	
<i>Abies</i>	
Needles arrayed all around the twigs.	
<i>Pseudotsuga</i>	
31. Leaves opposite to subopposite or whorled.	32
(13) Leaves alternate	35
32. Leaf bases running down onto the twigs.	
<i>Buxus</i>	

Leaf bases not running down onto the twigs	
.	33
33. Twigs hairy.	
. <i>Daphne</i>	
Twigs hairless	
.	34
34. Buds about as wide as the twigs, pith spongy	
<i>Euonymus</i>	
Buds much narrower than the twigs, pith uniformly solid.	
. <i>Kalmia</i>	
35. Twigs with sharp thorns.	
<i>Pyracantha</i>	
Twigs without thorns	
.	36
36. Leaves with palmate venation, twigs with climbing roots.	
. <i>Hedera</i>	
Leaves with pinnate venation, twigs without roots.	
.	37
37. Leaves pinnately compound	
<i>Mahonia</i>	
Leaves simple.	
.	38
38. Plants trailing, creeping, or matted	
.	39
Plants upright	
.	44
39. Leaves with stipules.	
<i>Cotoneaster</i>	
Leaves without stipules.	
.	40
40. Leaves predominantly less than 15 mm long.	
.	41
Leaves predominantly more than 15 mm long.	
.	42
41. Stems with minute scales, leaves not white beneath. <i>Gaultheria</i> (<i>Chiogenes</i>)	
Stems without scales, leaves white beneath.	
<i>Vaccinium</i>	
42. Leaves with rounded or cordate base, margins ciliate.	
<i>Epigaea</i>	
Leaves tapering to the base, margins not ciliate	
.	43
43. Leaves up to 7 cm long, crowded near the tips of the branches.	
<i>Gaultheria</i>	
Leaves less than 3 cm long, all along the branches	
<i>Arctostaphylos</i>	

44. Leaves with minute stipules or stipule-scars, sometimes spiny-edged. *Ilex*
 (38) Leaves without any trace of stipules, never spiny-edged.
 . . . 45
45. Leaf margins flat.
Chamaedaphne
 Leaf margins rolled under.
 . . . 46
46. Leaves with rusty brown woolly hair beneath
Ledum
 Leaves without this kind of pubescence
 . . . 47
47. Leaves usually less than 6 mm wide, whitened beneath.
Andromeda
 Leaves usually more than 1 cm wide, green or reddish
 beneath. *Rhododendron*
- Group 2. Deciduous woody plants with opposite or whorled leaf scars**
48. Vine, with evident climbing structures
 . . . 49
 (2) Shrub or tree without such structures.
 . . . 52
49. Climbing by twining.
Lonicera
 Climbing by tendrils or aerial roots
 . . . 50
50. Climbing by tendrils
Clematis
 Climbing by aerial roots
 . . . 51
51. Leaf-scars half-round, bundle scar 1.
Campsis
 Leaf-scars crescent-shaped, bundle scars 3 or more.
Hydrangea
52. Twigs armed with spine-tipped short side branches.
 . . . 53
 Twigs unarmed.
 . . . 54
53. Twigs silvery and roughened by a covering of minute scales . . .
Shepherdia
 Twigs without scales.
- Rhamnus*
54. Bundle scars 3 or more, sometimes slightly running together. . .
 . . . 55
 Bundle scar 1, often round, sometimes slightly broken up if
 elongated. 80
55. Leaf scars large, typically about as wide as the twig and almost
 as high

along it as they are wide, often nearly round, bundle scars
 usually 5 or more 56
 . . . 56
 Leaf scars smaller, if as wide as the twig, then much thinner
 along it than they are wide, and then often U-, V-, or horseshoe-
 shaped, bundle scars usually just 3 60
 . . . 60
 56. Twigs with terminal buds 57
 . . . 57
 Twigs without terminal buds. 58
 . . . 58
 57. Terminal buds 1.5 cm long or more, sometimes sticky.
Aesculus
 Terminal buds less than 1 cm long, not sticky.
Fraxinus
 58. Bundle scars 3-)5(-7), arranged in an open line.
Sambucus
 Bundle scars numerous, arranged in a ring.
 . . . 59
 59. Leaf scars opposite, pith chambered
Paulownia
 Leaf scars in whorls of 3, pith solid
Catalpa
 60. Leaf scars horseshoe shaped, wrapping around the bud, except for
 a
 (55) small gap at the top.
 . . . 61
 Leaf scars not as above, usually only below the bud or extending
 out
 to its sides.
 . . . 62
 61. Pith brown, buds single, rusty-hairy.
Phellodendron
 Pith white, buds closely superposed, dark-hairy
Calycanthus
 62. Bud scale 1.
 . . . 63
 Bud scales 2 or more or lacking.
 . . . 65
 63. Bud scale split in front
Cercidiphyllum
 Bud scale intact in front.
 . . . 64
 64. Buds gummy within.
Viburnum

- Buds not gummy when opened.
- . *Salix*
- 65. Leaf scars covered by a thin, tearing, articular membrane that also covers at least the bottom of the bud
- Philadelphus*
- Leaf scars without an articular membrane
- . . . 66
- 66. Stipule scars evident, flanking the bud
- Staphylea*
- Stipule scars absent
- . . . 67
- 67. Buds naked, without specialized bud scales, formed by arrested leaves and covered with scurfy stellate pubescence
- Viburnum*
- Buds enclosed by bud scales, glabrous or with simple hairs
- . . . 68
- 68. All buds with 1 or 2 pairs of visible scales
- . . . 69
- Most buds with 3 or more pairs of visible scales
- . . . 72
- 69. Leaf scars prominently raised, at least during the first winter.
- . . . 70
- Leaf scars low or slightly raised.
- . . . 71
- 70. Buds stalked (sometimes very shortly so), twigs often brightly colored for at least the first winter
- . *Cornus*
- Buds sessile, twigs generally tan or gray.
- Lonicera*
- 71. Terminal buds mostly less than 1 cm long, tapering rapidly to a short, triangular point.
- . . *Acer*
- Terminal buds mostly more than 1 cm long or, if shorter, with a prominent bulge in the lower half topped by an elongate beak.
- Viburnum*
- 72. Leaf scars from opposite sides of the twig meeting in between, often in a point, trees
- . . *Acer*
- Leaf scars separate but often joined by a transverse ridge, shrubs . . 74
- 74. Any extra buds at the nodes collateral, twigs often with stellate pubescence, bark on trunks peeling away, pith loose and frothy or

excavated between the nodes.

Deutzia
 Any extra buds at the nodes superposed, twigs glabrous or pubescent,
 but not with stellate hairs, bark tight or peeling, pith rather solid
 or excavated (in some *Lonicera*)
 . . . 75

75. Bundle scars close and sometimes running together, twigs densely hairy
 in the first year, the bark later peeling conspicuously

Kolkwitzia
 Bundle scars well separated from one another, twigs variously glabrous
 or hairy, bark tight or peeling
 . . . 76

76. Leaf scars small and round, on a raised cushion, buds often superposed,
 fruit a berry.

Lonicera
 Leaf scars linear, triangular, pentagonal, or crescent-shaped, low
 or slightly raised, buds superposed, collateral, or single, fruit
 a capsule or berry.
 . . . 77

77. Pith of first year twigs filling more than half of the diameter.
Lonicera
 Pith of first year twigs filling less than half of the diameter.
 . . . 78

78. First year twigs often stellate-pubescent, later with peeling bark, pith
 loose and frothy, capsules broad and flat-topped, 3-5-valved.
Deutzia
 First year twigs glabrous or pubescent but without stellate hairs,
 bark remaining tight, pith dense, capsules narrow and prolonged
 in a beak, 2-valved
 . . . 79

79. Lower pair of bud scales less than half as long as the bud, twigs glabrous

Diervilla
 Lower pair of bud scales more than half as long as the bud, twigs commonly with two rows of hairs but sometimes pubescent
 overall
 or glabrous.

Weigela
 80. Soft, pithy half-shrubs, buds superposed
 . . . 81
 (54) Without this combination of characters
 . . . 82

81. Leaf scar oval.	
<i>Caryopteris</i>	
Leaf scar triangular or crescent-shaped.	
<i>Buddleia</i>	
82. Pith spongy, chambered, or excavated	
. 83	
Pith continuous and persistent	
. 86	
83. Pith spongy.	
<i>Euonymus</i>	
Pith finally chambered or excavated.	
. 84	
84. Buds finally much multiplied.	
<i>Forsythia</i>	
Buds only 1-3 in each axil	
. 85	
85. Leaf scars raised, shriveled	
<i>Symphoricarpos</i>	
Leaf scars low.	
<i>Hypericum</i>	
86. Buds stalked.	
<i>Metasequoia</i>	
Buds not stalked	
. 87	
87. Leaf scars transversely broad (3 mm).	
<i>Syringa</i>	
Leaf scars often minute (scarcely 2 mm).	
. 88	
88. Leaf scars low	
<i>Daphne</i>	
Leaf scars raised.	
. 89	
89. Nodes with a stipular line	
<i>Cephalanthus</i>	
Nodes without stipular vestiges	
<i>Ligustrum</i>	
Group 3. Deciduous trees, shrubs, and vines with alternate leaf scars	
90. Vines climbing up tree trunks by means of aerial roots (Caution:	
(2) poisonous to touch – DO NOT COLLECT!)	
<i>Toxicodendron</i>	
Self-standing trees and shrubs or, if climbing vines, not doing	
so by	
means of aerial roots attached to tree trunks	
. 91	
91. Leaf scars without evident bundle scars because of a long-	
persistent	
leaf base or with 1 bundle scar, which may be somewhat	
divided. 92	

Leaf scars with 2 or more definite bundle scars, these sometimes partially confluent (running together)	121
92. Nodes with persistent stipules, stipule remnants, stipular prickles, or stipule scars, which may be minute	93
Nodes without any trace of stipules	101
93. Twigs with sharp prickles, bristles, and or glandular hairs on the internodes	
<i>Rubus</i> Twigs neither prickly nor glandular on the internodes but sometimes with stipular prickles at the nodes	94
94. Stipules persistent as a prominent pair of sharp prickles. <i>Caragana</i> Stipules persistent or not, but not prickly.	95
95. Stipules persistent as tiny tufts of hairs, twining vine. <i>Celastrus</i> Stipules persistent or not but not hairlike, self-supporting, upright or creeping shrubs.	96
96. Nodes with a persistent, 3-nerved leaf base topped by stipules and sometimes by a persistent petiole, covering at least the lower portion of the bud and sometimes hiding the twigs <i>Potentilla</i> Nodes with or without persistent leaf bases but these, when present, neither so large nor 3-nerved	97
97. Twigs strongly angled and ribbed. <i>Cytisus</i> Twigs round or slightly angled	98
98. Stipules persistent, prominent, narrowly triangular, at least 2 mm long <i>Cotoneaster</i> Stipules falling or minute if persistent, less than 1 mm long.	99
99. Buds superposed, the upper usually quickly growing out as a slender, short twig <i>Colutea</i>	

Buds superposed or not, not growing out in their first year . . .
. . 100

100. Pith large, at least one third of the diameter of the rounded
twigs,
fruit a capsule with a persistent base
Ceanothus
Pith small, less than one quarter of the diameter of the rounded
or
3- or 5-sided twigs, fruit a berry (but plants dioecious) . .
. . *Ilex*

101. Twigs bearing many long-lived spur shoots, these completely
without
internodal elongation.
. . 102
Twigs without spur shoots or with spur-like shoots displaying
obvious
internodal elongation.
. . 103

102. Spur shoots mostly less than 5 mm long, seed cones persistent . .
. *Larix*
Spur shoots frequently more than 1 cm long, seed cones shattering
at
maturity, leaving only a central stalk
Pseudolarix

103. Leaf scars absent and replaced by a scale-like leaf remnant,
hence
without a bundle scar.
. . 104
Leaf scars evident and bearing a bundle scar, which may be
obscure. . 105

104. Pith brown, minute, about one fifth of the twig diameter, buds
tiny,
often obscure or scarcely breaking the surface of the twig,
usually
single.
Taxodium
Pith white, larger, about one third of the twig diameter, buds
evident, rising well above the surface of the twig (although
often
pressed forward against it), often multiple.

Tamarix

105. Twining vines with stems wrapping around supports for portions of
their length
. . 106
Trees or shrubs with relatively straight stems.
. . 108

106. Leaf scars round, about as high as wide, buds minute and
sometimes
prickly to the touch, pith chambered.
Actinidia

Leaf scars much wider than high, buds well developed, though sometimes small, not prickly, pith uniform.

. . 107

107. Buds round, blunt, with several obviouw scales, pith often mottled with green.

Solanum
Buds elongate, pointed, mostly enclosed by a single scale, uniformly white to brown

Wisteria
108. Twigs armed with spines.
. . 109
(105) Twigs unarmed.
. . 111

109. Twigs 5-angled, glabrous.
. *Lycium*
Twigs round, with stellate hairs and/or peltate scales
. . 110

110. Terminal buds absent, replaced by a short, slender spine . . .
Hippophæe
Terminal bus present

Elaeagnus
111. Bundle scars compact, generally roundish, less than twice as wide as high along the twig
. . 112
Bundle scars extended, linear to C-shaped, more than three times as long as high along the twig
. . 114

112. Bundle scar just below the bud at the top of the leaf scar . .
Stewartia
Bundle scar more of less in the middle of the leaf scar.
. . 113

113. Twigs variously green and/or warty
Vaccinium
Twigs brown, not warty

Gaylussacia
114. Buds with 2 visible scales
. . 115
Buds with 3 or more visible scales
. . 116

115. Twigs with a waxy bloom, without lenticels, pith less than one fifth of the twig diameter, terminal buds present, bud scales with ciliate margins
Nemopanthus

Twigs not waxy, sometimes with lenticels, pith about one quarter of the twig diameter, terminal buds absent, bud scales without hairs along the edges

Diospyros

116. Bundle scar a straight, horizontal line, or nearly so.
. . 117
Bundle scar strongly curved, forming an open C-, U-, or V-shape.
. . 118

117. Twigs green (or purple), very smooth, aromatic, often with sylleptic branches (growing out in the same year as the branch supporting them and thus not ringed by bud scars at the base).

Sassafras

Twigs reddish brown, smooth to densely hairy, not strongly aromatic, branches mostly proleptic (growing out in the year following the branch supporting them and thus ringed by basal bud scars).

Spiraea

118. Terminal bud present
. . 119
Terminal bud absent.
. . 120

119. Terminal bud much larger than, and immediately surrounded by, a cluster of 2 or more lateral buds which then grow out as a pseudo-whorl of branches around a terminal inflorescence, pith solid

Rhododendron

Terminal bud only a little larger than the lateral buds, which are scattered along the growth increment and then grow out as more diffuse branches accompanied by lateral inflorescences, pith becoming chambered.

Halesia

120. Pith uniform.

Oxydendrum

Pith chambered.

Eucommia

121. Leaf scars with 2 bundle scars, twigs with extensive development of (91) spur shoots.
. *Ginkgo*

Leaf scars with 3 or more bundle scars, twigs mostly elongate, with few if any spur shoots.
. . 122

122. Leaf scars with 4 or more separated bundle scars or groups of bundle scars
- . . 123
- Leaf scars with 3 distinct bundle scars or groups of bundle scars. . 157
123. Nodes with persistent stipules or stipule scars (which may be tiny). 124
- Nodes without any trace of stipules.
- . . 139
124. Stipule scars completely encircling the twigs.
- . . 125
- Stipule scars or stipules shorter.
- . . 128
125. Leaf scars encircling the more or less conical buds
- Platanus*
- Leaf scars mostly below (and definitely not encircling) the buds, which are widest well above the somewhat constricted base
- . . 126
126. Twigs very coarse, at least 1 cm in diameter, the pith interrupted by thick firm plates only at the nodes.
- . *Ficus*
- Twigs more slender, generally less than 1 cm in diameter, the pith with few to many thin plates in the internodes (or none) and without thick plates at the nodes
- . . 127
127. Buds flattened, leaf scars round, pith with numerous firm plates in the internodes.
- Liriodendron*
- Buds round, leaf scars mostly half-moon- to U-shaped, occasionally round, pith without or with few, scattered firm plates
- Magnolia*
128. Twigs armed with sharp axillary spines
- Maclura*
- Twigs unarmed.
- . . 129
129. Vines with tendrils.
- . . 130
- Trees and shrubs without tendrils.
- . . 132
130. Pith brown, with firmer diaphragms at the nodes, sometimes accompanied by a small adjacent chambered region, otherwise uniform, twigs without raised, warty lenticels, bark soon flaking.
- . *Vitis*

Pith white or greenish, without diaphragms at the nodes,
 continuous
 or splitting into plates, twigs with numerous, raised, warty
 lenticels, bark remaining tight for at least the first two
 years. 131
 131. Pith uniform.
Parthenocissus
 Pith splitting into plates.
Ampelopsis
 132. Terminal buds present.
 . . 133
 Terminal buds absent, though twigs often with a subterminal bud
 very close to the tip
 . . 134
 133. Buds spread out along the twigs, bud scales about 5, pith round,
 bark soon shedding on twigs
Physocarpus
 Buds clustered toward the tips of the twigs, bud scales
 numerous,
 pith star-shaped, bark tight on twigs (except *Q. bicolor*) . . .
Quercus

134. Twigs very coarse, about 1 cm or more in diameter, with correspondingly large leaf scars and brown pith, buds tiny, scarcely sticking out, often superposed.

Gymnocladus
 Twigs much finer, usually less than 5 mm in diameter, with smaller leaf scars and pale pith, buds generally well developed and conspicuous (except in one case), single (or collateral).

. . . 135

135. Leaf scars spiraling around the twigs.

. . . 136

Leaf scars predominantly distichous.

. . . 137

136. Buds well developed, standing well out from the leaf axils, twigs reddish brown to orangeish, pith one third or more of the twig diameter.

. *Morus*
 Buds inconspicuous, scarcely raised above the leaf axils, twigs light tan or greenish, pith one quarter or less of the twig diameter

Hibiscus

137. Buds with 4 or more scales showing, twigs often with glandular hairs, pollen catkins often present through the winter

Corylus
 Buds with 3 or fewer scales showing, twigs glabrous or hairy but not glandular, never bearing pollen catkins in the winter

. . . 138

138. Outermost bud scale longitudinally striate, twigs bristly hairy at first, pith with a thin, green diaphragm at each node.

Broussonetia
 Outermost bud scale smooth or dotted, twigs glabrous or hairy but not stiffly hairy, pith without diaphragms.

. *Tilia*

139. Vines, climbing by twining or by tendrils.

. . . 140

(123) Upright, self-supporting trees and shrubs.

. . . 142

140. Climbing by tendrils, stem cross section without pith and packed with uniformly distributed individual vascular bundles.

Smilax
 Climbing by twining, stem cross section with a central pith surrounded

by wood . . . . .	. . . . .
	. . 141
141. Leaf scars round, the upper edge extending far out on either side of the minute bud (which may grow out as a peduncle).	
<i>Menispermum</i>	
Leaf scars half-round, the upper edge almost entirely abutted against the larger bud base. . . . .	. . . . .
<i>Akebia</i>	
142. Twigs prickly to thorny. . . . .	. . 143
Twigs unarmed. . . . .	. . 145
143. Leaf scars extending most of the way around the twigs, flanked by numerous thorns and prickles	
<i>Aralia</i>	
Leaf scars extending little further than the sides of the buds, with 1-3 slender prickles beneath. . . . .	. . 144
144. Twigs coarse, mostly 1 cm or more in diameter.	
<i>Kalopanax</i>	
Twigs slender, mostly less than 5 mm in diameter	
<i>Eleutherococcus</i>	
145. Twigs without a true terminal bud. . . . .	. . 146
Twigs ending in a terminal bud . . . . .	. . 151
146. Twigs generally slender, mostly 5 mm or less in diameter . . . . .	. . 147
Twigs coarse, mostly 1 cm or more in diameter. . . . .	. . 149
147. Leaf scars protruding from the twig and hiding the buds behind them	
	. . . . . <i>Rhus</i>
<i>aromatica</i>	
Leaf scars almost ringing the buds without hiding them . . . . .	. . 148
148. Buds very shortly conical and simple, shrub.	
<i>Dirca</i>	
Apparent buds somewhat egg-shaped and consisting of 2 or 3 closely packed superposed buds sharing a common outline, tree.	
<i>Cladrastis</i>	
149. Uppermost buds generally more than 1 cm long	
<i>Paeonia</i>	

Uppermost buds usually about 5 mm or less long
. . 150

150. Buds situated in a shallow notch at the upper edge of the leaf
scar
Ailanthus
Buds almost surrounded by the leaf scar
. *Rhus*

151. Leaf scar raised on a very dark leaf base remnant contrasting
with the
(145) much lighter twig.
Sorbus
Leaf scar low or raised, without a sharp colour contrast between
the
raised portion and the twig
. . 152

152. Buds very dark brown, the terminal bud naked (consisting of
arrested
leaves rather than specialized bud scales), pith crossed by
greenish
plates when young, becoming chambered with age.
Asimina
Buds of various colours except dark brown, the terminal bud made
up of
ordinary bud scales, pith uniform
. . 153

153. Buds sulphur-yellow, with pairs of obviously valvate (abutting)
bud
scales. *Carya*
cordiformis
Buds gray or light brown to purplish, with 2 or more obviously
imbricate
(overlapping) bud scales.
. . 154

154. Leaf scars forming a narrow arc beneath the buds extending more
than
halfway around the twig
Xanthorrhiza
Leaf scars with greater span along the twig, extending much less
than
halfway around it
. . 155

155. Terminal buds no wider than the twigs they sit on and often much
narrower (**poisonous to touch – DO NOT COLLECT!**)
Toxicodendron
Terminal buds obviously wider than the subtending twigs.
. . 156

156. Many twigs without terminal buds which are widest at the base,
shrubs
Paeonia

All twigs ordinarily with terminal buds which are widest well above the base, trees

. *Carya*
157. Pith chambered or crossed by firmer plates
. . 158
(122) Pith more or less homogeneous (at least along the internodes).
. . 161
158. Pith solid but crossed by firmer plates.
. *Nyssa*
Pith chambered
. . 159
159. Twigs slender, less than 5 mm in diameter, leaf scars up to as wide as the buds
Celtis
Twigs coarse, often 1 cm or more in diameter, leaf scars wider than the buds.
. . 160
160. Buds naked, consisting solely of arrested leaves.
Pterocarya
Buds covered by bud scales
Juglans
161. Pith flattened, sharply 3- or 5-angled, or lobed in cross section. . 162
Pith round or obscurely angled
. . 167
162. Pith flattened or 3-angled to 3-lobed.
. . 163
Pith 5-angled to 5-lobed
. . 164
163. Bud scales abutting each other (valvate), buds usually stalked
. *Alnus*
Bud scales overlapping (imbricate), buds sessile.
Betula
164. Lowermost scale of lateral buds lined up right over the centre of the leaf scar
Populus
Lowermost scale of lateral buds offset from the centre of the leaf scar
. . 165
165. Twigs coarse, generally 1 cm or more in diameter
. *Carya*
Twigs slender, generally 5 mm or less in diameter.
. . 166

166. Buds with 2-3 visible scales, leaf scars flanked by unequal stipule scars, twigs never with corky wings.
Castanea
 At least the terminal buds with 6 or more visible scales, leaf scars without stipule scars, twigs often developing corky ridges or wings
Liquidambar
 167. Buds obviously wrapped by a single bud scale
 . *Salix*
 (161) Buds cryptic, naked, or with at least 2 scales
 . . 168
 168. Twining vines with at least some helical portions of the shoots.
 . . 169
 Upright or arching trees or shrubs without spiraling shoots. . .
 . . 170
 169. Leaf scars more or less U-shaped.
Aristolochia
 Leaf scars more or less round.
Menispermum
 170. Twigs variously armed with prickles, spines, or thorns
 . . 171
 Twigs unarmed.
 . . 183
 171. Twigs with a pair of (stipular) prickles or spines flanking the leaf scar, even if additional prickles are found in other positions. . 172
 Twigs variously armed and sometimes with a single prickle adjoining the leaf scar but not with a pair flanking it
 . . 174
 172. Leaf scars thin and linear or shallowly U-shaped, prickles on the internodes, when present, sometimes broad-based and claw-like.
 . *Rosa*
 Leaf scars more expanded along the twig, somewhat triangular, round, or half-round, prickles on the internodes, when present, often bristle-like.
 . . 173
 173. Stipular prickles readily detached, buds obvious and covered by reddish brown hairs
Zanthoxylum
 Stipular spines firmly attached, buds obscure and dark
Robinia

174. Twigs armed (sometimes sparsely) along the internodes (and often also at the nodes
. . 175
Twigs armed only at the nodes.
. . 176
175. Leaf scars U-shaped, the ends clearly wrapping around the buds, nodes
sometimes with a spine centred just beneath the leaf scar . .
. *Ribes*
Leaf scars straight or shallowly U-shaped, the end extending out beyond the sides of the buds, any nodal prickle at the centre line of the leaf scar obviously displaced beneath its edge
. *Rosa*
176. Spines (modified leaves) inserted at a node beneath the bud, slender,
usually either simple or with a central spike and two side branches
Berberis
Thorns (modified branches) inserted at a node in the axil of a leaf scar or just above it, broad-based, simple or 3-dimensionally branched.
. . 177
177. Thorns branched.
. . 178
Thorns simple.
. . 179
178. Leaf scars thin and U-shaped, thorns with buds at their base, branched
thorns rare
Crataegus
Leaf scars quite 2-dimensional, thorns displaced above the buds, branched thorns common.
Gleditsia
179. Thorns smooth, without obvious leaf scars, very sharp, typically gently curved (sometimes straight)
. . 180
Thorns marked by minute leaf scars, somewhat dull, straight. . .
. . 181
180. Twigs round, thorns centred in the axils, usually at least 2 cm long
(much longer in most species), mostly curved, trees or large, relatively open shrubs.
Crataegus
Twigs angled, thorns protruding from the side of the axils, less than

2 cm long, straight, small, dense shrubs.

Chaenomeles

181. Leaf scars variously rounded, half-moon-shaped, or somewhat triangular,
about twice as wide as high, flanked by stipule scars.

Prunus

Leaf scars forming a thin line, several times wider than high,
without stipule scars

. . 182

182. Buds blunt, hairy.

. *Malus*

Buds pointed, glabrous

. *Pyrus*

183. Leaf scars deeply U- or C-shaped, extending all the way up to
the top of
(170) the buds around their sides

. . 184

Leaf scars entirely below the buds or extending no more than half
way up
their sides

. . 188

184. Leaf scars cleanly surrounding the buds without signs of tearing
. . 185

Leaf scars initially covering the buds and becoming torn as the
buds
break through them.

. . 186

185. Buds simple, twigs typically much thicker than a pencil, those
of the
most common species (*R. typhina*) densely hairy

. *Rhus*

Buds compound, consisting of 2-3 closely packed superposed buds
sharing
a common conical outline, twigs thinner than a pencil, always
hairless

Cladrastis

186. Buds hairless.

Gleditsia

Buds hairy

. . 187

187. Twigs yellowish to reddish brown, hairy but not warty, stipule
scars
absent

Ptelea

Twigs greenish, warty but not hairy, with minute stipule scars at
the
upper corners of the leaf scars

Sophora

- 188. First year twigs sharply 5-angled to 5-ridged
- . *Kerria*
- First year twigs more or less round or indistinctly angled,
sometimes
- with short ridges right beneath the leaf scars.
- . . 189
- 189. Leaf scars thin, several times wider than high
- . . 190
- Leaf scars more 2-dimensional, no more than twice as wide as
high. . 195
- 190. Leaf scars extended by elongate, thin, stipule scars
- Cydonia*
- Stipules or stipule scars absent
- . . 191
- 191. True terminal buds always absent
- . . 192
- True terminal buds present, when not replaced by inflorescences.
- . . 193
- 192. Buds generally sparsely and stiffly hairy or woolly, the hairs
sticking
- out
- . *Malus*
- Buds either hairless or completely and densely clothed with silky
hairs
- pressed forward along the bud
- . *Pyrus*
- 193. Buds stalked
- . *Ribes*
- Buds sessile
- . . 194
- 194. Buds with 3 or 4 visible scales, the second scale more than half
the
- length of the bud.
- Aronia*
- Buds with 5 or more visible scales, the second scale less than
half the
- length of the bud
- Amelanchier*
- 195. Twigs with yellow glandular dots
- . . 196
- (189) Twigs without glands
- . . 198
- 196. Stipule scars present beside the corners of the leaf scars . .
- Comptonia*
- Stipule scars absent
- . . 197
- 197. Buds nearly spherical, about as wide as long.
- . *Myrica*

- Buds oval, more than twice as long as wide.
- . *Gale*
198. Twigs without any trace of stipules.
- . . 199
- Twigs with remnant stipules or stipule scars, the scars sometimes
very
small
- . . 206
199. True terminal buds present, at least on shoots without terminal
inflorescences and infructescences.
- . . 200
- True terminal buds absent on all shoots, the shoot apex
represented by
a scar (often much smaller than the leaf scars)
- . . 202
200. Terminal buds with 2(-3) visible scales. *Cornus*
alternifolia
- Terminal buds with 4 or more visible scales.
- . . 201
201. Buds less than 5 mm long, hairless
- Cotinus*
- Buds more than 5 mm long, often hairy, in whole or in part.
- Sorbus*
202. Buds breaking through the skin (articular membrane) of the leaf
scar at
its upper edge.
- Gleditsia*
- Buds next to the leaf scar without breaking through them, these
thus
without an articular membrane
- . . 203
203. Nodes with a cluster of 2 or more green, nearly spherical flower
buds
displaced well above the smaller brown vegetative bud that
lies
directly above the leaf scar.
- Lindera*
- Nodes without any buds markedly displaced above the leaf scar.
- . . 204
204. Leaf scars 3-lobed, about as high as wide, buds with 2 nearly
equal
exposed scales
- Koelreuteria*
- Leaf scars round to half-round, wider than high, buds with 2 or
more
clearly unequal exposed scales.
- . . 205
205. Bundle scars running across the centre of the leaf scar, pith
pale

Maackia
 Bundle scars near the outer edge of the leaf scar, pith brown .

Sorbaria
 206. Upper buds 1.5 cm or more long, very slender, tight, and sharp .
Fagus
 Upper buds usually 1 cm or less long, if longer then relatively
 loose and blunt
 . . 207

207. Stipules persistent at the corners of the leaf scars, which are
 raised on a prominent leaf cushion
 . . 208
 Stipules represented only by stipule scars, the leaf scars raised
 or low
 . . 209

208. Bundle scars crowded near the centre of the leaf scar, buds
 hairy, standing up well above the leaf cushion.
Laburnum
 Bundle scars spread out along the outer edge of the leaf scar,
 buds hairless, almost hidden behind the leaf cushion

Colutea
 209. Leaf scars spiraling all around the twigs, which are straight or
 continuously curved
 . . 210
 Leaf scars distichous (in 2 rows) on either side of the twigs,
 which zig-zag from one bud to the next.
 . . 212

210. Twigs coarse, usually 1 cm or more in diameter, leaf scars very
 large, irregularly heart-shaped, buds tiny, superposed, in silky
 pits.
Gymnocladus
 Twigs slender, usually 5 mm or less in diameter, leaf scars small
 (no wider than the buds), generally oval or half-round, buds at
 least a few mm long, single or collateral (clustered side-to-side in
 the axils), not recessed.
 . . 211

211. Buds naked or, if scaly, with 4 or fewer exposed scales, always
 single .

Rhamnus
 Buds always scaly, usually with 5 or more exposed scales, single
 or in collateral clusters.
Prunus
 212. Buds becoming naked by the falling of a pair of scales, densely
 hairy all over, prominently stalked
 . . 213
 Buds persistently scaly with usually more than 2 exposed scales
 (2 in *Tilia*), hairless or hairy primarily at the edges of the
 scales, stalkless or a little stalked
 . . 214
 213. Buds narrowly elongate, capsules single or in a tight clump. .
Hamamelis
 Buds plump, capsules scattered along a stalk
Fothergilla
 214. Buds with 2(-3) exposed scales
 . *Tilia*
 Buds mostly with 4 or more exposed scales.
 . . 215
 215. Upper edge of leaf scar with a fringe of hairs against the base
 of the bud.
Cercis
 Upper edge of leaf scar without a fringe
 . . 216
 216. Buds with 4 exposed scales, often superposed, twigs very
 flexible, often with short ridges extending down from the leaf scars, pith
 usually light brown, twiggy shrubs with arching branches.
 . . 217
 Buds usually with 5 or more exposed scales (4 in *Ulmus pumila*),
 single or collateral (rarely superposed), twigs fairly stiff, rounded
 beneath the leaf scars, pith usually colorless to creamy or
 greenish, trees or tall, upright shrubs
 . . 218
 217. Larger buds sticking out from the twigs, bark soon peeling . . .
Neillia
 Larger buds pressed up against the twigs, bark tight.
Stephanandra
 218. Bud scales 2-ranked.
 . *Ulmus*
 Bud scales 4-ranked or spiral.
 . . 219

219. Bud scales 4-ranked.
 . . 220
 Bud scales spiral.
 . . 221
 220. Buds with 3-5 rounded pairs of exposed scales.
Zelkova
 Buds with (5-) 6 or more angled pairs of exposed scales
Carpinus
 221. Buds pointed, scales longitudinally lined, trees.
 . *Ostrya*
 Buds blunt, scales uniform, shrubs or trees.
Corylus

Useful references:

J. L. Farrar. 1995. *Trees in Canada*. Fitzhenry & Whiteside.
 W. M. Harlow. 1954. *Fruit key & twig key*, ed.4 [repr. Dover, 1959]
 W. Trelease. 1931. *Winter botany*, ed.3. [repr. Dover, 1967]

TAXONOMIC POSITIONS OF INCLUDED GENERA

<u>Genus</u>	<u>Family</u>	<u>Order</u>	<u>Superorder</u>
<i>Abies</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Acer</i>	Aceraceae	Sapindales	Rosanae
<i>Actinidia</i>	Actinidiaceae	Theales	
Dilleniaceae			
<i>Aesculus</i>	Hippocastanaceae	Sapindales	Rosanae
<i>Ailanthus</i>	Simaroubaceae	Sapindales	Rosanae
<i>Akebia</i>	Lardizabalaceae	Ranunculales	
Magnolianae			
<i>Alnus</i>	Betulaceae	Fagales	
Hamamelidaceae			
<i>Amelanchier</i>	Rosaceae	Rosales	Rosanae
<i>Ampelopsis</i>	Vitaceae	Rhamnales	Rosanae
<i>Andromeda</i>	Ericaceae	Ericales	
Dilleniaceae			
<i>Aralia</i>	Araliaceae	Apiales	Rosanae
<i>Arctostaphylos</i>	Ericaceae	Ericales	
Dilleniaceae			
<i>Aristolochia</i>	Aristolochiaceae	Aristolochiales	
Magnolianae			
<i>Aronia</i>	Rosaceae	Rosales	Rosanae
<i>Asimina</i>	Annonaceae	Magnoliales	
Magnolianae			
<i>Berberis</i>	Berberidaceae	Ranunculales	
Magnolianae			
<i>Betula</i>	Betulaceae	Fagales	
Hamamelidaceae			
<i>Broussonetia</i>	Moraceae	Urticales	
Hamamelidaceae			
<i>Buddleia</i>	Buddleiaceae	Scrophulariales	Asteranae
<i>Buxus</i>	Buxaceae	Euphorbiales	Rosanae

<i>Callitropsis</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Calluna</i>	Ericaceae	Ericales	
Dilleniaceae			
<i>Calocedrus</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Calycanthus</i>	Calycanthaceae	Laurales	
Magnolianaee			
<i>Campsis</i>	Bignoniaceae	Scrophulariales	Asteranae
<i>Caragana</i>	Fabaceae	Fabales	Rosanae
<i>Carpinus</i>	Betulaceae	Fagales	
Hamamelidanae			
<i>Carya</i>	Juglandaceae	Juglandales	
Hamamelidanae			
<i>Caryopteris</i>	Verbenaceae	Lamiales	Asteranae
<i>Cassiope</i>	Ericaceae	Ericales	
Dilleniaceae			
<i>Castanea</i>	Fagaceae	Fagales	
Hamamelidanae			
<i>Catalpa</i>	Bignoniaceae	Scrophulariales	Asteranae
<i>Ceanothus</i>	Rhamnaceae	Rhamnales	Rosanae
<i>Cedrus</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Celastrus</i>	Celastraceae	Celastrales	Rosanae
<i>Celtis</i>	Ulmaceae	Urticales	
Hamamelidanae			
<i>Cephalanthus</i>	Rubiaceae	Rubiales	Asteranae
<i>Cephalotaxus</i>	Taxaceae	Taxales	
Gymnospermae			
<i>Cercidiphyllum</i>	Cercidiphyllaceae	Hamamelidales	
Hamamelidanae			
<i>Cercis</i>	Caesalpiaceae	Fabales	Rosanae
<i>Chaenomeles</i>	Rosaceae	Rosales	Rosanae
<i>Chamaecyparis</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Chamaedaphne</i>	Ericaceae	Ericales	
Dilleniaceae			
<i>Cladrastis</i>	Fabaceae	Fabales	Rosanae
<i>Clematis</i>	Ranunculaceae	Ranunculales	
Magnolianaee			
<i>Colutea</i>	Leguminosae	Fabales	Rosanae
<i>Cornus</i>	Cornaceae	Cornales	Rosanae
<i>Corylus</i>	Betulaceae	Fagales	
Hamamelidanae			
<i>Cotinus</i>	Anacardiaceae	Sapindales	Rosanae
<i>Cotoneaster</i>	Rosaceae	Rosales	Rosanae
<i>Crataegus</i>	Rosaceae	Rosales	Rosanae
<i>Cryptomeria</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Cydonia</i>	Rosaceae	Rosales	Rosanae
<i>Cytisus</i>	Fabaceae	Fabales	Rosanae
<i>Daphne</i>	Thymelaeaceae	Myrtales	Rosanae
<i>Deutzia</i>	Hydrangeaceae	Rosales	Rosanae
<i>Diervilla</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Diospyros</i>	Ebenaceae	Ebenales	
Dilleniaceae			
<i>Dirca</i>	Thymelaeaceae	Myrtales	Rosanae
<i>Elaeagnus</i>	Elaeagnaceae	Proteales	Rosanae
<i>Eleutherococcus</i>	Araliaceae	Apiales	Rosanae

<i>Empetrum</i>	Empetraceae	Ericales	
Dillenianae			
<i>Epigaea</i>	Ericaceae	Ericales	
Dillenianae			
<i>Erica</i>	Ericaceae	Ericales	
Dillenianae			
<i>Eucommia</i>	Eucommiaceae	Eucommiales	
Hamamelidanae			
<i>Euonymus</i>	Celastraceae	Celastrales	Rosanae
<i>Fagus</i>	Fagaceae	Fagales	
Hamamelidanae			
<i>Forsythia</i>	Oleaceae	Scrophulariales	Asteranae
<i>Franklinia</i>	Theaceae	Theales	
Dillenianae			
<i>Fraxinus</i>	Oleaceae	Scrophulariales	Asteranae
<i>Gaultheria</i>	Ericaceae	Ericales	
Dillenianae			
<i>Gaylussacia</i>	Ericaceae	Ericales	
Dillenianae			
<i>Ginkgo</i>	Ginkgoaceae	Ginkgoales	
Gymnospermae			
<i>Gleditsia</i>	Caesalpiniaceae	Fabales	Rosanae
<i>Gymnocladus</i>	Caesalpiniaceae	Fabales	Rosanae
<i>Halesia</i>	Styracaceae	Ebenales	
Dillenianae			
<i>Hamamelis</i>	Hamamelidaceae	Hamamelidales	
Hamamelidanae			
<i>Hedera</i>	Araliaceae	Apiales	Rosanae
<i>Hibiscus</i>	Malvaceae	Malvales	
Dillenianae			
<i>Hippophæ</i>	Elaeagnaceae	Proteales	Rosanae
<i>Hydrangea</i>	Hydrangeaceae	Rosales	Rosanae
<i>Hypericum</i>	Clusiaceae	Theales	
Dillenianae			
<i>Ilex</i>	Aquifoliaceae	Celastrales	Rosanae
<i>Juglans</i>	Juglandaceae	Juglandales	
Hamamelidanae			
<i>Juniperus</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Kalmia</i>	Ericaceae	Ericales	
Dillenianae			
<i>Kalopanax</i>	Araliaceae	Apiales	Rosanae
<i>Kerria</i>	Rosaceae	Rosales	Rosanae
<i>Koelreuteria</i>	Sapindaceae	Sapindales	Rosanae
<i>Kolkwitzia</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Laburnum</i>	Fabaceae	Fabales	Rosanae
<i>Larix</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Ledum</i>	Ericaceae	Ericales	
Dillenianae			
<i>Ligustrum</i>	Oleaceae	Scrophulariales	Asteranae
<i>Lindera</i>	Lauraceae	Laurales	
Magnolianae			
<i>Liquidambar</i>	Hamamelidaceae	Hamamelidales	
Hamamelidanae			
<i>Liriodendron</i>	Magnoliaceae	Magnoliales	
Magnolianae			
<i>Lonicera</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Lycium</i>	Solanaceae	Solanales	Asteranae

<i>Maackia</i>	Fabaceae	Fabales	Rosanae
<i>Maclura</i>	Moraceae	Urticales	
Hamamelidanae			
<i>Magnolia</i>	Magnoliaceae	Magnoliales	
Magnolianae			
<i>Mahonia</i>	Berberidaceae	Ranunculales	
Magnolianae			
<i>Malus</i>	Rosaceae	Rosales	Rosanae
<i>Menispermum</i>	Menispermaceae	Ranunculales	
Magnolianae			
<i>Metasequoia</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Microbiota</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Morus</i>	Moraceae	Urticales	
Hamamelidanae			
<i>Myrica</i>	Myricaceae	Myricales	
Hamamelidanae			
<i>Neillia</i>	Rosaceae	Rosales	Rosanae
<i>Nemopanthus</i>	Aquifoliaceae	Celastrales	Rosanae
<i>Nyssa</i>	Nyssaceae	Cornales	Rosanae
<i>Ostrya</i>	Betulaceae	Fagales	
Hamamelidanae			
<i>Oxydendrum</i>	Ericaceae	Ericales	
Dillenianae			
<i>Paeonia</i>	Paeoniaceae	Dilleniales	
Dillenianae			
<i>Parthenocissus</i>	Vitaceae	Rhamnales	Rosanae
<i>Paulownia</i>	Scrophulariaceae	Scrophylariales	Asteranae
<i>Phellodendron</i>	Rutaceae	Sapindales	Rosanae
<i>Philadelphus</i>	Hydrangeaceae	Rosales	Rosanae
<i>Phyllodoce</i>	Ericaceae	Ericales	
Dillenianae			
<i>Physocarpus</i>	Rosaceae	Rosales	Rosanae
<i>Picea</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Pieris</i>	Ericaceae	Ericales	
Dillenianae			
<i>Pinus</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Platanus</i>	Platanaceae	Hamamelidales	
Hamamelidanae			
<i>Platyclusus</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Populus</i>	Salicaceae	Salicales	
Dillenianae			
<i>Potentilla</i>	Rosaceae	Rosales	Rosanae
<i>Prunus</i>	Rosaceae	Rosales	Rosanae
<i>Pseudolarix</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Pseudotsuga</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Ptelea</i>	Rutaceae	Sapindales	Rosanae
<i>Pterocarya</i>	Juglandaceae	Juglandales	
Hamamelidanae			
<i>Pyracantha</i>	Rosaceae	Rosales	Rosanae
<i>Pyrus</i>	Rosaceae	Rosales	Rosanae
<i>Quercus</i>	Fagaceae	Fagales	
Hamamelidanae			

<i>Rhamnus</i>	Rhamnaceae	Rhamnales	Rosanae
<i>Rhododendron</i>	Ericaceae	Ericales	
Dillenianae			
<i>Rhus</i>	Anacardiaceae	Sapindales	Rosanae
<i>Ribes</i>	Grossulariaceae	Rosales	Rosanae
<i>Robinia</i>	Fabaceae	Fabales	Rosanae
<i>Rosa</i>	Rosaceae	Rosales	Rosanae
<i>Rubus</i>	Rosaceae	Rosales	Rosanae
<i>Salix</i>	Salicaceae	Salicales	
Dillenianae			
<i>Sambucus</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Sassafras</i>	Lauraceae	Laurales	
Magnolianae			
<i>Sciadopitys</i>	Sciadopityaceae	Coniferales	
Gymnospermae			
<i>Shepherdia</i>	Elaeagnaceae	Proteales	Rosanae
<i>Smilax</i>	Smilacaceae	Liliales	Lilianae
<i>Solanum</i>	Solanaceae	Solanales	Asteranae
<i>Sophora</i>	Fabaceae	Fabales	Rosanae
<i>Sorbaria</i>	Rosaceae	Rosales	Rosanae
<i>Sorbus</i>	Rosaceae	Rosales	Rosanae
<i>Spiraea</i>	Rosaceae	Rosales	Rosanae
<i>Staphylea</i>	Staphyleaceae	Sapindales	Rosanae
<i>Stephanandra</i>	Rosaceae	Rosales	Rosanae
<i>Stewartia</i>	Theaceae	Theales	
Dillenianae			
<i>Symphoricarpos</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Syringa</i>	Oleaceae	Scrophulariales	Asteranae
<i>Tamarix</i>	Tamaricaceae	Violales	
Dillenianae			
<i>Taxodium</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Taxus</i>	Taxaceae	Coniferales	
Gymnospermae			
<i>Thuja</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Thujopsis</i>	Cupressaceae	Coniferales	
Gymnospermae			
<i>Tilia</i>	Tiliaceae	Malvales	
Dillenianae			
<i>Toxicodendron</i>	Anacardiaceae	Sapindales	Rosanae
<i>Tsuga</i>	Pinaceae	Coniferales	
Gymnospermae			
<i>Ulmus</i>	Ulmaceae	Urticales	
Hamamelidanae			
<i>Vaccinium</i>	Ericaceae	Ericales	
Dillenianae			
<i>Viburnum</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Vitis</i>	Vitaceae	Rhamnales	Rosanae
<i>Weigela</i>	Caprifoliaceae	Dipsacales	Asteranae
<i>Wisteria</i>	Fabaceae	Fabales	Rosanae
<i>Xanthorrhiza</i>	Ranunculaceae	Ranunculales	
Magnolianae			
<i>Yucca</i>	Agavaceae	Liliales	Lilianae
<i>Zanthoxylum</i>	Rutaceae	Sapindales	Rosanae
<i>Zelkova</i>	Ulmaceae	Urticales	
Hamamelidanae			

Taxonomic position according to the Cronquist system, except superorders are substituted for subclasses.