



# GROWING & USING **CAMELLIAS**

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# CONTENTS

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<b>CHAPTER 1 INTRODUCTION: HISTORY, BOTANY AND TAXONOMY</b>	<b>9</b>
History	9
Taxonomy	11
Example of a classification system for camellia	11
<b>CHAPTER 2 CULTURE – GROWING AND CARING FOR CAMELLIAS</b>	<b>14</b>
Soil for camellias	14
Planting	16
Transplanting	16
Watering	18
Mulching	18
Feeding/fertilising	19
Camellias in pots	20
Pruning	20
Health problems	22
Common insect problems	22
Common fungal diseases	23
Common environmental and other problems	26
<b>CHAPTER 3 PROPAGATION</b>	<b>28</b>
Seed propagation of camellias	29
Cutting propagation of camellias	30
Layering camellias	31
Grafting camellias	32
How a graft forms	33
Factors which influence healing of a graft	34
Other methods of propagating camellias	34
Leaf bud cuttings	34
Aerial layering	35
<b>CHAPTER 4 USING CAMELLIAS</b>	<b>36</b>
Criteria for selection	36
Plant size, shape and growth rate	36
Leaf size and shape	36
Leaf colour and texture	37
Flowers	37

Using camellias in the landscape.....	38
Woodland gardens.....	39
Open shrubberies.....	39
<b>CHAPTER 5 SPECIES AND CULTIVARS</b> .....	<b>40</b>
<i>Camellia cuspidata</i> .....	40
<i>Camellia fraterna</i> .....	41
<i>Camellia irrawadiensis</i> .....	41
<i>Camellia oleifera</i> .....	41
<i>Camellia pitardii</i> .....	41
<i>Camellia saluensis</i> .....	42
<i>Camellia sinensis</i> .....	43
Species camellias.....	44
<i>C. brevistyla</i> .....	44
<i>C. caudata</i> .....	45
<i>C. forrestii</i> .....	46
<i>C. hiemalis</i> .....	47
<i>C. kissii</i> .....	48
<i>C. lutchuensis</i> .....	49
<i>C. tsaii</i> .....	50
<i>C. wabisuke</i> syn. <i>momoiro wabisuki</i> .....	51
<i>C. yuhsienensis</i> .....	52
<i>C. yunnanensis</i> .....	53
Japonicas.....	54
<i>C. japonica</i> ‘Adolphe Audusson’ (Syn. ‘Audrey Hopfer’ ‘Adolphe Audusson Purple’, ‘Aldophe Audusson Red’).....	54
<i>C. japonica</i> ‘Akashigata’ (Syn. ‘Lady Clare’, ‘Akashi Bay’, ‘Empress’, ‘Nellie Bly’).....	55
<i>C. japonica</i> ‘Althaeiflora’.....	56
<i>C. japonica</i> ‘Angela Cocchi’.....	57
<i>C. japonica</i> ‘Anna M Page’.....	58
<i>C. japonica</i> ‘Apollo’ (Syn. ‘Paul’s Apollo’).....	59
<i>C. japonica</i> ‘Arajishi’ (Syn. ‘Huangshizi (China), ‘Arajishi Waratah’, ‘Heckla’, ‘Lady Alice’).....	60
<i>C. japonica</i> ‘Aubrey Magill’.....	61
<i>C. japonica</i> ‘Black Tie’.....	62
<i>C. japonica</i> ‘Blaze Of Glory’.....	63
<i>C. japonica</i> ‘Brushfield’s Yellow’.....	64
<i>C. japonica</i> ‘Cassandra’ (Syn. ‘Chandlerii Magniflora’).....	65
<i>C. japonica</i> ‘Chandleri’.....	66

<i>C. japonica</i> 'Chandlers Victory' .....	67
<i>C. japonica</i> 'Clarise Carlton' .....	68
<i>C. japonica</i> 'Cleopatra' .....	69
<i>C. japonica</i> 'C.m. Wilson' .....	70
<i>C. japonica</i> 'Comte De Gomer' .....	71
<i>C. japonica</i> 'Cup Of Beauty' .....	72
<i>C. japonica</i> 'Dahlonaga' (Syn. 'Nuccio's Golden Anniversary') .....	73
<i>C. japonica</i> 'Debutante' (Syn. 'Sarah C. Hastie') .....	74
<i>C. japonica</i> 'Dixie Knight' .....	75
<i>C. japonica</i> 'Dona Herzilia De Freitas Magalhaes' .....	76
<i>C. japonica</i> 'Elizabeth Le Bey' .....	77
<i>C. japonica</i> 'Emperor Of Russia' (Syn. 'Stevens Plant') .....	78
<i>C. japonica</i> 'Eximia' .....	79
<i>C. japonica</i> 'Federation' .....	80
<i>C. japonica</i> 'Great Eastern' .....	81
<i>C. japonica</i> 'Great Western' (Syn. 'Lady Duntz') .....	82
<i>C. japonica</i> 'Grunellii' .....	83
<i>C. japonica</i> 'Guilo Nuccio' .....	84
<i>C. japonica</i> 'Helenor' (Syn. 'Guilfolius Halleana', 'Guilfoyle's Hellenor') .....	85
<i>C. japonica</i> 'Henri Favre' .....	86
<i>C. japonica</i> 'Imbricata' .....	87
<i>C. japonica</i> 'Imperator Flora Rose' .....	88
<i>C. japonica</i> 'Isabel' (Syn. C. J. 'Isabella') .....	89
<i>C. japonica</i> 'Isaribi' .....	90
<i>C. japonica</i> 'Kumasaka' (Syn. 'Hollyhock', 'Jeanne Kerr', 'Kumasaka Beni', 'Lady Marion', 'Maiden', 'Sherbrooke') .....	91
<i>C. japonica</i> 'Konronkoku' (Syn. 'Black Prince', 'Kouron-Jura') .....	92
<i>C. japonica</i> 'Kujaku Tsubaki' (Syn. 'Kujaku', 'Benikujaku', 'Peacock', 'Peacock Camellia') .....	93
<i>C. japonica</i> 'Lady Maude Walpole' (Syn. 'Virginia Franco Rubra' (Australia), 'Laola Furen'(China)) .....	94
<i>C. japonica</i> 'Lady Vansittart' (Syn. 'Lady Vansittart Variegated') .....	95
<i>C. japonica</i> 'Latifolia' (Syn. 'Fanny Bolis', 'Latifolia Red', 'Latifolia Rosea', 'Latifolia Nannetensis') .....	96
<i>C. japonica</i> 'Leviathan' (Syn. 'Maranui', 'Maranui Pink') .....	97
<i>C. japonica</i> 'Marchioness Of Exeter' .....	98
<i>C. japonica</i> 'Marie Bracey' (Syn. 'Spellbound', 'October Delight') .....	99
<i>C. japonica</i> 'Maroon And Gold' .....	100

<i>C. japonica</i> ‘Masayoshi’ (Syn. ‘Aileen’, ‘Cantelou’, ‘Donckelaeri’, ‘Tea Garden’, ‘Winnie Davis 11’)	101
<i>C. japonica</i> ‘Mathotiana’	102
<i>C. japonica</i> ‘Metallica’	103
<i>C. japonica</i> ‘Middlemist’s Red’ (many synonymous names including ‘Carnea Plena’, ‘Middlemist’, Middlemist’s Blush’, ‘Rosea’)	104
<i>C. japonica</i> ‘Monarch’	105
<i>C. japonica</i> ‘Mrs Beresford’ (Syn. ‘Lady Beresford’)	106
<i>C. japonica</i> ‘Nuccio’s Gem’	107
<i>C. japonica</i> ‘Parksii’ (Syn. ‘Park’s Striped Rose’, Parksii Striped’, ‘Rosa Odorata’, ‘Striped Parks’)	108
<i>C. japonica</i> ‘Peach Blossom’	109
<i>C. japonica</i> ‘Prince Frederick William’	110
<i>C. japonica</i> ‘Professore Giovanni Santarelli’	111
<i>C. japonica</i> ‘Pukekura’ (Syn ‘Pukekura White’)	112
<i>C. japonica</i> ‘Rafi’ (Syn. ‘Luigi Avogadro’, ‘Rafia’ ‘Raffia’)	113
<i>C. japonica</i> ‘Red Red Rose’	114
<i>C. japonica</i> ‘R.I. Wheeler’	115
<i>C. japonica</i> ‘Rubra’ (Syn. <i>C. japonica</i> ‘Rubra Simplex’)	116
<i>C. japonica</i> ‘Somersby’	117
<i>C. japonica</i> ‘Speciosissima’ (Syn. ‘Anemoniflora Rosea’, ‘Pink Waratah’, ‘Shepherd’s Red’)	118
<i>C. japonica</i> ‘Spring Formal’	119
<i>C. japonica</i> ‘Sunburst’	120
<i>C. japonica</i> ‘Superscent’	121
<i>C. japonica</i> ‘Sylva’	122
<i>C. japonica</i> ‘Tiny Princess’	123
<i>C. japonica</i> ‘Twilight’	124
<i>C. japonica</i> ‘Unryu - Tsubaki’ (Syn. ‘Unryu’, ‘Mikawa Unryu’)	125
<i>C. japonica</i> ‘Wheeler’ (See <i>C. japonica</i> ‘R.I Wheeler’)	126
<i>C. japonica</i> ‘William Bull’	126
<i>C. japonica</i> ‘Witman Yellow’	127
<i>C. japonica</i> ‘Woodsii’	128
Reticulatas	129
<i>C. reticulata</i> ‘Captain Rawes’	129
<i>C. reticulata</i> ‘Lila Naff’	130
<i>C. reticulata</i> ‘Valentine Day’	131

<i>C. reticulata</i> ‘William Hertrich’	132
Sasanquas	133
<i>C. sasanqua</i> ‘Beatrice Emily’	133
<i>C. sasanqua</i> ‘Bonanza’	134
<i>C. sasanqua</i> ‘Classique’	135
<i>C. sasanqua</i> ‘Dazzler’	136
<i>C. sasanqua</i> ‘Early Pearly’	137
<i>C. sasanqua</i> ‘Exquisite’ (Waterhouse)	138
<i>C. sasanqua</i> ‘Jennifer Susan’	139
<i>C. sasanqua</i> ‘Kanjiro’ (Syn. ‘Hiryu’ (Australia) ‘Kankobai’, ‘Beni-Sazanka’, ‘Nagoya-Sazanka’, ‘Tachikan-Tsubaki’, ‘Utamakura’)	140
<i>C. sasanqua</i> ‘Little Pearl’	141
<i>C. sasanqua</i> ‘Mignonne’	142
<i>C. sasanqua</i> ‘Paradise Belinda’	143
<i>C. sasanqua</i> ‘Paradise Blush’	144
<i>C. sasanqua</i> ‘Paradise Caroline’	145
<i>C. sasanqua</i> ‘Paradise Diana’ (Syn. ‘Big Pink’)	146
<i>C. sasanqua</i> ‘Paradise Hilda’	147
<i>C. sasanqua</i> ‘Paradise Vanessa’	148
<i>C. sasanqua</i> ‘Petite Pink’	149
<i>C. sasanqua</i> ‘Pure Silk’	150
<i>C. sasanqua</i> ‘Plantation Pink’	151
<i>C. sasanqua</i> ‘Rose Ann’	152
<i>C. sasanqua</i> ‘Rosea’	153
<i>C. sasanqua</i> ‘Shichi-Fukujin’ (Syn. ‘Good Fortune’, ‘Seven Gods of Fortune’)	154
<i>C. sasanqua</i> ‘Shishi-Gashira’	155
<i>C. sasanqua</i> ‘Sidonnie Megan’	156
<i>C. sasanqua</i> ‘Slim ‘N Trim’	157
<i>C. sasanqua</i> ‘Something Special’	158
<i>C. sasanqua</i> ‘Vanessa’ See <i>C. sasanqua</i> ‘Paradise Vanessa’	159
<i>C. sasanqua</i> ‘Yuletide’	159
<i>C. x williamsii</i> Hybrids	160
<i>C. x williamsii</i> ‘Ballet Queen’	160
<i>C. x williamsii</i> ‘Burncoose’	161
<i>C. x williamsii</i> ‘Carnation’	162
<i>C. x williamsii</i> ‘Cheapside’	163
<i>C. x williamsii</i> ‘Debbie’	164

<i>C. x williamsii</i> ‘Donation’ .....	165
<i>C. x williamsii</i> ‘E.g. Waterhouse’ .....	166
<i>C. x williamsii</i> ‘Empire Rose’ .....	167
<i>C. x williamsii</i> ‘Francis Hanger’ .....	168
<i>C. x williamsii</i> ‘Freedom Bell’ .....	169
<i>C. x williamsii</i> ‘George Blandford’ .....	170
<i>C. x williamsii</i> ‘Golden Spangles’ .....	171
<i>C. x williamsii</i> ‘Jenefer Carlyon’ .....	172
<i>C. x williamsii</i> ‘Joe Nuccio’ .....	173
<i>C. x williamsii</i> ‘Margaret Waterhouse’ .....	174
<i>C. x williamsii</i> ‘Mirage’ .....	175
<i>C. x williamsii</i> ‘Tip Toe’ .....	176
<i>C. x williamsii</i> ‘Turkish Delight’ .....	176
Hybrids.....	177
<i>C.</i> ‘Fragrant Pink’ .....	177
<i>C.</i> ‘Gay Baby’ (Hybrid).....	178
<i>C.</i> ‘Night Rider’ (Hybrid).....	179
<i>C.</i> ‘South Seas’ (Hybrid).....	180
<i>C.</i> ‘Sweet Emily Kate’ .....	181
<i>C. x Cuspidata</i> ‘Spring Festival’ (Hybrid).....	182
<i>C. x Reticulata</i> ‘Maud Messel’ .....	183
<b>APPENDIX</b> .....	<b>184</b>
Distance learning and online courses.....	184
E-books by John Mason and ACS staff.....	185
Printed books by John Mason.....	186
Useful contacts.....	187
ACS global partners.....	187
Social media.....	187

# CREDITS

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# CHAPTER 1 INTRODUCTION: HISTORY, BOTANY AND TAXONOMY

*Camellias are mainly evergreen shrubs (some small trees): leaves simple, toothed margins, alternate, thick, leathery and usually with showy flowers. They are widely popular shrubs in home gardens around the world, particularly in temperate climates.*

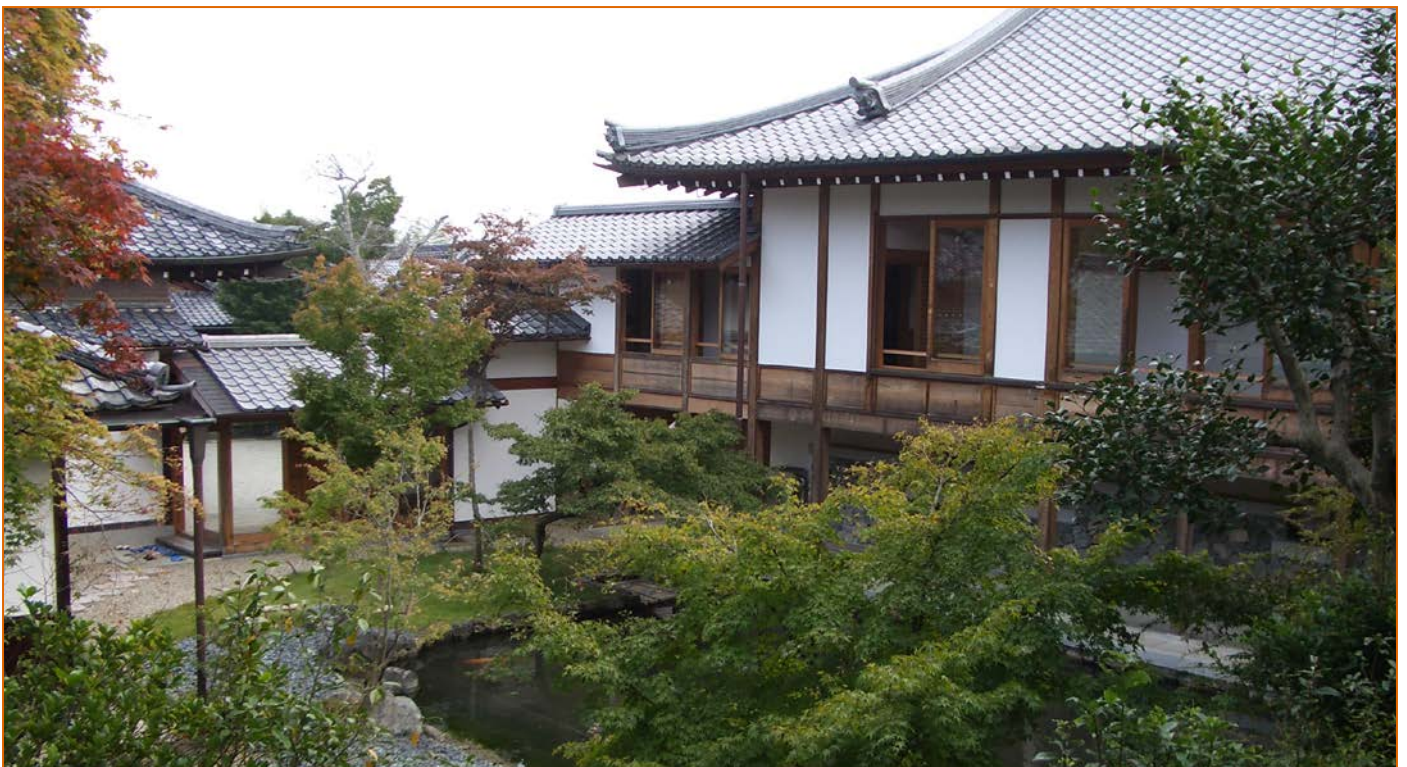
## HISTORY

Camellias are indigenous to India and Nepal through China and Japan and south into South East Asia. Many species occur in mountainous areas of the tropics and others in harsh cooler climates - as far as 40 degrees latitude.

The most significant species through history has been the tea plant (*Camellia sinensis*) which is the source of both green tea and black tea. Chinese literature records tea as far back as 493 BC.

In Japan plants, including some bonsaied specimens, said to be over 300 years old can be seen still growing in temple gardens today.

Camellias are named after a Jesuit naturalist called Georg Josef Kamel. The Japanese name for the Camellia was Tsubaki but the genus was given its Latin name by the Swedish botanist, Linnaeus in 1735, using the Latin version of Kamel's name *Camellus*. Originally it was pronounced Ka- mell –yah later changing to the more common Ca – meel – yah. Either pronunciation is correct.



*Camellia japonica* and *Camellia sinensis* were being cultivated in European gardens by the mid-18th century. Other *Camellia* species were brought to Europe throughout the 18th century, but on the whole they didn't have the same ornamental appeal as *C. sinensis* and *C. japonica*. They were introduced into the 'New World' - USA in the late 1700's, Australia in 1831 and also New Zealand in the mid-19th century.

The appeal of camellias increased through the nineteenth century but interest in the species waxed and waned after the First World War and the post-Victorian era, when people thought their stiff formality no longer suited modern garden with the emphasis on billowing herbaceous borders.

However, it wasn't until the 1930's that serious breeding of camellias began to result in a surge of new hybrids which once again increased their popularity. *C. japonica* was widely crossed with *C. saluenensis*, resulting in a group of hybrids that were given the name *C x williamsii*.

*Camellia* societies began to form throughout the 1940's and beyond, and the horticultural significance grew from then to where it is today.



*Camellia japonica* Althaeiflora

## BOTANY

Camellias are medium to large evergreen shrubs that grow from 2m through to 8 metres tall, according to the species. The plants have thick, leathery, glossy, alternate leaves (i.e. they alternate on the stem – rather than being opposite each other) to 10cm long. Flowers vary in colour, form and flowering time according to the species but range in colour from white, pink through to red, some species are also creamy or yellow. Blooms are usually borne in the leaf axils, either solitary or in pairs and rarely in threes. They are usually large and showy (although some cultivars have miniature blooms) and may be single, semi-double or double, blooming between autumn through to spring. The flowers are bee pollinated producing a woody capsule each containing a few seeds.

### Botany of the leaves:

- Coriaceous (leather-like texture)
- Pinnately veined (with a single primary vein or midrib from which further veins branch out)
- Usually serrated (with toothed edges) Petiolate (leaves have stalks); rarely sessile (without stalks) or amplexicaul (leaves clasping the stem at the base)

### Botany of the flowers:

- Hermaphrodite (having both male and female reproductive parts on the same flower)
- Solitary or in clusters in the leaf axils or at the branch terminals

- Pedicellate (with stalks attaching the flowers to the main axis (peduncle) of the inflorescence or sessile (without a pedicle))
- Bracts usually 2–8 (bracts are leaf-like organs that usually surround base of the flowers)
- Sepals usually 5–6 (sepals surround and protect the flower buds are usually green; it is often difficult to differentiate between sepals and bracts.
- Perulate (to 21 perules) deciduous or persistent (perules/perula are scales (transformed, reduced leaves) that cover and protect the embryonic buds)
- Corollas (i.e. collective term for the petals) white, red (through to pink) or yellow; 5 – 12 petals primarily connate (i.e. fused together)
- Stamens numerous - outer filament whorl often connate into filament tube and adnate (having grown together) to the petal bases. The anthers (the thread-like structures on top of which the anthers are situated) are joined to the filaments for some distance along the dorsal edge (the side facing away from the axis) or occasionally basifixed (i.e. attached at its base to the filament). Anthers are 2 locular (having 2 cavities for pollen grains).
- Ovaries are superior (i.e. when the other floral parts are below the ovary), 3–5 locular (cavities containing ovules), sometimes unilocular, 3–5 valvate (valves) usually dehiscent (splitting open) from the top, columella (central column) persistent or lacking.

- Seed globose (spherical) or polygonal, seed coat corneous (horny)

## TAXONOMY

Camellias belong to the plant family Theaceae. Reputable references may vary in the number of species attributed to the genus *Camellia* but today approximately 300 are described as species to include varieties of species and sub-species; there are also thousands of named cultivars. The following are the best-known species:

- *C. japonica* has been bred widely to produce thousands of different flowering forms. *C. japonica* is best grown in temperate climates.
- *C. reticulata* cultivars are generally more upright, with more open foliage and very large flowers, but not in the same quantity as the other two main types.
- *Camellia sasanqua* has smaller flowers, but is more adaptable than others species. *C. sasanqua* will tolerate full sun and subtropical areas better than many others.
- *C. sinensis* (the source of commercial tea) can be grown in tropical areas as a crop, or as an ornamental.

## Example of a Classification System for *Camellia*

*Camellia* is classified into several sub-genera, these further divided into sections, by most camellia experts. Research is always ongoing and