

The greatest book never printed: *Magnolia* and *Trees and Shrubs Online*

Tom Christian

MAGNOLIAS at Arboretum Wespelaar Saturday 13 April - Monday 15 April 2024









A modern reference to temperate woody plants



- IDS Trees and Shrubs Online (TSO) is a free-to-access digital encyclopaedia of woody plants cultivated in temperate parts of the world
- It aims to be a contemporary, comprehensive and authoritative reference for botanists, ecologists, foresters, gardeners, landscapers and everyone who needs reliable information on the subject
- No other such work exists, in print or digital format



TSO was launched in 2017 based on the text of three major works:







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- the Eighth Edition of *Bean's Trees and Shrubs Hardy in the British Isles* (1976–81);
- the Bean *Supplement* (1988);
- *New Trees: Recent Introductions to Cultivation* (2009)











 TSO's long-term ambition is to renew these texts entirely, creating a fresh body of comprehensive and authoritative information for the 21st century

 Many groups are still in their Bean format, some combine text from Bean, the Supplement, and from New Trees, and as funding is secured to commission revisions these are brought fully up to date



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Cytisus battandieri Maire



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Credits

Article from **Bean's** *Trees* and Shrubs Hardy in the British Isles

Recommended citation

'Cytisus battandieri' from the website Trees and Shrubs Online (treesandshrubsonline.org/ articles/cytisus/cytisusbattandieri/). Accessed 2024-04-



Now considered distinct from the brooms (*Cytisus*) and placed in its own monospecific genus, *Argyrocytisus battandieri* is a beautiful shrub that deserves wider planting. This example was billowing over a garden wall in Oxford, UK, early June 2021. Image Tom Christian.

An unarmed deciduous shrub 15 ft or more high, of rather erect habit; young shoots stout, ¼ in. in diameter, covered with silky down. Leaves trifoliolate, with a main-stalk 1½ to 2½ in. long; stipules narrowly linear, ¼ to ¾ in. long, soon falling. Leaflets stalkless, obovate, tapered at the base; rounded, notched or mucronate at the apex; 1½ to 3½ in. long, 1 to 1½ in. wide; both surfaces covered with silky white hairs giving them a silvery appearance. Racemes erect or curving upwards, about 5 in. long, terminating

Genus

Cytisus

Synonyms

Argyrocytisus battandieri (Maire) Raynaud

Species Links

Glossary

References

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Lagerstroemia

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Note The total word count includes captions, headings, synonyms, common names, etc.



Acer capillipes Maxim.

Modern name @

Acer capillipes Maxim. ex Miq.

A deciduous tree sometimes 30 to 35 ft high, the branchlets glabrous, red when young and becoming brown marked with longitudinal whitish stripes. Leaves reddish when young, three-lobed, 3 to 5 in. long, about three-fourths as wide, glabrous, doubly toothed, the terminal lobe triangular and larger than the side ones, but sometimes the sinuses are so shallow that the leaves are virtually unlobed and kite-shaped; veins and stalk usually red. Flowers greenish white, in drooping slender racemes $2 \frac{1}{2}$ to 4 in. long. Fruits glabrous, numerous, in drooping racemes; keys $\frac{1}{2}$ to $\frac{3}{4}$ in. long; wings rounded at the end, $\frac{1}{5}$ in. wide, spreading at an angle of 120° or almost horizontally.

Native of Japan, introduced to cultivation by Prof. Sargent, who found fruiting trees in Japan in October 1892, and sent young trees to Kew a year or two later. It has proved hardy. It is one of the handsome group with striated branches including *A. pensylvanicum* and *A. rufinerve*, to both of which it is closely allied and bears much resemblance in shape of leaf, but is readily distinguished by the absence of rusty down from the undersides of the young leaves. The usually red petioles and the relatively long central lobe, extending about half-way towards the base of the leaf, also serve to distinguish it. In *A. rufinerve*, the side lobes arise nearer to the tip of the leaf, and the central lobe is rather short and stubby; also its young stems are distinctly glaucous. There is a fine specimen in the Winkworth Arboretum, Surrey.





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Acer capillipes

From the Supplement (Vol. V)

This species is portrayed in *Bot. Mag.*, n.s., t.777, from a tree at Kew raised from seed received from K. Wada in 1933. The examples listed below are unlikely to be older than this, since *A. capillipes* is not a long-lived species. One reason for this, which applies to all the snake-barks and perhaps especially to this one, is that the bark remains thin even at the base of the trunk. At Borde Hill a whole group of such trees, about thirty years old, was damaged beyond repair by gnawing of the bark – hares being the probable culprit in this instance. Susceptibility to honey fungus may be another cause of sudden death.

specimens: Winkworth Arboretum, Godalming, Surrey, 36 × 4 ft (1983); R.H.S. Garden, Wisley, on Battleston Hill, 42 × 3 ft (1981); Exbury, Hants, 38 × ³¹/₂ ft (1978); Westonbirt, Glos., in The Waste, *pl.* 1950, 41 × ²³/₄ ft (1981).



- Important texts are consulted, including regional floras, monographs, scientific papers, articles, and existing books on woody plants in cultivation such as Bean, Krüssmann, Dirr, etc.
- For complex genera, important living collections are visited by the author as part of their research, and if necessary, herbaria
- New text is thoroughly reviewed by the Editorial team prior to publication, and external experts are consulted when appropriate, helping to ensure the highest possible standard



Dan Crowley (centre) researching snake bark maples at Hergest Croft, July 2019.

Koelreuteria

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Koelreuteria

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Trees, single or multitrunked, deciduous, polygamo-monoecious or polygamo-dioecious; bark grey-brown becoming fissured when mature. Stems often prominently lenticellate. Leaves alternate, imparipinnate or bipinnate, estipulate; rachis canaliculate to flattened adaxially, glabrous to lightly pubescent; leaflets alternate or opposite, deeply and irregularly toothed, rarely entire, sessile to subsessile, glabrous to lightly pubescent. Flowers borne on terminal panicles, rarely axillary, large, heavily branched, pyramidal in shape. Flowers zygomorphic. Calyx lobes 5, with 3 long and 2 short, valvate, ovate, glandular to lightly pubescent or puberulent, joined at base. Disc thick, raised on short androgynophore. Petals 4–5, slightly unequal in length, linear, apex acute to obtuse, margins entire, glabrous, yellow maturing to orange-red at anthesis, strongly reflexed above claw, claw up to twice the length of calyx lobes, densely villous haired. Stamens often 8 (9), sometimes fewer, inserted on disc, filaments often villous haired, mainly proximally, anthers antrorse, basifixed, glabrescent, pollen grains 3-colpate. Ovary superior, 3-loculed; ovules 2 per locule, placentation parietal; style exserted; stigma 3-lobed or entire. Capsules swollen, ovoid, ellipsoid, or subglobose, triangular in section, glabrescent, loculicidal into 3 schizocarps, papyraceous. Seeds 1 per locule, globose, arillodes absent; testa black or dark brown, shiny, occasionally with a waxy whitish coating; embryo revolute, radicles slightly longer. Seedings exhibit epigeal germination producing narrow, linear cotyledons. 2*n* = 30, 32. (Meyer 1976; Urdampilleta, Ferrucci & Vanzela 2005; Xia & Gadek 2007).

229 words

Main text

The genus *Koelreuteria* is justly admired for its handsome foliage, broad inflorescences of yellow flowers (whence the moniker 'Goldenrain Tree'), and inflated fruits resembling lanterns. It is a small genus containing just three species: *Koelreuteria paniculata* and *K. bipinnata* native to central to eastern China, Korea and northern Vietnam, and *Koelreuteria elegans* comprising two disjunct subspecies, *K. elegans* subsp. *elegans*, endemic to Fiji in the Pacific and *K. elegans* subsp. *formosana* endemic to Taiwan (POWO 2024). The common name Pride of India is often associated with *Koelreuteria*, athough the origin of this name is unclear and utterly misleading as no members of the genus are naturally found there.

Koelreuteria was first described in 1772 by Erik Laxmann from specimens cultivated in the gardens of the Academy in St Petersburg, which first flowered in 1771, having been grown from seed sent from China by the French Jesuit missionary and amateur botanist Pierre d'Incarville in 1747 (Laxmann 1772; Meyer 1976; Dosmann, Whitlow & Ho-Duck 2006; Natural History Museum 2013). The species first collected by d'Incarville was named *K. paniculata* after its large pyramidal panicles of bright yellow flowers, and the genus itself named in honour of Joseph Gottlieb Kölreuter. Laxmann was

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A capillipes may also be confused with A. rufinerve, though it is easily separated from that species by its red petioles and glabrous, rather than rufous pubescent, lower leaf surfaces, and although the new shoots of A. capillipes can be somewhat bloomed, this character is rarely as marked as it is in A. rufinerve.





Acer capillipes fruits hang in densely set racemes. Image H. C. Angus.

Autumn colour starting on a municipal planting of *Acer capillipes* by the Salisbury bypass, Wiltshire; 5th September 2009. Image Owen Johnson.



The typical markings in the bark of Acer capiliges are still very visible and attractive in this specimen planted in 1975 in Ray Wood, Castle Howard, North Yorkshire (July 2020). Image John Grimshaw.



Acer capillipes (Royal Botanic Gardens, Kew, November 2020) Image Tony Kirkham.



Additional images are displayed at the end of the main text. These can all be enlarged.



Acer capillipes Maxim.





Acer capillipes colours strongly in autumn. Image H. C. Angus.

A deciduous tree to 15(-20) m in the wild. Bark dark green with pale grey, longitudinal stripes, turning pale brown and shallowly fissured with age. Branchlets glabrous, purplish red to green, glaucous or not, strongly striped white. Buds stipitate, ovoid, with 2 pairs of valvate scales, green to red. Leaves chartaceous, pentagonal in outline, base cordate to rounded, 3– (rarely 5–) lobed, 8–15 × 7–12 cm, lobes ovate, the central lobe long, lateral lobes forward pointing, basal lobes absent or obscure, apex long acuminate, margins irregularly double-serrate, upper surface dark green, lower surface paler, with reddish to rusty pubescence at first, soon glabrous, with small, prominent membranes in promart axils; petiole 3–8 cm long, red, grooved; autumn colours yellow to deep red. Inflorescence axillary or terminal, racemose, glabrous, pendulous or soon becoming so, 20–50 flowered, ~10 cm long. Flowers yellowish-green, 5-merous, pedicels slender, 0.8–1.5 cm long, sepals oblong, ~0.3 cm long, petals narrowly obovate, ~3.5 cm long, stamens 8, inserted outside the nectar disc. Samaras 1.3–1.8 cm long, wings spreading at right angles or more broadly; nutlets ovoid, concave on one side. Flowering May, fruiting in October (Bean 1976a; van Gelderen *et al.* 1994; van Gelderen & van Gelderen 1999; Ogata 1999).

Distribution JAPAN Honshu, Shikoku

Habitat Temperate, deciduous forests between 600 and 1000 m asl.

Genus

Acer

Sect. Macrantha

Common Names

Ashiboso-urinoki Red Snakebark Maple Hosoe-Kaede Hair-foot Maple



Other taxa in genus

Acer acuminatum Acer amplum Acer argutum Acer barbinerve Acer buergerianum



Acer cappadocicum Gleditsch f. tricaudatum

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Plant Index





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Advanced Search

Enter search terms

Genus, species or infraspecific name (includes synonyms)



Search notes

Enter scientific names in the Genus, species or infraspecific name box to



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Search Results

Your search for Wespelaar returned 1087 results

Abies alba European Silver Fir, Sapin Pectiné, Weisstanne, Abete bianco, Abies amabilis Pacific Silver Fir, Lovely Fir, Beautiful Fir, Cascades Fir, Sapin Gracieux, Pacific Fir Abies balsamea Balsam Fir, Balm-of-Gilead Fir, Balsam, Sapin Balsamier, Balsamtanne Abies balsamea var. phanerolepis Canaan Fir, West Virginia Balsam Fir Abies bracteata Santa Lucia Fir, Bristlecone Fir, Sapin Bracteata, Sapin à Bractées Abies cephalonica Greek Fir, Grecian Fir, Kukunaria, Sapin de Céphalonie, Grieschische tanne Abies chensiensis Qinling Lengshan, Northern Giant Fir, Chinese River Fir, Shaanxi Fir, Shensi Fir Abies cilicica Cilician Fir, Illeden, Sapin de Cilicie, Sapin Cilicien, Zilizische tanne Abies concolor var. lowiana Low's Fir, Sierra White Fir, Pacific White Fir, California White Fir, Sapin de Low, Low Tanne Abies delavayi Delavay Fir, cang shan leng shan Abies densa Sikkim Fir Abies durangensis Durango Fir Abies durangensis var. coahuilensis Coahuila Fir Abies ernestii Western River Fir, Western Giant Fir, Ernest Fir, Huangguo Lengshan Abies fabri Faber Fir, Emei Lengshan



- To 5 April 2024, 111 genera have been fully updated, including many of major horticultural significance e.g. *Abies, Alnus, Buddleja, Carpinus, Enkianthus, Forsythia, Magnolia, Malus, Tilia, Stewartia* and *Weigela*
- Revisions of the major genera Acer and Quercus are underway; these are being tackled in taxonomic sections. Several major sections in both genera have already been fully updated
- At the time of writing, new accounts in the final stages of editing include *Koelreuteria, Parrotia, Sassafras* and North American maples



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Completed Groups

About	As of April 2024 Trees and Shrubs Online contains over 14,100 individual articles on
How You Can Help	woody plants hardy in the northern temperate zones. The texts are derived from three major sources: the Eighth Edition of <i>Bean's Trees and Shrubs Hardy in the British Isles</i>
Licence	(1976–81) together with the <i>Supplement</i> (1988); <i>New Trees: Recent Introductions to Cultivation</i> (2009); and brand new text specially commissioned for <i>Trees and Shrubs Online</i> .
Who We Are	
Completed Groups	Many groups are still in their <i>Bean</i> format, some combine text from <i>Bean</i> , the <i>Supplement</i> , and from <i>New Trees</i> , and as funding is secured to commission revisions these are brought fully up to date. The following list identifies the major groups that have been fully updated so far. It is updated whenever a new account is published:
	• Abelia – published April 2021
	Abies – published June 2021
	 Acanthus – published February 2019
	 Acer (genus account) – published September 2020
	 Acer Section Acer (Eurasian species) – published November 2020
	(A. caesium; A. × coriaceum; A. granatense; A. heldreichii; A. hyrcanum; A.
	monspessulanum; A. obtusifolium; A. opalus; A. × pseudoheldreichii; A.
	pseudoplatanus; A. sempervirens; A. velutinum)
	Acer Section Macrantha – published July 2020
	(A. capillipes; A. caudatifolium; A. chienii; A. × conspicuum; A. crataeqifolium; A.

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pre-eminent resource for anyone interested in trees and shrubs. The day to day project management, including editorial oversight of all new text, is the responsibility of the Editorial Team. revised in full as funding becomes available. Many groups have already been revised (see Completed Groups), and an international team of authors is constantly at work preparing new entries. from countries all around the world, and everyone involved in TSO looks forward to seeing these figures increase further.

🕦 Sponsorship

March 2024: Trees and Shrubs Online relies on generous donations to meet its core costs and sponsorship to enable new text to be researched, written, edited and published. The project is indebted to the many individuals, organisations and charities that have contributed generously to our aim of disseminating new, high-quality information for free, for everyone.

We are delighted to have recently received sponsorship to update the accounts of *Crataegus, Cryptomeria, Larix, Taxus* and *Zanthoxylum*.

The TSO team would be delighted to hear from anybody interested in supporting our ongoing work. We are particularly keen to secure funding to update the Japanese maples and to provide urgently-needed accounts of up-and-coming genera such as *Lagerstroemia*, *Loropetalum* and *Heptapleurum* (*Schefflera*) for which very little information is currently available to gardeners. To enquire about these or other sponsorship opportunities please write to editor@treesandshrubsonline.org.

Recent publications

March 2024: New accounts to appear on *Trees and Shrubs Online* in recent months include four monospecific genera: the two record-breaking American conifers *Sequoia* and *Sequoiadendron*; the well-known Chilean Firebush (*Embothrium*), and the beautiful but seldom-grown Sino-Himalayan tree *Tetracentron*.

The Alders (*Alnus*), largely an overlooked genus in gardens, are now served by an excellent new account, fully meeting our aspirations for all TSO entries to be the best horticultural monograph of the genus available, and very well illustrated. Accounts nearing completion include a suite of genera in the Hamamelidaceae, North American maples (*Acer* spp.), *Koelreuteria* and *Sassafras*..

A list of all groups fully revised to date can be found on the Completed Groups page; this is updated whenever a new account is published.

Origin of 761 current genera on TSO, April 2024



International Dendrology Society
Trees and Shrubs Online







"Our aspiration is for each new account on TSO to be the best horticultural monograph of the genus available, and very well illustrated"

(John Grimshaw, Editor-in-Chief, March 2024)



How do you solve a problem like *Magnolia*?







Dr Julian Sutton



- "New Trees dealt with Magnolia reasonably well"
- "Bean's 8th edition also dealt with *Magnolia* much better than it did, say, *Hydrangea*"
- "The 1990s and 2000s saw a big concerted effort to reach a consensus taxonomy, culminating in Figlar & Nooteboom 2004 (updated in 2020)"
- Also in 2020 a new, much improved, single-tier infrageneric classification

(Wang, Y.-B. *et al.* (2020) Major clades and a revised classification of *Magnolia* and Magnoliaceae based on whole plastid genome sequences via genome skimming in Journal of Systematics and Evolution 58:5 673-695)



- A large, international community of willing collaborators
- Matt Lobdell's work on cultivar classification concurrent with JS working on TSO
- "Matt was a few months ahead and superbly helpful. He produced one of the best cultivar classifications of a big genus I've ever seen. Careful, comprehensive and critical"


Question 1: One genus or several?

"I thought we resolved this 20 years ago! Why are people still debating it?"



"Most who favour the 'one genus' approach outlined above have divided *Magnolia* into 3 subgenera and 12 sections, with some sections further divided into subsections, following Figlar & Nooteboom (2004) and (more accessibly) Figlar (2012). However, this is certainly not the last word on the subject. A revised classification which recognizes 15 sections, with no subgenera or subsections, has recently been proposed (Wang et al. 2020), based on analysis of whole plastid genome sequences. This overcomes a taxonomic problem with the previous classification, Subgenus *Magnolia* having been found not to be monophyletic. More importantly for our purposes it is a simple, easily understood, single-tier classification. The major groupings of species relevant to gardens in our area remain intact, usually with the same names if not always at the same taxonomic level. The study's authors include Chinese and American workers (including American authority Richard Figlar), giving some hope that it might come to be accepted internationally."



Question 1: One genus or several?

"A valid alternative resolution is to raise each of these major branches to generic status, although some of these are difficult to define on morphological grounds, and it would lead to considerably more changes to familiar names than does the one-genus approach. The concept of *Yulania* × *soulangeana* would probably appeal to few gardeners! Significantly, an increasing number of hybrid cultivars would then be bigeneric, leading to a proliferation of cumbersome nothogeneric names."



Question 1: One genus or several?

Option 1:

Magnolia

Option 2:

Magnolia and 14 other genera including Manglietia, Michelia, Oyama, Yulania, etc. and many cumbersome nothogenera



Question 2: Scope?

- Species and lower taxa:
 - Successfully cultivated outdoors in the temperate zone
- Hybrids and cultivars:

"When deciding which cultivars to include in *Trees and Shrubs Online* we have sought to balance the virtue of thoroughness against the curse of comprehensivity. From over 1000 established cultivars in *Magnolia*, many sadly never formally registered (Lobdell 2021), we have selected over 400. Distinctiveness, widespread commercial or informal distribution, and historical significance are all factors favouring inclusion, while obscurity is the biggest single factor working against it. Things change, and our online format allows us periodically to review coverage, including cultivars which come to the fore and rectifying omissions."



🗹 Magnolia campbellii Alba Group

🛛 🗹 Magnolia campbellii 'Ambrose Congreve'

Magnolia campbellii 'Betty Jessel'

🗹 Magnolia campbellii 'Borde Hill' 📎

🗹 Magnolia campbellii 'Darjeeling'

Magnolia campbellii 'Hendricks Park'

🗹 Magnolia campbellii 'Lanarth'

🗹 Magnolia campbellii Mollicomata Group

🗹 Magnolia campbellii 'Peter Borlase'

Magnolia campbellii 'Queen Caroline'

Magnolia campbellii Raffillii Group

Magnolia campbellii 'Werrington'

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Magnolia campbellii

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🛛 Magnolia campbellii 'Ambrose Congreve'	Garden plants with white tepals are grouped here, whether or not they have a cultivar
Magnolia campbellii 'Betty Jessel'	name; all seem to have originated from the Indian end of the range, the first
🗹 Magnolia campbellii 'Borde Hill' 📎	are derived from a very few collections, several other characteristics are claimed as
🗹 Magnolia campbellii 'Darjeeling'	being correlated with white flowers. These are: a tendency to come into leaf much later,
Magnolia campbellii 'Hendricks Park'	often mid-May in Britain; younger flowering of seedlings (12–15 years); larger leaves and flower buds (Gardiner 2000). Named cultivars include:
🗹 Magnolia campbellii 'Lanarth'	(Character) A condition from the existing Coordenant related before 1075 at Nigel
🗹 Magnolia campbellii Mollicomata Group	Holman's garden Chyverton, Cornwall.
🗹 Magnolia campbellii 'Peter Borlase'	'Ethel Hillier' Raised at Hillier Nurseries before 1973 from wild-origin seed, claimed as
🗹 Magnolia campbellii 'Queen Caroline'	especially vigorous and hardy. Faint pink flush on tepal bases outside. (Edwards &
🗹 Magnolia campbellii Raffillii Group	Marshall 2019)
🛛 Magnolia campbellii 'Werrington'	'Strybing White ' Distinct flower form: outer tepals hang down while inner ones stay stiffly upright. Selected before 1962 by Eric Walther, Strybing Arboretum, San Francisco,
	from seed imported in 1940 from Ghose & Co., India.

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Magnolia campbellii

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🗹 Magr	iolia campbell	ii 'Werrington'				

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Raffillii Group

Hybrids between western forms with intensely pink tepals and eastern plants of Mollicomata Group, which combine the strongly coloured tepals of the former with the 'cup and saucer' form and slightly later flowering of the latter, making it less likely that flowers will be frosted. Charles Raffill of Kew worked on these hybrids in the 1940s, raising about 100 seedlings which were distributed to gardens across southern and western Britain; some are now named. Sir Charles Cave made similar crosses at Sidbury Manor, Devon in the 1920s. The cross may well have also occurred spontaneously in gardens (Bean 1981).

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'Charles Raffill' Flowers 23 cm across, tepals 12, purple-pink outside, white flushed pink inside; slight fragrance. The type for the group, one of several Raffill seedlings planted in the Valley Gardens, Windsor Great Park. Its flowering well after the extreme winter of 1962-3 helped bring this clone to attention. 'Best selection for cold gardens' notes Philippe de Spoelberch (pers. comm. 2021). It consistently flowers successfully in April in Ray Wood, Castle Howard, North Yorkshire.

'Kew's Surprise' Flowers 23 cm across, richer pink outside than 'Charles Raffill'; especially good 'cup and saucer' form. John Gallagher (Hampshire, UK) also found its buds to be less tender (pers. comm. to Andrews 2006). A Raffill seedling planted at Caerhays Castle, Cornwall, first flowered 1966.

'Sidbury' Tepals strong pink outside. The only Cave clone distributed, from the original at Sidbury Manor, by Hillier Nurseries from 1970.

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🗹 Magnolia campbellii 'Ambrose Congreve'	
Magnolia campbellii 'Betty Jessel'	
Magnolia campbellii 'Borde Hill' 🗞	
Magnolia campbellii 'Darjeeling' See under 'Lanarth' below.	
Magnolia campbellii 'Hendricks Park'	
🗹 Magnolia campbellii 'Lanarth'	
🖬 Magnolia campbellii Mollicomata Group	
🗹 Magnolia campbellii 'Peter Borlase'	
🗹 Magnolia campbellii 'Queen Caroline'	

Magnolia campbellii Raffillii Group

Magnolia campbellii 'Werrington'

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Magnolia campbellii

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🗹 Magr	nolia campbel	lii 'Queen Caroline'					
🗹 Magr	nolia campbel	lii Raffillii Group					
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Children are sorted by "article_sortcode", per the template setting.

'Lanarth'

Flowers to 23 cm across, tepals deep magenta ageing deep purple-violet, an extraordinary and striking colour which draws the eye from a great distance in the garden. Early flowering, with the Indian forms rather than Mollicomata Group. Buds larger and flatter than most forms; leaves large as cultivated plants go, typically 25 × 15 cm. One of just three seedlings known to have been raised from F 25655 (Salween-Kiuchiang Divide, 1924 – see main text); this one was planted at Lanarth, Cornwall. Not easily propagated by budding. Seedlings grow vigorously and are often very similar, which has given rise to confusion. 'Lanarth' is an important parent of hybrid cultivars. 'Borde Hill', another of the three original Forrest seedlings, is very similar in flower and is not discussed separately.



Magnolia campbellii 'Lanarth'

Cornwall; March 2022). Image

has extraordinarily richly coloured flowers (Trewithen,

Jim Gardiner.



at Tikorangi, New Zealand (6th August 2015). Image Abbie Jury.





🗹 Magnolia campbellii Raffillii Group

Magnolia campbellii 'Werrington'

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Things became complicated in the 20th century, when *Magnolia mollicomata* (differing primarily in its hairy pedicels) was described from a series of George Forrest's specimens collected about 1000 km to the east, in the area where Yunnan meets Xizang (Smith <u>1920</u>). Subsequently it has been treated as an infraspecific taxon within *M. campbellii*, either as subsp. mollicomata or var. mollicomata. Seed introductions from the same area quickly followed, most significantly F 24118, 24213 and 24214 of 1924 from the Shweli-Salween Divide, while Forrest's 1914 gathering from the Dali area seems to have made only a small impact. Trees grown from these collections, along with their unhybridized seedlings, have a distinct set of features. Their tepals are a more subdued mauve-pink than the rose-pink of the western forms; flowers tend to have the 'cup and saucer' form prized by gardeners, with an outer whorl of tepals spreading (the saucer) while the incurving inner tepals remain upright (the cup); they flower later in the season than typical *M. campbellii*, but from an earlier age (10–14 years as opposed to 20–30); and there is a tendency for the crown to spread from an earlier age (Gardiner 2000).

However, botanists concerned primarily with wild plants have increasingly rejected *"mollicomata"* at any level, beginning with <u>Dandy (1928)</u> just a few years after its description. The various characters which distinguish it in gardens vary independently across the wild range of *M. campbellii*, and when comparing wild specimens from across the range, "mollicomata" does not emerge as a discrete group (Spongberg 1976; Chen & Nooteboom 1993). Early (and ongoing) garden introductions focussed on the westernmost ("typical" *campbellii*) and easternmost ("*mollicomata*") extremes of the range; the clear differences between them reflect this sampling bias. However, this does result in two distinct groups of plants in our gardens. These are long-lived trees, and vegetative propagation is usual, except when breeding new hybrids, so the difference persists. Gardeners need a name for these distinct plants, without being forced to place all garden clones in one or another mutually exclusive category (as is the way with varieties and subspecies), but naturalists should not be saddled with what for them is an unnatural, arbitrary distinction. Hence, *M. campbellii* Mollicomata Group is here defined (formal publication to follow) on the characters which make these plants distinct in gardens – see below. As with the Cultivar, a Group is intended to be used only for the naming of plants in cultivation (Brickell et al. 2016). Not all eastern forms are included within the Group, notably 'Lanarth' and other seedlings raised from *F* 25655. This collection was made further south than the collections which gave rise to Mollicomata Group, on the Salween-Kiuchiang Divide, Yunnan–Myanmar border, in 1924. These have previously been placed rather uncomfortably in subsp. *mollicomata*, although differing from those other collections in several ways.

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Quercus cerris Laciniata Group	
Quercus leucotrichophora Banj	
Quercus phillyreoides Crispa Group Chirimen oak, Biwabagashi	
Quercus rotundifolia Microphylla Group	
Quercus rubra Aurea Group	
Quercus texana New Madrid Group	
Rhododendron hanceanum	
Rhododendron hodgsonii	
Stewartia ovata Mountain Camellia, Mountain Stewartia	
Stewartia pseudocamellia Koreana Group	
Styrax japonicus 'Pink Chimes' Pink-flowered Styrax	
Symphoricarpos Doorenbos Group	
<i>Tilia</i> × <i>europaea</i> Kaiserlinde Group	- 4
Tilia platyphyllos Laciniata Group Cut-leaved Lime, Cut-leaf Lime	_
Tilia tomentosa Petiolaris Group Silver Pendent Lime	_
Weigela Aurea Group	_
Weigela Bicolor Group	
Weigela Dwarf Group	
Weigela Pink-Flowered Group	
Weigela Purpurea Group	
Weigela Red-Flowered Group	
Weigela Variegata Group	
Weigela White-Flowered Group	-



"Formal [Cultivar] Groups offer a huge opening for horticulture to influence the naming of plants and to de-escalate the growing conflict between horticulture and taxonomy"

(JS, April 2024)



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Sorbus L.



International Dendrology Society Trees and Shrubs Online

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Credits

Article from Bean's Trees and Shrubs Hardy in the British Isles

Article from *New Trees* by John Grimshaw & Ross Bayton

Recommended citation



Like many rowans *Sorbus sargentiana* is a superb tree for small gardens, with bold foliage and large, colourful infructescences. A private garden in Hampshire, UK, 14 September 2023. Image Tom Christian.

Editorial Note

SORBUS - THE VIEW IN 2023

The name *Sorbus* is extremely familiar to horticulturists and botanists and has been applied to a very large number of taxa that differ quite significantly from each other in morphology and, as has become apparent, genetics – a paraphyletic ragbag. This familiar, broad concept of the genus (*Sorbus sensu lato* [s.l.]), seems to have first been adopted by Alfred Rehder in 1927 (Rehder 1927–1940) and became widely accepted in mainstream literature, despite the obvious differences between groups of taxa. These became treated as subgenera: subg.





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Thomsonaria caloneura (Stapf) Rushforth



International Dendrology Society Trees and Shrubs Online

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For information about how you could sponsor this page, see How You Can Help

Credits

Article from **Bean's** *Trees* and Shrubs Hardy in the British Isles

Recommended citation

'Thomsonaria caloneura' from the website Trees and Shrubs Online (treesandshrubsonline.org/ articles/thomsonaria/ thomsonaria-caloneura/).



Thomsonaria caloneura is arguably at its most attractive in early spring, when its young, heavily textured, copper-coloured leaves render it a very striking tree. Royal Botanic Garden Edinburgh, 28th February 2022. Image Tom Christian.

Editorial Note

The text below is that of Bean (Bean 1981) who discussed this taxon under the name *Sorbus caloneura*. We have created this hybrid article – Bean's text under the correct modern name, with appropriate synonymy – whilst we await sponsorship to enable a full revision of this genus to be written. We are re-organising the *Sorbus sensu lato* articles in this way to enable a new revision of *Sorbus sensu stricto* to commence in 2023, and to bring the nomenclature of this complex group of plants up to date in line with modern treatments.

Genus

Thomsonaria

Synonyms

Aria caloneura (Stapf) H.Ohashi & Iketani *Micromeles caloneura* Stapf *Pyrus caloneura* (Stapf) Bean *Sorbus caloneura* (Stapf) Rehder

Species Links

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References



Your search for Linnaea returned 20 results

Abelia chinensis Chinese Abelia Abelia × grandiflora Common Abelia Abelia schumannii Abelia uniflora Diabelia serrata Diabelia spathulata Diabelia stenophylla var. tetrasepala Dipelta floribunda Dipelta ventricosa Dipelta yunnanensis Boxleaf Honeysuckle, Yunnan Honeysuckle Kolkwitzia amabilis Beautybush, 蝟实属 Linnaea Linnaea borealis Linnea, Twinflower, bei ji wua, Moosglökchen, Nårislegras, zimoziół północny Quercus ilex Holm oak, Holly oak Vesalea floribunda Mexican Abelia Vesalea mexicana Vesalea subcoriacea Zabelia corymbosa Zabelia dielsii Zabelia triflora Himalayan Abelia If you can't see what you're looking for, Search Again (Advanced Search)

or try the Plant Index.

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Linnaea borealis subsp. borealis in habitat in Sweden. A swathe like this, in full flower on a woodland floor, is a beautiful sight, but these conditions are very difficult to replicate in cultivation. Image Evamaria Ferm.

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Your search for Linnaea returned 20 results

Abelia chinensis Chinese Abelia Abelia × grandiflora Common Abelia Abelia schumannii Abelia uniflora Diabelia serrata Diabelia spathulata Diabelia stenophylla var. tetrasepala Dipelta floribunda Dipelta ventricosa Dipelta yunnanensis Boxleaf Honeysuckle, Yunnan Honeysuckle Kolkwitzia amabilis Beautybush, 蝟实属 Linnaea Linnaea borealis Linnea, Twinflower, bei ji wua, Moosglökchen, Nårislegras, zimoziół północny Quercus ilex Holm oak, Holly oak Vesalea floribunda Mexican Abelia Vesalea mexicana Vesalea subcoriacea Zabelia corymbosa Zabelia dielsii Zabelia triflora Himalayan Abelia If you can't see what you're looking for, Search Again (Advanced Search)

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As Christenhusz points out '...the delimitation of genera is arbitrary, and depends on tradition and preference of the user. Here, I am merely making the names available to provide a choice' (<u>Christenhusz 2013</u>). This choice now available to authors is reflected in a range of approaches in major works. *Plants of the World Online* has adopted Christenhusz's system, whereas others, for example the *Catalogue of Life*, have not. The *Flora of China*, where many of the groups in question have a significant distribution, has opted to retain separate genera following Landrein *et al.* 2012, necessarily invoking the segregation of *Abelia*, and goes further by placing them into the family Linnaeaceae (<u>Yang & Landrein 2011</u>). A recent publication from the Royal Botanic Gardens, Kew – *A monograph of Caprifoliaceae: Linnaeeae* – has also maintained separate genera (Landrein & Farjon 2020).

(Written in 2021!)

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https://www.treesandshrubsonline.org/articles/magnolia/magnolia-macrophylla/

The following key to taxa within Section *Macrophylla*, following contemporary Mexican work, is slightly modified from Vázquez-García *et al.* (2021). All these taxa apart from *M. macrophylla* s.s. and *M. ashei* map onto *M. macrophylla* var. *dealbata* as used here.

Identification key

1a	Mature fruit broadly ovoid, broadly ellipsoid to subglobose	2
1b	Mature fruit oblongoid, ovoid or ellipsoid	4
2a	Leaves 50–110 cm long; tepals 20–23 cm; gynoecium 4 cm long; stamens (300–)350–580; carpels (44–)50–80; growing at 150–300 m (SE USA)	M. macrophylla s.s. (= var. macrophylla)
2b	Leaves 25–35(–40) cm long	3
3a	Tepals 10–11 cm long; carpels 30–40; growing at 1500–1700 m (Mexico: Nuevo León)	M. nuevoleonensis
3b	Tepals 12–15 cm long, carpels 58–62; growing at 1800–220 m (Mexico: Oaxaca)	M. mixteca
4a	Carpels shortly (<0.7 cm) beaked	5
4b	Carpels prominently (1.0–1.5 cm) beaked	6
5a	Multi-trunked large shrub or small tree 8–10(–12) m; fruit cylindrical to ellipsoid; carpels 20–25(–50), shortly beaked; growing at <150 m (USA, Florida)	M. ashei s.s. (= macrophylla var. ashei)
5b	Single-stemmed trees 8.0–25.0 m; fruit rhomboid-ovoid; carpels 50–65; growing at 800–1950 m (Mexico: San Luis Potosí, Querétaro & Hidalgo)	M. rzedowskiana

✓ ④ Magnolia macrophylla - Trees at × ④ Search Results - Trees and Shrul ×

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Magnolia Cultivars D



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Our primary references for cultivar information are Jim Gardiner's (2000) '*Magnolias: a Gardener's Guide*' and Matt Lobdell's (2021) register of cultivars for Magnolia Society International. Further references are cited where relevant. Other important accounts of cultivars include Dorothy Callaway's (1994) '*The World of Magnolias*' and (in German) Beet Heerdegen and Reto Eisenhut's (2020) '*Magnolien und Tulpenbäume: Magnoliaceae*'. Magnolia Society International's journal '*Magnolia*' is an ongoing trove of information.

'D.D. Blanchard'

See Magnolia grandiflora 'D.D. Blanchard'.

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'Daisy Diva'

M. sprengeri var. diva × M. × soulangeana 'Lennei Alba'

RHS Hardiness Rating: H6

USDA Hardiness Zone: 6-9

Flowers precocious, along the branches during April (S England), opening flat or beyond, to 30 cm across; tepals 12–14, white stained purple at the base. A small tree selected 1986 from Magnolia Society International seed by Mike Robinson, England

Genus

Magnolia

Species Links Glossary

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→ C 🖙 treesandshrubsonline.org/articles/magnolia/magnolia-grandiflora/#18178

'D.D. Blanchard'

Synonyms/alternative names Magnolia grandiflora 'Brown Velvet'

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Intense copper coloured indumentum on the leaf underside; compact and upright. The original tree grew in its namesake's yard in Wallace, NC, in the early 1960s; initially distributed by Robbins Nursery, Willard, NC.





Magnolia grandiflora 'D.D. Blanchard' (here around 20 years old) is compact and upright (November 2017). Image Philippe de Spoelberch.



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Magnolia grandiflora 'D.D. Blanchard' (Cincinnati Zoo and Botanical Garden, August 2022). Image John Grimshaw.

'Edith Bogue'



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Felix and Mark Jury's deciduous *Magnolia campbellii*-influenced hybrids produce large flowers from a young age. This is *M*. 'Milky Way' (Tikorangi, New Zealand; 14th September 2015). Image Abbie Jury.

Father and son Felix and Mark Jury of Taranaki Region, New Zealand, have introduced a modest number of very distinct hybrids which have achieved international distribution and acclaim in the present century. Their hybrids fall into two quite distinct groups, deciduous magnolias involving species of Section *Yulania*, and evergreens using members of Section *Michelia*.

Already a successful breeder of camellias and other plants (e.g. *Phormium* 'Yellow



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Magnolia de Vos and Kosar hybrids



International Dendrology Society Trees and Shrubs Online

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Credits



Magnolia de Vos and Kosar hybrids: a gathering of 'The Girls' at Arboretum Wespelaar (left to right: 'Ricki', 'Randy', 'Susan'; 6th April 2011). Image Philippe de Spoelberch.

USDA Hardiness Zone 5-9

RHS Hardiness Rating H6

Eight hybrids between *Magnolia stellata* and *M. liliiflora* were named at the US National Arboretum, Washington, DC in 1968, the culmination of a project begun in 1955 by Francis de Vos, and continued by William Kosar. They are precocious-flowering, medium to large deciduous shrubs, widely grown on both sides of the Atlantic. One, 'Susan' has proved to be among the finest shrubby magnolias for general garden use.





Origin of 761 current genera on TSO, April 2024



International Dendrology Society
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Origin of **ARTICLES** on TSO, April 2024



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🌲 > Home > Articles > Lagerstroemia >

Lagerstroemia

Article Manage Report Sources Species Settings Delete Preview ~ **Text Report** Articles **The RHS Plant Finder** Species: 4 returns 201 results! Infraspecifics: 1 Total articles: 6 Words Total words: 2,343

Note The total word count includes captions, headings, synonyms, common names, etc.

Lagerstroemia

A genus of about fifty species in E. and S.E. Asia and Australia. It was named by Linnaeus after his friend Magnus von Lageström of Gothenburg (1696–1759).

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2 treesandshrubsonline.org/articles/lagerstroemia/

Credits

Article from Bean's Trees and Shrubs Hardy in the British Isles

Article from *New Trees* by John Grimshaw & Ross Bayton

Recommended citation

'Lagerstroemia' from the website *Trees and Shrubs Online* (treesandshrubsonline.org/ articles/lagerstroemia/). Accessed 2024-04-06.



Lagerstroemia are generally associated with climates hotter and sunnier than those of the UK, but clones of *L. indica* are now thriving as street trees across the Greater London heat island. August 2018. Image Owen Johnson.

Editorial Note

In few other woody genera has there been more extensive recent breeding and selection work than in *Lagerstroemia*. The current TSO account is inadequate, and we would very much like to be able to undertake a full review at the earliest opportunity. It is estimated that the sponsorship cost of this would be in the vicinity of £6000.

John Grimshaw, September 2022

Text below was modified from New Trees in September 2023.

Lagerstroemia includes about 55 species in Australia and eastern Asia as far north as Japan (Qing *et al.* 2007). They are evergreen or deciduous trees or shrubs with showy flowers and attractive bark. The branchlets are terete or four-angled, rarely with small wings. The leaves are alternate, opposite or in between. The flowers are solitary or in terminal and axillary paniculate cymes; they are hermaphrodite and 6-merous, though 5-merous and 7-merous flowers are common. The calyx is campanulate or funnelshaped with 6–12(–14) veins or ribs; it opens out into narrow or broadly

Glossary

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Summary of article origins on TSO: current and projected genera, October 2022

- A list of current all current genera was obtained directly from the system on 29/09/22
- This was cross-referenced with the *Hillier Manual* (9th edition, 2019) to identify missing and defunct genera
- Anomalies between TSO and HM were cross referenced with *Plants of the World Online*
- It was found that 134 genera are currently 'missing' from TSO
Origin of current and projected genera on TSO, April 2024



International Dendrology Society
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Distribution of new 134 projected genera by family (by number of genera)





- Arecaceae Araliaceae Asteraceae Lamiaceae Rhamnaceae Bignoniaceae Bromeliaceae Rubiaceae Proteaceae Rosaceae Rutaceae Boraginaceae Phytolaccaceae Cycadaceae Cannabaceae (or Ulmaceae) Polygalaceae Amaranthaceae Saxifragaceae Thymelaeaceae Cyatheaceae Polygonaceae Elaeocarpaceae Escalloniaceae Sapindaceae Simaroubaceae
- Theaceae
- Gelsemiaceae
- Melastomataceae
- Meliaceae



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Trees and Shrubs Online Visitor Summary

To end 2023

Unique visitors and site visits

Growth in the monthly number of unique visitors has been continuous over the lifetime of the site, reaching nearly 36,400 in May 2023. The following graph shows spring and autumn peaks since the site was launched.



The monthly pattern of visitors is similar each year, with a spring peak usually in May and a smaller peak around October.



The monthly pattern of visitors is similar each year, with a spring peak usually in May and a smaller peak around October.



The **total number of visits** in each month is typically around 20% greater than the number of unique visitors, and the **number of page views** is more than double the unique visitors.



The total number of visits to the site per year has been growing annually (one visit may involve looking at multiple pages) and is approaching half a million, as shown in the following chart.





Top Ten Countries 2023

United States	168,600
United Kingdom	138,930
France	14,870
Netherlands	13,910
Germany	13,436
Australia	13,432
Russia	10,384
Canada	9,146
Italy	7,552
China	6,877



What others are saying...

- *"Trees and Shrubs Online is an indispensable resource"* Kyle Port, Plant Records Manager at the Arnold Arboretum
- *"an exceptionally interesting and valuable website"* Piotr Banaszczak, Head of the Rogów Arboretum, Poland
- *"My most sincere thanks to the IDS for making [Meliosma] much simpler to understand" Charles Williams, Caerhays Castle, UK*



"Our aspiration is for each new account on TSO to be the best horticultural monograph of the genus available, and very well illustrated"

(JMG, March 2024)









Origin of current genera (749) on TSO





- Bean, New Trees
- Bean, NT, TSO (Acer, Quercus)
- New Trees

TSO