MAGNOLIA SPECIES IN CULTIVATION AND SOME NEW HYBRIDS

Philippe de Spoelberch NDV at Von Gimborn arboretum 24 April 2014

Subgenus Magnolia

Section Magnolia: M. grandiflora, virginiana, schiedeana, tamaulipana

Section *Gwillimia*:

Subsection Gwillimia M. delavayi (henryi) Subsection *Blumania* (all subtropical)

Section *Talauma* (55 species, none hardy)
Subsection *Talauma* (31 species: Central America)

Subsection Dugandiodendron (14 species: Colombia and Venezuela)

Subsection Cubense (10 species: Cuba, Haïti, Rep. Dominican, Porto Rico)

Section Manglietia (35 sp.): M. conifera, decidua, insignis, fordiana, yuyuanensis

Section Kmeria (3 species from South East Asia, none are hardy)

Section Rhytidospermum

Subsection Rhytidospermum: M. tripetala, obovata, officinalis, rostrata Subsection Oyama: M. sieboldii, sinensis, wilsonii, globosa

Section Auriculata: M. fraseri, - var. pyramidata

Section Macrophylla: M. macrophylla, - var. ashei, - var. dealbata

Subgenus Yulania

Section Yulania

Subsection Yulania (China, Japan and Korea)

- 1 campbellii, sprengeri, var. elongata, dawsoniana, sargentiana
- 2 denudata, liliiflora, cylindrica,
- 3 kobus, stellata, salicifolia
- 4 amoena, biondii, zenii

Subsection Tulipastrum: acuminata, - var. subcordata

Section Michelia

Subsection Michelia: cavaleriei, var. platypetala, laevifolia, doltsopa, ernestii, foveolata, maudiae,

Subsection Elmerrilia (6 sp., Philippines, Indonesia)

Subsection Maingola (11 sp. India, Vietnam, Borneo etc)

Subsection Aromadendron (5 species, Sumatra Borneo)

Subgenus Gymnopodium

Section *Gymnopodium*: *M. nitida, lotungensis*

Section Manglietiastrum: (One species, Yunnan)



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- Magnolia Study Day: UBC Botanical Garden in Vancouver on Saturday, April 5, including a tour of their extensive collection with Douglas Justice and MSI Board Member Andy Hill. Register today!
- · Kew is releasing Magnolias in Art and Cultivation,

S Skype



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M. KWANGTUNGENSIS

Ethan, Greenhouse and Nursery Manager at Smithgall Woodland Garden, hosted our recent annual meeting in Athens, Georgia. Meet Ethan and see what draws him to the world of magnolias, including his favorite --M. kwangtungensis.

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Cultivar description in Magnolia Society International

Angustifolia

[M. virginiana], cv. (Page, Page's Prodr. p. 21. 1817, Southampton, England), as M. glauca cv. Angustifolia. 'Willow See cv. salicifolia (Bosse, 1841), with similar description.

Angustifolia Glabrata

[M. grandiflora], cv. (Schelle in Beissner et al., handb. Der Laubholz-Benennung 100, 1903), nomen nudum.

Anilou

[M. acuminata x M. 'Elizabeth'] cv. (Magnolia 40(1) [Issue 77]: 20-21, 2005) This upright tree bears erect flowers the open with the leaves; outer tepals have green shades but are not sepaloid; young flowers are very green (RHS 143 depending on stage; mature flowers are deep yellow (RHS 7D) on the outside and sulphur yellow (RHS 6D) within; outer whorl of tepals has a green blotch; tepals are broadly obovate and 10-12cm (3.94-4.72in) long and 5.5cm (2.16in) wide; stamens are yellow with soft pinkish filaments; gynoecium is green with soft yellow stigmas; bloom period is longer than a month; hybridized by Dr. August Kehr, raised, selected, named and registered (November 9 2004) by Koen Camelbeke and Philippe de Spoelberch of Arboretum Wespelaar, Belgium. Name and description of this plant previously published by Camelbeke, K. 2004 Jaarboek Belgische Dendrologische Vereniging 2003:40.

Anilour

Ann

[M. liliiflora, M. stellata], cv. (Dudley & Kosar, Morris Arb. Bull. 19: 28, Figs. 1, 4, 1968), Early blooming, flowers small, 2-4 in. in diameter, buds red-purple (RHS 71A) at the base to (RHS 70B) at the apex, flowers erect at anthes tepals 6-8, subulate-obovate, 1-2 1/2 in. long, 1/2-3/4 in. wide, erect, outside red-purple (RHS 71B) to purple (RHS75A-75D), inside purple (RHS75D), stamens 50-60, red-purple (RHS 71A-71B). A sterile triploid. U. S. Natl. Arb. #28344. (M. liliiflora cv. Nigra x M. stellata).

Ann Rosse

[M. denudata, M. sargentiana], cv. Magnolia 20(1) [ISSUE 37]: 15, 1984. 'A tree with large chalice-shaped flowers, 7-8 inches across, with 9 tepals which are white with a pink flush, deepening to red at the base (Treseder, Magnolia p. 148).' (M. denudata x M. sargentiana var robusta)

Cultivar list and origin by Luc De Jonge (653 taxa)

NAME	PARENTS	REGISTERE	YEAR	MEMO
AASHILD KALLEBERG	obovata x sieboldii	Aashild Kalleberg		3 sepais 8-9 petais pure white flowers stamens deep reed
ADRAL	soulangeanz	Ralp Smith	1964	9 tepals purplish-red outside whitish inside
ADVANCE	soulangeana Burgundy x Vulcai	Vance Hooper		large gobiet shaped clear lilac purple upright flowers. 9 rounded tepals
AFTER ELIZABETH	soulangeana type	Tom Kreniksky	2011	flowers similar soulangeana, with distinct purplish red marking outer tepais
AIA	salicifolia W.B.Clarke seedling	Jose Almandoz	2005	
AIKEN COUNTY	virginiana var australi:	Chuch Weeks		unusually glossy foliage with silvery underside
ALBA SUPERBA	soulangeana	Van Geest	1866	fragrant creamy white flowers with basal biotches of pink-purple
ALBATROS	cylindrica x veitchii Peter Veitch	Peter Borlase		11 floopy tepals white inside flushed with green towards base outside
ALEX	lennei x sprengeri Divi	Maurice Foster	1303	columnar flowers like soulangeana shaded a good pink at te base
ALEXANDRINA	soulangean	Cels	4075	9 tepals white flushed rose purple darker purple lines three quarters tepal
ALIXEED	stellata seedling	Bill Brinka	1025	light pink stellata upright tepals highly scented
ALLISON	acuminata	Dill Direct		old tree in Tolono
ALLSPICE	doltsopa x figo			ALCOHOLOGO CONTRACTOR
ALYCIA	J.C.Williams x Vulcan (or Apollo	lan Baldick		leathery green leaves fuzzy brown flowerbuds creamy white fragrant fl
AMABILIS	soulangeans		HREE	rich reddish purple large cream white flowers with minimal pink blush backside tepals
AMBER	Yellow Bird x Brooklynensis	Baumann nursery	1000	
AMBROSE CONGREVE	campbellii var albi	Ian Baldick		large amber colored flowers
AMBROSIA	DC4 acumin x brookl Eva Maria x brookl # 14:	to Date &	2004	ciaret-red flowers
- 1 - CARROLL TO 1000		lan Baldick	2004	pointed barium yellow petals shaded green centrally striped beetroot yellow
AMETHYST FLAME	liliiflora x Vulcan siste	Vance Hooper	1-200-2	compact grower violet colouring
ANDRE LEROY ANGEL MIST	soungeam		1892	dark pink to purple flowers
	officinalis x (obovata x sieboldi) =wiesener	Dennis Ledvina		12 creamy white tepals that maintain excellent form
ANGELICA	open pol cylindrica x soul Sawada's Pin	Dennis Ledvina	100000	9 round, cup shaped tepals pure white bowl shaped flowers
ANILOU	acuminata x Elizabeth	PdS		9 tepals very green yellow upricht tree
	lihiifiora Nigra x stellata roser	Francis De Vos		6-8 tepais red purple at the base paling toward apex
ANN JENKINS	camp x camp mollicomata	Frascr Joskins	1980	
ANN ROSSE	demadata x sargentiana robustz	2017/2017/05/51 (67)	1960	**
ANNA	acuminata x sargentiana robusta x.	Sven Lennartsson		semi double flower 10-16 tepals overall impression creamy white
ANN'S DELIGHT	Vulcan x Apollo ?	7		Improved Vulcan a root stock growth
ANTICIPATION	cylindrica open pollinate	August Kehr	1999	white flowers 25.5 cm diameter same parentage as Albatros
ANTJE ZANDEE (cherry lady)	black tulip x deep purple dream	Gotschalck		Innen und aussen kirschrot-purpur
ANYA	iolanthe x vulan or apolk	hiwrence NZ.		deep red flower shape of sprengeri Diva
APOLLO	hiliiflora Nigra x camp mol Lanarti	Felix Jury		large star shaped deep rose pink flowers
APRICOT BRANDY (pink)	acuminata F.M. x sprengeri Divi	Phil Savage		upright peach colored flowers pink at the base flushing to creamy yellow at the tips
ARABIAN NIGHTS	sayonara x vulcar	Stuart Robertson	2000	
ARCHALIE	demidata x soul Grace Mc Dade			
ARCHANGEL	sprengeri Diva x soulangeana Brozzon	Phil Savage		huge heavy textured white flowers
ARCTIC STAR	woodsman x tore	lodvina klehm	2013	flowers creamy lvory base with red lavender flaring streaking green tints
ARNOLD DANCE	sargentiana robusta x camp mollicomati	Burncoose		large rich pink flowers
ASIAN ARTISTRY	denudata x sprengeri Diva			9-12 tepais white inside stained deeper red-purple base tepais fragrance of Diva tree like gro
ATHENE	soul Lennei Alba x Mark Jury	Felix Jury		white with unusual violet pink base

Section Magnolia

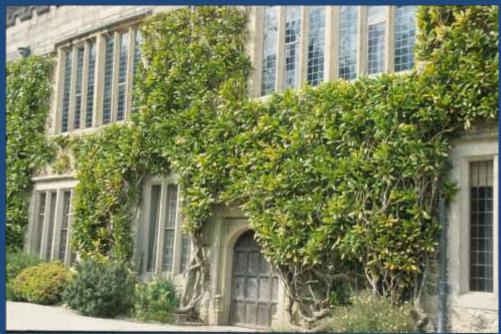




Magnolia grandiflora

Needs no introduction Hardy versatile, happy both in Mediterranean climate (Huntingdon) and maritime climate, possibly on a wall here at Lanhydrock, in the UK.

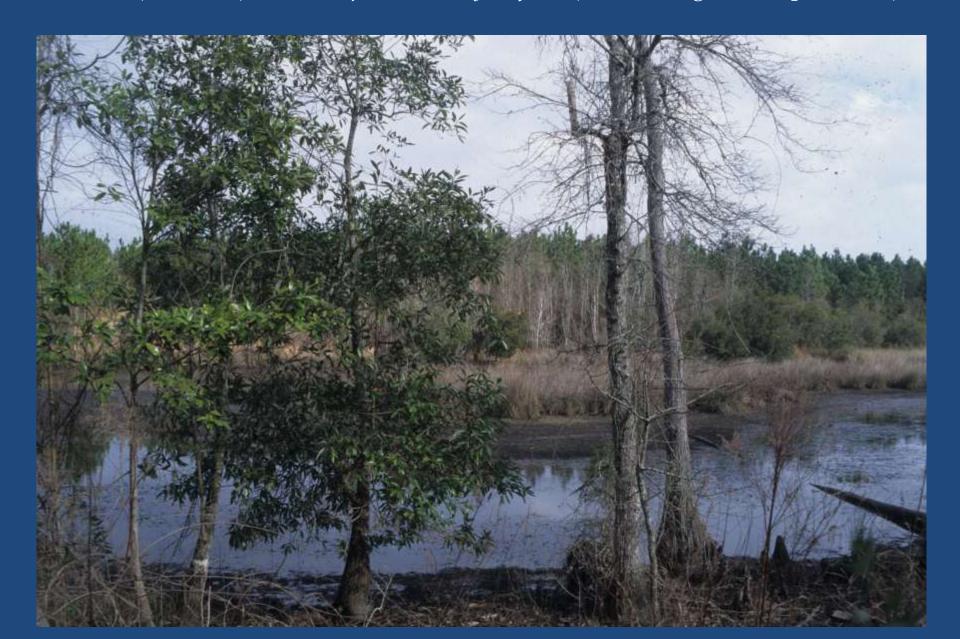




Magnolia virginiana, vigorous, healthy, adaptable, From the east coast of North America all the way from Cuba to Massachusetts. *var. australis* here at Bellengrath Garden, Mobile, Alabama).



M. virginiana, along water ways, even brackish as here again in Bellengrath Garden, (Alabama) with *Liquidambar styraciflua*. (Note enlarged stump on both)













Section Gwillimia

Only one hardy species in Western Europe: Magnolia delavayi,

Here in Kunming, Sichuan (at Fragrant Hills) And in the UK (High Beeches), on a carpet of bluebells (*Hyacinthoides non-scripta*)





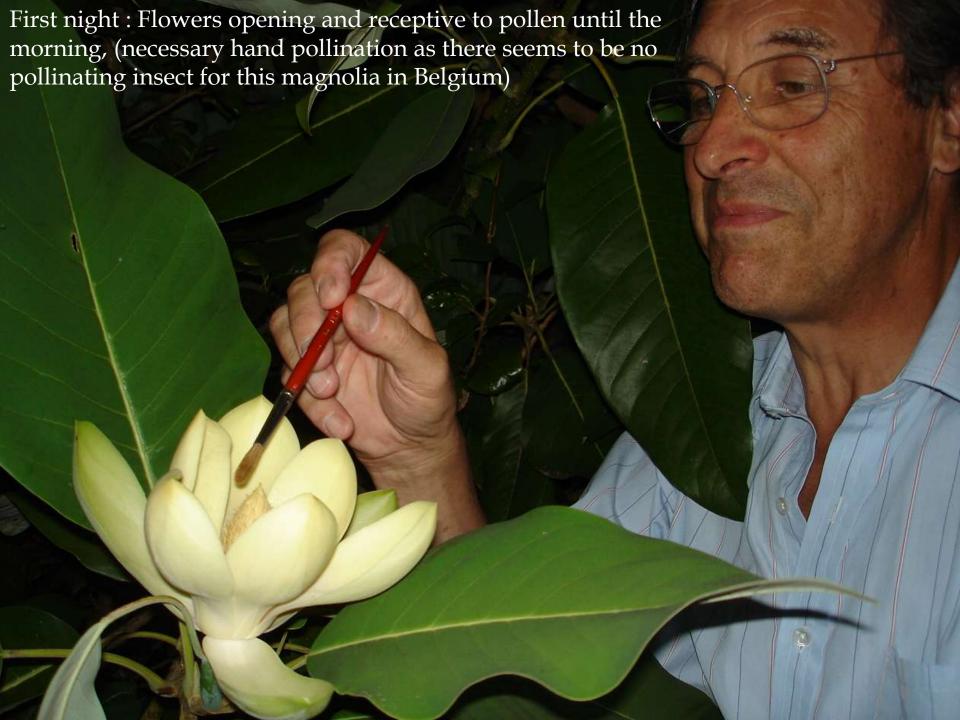
And in Ireland, on the occasion of a previous MSI visit (Birr Castle)













Section Manglietia

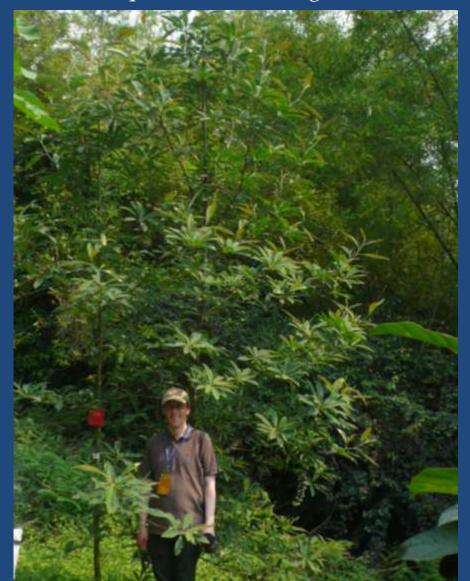
Mainly Asiatic plants, from the Himalaya to China, Vietnam, Laos, Borneo. Previously in the genus *Manglietia*, these subtropical plants are now merged into *Magnolia*.

Several species are hardy in zone 7 and 8: *Magnolia conifera, decidua, insignis, fordiana, yuyuanensis.*

There is a lot to play with in this section and *M. insignis* seems particularly promising for the hybridizer.

I would love to see a specialized collection on the Atlantic coast of the UK, France or Northern Spain to hold and evaluate all these new species and their hybrids.

We have one hardy plant in the section at Arboretum Wespelaar: *M. decidua*, the only deciduous member of the section. It has recently flowered at Kunming Botanical Garden. It will be interesting to cross it with other members of the section in particular *M. insignis*.







Magnolia insignis, Zibenshan National Park, Yunnan, coppiced over and over again, but growing strongly











Section Rhytidospermum subsection Rhytidospermum

Close to the previous subsection (*Manglietia*) also hybridized with the following (*Oyama*)

Once again many possibilities for good crosses.

Four species, found on two continents!

M. tripetala on the East coast of North America

M. obovata in Asia (China, Korea, Japan)

M. officinalis and officinalis var. biloba in China

M. rostrata in China

















Magnolia officinalis and officinalis var. biloba

This is a curious association: there is more difference between var. *biloba* and *officinalis* than between *officinalis* and *obovata*

M. officinalis seems intermediate between *obovata* and var. *biloba* and could be a hybrid as mentioned by Dr. Stephen Spongberg. And var. *biloba* would then be the species.

It is most difficult to identify the original geographic distribution as all these magnolias have been largely cultivated the bark being used in traditional Chinese medicine.

Three close taxa and a hybrid compared











In search of a bilobed gigantic M. wilsonii ... by crossing it with M. officinalis var. biloba









Magnolia rostrata is of limited hardiness. It survives in Southern UK (Nymans) and thrives on the West coast of Scotland.(Glenarn)





Section Rhytidospermum Subsection Oyama

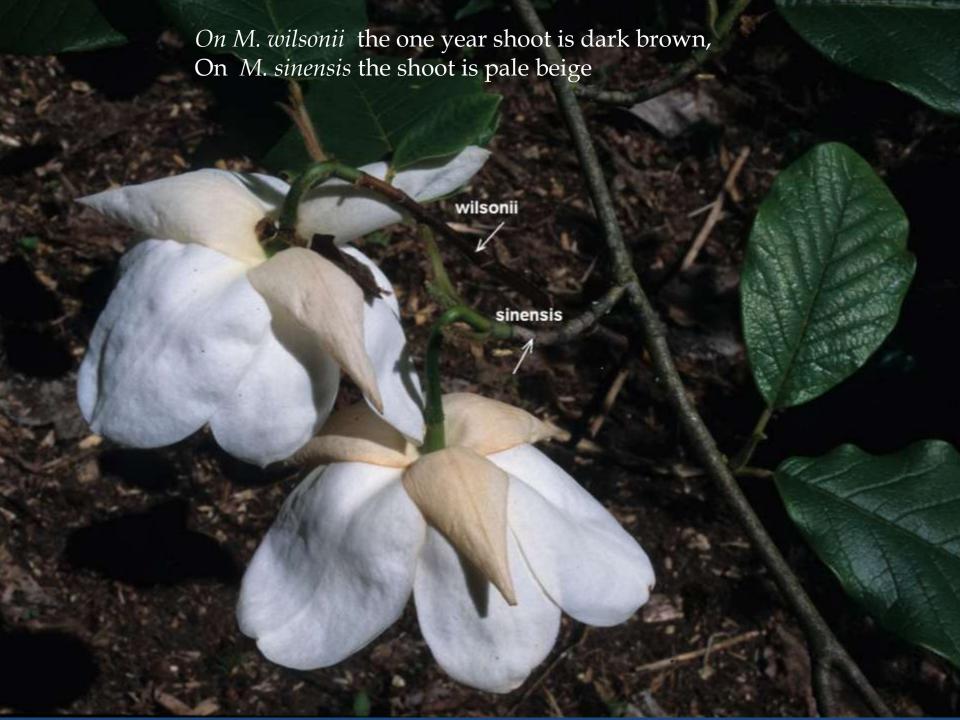
Three or Four species, all Asiatic, and closely related:

- •M. sieboldii (Japan, Korea and Northern China)
- •M. wilsonii (and M. sinensis) in China
- •M. *globosa* in the Himalaya

They are charming short lived shrubs, easily crossed with species of the *Rhytidospermum* subsection, and probably *Manglietia* subsection.

NB: *Magnolia sinensis*, is in fact very different from *Magnolia sieboldii*. It has been treated as a variety of *sieboldii*, but it is much closer to *wilsonii*. Flowers and fruit of *sinensis* are identical to those of *wilsonii*; only the leaf and colour of the shoot are in anyway different.





There are numerous inter-specific hybrids between members of both *Oyama* and *Rhytidospermum* subsections.

There are many opportunities for crosses and selections. And they deserve a specialized collection of their own.

M x wieseneri (obovata x sieboldii) and *M. 'Nimbus' (obovata x virginiana*), should be in every collection. They are among the most scented of magnolias.











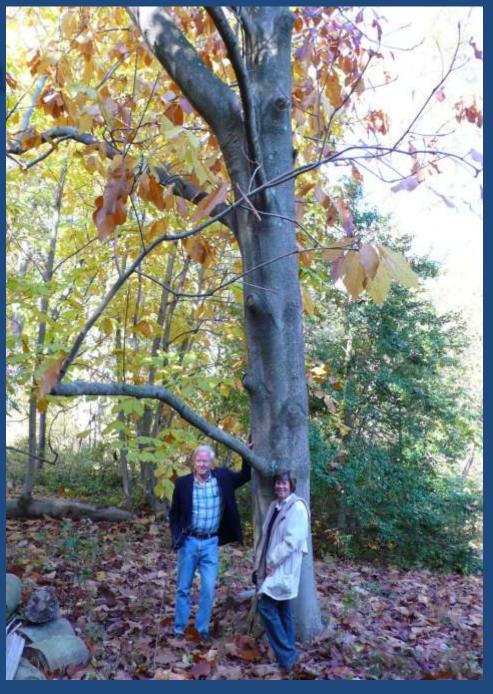




Section Auriculata

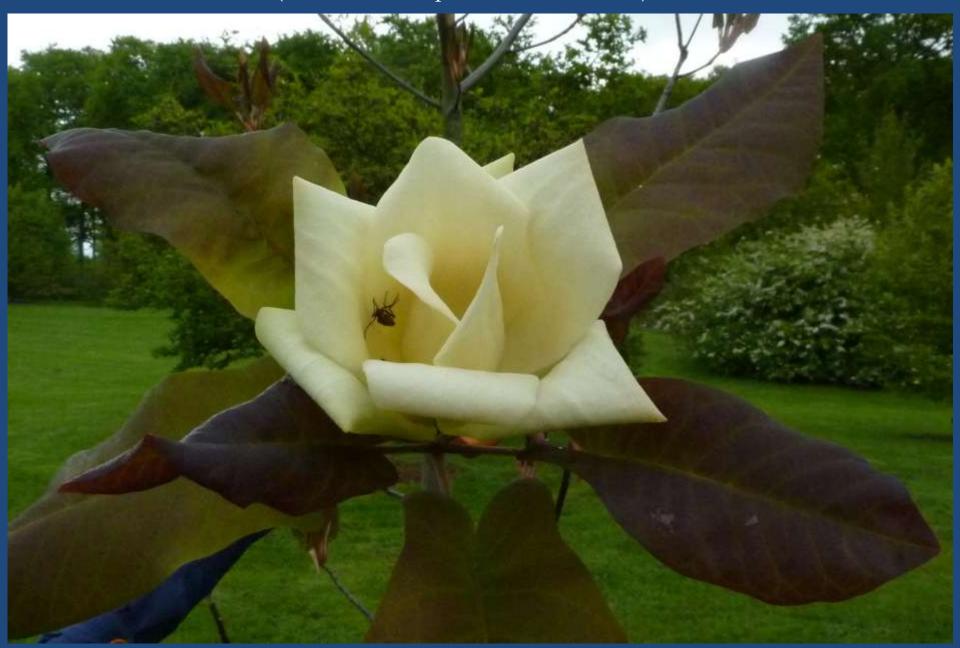
Magnolia fraseri and fraseri var. pyramidata are both endemic to the eastern United States. Both will become large trees. They have superficial characteristics in common with M. macrophylla (large leaves with auricled base), but are really in very different sections.







Magnolia fraseri (S. Appalachians, South Carolina) – (Arboretum Wespelaar 03250-wld-203)









Magnolia fraseri-Large, Magnolia obovate insignis- Narrow foliage w/ foliage w/ auriculate cuneate base base • Genome size verification-M. fraseri 2C = 3.82 M. xinsigneri 2C = Hybrid- intermediate 4.38 size w/ truncate base M. insignis2C = 4.87

Section Macrophylla



Magnolia macrophylla, a large tree,

- as an isolated specimen (Henry Foundation, Gladwyn, Pa)
- or as a forest tree (Barnes Arboretum, Philadelphia, Pa)









Subgenus Yulania Section Yulania subsection Yulania

The subsection *Yulania* contains most of the great early flowering deciduous magnolias which are well known and loved by the horticultural world.

All originate in Asia

They can be listed in four basic groups:

- 1. campbellii, dawsoniana, sargentiana, sprengeri, sprengeri var. elongata
- 2. *denudata, liliiflora* (and their hybrid *x soulangeana*), *cylindrica*
- 3. kobus, stellata, salicifolia (the old Buergeria group)
- 4. amoena, biondii, zenii (precocious flowering trees)

1 - campbellii, sprengeri, sprengeri var. elongata, dawsoniana, sargentiana

These are the 5 giant flowered magnolias of the Himalaya and South Western China

Unfortunately the plants in this group are not very hardy In Europe they are mostly grown in the South and West of the British Isles. They should do well on the Atlantic coast of Spain and Portugal.

Magnolia campbellii, is one of the giants of the Himalayas; A tree in Bhutan (Gante Gompa) has been measured at 4.50 m girth x 25 m height. There are many variations from west to east: from var. *alba*, to var. *mollicomata*











Pure whites, late flowering and with 12 large tepals based on *Magnolia* campbellii var. alba, denudata, sprengeri var. elongata, cylindrica should produce great collections













Magnolia 'Sara Koe' ('Galaxy' x mollicomata) - 95046-pds-206 -



Magnolia 'Sara Koe' ('Galaxy' x mollicomata) - 95046-pds-206 -





Magnolia 'Hot Lips' (mollicomata x)-87307-pds-135 - 2000.0404



Magnolia sprengeri was introduced into cultivation by Wilson under Wilson 688. Out of that seed lot came 7 white flowering plants (var. *elongata*) and one extraordinary pink flowered tree which has been given the cultivar name 'Diva'.



As seen from the next slide, there seems to be in the wild, a complete continuum of forms and colours, so that it will be near impossible to set a defining criteria between both taxa (Erland Ejder to RHS Woody Plant Committee 10 April 2012)











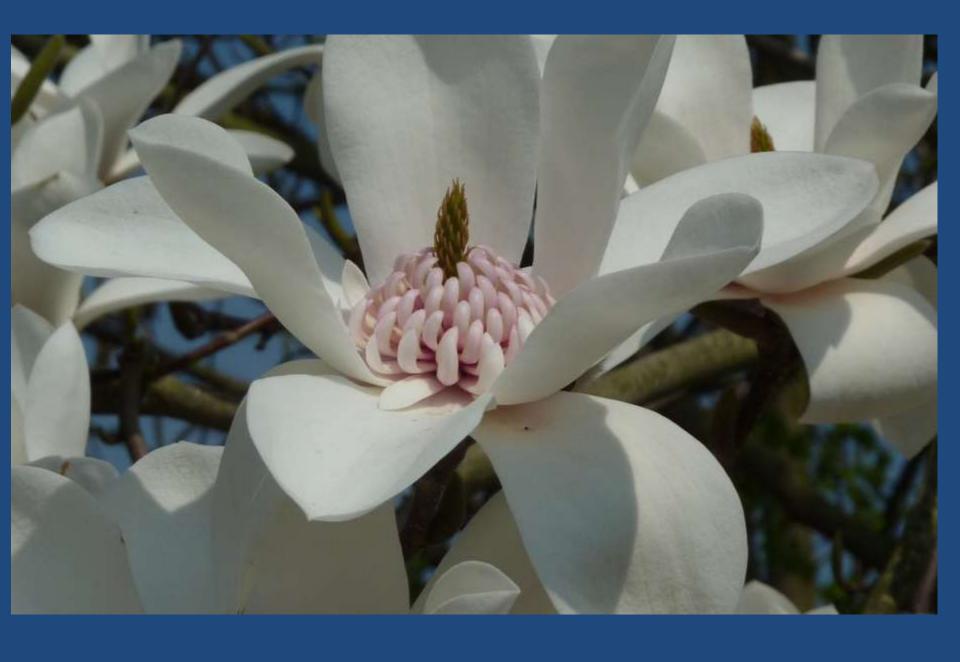
Magnolia 'David Clulow' x sprengeri var. elongata - 98137-pds- 29 - 2006.0421





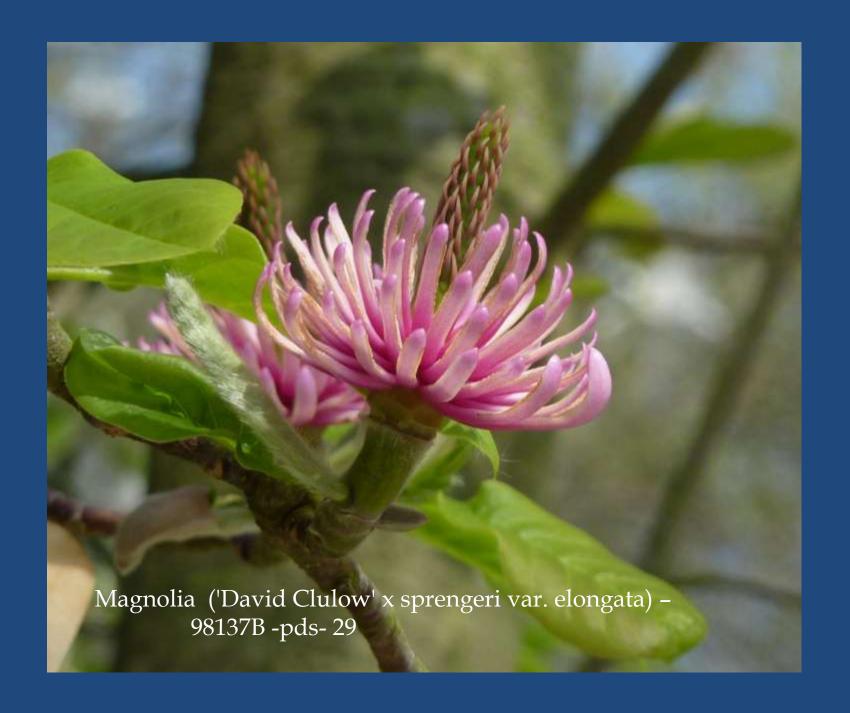






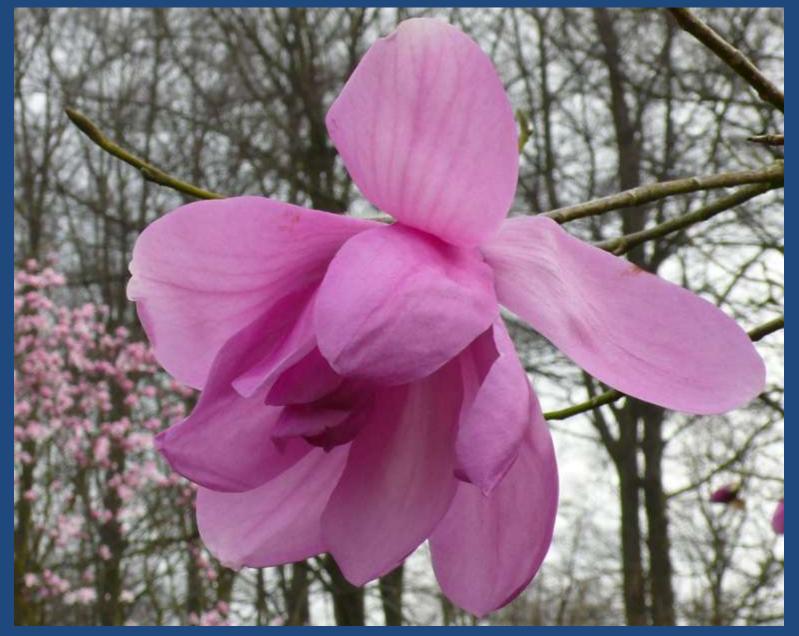
Magnolia 'Joli Pompon' ('David Clulow' x sprengeri var. elongata)











Magnolia 'Purple Breeze' (sargentiana hybrid ?) - 84323-esv-206 -



Magnolia 'Purple Breeze' (sargentiana hybrid?) - 84323-esv-206 -

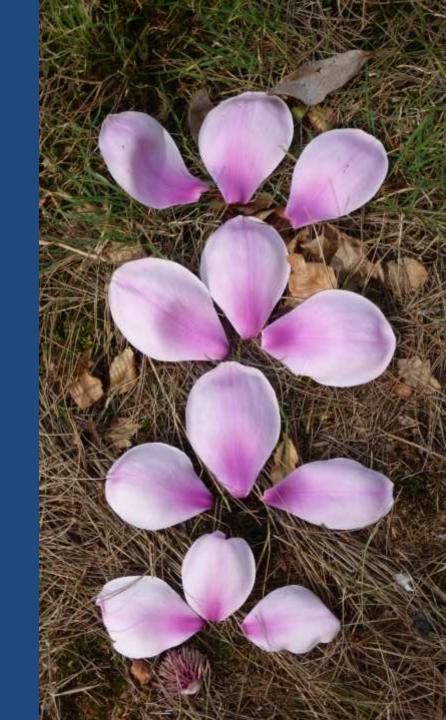
2 - Magnolia denudata, liliiflora (x soulangeana), cylindrica







Magnolia 'Atlas' ('Mark Jury' x 'Lennei') - 94119-spi-174 -



Deep reds and purples will be in demand. Again evaluation, improvements and conservation will be needed.





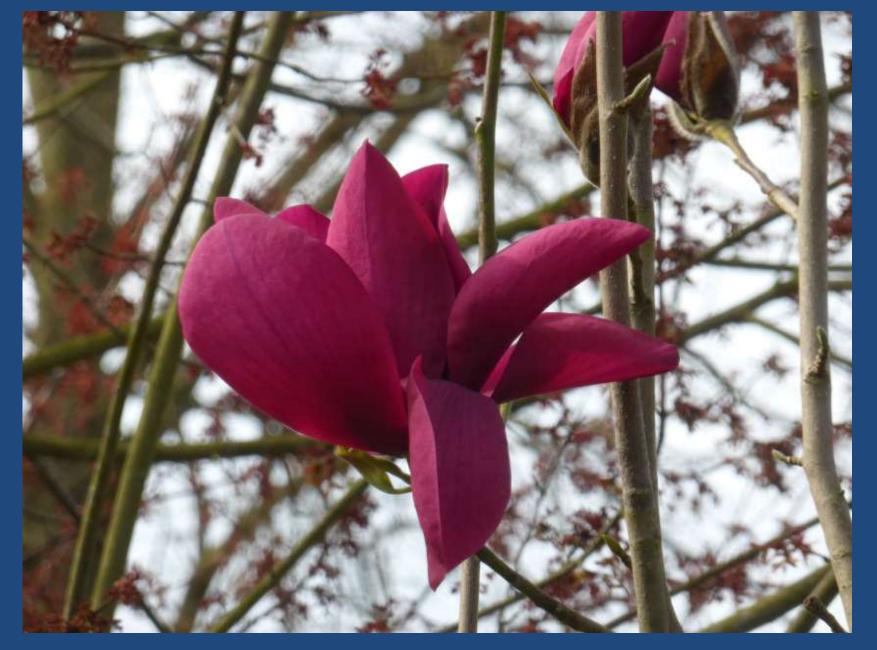




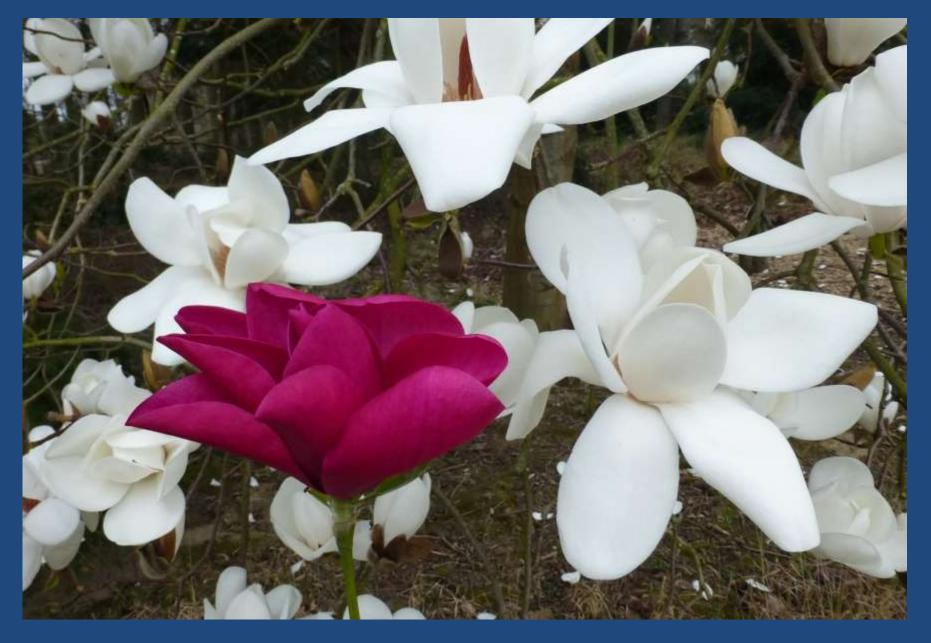


Magnolia 'Shirazz' (denudata x 'Vulcan') - 08207-bur-164 -





'(Black Tulip' x 'J.C. Williams')



'(Black Tulip' x 'J.C. Williams')





3 – The Buergeria group M. kobus, stellata, salicifolia and hybrids

kobus

x loebneri

x kewensis

stellata

x proctoriana

salicifolia





4 - Magnolia amoena, biondii and zenii

I have placed, for my own convenience, these three species in the fourth group. They are all very precocious flowering trees.

Magnolia biondii, is probably the best known, wonderfully scented.







Subsection Tulipastrum

One species *Magnolia acuminata* and one variety, var. *subcordata*, the only species contributing the yellow colour to hardy deciduous hybrid magnolia





















Magnolia 'Honey Liz' ('Miss Honeybee' x 'Elizabeth') - 03217-rut-268



Section Michelia

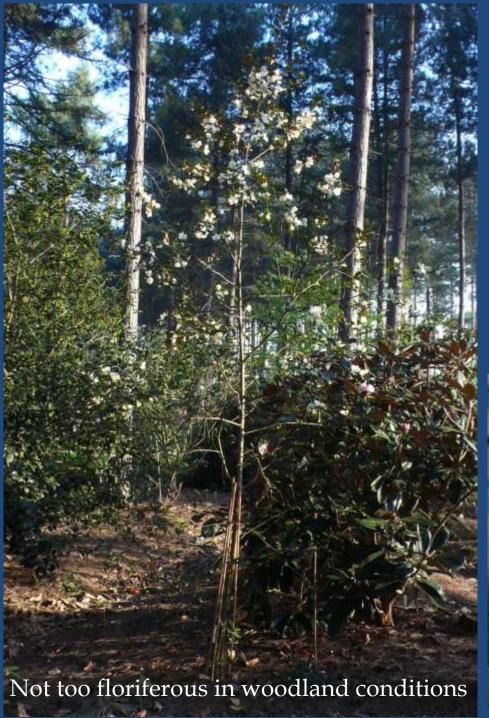
Subsection Michelia:

Magnolia cavaleriei, -var. platypetala, laevifolia, doltsopa, ernestii, foveolata, maudiae

All species in section *Michelia* are evergreen. Few are hardy.

- *Michelia laevifolia* is perfectly hardy and must be planted in full sun,
- *Magnolia maudiae* and *doltsopa* are well established in Cornwall.
- *Magnolia cavaleriei* var. *platypetala* is hardy in Western Canada, in zone 6 and has done well at Bokrijk arboretum!















Subgenus Gynopodium

Magnolia nitida, not hardy Whereas M. lotungensis is hardy in zone 6.



