ALTERNATIVE VISIONS FOR A MAGNOLIA COLLECTION

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Arboretum Wespelaar
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First of all: there may be better things to do than collecting magnolias

- Other genera offer a much larger range of interests;
- the magnolia season is fundamentally short
- Flowers are often hit by spring frost; only one out of three years is blessed by a show of clean flowers
- These shrubs are rather uninteresting during the rest of the year
- Autumn coulours are rare.
- Fruiting bodies may remain on shrubs long after shedding their seed and are not attractive.

You may nevertheless succumb to the temptation as we have at Arboretum Wespelaar :

Hereunder, the collection of species and hybrids of the Buergeria group
(now in sub subsection Yulania)

Indeed, even if it only shines for a couple of weeks, a complete collection is always a fascinating achievement for the dedicated magnoliaphile

But if not well presented and justified, it will most probably be rather boring for the uneducated or less passionate visitor to the collection

The golden rules:

- Most of all it must be beautiful: aesthetic considerations must dominate over quantity.
- Secondly, the collection must follow a main theme and a clear logic.
- Thirdly, it should offer something original and distinctive, set apart from other similar collections and possibly even offering something different from other national or international magnolia collections

Aesthetic considerations

- This is a matter of personal taste; but one must make a choice; and then be consistent
- Unfortunately the collector will often neglect these principles and keep adding plants, leading to an untidy chaos. Do have the courage to move young plants and cut old ones, if they are not in the right spot or have become ungainly
- The most popular style for botanical collections is that of the informal landscape garden. But a regular garden in the right environment could do.

Trial grounds and nurseries are best disposed on a regular basis but this is not a garden and these trial beds will go as soon as the crosses will have been evaluated.

Irregular beds are probably easier to manage and blend well with a typical landscape concept

I have mixed feelings when it comes to planting magnolias on a lawn: they soon look lost, as they dot the area. One way to group them may be on undulating mounds

Another alternative may be to manage the grounds differently with taller grass around the plants and neatly mowed paths and open areas between these (possibly cut twice or three times during the season). Hopefully, even the more blasé of garden visitor will find an interest in such a layout

And don’t forget to associate the magnolias with other trees and shrubs
In the center :*Fagus sylvatica* ‘Dawyck’ a clear architectural contribution.
Conifers are useful backgrounds at flowering time. (*Abies* x *borisii-regis)*

Choosing a main theme and following the logic

There are probably dozens of possible concepts to organize a collection.

Here are a few which might provide interest and value:

1. Species and grouped in a systematic layout
2. Hybrids grouped by parentage
3. Geographical origins
4. Historical cultivars and introductions
5. Colour schemes
6. Climate zones and hardiness
7. Threatened species (IUCN criteria)
8. Merit : « Top ten » for various uses
9. Flowering time

One example: A systematic collection of hardy species

I have followed the Magnolia Society International and IUCN (BGCI) Red List treatment for the presentation of this theme.

The hardy species can be grouped in

- 3 subgenera
- 12 sections
- 21 subsections

Those species considered hardy in Western Europe are hereafter indicated in yellow

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, - var. 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*

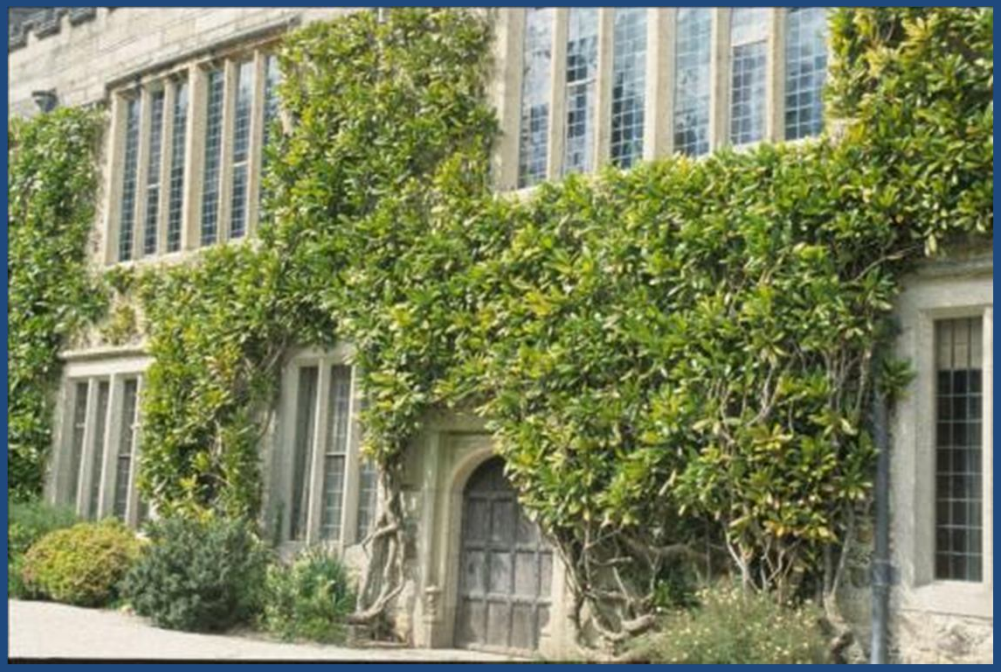
Section *Manglietiastrum:* (One species, Yunnan)

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).

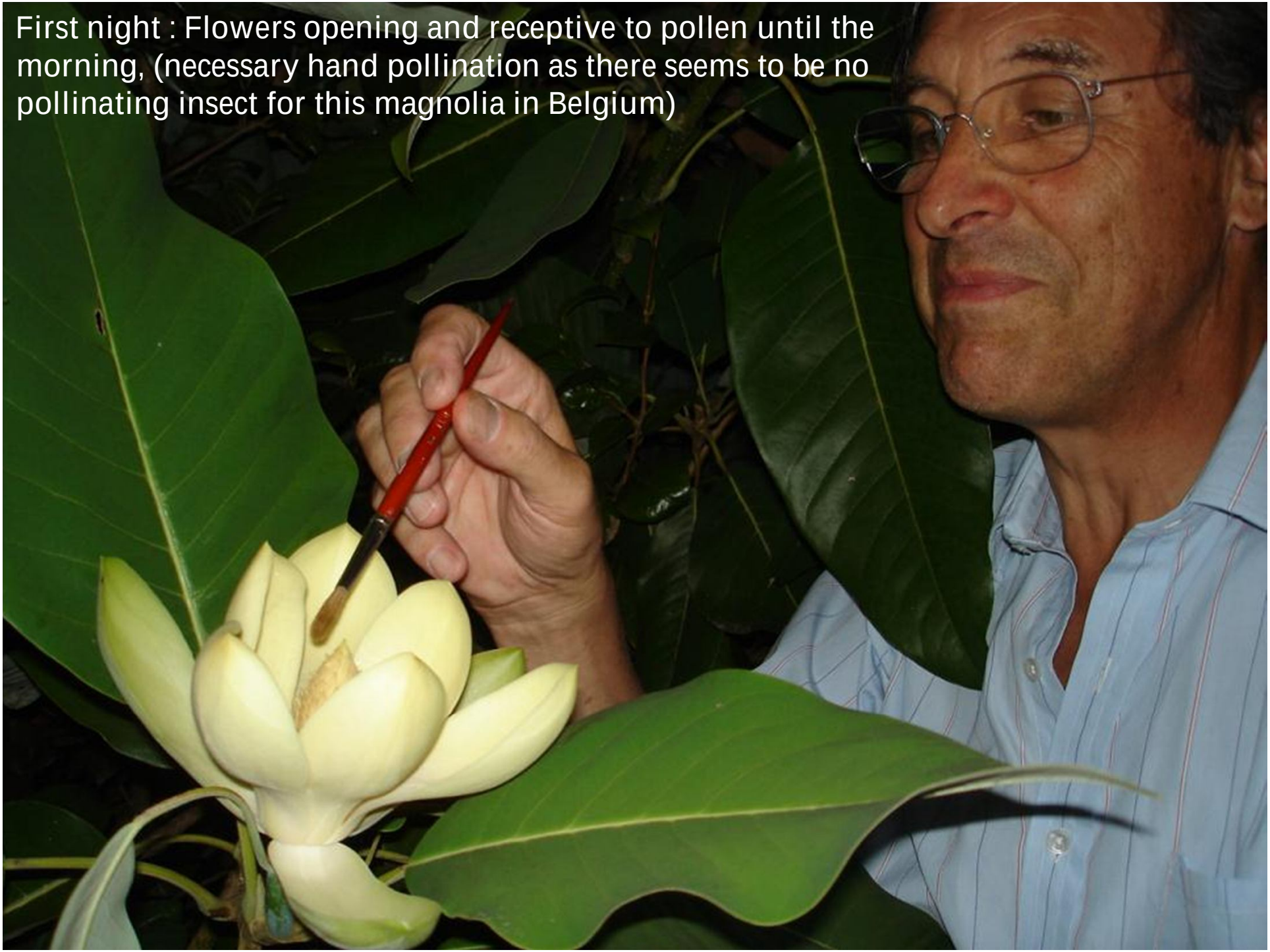
M. virginiana, along water ways , even brackish as here again in Bellengrath Garden, (Alabama) with *Liquidambar styraciflua.* (Note enlarged stump on both)

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)


First night : Flowers opening and receptive to pollen until the morning, (necessary hand pollination as there seems to be no pollinating insect for this magnolia in Belgium)

Morning of the second night: pollen collected for fertilizing the next opening flower.

Section Manglietia

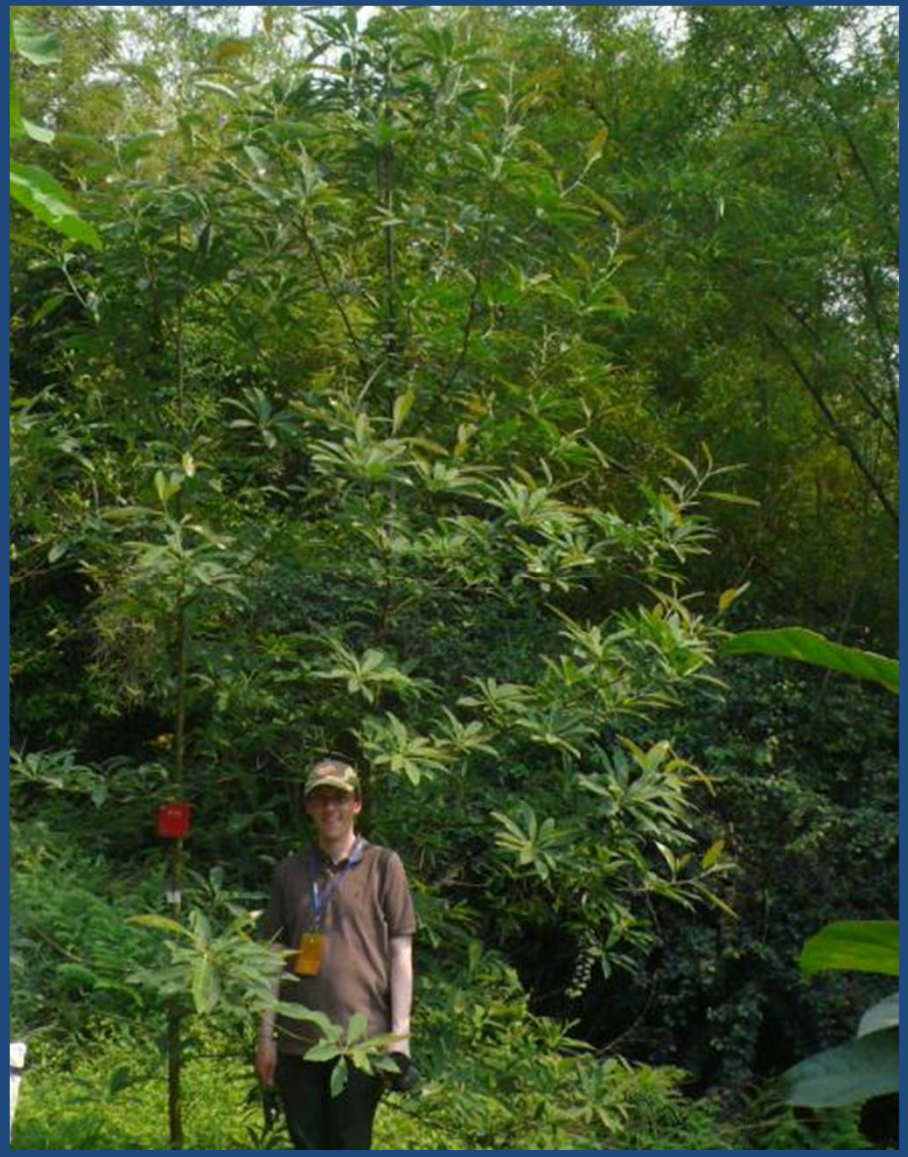
Mainly Asiatic plants, from the Himalaya to China, Vietnam, Laos, Borneo. Previously in the genus ***Manglietia***, these subtropical plants are now merged into ***Magnolia***.

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*.

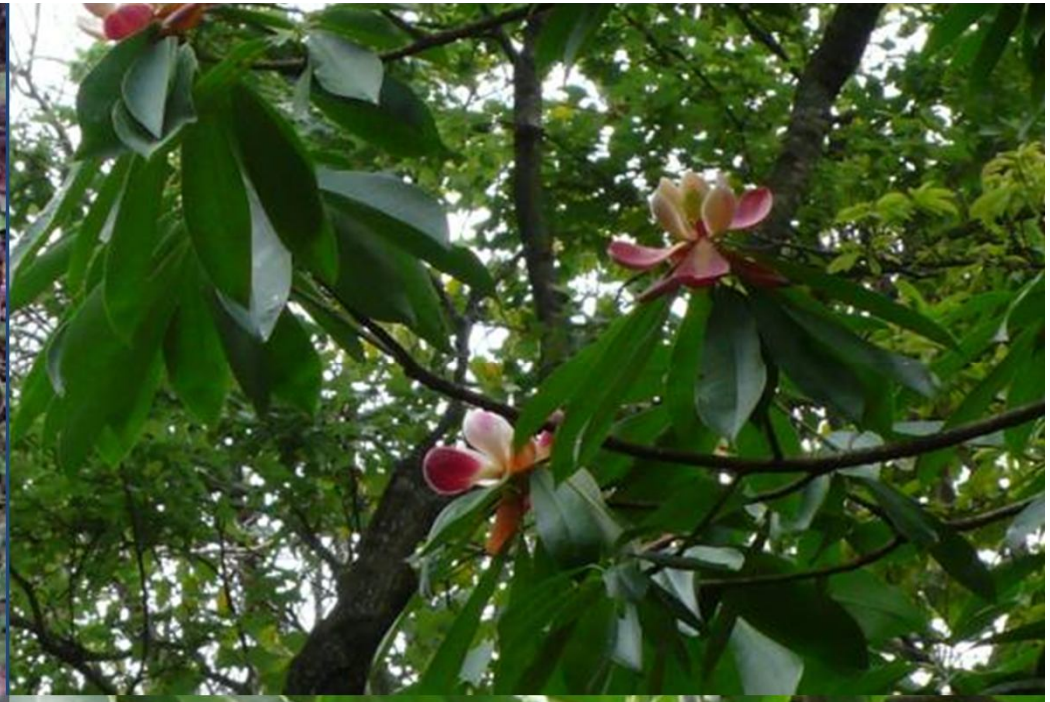


Magnolia decidua first flowering in cultivation, at Kunming BG (Photo Sun Wei-Bang)

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

Magnolia insignis (Zibenshan)

Magnolia insignis (Caerhays garden)




Magnolia insignis
(Photo Dick Figlar)

Subsection Rhytidospermum

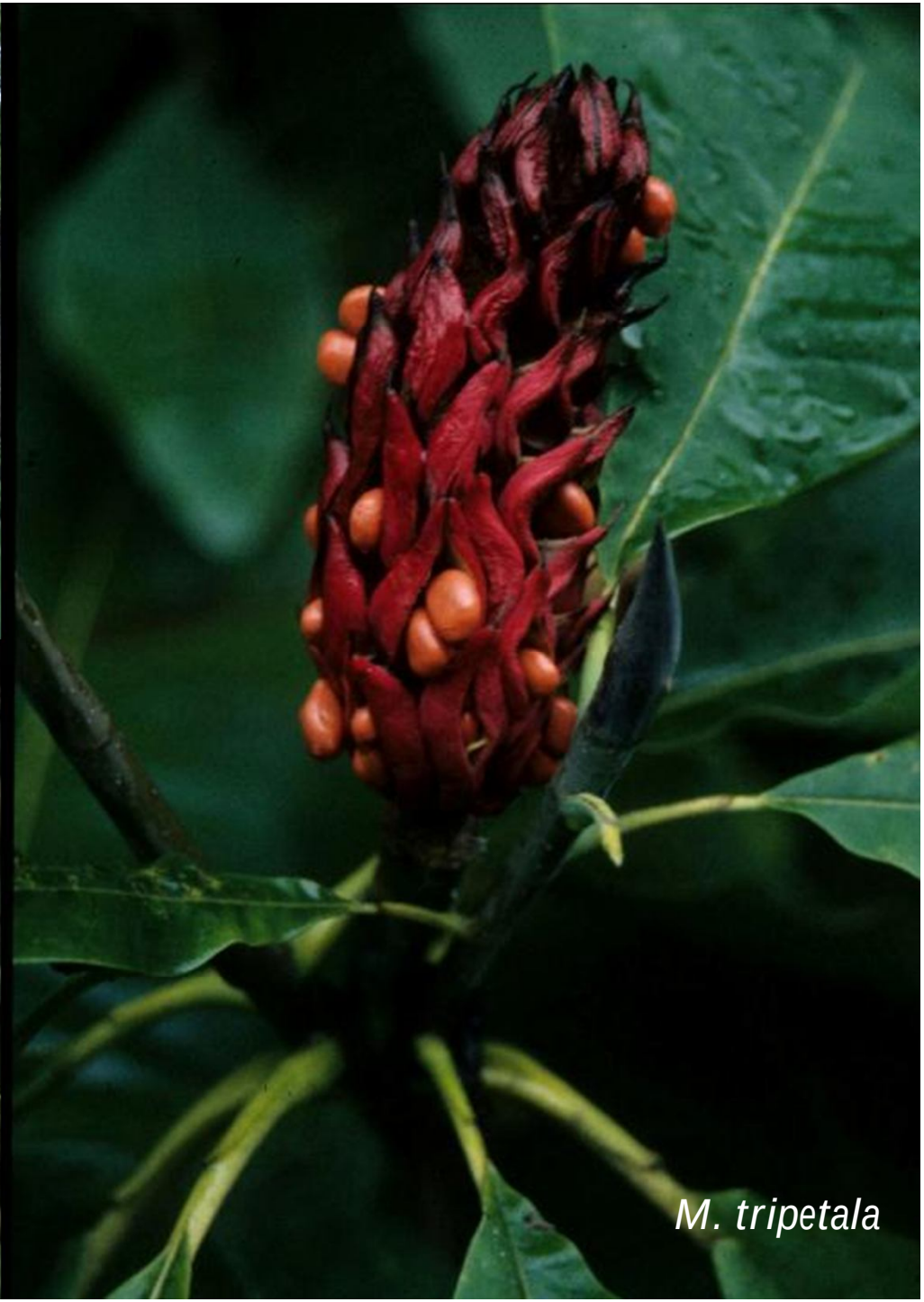
Close to the previous subsection (***Manglietia***) and easily hybridized with the following (***Oyama***)

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


M. tripetala


M. tripetala

Magnolia obovata (syn. *hypoleuca*)


M. obovata (syn. *hypoleuca*)

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

Wind in the leaves of *Magnolia officinalis* (Damao shan)

Magnolia officinalis (Damaoshan, China)


Magnolia officinalis var. *biloba*

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

Subsection Oyama

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

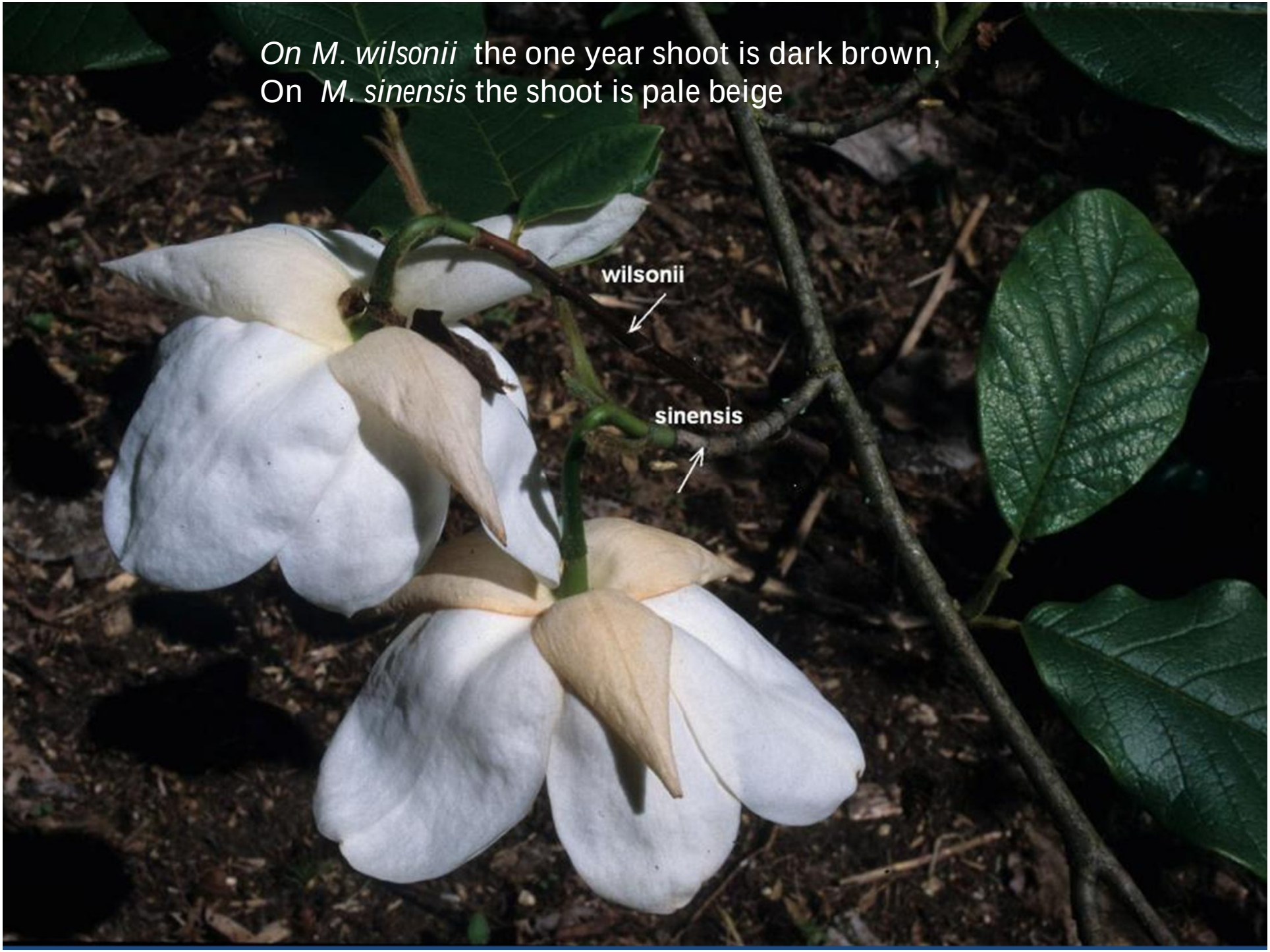
- *M. sieboldii* (Japan, Korea and Northern China)
- *M. wilsonii* (and *M. sinensis)* in China
- *M. globosa* in the Himalaya

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.

Magnolia wilsonii (horizontal flowers)

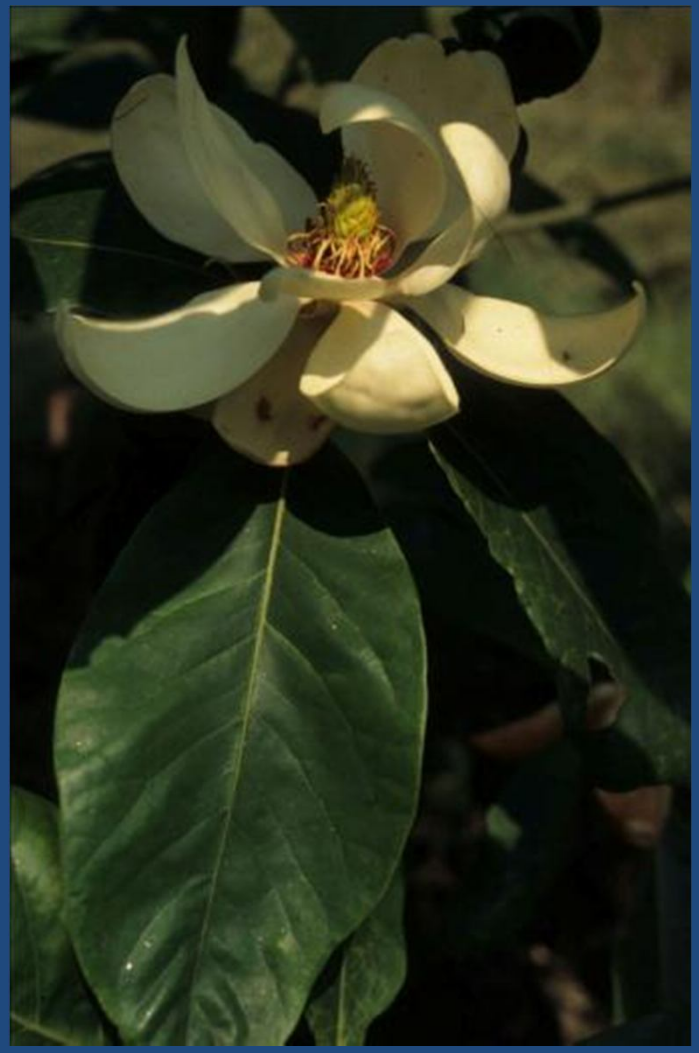
Magnolia sieboldii (vertical flowers)


On M. wilsonii the one year shoot is dark brown,
On *M. sinensis* the shoot is pale beige
wilsonii
sinensis

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

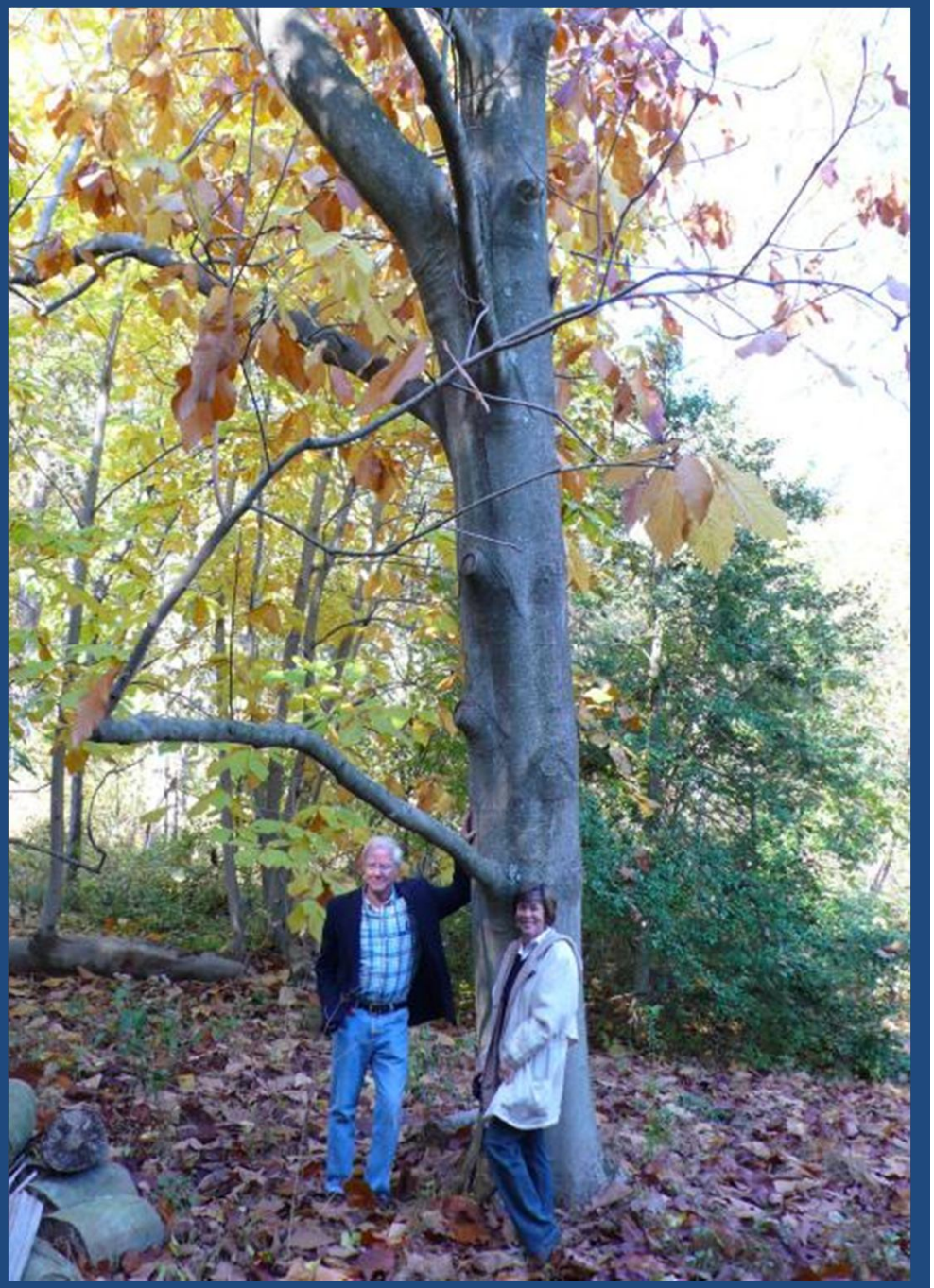
There are many opportunities for crosses and selections.
And they deserve a specialized collection of their own.

At least *M x wieseneri (obovata x sieboldii*) and ‘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.



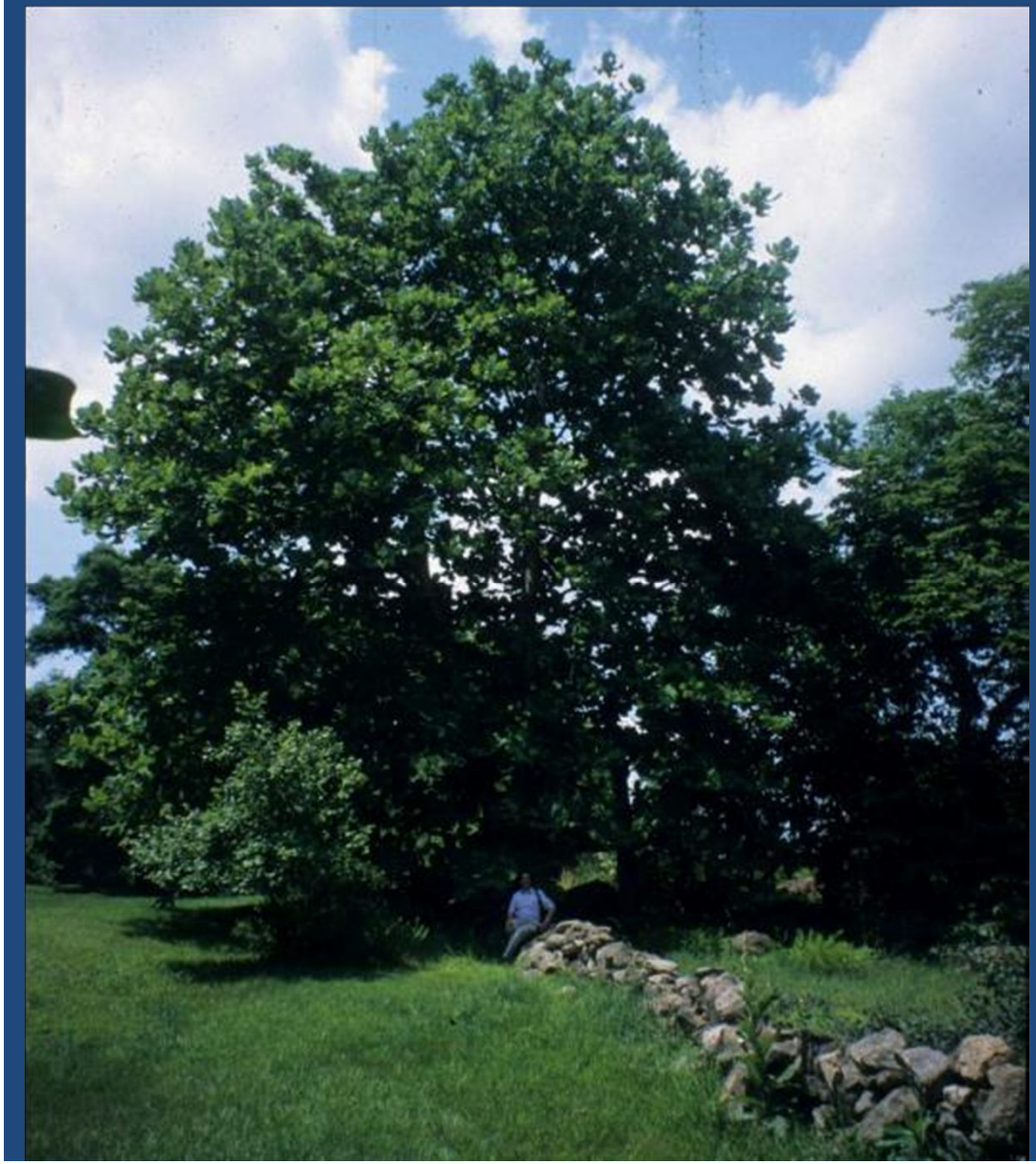
Magnolia fraseri (S. Appalachians, South Carolina) –
(Arboretum Wespelaar 03250-wld-203)

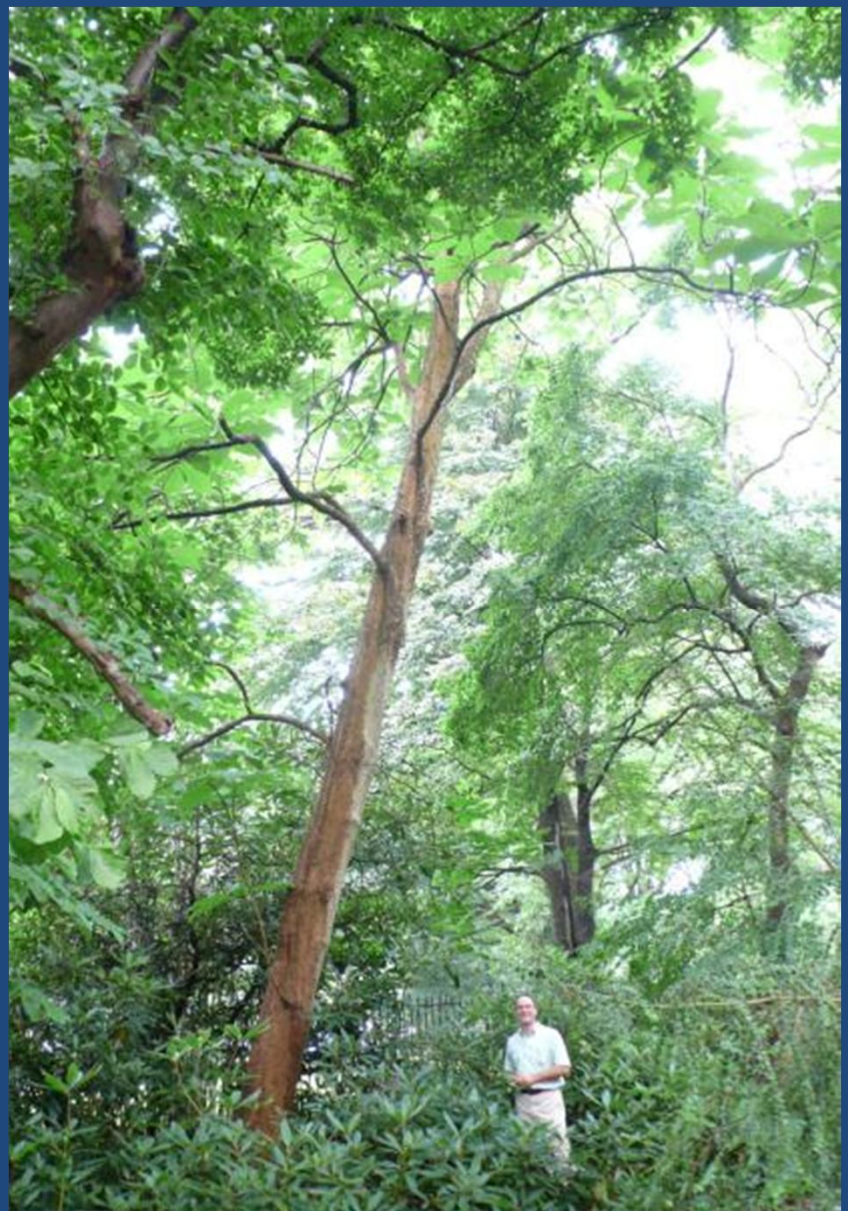
Section Macrophylla

Magnolia 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*

Magnolia campbellii var. *alba,* 3 000 – 3 200 meters, Bhutan

Magnolia campbellii var. alba , with *Rhododendron arboreum* (on the Dochu La, 3200 m, Bhutan)


Magnolia campbellii Raffillii Group

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'.

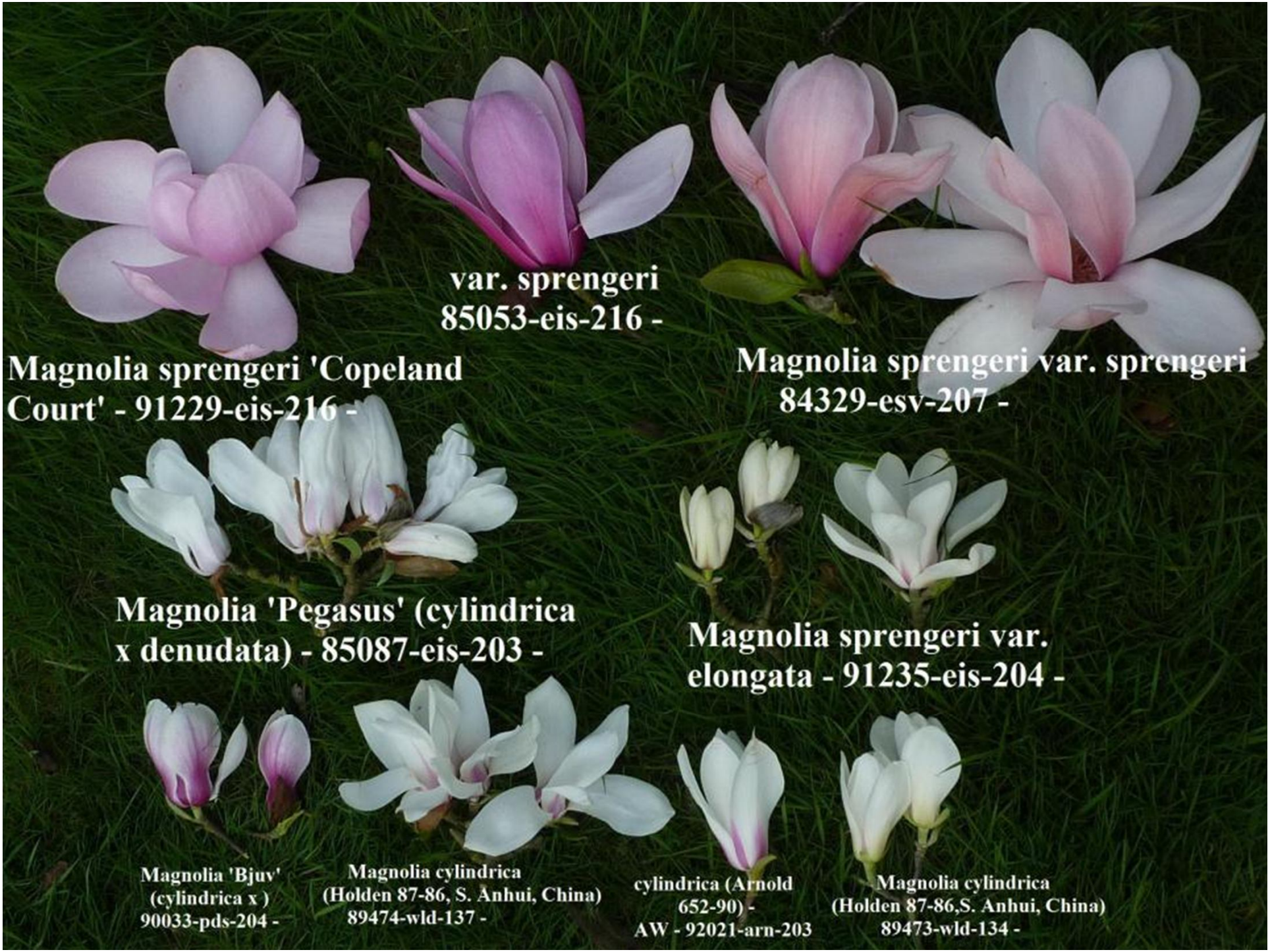
Magnolia sprengeri var. *sprengeri*

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)


All photographs courtesy of Erland Ejder , RHS, April 2012


Magnolia sprengeri var. *elongata*


Magnolia sprengeri var. *elongata* –
Ex Foping Nature reserve, at Morris Arboretum
Photograph by A. Aiello


var. sprengeri
85053-eis-216 -
Magnolia sprengeri 'Copeland Court' - 91229-eis-216 -
Magnolia sprengeri var. sprengeri
84329-esv-207 -
Magnolia 'Pegasus' (cylindrica x denudata) - 85087-eis-203 -
Magnolia sprengeri var. elongata - 91235-eis-204 -
Magnolia 'Bjuv' (cylindrica x) 90033-pds-204 -
Magnolia cylindrica (Holden 87-86, S. Anhui, China) 89474-wld-137 -
cylindrica (Arnold 652-90) - AW - 92021-arn-203
Magnolia cylindrica (Holden 87-86,S. Anhui, China) 89473-wld-134 -

Magnolia dawsoniana

Magnolia sargentiana

Magnolia dawsoniana

Magnolia sargentiana var. *robusta*

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


M. denudata

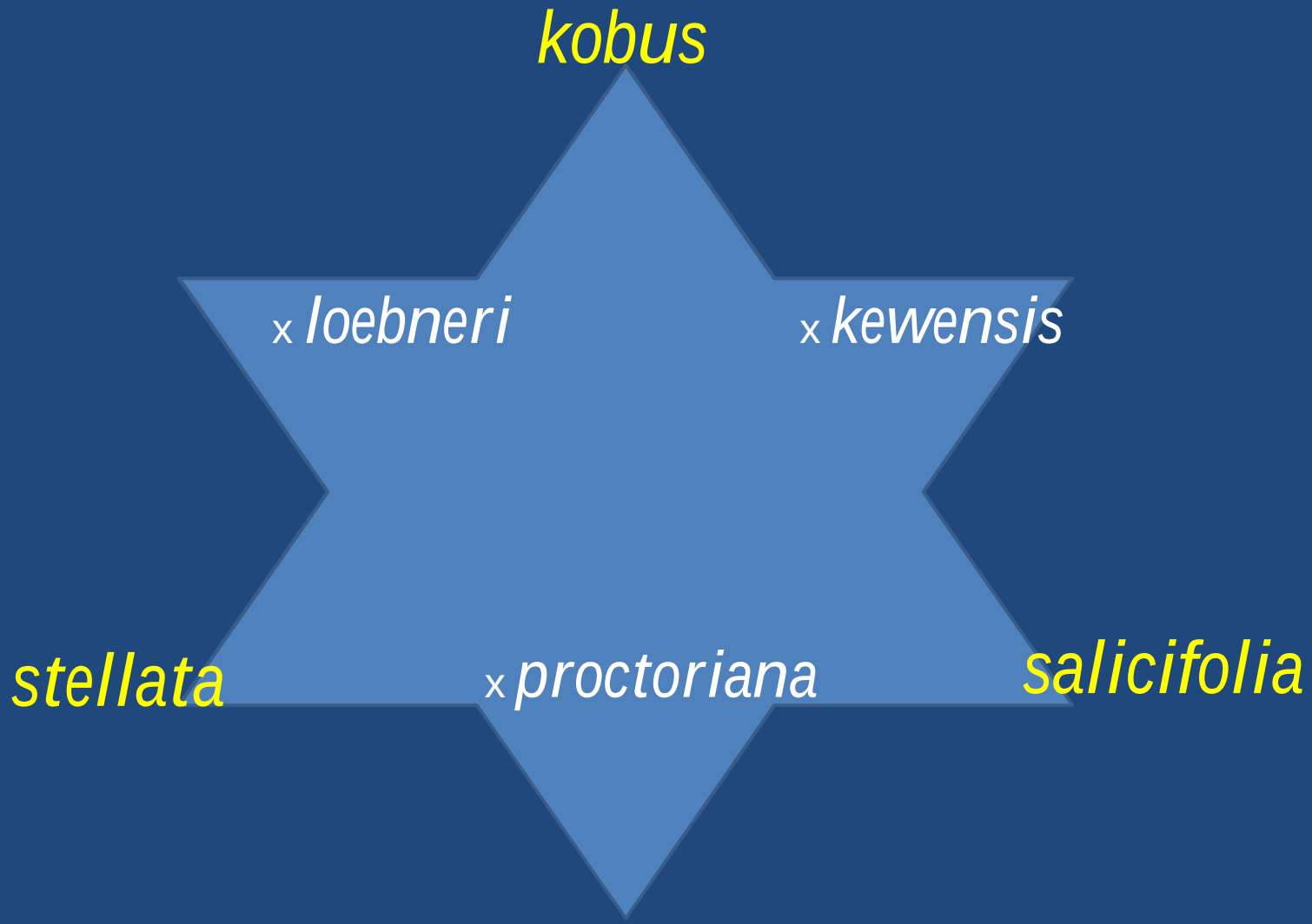

M. liliiflora


M. x soulangeana


M. cylindrica

3 – The Buergeria group

M. kobus, stellata, salicifolia and hybrids




Magnolia kobus


Magnolia stellata
Magnolia salicifolia

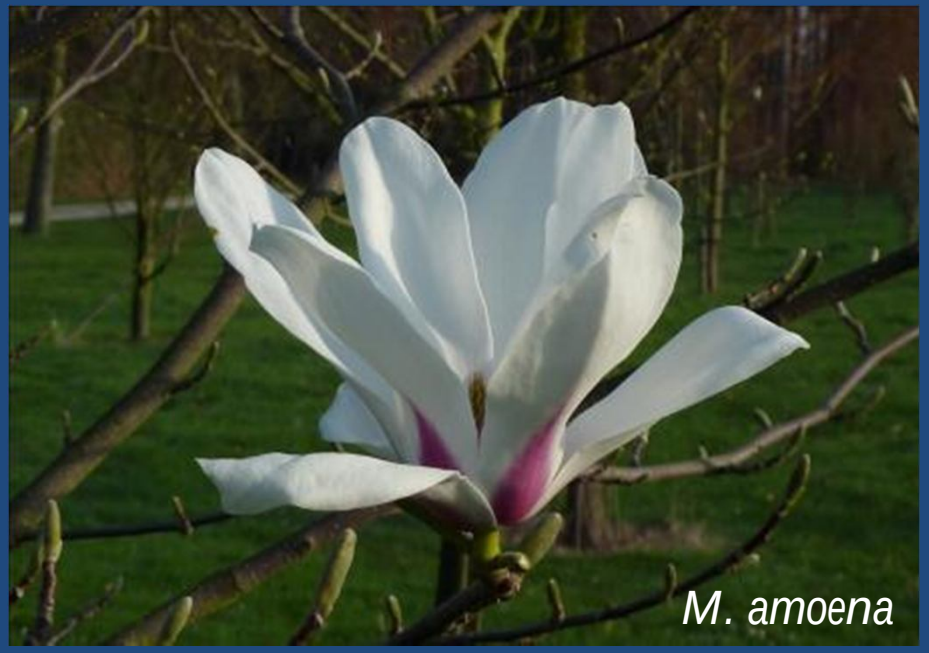

Magnolia salicifolia


Magnolia stellata
'Jane Platt' - 9009
eis-204 -
Magnolia stellata 'Rosea' -
87057-eis-204 -
Magnolia stellata
'Chrysanthemiflora'
90016-rut-204 -
Magnolia stellata
'Shi Banchi Rosea'
03209-rut-204 -
Magnolia stellata
'Keiskei Plena' -
01241-rut-204 -

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.

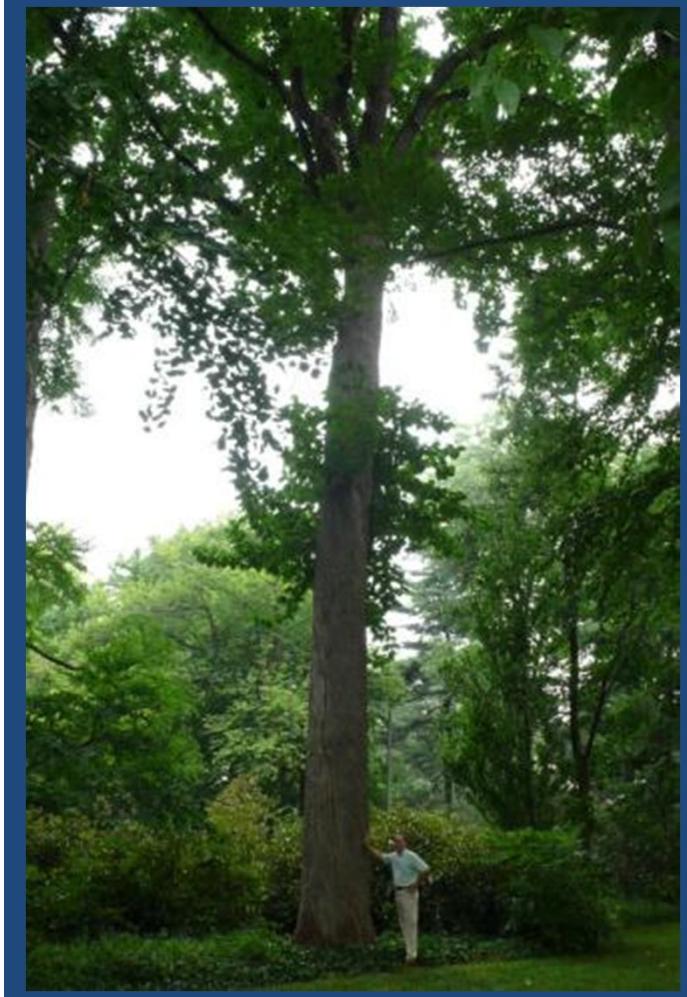

M. amoena


M. biondii


M. zenii

Subsection Tulipastrum

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



Magnolia acuminata var. *subcordata*

Section Michelia

Subsection *Michelia :*
Magnolia cavaleriei, -var. *platypetala, laevifolia, doltsopa, ernestii, faveolata, 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!


Magnolia laevifolia

Not too floriferous in woodland conditions

Magnolia cavaleriei* var. *platypetala - Pickens S.C., USA - (Photo Dick Figlar)

Magnolia doltsopa – Caerhays Castle, Cornwall GB - 2008.0323

Magnolia 'Jack Fogg' (*doltsopa* x *figo*)

Subgenus Gynopodium

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

Magnolia nitida - UK, Cornwall, Caerhaeys C.

A collection of cultivars

It is essential that several gardens establish collections of cultivars, both historic and modern. This is a huge challenge and specialization will be necessary if one wishes to conserve the hundreds of named plants. Essential collections would cover;

The ***soulangeana*** hybrids (*denudata* x *liliiflora*)

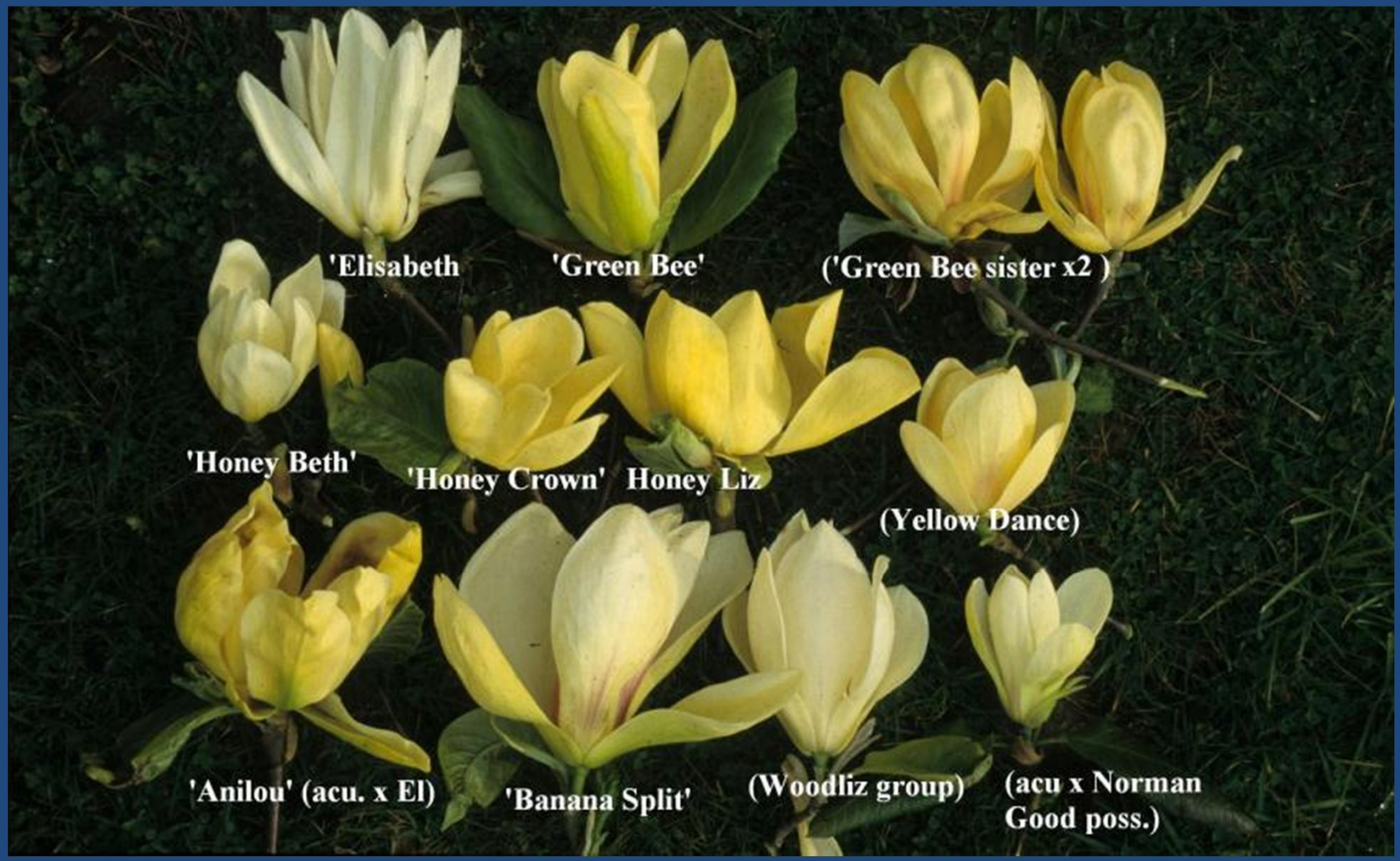
The Gresham hybrids (*veitchii* x)

The Buergeria hybrids (***loebneri, kewensis***, ***proctoriana***)

Hybrids of ***sprengeri, campbellii, sargentiana*** **and** ***dawsoniana.***

Specialized collections by colours

Yellows born from crosses with *M. acuminata* are now numerous and need to be evaluated, improved and possibly conserved



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

Magnolia liliiflora

Magnolia campbellii var. *mollicomata*

Magnolia 'Black tulip'

Magnolia 'Vulcan'


Magnolia ‘Vulcan’ (*liliiflora* x *mollicomata* ‘Lanarth’)

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


Magnolia campbellii var. *alba*


Magnolia stellata


M. ‘Leda’ (*campbellii var. alba x ‘Pegasus’)*


Magnolia ‘David Clulow’


agnolia 'Sybille' ('White Giant' x 'Leda')

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

Good luck to you
and your specialized
collections