

## Magnolias of the Northeast, Part 2

*Stefan Cover*

### *Magnolia kobus*

#### **Common name**

Kobus Magnolia, Kobushi (in Japan).

#### **Other names in literature**

*Magnolia praecocissima*

#### **Description**

A variable species. A small rounded to large upright tree to 75ft tall (22.9m), sometimes multi-trunked, commonly 25–30ft (7.6–9.1m) tall in cultivation. The 3–5in (7.6–12.7cm) wide flowers are abundant on mature plants, white, and have six petal-like tepals. In zones 5–6, flowering occurs before the leaves emerge from mid-April to early May. Leaves are 3–6in (7.6–15.2cm) long, the foliage is medium textured. The seed cones are inconspicuous; the bark is smooth and light gray. A handsome and long-lived tree.

#### **Native range/natural history**

Widespread throughout Japan, but not known from the island of Shikoku. This tree grows in a wide variety of moist forest types from sea level to over 5000ft (1524m) in elevation. Plants from the northern island of Hokkaido are reportedly larger and hardier, and are sometimes distinguished in the literature as the var. *borealis*.

#### **Hardiness**

USDA zones 4–8. One of the hardiest magnolias.

#### **Ornamental value**

The unenlightened sometimes criticize the plant because the flowers are not enormous, and it can be slow to flower when grown from seed. Nonetheless, it makes a spectacular specimen tree. The white flowers contrast nicely with the gray bark and, at a distance, mature plants look like white clouds when in flower, and have a striking air of purity and simplicity. There is a large *M. kobus* at the main entrance of the Arnold Arboretum near the Hunnewell building; to see it in flower is to want it—it's as simple as that. In addition, the bark, flower buds, and foliage are all ornamental assets.

#### **Culture**

As for other magnolias. Wind and exposure resistant, and possesses outstanding hardiness. Tolerant of alkaline soils for a magnolia.

### Cultivars

Not commonly offered. Even the species itself is not easy to find in commercial horticulture. A very similar plant that is often far easier to find is the hybrid *M. × loebneri* 'Merrill,' a cross of *M. kobus* with *M. stellata* developed at the Arnold Arboretum. This forms a medium sized tree [to 40ft (12.2m) tall]] with a broadly rounded crown and dense, kobus-like foliage. Its white flowers have more tepals, but they are close in appearance to the flowers of *M. kobus* and form a beautiful display. It is an outstanding tree that deserves wider planting. When crossed with the closely related *M. stellata*, *M. kobus* is a parent of the *M. × loebneri* group of hybrids, of which 'Merrill' is just an example. These large shrubs or small trees exhibit commendable hardiness and tolerance of exposure. The following are sometimes available in commercial horticulture. 'Ballerina' is an excellent plant that has enormous numbers of pure white, stellata-like blooms having many tepals. Its foliage is also stellata-like, but it grows to 30ft (9.2m) tall—far larger than most Star Magnolias. 'Donna,' an outstanding selection by Harry Heineman, is a large shrub with pure white, elegant flowers to 7in (17.8cm) diameter that are intermediate between those of *M. stellata* and *M. kobus*. Another important hybrid is 'Leonard Messel.' This forms a tree to 25ft (7.6m) tall with fine textured, stellata-like foliage. The flowers are also stellata-like, with only 12–15 tepals, which gives them a spidery appearance. They are pale pink to white on the inside, but the outer surfaces of the tepals have a prominent red-pink stripe running from base to apex. The overall effect is that of a gorgeous light pink, and they are borne abundantly, even on very young plants. This plant should be in every magnolia collection.

### Problems

In general, a rugged, adaptable magnolia. Flowers early, so late frosts may ruin the display. Seedlings are sometimes slow to flower, but worth the wait. Grafted or cutting raised plants—if you can find them—will flower earlier.

## *Magnolia liliiflora*

### Common names

Lily Magnolia, Mulan ("Woody Orchid" in China).

### Other names in literature

*Magnolia quinquepeta*

### Description

A large, spreading shrub, ultimately 10–15ft (3–4.6m) tall and wide, with small ovate, dark green leaves, and red-pink to dark red-purple vase-shaped flowers with lighter, sometimes white interiors, that appear over an extended period in late spring (mid-May to June and sporadically to late August in USDA zone 6). Fall color is nonexistent and the seed cones are inconspicuous.

**Native range/natural history**

This plant is thought to be native to central and sw China, but whether or not natural populations still exist is uncertain. The *Flora of China* (draft) lists it from "Slopes, forest edges; 984–5249ft (300–1600m) Fujian, Hubei, Sichuan, and NW Yunnan." It is widely grown throughout China, Korea, and Japan as an ornamental. Unlike most Magnolias, this shrub is not a true forest plant. It is apparently adapted for life at the forest edge in sunny, moist thickets.

**Hardiness**

USDA zones 6–8. Some cultivars may do well in zone 5B.

**Ornamental value**

An attractive large shrub valuable for its late, red-purple flowers and long flowering period. A good magnolia for smaller gardens.

**Culture**

As for other magnolias. Less shade tolerant than most; substantial sun is necessary for abundant flowering.

**Cultivars**

Only two are offered with any frequency by nurseries in the United States. 'Nigra' and 'O'Neill' are excellent plants that have dark red-purple flowers and differ in relatively minor respects. They are reported to be hardier than "typical" *M. liliiflora* and should be tried in zone 5. Other cultivars are available from European nurseries. *M. liliiflora* has been used extensively in hybridizing. Most famous of these are the *M. X soulangeana* hybrids, described under *M. denudata*. A series of crosses with *M. stellata* made at the National Arboretum are called the "Little Girls." These are dense, medium to large shrubs with bright red-pink to red-purple flowers that appear a bit earlier than in *M. liliiflora*. All like direct sun, are rock hardy in zone 5, and there are reports of success in zone 4 as well. In my opinion, the best of these are 'Ann,' 'Betty,' and 'Susan.' 'Ricki,' 'Jane,' and 'Pinkie' are sometimes offered in commercial horticulture, but their flower color is not as intense or distinctive, in my opinion. Another fine hybrid is *M. 'Marillyn,'* a cross with *M. kobus*. It forms a very hardy shrub or small tree with somewhat coarser foliage than *M. liliiflora*, but good, large, dark purple flowers. *M. liliiflora* was also employed as a parent in many of the "Gresham hybrids," named after their creator, Todd Gresham. These are small to medium sized trees with light to dark red-purple flowers. Two of these that succeed in zone 6 New England are 'Royal Crown' and 'Full Eclipse.' *M. liliiflora* is also a parent of 'Galaxy' and 'Spectrum,' discussed under *M. sprengeri*.

**Problems**

Vulnerable to occasional late season mildew on the leaves, and it may partly defoliate during severe drought years. The mildew is never as bad as in even the best of lilacs, but it can make the leaves unattractive. Unfortunately, the tendency to foliar mildew is transmitted to varying degrees to *M. liliiflora* hybrids. Still, a very worthy ornamental shrub.



## ***Magnolia macrophylla***

### **Common name**

Bigleaf Magnolia, Cowcumber.

### **Other names in literature**

None.

### **Description**

Almost indescribable, but here goes anyway... A medium sized tree with the largest simple (as opposed to compound) leaves, and flowers, of any magnolia, indeed any tree in North America. The leaves are enormous, usually 20–30in (50.1–76.2cm) in length, but some can reach 36in (91.4cm). They are apple green with contrasting whitish undersides, and are held in “whorls.” The strongly fragrant white flowers are 10–14in (25.4–35.6cm) in diameter (let me repeat that—10–14in (25.4–35.6cm)!) and generally have some purple spotting on the inner bases of the tepals. Some populations in southern Mississippi are known to have pure white flowers. They appear in early to mid June in USDA zones 5–6. The spheroidal seed cones are conspicuous, the size of a softball in some clones, and open to reveal salmon-pink seeds. The tree presents two different growth forms, depending on where it is grown. Woodland trees tend to be single trunked, tall, and narrowly upright, with an open canopy. Open-grown trees often form a short trunk with several upwards ascending limbs, and a broadly rounded, dense canopy. Seedlings flower at 10–15 years old, earlier if the plant gets good light and good growing conditions. This species is closely related to the smaller *Magnolia ashei*.

### **Native range/natural history**

*Magnolia macrophylla* is a rare tree occurring from extreme southern Ohio south to Alabama and Mississippi, with isolated populations in the Carolinas, Georgia, Louisiana, and Arkansas. It is usually found on moist, protected slopes (often north-facing) in creek valleys or ravines, often in areas with soils of limestone origin and a more or less neutral pH. In nature it is a subcanopy tree 30–40ft tall (9–12m) adapted to life at the lower edges of the forest canopy. Occasionally, however, it penetrates the canopy and can become 80–100ft tall (24.4–30.5m)—a most impressive sight. Together with *M. ashei*, and the Mexican *M. dealbata*, *M. macrophylla* belongs to an extremely ancient lineage within the Magnoliaceae that occurs only in the New World.

### **Hardiness**

USDA zones 5–8.

### **Ornamental value**

A tree of exotic, tropical appearance. To see a well-grown, mature specimen is to want one, even if one's garden is the size of a postage stamp. A specimen tree with unique character for protected areas in partial or light shade. Can be grown in full sun if moisture is reliable, and if sheltered from strong winds. The flowers are awe inspiring to say the least, but are most effective

where they can be viewed from above. Garden designers and woody-plant “gurus” are often critical of this species, because it is “difficult to grow” and can overpower small spaces because of its large size and coarse texture. This is nonsense. The plant grows like a weed if its cultural requirements are met, and nearly any tree can “overpower” a space—if the space is small enough. Use sense in placement and don’t blame the innocent plant is what I say. In its proper setting, this is one of the truly magnificent trees of the world and it deserves to get credit for that. *M. ashei* offers many of the qualities of *M. macrophylla* on a significantly smaller scale.



*Magnolia ashei*. Photographed by Don King in his garden.

#### **Culture**

As for other magnolias. Requires rich, moist, but not soggy soil and some protection from strong winds. Growth can be moderate to rapid under favorable conditions.

#### **Cultivars**

None commonly offered, none needed really.

#### **Problems**

A surprisingly resilient and trouble-free plant. Broken branches and tattered foliage may be the price if planted without adequate protection. Not particularly tolerant of poor soils or drought.

### ***Magnolia obovata***

#### **Common names**

Japanese Umbrella Magnolia, Japanese Bigleaf Magnolia, Honoki (in Japan).

#### **Other names in literature**

*Magnolia hypoleuca*

#### **Description**

A large, often impressive forest tree to 100ft (30.5m), commonly 40–60ft (12.2–18.3m) tall in cultivation, with a narrow to broadly rounded crown. Leaves are large [to 24in (61cm) long], ovate, with whitish undersides, and occur in horizontally held whorls. This creates a coarse-textured, tropical-looking foliage. The flowers are 8–10in (20.3–25.4cm) wide, white, with prominent red stamens, powerfully fragrant, and appear at branch tips with and after the leaves in late May and June in New England. The bark is smooth and gray.

The seed cones are amazing, prehistoric looking, upright to pendant, and dark red with numerous spine-like projections (called styler beaks).

**Native range/natural history**

Japan: widespread throughout, growing in moist mountain forests from 1800–5400ft (546.6–1645.9m) in elevation. It also occurs on the Kuril Islands in the Sea of Japan that now belong to Russia. The wood is used extensively by the Japanese lumber industry. Note: recent genetic studies have shown that *M. obovata* is closely related to the Chinese *M. officinalis* and *M. biloba*, and to the North American *M. tripetala*.

**Hardiness**

USDA ZONES 5B–8.

**Ornamental value**

An impressive specimen tree providing a distinctive tropical character to the garden. The fragrant flowers are wonderful in the spring, the foliage is attractive all summer, and the bizarre seed cones are a conversation topic in the fall.

**Culture**

As for other magnolias. *M. obovata* prefers some protection provided by other trees and dislikes poor, droughty soils. Under favorable conditions, however, growth can be 2–3ft (0.6–0.9m) a year. Tolerates light or partial shade when young, but needs more direct sunlight for good flowering when older.

**Cultivars**

None currently offered in the USA.

**Problems**

None.

***Magnolia officinalis* and *Magnolia biloba*.****Common names**

None.

**Other names in literature**

*Magnolia biloba* is usually referred to as *M. officinalis* var. *biloba*.

**Description**

These two species are closely related and until recently were regarded as different forms of *M. officinalis*. Recent studies have shown them to be morphologically and genetically distinct. Both are medium to large forest trees [to 80ft (24.4m) in nature]. In cultivation they commonly reach 30–40ft (9.1–12.2m). They have large leaves 12–24in (30.5–60.9cm) long held horizontally in whorls; those of *M. biloba* have a distinctive notch at the apex. The flowers are strongly fragrant, white, and appear at branch tips after the leaves in late May and early June. The large seed cones are bright red-pink or red.



**Native range/natural history**

Both species are widely distributed and cultivated in central China, but natural populations are thought to be scarce. This is because the bark is used in traditional Chinese medicine, and wild trees are killed when the bark is harvested. The good news is that the plants are now cultivated extensively and this may allow the re-establishment of wild populations. Little is known about their natural histories, or even their geographic distributions. The Flora of China (draft) lists *M. officinalis* from "Forests; 984–4921ft (300–1500m). SE Gansu, NE Guizhou, SE Henan, W Hubei, SW Hunan, S Shaanxi, and E and S Sichuan." *M. biloba* [there treated as a variety] is listed from "Forests; 984–4953ft (300–1400m). Anhui, Fujian, N. Guangdong, Guangxi, Hunan, Jiangxi, and Zhejiang." Ecologically, these trees are probably very similar to the Japanese *M. obovata*, or the North American *M. fraseri*: gap-colonist trees in moist, rich mountain forests.

**Hardiness**

USDA ZONES 5B–8.

**Ornamental value**

Both species are sizable, handsome trees that provide a striking tropical accent in the garden. Young trees have a relatively narrow, upright growth form. Older trees, particularly when open grown, develop a broader, more rounded canopy. The flowers are attractive and fragrant, and the seed cones provide additional interest in the autumn.

**Culture**

As for other magnolias. Both species grow well in part or full sun if moisture is reliable, but also perform well in light or partial shade.

**Cultivars**

None.

**Problems**

None.

***Magnolia pyramidata*****Common name**

None.

**Other names in literature**

*Magnolia fraseri* var. *pyramidata*

**Description**

A small to medium sized tree with narrow upright form when young, and a somewhat broader, rounded crown in maturity. The leaves are 5–8in (12.7–20.3cm) long, have a unique shape, and are held horizontally in whorls. In shade or partial shade this creates an open, airy canopy supported by an orderly and distinctive branch architecture. In full sun, and at maturity, the

canopy is denser, and the architecture of the crown less regular. The pungently fragrant flowers are 5–7in (12.7–17.8cm) wide, white, with long, narrow tepals, and appear at the branch tips as the leaves emerge in mid to late May in zones 5–6. In cultivation, normally a small tree 20–30ft (6.1–9.1m) tall, but 60ft (18.2m) tall specimens at the Henry Botanic Garden near Philadelphia are a reminder of what the plant can do when happy.

#### **Native range/natural history**

A rare tree found in small, scattered populations in rich forests along the Coastal Plain from South Carolina to Mississippi, with an isolated population in east Texas. It is often found on the upper slopes of moist creek valleys, where it is a subcanopy or gap-colonizing tree. *M. pyramidata* is a close relative of the southern Appalachian *M. fraseri*. These species together form a unique lineage within the genus *Magnolia* that occurs only in North America.

#### **Hardiness**

Seems fine in USDA zone 5B once established. Often listed as zone 6–8. Barry Yinger, who rears both in southern Pennsylvania, says that plants from the Texas population are hardier than plants from the Florida Panhandle. Plants from Florida are doing well in my zone 5B frostpocket garden.



*Magnolia sprengeri* (84329). Photographed at Herkenrode by Philippe de Spoelberch.

#### **Ornamental value**

One of the secret treasures of the North American flora, *M. pyramidata* is very seldom seen in cultivation. It makes a wonderful small woodland or forest-edge tree in light or partial shade, and adds character to the garden through its distinctive leaves, architecture, and flowers. The floral effect is beautiful; the flowers look like white stars held upright at the ends of the branches, and are particularly effective against a dark woodland backdrop. This plant has an exotic quality all its own.

#### **Culture**

As for other magnolias. Will grow in full sun if moisture supply is reliable, but thrives in partial sun or high light shade. Sensitive to drought and to soggy soils; otherwise surprisingly tough.

#### **Cultivars**

None. Very rarely offered in commercial horticulture.



**Problems**

None, if cultural requirements are met. Perhaps a little slow to establish in zone 5B, but well worth the effort.

***Magnolia salicifolia*****Common names**

Anise Magnolia, Japanese Willow-Leaf Magnolia

**Other names in literature**

None.

**Description**

Variable: in nature, a large shrub to medium sized tree 50ft (15.2m) tall. Most commonly seen as a small, narrowly upright tree to 30ft (9.1m). The flowers are white, sometimes with a faint pink stripe on the outsides of the six petal-like tepals, 3–5in (7.2–12.7cm) wide, and occur in large numbers on mature plants. In USDA zones 5–6, flowering occurs from late April to early May before the leaves emerge. The foliage is a pleasing dark green and elegantly fine textured. The bark is silvery gray. Twigs have a strong spicy scent when the bark is cut. The seed cones are inconspicuous.

**Native range/natural history**

Japan, Honshu. Forests of moist mountain slopes up to 6000ft (1828m) in elevation.

**Hardiness**

USDA zones 5–8.

**Ornamental value**

According to some, the floral display is not quite as stunning as in some other Asiatic deciduous Magnolias but in the opinion of many, it has a delicacy and purity all its own. An excellent and refined specimen tree or woodland border tree. Foliage, bark, flower buds, and growth form are additional ornamental assets.

**Culture**

As for other magnolias. Growth rate is moderate to rapid under favorable conditions.

**Cultivars**

It is difficult to find true *M. salicifolia* for sale in this country. Many cultivars are believed by the Magnolia mafia to be hybrids with *M. kobus*, but do offer the traits of true *salicifolia*. The following are sometimes offered for sale. 'Else Frye' and 'Iufer' form small trees with relatively large flowers with pink and reddish-tipped stamens, respectively. 'W.B. Clarke,' 'Kochanakee,' and 'Miss Jack' form larger, faster growing trees with abundant white flowers, sometimes with a faint pink tinge at the base. All are great plants. Another special plant often available is 'Wada's Memory.' Clearly a hybrid with *M. kobus*,

'Wada's Memory' forms a large tree (eventually), with dense, attractive, dark green foliage and burgundy new growth. The tree is narrowly upright when young, but becomes broadly pyramidal with age. The flowers are large [7in (17.8cm) wide], white, and the petals droop during the flower's development. Some criticize the plant for its drooping flowers, but they create a unique and graceful effect, in my opinion. Combined with the large numbers of flowers produced, the floral display is quite striking. Fallen tepals can create the illusion of snow cover under large specimens. It is a wonderful plant. All of these are hardy to zone 5B.

**Problems**

All forms flower relatively early, so frost pockets and southern exposures should be avoided. Otherwise relatively trouble-free if cultural requirements are met.

***Magnolia sieboldii*****Common name**

Oyama Magnolia

**Other names in literature**

*Magnolia parviflora*

**Description**

A medium to large spreading shrub, rarely a small tree. Usually 6–15ft (1.8–4.6m) tall with equal or greater spread. Flowers are 3–4in (7.6–10.2cm) in diameter, white, with a prominent pink, to rose-red, to burgundy (rarely yellow) ring of stamens, and are nodding to pendant in presentation. They appear over several weeks in late May and in June when the leaves are partly to fully emerged. The foliage is medium textured, but not dense. Leaves are broad, 4–7in (10.2–17.8) long, and medium green. The bark is light brown. Seed cones are pendant, turning rose-red in the fall.

**Native range/natural history**

Japan, Korea, NE China, with a disjunct population in eastern China. The Flora of China (draft) lists it from "Forests; 5249–6562ft (1600–2000m). Anhui, N Fujian, Guangxi, Jiangxi, Liaoning, and Zhejiang." *M. sieboldii* is a forest understory plant, and occurs commonly along stream banks in mountain forests. Japanese plants are segregated as the subsp. *japonica* and are characterized by smaller size, less upright growth, and paler stamens (often pink, sometimes yellow). Korean and Chinese plants (subsp. *sieboldii*) are larger, more upright and generally have darker stamens, often rose-red to burgundy.

**Hardiness**

USDA zones 5–7, some reports of success in zone 4. Does not like hot summers, and is thus unhappy in the deep South.

**Ornamental value**

A refined, uncommonly elegant large shrub for woodland and semi-open gardens. The flowering habit is unique and the red-pink seed cones are a bonus in the fall.

**Culture**

As for other magnolias. Prefers high, light shade or partial shade with some protection from afternoon sun.

**Cultivars**

The species is moderately common in commercial horticulture. 'Colossus' is a hexaploid form developed by August Kehr that is rated highly by some magnolia experts for its reputed larger leaves, flowers, and increased tolerance of drought and direct sun. In my experience, the stamens of 'Colossus' are rose-pink, and are not as attractive as those on plants with darker stamens. Some cultivars are occasionally sold that offer semi-double flowers, sometimes with reddish tips to some of the tepals. These include: 'Michiko Renge,' 'Harold Epstein,' and 'White Flounces,' a good selection by Harry Heineman. I much prefer the straight species myself, but these unusual forms are the objects of what is almost a cult among some. Plants from Korea and China have darker stamens than those from Japan, and thus the flowers are more striking. Try to get plants of Korean origin if possible; plants from China are not yet available. A hybrid with *M. macrophylla* created by August Kehr (called "20-1") has recently been made available by Fairweather Nursery in New Jersey. The growth form seems *macrophylla*-like, the leaves are large, elongate, and sieboldii-like, and the flowers are 6in (15cm.) in diameter, upright, and pure white with a ring of reddish stamens. An attractive and promising plant, in my opinion.

**Problems**

None, once established in a good spot. Young plants are sensitive to drought and must be watered attentively the first year or two.

***Magnolia sprengeri*****Common name**

None.

**Other name in literature**

None.

**Description**

This species is presently thought to occur in two forms. The var. *sprengeri* is typically a medium sized tree 30-60ft (9.1-18.2m) tall, with a broad, rounded crown when grown in the open. The 8in (20.3cm) diameter flowers have 12 tepals and are rich pink or even red-purple in color, and lighter on the inside. They appear before the leaves in late April or early May in USDA zones 6-7. The leaves are 5-8in (12.6-20.3cm) long, dark green and form a medium textured foliage. The var. *elongata* forms a smaller, bushier tree with white



flowers that sometimes have a pink basal flush. The leaves are longer and narrower than those of the var. *sprengeri*. The relationship between these two forms is poorly understood, and it is possible that additional research may reveal them to be separate (though closely related) species.

#### **Native range/natural history**

Broadly distributed in central and southwestern China, but apparently not common. The Flora of China (draft) lists it from "Forests or thickets; 4265–7874ft (1300–2400m). S Gansu, SW Henan, W Hubei, NW Hunan, Shaanxi, E and NE Sichuan." Virtually no information is available concerning the natural history of either form of the species.

#### **Hardiness**

Var. *sprengeri* is often listed as USDA zones 6–8; the var. *elongata* is rumored to be hardier, but I have seen no documentation of this. The var. *sprengeri* grows well south of Boston along the coast and should likewise flourish in the warmer parts of southern New England. I have not yet seen 'Diva' grown successfully in zone 5, but some forms of *M. sprengeri* may prove to be hardy there.

#### **Ornamental value**

Spectacular specimen trees, beautiful in flower and attractive in all other seasons. The seed cones are large and pink when ripe, and provide additional interest in the autumn. Plants cultivated in Europe and North America stem from a single seed collection in China, brought to Britain by E.H. Wilson in 1902. Apparently seeds from two or more plants were mixed accidentally because the seeds gave rise to several white flowered trees (var. *elongata*) and a single pink-flowered tree (var. *sprengeri*). The original pink-flowered plant is referred to as *M. sprengeri* 'Diva' (= goddess). 'Diva' is perhaps the most spectacular of the hardy Asian Magnolias. The gorgeous, rich pink flowers reach 8in (20.3cm) in diameter, occur abundantly on mature plants, and create a stunning display in early May in zone 6. The variety *elongata* is not available in the USA as far as I know, but is also an excellent ornamental tree.

#### **Culture**

As for other magnolias.

#### **Cultivars**

'Diva' has given rise to a number of seedlings that have been given cultivar names, and which may or may not be hybrids. Two are sometimes available in the USA. 'Eric Savill' has mind boggling red-purple flowers (sometimes with slightly crumpled tepals), and 'Burncoose' is said to be as good or better. Both grow well where 'Diva' thrives. Other *sprengeri* forms are available from European nurseries. 'Diva' has also been used extensively in hybridizing. The most important of these hybrids for New England are 'Galaxy' and 'Spectrum,' both crosses with *M. liliiflora*, and 'Big Dude,' a cross with *M. × soulangeana* 'Picture.' 'Galaxy' forms a pyramidal tree 30–40ft (9.1–12.2m) tall with abundant red-purple to pink flowers 6–8in (15.2–20.3cm) in diameter, held upright on the branches. It is fully hardy in zone 5. 'Spectrum'

is a sister seedling with larger, deeper colored flowers that forms a broadly rounded small tree and it is hardy to zone 5B. Magnoliaphiles are divided with respect to 'Galaxy' and 'Spectrum.' Many prefer the larger, deeper colored, more vase-shaped flowers of 'Spectrum,' but 'Galaxy' counters with its superior growth form, foliage texture, and hardiness—plus its flowers have nothing to apologize for either. These hybrids are among the most drop-dead gorgeous trees you can grow in a zone 5–7 garden, and both flower later than 'Diva,' which provides additional protection against late frosts. The unfortunately named but spectacular 'Big Dude' forms a broad, medium sized tree, has enormous flowers 10–14in (25.4–35.6cm) in diameter, purplish pink at the base and shading to white at the tips of the tepals on the outside, white on the inside, and it is zone 5 hardy. This plant is highly regarded by many Magnolia experts.

**Problems**

None in particular. Early flowering, so late frosts may ruin the flower display some years.

***Magnolia stellata*****Common name**

Star Magnolia

**Other names in literature**

*Magnolia kobus* var. *stellata*, *M. tomentosa*

**Description**

A dense multi-stemmed shrub or single-trunked tree, commonly 10–15ft (3–4.6m) occasionally 20ft (6m) tall and sometimes as wide. The abundant flowers emerge before the leaves, are 3–5in (7.6–12.6cm) in diameter, range from white to pink, and have 12–50 narrow tepals. In zones 5–6, flowering occurs from mid-April to early May. The foliage is dense, medium green, and very fine textured for a magnolia. For many years *M. stellata* was thought by most to be a variety of *M. kobus*. Field research has demonstrated that *M. stellata* has the characteristics of a good species, including its own distinctive ecology and geographic distribution.

**Native range/natural history**

Endemic to a small area in central Japan. Occurs at the edges of wetlands and on adjacent moist, forested slopes, forming dense thickets in places. Not a forest understory plant, *M. stellata* loves open, shrubby habitats. It does not occur together with *M. kobus*, but it is sometimes found with *M. salicifolia* on forested slopes. Hybrids between the two species have been seen in nature.

**Hardiness**

Flawlessly hardy in USDA zones 5–8, success also reported in zone 4.

**Ornamental value**

A great specimen plant, or back of border large shrub. A good Magnolia for smaller gardens. The floral display is unique among the magnolias, as the numerous, narrow tepals create a very fine-textured effect.

**Culture**

As for other magnolias. Growth is relatively slow; 12–18in (30.5–45.7cm) a year is normal under favorable conditions. Tolerant of wind and exposure, and possesses great hardiness.

**Cultivars**

A number are offered in commercial horticulture. Common white-flowered cultivars include: 'Centennial,' 'Waterlily,' and 'Royal Star.' All are floriferous and feature flowers with a large number of tepals. 'Royal Star' is exceptionally cold hardy. Pink-flowered cultivars include: 'Jane Platt' (numerous tepals, truly pink), 'Rosea' (pink fading to white, variable), and 'Rubra' (spidery flowers with about 15 tepals, true pink, smaller shrub). In my opinion, the very best pink stellata is *M. × loebneri* 'Leonard Messel,' a hybrid of *M. stellata* with *M. kobus* that is very stellata-like. The flowers are spidery and purplish pink on the outsides of the tepals, white on the insides, and are borne abundantly in late April and early May in USDA zones 5–6. It forms a small tree to 25ft (7.5m) tall. If you want a large, economy-sized pure white stellata, *M. × loebneri* 'Ballerina' displays thousands of beautiful stellata-type flowers, and grows to 30ft (9.1m) tall.

**Problems**

Flowers early, so late frosts can be a problem. Avoid frost pockets and southern exposures.

***Magnolia tripetala*****Common name**

Umbrella Magnolia.

**Other names in literature**

None.

**Description**

A variable species usually seen as a small single or multi-stemmed tree to 30ft (9.1m) tall. The leaves are large, up to 24in (60.9cm) long, medium to dark green, and occur in distinctive whorls, hence the common name "Umbrella Magnolia." The flowers are 6–10in (15.2–25.4cm) in diameter, white, sometimes with slightly crumpled tepals, unpleasantly fragrant, and appear on branch tips amidst the leaves in late May and early June in USDA zones 5–6. They are followed by conspicuous bright pink to rose-red seed cones in the autumn. Note: open-grown trees usually develop a dense, broadly rounded canopy as wider or wider than tall. Trees in the forest understory develop an upright, comparatively narrow, more open canopy.



**Native range/natural history**

*Magnolia tripetala* occurs sporadically in moist creek valleys and slopes in rich forests from southern Pennsylvania south to the Florida Panhandle and west to isolated populations in Arkansas and Missouri. Where it co-occurs with other "Big Leaf" Magnolias (*M. fraseri*, *M. macrophylla*, or *M. pyramidata*), *M. tripetala* tends to occupy slightly moister microhabitats. It is most common in the southern Appalachians and on the Cumberland Plateau in Kentucky and Tennessee. It is generally an understory tree, but it is occasionally found growing in small gaps, at forest edges, and in scrubby thickets.

**Hardiness**

USDA zones 5–8. There are reports of success in zone 4, as well.

**Ornamental value**

Receives some criticism from infidels because of the weak, but somewhat unpleasant floral fragrance and its coarse foliage. This plant, however, is unparalleled in bringing an exotic, tropical flair to the woodland or partly shaded garden. The foliage quality is heavy and lush, the flowers a beautiful addition in the spring, and the seed cones look like something out of the age of the dinosaurs. That's an awful lot of positives in my book!

**Culture**

As for other magnolias. Likes rich, moist (but not soggy) soils, and some protection provided by other woody plants. Prefers light or partial shade, but will grow well in full sun if the moisture supply is reliable. Not tolerant of exposure to strong winds or severe drought. Some *tripetala* will sprout at the base of trunk and the suckers should be removed to maintain the form of the plant. It grows rapidly [2–3ft (0.6–0.9m) per year] if happy. Easily grown from seed.

**Cultivars**

None commonly offered. This is a variable species, however, and good forms could be selected.

**Problems**

Few, if cultural requirements are met. Mature trees at the Arnold Arboretum have recently developed a viral or fungal disease which causes the leaves to partly or completely turn bright yellow to white late in the growing season. The disease was recently spotted in Stoughton, Massachusetts also. Dick Figlar reports that he has seen the disease in southern New York and in New Jersey as well, and that some plants have been killed by it.

***Magnolia virginiana*****Common name**

Sweetbay

**Other names in literature**

*Magnolia glauca*

**Description**

Sweetbay occurs in two forms. The var. *virginiana* is deciduous, has glabrous twigs and grows as a multiple-stemmed large shrub or small tree 15–30ft (4.6–9.1m) tall. It is native from Massachusetts south to eastern North Carolina along the Coastal Plain. The var. *australis* is evergreen or semi-evergreen, has pubescent twigs, and grows as a single-trunked tree, often to 60ft (18.3m) tall in its native habitats. It occurs on the Coastal Plain from the Carolinas south through Florida, and west to eastern Texas. In both forms, the leaves are 3–6in (7.6–15.2cm) long, relatively narrow, and dark green, with pale undersides. The flowers are white, 3in (7.6cm) in diameter, with a strong, lemony fragrance. They appear gradually during June and July in USDA zones 5–6.

**Native range/natural history**

The var. *virginiana* is a small tree of swampy thickets and wetland edges. The var. *australis* is found in similar situations, but it is also a substantial canopy tree in several important wetland and creek-valley forest types in the southeastern USA.

**Hardiness**

Var. *virginiana* (zones 5–8); var. *australis* (zones 6–8), possibly OK in parts of zone 5B.

**Ornamental value**

A valuable small tree for specimen use in New England. The foliage is fine textured for a magnolia and casts light shade. The flowers are small and occur sporadically over a long period, but they are pretty and the fragrance is a nice asset. Tolerant of poorly drained soils and, unlike all other Magnolias, it can be used in a relatively damp spot. This tree is popular with garden designers, which means that it gets planted in all sorts of places where it doesn't do well and looks mangy. Give the plant what it wants, however, and it is an *attractive* ornamental.

**Culture**

Not fussy as to soil types, tolerates poorly drained soils, but will not stand prolonged submergence. Prefers full sun, but tolerates light shade. Likes summer heat.

**Cultivars**

This is where "the rubber meets the road" for growers of Sweetbay. In nursery catalogs and books you may see seductive claims about Sweetbays that are supposedly evergreen in zone 5B. These are usually var. *australis* forms that are reputedly extra hardy. Examples include 'Henry Hicks,' 'Milton,' and 'Satellite.' These plants may (or may not) survive in zone 5B, but their leaves are not tolerant of severe winter weather and the trees look half defoliated, depressed, and ratty until spring. The same happens in the colder parts of zone 6. All these plants retain their foliage better and look much more attractive in zone 6B and south. zone 5–6A gardeners should grow the normal var. *virginiana*, which is reliably hardy and essentially deciduous. 'Moonglow' is a recent cultivar that has received much publicity, most of it

seemingly too good to be true. The jury is out on how it will perform in New England.

**Problems**

Very few, as long as you don't plant in standing water or on a gravel pile.

***Magnolia zenii*****Common name**

Bao-huan Yulan (in China)

**Other names in literature**

None.

**Description**

A medium-sized tree with a narrowly rounded crown, ultimately to 50ft (15.2m) tall or more, narrowly upright when young. The foliage is neat, dark green, and finer textured than that of many Magnolias. The bark is smooth and light gray. The flowers are 3–5in (7.6–12.7cm) in diameter, white with a red-purple to pink stripe on the outside of the nine tepals, and perch upright on the branchlets. The tips of the outer tepals reflex when the flower opens, creating an informal, but graceful effect. The flowers have a powerful fragrance that may be detected at some distance from the tree. The outstanding feature of this magnolia is the extreme earliness of its flowering (at the end of March or the beginning of April in USDA zones 5–6). This is well before any magnolia (other than *M. biondii*) is even thinking of flowering. Older trees put on a gorgeous display and the flowers are quite frost resistant.

**Native range/natural history**

Truly rare and endangered, this plant is known for certain from only one small population in the wild. It is located on Bao-Hua Shan (2000m elevation) in Jiangsu Province in China, and is now reportedly surrounded by a fence—a bad omen for its future existence as a wild plant. The Flora of China (draft) lists another record, from Jurong Xian in Jiangsu Province, which requires confirmation. *M. zenii* was introduced into the US in 1980, when about 20 seeds total were given to the Arnold Arboretum and the National Arboretum. The plant first flowered at the Arnold in 1988. The natural history of *M. zenii* is not known, but judging by its behavior as a cultivated plant, it is probably a tree of gaps and forest edges in moist, rich, mountain forests.

**Hardiness**

So far, hardy in USDA zones 5B–8. Should be tried in zone 5A.

**Ornamental value**

An outstanding and unique specimen tree. The flowers are small, but very beautiful and they possess a powerful fragrance. In addition, the tree flowers at a time when nothing comparable is flowering, and the display is stunning when well developed. The flowers are sparse and smaller than normal the



first years of flowering, but the display rapidly increases in intensity. By the age of 15–20 years, the trees are 20–30ft (6.1–9.1m) tall and put on quite a show. Foliage, growth form, bark, and flower buds are all additional attractions.

### **Culture**

As for other magnolias. Full sun stimulates rapid growth and good flowering, but some protection provided by other woody plants is beneficial. Can grow 2–3ft (5–7.6cm) per year, if happy. *M. zenii* is easily grown from seed and in my experience seeds come true, because its extremely early flowering precludes crossing with other Magnolias.

### **Cultivars**

The famous woody-plant guru, Dr. Michael Dirr, has recently named 'Pink Parchment,' which has larger and pinker flowers than normal, and is supposedly better adapted to heat and drought. McCracken's Nursery ([www.mccrackensnursery.com](http://www.mccrackensnursery.com)) is the only place I've seen it offered for sale. Even the straight species is hard to find in commercial horticulture. Many nurseries have gotten *M. zenii* plants from Piroche Plants, Inc., a large wholesale nursery in British Columbia, Canada. Pat McCracken has seen sizable specimens of these at the Piroche nursery and says that they are imported directly from China. He notes, however, that the Piroche trees differ from the collections that first came to the us in 1980. However, John Gallagher has two *zenii* in his garden in the UK and they are *very* different from what we have in the us. It is very possible that we simply have not seen enough specimens of this species to know what genetic variability there is in *M. zenii*. The Piroche plants are quite consistent in their characteristics and form attractive trees with somewhat coarse foliage and an open, rounded crown. The flower buds are large and are often presented almost horizontally. I have one that will flower next year and can hardly wait to see what emerges from those buds!

### **Problems**

None apparent so far.

### **Pests and other problems**

If their cultural requirements are met, Magnolias are relatively trouble-free plants, even in cold continental climates like that of the northeastern United States. Nevertheless, problems do occur sometimes. Here is a list of those most frequently encountered.

### **Poor siting and planting practices**

These are by far the most common causes of plant failure. Proper siting was discussed previously. The most prevalent planting mistake is to plant too deep. It is vital that the soil line after planting must be at the same level as it was when the plant was in its container. In balled and burlapped specimens the correct soil line is usually pretty obvious. The second common mistake is not mulching the plant generously. Use bark mulch—preferably not the

bright red “eyesore” variety so commonly used in commercial landscaping—and don’t pile it up around the trunk! I’ve also seen instances where people have mulched with stones or gravel, a grave error. Besides looking hideous, this often kills Magnolias—primarily by transmitting heat directly into the soil of the root zone.

### **Early and late frosts**

In New England, untimely frosts are our specialty. Early autumn frosts and late spring frosts cause different types of damage. Early autumn frosts commonly nip growth that hasn’t fully hardened off yet, but in most cases, plants recover and resume growth the next spring from undamaged buds further down the stems. Late spring frosts are much more dangerous. Light frosts can ruin the flower display of early flowering plants. Heavier frosts or freezes kill leaves and damage or kill twigs and branches. In extreme cases, the entire plant may be killed. Note: when plants are purchased by mail order, they often arrive further along in their spring development than the New England climate would permit if they had overwintered here. If planted out too early, such plants are often killed outright if caught by a late frost. Keep them in their pots and in a protected spot until the danger of frost is passed.

### **Frost cracks**

These occur in late winter when the air temperature is well below freezing and the morning sun (now increasing in intensity) warms the frozen bark of the trunk so rapidly that it cracks. Frost cracks usually occur near the base of the trunk on the side directly exposed to morning sun and sometimes on large branches as well. It is much more frequent where Magnolias are planted on open, exposed sites. Frost cracks are a significant injury. Even minor ones can take several years to heal. Large frost cracks can cripple a plant and may take many years to heal. Healthy plants show better resistance and heal more quickly. Weak plants can be killed. There is no effective treatment for frost cracks other than keeping the plant in good condition and letting nature take its course. Likewise, it doesn’t seem you can prevent them by shielding the trunk. I’ve seen frost cracks occur under plastic tree guards, so they don’t seem to help much. Tree wraps (a form of paper tape) may prove more effective. (See *Winterizing your Magnolias* elsewhere in this issue.)

### **Magnolia scale**

Scale insects are common sap-feeding plant pests. The Magnolia Scale (*Neolecanium cornuparvum*) is a specialist on Magnolias and can severely damage plants if left untreated. Fortunately, Magnolia Scale is very infrequent in New England. Information pertaining to diagnosis and treatment is widely available on the internet and a recent article in the *Magnolia* (Issue 73) contains much useful information and good photographs as well.