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A Tentative Key to the Cultivated Magnolias

The genus *Magnolia* was named by Linnaeus to commemorate Pierre Magnol, 1638–1715, a professor of botany and medicine and an early director of the botanical garden at Montpellier. Comprised of about 75 or 80 species, the genus occurs naturally in two widely separated areas; about 50 species are native in eastern Asia from Japan to the Himalayan region and southward to Java, while in North and Central America 25 or 30 additional species are known. Most of the species are apt and sought-after ornamentals, noted for their white, pinkish, purplish, or greenish-yellow flowers that are almost unrivaled in both size and beauty. Moreover, the ease with which some of the species hybridize has added to the popularity of the genus with plant breeders, and some of the finest ornamentals are the result of hybridizations.

The leaves of *Magnolia* also are noteworthy, since some species have leaves that are as large as those of any of our native or cultivated plants. Some of the deciduous species flower before the leaves expand in the spring, and the pastel-colored blossoms stand out against the delicate tracery of the branches, while in other deciduous and evergreen species, the flowers are produced against the luxuriant backdrop of the foliage. In late summer and fall, the interesting fruit aggregates divulge the red or orangish seeds and add to the ornamental value of the plants during that season. The densely pubescent flower buds of some deciduous species, moreover, make the dormant plants attractive during winter and anticipate, long in advance, the spring to follow.

The tentative key presented here is a result of an examination of the taxonomy of *Magnolia* for a projected manual of cultivated trees and shrubs. Since *Magnolia* is a genus that is an established favorite with gardeners and horticulturists, as well as botanists, it is hoped that publication of this key in its present preliminary form will allow interested individuals to test its utility with living specimens. I shall greatly appreciate com-



ments on the workability of the key as well as mistakes and oversights that become evident in it, so that they can be corrected for a final version.

Although there are several keys for the identification of the species of *Magnolia* (and comparisons of these with the present key will show my indebtedness to their authors), most are restrictive since they treat species of a particular region or botanical group. Dandy's key to the species of the genus, published in the *Journal of the Royal Horticultural Society*, is not readily available to the American public. The present key addresses itself to species cultivated in North America, north of tropical and subtropical areas. With the exception of Rehder's key in the second edition of his *Manual of Cultivated Trees and Shrubs*, there is no single reference for the identification of the taxa and hybrids of *Magnolia* either commonly or uncommonly encountered in temperate regions of North America. Most determinations of infrequently cultivated species, moreover, require consultation of monographs and numerous references scattered in the older botanical and horticultural literature.

All of the names of *Magnolia* included in Rehder's *Manual* have not been keyed or accounted for here largely due to some unresolved problems requiring further research and taxonomic judgement. Yet, the number of keyed taxa has been doubled from 19 in Rehder's *Manual* to 38 in the present key. Of these 38 taxa and hybrids, three were not treated by Rehder, while the ranks of some other taxa have been changed in accordance with the results of recent research into the taxonomy of the species by several investigators. The treatment prepared by Rehder for L. H. Bailey's *The Standard Cyclopaedia of Horticulture* (1914), which predates his treatment in the second edition of his *Manual*, keyed the 23 taxa then known in cultivation in a larger geographic area, but the taxonomy has since been modified and the nomenclature largely superseded.

Figure 1. *Magnolia*. a-m, subgenus *Magnolia*. a-i, *M. virginiana*: a, flowering branchlet, $\times 1/2$; b, flower with tepals removed to show androecium (many stamens removed) and gynoecium (carpels), $\times 2$; c, 3 stamens from adaxial side, showing lines of introrse dehiscence, $\times 3$; d, cross sections through anthers to show pollen sacs and vascular bundles, $\times 6$; e, longitudinal section of gynoecium showing 5 carpels, each with 2 ovules, $\times 3$; f, nearly mature fruit aggregate with longitudinal styler scars on the carpels, $\times 1/2$; g, mature fruit aggregate with pendulous seeds, $\times 1/2$; h, seed in longitudinal section showing seed coats, endosperm (dotted), and minute embryo, $\times 2$; i, seed with fleshy red outer coat removed, $\times 2$. j-l, *M. grandiflora*: j, bud, with stipular bud scale about to fall, $\times 1/2$; k, flower with tepals removed to show androecium (stamens) and gynoecium (carpels), half of the stamens removed, $\times 1$; l, stamens from adaxial side, showing lines of introrse dehiscence, $\times 2$. m, *M. tripetala*: stamen from adaxial side, $\times 3$. n-q, subgenus *Yulania*, *M. acuminata* var. *subcordata*: n, flowering branchlet, $\times 1/2$; o, opening flower bud showing reduced outer tepals, $\times 1/2$; p, stamen from adaxial side, showing lateral dehiscence, $\times 4$; q, cross section through anther, showing lateral dehiscence and 3 vascular bundles, $\times 8$.

Casual inspection of the key will indicate that nomenclatural changes and taxonomic judgements have affected the names by which several taxa are usually referred to in the literature and horticultural trade. In these few instances, pertinent synonyms and references to the literature are indicated in footnotes.

One of the problems encountered in preparing the key was deciding which species, taxa of a rank lower than species, and hybrids should be included. Documented specimens in the herbarium of the Arnold Arboretum have been the basis on which most taxa have been included. In other instances, published records of the occurrence of taxa in cultivation within the range of Rehder's *Manual* (including the plant inventories of several arboreta and botanical gardens produced in computerized form by the Plant Records Center) have been accepted as documentation. In general, a taxon has been included if there is good evidence of its occurrence or possible occurrence within our area.

Another problem of considerable concern has been the lack of treatment accorded cultivars. The purpose here is to provide a key for the identification of species and botanical varieties, some of the more distinctive hybrids, and in one instance a botanical form. Because of the difficulties surrounding their circumscription, cultivars have not been accounted for here. A bibliography has been appended to the key to serve as a guide to some of the literature where information concerning cultivars can be found. Unfortunately, in my opinion, altogether too many plants in the trade are listed and sold only under a cultivar name without any reference to the relationship of the plant to a botanically accepted species or hybrid group. This procedure is acceptable under the rules of the *International Code of Nomenclature of Cultivated Plants* — 1969, but the cultivar name alone (and they are in excess of one hundred in *Magnolia*) gives no indication of derivation or relationship. Hopefully, this key will enable the association of some cultivars with the taxon or hybrid group to which they belong.

Unfortunately, it has been impossible to construct a key using only vegetative, floral or fruiting characteristics; as a result, characters from the flowers and fruit aggregates, as well as from the vegetative parts, may be required for an identification. It is conceivable that an entire growing season may be necessary for the accurate and correct identification of a particular plant, and it is suggested that careful notes and a series of pressed herbarium specimens be made throughout the season to preserve flower and fruit characters as well as those of the leaves. Concomitantly, the different stages available should be used in conjunction with the key until a determination is made. Some of the characteristics used in the key are illustrated in Figure 1, and in these instances the appropriate drawings illustrating the character are referred to in the key.

A TENTATIVE KEY TO CULTIVATED MAGNOLIAS

1. Anthers dehiscing introrsely (Fig. 1, b, c, d, l, & m); flowers neither appearing before the foliage nor with an outer whorl of calyx-like tepals; leaves persistent or deciduous. 2.
2. Stipules adnate to the petioles, leaving scars on the upper surface of the petioles; leaves deciduous or persistent. 3.
3. Leaves persistent; flower buds enclosed in one or more stipular bud scales (Fig. 1, j), the scales leaving as many annular scars on the pedicel. 4.
4. One or more stipular bud scales enclosing the flower bud, leaving one or several annular scars on the pedicel; stipules large, extending almost the entire length of the petiole to the base of the blade. *M. Delavayi*.
4. One stipular bud scale (Fig. 1, j) enclosing the flower bud, leaving one annular scar on the pedicel; stipules very small, leaving obsolete scars on the petioles. *M. grandiflora* × *virginiana*.
3. Leaves deciduous (or sometimes persistent in *M. virginiana*); flower buds enclosed by one stipular bud scale (Fig. 1, j), leaving a single annular scar on the pedicel. 5.
5. Leaves crowded into false whorls at the ends of branches, the leaves large or very large, 20–100 cm. long. 6.
6. Leaves auriculate or cordate at base. 7.
7. Leaf blades, stipules, buds, and follicles finely pubescent. *M. macrophylla* (incl. *M. Ashei*). 8.
7. Leaf blades, stipules, buds, and follicles glabrous. 8.
8. Stamens more than 8 mm. long; tepals more than 8 cm. long; fruit aggregate more than 6 cm. long. *M. Fraseri*.
8. Stamens less than 8 mm. long; tepals less than 8 cm. long; fruit aggregate less than 6 cm. long. *M. pyramidata*.
6. Leaves cuneate to rounded or rarely subcordate at base. 9.
9. Fruit aggregates to 10 cm. long; flowers with offensive odor. *Magnolia tripetala*. 9.
9. Fruit aggregates over 10 cm. long; flowers fragrant. 10.
10. Ripe carpels with short beaks, usually less than 5 mm. long; indumentum, if present, not reddish-brown. 11.
11. Leaves mostly obovate; young branches and leaf petioles purplish. *M. hypoleuca*.¹ 11.
11. Leaves mostly elliptic-obovate, sometimes bilobed at the apex; young branches and petioles yellowish-green. *M. officinalis*.
10. Ripe carpels with long beaks, up to 8 mm. long; buds and leaves with reddish-brown pubescence. *M. rostrata*.
5. Leaves not crowded into false whorls at the ends of branches, the leaves generally 10–20 cm. long. 12.
12. Leaves deciduous or sometimes persistent, glaucous on the under surface; anther connectives with short, acute appendages (Fig. 1, c). 13.

13. Tepals up to 10 cm. long; leaf blades up to 20 cm. long, broadly elliptic to obovate.
M. × Thompsoniana.
13. Tepals up to 5 cm. long; leaf blades up to 15 cm. long, ovate to narrowly elliptic or lanceolate.
M. virginiana.
12. Leaves deciduous, the under surfaces pale green or somewhat glaucescent; anther connectives blunt or retuse at the apex (Fig. 1, p). 14.
14. Flowers pendent at anthesis, the fruit aggregates pendent; leaves with gray or silver-gray pubescence. 15.
15. Leaves elliptic with an acute apex; pubescence on under surface of leaves gray; branchlets dark brown.
M. Wilsonii.
15. Leaves obovate with obtuse apices; pubescence on under surfaces of leaves silvery-gray; branchlets light tan.
M. sinensis.
14. Flowers nodding or horizontal at anthesis (not fully pendent); leaves almost glabrous below and/or with the hairs with reddish-brown pigment at the base or conspicuously rufous. 16.
16. Leaves obovate to broad elliptic; under surfaces glabrescent, without conspicuous rufous pubescence along the midvein and major lateral veins; branches becoming light brown. 17.
17. Pedicels stout, ca. 5 mm. in diameter; leaves with 10–15 pairs of veins; tepals up to 6 cm. long; stamens ca. 2 cm. long.
M. × Watsonii.
17. Pedicels slender, ca. 2 mm. in diameter; leaves with 6–10 pairs of veins; tepals up to 5 cm. long; stamens less than 1 cm. long.
M. Sieboldii.
16. Leaves ovate to elliptic, the under surfaces pubescent with conspicuous rufous indumentum along the midvein and major lateral veins; branches becoming chocolate brown.
M. globosa.
2. Stipules free from the petioles, not leaving scars on the upper surfaces of the petioles; leaves persistent. 18.
18. Gynoecium stalked (stipitate), the stamens or stamen scars separated from the gynoecium by a short gap on the floral axis.
M. nitida.
18. Gynoecium sessile, the stamens or stamen scars occurring immediately under the gynoecium (Fig. 1, b, k). 19.
19. Carpels densely pubescent, the hairs extending onto the adaxial surfaces of the styles (Fig. 1, k); tepals 8–12 cm. long; fruit aggregate usually greater than 4 cm. long.
M. grandiflora.
19. Carpels sparingly pubescent, the styles glabrous; tepals 7–9 cm. long; fruit aggregate usually less than 4 cm. long.
M. grandiflora × virginiana.
1. Anthers dehiscing laterally or sublaterally (Fig. 1, p, q); flowers appearing before the foliage and/or with a much reduced calyx-like outer whorl of tepals (Fig. 1, o); leaves deciduous. 20.
20. Tepals subequal, the outer whorl not simulating a calyx; flowers appearing before the leaves (sometimes continuing in flower as the leaves expand); tepals white to rose or rose-purple. 21.
21. Leaves elliptic to oblong-ovate, usually rounded at the base and usually over 15 cm. long, with 12 or more pairs of lateral veins. 22.
22. Flowers large, up to 25 cm. in diameter with 12–16 tepals.
M. Campbellii (incl. *M. mollicomata*).³
22. Flowers up to 20 cm. in diameter with 9 tepals.
M. × Veitchii.

21. Leaves broadest above the middle, cuneate at the base and mostly under 15 cm. long, with not more than 12 pairs of lateral nerves. 23.
23. Flowers erect on the branches; leaves apiculate or abruptly short-acuminate at the apex. 24.
24. Tepals 9, tapering downward to a broadish base; flowers cup-shaped. 25.
25. Tepals subequal in length, white, occasionally with a rose coloration at the base.
..... *M. denudata*.
25. Three outer tepals somewhat shorter than the inner six, pink to reddish-purple outside, white within.
..... *M. × Soulangiana*.
24. Tepals 12 or more, much narrowed at the base; flowers saucer shaped. 26.
26. Flowers large, up to 20 cm. in diameter, the tepals rosy-pink outside, white within; leaves broadly obovate, villose along the main veins beneath, often with scattered hairs over the entire surface.
..... *M. Sprengeri* var. *diva*.⁴
26. Flowers up to 10 cm. in diameter, the tepals white both within and without, sometimes flushed with purple toward the base; leaves lanceolate to narrowly obovate, the lower surface glabrous or glabrate.
..... *M. Sprengeri* var. *elongata*.⁴
23. Flowers borne horizontally, nodding or pendent, occasionally erect; leaves usually rounded and often emarginate, rarely apiculate, at the apex. 27.
27. Leaves subcoriaceous or chartaceous, not strongly reticulate above, the under surface pubescent; tepals 10-16, white within, rosy-purple without. 28.
28. Slender, tall tree; leaves obovate; tepals 10-14, narrowly spatulate.
..... *M. Sargentiana* var. *Sargentiana*.
28. Large shrub or wide-spreading tree with several branches from the base; leaves oblong-obovate, tapering and slender; tepals 10-16, broadly spatulate and overlapping.
..... *M. Sargentiana* var. *robusta*.
27. Leaves coriaceous and strongly reticulate above, the under surface glabrous; tepals 9-12, white, flushed with rosy-purple outside.
..... *M. Dawsoniana*.
20. Tepals very unequal, the outer whorl shorter and simulating a calyx (Fig. 1, o), these outer tepals sometimes early deciduous; flowers appearing before or after the leaves. 29.
29. Flowers appearing before the leaves (sometimes continuing in flower as the leaves expand); inner tepals purplish or white, white tepals sometimes flushed at the base with rose or purple. 30.
30. Inner tepals 6, the outer 3 tepals not early deciduous and much smaller than the inner 6. 31.
31. Flowers purplish or sometimes nearly white, the outer 3 tepals petaloid, ca. one-half as long as the inner tepals.
..... *M. × Soulangiana*.
31. Flowers white, the outer 3 tepals greenish, sepal-like, less than one-half the length of the inner tepals (Fig. 1, o). 32.
32. Leaves lanceolate to lanceolate-elliptic, widest at or below the middle, tapering gradually to an acute apex; blades with hairs along the veins below, or finely appressed-pubescent or with scattered hairs over the entire surface below. 33.
33. Leaves coriaceous with hairs along the veins beneath; vegetative buds on mature growth densely silky-sericeous.
..... *M. Biondii*.
33. Leaves chartaceous, finely appressed-pubescent or with scattered hairs over the entire surface beneath; vegetative buds on mature growth glabrate or finely pubescent.
..... *M. salicifolia*.

13. Tepals up to 10 cm. long; leaf blades up to 20 cm. long, broadly elliptic to obovate. *M. × Thompsoniana*.
13. Tepals up to 5 cm. long; leaf blades up to 15 cm. long, ovate to narrowly elliptic or lanceolate. *M. virginiana*.
12. Leaves deciduous, the under surfaces pale green or somewhat glaucescent; anther connectives blunt or retuse at the apex (Fig. 1, p). 14.
14. Flowers pendent at anthesis, the fruit aggregates pendent; leaves with gray or silver-gray pubescence. 15.
15. Leaves elliptic with an acute apex; pubescence on under surface of leaves gray; branchlets dark brown. *M. Wilsonii*.
15. Leaves obovate with obtuse apices; pubescence on under surfaces of leaves silvery-gray; branchlets light tan. *M. sinensis*.
14. Flowers nodding or horizontal at anthesis (not fully pendent); leaves almost glabrous below and/or with the hairs with reddish-brown pigment at the base or conspicuously rufous. 16.
16. Leaves obovate to broad elliptic; under surfaces glabrescent, without conspicuous rufous pubescence along the midvein and major lateral veins; branches becoming light brown. 17.
17. Pedicels stout, ca. 5 mm. in diameter; leaves with 10–15 pairs of veins; tepals up to 6 cm. long; stamens ca. 2 cm. long. *M. × Watsonii*.
17. Pedicels slender, ca. 2 mm. in diameter; leaves with 6–10 pairs of veins; tepals up to 5 cm. long; stamens less than 1 cm. long. *M. Sieboldii*.²
16. Leaves ovate to elliptic, the under surfaces pubescent with conspicuous rufous indumentum along the midvein and major lateral veins; branches becoming chocolate brown. *M. globosa*.
2. Stipules free from the petioles, not leaving scars on the upper surfaces of the petioles; leaves persistent. 18.
18. Gynoecium stalked (stipitate), the stamens or stamen scars separated from the gynoecium by a short gap on the floral axis. *M. nitida*.
18. Gynoecium sessile, the stamens or stamen scars occurring immediately under the gynoecium (Fig. 1, b, k). 19.
19. Carpels densely pubescent, the hairs extending onto the adaxial surfaces of the styles (Fig. 1, k); tepals 8–12 cm. long; fruit aggregate usually greater than 4 cm. long. *M. grandiflora*.
19. Carpels sparingly pubescent, the styles glabrous; tepals 7–9 cm. long; fruit aggregate usually less than 4 cm. long. *M. grandiflora* × *virginiana*.
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20. Tepals subequal, the outer whorl not simulating a calyx; flowers appearing before the leaves (sometimes continuing in flower as the leaves expand); tepals white to rose or rose-purple. 21.
21. Leaves elliptic to oblong-ovate, usually rounded at the base and usually over 15 cm. long, with 12 or more pairs of lateral veins. 22.
22. Flowers large, up to 25 cm. in diameter with 12–16 tepals. *M. Campbellii* (incl. *M. mollicomata*).³
22. Flowers up to 20 cm. in diameter with 9 tepals. *M. × Veitchii*.
21. Leaves broadest above the middle, cuneate at the base and mostly under 15 cm. long, with not more than 12 pairs of lateral nerves. 23.
23. Flowers erect on the branches; leaves apiculate or abruptly short-acuminate at the apex. 24.
24. Tepals 9, tapering downward to a broadish base; flowers cup-shaped. 25.
25. Tepals subequal in length, white, occasionally with a rose coloration at the base. *M. denudata*.
25. Three outer tepals somewhat shorter than the inner six, pink to reddish-purple outside, white within. *M. × Soulangeana*.
24. Tepals 12 or more, much narrowed at the base; flowers saucer shaped. 26.
26. Flowers large, up to 20 cm. in diameter, the tepals rosy-pink outside, white within; leaves broadly obovate, villose along the main veins beneath, often with scattered hairs over the entire surface. *M. Sprengeri* var. *diva*.⁴
26. Flowers up to 10 cm. in diameter, the tepals white both within and without, sometimes flushed with purple toward the base; leaves lanceolate to narrowly obovate, the lower surface glabrous or glabrate. *M. Sprengeri* var. *elongata*.⁴
23. Flowers borne horizontally, nodding or pendent, occasionally erect; leaves usually rounded and often emarginate, rarely apiculate, at the apex. 27.
27. Leaves subcoriaceous or chartaceous, not strongly reticulate above, the under surface pubescent; tepals 10–16, white within, rosy-purple without. 28.
28. Slender, tall tree; leaves obovate; tepals 10–14, narrowly spatulate. *M. Sargentiana* var. *Sargentiana*.
28. Large shrub or wide-spreading tree with several branches from the base; leaves oblong-obovate, tapering and slender; tepals 10–16, broadly spatulate and overlapping. *M. Sargentiana* var. *robusta*.
27. Leaves coriaceous and strongly reticulate above, the under surface glabrous; tepals 9–12, white, flushed with rosy-purple outside. *M. Dawsoniana*.
20. Tepals very unequal, the outer whorl shorter and simulating a calyx (Fig. 1, o), these outer tepals sometimes early deciduous; flowers appearing before or after the leaves. 29.
29. Flowers appearing before the leaves (sometimes continuing in flower as the leaves expand); inner tepals purplish or white, white tepals sometimes flushed at the base with rose or purple. 30.
30. Inner tepals 6, the outer 3 tepals not early deciduous and much smaller than the inner 6. 31.
31. Flowers purplish or sometimes nearly white, the outer 3 tepals petaloid, ca. one-half as long as the inner tepals. *M. × Soulangeana*.
31. Flowers white, the outer 3 tepals greenish, sepal-like, less than one-half the length of the inner tepals (Fig. 1, o). 32.
32. Leaves lanceolate to lanceolate-elliptic, widest at or below the middle, tapering gradually to an acute apex; blades with hairs along the veins below, or finely appressed-pubescent or with scattered hairs over the entire surface below. 33.
33. Leaves coriaceous with hairs along the veins beneath; vegetative buds on mature growth densely silky-sericeous. *M. Biondii*.
33. Leaves chartaceous, finely appressed-pubescent or with scattered hairs over the entire surface beneath; vegetative buds on mature growth glabrate or finely pubescent. *M. salicifolia*.

32. Leaves elliptic to obovate, widest above the middle, abruptly short-acuminate, acute, or rounded at the apex; blades with long hairs along the veins beneath. 34.
34. Leaves elliptic, up to 5 cm. wide, with the apex rounded to acute; upper and lower surfaces of the blade strongly reticulate. *M. cylindrica*.
34. Leaves elliptic or more commonly obovate, up to 10 cm. wide, with an abruptly short-acuminate apex, the under surface of the blade reticulate, the upper surface smooth. *M. Kobus* var. *Kobus* (incl. some forms of *M. × Loebneri*).⁵
30. Inner tepals (9-)11-20(-30), the 3 very much smaller outer ones often early deciduous. 35.
35. Leaves oblanceolate, widest above the middle, tapering gradually to a cuneate or acute base, the under surface glabrescent or with hairs along the veins; tepals 15-20(-30). *M. Kobus* var. *stellata* (incl. some forms of *M. × Loebneri*).⁵
35. Leaves elliptic, widest at or near the middle, tapering to a broadly cuneate or almost rounded base, the under surface finely appressed-pubescent over the entire surface with longer hairs along the veins; tepals 9-16. *M. × Proctoriana*.
29. Flowers appearing with or after the leaves; inner tepals purple or green to golden-yellow. 36.
36. Inner tepals purple. *M. liliflora*.
36. Inner tepals green to golden-yellow. 37.
37. Stem of current year and previous year glabrous, with hairs only at the terminal bud scar and on the upper and lower adjacent internodes to this scar; tepals greenish to greenish-yellow throughout, or greenish-yellow outside and golden-yellow inside, 3-9 cm. long; pedicel glabrous or rarely villous; leaf tomentose to glabrous below. 38.
38. Leaves tomentose on lower surface; base rounded, truncate, cuneate, acute or rarely subcordate. 39.
39. Flowers greenish-yellow throughout. *M. acuminata* var. *acuminata*.⁶
39. Flowers greenish-yellow outside and clear golden-yellow inside on inner tepals. *M. acuminata* f. *aurea*.
38. Leaves glabrous or early glabrate with scattered hairs remaining on the veins beneath; base mostly rounded, truncate or subcordate, rarely cuneate or acute. *M. acuminata* var. *ozarkensis*.
37. Stem of current and previous year with short hairs or roughened with the bases of hairs; tepals greenish-yellow throughout or more often light yellow outside and golden-yellow inside, 2.5-7 cm. long; pedicel typically villous, rarely glabrous; blades tomentose beneath. *M. acuminata* var. *subcordata*.⁷

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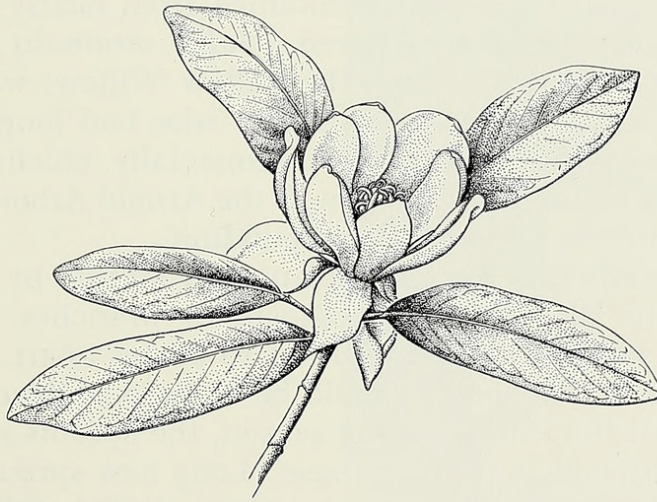
In addition to the references listed above, articles on *Magnolia* too numerous to mention individually have appeared in the following publications or special issues:

- American *Magnolia* Society. Newsletter of the American *Magnolia* Society. Vols. 1–9, 1964–1973, and continuing.
- Arboretum Bulletin, Univ. Washington Arb. Found. Vol. 10, No. 4. 1947. "Special *Magnolia* Number."
- Journal of the California Horticultural Society Vol. 23, No. 1. 1962. [Entire issue devoted to articles on *Magnolia*.]

Notes

- 1 *Magnolia hypoleuca* Siebold & Zuccarini is the correct name of the taxon that is often referred to and sold as *M. obovata* Thunberg. The name *M. obovata* Thunberg is superfluous.
- 2 The correct name is *Magnolia Sieboldii* K. Koch, not *M. parviflora* Siebold & Zuccarini, which is a later homonym.
- 3 The inclusion of *Magnolia mollicomata* within *M. Campbellii* follows the treatment of J. E. Dandy, *Notes Roy. Bot. Gard. Edinb.* 16: 123, 124. 1928.

- 4 A nomenclatural problem exists in the treatment of *Magnolia Sprengeri* that may be solved by examination of the type specimen. No typical variety (var. *Sprengeri*) has been designated, and if one of the two varieties recognized here corresponds with the type of the species, it automatically would be designated var. *Sprengeri*.
- 5 For the rationale behind the treatment accorded *Magnolia Kobus* and its var. *stellata*, see B. C. Blackburn, *Amatores Herbarii* 17: 1, 2. 1955, and *Baileya* 5: 3-13. 1957. *Magnolia* \times *Loebneri* represents forms that link the two varieties.
- 6 The treatment of *Magnolia acuminata* followed here is essentially that of J. W. Hardin, *Jour. Elisha Mitchell Sci. Soc.* 70: 298-312. 1954.
- 7 The correct name of *Magnolia cordata* Michaux, when treated as a variety of *M. acuminata*, is var. *subcordata* (Spach) Dandy, *Am. Jour. Bot.* 51: 1056. 1964, not var. *cordata* Sargent, *Am. Jour. Sci.* III. 32: 473. 1886.





Spongberg, Stephen A. 1974. "A Tentative Key to the Cultivated Magnolias." *Arnoldia* 34(1), 1–11.

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