

Magnolias in the University of Washington Arboretum

by Joseph A. Witt

The Puget Sound region of Washington State is a good place to raise magnolias. The climate, a mild, modified Mediterranean type, allows us to grow most of those species and hybrids which don't require subtropical conditions. Temperatures are not extreme, the highest recorded has been 100° F., the lowest (in the Arboretum) 8° F., and such temperatures very rarely occur. Precipitation is only moderately heavy, averaging about 40 inches a year, 82 per cent of which occurs between October and April. Summers are dry and it is imperative that plants such as magnolias be irrigated in June, July, and August. Snowfall is variable, many winters passing with only traces but there may be heavy falls of wet snow, which can devastate trees with brittle wood. The U.S.D.A. Plant Hardiness Zone Map (1960) shows Seattle in Zone 9A; we feel more comfortable assuming we are in Zone 8A or perhaps 8B.

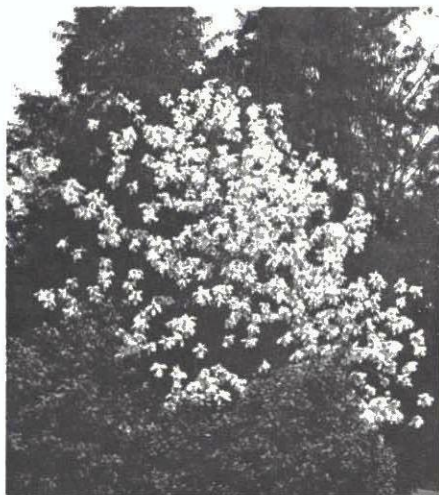
The University of Washington Arboretum started its Magnolia collection in 1937; the master plan, drawn by the Olmsted Brothers landscape firm, placed the *Magnoliaceae* on well drained, somewhat gravelly soils near the Arboretum's center. This site still contains a good part of the collection but because of its rather poor soils and our gradual deemphasis on planting in family groups, many Magnolia species have been planted in other locations with better soil conditions, where the beauty of these trees are complemented by other flowering woody plants. Two areas, Loderi Valley and Rhododendron Glen, now contain the bulk of the early flowering species and hybrids of Section *Yulania*. The former is a shallow valley protected by an overstory of native conifers and big leaf maples, and planted with rhododendron species and hybrids, including a collection of the beautiful *Rhododendron* 'Loderi' cultivars. A relatively rich, loamy soil, adequate moisture and the canopy of large trees have suited the magnolias admirably.

Rhododendron Glen is a much larger area, more than 5 acres. Facing west or northwest, with relatively steep slopes, it has better soil than the original Magnolia

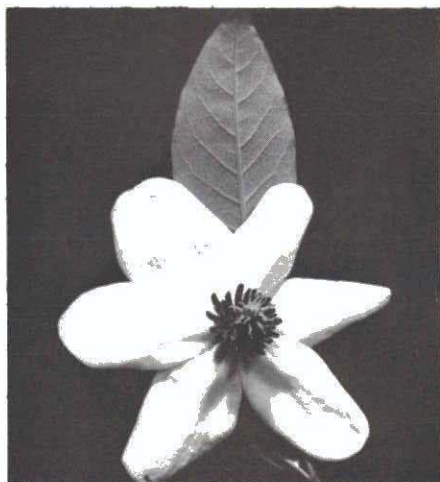
collection site. Magnolias have been used as companion plants for *Rhododendron* and *Camellia* for about 40 years and some of our largest specimens are growing here.

The Arboretum's collection now numbers 78 taxa; of these, 25 are species, 5 are botanical varieties, and 40 are hybrids and cultivars. The first introductions were made about 1939 and our records show that there were 34 taxa in the Arboretum's nursery by 1942. At this time the first trees were planted on the grounds. Unfortunately, it was not until about 1947 that complete planting records were kept, so we have no accurate dates for the plantings of some of what are now our largest magnolias.

These early plantings include *Magnolia acuminata* and var. *cordata*, *M. denudata*, *M. fraseri*, *M. grandiflora*, *M. hypoleuca*, *M. kobus*, *M. quinquepeta* (*liliflora*) and var. *nigra*, *M. macrophylla*, *M. × soulangiana* and its cultivars, *M. stellata* (*kobus* var. *s.*) 'Rosea', and *M. tripetala*. These plants came from many sources. Several of the Japanese species were acquired from K. Wada of the Hakoneya Nursery, Japan; others came from the Arnold Arboretum. The cultivar of *M. kobus* which we named



Magnolia sargentiana robusta in University of Washington Arboretum. Photo Brian Mulligan.



Magnolia wilsonii in University of Washington Arboretum. Photo William Eng.

'Wada's Memory,' now thought to be an *M. × kewensis*, was among this first group.

Introduction of magnolias was accelerated in the period following World War II, especially after Brian O. Mulligan became director in 1946. The number of taxa doubled by 1960 and has been increasing steadily but more slowly since then. Many of these introductions were English imports, from Veitch and Son Nurseries, Royal Botanic Garden, Kew, Bodnant Gardens, Hillier and Sons Nursery, Windsor Great Park and Treseder's Nurseries. Others came from the National Arboretum, Strybing Arboretum and from local gardeners and nurseries. The Gossler Farms Nursery in Springfield, Oregon, has been one of our largest commercial suppliers in recent years.

Naturally, not all of our introductions have been successful. *Magnolia delavayi* has been tried three times and each time has been killed by a cold winter. Most *M. campbellii* planted before 1955, a year when Seattle suffered from a severe freeze in early November, were killed outright. Only one plant of *M. campbellii*, subsp. *mollicomata*, survived and it was cut to the ground. Others have been lost for various reasons, including *M. nitida*, *M. rostrata*, *M. sprengeri* var. *elongata* and *M. globosa*. We intend to replace these when possible, or at least any that have some chance of surviving our colder winters. We believe, for instance, that

M. delavayi should survive against a warm wall.

Our magnolias have been established long enough now that we have flowering on nearly every species and on most hybrids. Blooming season usually starts in mid-March when *M. campbellii* and its relatives open their huge pink flowers on bare wood. By the end of March or early April we can expect to see *M. sargentiana* var. *robusta*, *M. dawsoniana*, *M. sprengeri* 'Diva,' *M. denudata* (*heptapeta*) and the hybrid *M. campbellii* × *M. campbellii* subsp. *mollicomata*. In succeeding weeks there is a constant opening of magnolia flowers, peaking about mid-April when most of the Section *Buergeria* are blooming. These are followed by the American species and by late May we can expect to have *M. hypoleuca* in flower along with *M. sieboldii* and *M. sinensis*. In June the gigantic flowers of *M. macrophylla* open and somewhat later, often in July, the *M. grandiflora* clones will start their prolonged blooming period, which may extend to October. The very similar flowers of the Mexican *Magnolia*, which we are carrying under the name of *M. schiedeana* but which may be a new species (see B.O. Mulligan, "Magnolia Mystery in Seattle," this newsletter, XIII (s) pp 13-16, Fall-Winter 1977), bring our flowering season to a close except for *M. virginiana* and some reflowering on the *M. × soulangiana* cultivars.

The flowering period of our early magnolias may vary nearly a month, depending on the weather. For instance, our records show that one, *M. sargentiana* var. *robusta*, opened its first flowers on March 20, 1967; March 5, 1969; Feb. 27, 1973; March 23, 1975; March 11, 1977; and March 3, 1978. The same records show that the flower buds were damaged by late frosts on at least two occasions in the past 12 years. This year, 1979, saw a very fine display on all the early species save one, despite a cold period in late December and early January. During this time we had five days with the maximum temperatures remaining below 32° F. and a minimum of 8° F. on one cold night.

The only magnolia that suffered was the hybrid *M. campbellii* × *M. campbellii* subsp. *mollicomata*. This was a real surprise since we had felt this cross was unusually cold resistant. Unfortunately, we do not know

Species	Year Received	Year Planted	Height (feet)	DBH* (inches)	Source
<i>M. acuminata</i>	1940	1946	53	11.7	Arnold Arboretum
<i>M. campbellii campbellii</i>	1958	1958	ca 50	14.9	Taylor Nursery, Seattle
<i>M. campbellii</i> × <i>mollicomata</i>	1952	1959	40	8.6	D.G. Graham, Seattle
<i>M. campbellii mollicomata</i>	1947	1958	40	9.1	Hillier & Sons, England
<i>M. dawsoniana</i>	1953	1953	55	14.2	Taylor Nursery, Seattle
<i>M. denudata (heptapeta)</i>	1940	pre-1946	ca 35	11.5	K. Wada, Japan
<i>M. fraseri</i>	1940	1947	60	9.9	Arnold Arboretum
<i>M. hypoleuca</i>	1947	1948	34	11.3	Layritz Nursery, Victoria, B.C.
<i>M. kobus</i> 'Wada's Memory'	1940	1947	38	10.2	K. Wada, Japan
<i>M. macrophylla</i>	1940	1947	ca 50	12.1	Arnold Arboretum
<i>M. salicifolia</i>	1947	1948	46	9.6	Mrs. T.C. Frye, Seattle
<i>M. salicifolia</i> 'Else Frye'	1947	1948	23	4.5	Mrs. T.C. Frye, Seattle
<i>M. sargentiana</i> var. <i>robusta</i>	1952	1958	42	11.7	D.G. Graham, Seattle
<i>M. sprengeri</i> 'Diva'	1952	1959	40	7.5	D.G. Graham, Seattle
<i>M. tripetala</i>	1940	pre-1946	43	11.9	Arnold Arboretum
<i>M. × veitchii</i>	1959	1959	33	6.0	Taylor Nursery, Seattle

*"Diameter Breast High" (Diameter of tree bole measured 4½ feet above ground line).

the origin of this plant, which has the same parents as *M. 'Charles Raffill'* and *M. 'Kew's Surprise.'* We received it from a 'local magnolia enthusiast, the late Donald Graham, as scions in 1952. Mr. Graham imported a number of *Magnolia* species from England and it seems safe to assume that our plants came from among the original distribution of about 100 plants in 1948 and 1949 as recorded in Treseder's book, *Magnolias*, p. 169. It is a pity we don't know from which clone it was derived since it is a fantastically beautiful tree in full flower.

Our arboretum has some fairly large magnolia trees, as might be expected of a collection about forty years old. The chart is intended to give an idea of the size of some of our largest trees; it by no means lists all the magnolias growing in the University of Washington Arboretum.

As beautiful as the Arboretum's magnolias are, this collection is more than just a display of highly ornamental plants. It is both a teaching aid and research tool for the University of Washington and nearby universities, colleges, and high schools. Students of botany, dendrology and horticulture are major visitors. Research projects conducted by University scientists and those from other institutions make full use of the collections, fulfilling our policy of supplying material for any legitimate research project.

Two cultivars have been named at the Arboretum, *M. 'Wada's Memory'* and *M. salicifolia* 'Else Frye'; another, a shrubby *M.*

kobus, is now being evaluated for naming. The first two are now widely distributed and available from commercial sources. We also participate in the International Seed Exchange conducted among the world's botanic gardens and arboreta. We have found that seeds from our magnolias are highly popular with foreign gardens. Last year, for instance, we offered seeds of 12 species and had requests for about 450 packets of seeds. Unfortunately, we were able to fill only about three fourths of the demand before the supply ran out.

We consider our magnolias of great importance and usefulness in the total



Magnolia sinensis in University of Washington Arboretum. Photo William Eng.

Arboretum program. We hope to expand the collection and intend to see that it continues to be available to the public and the academic community as a source of aesthetic pleasure and a resource for learning and research.

A more detailed description of the University of Washington Arboretum's collection by sections follows:

Section *Rytidospermum*: *M. hypoleuca*; *M. officinalis* (correct name of this plant has been questioned by Dr. Stephen Spongberg), var. *biloba*; *tripetala*; *fraseri*; *pyramidata* (in nursery); *macrophylla*; *ashei*.

Section *Magnolia*: *M. virginiana*, var. *australis*.

Section *Oyama*: *M. sieboldii*; *sinensis*; *wilsonii*.

Section *Theorhodon*: *M. grandiflora*, cvs. 'Goldie Manual,' 'Exoniensis,' 'Goliath,' 'Russet,' 'Samuel Sommer,' 'St. Mary'; *M. schiedeana* (but see comments above).

Section *Yulania*: *M. heptapeta* (*denudata*); *M. sprengeri*, cv. 'Diva'; *M. campbellii*, cvs. 'Alba,' 'Strybing White'; *M. campbellii* subsp. *mollicomata*, cv. 'Fastigiata'; *M. dawsoniana*, cv. 'Chyverton'; *M. sargentiana* var. *robusta*, cv. 'Caerhays Belle.'

Section *Buergeria*: *M. stellata* (*kobus* var. *s.*), cvs. 'Centennial,' 'Rosea'; *M. cylindrica*, *M. kobus*, cvs. 'Nana Compacta,' 72-47 (tentatively named 'Carl S. English'), 'Wada's Memory'; *M. salicifolia*, cvs. 'Else Frye,' 'Fasciata.'



Magnolia campbellii in University of Washington Arboretum. Photo Brian Mulligan.

Section *Tulipastrum*: *M. acuminata*, subsp. *cordata*; *M. quinquepetala* (*M. liliflora*), cv. 'Nigra.'

Hybrids: *M. acuminata* × *M. heptapeta* cv. 'Elizabeth'; *M. quinquepetala* × *M. stellata* cvs. 'Ann,' 'Betty,' 'Judy,' 'Pinkie,' 'Randy,' 'Ricki,' 'Susan'; *M. virginiana* × *M. grandiflora* cv. 'Freeman,' F₂: *M.* × *soulangiana* cvs. 'Alexandrina,' 'Brozzoni,' 'Grace McDade,' 'Lennei,' 'Lennei Alba,' 'Pelton,' 'Picture,' 'Speciosa'; *M.* × *highdownensis*; *M.* × *loebneri*, cvs. 'Leonard Messel,' 'Merrill,' 'Willowwood'; *M.* × *wieseneri* (*M. watsonii*); *M.* × *thompsoniana*; *M.* × *veitchii*; *M.* × *veitchii* × *M. heptapeta* (NA31328).

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Magnolias at Strybing

This Newsletter has received a copy of "Magnolias and Their Relatives in Strybing Arboretum," a newly published "self guide" to viewing these plants at the arboretum in Golden Gate Park, San Francisco. The booklet was sent in behalf of Constance Stroud, president of the Strybing Arboretum Society of Golden Gate Park, by Jane Gates, librarian, with the note that it is priced at \$1.50 and is available at the kiosk at the entrance of Strybing Arboretum.

The booklet covers 31 plant specimens and includes a map to help the reader locate them in the arboretum.

Two persons have sent comments on the booklet: Joseph C. McDaniel, AMS president, is doubtful that the cover picture, identified as *Magnolia kobus*, is that species, and believes it is *Magnolia* 'Wada's Memory.' He says the American magnolias apparently are not as well adapted to San Francisco's mild winters and cool, foggy summers as the precocious Asian magnolias, since there are no American magnolias mentioned except two cultivars of *Magnolia grandiflora*.

Gene German says several species and hybrids in the arboretum are not mentioned in the booklet.

The text is expertly written by Dr. Elizabeth McClintock and describes the origin of the Strybing Magnolia collection, one of the best in the country. The attractive drawings are by Nancy Baron.