'Silver Parasol'
A New Magnolia Cultivar

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In the Boston area magnolias are generally thought of as small trees or large, twiggy shrubs — early spring-flowering plants that are well adapted for small gardens and urban settings Rarely, however, are magnolias thought of as large forest trees, yet several species of this diverse genus attain a large size, and in the regions where they are native these species often rate as some of the largest and tallest trees in the forests they inhabit.

The living collections of the Arnold Arboretum include several magnolia specimens that would be considered by most any judge to constitute large trees. These, with one exception, are plants of *Magnolia acuminata* (L.) L., the North American cucumber-tree, and the two specimens that flank the walk to the arboretum's Administration Building are prominent examples. The exception, alluded to above, is a magnolia that grows adjacent to the Arborway wall above the bank of Goldsmith Brook to the right of the main, Arborway gate to the arboretum. Since several large trees of *M. acuminata* grow nearby, the size of this specimen is often not immediately appreciated. For many years this plant, which is grown under Accession Number 1280-27-C, was considered to be a fine example of the Japanese white-bark magnolia, *Magnolia hypoleuca* Siebold & Zuccarini. In

Magnolia 'Silver Parasol' in late winter **The pale pewter-colored bark** *is one of the tree's outstanding ornamental attributes Photograph by P Del Tredici*

eastern Asia *M hypoleuca* is a prominent forest tree in mountainous regions in the southern Kurile Islands, the four main Japanese Islands of Hokkaido, Honshu, Shikoku, and Kyushu, and southward in the Ryukyu Islands. It attains its best development in the forests on Hokkaido where it grows to be 30 meters (ca. 100 feet) tall, and Charles Sprague Sargent gathered seeds of this species there in 1892. One of the plants of the white-bark magnolia that grew from the seed Sargent brought back to the arboretum was given Accession Number 15172 and planted in the magnolia collection to the east of the Administration Building. Unfortunately, this tree, the only specimen of *M. hypoleuca* that remained in the arboretum's collection that originated directly from Sargent's introduction, had to be destroyed when the service garages and parking lot were constructed adjacent to the Administration Building.

One of the chief characteristics of *Magnolia hypoleuca* and other closely related species is the large size and arrangement of the leaves While the leaves are usually alternate and widely spaced on new shoots, those on older shoots are crowded into false whorls at the ends of the branchlets. When the leaves fall in autumn, large leaf scars are evident on the stout, brittle branchlets, and Neal Treseder (1978, p 51) has remarked that "The tree has an almost antediluvian appearance, with its prominently annular-scarred and lenticelled stems."

Other magnolia species that share this unusual leaf arrangement have been grouped with *Magnolia hypoleuca* in *Magnolia* section *Rytidospermum*, and this group includes both Asian and American representatives. The most widespread American species of section *Rytidospermum* is the umbrella-tree or elkwood, *M. tripetala* L , and the first listed common name is an illusion to the arrangement of its leaves on the branchlets. The umbrella-tree is native to rich woodlands in eastern North America from southern Pennsylvania and West Virginia southward into Florida and westward through Ohio and Kentucky to Arkansas and Missouri.

Unlike *Magnolia hypoleuca*, the American umbrella-tree is usually a tree of small stature or more often a large shrub with numerous branches from the base of the plant. Those plants that do attain a tree habit may grow to a maximum height of about 12 meters (ca. 35 feet), and in their native woodlands they are usually understory trees The bark of the umbrella-tree is ash-gray, while that of *M. hypoleuca* is silvery-gray, and the flowers of *M. tripetala* have an offensive odor while those of *M. hypoleuca* are pleasingly fragrant. Other characters, including those of the fruit aggregates (7-10 cm. long in *M. tripetala*, 13.5-20 cm. long in *M. hypoleuca*), flowers, and leaves, separate plants of these two closely related species.

Several years ago when one of us (Spongberg) was checking the identities of the magnolias in the arboretum's living and herbarium collections, the large tree growing under Accession Number 1280-27-C and passing as a specimen of *Magnolia hypoleuca* posed a dilemma, as it did not agree completely with descriptions and speci-

A fine specimen of Magnolia hypoleuca *at the Arboretum of the Barnes Foundation* Magnolia *'Silver Parasol' inherited the treelike habit from this parent, but unfortunately not the glaucous leaves so conspicuous in this photograph Photograph by R Weaver, Jr*

mens of *M. hypoleuca*. After a considerable number of comparisons were made, however, it was concluded that the arboretum tree represents an interspecific hybrid between *M. hypoleuca* and *M. tripetala*. In some of its characteristics (especially the flowers and leaves) the arboretum tree is more like the umbrella-tree, yet it had been grown from a seed collected from Sargent's introduction of *M. hypoleuca* (Accession Number 15172),and its large size, its beautiful silvery bark, and its large fruit aggregates suggest that species. Moreover, Sargent's *M. hypoleuca* once grew in close association with arboretum plants of *M tripetala*, and the opportunity for hybridization was undoubtedly present since both species flower in late May and June after the leaves have fully expanded.

The fact that these two closely related species could hybridize is not surprising since numerous other hybrid combinations are known involving both species, and a *Magnolia hypoleuca* × *M. tripetala* hybrid has been recorded previously from Poland (Vasak, 1973). *Magnolia tripetala* is known to have hybridized with other species of section *Rytidospermum*, including *M. officinalis* Rehder & Wilson var. *biloba* Rehder & Wilson, *M. fraseri* Walter, and *M. macrophylla* Michaux, while *M. tripetala* × *M. sieboldii* K. Koch, an intersectional hybrid, is represented in cultivation by the cultivar 'Charles Coates'. Another intersectional hybrid involving *M. tripetala* and *M. virginiana* is

Foliage and a mature fruit aggregate of Magnolia tripetala, *characteristics of which are inherited by* M *'Silver Parasol' From a watercolor by Esther Hines*

known in cultivation under the collective name *M.* × *thompsoniana* (Loudon) C de Vos, and was the first magnolia hybrid combination known to arise in cultivation (see Spongberg, 1976) *Magnolia hypoleuca* has also hybridized with other species of section *Rytidospermum*, including *M. fraseri* and *M. macrophylla*, and *M.* × *wiesneri* is the collective epithet for intersectional hybrids between *M. hypoleuca* and *M. sieboldii*.

It is apparent that magnolia hybrids are to be expected when the various species of this ornamentally valuable genus are grown in close proximity in cultivation, and the Arnold Arboretum plant of *Magnolia hypoleuca* × *M. tripetala* is, in our minds, such an outstanding plant that it is deserving of a cultivar name to distinguish it from other plants of the same parentage. In this regard it should be noted that a hybrid plant (perhaps a sister seedling) of reputedly the same parentage is growing at the Hunnewell Estate in nearby Wellesley, Massachusetts, and plants that may have been distributed by the Arnold Arboretum as *M. hypoleuca* may represent this hybrid. We should like to name the plant growing at the Arnold Arboretum and its conal progeny 'Silver Parasol' to draw attention to its silvery gray bark and the parasol-like arrangement of its large leaves.

Magnolia hypoleuca Siebold & Zuccarini × *M. tripetala* L.
'Silver Parasol'

The original tree as of 1 March 1981 is 49 feet (14.8 meters) tall with a spread of 45 feet (13.6 meters). The circumference of the single

A view into the canopy of Magnolia *'Silver Parasol' showing the umbrella-like arrangement of the leaves Photograph by S Spongberg*

The foliage and immature fruit aggregate of Magnolia *'Silver Parasol' Note their size when compared with a human hand Photograph by S Spongberg*

A fully open flower of Magnolia 'Silver Parasol'. A sweet fragrance compliments the beautiful form and pristine whiteness of these magnificent blossoms Photograph by H Howard

trunk (at 4 feet) is 4 feet, 7 inches (1.4 meters). Its habit is pyramidal, with gently ascending branches, the lowermost originating 6 feet above the ground. The silvery-gray or pewterlike bark is unfissured, even on the oldest wood. It is quite smooth except for the scattered, quarter-inch, diamond-shaped remains of the lenticels.

The leaf blades are elliptic-obovate (narrowly egg-shaped), broadest just above the middle, with an acute to short-acuminate (broadly pointed or abruptly pointed) tip, and a broadly cuneate or occasionally obtuse (broadly triangular) base. At maturity they vary from 12 to 16 inches (30–44 centimeters) in length and in width from 5 to 8 inches (13–21 centimeters), although occasional individuals may be considerably smaller. The undersides of the leaves are slightly grayish and densely short-villous when young; the hairs along the veins are denser, silky, and rather tightly appressed. However at maturity the leaves are glabrescent (nearly hairless).

At the Arnold Arboretum the flowers appear from late May through early June, after the leaves have nearly matured. They are from 8 to 10 inches (20–25 centimeters) across and sweetly fragrant. There are normally 9 tepals, but 12 are occasionally present. The outer 3 tepals are reddish green, and they reflex as the flowers open. The inner 6 (or 9) are creamy-white; at maturity they are held horizontally and the flowers as a result are flat and saucer-shaped. The inner tepals are somewhat variable in shape. The outermost ones tend to be spathulate (tongue-shaped) and these intergrade to ones with an elliptic (oval) blade which narrows gradually at the base to a distinct claw (stalk).

They vary in length from 4 to 5½ inches (11–14 centimeters), and they are about 1½ inches (4–5 centimeters) broad.

The stamens are bicolored, the short filaments crimson, and the much longer anther sacs whitish. The gynoecium (aggregate of carpels) is pinkish, and it retains this color as it matures into fruit The mature aggregate unfortunately does not assume the beautiful rose color typical of good forms of *Magnolia tripetala* parent, but it is similar in size and color.

Magnolia 'Silver Parasol' most closely resembles its *M. hypoleuca* parent. The most conspicuous differences are in its more nearly elliptic leaves which are only slightly glaucous beneath and in its shorter fruit aggregates, all tendencies toward *M tripetala*. However its tree-like habit and sweetly scented flowers distinguish it immediately from *M. tripetala*. The plant at the Hunnewell Estate, referred to earlier as a probable sister seedling of 'Silver Parasol' carries tendencies toward *M. tripetala* even further in its more distinctly clawed inner tepals and its leaves glabrescent even when young.

Before its true identity was known, scions of 'Silver Parasol', were distributed by the Arnold Arboretum as *Magnolia hypoleuca* We would welcome reports on the status of these propagants if any survive, especially as to their hardiness and performance in diverse areas of our country.

References

Spongberg, S A 1976 Some old and new interspecific Magnolia hybrids. *Arnoldia* 36 129–145

Treseder, N G 1978 *Magnolias* London Faber & Faber.

Vasak, E. V. 1973 *Magnolia hypoleuca* in nature and in cultivation *Newsl. Am Magnolia Soc.* 9(1). 3–6.

Appendix:

Herbarium specimens that document this new cultivar as well as the plant of the same reputed parentage growing at the Hunnewell Estate, Wellesley, are deposited in the herbarium of the Arnold Arboretum in Jamaica Plain (AAH). These include the following.

Arnold Arboretum.

S A Spongberg 75-31a (3 sheets)
S A Spongberg s n. May 19, 1976 (5 sheets)
S A Spongberg s n. May 26, 1976 (6 sheets)

Hunnewell Estate, Wellesley

S A. Spongberg s.n. June 2, 1976 (5 sheets)