

## The Japanese Maple Collection at SFA Gardens<sup>©</sup>

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The generally accepted origin of all maples is central China, primarily in Hubei, Sichuan, and Yunnan provinces (Gelderen, 1994). Over 100 million years ago, the family *Sapindaceae* (syn. *Aceraceae*) radiated from there, moving westward, southward, and to the northeast, the latter trek taking maples into eastern Siberia and ultimately into North America. Most abundant during the Miocene from 25 to 5 million years before present, the range of maples was greatly reduced into the present day temperate regions with the ice age which began about 5 million years ago. While there are a few tropical maples, most of the 150 species today can be found in temperate regions. Rarely abundant, the species is often sympatric — that is, several maple species often reside in the same habitat without crossing. That paints the picture that leads our discussion to one maple species, a group we call the Japanese maples.

Japanese maples typically describes the cultivars of *Acer palmatum* and *Acer japonicum* (fullmoon maple). Although there are two dozen additional species in Japan (more if you count introduced species), these two species have received the most interest and use. In both, but especially in *A. palmatum*, there's a tendency to sport or produce unique seedlings — thus the increased pace of cultivar introductions. Like so much in horticulture, the temptation to name, propagate, distribute and promote a “new” plant, is just too much.

The definitive text for Japanese maples is by J.D. Vertrees, a Timber Press publication, now in the fourth edition (Vertrees, 2009). With the death of Vertrees in 2003, the more recent versions have been coauthored and amplified by Peter Gregory, who is the retired manager of the world-famous Westonbirt Arboretum in Gloucestershire, England. Gregory and Hugh Angus (who recently retired as Head of Collections at Westonbirt) visited Stephen F. Austin State (SFA) Gardens in November 2010. This was a rare opportunity for our garden to capitalize on maple experts who have enjoyed long careers with attention to this genus, the cultivars, and the nuances of growing maples. For a broader understanding of Japanese maples and related species, readers are encouraged to review an *Illustrated Guide to Maples* (Le Hardy de Beaulieu, 2003).

Cultivars are typically divided into eight groups: palmate, dissectum, deeply divided, linearilobum, dwarf, semi-dwarf, variegated, and unusuals. This is an arbitrary delineation. From small trees, to shrubs, to small dwarfs, there's a cultivar for anyone's taste. The big bold palmate types hold up better in the heat of a Texas summer, while the highly dissected types tend to leaf burn in summer. There are variegated cultivars. In Japanese, markings on the leaf are called “fu” with over 20 kinds of variegation described. With many variegated cultivars, there's some tendency to revert, easily controlled with a snip or two.

### STEPHEN F. AUSTIN GARDENS

Stephen F. Austin (SFA) Gardens comprises 58 ha (128 acre) of on-campus property at Stephen F. Austin State University, Nacogdoches, Texas. Tree, shrub, and herbaceous perennial evaluation at SFA Gardens is scattered across gardens and landscapes. Nacogdoches is Zone 8b with an average annual rainfall of 1219 mm (48 in.). June through August is characteristically hot and dry. In recorded history, 1 Sept. 2000 was the record high, 44.4°C (112°F), and 23 Dec. 1989 was the record low -17.8°C (0°F). Soils are generally well drained, slightly acidic, and the native flora is dominated by pine, oak, river birch, sweetgum, sycamore, Florida maple, hornbeam, elm, hackberry, pecan and hickory.

## CULTIVARS

Dirr described over 40 Japanese maple cultivars in the *Manual for Woody Landscape Plants* (Dirr, 2009), but a conservative estimate of cultivars currently available in the trade exceeds 1000. Stephen F. Austin Gardens is home to 454 *A. palmatum* and *A. japonicum* trees (Stump, 2014). The nomenclature of Japanese maples is confusing with many plants we have purchased later proven not true to type. For red foliage color, we favor (Amoenum Group) ‘Bloodgood’, (Matsumurae Group) ‘Chitoseyama’, (Amoenum Group) ‘Fireglow’, (Matsumurae Group) ‘Moonfire’, ‘Hefner’s Red’, (Amoenum Group) ‘Osakazuki’, (Amoenum Group) ‘Oshio-beni’, (Palmatum Group) ‘Shaina’, (Matsumurae Group) ‘Trompenburg’, (Dissectum Group) ‘Tamukeyama’, and (Amoenum Group) Red Emperor™ Japanese maple. Other desirable cultivars include: (Palmatum Group) ‘Orange Dream’ and (Amoenum Group) ‘Tsuma-gaki’ for unique foliage color in the spring, (Dissectum Group) ‘Seiryū’ for a cutleaf that develops into a strong small tree, (Dissectum Group) ‘Orangeola’ as a durable shrub dissectum, ‘Tsukasa Silhouette’ as uniquely fastigiated, ‘Ryusen’ as a fast growing weeping form, and, finally the coolest toadstool forms ever, any of the ‘hime’ cultivars: (Dwarf Group) ‘Yuri-hime’, (Dwarf Group) ‘Oto-hime’, (Dwarf Group) ‘Shishio-hime’, or (Dwarf Group) ‘Tama-hime’ (syn. ‘Yatsubusa Tamahime’). Over many years, we have concluded that full moon maples are a bit difficult in our climate, prone to slow growth and leaf burn. However, *Acer japonicum* ‘Vitifolium’ has reached good stature and its fall color has been a striking red/orange.

## CULTURE

At SFA Gardens, the strategy for over 25-years has been to either buy small plants via various mail order nurseries or acquire graft wood and propagate them ourselves. We then grow them for 1 to 2 years in containers. Cost is a major reason for that strategy. Large containerized Japanese maples can be expensive. Another reason is the fact that very few cultivars are offered in the South in retail or wholesale nursery outlets. In our region, sunlight and exposure has a large impact on Japanese maple survival, growth and performance. In east Texas, full morning sun is preferred. Full exposure to a western sun can be deleterious. Cultivars that feature variegated foliage or highly dissected leaves need additional protection. After locating the tree, think soil drainage. Japanese maples like well drained humus-rich soils and we have learned through experience that planting on a slight berm or knoll is best. At SFA Gardens we rarely dig a hole more than half the container root ball depth, choosing instead to plant high and then mound up around the plant, following that with heavy mulch except near the trunk itself. Japanese maples are tolerant of sands to clays, preferring slightly acidic soils. Develop an irrigation plan for the critical establishment years. At SFA Gardens, we utilize drip or sprinkler irrigation. Either works well. Once established, Japanese maples are amazingly drought tolerant in our Pineywoods region. When it comes to pruning, we usually say why? The tree’s natural form is the goal. Cut away any shoots that arise from below the graft and, yes, you can remove a damaged limb or low hanger if you wish — but put away the saw. Whatever you do, don’t try to hack your way to a meatball or cube — the maple police may come calling.

## PROPAGATION

We collect seed in the fall from various cultivars when they first show a brown hue and then stratify for approximately 120 days. Most improved cultivars are grafted; some can be rooted. There is controversy on own rooted cultivars. Some report that the own rooted plants are weak and that vigorous rootstocks are important to the growth rate and performance in the landscape. That has not been our experience. For example, we have about a dozen “hime” cultivars, small toadstool forms, that are own rooted and they have grown into sizeable specimens of good health. Still, the general recommendation remains that cultivars should be grafted on vigorous *A. palmatum* seedlings. Dwarf cascading types can be grafted high which costs more but leads to interesting form and structure.

## **CONCLUSIONS**

Japanese maples are becoming increasingly popular in Southern USA landscapes. Twenty-five years ago, they were rarely encountered in Texas or Louisiana retail outlets. If available, they were often listed as “red” or “green”. Today, Japanese maple cultivars are widely available in garden centers, although the diversity of cultivars available remains low. The showcase of Japanese maples at SFA Gardens has impacted the popularity of the species in our region. The collection is comingled with a large collection of azaleas, camellias and other small flowering trees under a high canopy forest composed primarily of loblolly pines.

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