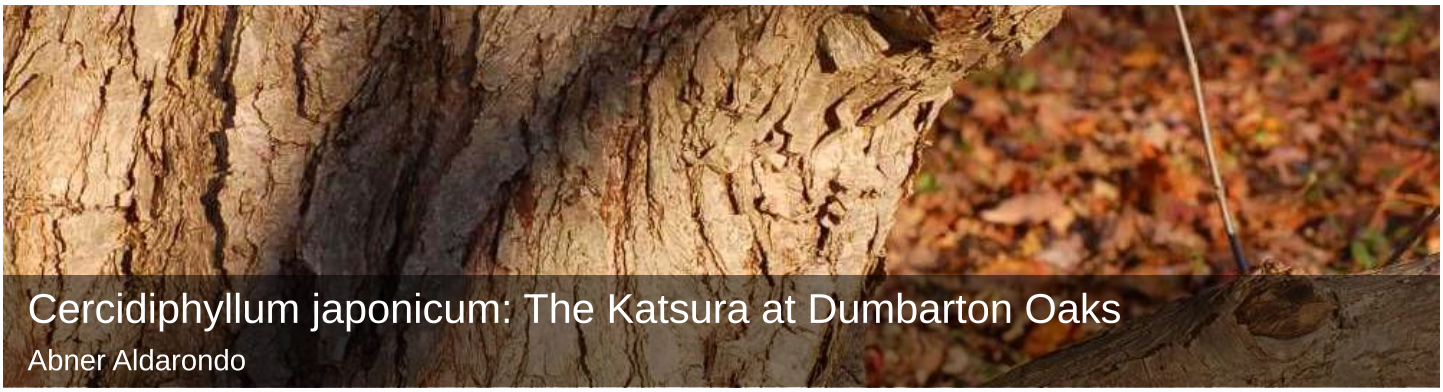


Cercidiphyllum japonicum: The Katsura at Dumbarton Oaks

Abner Aldarondo

The Katsura at Dumbarton Oaks

One of the oldest katsura trees (*[Cercidiphyllum japonicum*) in North America lives in the gardens of Dumbarton Oaks. You can see the sprawling octopus-like tree just beyond the R Street entrance gate on the East Lawn, its long-limbed branches swooping down, out, and then upward. Beatrix Farrand, the garden landscape architect who designed the gardens, noted in her *Plant Book for Dumbarton Oaks* that the katsura was growing where it stands today when Robert and Mildred Bliss bought the property in 1920. [1]

Beatrix Farrand's Plant Book for Dumbarton Oaks

Eastward view of the path from the gatehouse, between the katsura and the R Street wall, 1979 (photo: Ursula Pariser)

Ground cover on either side of the walk as it turns northward past the east end of the lawn may well be continued in its mass of Helleborus, Ferns, spring bulbs, Tulips Kaufmanniana and Clusiana, Grape Hyacinth, Aconite, Snowdrops, early Narcissus, Ionquilla simplex, and Violets, with occasional masses of Veronica rupestris.

Where the walk turns to the north a group of Magnolia glauca once screened what used to be known as the Gothic Garden from the walk. The Gothic Garden was surrounded by big clumps of Box, but these are no longer beautiful so the old Gothic Garden becomes a pleasant tangle of the early flowering Jasmines underplanted with blue Scilla and other spring-flowering bulbs.

On the west side of the walk, making the east border to the lawn, several trees add protection to both the R Street and Lovers' Lane plantings: an American Elm (Ulmus americana), a White Maple (Acer saccharinum), a Cedar tree (Cedrus atlantica), and a large-leaved Magnolia (Magnolia macrophylla) which is more a curiosity than a beauty.

Much variety in this planting is not thought desirable; its main duty is to screen the house from the two adjoining streets and make a frame to the east lawn. The east lawn is one of the loveliest of the features of Dumbarton Oaks in its freedom from detail. Its generous scale and graceful slopes add quiet to the design.

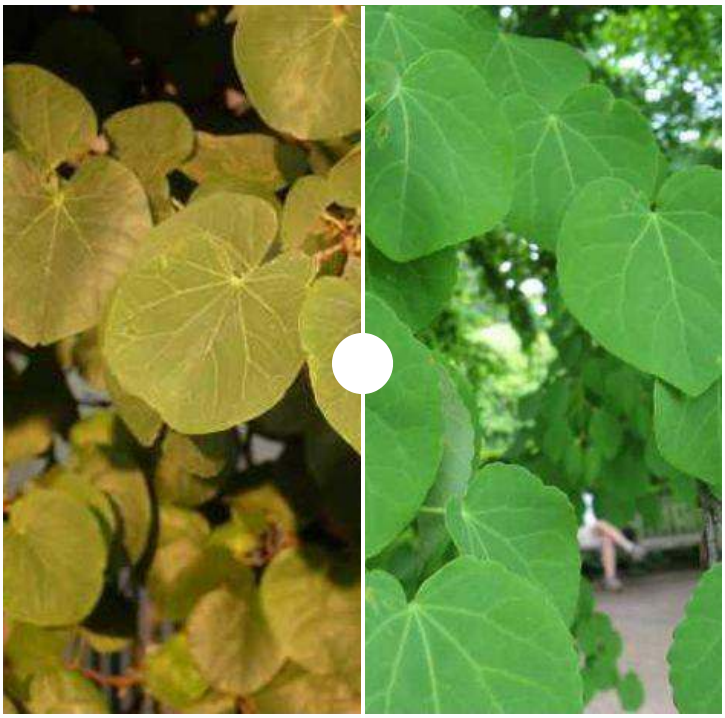
20

And how did it get there? This essay is an attempt to answer that question and paint a portrait of the katsura as a species over time. This biography looks at disparate moments in which the katsura appears—millions of years ago when dinosaurs roamed the Earth, in poetic images created a millennium after the common era, two hundred years ago during the United States' horticultural boom, and at Dumbarton Oaks today.

Close-up of the katsura tree.

The Japanese Judas Tree

The katsura is one of the two species that belong to the genus [*Cercidiphyllum](Q526549)*, the other being *Cercidiphyllum magnificum*. The genus refers to the two species having heart-shaped leaves similar to the Judas tree (*Cercis siliquastrum*). Samuel B. Parsons's Kissena Nursery in Flushing, New York, was probably the first commercial nursery to sell katsuras in the United States; one of the nursery's descriptive catalogs compares the katsura to a Judas tree.[2] Its species name, japonicum, refers to the katsura being native to Japan. Found in the country's mountainous regions, its light and soft wood is used in cabinetry and the interior finish of buildings. The tree also grows in Southern China's moist mixed forests](Q858028) of Southern China, disturbed and secondary mixed forests, and along bodies of water in the mountains.[3]



A deciduous tree, the katsura sheds leaves in the fall—and its leaves decompose and release the chemical maltol into the air leaving a sweet smell. Farrand accounted for this in her design of Dumbarton Oaks' East Lawn, adding plants that brought out its beauty and provided an "additional evergreen screen" when the tree had no leaves.[4] The katsura is a dioecious tree, meaning the individual trees produce either male or female flowers in the springtime. While its flowers have no petals, the colors are lovely: the male flowers are purple-red and the female flowers are yellow-green. As Dumbarton Oaks' katsura is a male, one slight sway of the tree's branches and pollen flies all over.

Dumbarton Oak's katsura tree in the fall showcasi...

Prehistoric Ancestors

Cercidiphyllum is an ancient genus—over 80 million years old. Fossil plants resembling its leaves appeared in the mid-Cretaceous period. It was widespread in the Northern Hemisphere during the Late Cretaceous and Early Cenozoic periods.[5] For the most part, the katsura has remained largely unchanged. Charles Darwin coined the term "living fossil" to refer to species that have survived for millions of years with little morphological change. Aside from changing very little over long periods of time, they also have distribution ranges that are more restricted than in the geologic past. This is to say that these plants can be found in the geological records across many places, though today they are native to a smaller range.[6] During the later Cenozoic period, the katsura experienced regional extinction and its range is now restricted to East Asia.[7] Even though katsura does not fit the definition of a living fossil, since it has evolved, thinking of the tree and its lineage prompts us to consider how landscapes change over time and why. Take for example how katsura is grown widely as an ornamental for its interesting form across the regions in which it was originally extinct, returning to where its prehistoric ancestors once grew millions of years ago, because of its ornamental beauty.

Cercidiphyllum obtritum leaf.

Cercidiphyllum...

Poetic Traditions Inspire Imperial Villa

The Geppa-Rō.

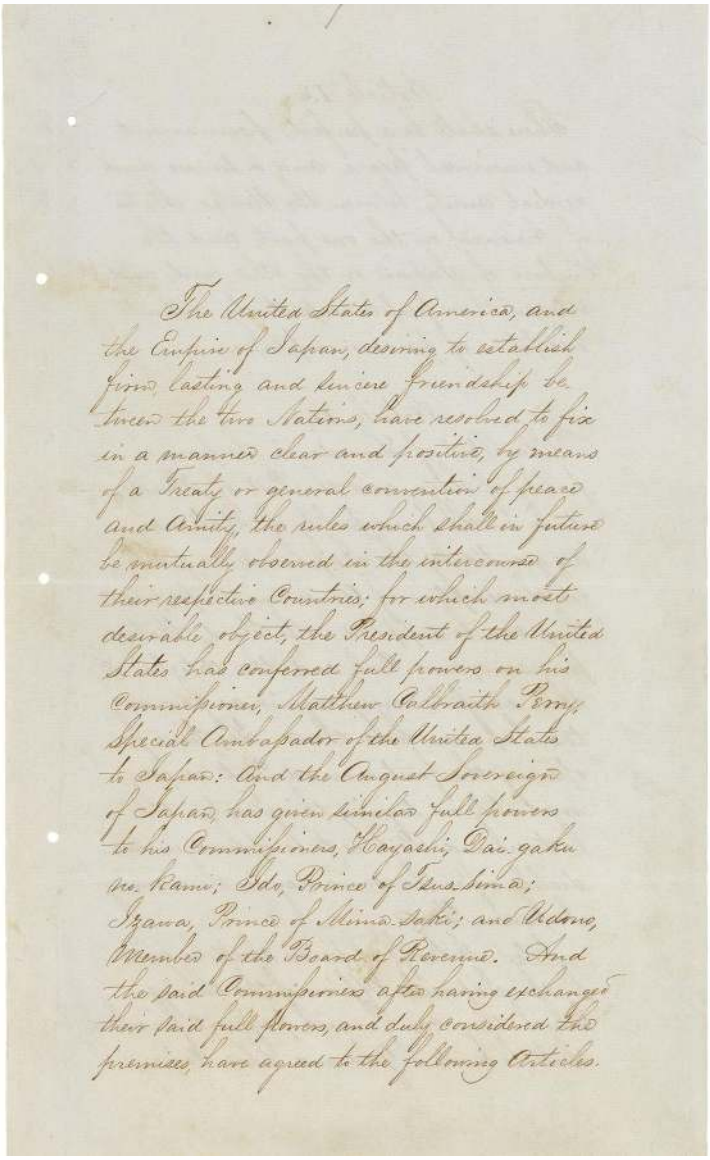
The awe-inspiring and ornamental qualities of trees have inspired artistic pursuits throughout time. Take for example how oaks heavily inspired Beatrix Farrand's design of Dumbarton Oaks' Green Garden terrace. The katsura, and its literary depictions, inspired the architectural design of the Katsura Imperial Villa. In Japanese poetry, the 'katsura of the moon' is a poetic image with Chinese roots used well before the Heian period (794–1185 CE). It is associated with the harvest moon when you can most clearly see the shadow of a katsura in the moon's center.[8] The oldest extant *Man'yōshū*, a collection of Classical Japanese Poetry compiled sometime after 759, is the *Katsura-bon*, whose name comes from being in the possession of the imperial Hachijō-no-miya family. Prince Hachijō-no-miya Toshihito financed the Katsura Imperial Villa and designed architectural features that evoke the katsura's rich poetic association with the moon. The Palace has four teahouses that represent the four seasons. Geppa-Rō (the moon-on-the-waves-tower), the teahouse associated with autumn, takes its name from a poem by the Tang-dynasty Chinese poet Jai Buyi (772-846) who greatly influenced early Japanese literature.[9]

Shinto-Tsukuyomi-no-Mikoto-Ol...

In Japanese mythology and folklore, the katsura links the heavens and the Earth. One myth tells the story of the descent of the moon god Tsukuyomi to Earth and his visit to the goddess of food, Ukemochi. She prepares dinner for him by spitting out boiled rice, seafood, and game. Disgusted, Tsukuyomi murders Ukemochi and body becomes the Earth's food; her limbs generate foodstuffs such as rice, red beans, and soya grains—it is through her death that human life becomes possible. The *Yamashiro no kuni fudoki* ('Annals of Yamashiro Province'), an eighth-century compilation of traditions in Yamashiro province, tells a similiar version of the tale, but specifies that Tsukuyomi manifested as a katsura tree when he met Ukemochi. The katsura's sweet bark smell, often described as like cinnamon, attracted Tsukuyomi to the tree. The Annals add that Katsura Village, now a neighborhood in modern-day Kyoto, is home to the tree where the moon god descended upon the Earth.[10]

Western Desire for Japanese Flora

Dumbarton Oak's katsura may be the result of the growth of trade of Asian flora. The European craze for trees and flowering plants from East Asia began in the mid-seventeenth century, grew in the eighteenth and nineteenth centuries and plateaued in the early twentieth century. The desire for Eastern Asian flora was the result of imperial botany, the "quest to bring the world's vegetation home for the delectation of the overseers of empire."[11] Eighteenth century European trade with Eastern Asia took place in subtropical ports, like South China's Pearl River Delta, and Dejima, the Dutch trading post in Nagasaki, Japan. While interest in Chinese and Japanese plants was high, Europe's temperate climate could not support the sub-tropical plants available. After the opium wars, Europeans were able to reach the northern and interior mountainous areas of China, whose plants were better suited for the European climate. By the middle- to late- nineteenth century, there was an uptick of botanical explorations in China and Japan. German physician and botanist Philipp Franz von Siebold was posted to Dejima as resident physician and scientist in 1823.[12] He quickly amassed a botanical collection and introduced Japanese plants to Europe in 1829. By the 1840s, Japanese flora reached the United States via European trade.[13] Japan also had an isolationist foreign policy from the 17th century to the mid-19th century. Once Matthew Perry negotiated the Treaty of Kanagawa on March 31, 1854, after threatening military force against Japan, diplomatic relations between Japan and the United States were established. Japan then opened itself to the world. During the nineteenth century, it showcased its flora, including the katsura, in world fairs.

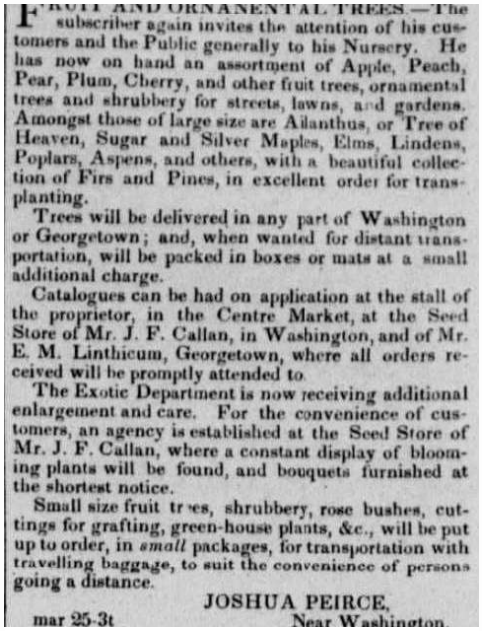


The United States of America, and the Empire of Japan, desiring to establish firm, lasting and sincere Friendship between the two Nations, have resolved to fix in a manner clear and positive, by means of a Treaty or general convention of peace and Amity, the rules which shall in future be mutually observed in the intercourse of their respective Countries; for which most desirable object, the President of the United States has conferred full powers on his Commissioner, Matthew Calbraith Perry, Special Ambassador of the United States to Japan: And the August Sovereign of Japan has given similar full powers to his Commissioners, Hayashi, Dai gaku no Kami; Ido, Prince of Tsus Sima; Izawa, Prince of Mima Saka; and Udono, Member of the Board of Revenue. And the said Commissioners after having exchanged their said full Powers, and duly considered the premises, have agreed to the following Articles.

Treaty of Kanagawa, in English March 31, 1854...

Edward Linthicum and Dumbarton Oaks' Garden

It was once thought that Dumbarton Oaks' katsura was planted by Edward Linthicum, a local hardware store merchant (at what is today Wisconsin Avenue and M Street), primarily because he established the property's gardens and had a business relationship with Joshua Peirce's Linnaean Hill Nursery in Rock Creek Park. Peirce sold fruit and ornamental trees grown by persons he enslaved—in fact, he named William Beckett an invaluable part of his business in a petition for compensated emancipation under the District of Columbia Emancipation Act.[14] In 1848, Linthicum hired J.H. Small, a renowned English gardener, to design the gardens of what was then called the Oaks, with the labor of enslaved individuals.[15] [16] Further research into the introduction of katsura into the United States, however, undermines Linthicum's role in planting the tree at the Oaks.



FRUIT AND ORNAMENTAL TREES.—The subscriber again invites the attention of his customers and the Public generally to his Nursery. He has now on hand an assortment of Apple, Peach, Pear, Plum, Cherry, and other fruit trees, ornamental trees and shrubbery for streets, lawns, and gardens. Amongst those of large size are Ailanthus, or Tree of Heaven, Sugar and Silver Maples, Elms, Lindens, Poplars, Aspens, and others, with a beautiful collection of Firs and Pines, in excellent order for transplanting.

Trees will be delivered in any part of Washington or Georgetown; and, when wanted for distant transportation, will be packed in boxes or mats at a small additional charge.

Catalogues can be had on application at the stall of the proprietor, in the Centre Market, at the Seed Store of Mr. J. F. Callan, in Washington, and of Mr. E. M. Linthicum, Georgetown, where all orders received will be promptly attended to.

The Exotic Department is now receiving additional enlargement and care. For the convenience of customers, an agency is established at the Seed Store of Mr. J. F. Callan, where a constant display of blooming plants will be found, and bouquets furnished at the shortest notice.

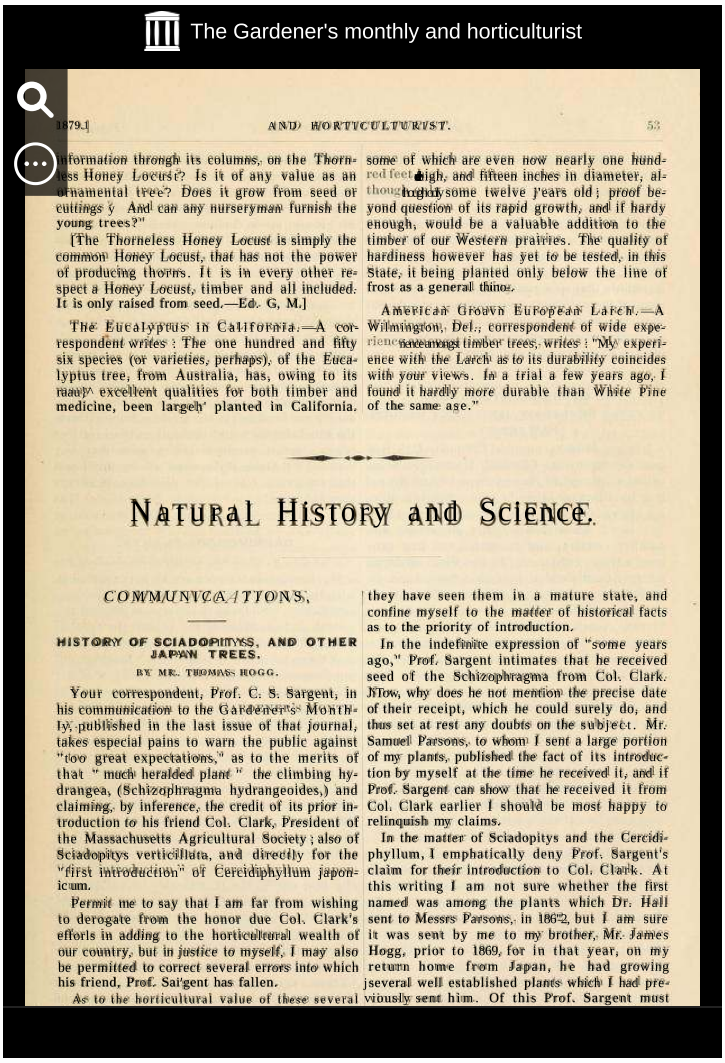
Small size fruit trees, shrubbery, rose bushes, cuttings for grafting, green-house plants, &c., will be put up to order, in *small* packages, for transportation with travelling baggage, to suit the convenience of persons going a distance.

JOSHUA PEIRCE,
mar 25-3t Near Washington

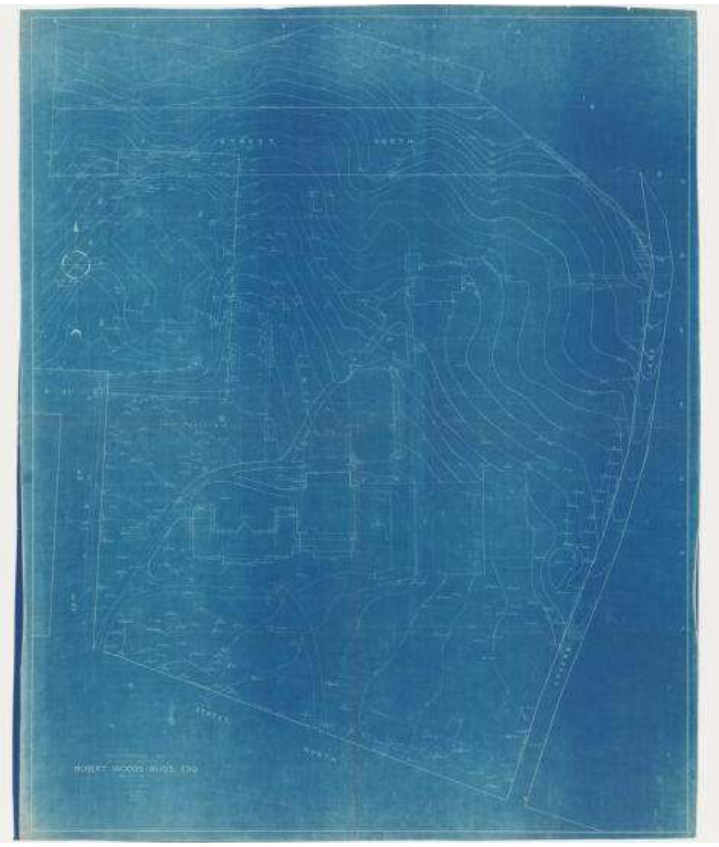
Clipping of a newspaper...

Thomas Hogg Jr. Introduces Katsura to the United States

In 1862, President Abraham Lincoln appointed Thomas Hogg Jr. (whose father established one of New York City's first nurseries) to the Japanese Consulate in Kanagawa in 1862. During his post, which he occupied until 1869, he sent seeds of Japanese flora to his brother James, who grew them in his home garden. It was during Hogg Jr.'s second trip to Japan, as he "worked as an independent advisor to the Japanese Customs Service," in the 1870s that he acquired katsura seeds.[17] He sent these to Samuel B. Parsons, the owner of the Kissena Nursery, because he had experience with propagating and growing Japanese plants.[18] Parsons began selling one-foot tall katsura in 1874. In an 1879 letter published in *The Gardener's Monthly and Horticulturalist*, Hogg Jr. denied botanist Charles Sprague Sargent's claim that agricultural scientist William S. Clark introduced katsura to the United States.[19] [20] In reference to Sargent visiting James' garden after Thomas returned from his second trip to Japan, Hogg Jr. remarked that "it seems incredible that so remarkable a plant could have escaped the notice of so enthusiastic an admirer of trees."[21]



A 1922 topographical survey of Dumbarton Oaks, providing the diameters of trees throughout the property, marks an unnamed tree (simply referred to as “Tree”) where the katsura is located.[22] The 1922 survey gives the “Tree” a diameter of twenty inches, which would make it at least twenty to thirty years old at that point. However, dating a tree with only a diameter is difficult without knowing the exact conditions in which the tree grew. The estimate provided here is only accurate if the tree grew healthily when its diameter was measured in 1922.[23] If the tree was well taken care of before the Bliss’ purchase of the property, Dumbarton Oaks’ katsura is at least 120 years old—though, the age provided here is only a guess. Given this estimated age of Dumbarton Oaks’ katsura, and the chronology of katsura’s introduction to the United States, the Blount family is the most likely candidate for planting the tree. Henry Fitch Blount purchased the Oaks in 1891 from Linthicum—around the same time the katsura would have been planted (but only if the twenty-thirty age estimate derived from the 1922 survey is accurate). Lucia Blount, Henry’s wife, was “interested in developing the grounds further as gardens” and collected trees from nearby property owners.[24] The time when the Blount family purchased Dumbarton Oaks, along with their improvements of the grounds which include the introduction of boxwoods into the garden, make them a likely suspect. This also fits in with when the Washington Nursery, owned by John Saul, one of the District’s well-known nurserymen, first included the katsura in his wholesale catalog in 1895, which notes the tree being a “recent introduction.”[25]



1922 topographical survey of Dumbarton Oaks.

Fujimoto Master Gardener

To help extend the lifespan of its katsura, in 2023, Dumbarton Oaks invited Kurato Fujimoto, a Japanese master gardener, to use indigenous Japanese horticultural practices on the tree. Among the techniques he brought to the job was placing a support pole, called hoozue (chin cane), at the ends of branches to support and encourage branch growth and create additional energy for the tree. Fujimoto has two guiding principles for placing a hoozue at the end of a branch: whether it needs support or seems to be able to support additional leaf biomass. Once the branches are identified, the ground beneath them is marked with a stake or flag and the distance between them is measured. Then pole fabrication begins.

Halfway point of hoozue installation.

A basic hoozue is a single pole with a cross piece attached at the top, resembling a croquet mallet. Heavier branches require two poles with cross piece. Some hoozue-eligible branches are above another branch—in which case a bridge made up of two poles with a long cross piece is installed instead of removing or penetrating the lower branch. The hoozue Fujimoto uses at Dumbarton Oaks are made from the hard and durable *robinia pseudoacacia* (black locust); in Japan, the hoozue are usually made out of *thujopsis dolabrata* (hiba arborvitae). Ron Henderson, a landscape architect who collaborates with Fujimoto, comments on the positive effect of hoozue: “We [Americans] have a bit of a naturalistic tenden[cy] or wilderness tenden[cy] or, you know, we don’t coppice [cut back] and hedge and show human alteration of plants quite as much as other cultures and this [hoozue] gives a different kind of evidence of the care that many in North America are not used to seeing. And I think as a consequence, it’s helped… some people see that we are, in fact, taking care of these living things.”[^ref 26]

Left to right: single pole hoozue, bridge hoozue, a...

The Power of Trees

Dumbarton Oaks' katsura tree.

Old trees like Dumbarton Oaks' katsura, are contemporaneous with historic events. And by telling their story we see how their surroundings have changed—or stayed the same. But trees are more than just narrative devices: we name places after trees and our culture is influenced by our interaction with them. Despite plant blindness associated with a society distant from them, they are nonetheless central to our lives. If we calibrate our attention to the temporal and spatial scales of trees, we get a complicated history of a tree across different times and places. It also complicates the notion of a historic garden, including Dumbarton Oaks'. It is a historic garden in the sense that Beatrix Farrand designed a beautiful garden many decades ago, but it is also historic in the sense that the land on which she laid out her vision had a history that superseded her. The landscape was not a tabula rasa upon which Farrand engraved her design. The katsura is a case in point of how landscapes are constantly changing, and the various organisms that live on them change. But perhaps more interesting is the power of trees: we move them across seas for their beauty—and unknowingly plant them where their ancestors once sat, a reunion across time and space.

References

1. Diane Kostial McGuire, ed., *Beatrix Farrand's Plant Book for Dumbarton Oaks* (Washington, DC: Dumbarton Oaks, Trustees for Harvard University, 1980): 19. ↩
2. Parsons & Sons Co. et al., *Descriptive Catalogue of Hardy Ornamental Trees, Flowering Shrubs and Vines: Including Rhododendrons, Roses, Magnolias, Chinese and Ghent Azaleas, Camellias, Japanese Maples and Other Rare and Choice Plants* (Flushing, N.Y: Parsons & Sons Co, 1888). https://doi.org/10.5962/bhl.title.85258. ↩
3. Peter R. Crane and Ashley DuVal, "766. CERCIDIPHYLLUM MAGNIFICUM: Systematic Placement and Fossil History of Cercidiphyllum Siebold & Zuccarini: Cercidiphyllaceae," Curtis's Botanical Magazine 30, no. 3 (2013): 177—178. ↩
4. McGuire, 19. ↩
5. Crane and DuVal, 177. ↩
6. Shanshan Zhu et al., "Genomic Insights on the Contribution of Balancing Selection and Local Adaptation to the Long-term Survival of a Widespread Living Fossil Tree, Cercidiphyllum Japonicum," *New Phytologist* 228, no. 5 (December 2020): 1674, https://doi.org/10.1111/nph.16798. ↩
7. Crane and DuVal, 177. ↩
8. Nicolas FiÉvÉ, "The Genius Loci of Katsura: Literary Landscapes in Early Modern Japan," *Studies in the History of Gardens & Designed Landscapes* 37, no. 2 (April 3, 2017): 149, https://doi.org/10.1080/14601176.2016.1239402. ↩
9. Michael Fowler (2023) Unfolding Architecture, Enfolding Landscape: *The Shakkei* at Geppa-rō Pavilion, *Architectural Theory Review*, DOI: 10.1080/13264826.2023.2231106 ↩
10. FiÉvÉ, 150-151. ↩
11. Thomas R. H Havens, "Seeking Japanese Plants in Europe and North America," *Land in Plants in Motion: Japanese Botany and the World* (Honolulu: University of Hawaii Press, 2020), 57. https://doi.org/10.1515/9780824883447-005. ↩
12. https://plants.jstor.org/stable/10.5555/al.ap.person.bm000007805 ↩
13. Ibid., 66. ↩
14. "William H. Beckett (U.S. National Park Service)", https://www.nps.gov/people/william-h-beckett.htm. ↩
15. James Almeida and Thaïsa Way, "Land and Labor: Dumbarton Oaks Prior to 1920," News Item, Dumbarton Oaks, https://www.doaks.org/newsletter/news-archives/2021/land-and-labor-dumbarton-oaks-prior-to-1920. ↩
16. *Evening star*. (Washington, DC), 10 March 1929. *Chronicling America: Historic American Newspapers*. Lib. of Congress. https://chroniclingamerica.loc.gov/lccn/sn83045462/1929-03-10/ed-1/seq-88/ ↩
17. Peter Del Tredici, "The Introduction of Japanese Plants Into North America," *The Botanical Review 83*, no. 3 (September 2017): 233, https://doi.org/10.1007/s12229-017-9184-3. ↩
18. Del Tredici, 234. ↩
19. *The Gardener's Monthly and Horticulturist*, vol. 21 (Philadelphia, Pa: Charles H. Marot, 1879), https://www.biodiversitylibrary.org/item/30894. 54. ↩
20. Del Tredici, 228. ↩
21. *The Gardener's Monthly*, 54. ↩
22. James Berrall, "Topographical Map of Property Belonging to Robert Woods Bliss, Esq., Washington, D.C.," 1922, Dumbarton Oaks Garden Archives, https://images.hollis.harvard.edu/primo-explore/viewcomponent/L/HVD_VIA8001614134?vid=HVD_IMAGES&imageId=urn-3:doak.reslib:100070038. ↩
23. I am grateful to Michael S. Dosmann, Keeper of the Living Collection at Arnold Arboretum, for this insight. ↩
24. Almeida and Way. ↩
25. John Saul, *Wholesale Catalogue of Fruit, Evergreen and Ornamental Trees Shrubs, Roses, and Greenhouse Plants for the Autumn of 1894 and Spring of 1895*, vol. 1895 (Washington, D.C: John Saul, 1895), https://www.biodiversitylibrary.org/item/134472. Page 11. ↩

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