Beyond the Tidal Basin:
Introducing Other Great Flowering Cherry Trees

March 20 – April 27, 2012
8:00 a.m. - 5:00 p.m. daily

Prunus pseudo-cerasus.
(Flowering Cherry.)

U.S. National Arboretum
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Introduction

For centuries, the Japanese have valued the ornamental qualities of flowering cherries, equating the transient beauty of the blossoms with the brevity of human life. As early as the mid-nineteenth century, Americans, too, were captivated by the delicate beauty of the cherry. Since that time, United States Department of Agriculture scientists have played a role in bringing flowering cherries to the North American landscape through plant collection in Japan as well as through different breeding projects. National Arboretum scientists continue this tradition today.

When most people hear the word "cherry blossom," they think of the familiar Yoshino cherry trees, made famous by the historic planting around the Tidal Basin in Washington, D.C. However, there are many other types of flowering cherries that offer a diversity of flower color, bloom time, shape, disease and pest resistance, cold hardiness, and tolerance to environmental stresses. The Arboretum is using this diversity in its flowering cherry breeding program to create new varieties that can be used in a wide range of landscape settings. You will visit three of these new varieties as well as our research fields on this tour.

Our *Beyond the Tidal Basin* tour introduces you to a wide range of flowering cherries. You will see flowers in peak bloom on different trees at different times, as each type has its own bloom time. Cherries have other ornamental features, too, such as fall color and interesting bark, so be sure to look at the whole tree and take note of the ones with the qualities and bloom times that match your taste and landscape needs.

Tour Basics

You may visit all stops by walking, but remember that the Arboretum is 446 acres (you would walk approximately 3 miles on the tour). If driving, please park only in designated areas. The stops are marked with numbers on stakes.

The tour map is located in the center of the booklet.

The National Arboretum's Role in Preserving the Historic Tidal Basin Cherries

In the 1970s Arboretum botanist Roland Jefferson researched the history of the Tidal Basin cherries in order to co-author the first documented history of the 1912 gift (available in PDF format at http://naldc.nal.usda.gov/catalog/CAT78696066). Jefferson took cuttings of the original trees between 1976 and 1979, propagating over 100 clones, some of which you will see on the tour (stops #3 and 6). He was the first to realize the importance of preserving clones of the trees planted by First Lady Helen Taft and Viscountess Chinda (stops #28 and 29).

Roland Jefferson with cuttings from the 1912 cherries.

Ruth Dix and Dr. Margaret Pooler with trees grown from cuttings from the 1912 trees.

In the late 1990s Arboretum horticulturist Ruth Dix took additional cuttings of the original trees to provide the National Park Service with replacement trees for the original ones as they die. Though they are younger, the new trees are genetically identical to the 1912 gift. Read more about this project online: http://www.ars.usda.gov/is/ar/archive/apr99/cher0499.htm.

Blooming Periods

Early Flowering = Early to late March

Mid-season Flowering = Late March to mid-April

Late Flowering = Mid- to late April

People have wondered about the effect of this year's mild winter temperatures on bloom time for the cherries. The Arboretum's early blooming cultivar 'First Lady' was in peak bloom on March 25th last year. This year, the same tree was blooming on March 4th, three weeks earlier. The time periods defined above are for an average year.

1. *Prunus* 'Dream Catcher' Early Flowering

This cultivar resulted from a selection made in 1984 from the Arboretum's research breeding program (see stop #37) and is the first flowering cherry to be released by the National Arboretum for sale by commercial nurseries. 'Dream Catcher' grows to 25' tall with a vase-shaped crown spread of 15' and features large, clear medium pink, single flowers. To view a fact sheet, see www.usna.usda.gov/Newintro/awards.html.

2. *Prunus subhirtella* 'Pendula' Mid-season Flowering

Since the 8th century A.D., the Japanese have held flower viewing gatherings, or *hanami*, under mature trees such as these. In the past, they wrote poems and offered sake to the spirits—*kami*—that lived in the trees to assure abundant harvests. Today, while many people in Japan and elsewhere look forward to picnics and parties under the cherry trees, just pausing to admire the blossoms is "doing *hanami*."

A horticulturist takes a flowering cherry budwood cutting for propagation.

3. *Prunus ×yedoensis* Mid-season Flowering

In the late 1970s, Arboretum botanist Roland Jefferson took cuttings of several of the trees from the 1912 Tidal Basin gift from Japan in order to grow trees at the Arboretum that are genetically identical to the 1912 trees. These new trees serve to preserve documented original trees. This tree grew from one of those cuttings and, though 60 years younger than the Tidal Basin Yoshino trees, is genetically identical to one of them. Conserving important plant material is just one of the roles of the National Arboretum.

4. *Prunus ×yedoensis* Mid-season Flowering

Unfortunately, this once stately Yoshino cherry is reaching the end of its life. A storm last year took a large branch, but the tree was already showing its age. Yoshino cherries—like many other flowering cherries—can live to between 60 and 100 years (less than 4% of the original gift of 3,000 Tidal Basin cherries are still alive to celebrate their centennial). This tree is about 63 years old.

The leafless cherry,
Old as a toothless woman,
Blooms in flowers,
Mindful of its youth.

Matsuo Bashō, 17th century poet

5. *Prunus* 'Helen Taft' Mid-season Flowering

Named and released especially for this year's centennial celebration of the 1912 Tidal Basin cherries, this new cultivar in the Arboretum's First Lady flowering cherry series honors the former president's wife who helped to bring the flowering cherries to Potomac Park. One of the parents of this hybrid cherry is a clone of the Yoshino cherry that Viscountess Chinda planted (see stop #29). Like this parent, 'Helen Taft' is a large, spreading tree, growing to 35' tall and wide in 30 years. The most noticeable difference between this Arboretum cultivar and the Yoshino is the flower color. 'Helen Taft' has flowers that come out pink and remain pink, whereas most Yoshinos are white or at least fade to white. Because it was just released officially this year, 'Helen Taft' will not be available commercially until at least 2014. Make a note to ask your local nursery for it then.

6. *Prunus ×yedoensis* Mid-season Flowering

Arboretum research scientists used a clone of a 1912 Tidal Basin cherry similar to this one as one of the parents for a hybrid they named 'Helen Taft' (see stop #5). They took pollen (male cells) from another type of flowering cherry, *Prunus campanulata* (Taiwan cherry) and placed it on the stigma (female part) of the *Prunus ×yedoensis* flowers to create seed with elements of both trees. The feature they saw in the new hybrid that they especially liked was the pink flowers—a contribution from the Taiwan cherry parent. The Yoshino parent provided the broad, upright form of the hybrid tree and its large flower size.

7. *Prunus* 'Dream Catcher'

See stop #1.

8. *Prunus* (Sato-zakura Group) 'Taihaku' Mid-season Flowering

The flowering cherry has been cultivated in Japan for so many centuries that the parentage of many of the named selections is unknown. To recognize these garden cherries' Japanese horticultural origins, botanists place them in the "Sato-zakura ["village cherry"] Group." The group includes many different cultivars, including this one, 'Taihaku', which means "big white" in Japanese—a reference to this tree's large flowers.

9. *Prunus* (Sato-zakura Group) 'Shirotae' Late Flowering

The thin white petals of this "garden cherry" (see stop #8) cultivar inspired the Japanese to name it after a white cloth—called *shirotae* in Japanese—made from the paper mulberry tree. 'Shirotae' has been grown in Japanese gardens since the early nineteenth century, remaining a favorite for its large, double, fragrant blossoms. A broadly spreading tree, it requires room to mature.

10. *Prunus serrulata* var. *pubescens* 'Fudanzakura' Early Flowering

The Japanese word *fudanzakura* means "cherry without interruption" and refers to this cultivar's tendency to flower sporadically throughout the winter and early spring before it puts on a full display. Unfortunately, frost sometimes turns the early flowers brown. Grow this cherry for the joy of finding flowers fully open at surprising times of the year. Look for three of these planted here.

Photo credit: Kimon Berlin

11. *Prunus* (Sato-zakura Group) 'Amayadori' Late Flowering

'Amayadori' blossoms begin as clusters of pink buds and open as fragrant white double flowers. While some flowering cherry cultivars do not produce fruit, many, like 'Amayadori', do. Its small black fruits—appealing to wildlife, but not to people—mature in the fall. (Trees that produce edible cherries are close relatives of the flowering cherry.) Note the especially large and ornamental lenticels (openings through which gases are exchanged) on the bark and branches.

12. *Prunus* (Sato-zakura Group) 'Taihaku'

See stop #8.

13. *Prunus yedoensis* 'Akebono' Mid-season Flowering

The cherries in this multi-tree* planting are all 'Akebono', a popular American cultivar of the Yoshino cherry (see stops #3 and 4). Like the Yoshino, the flower buds are pink, but the mature flower turns white with a trace of pink (*akebono* means dawn in Japanese).

*The first is mid-way down the bank, directly behind the number sign, and the others are at the forest edge.

14. *Prunus* (Sato-zakura Group) 'Shirotae'

See stop #9.

15. *Prunus subhirtella* 'Pendula Plena Rosea' Mid-season Flowering

This attractive deep pink, double-flowered weeping cherry grew on the grounds of the imperial palace in Kyoto, Japan, and came to the West in 1928 via England (through cuttings, which is one of the ways nurseries produce plants identical to the original to sell). Its red buds are unusual because the bright yellow-green stigma (the portion of the female reproductive organ to which pollen attaches) protrudes from the still tightly closed petals. Nurseries usually propagate flowering cherries by taking buds from the parent tree and grafting them onto the roots—and sometimes trunk—of a different type of cherry, called the rootstock. In order to obtain a straight trunk, propagators will graft weeping varieties onto longer trunks (as they did on this one), while standard varieties (or non-weeping types) are often grafted near the ground.

16. *Prunus ×incam* 'First Lady' Early Flowering

The second release from the Arboretum's field trials (see stop #37), this cultivar was selected for its strongly upright growth habit and dark pink, semi-pendulous single flowers. Even though this specimen is small, in 20 years it will grow to 25' tall and 14' wide. Its glossy dark green leaves have shown good disease tolerance. It is the first in the Arboretum's research unit's series of flowering cherries named after first ladies (see stop #5).

17-24. Flowering Tree Collection

Flowering cherries represent one the most popular groups of flowering trees for the home landscape. Planted in the area on both sides of the road at this stop is the Arboretum's Flowering Tree Collection, which includes several types of flowering cherries. You'll discover several popular cultivars that are ideal for smaller landscapes, including ones that have especially ornamental leaves, have a weeping form, and that bloom in the fall. We list a few of them here with their own numbers, but take time to stroll through the entire collection (look for the silver tags hanging in branches for the trees' names).

17. *Prunus* 'Snow Goose' Mid-season Flowering

A smaller sized tree at 20' tall and wide, 'Snow Goose' opens its abundant single white blossoms before its leaves, and must have reminded its creator of its avian namesake. The cultivar came from the Netherlands. Look for three of these planted here.

18. *Prunus* ×*incam* 'First Lady'

See stop #16.

19. *Prunus* 'Snofozam' Mid-season Flowering

The cascading branches covered with pure white flowers inspired two other names under which this weeping form cultivar is also sold: Snow Fountains® and 'White Fountain'. The simple five-petal blossoms are long lasting and the foliage turns orange and gold in the fall. The height of the tree depends upon the height at which it was grafted (see stop #15). It is a naturally weeping type, so may also be found growing on its own roots. Look for three of these planted here.

20. *Prunus sargentii* 'Princeton Snow Cloud' Mid-season Flowering

The popular Sargent cherry (see stop #36) has pink flowers. This selection of the Sargent cherry was developed in New Jersey in the early 1980s and selected because it produces abundant large white flowers. Like other Sargent cherries, this cultivar's leaves emerge before the flowers and display brilliant red fall color. Look for three of these planted here.

21. *Prunus* (Sato-zakura Group) 'Royal Burgundy' Late Flowering

Photo credit: Martina Pintaric

This cultivar is similar to the familiar 'Sekiyama' ['Kwanzan'] (see stop #24), but has uniquely reddish-purple-hued leaves in addition to ornamental, abundant, deep pink, chrysanthemum-like flowers. It tends to be smaller than 'Sekiyama', growing to 25' tall and wide.

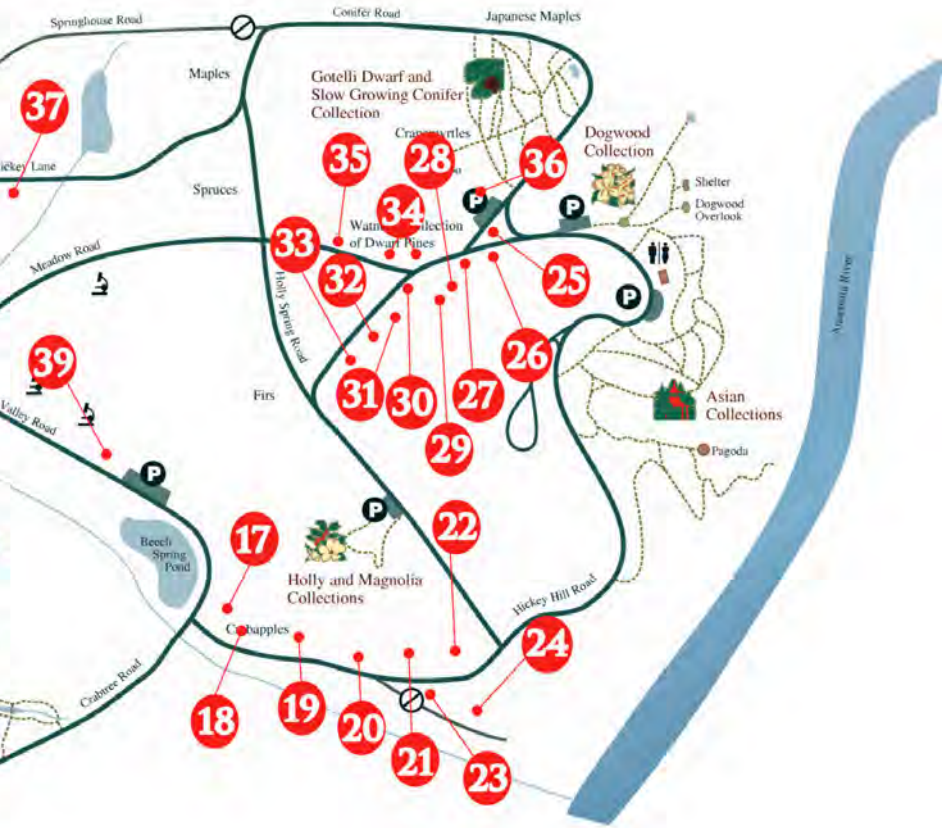
22. *Prunus ×incam* 'Okame' Early Flowering

One of the earliest cherries to flower, an 'Okame' in full deep pink flower heralds the beginning of spring. The small- to medium-sized tree works well in small gardens, adding interest in fall with its colorful orange-red leaves.

Beyond the
Introducing Other Great
Tour

Please park only in designated areas. The

Tidal Basin: Flowering Cherry Trees Stops



Arboretum hours are 8:00 am – 5:00 pm daily.

23. *Prunus subhirtella* 'Autumnalis Rosea' Mid-season Flowering

This fall-blooming cultivar was in full flower at Thanksgiving in 2011—a surprising treat for visitors to the Arboretum during the holiday weekend! The semi-double delicate pink flowers appear twice each year, in the fall and then again in the spring.

24. *Prunus* (Sato-zakura Group) 'Sekiyama' Late Flowering

Another type of old "garden cherry" (see stop #8), this cultivar joins Yoshino as one of the most commonly available in nurseries. It blooms later than other cherries and features double flowers that resemble tiny peonies. It is also known as 'Kwanzan' or 'Kanzan' and, after Yoshino, is the most common type planted at the Tidal Basin and East Potomac Park in Washington, DC.

25. *Prunus ×incam* 'Okame'

See stop #22.

26-33. Prunus Hillside

This north-facing portion of Hickey Hill showcases flowering cherries from older collections as well as new plantings. The gentle slope and edge-of-forest setting is typical of where many of Japan's flowering cherries grow. Be sure to explore the whole hillside to see all of the cherries.

26. *Prunus ×incam* 'Okame'

See stop #22.

27. *Prunus* (Sato-zakura Group) 'Sekiyama'

See stop #24. This tree is about 50 years old.

28. *Prunus ×yedoensis* Mid-season Flowering

In 1975 Arboretum botanist Roland Jefferson took cuttings of the Yoshino cherry trees that First Lady Helen Taft and Viscountess Chinda planted at the Tidal Basin in 1912. He did this to assure that these "witness" trees would be preserved through clonal plants (genetically identical copies). This is one of the trees he grew from a cutting. It is identical to the one that First Lady Helen Taft planted. Should the original Tidal Basin tree die, a cutting can be taken from this tree to grow a new one to replace it.

29. *Prunus ×yedoensis*
Mid-season Flowering

This tree grew from a cutting taken in 1975 from the Yoshino cherry that Viscountess Chinda planted in 1912 (see stop #28). It is genetically identical to the one that the Viscountess planted at the Tidal Basin.

30. *Prunus ×yedoensis* 'Awanui'
Mid-season Flowering

The Arboretum was fortunate to obtain a propagation of this cultivar from New Zealand, and we believe we are the only ones in the United States to have it. Popular outside the U.S., the cultivar demonstrates good disease resistance and has single clear pink blossoms.

31. *Prunus* (Sato-zakura Group) 'Shirotae'

See stop #9.

USDA botanist Paul Russell wrote the first American scientific guide to the newly popular flowering cherries in 1934. Many of his detailed descriptions of the different types of the trees were based on trees growing at the Department's plant introduction station in Glenn Dale, MD. This tree is one of those, grown from a cutting from the original in Glenn Dale and planted in a dedication to Russell in 1964, the year after he died.

'Shirotae' from Russell's 1934 *The Oriental Flowering Cherries* (USDA Circular No. 313)

32. *Prunus* 'Aratama' Mid-season Flowering

This cultivar was donated to the USDA in 1979 by a Japanese nursery. The plant remained at a quarantine station until 1992, when it was planted at the Arboretum. Imported members of the genus *Prunus* must be grown in special facilities and assessed by the USDA for a number of years before being declared safe from diseases that threaten our cultivated and wild fruiting and flowering cherries, peaches, nectarines, apricots and plums (all members of the genus *Prunus*). Only then may they be displayed in public gardens and offered for sale.

33. *Prunus mume* 'Okitsu-akabana' Early Flowering

Many people confuse the Japanese flowering apricot, *Prunus mume*, with the flowering cherry, and no wonder—they are closely related. Most of the apricots bloom earlier, however, and their branching and flower shapes are different. Compare this late-blooming apricot cultivar to the cherries growing around it. If the flowers of the apricot are in bloom, be sure to smell them—they are generally more fragrant than the cherries. This cultivar's blossoms are larger than most other apricots.

Prunus mume 'Okitsu-akabana'

Another type of Japanese flowering apricot, *Prunus mume* 'Shiro-Naniwa'. This cultivar is located in the Arboretum's Asian Collections.

34. *Prunus ×yedoensis* 'Shidare Yoshino' Mid-season Flowering

A weeping form of the popular Yoshino cherry. Compare this weeping Yoshino to the upright forms across the road (stops #28 and 29).

35. *Prunus cyclamina* Mid-season Flowering

This is the only flowering cherry on the tour native to China. While rare in North America, its vigorous growth habit and mature height of 25-30' make it a good candidate for urban gardens. Its delicate pink blossoms appear before bronze-red new foliage, and its red fruits are attractive to birds.

36. *Prunus sargentii* Mid-season Flowering

The Sargent cherry was named for Charles Sprague Sargent (1841-1927), a renowned botanist and first director of the Arnold Arboretum at Harvard University. As this mature specimen demonstrates, the species is large, growing to 40' to 50' tall and wide. Its highly ornamental reddish bark, deep pink flowers, and bronze- to red-colored autumn leaves have made it a popular choice for generations.

37. *Prunus* Research Field

Also see stop #39.

While most people are familiar with more common flowering cherries like Yoshino, few realize the diversity present in the flowering cherry group. This research field—comprised largely of trees grown from seeds collected from hundreds of trees in Japan during Arboretum planting collecting trips in the 1980s—illustrates some of that diversity. Note the variation in bloom date—some trees are in full bloom, while others are still in bud or past blooming; bloom color—blossoms range from white to dark pink; tree form—some are tall and upright, while others may be short and rounded; and bark characteristics—trunks may be smooth and shiny or rough and peeling. Scientists at the Arboretum select from this diversity by combining traits from these species through a breeding program that aims to create new cultivars (cultivated varieties) of flowering cherries that will fit into different landscape settings. Thanks to the collecting efforts of Arboretum scientists and horticulturists in several Asian countries, the National Arboretum has the most diverse collection of flowering cherries in the United States.

38. *Prunus ×yedoensis*

This Yoshino grew from seed collected by Arboretum botanist Roland Jefferson in 1986 from a tree growing along Takamatsu Lake (pictured here) in Japan. Like all the other trees in this research collection, it is evaluated by the Arboretum's shrub breeding scientist, Dr. Margaret Pooler, for possible use in breeding or for releasing as a new cultivar, should it display traits that would distinguish it from other Yoshinos.

39. *Prunus* Research Field

Also see stop #37.

For ease of planting and evaluation, Arboretum scientists plant research trees in rows like a crop. They continuously evaluate the flowering cherries in this field for traits such as disease and pest resistance; tolerance to environmental stresses; plant habit, bloom time, and duration; and appearance of the flowers and bark. The field contains a mix of trees: some are used for breeding, others are hybrids that are in various stages of evaluation for possible cultivar release (see stops #1, 5, and 16).

Notes

Notes

Cherry Blossom Basics

Prunus is the Latin name for flowering cherries and their relatives (over 400 species, which include edible cherries, plums, peaches, apricots, and almonds). Flowering cherries are grown for their flowers, not fruit, and are native to several countries in Asia besides Japan, including China, Korea, and Taiwan.

Plant names enclosed in single quotes (e.g., 'Dream Catcher') indicate that the plant is a cultivar, or cultivated variety. A properly named cultivar will have features (e.g., flower color and form) identical to all others with the same cultivar name. To guarantee that you get the type of cherry you want, be sure you ask for it by name.

The flowering time of cherries, like most spring-flowering plants, is dependent on a combination of day length and temperature. Different types also have different blooming seasons—some even flower in the fall. For this reason, during this tour, you will discover the cherries in different stages of bloom and leaf.

Flowering cherries have ornamental features beyond their blossoms. Summer and fall foliage or ornamental bark characteristics add year-round interest to some species. Cherry bark can be quite shiny and range in color from gray to a reddish brown. On some species the lenticels, or porous lines through which gases are exchanged, form distinctive patterns on the trunk and branches. Flowering cherries also come in different shapes. Some may be broad and rounded, while others are more upright or even weeping.

Generally easy to grow, flowering cherries require full sun, well-drained soil, and adequate moisture. Plant them in spring or fall. Most are hardy to USDA Zone 5. Few *Prunus* species are resistant to disease and insect pests, but generally can tolerate some damage from them, blooming consistently for several decades if otherwise healthy.

The U.S. National Arboretum serves the public need for scientific research, education, and gardens that conserve and showcase plants to enhance the environment. Visit our web site: www.usna.usda.gov

Arbor House Gift Shop Hours
10:00 a.m. to 3:30 p.m. daily and
10:00 a.m. to 5:00 p.m. on weekends April 7 - mid-October

Arboretum Hours
8:00 a.m. to 5:00 p.m. daily

Cover illustration: *Prunus pseudo-cerasus* (Flowering Cherry). Page 37, The Yokohama Nursery Company, 1905. Henry G. Gilbert Nursery and Seed Trade Catalog Collection. Special Collections, National Agricultural Library (NAL). Visit the Arbor House Gift Shop to purchase NAL's products made with this image and others, or shop online at http://www.nal.usda.gov/.

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The U.S. National Arboretum is an official participant of the 2012 National Cherry Blossom Festival. For more information about the festival, visit www.nationalcherryblossomfestival.org.

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