

OUTSTANDING PLANTS OF THE ARNOLD ARBORETUM

Prunus × *yedoensis* ‘Daybreak’

There are many different varieties and cultivars of flowering cherry trees available for use in today’s landscape plantings. One of the more spectacular but little used cherries is a cultivar of *Prunus* × *yedoensis* known as ‘Daybreak’. The Japanese name ‘Akebono’ refers to two different cultivars one with single flowers, and the other with double ones. This article will concern the single-flowered cultivar and will use the name ‘Daybreak’. *Prunus* ‘Daybreak’ is distinguished from other flowering cherries by abundant pink flowers that appear early in April, by its spreading habit, and by its glossy, lenticelled bark.

As a cultivar of *Prunus* × *yedoensis*, ‘Daybreak’ shares in a fascinating history. In *The Cherries of Japan* (1916), the famous plant explorer E. H. Wilson stated that the oldest known specimens of *Prunus* × *yedoensis* were growing in the Imperial Botanic Garden at Koishikawa, Japan; at that time the trees were approximately 40 years old. It was from this group of trees that the Japanese botanist Matsumura (1901) had first named and described *Prunus* × *yedoensis*, now thought to be a hybrid between the double white-flowered *P. speciosa* and the single pink-flowered *P. subhirtella* ‘Rosea’. The common name, Yoshino cherry, comes from the name of the Japanese region known for its wild cherries.

In 1902 seeds were sent from Tokyo to the Arnold Arboretum, constituting the first known introduction of *Prunus* × *yedoensis* into the United States. Wilson commented that in 1916 there were over 50,000 Yoshino cherry trees growing in Tokyo alone. In the United States, perhaps the most famous collection of flowering cherry trees is



in the Tidal Basin area in Washington, D.C., where each spring a cherry blossom festival is held. These trees were a gift from the Mayor of Tokyo in 1912. Originally, there were 4,000 trees planted, 800 of which were Yoshino cherries. Today, many of them are dying of old age and less than 25 percent of the original trees remain standing.

The 'Daybreak' cultivar of the Yoshino cherry originated in 1920 from a tree in the collection of W. B. Clarke in San José, California. This tree, which had masses of flowers pinker than those of the species, was named and introduced into cultivation in 1925. The Arnold Arboretum has a single specimen of *Prunus* 'Daybreak' on its Jamaica Plain grounds; a plant was received from Mr. Clarke in 1949 and given the accession number 212-49. It can be found on the left side of the road leading to the top of Bussey Hill, where it appears to survive Boston's winters quite well. It is a wide-spreading tree with four main branches and has reached a height of 25 feet with an equivalent spread. A strong grower, it has many open spaces between its branches, giving it an "airy" silhouette. A graceful touch is added by the slightly pendulous nature of its outermost branchlets.

Prunus 'Daybreak' is one of the earliest of the flowering cherries to bloom. In Jamaica Plain the peak bloom period occurs in early to mid-April and lasts for two weeks. The pleasingly almond-scented blossoms are usually borne on leafless branches in clusters of two to six. Each flower consists of five sepals, five or six petals, numerous stamens, and one pistil. The petals are half an inch in diameter, and each has a slight notch on its outer edge. The 'Daybreak' cultivar is best known for the color of the petals, light pink, with the outline of each petal tinged slightly darker. The calyx and upper side of the flower pedicel are rose colored. It is interesting to note that when the petals drop in late April, the appearance of the tree turns from light pink to dark rose due to the conspicuous calyces.

The leaves of *Prunus* 'Daybreak' are ovate, four to five inches long, and two inches wide. The leaf margins are doubly serrate, with the very tips of the teeth pointing upward. The newly unfolded leaves are bright green, but by summer the upper surfaces are a leathery dark green and the lower surfaces light green. The leaf petioles are red above and green below; they have two or three characteristic reddish glands just below the base of the blade and are grooved from this point to the stem. In the fall the leaf color ranges from reddish bronze, to bright yellow, to bright red.

New stem growth is red above and green below, with the tiny lenticels appearing as red dots widely spread around the entire stem. In one year's time the stems become glaucous chestnut-brown above and light tan below. After two years, the bark becomes glossy brownish red, with the prominent horizontal lenticels exposing the rust-colored inner bark. This mature bark provides for year-round interest; it is especially striking when seen against the white of the winter landscape.

Because *Prunus* 'Daybreak' is a hybrid, and also because it depends on insects and weather for pollination, fruit-set is not entirely predictable. There was no fruit formed this past spring on the Arnold



The graceful, spreading habit and spectacular floral display of the 'Daybreak' cherry are evident in this specimen, located on Bussey Hill

Arboretum specimen, but when fruit-set does occur it results in many small ($\frac{1}{2}$ " diameter) drupes that ripen to a black color in late summer. These fruits are visually attractive both to man and to the many birds that seem to like their bitter taste.

Asexual propagation, by either budding or stem cuttings, is the best way to retain the desirable characteristics of this cultivar. Budding is best done in mid-summer and involves inserting several buds of *Prunus* \times *yedoensis* 'Daybreak' into an appropriate rootstock such as *P. avium*. If stem cuttings are used, they should be taken from the spring softwood, dipped in a liquid hormone solution containing 8,000 ppm. IBA(indolebutyric acid) for five seconds, and then placed in a medium of equal parts peat and perlite. If the cuttings are kept in a high-humidity atmosphere (using mist or by enclosing them within a large plastic bag), rooting should occur within eight to ten weeks.

As of September 1980, *Prunus* 'Daybreak' was commercially unavailable in North America. Interested individuals and nursery businesses wanting to try this cherry tree may be able to obtain budwood from the Arnold Arboretum during the month of July, 1982. Requests concerning availability and service charges should be sent to the Arnold Arboretum well in advance and rootstock of *Prunus avium* should be prepared for budding.

In the cultivation of *Prunus* 'Daybreak' for home landscapes, there are very few problems that can not be solved. Care should be taken to select a suitable site where the soil is well drained, where the pH is in the range of 5.5 to 7.0, and where there is full sun for optimum flowering. During the spring of 1980, the specimen at the Arnold Arboretum sustained a moderate amount of leaf damage known as "shot-holing." As the name implies, the disease causes the leaves to look as if they have had shot fired through them, and may be caused

either by insects or a fungus. When no insects were found in a careful examination of the Arnold Arboretum specimen, it was hypothesized that a fungus was the cause. In a home landscape this damage would be discovered quite early, and the tree could be sprayed; in a larger area, such as an arboretum, the damage might not be discovered quite as early, and it might not be feasible to spray a single tree. However, the extra effort perhaps necessary to keep the tree vigorous, well pruned, and pest-free is worthwhile in the long run.

Prunus 'Daybreak' would be best used in landscaping as a specimen plant, in a location where the full splendor of the tree could be viewed from several different angles. The delightful pink floral display, the graceful spreading habit, and the glossy, lenticelled bark give this cultivar a potential to be used a great deal more in today's landscape.

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Back cover Closeup of the flowers of *Calanthe tricarinata*, showing the beautiful form of the flowers and their prominently ridged lips in different views. Photograph by M. Dirr.