

Canna-ballistic

THE CANNA HAS MADE
A COMEBACK, AND THANKS
TO LONGWOOD GARDEN'S
BREEDING PROGRAM,
THERE ARE MANY LOVELY
SELECTIONS TO CHOOSE FROM.

by DR. TOMASZ ANIŚKO

Heralded as “psychedelic wonders” and “spectacular exotics,” cannas (*Canna*) recently made a triumphal return to modern gardens. In the United Kingdom, the Royal Horticultural Society (RHS) recognized canna fashion by selecting this group of plants for its highly respected trials at the society’s garden at Wisley. The nomination of cannas for these trials validates this group of plants as accepted in contemporary landscapes, finally breaking away from the plants’ long association with Victorian gardens.

Proclamations like “cannas are back” and “the canna retirement is over” have been made on numerous occasions since the 1960s, but it was not until the 1990s when the renewed interest in using lush subtropical plants for seasonal plantings brought this genus back into the limelight. After World War II, breeding varieties of shorter stature than traditional cannas set these plants on a ballistic trajectory, featuring larger, better proportioned flowers in a wider array of softer colors, which lifted these selections to new heights.

Nearly 100 years after the last book on cannas was published, there are suddenly titles appearing on both sides of the Atlantic. (There is *The Gardener’s Guide to Growing Cannas* by Ian Cooke published in 2001, and *Cannas You Can Grow*, jointly written by James Waddick and Glenn Stokes, to be published this year.) And thanks to the hard work of interested professionals, these plants are now returning to our gardens more beautifully and spectacularly than ever before.

LONGWOOD BREEDING. In the 1960s, Longwood Gardens Inc. in Kennett Square, PA, attempted to rekindle canna interest by including the plants in prominent floral displays throughout its conservatories and outdoor gardens. Work began with the acquisition of cultivars commercially available at the time. Field evaluations were set up to select the most suitable varieties. After rigorous screening, however, none of the plants in the trials was deemed acceptable for Longwood’s garden areas.

To remedy the situation, Longwood began a breeding program in 1967 that was to last more than 20 years. Dr. Robert Armstrong, geneticist at the garden, was asked to develop new cannas more suitable for display purposes. The primary goals were to develop a clear yellow-flowered dwarf selection that could tolerate high heat and low light in conservatories, propagate and store easily, and abscise faded flowers readily. The search for a pure white-flowered canna also began then, as all so-called white varieties at the time were either no longer available or not satisfactorily pure in color.

Breeding began among three cultivars: ‘Moonlight’, received from the Nikitsky Botanic Garden in Yalta, Ukraine, then part of the USSR; and ‘Ambassador’ and ‘Banner’, both from the Durban Botanic Garden in Durban, South Africa. All three

had pale yellow to deep yellow flowers. A pink canna — ‘Mrs. P.S. duPont’ — was also included in initial crosses due to its good flowering form. This was also done in an attempt to improve the cultivar’s color.

In 1969, seed of five canna species — *C. achiras*, *C. humilis*, *C. limbata*, *C. polymorpha* and *C. variabilis* var. *rosea* — were procured from the Villa Taranto Botanical Garden in Lago Maggiore, Italy, for incorporation into the breeding stock. When these plants first flowered, however, it was found that they were only chance seedlings from a cross of unknown parents. Nevertheless, when these red- and deep crimson-flowered plants were used in subsequent crosses to produce hybrids of mixed colors, all showed a marked iridescence not previously seen.

With this unexpected occurrence, the program branched out to include the development of red, orange and pink cannas suitable for use in Longwood conservatories and gardens. It was decided the cultivars developed should have superior bedding plant qualities, namely dwarf uniform habit and abundant flowers that were open-faced and borne on open spikes. Emphasis was placed on increased flower production throughout the season but not necessarily on individual bloom size. Although dwarf cannas had been around for quite some time, they did not flower profusely and came in a limited range of colors.

Other factors considered in breeding were plant vigor, early flowering, foliar appearance, self-cleaning ability and good propagation qualities. Selecting for the self-cleaning characteristic proved difficult. While such a trait did make the plants look neater with less care, it also made them subject to premature floral drop during heavy rains or high winds.

With these objectives in mind, canna species and cultivars were obtained from many sources both within and outside the US. Between 1967 and 1984, some 35

species and cultivars were used in crosses. In 1969, Roberto Burle-Marx, renowned landscape architect, gave the garden *C. glauca*, which he collected in the state of Rio de Janeiro, Brazil. The species was crossed with selected terrestrial cannas, which a few years later resulted in a series of four aquatic cultivars: *C. ‘Endeavor’*, *C. ‘Erebus’* (photo, page 48), *C. ‘Ra’* and *C. ‘Taney’*.

Between 1969 and 1970, several unidentified cannas were collected in Hawaii, Costa Rica and Jamaica. Then, in 1972, Soviet cultivars such as *C. ‘K.A. Timirazov’*, *C. ‘Krimsky Riviera’* and *C. ‘Solneznaya Krasavaya’*, brought from the Nikitsky Botanic Garden by John Creech of the US National Arboretum, Washington, DC, were added to the breeding program. Between 1972 and 1975, Timothy Plowman of the Botanical Museum at Harvard University, Cambridge, MA, shared a number of species he collected in Peru and Bolivia, among them *C. iridiflora*, *C. paniculata* and *C. liliiflora*. In 1983, several species — mostly unidentified — collected in Costa Rica by William Burger of The Field Museum of Natural History



PHOTO BY LARRY ALBEE

Canna ‘Brandywine’ boasts large, deep red flowers with yellow-speckled inner stamens.



PHOTO BY LARRY ALBEE



PHOTO BY LARRY ALBEE

Canna ‘Chesapeake’ is the purest white selection available.



Not only does *Canna* 'Penn' look stunning with its coral flowers and dark green leaves, its self-cleaning ability provides a neat appearance.

PHOTO BY LARRY ALBEE

in Chicago, were incorporated into the breeding program as well. Finally, *C. achiras*, *C. latifolia* and *C. polymorpha*, received from the Hortus Botanicus Vrije Universiteit in Amsterdam, Netherlands in 1984, were used in crosses.

LONGWOOD'S LOVELIES. Thousands of crosses were produced as a result of the 22-year-old breeding program. After rigorous screening, however, only 12 cultivars were selected and named. All are vigorous, uniform in stature and short to moderate in height. Most have medium green leaves with translucent margins and are of small to medium size for a canna.

The flowers are prolific and held well-above the foliage. Furthermore, these selections bloom all summer long. How early they bloom, however, is determined by how early they are planted. Although

the elusive self-cleaning characteristic is more evident in some cultivars than others, all propagate and store easily.

These beautiful selections thrive in the climate of southeastern Pennsylvania, where summers are often hot and humid. At Longwood, the plants are treated as tender perennials and are replaced yearly. For best results, these cannas should be sited in full sun and watered and fertilized regularly. At the gardens, we haven't had any pest and disease problems, with the exception of the Japanese beetle, which eats anything.

All grow about 3 feet tall, with the exception of *C. 'Conestoga'* (photo, opposite), which reaches an average of 4 feet, and *C. 'Constitution'*, which is the tallest, reaching 4 feet to 5 feet. The names chosen for the 12 cultivars are historically significant in the vicinity of Longwood.

C. 'Brandywine' (photo, page 47), boasts large, deep red flowers with yellow-speckled inner staminodia (petal-like sterile stamens). Its leaves have burgundy margins. This cultivar is valued for its consistent profusion of flowers during the growing season.

C. 'Chesapeake' (photo, page 47) has creamy white, medium-size blooms that fade to nearly pure white in sun.

C. 'Conestoga' offers lemon yellow flowers that appear to have a translucent quality. This selection is exceptionally floriferous, with blossoms nearly obscuring the top of the plants at times. The blooms' self-cleaning characteristic is strongly expressed in this cultivar, making the whole plant appear extremely neat.

C. 'Constitution' features pale coral flowers set nicely against dark red-green foliage with burgundy margins. Staminodia are blotched and streaked pale coral.



The barrage of flowers on *Canna* 'Conestoga' can nearly obscure the top of the plant at times.

C. 'Declaration' puts forth bright red flowers. Its leaves appear to have a grayish green undertone with lighter midribs and narrow, brown margins.

C. 'Delaware' boasts large, deep coral flowers. This cultivar has been used extensively in Longwood conservatories. It flowers profusely — even under low-light conditions.

C. 'Franklin' has pink-orange blooms flushed reddish orange. Like 'Constitution', the plant offers red-green foliage with burgundy margins.

C. 'Freedom' produces bright orange flowers grading to yellow at the base. This is one of the most dwarf selections in this series of cultivars.

C. 'Independence' features bright yellow flowers providing a massive display of color.

C. 'Lenape' (photo, above) offers large, yellow flowers covered with red spots primarily on the adaxial surface. It is an extremely floriferous plant, providing a rather startling display, which appears to be orange from a distance due to the color combination.

C. 'Liberty' has bright, deep rose flowers with inner staminodia faintly speckled a yellowish hue.

C. 'Penn' (photo, opposite) boasts coral-colored flowers. It is extremely floriferous and self-cleans well. Leaves are dark green with red edges.

Since 1997, these cannas have been released to dozens of botanical gardens and commercial growers nationwide. These beauties are just beginning to appear in nursery catalogs and receive



The red spots adorning the yellow blooms of *Canna* 'Lenape' create the semblance of a lovely sea of orange from a distance.



Canna 'Erebus' is one of Longwood Garden's aquatic introductions.

wider recognition. Their appearance coincides with a renewed interest in using lush subtropical plants for seasonal display in outdoor gardens. Longwood cannas — with their exuberant foliage and flowers — find a wide variety of uses in both contemporary and traditional landscapes.

These selections demonstrate what a long way breeders have come — from the tall, spindly foliage plants bedecking the circular beds of railroad stations, city halls and other public buildings of the Victorian era to the spectacularly floriferous varieties of today. Although they can be used almost anywhere, these sensational subtropicals are perfectly amendable to the more intimate settings of modern suburban homes.

For a list of suppliers of the plants mentioned in this article, see Re:Sources in the Dec. 1 issue.

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