

Caladium Cultivars Developed at the UF/IFAS¹

Zhanao Deng and Brent Harbaugh²

Caladiums (*Caladium x hortulanum*) are popular ornamental plants. They are members of the Araceae family and originated in the New World tropics. These plants display a wide diversity of leaf shapes, colors, and color or vein patterns that is rarely found in other cultivated plant species. Their colorful leaves rival many flowers, and the plants grow well in summer heat and shady conditions.

Potted and landscape caladium plants are grown from tubers (they are often called bulbs). Most of the tubers used throughout the world are produced in Florida.

The University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) initiated a caladium breeding program in 1976 at the Gulf Coast Research and Education Center. So far, this has been the only major organized caladium breeding program in the world. The program's main objectives were to develop new cultivars that: 1) can produce many bright colorful leaves and a high yield of good quality tubers; and 2) have short, sturdy petioles and multi-eyed tubers that can result in increased early leaf production and improved leaf display. Additional goals of this program included the following: 1) to improve the aesthetic values and performance of caladium plants in containers and landscapes; 2) to eliminate the costly labor associated with tuber de-eyeing; and 3) to improve tuber and plant productivity and profitability.

Hybridizations among commercial caladium cultivars followed by rigorous selection and multiple year evaluations on muck and sandy soils resulted in the release of 13 new cultivars between 1988 and 2001 (Table 1). These cultivars possess a diverse range of leaf color or color patterns and have many improved characteristics (plant growth habits, foliage display, tuber sizes and quality, sun tolerance, etc.) that are important for potted and landscape plant production and performance. They are grouped under 8 categories, based on leaf shape and primary colors.

White Fancy-Leaf Type

'**Florida Blizzard**' (Figure 1) is an attractive addition to the white fancy-leaved cultivar group with its unique foliar color pattern. '**Florida Moonlight**' (Figure 2) represents the first release from the UF breeding efforts in the so-

called June Bride type. Both cultivars were bred for forcing in 4- to 8-inch containers. They produce a superior number of leaves and make attractive pots when buds are excised. In the landscape, they are best grown in partial-sun to shady locations.



Figure 1. 'Florida Blizzard'



Figure 2. 'Florida Moonlight'

Red Fancy-Leaf Type

'**Florida Cardinal**' (Figure 3) was bred primarily for forcing in containers. It has a distinctive orange-red color on the surface of tubers.



Figure 3. 'Florida Cardinal'



Figure 5. 'Florida Elise'

Pink Fancy-Leaf Type

'Florida Roselight' (Figure 4), 'Florida Elise' (Figure 5), and 'Florida Calypso' (Figure 6) were bred for primary use in the landscape in sunny or shady locations, but they can also be used for forcing in containers. They have improved sun tolerance over many of the traditional pink cultivars such as Kathleen, and pink leaf colors do not fade to an unappealing tan color when grown without shade.



Figure 4. 'Florida Roselight'



Figure 6. 'Florida Calypso'

Multicolor Fancy-Leaf Type

'Florida Fantasy' (Figure 7) and 'Florida Sunrise' (Figure 8) show distinct color definitions between the primarily white-faced leaves and the red veins that are rarely found in previous commercial cultivars. They were developed primarily for container production and require de-eyeing for best performance. Shading should be provided in the landscape to avoid possible foliage burning.



Figure 7. 'Florida Fantasy'



Figure 10. 'Florida Whitewater'



Figure 8. 'Florida Sunrise'

White Lance-Leaf Type

'Florida White Ruffles' (Figure 9) and 'Florida Whitewater' (Figure 10) were bred primarily for forcing in containers. They produce highly compact, attractive plants with many leaves and do not require bud excision in forcing.



Figure 9. 'Florida White Ruffles'

Red Lance-Leaf Type

'Florida Red Ruffles' (Figure 11) is more cold-tolerant than Red Frill and Rosalie, the two major commercial red lance-leaf cultivars. This cold tolerance may help to extend its geographical use in the landscape.



Figure 11. 'Florida Red Ruffles'

Pink Lance-Leaf Type

'Florida Sweetheart' (Figure 12) produces many wide lance leaves with a bright pink color in a unique pattern. It has been the most widely accepted cultivar originating from this breeding program.



Figure 12. 'Florida Sweetheart'

Green Lance-Leaf Type

'Florida Irish Lace' (Figure 13) produces many long, narrow, green leaves with wavy margins. It is intended for planting tubers directly into the landscape. Plants can be used as a landscape border or in combination with other red or white lance-leaved cultivars.



Figure 13. 'Florida Irish Lace'

Literature Cited

- Baldwin, B.D., G.J. Wilfret, and B.K. Harbaugh. 2002. 'Florida White Ruffles' - A white strap-leaved caladium for small pots, hanging baskets, or sunny landscapes. *HortScience* 37(5):838-840.
- Harbaugh, B.K., B.D. Miranda, and G.J. Wilfret. 2002. 'Florida Blizzard' - A white fancy-leaved caladium for large pots or shady landscapes. *HortScience* 37(5):844-846.
- Miranda, B.D. and B.K. Harbaugh. 2003. 'Florida Moonlight' - A white fancy-leaved caladium for pots and shady landscapes. *HortScience* 38(4):635-637.

- Wilfret, G.J. 1988. Florida Roselight, A rose caladium for the landscape. Florida Agricultural Experiment Station, Institute of Food and Agricultural Sciences, University of Florida, Circular S-352.
- Wilfret, G.J. 1991. Florida Elise: A pink caladium for landscape and containers. Florida Agricultural Experiment Station, Institute of Food and Agricultural Sciences, University of Florida, Circular S-375.
- Wilfret, G.J. 1991. Florida Sweetheart: A rose lance caladium for landscape and containers. Florida Agricultural Experiment Station, Institute of Food and Agricultural Sciences, University of Florida, Circular S-380.
- Wilfret, G.J. 1991. Florida Fantasy: A multicolored caladium for containers. Florida Agricultural Experiment Station, Institute of Food and Agricultural Sciences, University of Florida, Circular S-381.
- Wilfret, G.J. 1991. Florida Red Ruffles and Florida Irish Lace: Two new lance-leaf caladium cultivars. *HortScience* 31:564 (Abstract).
- Wilfret, G.J. 1992. 'Florida Cardinal' caladium. *HortScience* 27(12):1342-1344. Wilfret, G.J. 1993. 'Florida Sunrise' caladium. *HortScience* 28(3):237-238.
- Wilfret, G.J. 1995. 'Florida Calypso': A multicolored caladium for the landscape and containers. *HortScience* 30(4):777.
- Wilfret, G.J., B.K. Harbaugh, and B.D. Miranda. 2002. 'Florida Whitewater' - A white lance-leaved caladium for small pots, hanging baskets, or sunny landscapes. *HortScience* 37:841-843.

Table 1.

Cultivar	Parentage	Release date	Leaf characteristics ²	Uses and requirements			
				Pots ^y (4"-5")	Landscape		Hanging baskets
					Shade	Sun	
Fancy-leaved Type							
Florida Cardinal	Freida Hemple x Carolyn Whorton	1988	Large, dark-red central areas with green margins.	N	X		
Florida Roselight	Carolyn Whorton x Candidum	1988	Large rose blotches in the center and a few small green blotches, large main veins and margins in green.	D	X	X	
Florida Sunrise	Candidum x Freide Hemple	1988	Large red main veins surrounded by white interveinal areas and netted green secondary veins.	D	X		
Florida Fantasy	Candidum Jr. x Red Frill	1990	White leaves with dark red main veins and netted green secondary veins and green margins.	N	X		
Florida Elise	Carolyn Whorton x Florida Roselight	1991	Large pink blotches in the center with green main veins and margins.	O	X	X	
Florida Calypso	Carolyn Whorton x White Christmas	1996	Dark-red central venation and rose and white blotches.	D	X	X	
Florida Blizzard	Aaron x White Christmas	2001	White veins, large white blotches, dark-green margins.	D	X		
Florida Moonlight	Aaron x Candidum Jr.	2002	Large white leaves, white primary veins, green secondary veins and margins.	D	X		
Lance-leaf Type							
Florida Sweetheart	Candidum Jr. x Red Frill	1991	Wide lance leaves with large centers and main veins in dark rose, and green margins.	N	X	X	X
Florida Irish Lace	[Candidum Jr. x Red Frill] x [Candidum Jr. x Red Frill]	2000	Dark green lance-leaf, dark green veins, heavily ruffled margins.	N	X	X	X
Florida Red Ruffles	[Red Frill x Candidum Jr.] x Red Frill	2000	Large red centers with dark-green margins, slightly waved	N	X	X	
Florida White Ruffles	Aaron x Red Frill	2001	Wide strap leaves with a white center, white veins and green margins, slightly ruffled	N	X	X	X

Cultivar	Parentage	Release date	Leaf characteristics ^z	Uses and requirements			
				Pots ^y (4"-5")	Landscape		Hanging baskets
					Shade	Sun	
Florida Whitewater	White Wing x White Queen	2001	Long strapped leaves with white centers, green veins and dark-green margins.	N	X	X	X

^z Leaf characteristics vary to some extent with light conditions. The best foliage colors for caladium are generally obtained when plants are grown under partial light exclusion or shading. The appropriate light exclusion levels for fancy- and lance-leaved types are 40%–50% and 20%–30%, respectively.

^y For optimum pot forcing, some cultivars require de-eyeing, while others do not. Letters D, N, and O in the column indicate that de-eyeing is required, not required, or optional for the specific cultivar.

¹ This document is ENH 965, one of a series of the Department of Environmental Horticulture, UF/IFAS Extension. Original publication date September 2003. Revised August 2014. Visit the Ask IFAS website at <https://ask.ifas.ufl.edu/> for the currently supported version of this publication.

² Zhanao Deng, professor, breeding and floriculture, Department of Horticultural Sciences, UF/IFAS Gulf Coast Research and Education Center; Brent Harbaugh, professor emeritus, Department of Horticultural Sciences; UF/IFAS Extension, Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information, and other services only to individuals and institutions that operate in compliance with applicable federal and state non-discrimination laws and policies. For more information on obtaining other UF/IFAS Extension publications, contact your county's UF/IFAS Extension office. U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A&M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Andra Johnson, Dean for UF/IFAS Extension.