Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 3rd Quarter 2016

Environmental News

Coming Soon: Wildflower Garden at Rotary Park Environmental Center

Florida is the "land of flowers" according to antiquated Spanish explorer maps of the Americas. This heritage will be beautifully demonstrated at Rotary Park Environmental Center thanks to grant funding provided by the Florida Wildflower Foundation.

The Florida Wildflower Foundation is a non-profit organization that funds research, education and planting projects statewide, focusing on Florida's attractive native wildflowers.

The foundation receives much of its funds through revenue from the State Wildflower specialty license plate.

The planting project has already begun at Rotary Park Environmental Center. The completion of the full display is targeted for just before spring 2017.

Be sure to visit the center during the spring and summer to enjoy many of the stunning wildflowers that call Florida home.

For more information on the Florida Wildflower Foundation please visit flawildflowers.org

Inside This Issue:

Questions? Comments? Let us know!
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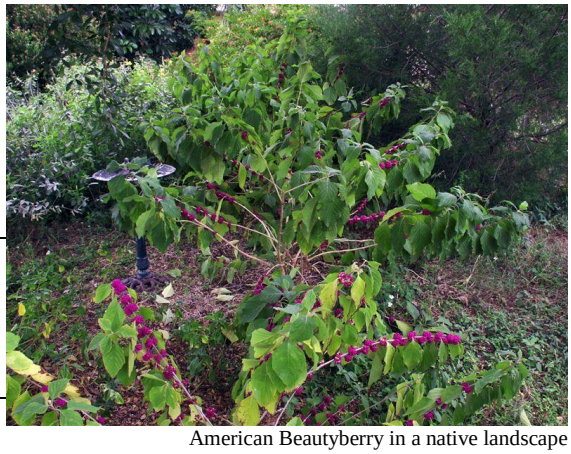
Native Plant profile

American Beautyberry
Callicarpa americana

American beautyberry is a loosely branching shrub that is native to the Southeast United States and throughout Florida. It is found in various habitats throughout Florida, doing well in all soil and moister conditions from beachscapes to oak hammocks. It will grow to about 6 feet in height and works well as an understory plant due to its tolerance to full shade.

What makes the American Beautyberry unique in the home landscape is its colorful flowers which are then followed by countless bright purple berries. The flowers attract nectaring insects, such as butterflies, and the berries are often consumed by birds.

Whether in flower or fruiting stage the American beautyberry truly stands out in the home landscape, and proves to be attractive for the homeowner as well as the wildlife.



American Beautyberry in a native landscape
Photo by Kraig Hankins

Backyard Habitat

Florida's climate attracts many migratory species of birds. Combined with the common year-round bird species, this can add up to numerous birds in search of food. Here are a few simple tips to attract a variety of birds to home landscapes and back yards.

- ✓ Use mulch around the base of plants or allow leaf litter to remain in plant beds. Mulch is a natural habitat for many insects and can attract insectivorous birds such as robins and thrashers.
- ✓ Create a "bird boarder" along property perimeters by planting a mix of native trees and shrubs (even if it's just the back 10 feet). This provides habitat and refuge to birds that visit. Be sure to choose a variety of plant species, as different birds will have varied habitat preferences. Many Florida native plants flower or fruit during the spring or fall and likewise attract insects. This will make any yard an attractive stop-over for feeding.
- ✓ Leave tree snags (a dead tree that is still standing) for cavity-nesters such as woodpeckers or screech owls.
- ✓ If possible, leave a portion of turf lawn higher, this will provide additional food and shelter and potentially increase the number of bird species that may visit a home landscape. Planting ground cover alternatives can also diversify turf areas.

With 400 miles of canals, birds do not have to go far to find water, and sometimes that water is brackish. An ideal way to attract birds is to lure them in with the sound of running or trickling water. Providing a fountain or other water feature in a home landscape is more attractive in many ways than simple bird baths.

Photo Courtesy of allaboutbirds.org

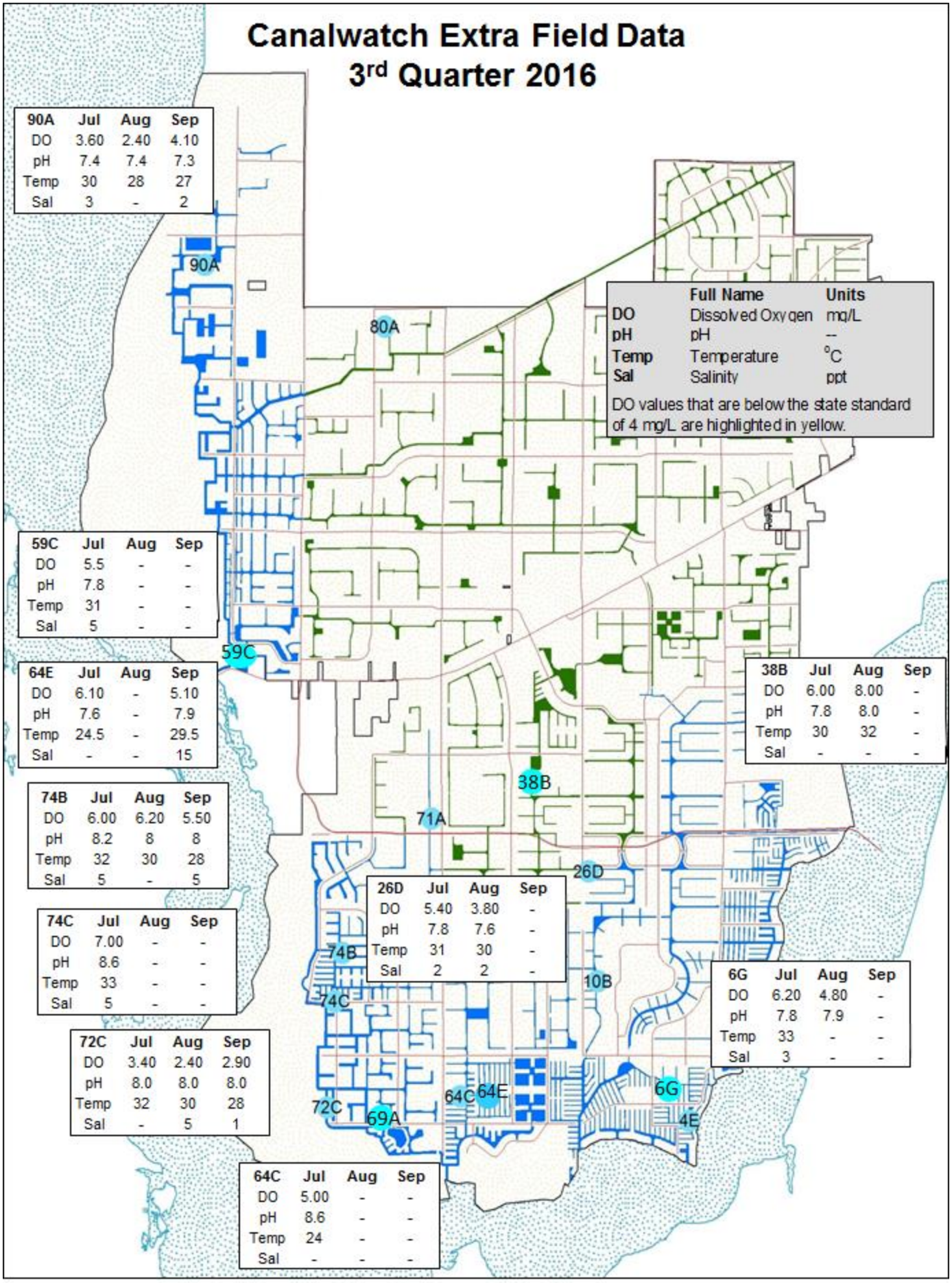
Photo by Harry Phillips

- ✓ Avoid the use of pesticides in home landscapes. Birds eat a variety of insects, including aphids, mosquitoes, spiders and other bugs that may not be welcome in a garden, and hence control these pests naturally. (Burrowing owls will especially target roaches). Pesticide contaminated insects can poison birds.
- ✓ Birds sometimes collide with exterior windows. Reflections of branches, cloudless skies or even their own mirrored image in the glass often confuses birds. Covering exterior windows with a one-way transparent film causes the window to appear opaque on the outside, but allows occupants in the home to see out is one approach. (Often these products offer energy savings too).
- ✓ Put discreet clusters of decals, stickers, sun catchers, Mylar strips, or other objects on the outside surface of the window is also effective. Some stickers sold in bird-feeding stores are colored in the ultraviolet spectrum—they appear transparent to our eyes but are visible to birds. Move houseplants away from windows, they give the illusion of clear passage or reflected habitat.

Please keep cats indoors and never feed strays that can potentially attack birds visiting your yard.
If using a bird feeder, keep bird food and fruits off the ground.
Birds are vulnerable to predators when feeding on the ground.

With these suggestions birds will enjoy a backyard habitat year after year.

Canalwatch Extra Field Data
3rd Quarter 2016



90A	Jul	Aug	Sep
DO	3.60	2.40	4.10
pH	7.4	7.4	7.3
Temp	30	28	27
Sal	3	-	2

	Full Name	Units
DO	Dissolved Oxygen	mg/L
pH	pH	--
Temp	Temperature	°C
Sal	Salinity	ppt

DO values that are below the state standard of 4 mg/L are highlighted in yellow.

59C	Jul	Aug	Sep
DO	5.5	-	-
pH	7.8	-	-
Temp	31	-	-
Sal	5	-	-

64E	Jul	Aug	Sep
DO	6.10	-	5.10
pH	7.6	-	7.9
Temp	24.5	-	29.5
Sal	-	-	15

38B	Jul	Aug	Sep
DO	6.00	8.00	-
pH	7.8	8.0	-
Temp	30	32	-
Sal	-	-	-

74B	Jul	Aug	Sep
DO	6.00	6.20	5.50
pH	8.2	8	8
Temp	32	30	28
Sal	5	-	5

26D	Jul	Aug	Sep
DO	5.40	3.80	-
pH	7.8	7.6	-
Temp	31	30	-
Sal	2	2	-

74C	Jul	Aug	Sep
DO	7.00	-	-
pH	8.6	-	-
Temp	33	-	-
Sal	5	-	-

6G	Jul	Aug	Sep
DO	6.20	4.80	-
pH	7.8	7.9	-
Temp	33	-	-
Sal	3	-	-

72C	Jul	Aug	Sep
DO	3.40	2.40	2.90
pH	8.0	8.0	8.0
Temp	32	30	28
Sal	-	5	1

64C	Jul	Aug	Sep
DO	5.00	-	-
pH	8.6	-	-
Temp	24	-	-
Sal	-	-	-

	bd = below detection				benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.														
	July 2016						August 2016						September 2016						
	NO2	NO3	NH3	TKN	T-N	T-PO4	NO2	NO3	NH3	TKN	T-N	T-PO4	NO2	NO3	NH3	TKN	T-N	T-PO4	Avg
	<1.0	<1.0	none set		<2.0	<0.46	<1.0	<1.0	none set		<2.0	<0.46	<1.0	<1.0	none set		<2.0	<0.46	TSI
3F	bd	bd	0.1	1.1	1.1	0.11							bd	0.21	0.0.5	0.2	0.2	0.08	64.84
3H	bd	bd	0.2	0.8	0.8	0.04							bd	bd	0.6	0.4	0.4	0.07	48.48
5D	bd	bd	0.1	1.1	1.1	0.14	bd	bd	<0.1	0.9	0.9	0.09	bd	0.61	0.6	0.2	0.2	0.08	54.03
6F	bd	bd	0.1	1.1	1.1	0.20	bd	bd	<0.1	1.1	1.1	0.14	bd	bd	0.5	0.6	0.6	0.14	53.41
6G	bd	bd	0.1	1.1	1.1	0.22	bd	bd	<0.1	1	1.0	0.14							68.71
7E	bd	0.14	0.1	1.2	1.3	0.16							bd	0.29	0.6	0.4	0.4	0.13	58.84
7F	bd	0.07	0.1	1.2	1.3	0.19							bd	0.08	1.1	0.8	0.8	0.12	60.58
9F	bd	bd	0.1	1.8	1.8	0.17	bd	bd	<0.1	0.8	0.8	0.08							66.01
10C	bd	bd	0.1	0.9	0.9	0.09	bd	bd	<0.1	0.5	0.5	0.01	bd	0.13	3.0	0.7	0.7	0.07	52.88
11E	bd	0.17	0.1	1.6	1.8	0.18	bd	0.21	<0.1	0.8	0.8	0.11	bd	0.16	1.2	0.9	0.9	0.14	55.83
12H	bd	0.12	0.1	1.1	1.2	0.17	bd	0.16	<0.1	0.8	0.8	0.11							61.60
16E	bd	0.05	0.1	0.6	0.7	0.03	bd	bd	<0.1	0.5	0.5	0.01	bd	0.57	0.9	0.5	0.5	0.07	43.82
16H							bd	bd	<0.1	0.3	0.3	0.01	bd	0.11	0.8	0.4	0.4	0.05	43.18
19D							bd	0.15	<0.1	0.9	0.9	0.14	bd	0.14	0.3	0.7	0.7	0.13	56.86
19K	bd	bd	<0.1	0.9	0.9	0.18	bd	0.12	<0.1	1.0	1.0	0.13	bd	0.05	0.5	1.0	1.0	0.14	62.46
21D	bd	bd	0.1	1.0	1.0	0.12	bd	0.07	<0.1	0.5	0.5	0.05	bd	0.5	0.4	0.6	0.6	0.08	56.38
22G	bd	bd	0.1	0.9	0.9	0.14	bd	bd	<0.1	0.6	0.6	0.03	bd	0.39	0.2	0.5	0.5	0.09	56.90
23C	bd	bd	0.1	0.5	0.5	0.02							bd	0.08	0.8	0.5	0.5	0.05	44.06
26D	bd	bd	<0.1	0.9	0.9	0.06	bd	0.05	<0.1	0.7	0.7	0.09							59.16
26H	bd	bd	<0.1	0.8	0.8	0.06	bd	0.09	<0.1	0.6	0.6	0.01							52.98
27A													bd	0.09	0.6	1.2	1.2	0.06	58.68
27B													bd	0.36	1.0	1.6	1.6	0.08	64.21
27C													bd	0.1	0.9	1.2	1.2	0.06	58.68
27D													bd	0.35	0.5	5.9	5.9	0.21	50.07
28D	bd	bd	0.1	0.9	0.9	0.08	bd	bd	<0.1	0.6	0.6	0.07	bd	bd	1.2	0.6	0.6	0.06	63.87
31C	bd	bd	<0.1	0.5	0.5	0.03							bd	0.16	0.5	0.5	0.5	0.05	49.90
38B	bd	bd	<0.1	0.4	0.4	0.03	bd	bd	<0.1	0.7	0.7	0.01	bd	0.05	0.7	0.6	0.6	0.05	48.10
41A	bd	bd	<0.1	0.4	0.4	0.02							bd	0.34	0.5	0.4	0.4	0.04	40.63
41B	bd	bd	0.1	0.6	0.6	0.02	bd	bd	<0.1	0.5	0.5	0.01	bd	0.54	0.6	0.8	0.8	0.06	40.23
45D	bd	bd	0.1	0.6	0.6	0.03	bd	0.06	<0.1	0.4	0.4	0.04	bd	0.16	0.5	0.5	0.5	0.08	53.70
45F	bd	bd	<0.1	0.6	0.6	0.07	bd	bd	<0.1	0.5	0.5	0.05	bd	bd	1.2	0.4	0.4	0.08	52.18
48A							bd	0.10	<0.1	0.4	0.4	0.02							48.19

52B	bd	bd	<0.1	0.3	0.3	0.01							bd	bd	0.7	0.5	0.5	0.05	38.31
58B													bd	0.47	0.7	0.4	0.4	0.05	37.86
58I	bd	bd	0.1	0.5	0.5	0.02	bd	bd	<0.1	0.5	0.5	0.02	bd	0.75	0.4	0.5	0.5	0.06	43.59
58J	bd	bd	0.1	0.9	0.9	0.03	bd	bd	<0.1	0.6	0.6	0.02	bd	0.12	0.4	0.6	0.6	0.06	50.29
59C	bd	bd	<0.1	0.8	0.8	0.03	bd	bd	<0.1	1.0	1.0	0.02							43.21
59D	bd	bd	<0.1	0.7	0.7	0.04	bd	bd	<0.1	0.6	0.6	0.02	bd	bd	0.5	1.0	1.0	0.06	45.59
60C							bd	0.06	<0.1	0.4	0.4	0.02							39.74
64B	bd	0.13	<0.1	0.8	0.9	0.11	bd	0.13	0.1	0.6	0.6	0.10	bd	0.42	0.6	0.5	0.5	0.12	41.74
64F	bd	0.10	0.1	0.7	0.8	0.11	bd	0.14	<0.1	0.5	0.5	0.10	bd	0.96	0.5	0.5	0.5	0.11	46.23
64G	bd	0.12	<0.1	0.7	0.8	0.11							bd	0.19	0.7	0.4	0.4	0.12	45.16
65C	bd	0.05	<0.1	1.1	1.2	0.12	bd	0.10	0.1	0.7	0.7	0.09	bd	bd	0.6	0.4	0.4	0.11	52.65
69D	bd	bd	<0.1	1.1	1.1	0.08	bd	0.17	<0.1	0.6	0.6	0.08	bd	0.48	0.6	1.0	1.0	0.15	55.75
71B	bd	bd	<0.1	0.4	0.4	0.01	bd	0.11	<0.1	0.4	0.4	0.01	bd	0.74	0.5	0.4	0.4	0.05	28.91
72C	bd	bd	0.1	0.9	0.9	0.05	bd	0.12	<0.1	0.7	0.7	0.04	bd	0.15	0.8	0.8	0.8	0.10	57.80
72E	bd	bd	<0.1	0.9	0.9	0.05							bd	bd	0.8	0.6	0.6	0.11	57.55
74B	bd	bd	0.1	1.3	1.3	0.05	bd	0.09	<0.1	2.1	2.1	0.07	bd	0.31	0.7	0.9	0.9	0.10	58.49
74C	bd	bd	<0.1	0.9	0.9	0.05													54.41
82A	bd	bd	<0.1	0.7	0.7	0.03	bd	0.08	<0.1	0.7	0.7	0.03	bd	0.91	0.4	0.7	0.7	0.06	58.48
83C	bd	bd	<0.1	0.7	0.7	0.02	bd	0.08	<0.1	0.8	0.8	0.03	bd	0.44	0.6	0.5	0.5	0.06	53.71
89A	bd	0.07	0.1	1.0	1.1	0.12	bd	0.10	<0.1	0.9	0.9	0.14	bd	0.05	0.5	0.8	0.8	0.16	62.53
90A	bd	bd	0.2	1.4	1.4	0.01	bd	0.10	0.2	1.3	1.3	0.03	bd	bd	0.8	0.6	0.6	0.05	50.48
Median		**0.11**	**0.10**	**0.90**	**0.90**	**0.06**		**bd**	**0.10**	**0.60**	**0.60**	**0.04**		**bd**	**0.60**	**0.60**	**0.60**	**0.08**	**53.41**
Max		**0.17**	**0.20**	**1.80**	**1.80**	**0.22**		**0.21**	**0.20**	**2.10**	**2.10**	**0.14**		**0.96**	**3.00**	**5.90**	**5.90**	**0.21**	**68.71**

NO2 = Nitrite (inorganic)	TKN = Total Kjeldahl Nitrogen (organic + NH4)
NO3 = Nitrate (inorganic)	TN = Total Nitrogen (inorganic + organic)
NH3 = Ammonia (inorganic)	TPO4 = Total Phosphate

All nutrient concentrations shown in mg/L

High levels of nutrients in our canals can indicate the presence of fertilizer runoff or effluent from wastewater or septic systems. Excessive nutrients can lead to nuisance plant growth and algal blooms.

TSI = Trophic State Index, a quick indicator of canal health. 44 sites this quarter scored as GOOD (<60). 9 sites scored FAIR (60-70), and zero scored POOR (>70).
Third quarter water quality has had its challenges. With dialy rainfall patterns, tropical storms and increased freshwater inflows from the Caloosahatchee River, the end of the rainy season offered a welcomed relief. The amount of freshwater bloomed instances of cyanobacteria, duckweed and macro algae. This occurance is common this time of year, but was more prevelant due to the increased rainfall that occured during the winter and spring.

Florida Friendly
Gardening Series

UF | IFAS Extension
UNIVERSITY of FLORIDA

Exotic Invasive Plants
December 2nd 2016

Color in the Native Garden
January 13th 2017

Poisonous Plants
January 27th 2017

Plant This, Not That
February 10th 2017

Gardening Tips for Snowbirds
March 10th 2017

Ergonomic Tools
March 31st 2017

All classes are FREE and held from 9:00 to 10:30am at the Rotary Park Environmental Center.
For more information please visit

www.capecoral.net/department/parks_and_recreationhome/rotary_park_environmental_center/index.php

Or call (239) 549-4606

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