Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 1st Quarter 2015

Environmental News

Canalwatch Celebrates 20 years!

This year marks the 20th anniversary of Canalwatch. In May of 1995, 14 volunteers brought in their water samples for the Environmental Lab to test. Twenty years later, and Canalwatch is still a prominent example of citizen science for water quality in Southwest Florida. Currently, Canalwatch has 44 members and continues to educate time-honored and new volunteers on water issues that affect Cape Coral's water bodies and shape it's ecosystems.

We at the Environmental Resources Division are enthusiastic for the next 20 years of Canalwatch. Water quality issues may never diminish, but it certainly can be abetted by providing residents with the tools and the knowledge to be ambassadors in the community.

Thanks to all the Canalwatch volunteers for your determination and dedication to the program. Also, a special thank you to Jean Shields, Jerry and Lee Hart for 20 years of service, Beryl and Prudence McGuire for almost 20 years service (19) and Al and Iris Rizzi for their 15 years of service. Thank you for being there from the beginning and pioneering the program.

Inside This Issue:

Questions? Comments? Let us know!

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Native Plant profile

Blanket Flower
Gaillardia pulchella

Wildflowers abound in spring and one worthy of bounding and (over bounding) in the home landscape is the aptly named blanket flower. This striking flower of red, yellow and orange disperses many seeds to extend its range. Nevertheless, think of blanket flower as a beautiful addition to a garden and not a weedy intruder that will discourage its introduction.

Attracting many pollinators, including honeybees and butterflies, it serves as a popular addition to home butterfly gardens. Incorporating blanket flower with other flowering herbs, such as: beach dune, sunflower, tropical sage and blue porterweed, will embellish even a small container garden while providing nectar for pollinators.

Blanket flower grows to about two feet tall and prefers full sun. It also grows well in all soil types and can tolerate the occasional salt spray.

Blanket Flower (Photo by Harry Phillips)

Burrowing Owls

Burrowing owls (*Athene cunicularia*) are a well-known ground nesting owl species in Cape Coral. While Cape Coral is recognized as having a considerable population of burrowing owls, it is not the only place they exist in the Americas. Burrowing owls can be found as far west as California, as far east as the Bahamas, as far north as Canada and as far South as Central and South America. There are numerous sub species of burrowing owls. Florida's burrowing owls are distinguished as sub species *A. cunicularia floridana* and do not have the migratory range the western occurring owls maintain; also a sub species, *A. cunicularia hypugaea*. Within all the sub species of burrowing owls, *A. cunicularia floridana* and *A. cunicularia hypugaea* have residential breeding range in the United States. The Florida burrowing owl also occurs in the Bahamas, and is most likely a resident breeder there as well, because of a stable climate. The stability of South Florida's climate is attributed to Cape Coral having such a ubiquitous population of owls, but the open landscape, preferred habitat of the burrowing owl, is another characteristic of why they live and breed within the city.

Nesting season extends from February 15th to July 10th. Female burrowing owls can lay up to 12 eggs, but typically around half that amount is common and eggs are deposited at differing successions, resulting in broods with slightly varying ages. Owl chicks emerge from the burrow in mid to late March and will stay near the burrow until they are able to fledge at around 40 to 50 days; while some can linger longer.

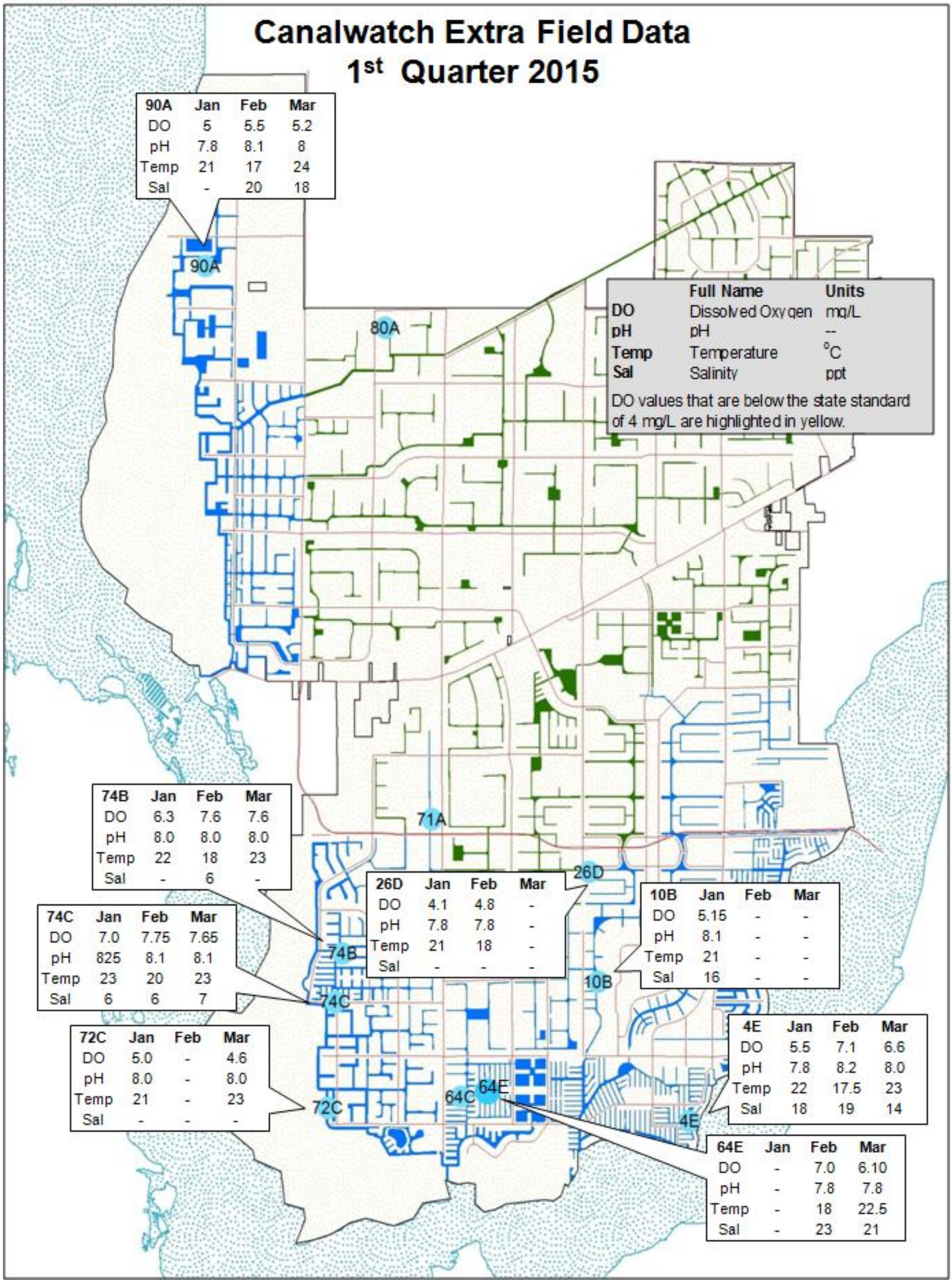
Burrowing Owl adult with seven juveniles. Photo by Honey Phillips

The carnivorous diet of the burrowing owl consist many of insects, spiders, small reptiles, amphibians, rodents and small birds.

Burrowing owls are a protected species under the Endangered Species Act. Currently they are listed as a species of special concern. Development and land use changes have been the primary factors for this designation. This designation protects not only the owl and their young, but also the nest site. The burrows afford this protection because there is a reoccurrence of owls returning to nest sites previously used. However, they are not selective and this is beneficial to the burrowing owl because they can be relocated from prior years burrow(s). On site or near site relocation is ideal in the aspect of development. A suitable "starter" burrow can be dug, in anticipation that the owl will relocate and reside there for the onset of the nesting season. With these procedures, and proper permitting, a burrow can be destroyed in regards to construction activities. If it must be done, deferment of collapsing a burrow until after the nesting season is paramount. Nonetheless, a simple fact remains; more burrows, more opportunities for burrowing owls to find suitable nesting grounds to raise young.

Starter burrows are recommended to residents of Cape Coral by the Cape Coral Friends of Wildlife and are a remarkable approach in inviting the burrowing owl to residential landscapes. For more information regarding starter burrows for your yard, or more information on burrowing owls in general. Please visit www.ccfriendsofwildlife.org.

Canalwatch Extra Field Data
1st Quarter 2015



90A	Jan	Feb	Mar
DO	5	5.5	5.2
pH	7.8	8.1	8
Temp	21	17	24
Sal	-	20	18

	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.

74B	Jan	Feb	Mar
DO	6.3	7.6	7.6
pH	8.0	8.0	8.0
Temp	22	18	23
Sal	-	6	-

74C	Jan	Feb	Mar
DO	7.0	7.75	7.65
pH	825	8.1	8.1
Temp	23	20	23
Sal	6	6	7

72C	Jan	Feb	Mar
DO	5.0	-	4.6
pH	8.0	-	8.0
Temp	21	-	23
Sal	-	-	-

26D	Jan	Feb	Mar
DO	4.1	4.8	-
pH	7.8	7.8	-
Temp	21	18	-
Sal	-	-	-

10B	Jan	Feb	Mar
DO	5.15	-	-
pH	8.1	-	-
Temp	21	-	-
Sal	16	-	-

4E	Jan	Feb	Mar
DO	5.5	7.1	6.6
pH	7.8	8.2	8.0
Temp	22	17.5	23
Sal	18	19	14

64E	Jan	Feb	Mar
DO	-	7.0	6.10
pH	-	7.8	7.8
Temp	-	18	22.5
Sal	-	23	21

	bd = below detection				benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.														
	January 2015						February 2015						March 2015						
	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	0.21	0.1	0.7	0.91	0.04	bd	bd	bd	0.8	0.8	0.03	bd	0.06	bd	0.8	0.86	0.04	50.67
4E	bd	0.16	0.1	1.0	1.16	0.08	bd	0.11	bd	0.9	1.01	0.05	bd	bd	bd	0.6	0.6	0.04	54.78
5D	bd	0.12	0.1	bd	0.12	0.06							bd	0.06	0.1	1.0	1.06	0.05	34.89
5F	bd	0.15	0.5	0.6	0.75	0.05	bd	bd	0.2	1.0	1.0	0.05	bd	bd	0.1	0.7	0.7	0.04	53.46
6F	bd	0.20	bd	0.7	0.90	0.07	bd	bd	bd	1.3	1.3	0.05	bd	bd	bd	0.7	0.7	0.04	54.27
9F							bd	bd	bd	1.3	1.3	0.05							57.78
10B	bd	0.10	bd	0.3	0.40	0.04	bd	bd	bd	0.5	0.5	0.02							44.04
11E	bd	0.20	bd	0.6	0.80	0.09	bd	0.13	bd	0.9	1.03	0.07	bd	bd	bd	0.6	0.6	0.06	54.00
12H	bd	0.16	0.1	0.9	1.06	0.08	bd	0.17	bd	0.9	1.07	0.07	bd	bd	bd	0.5	0.5	0.05	50.63
15E	bd	0.06	0.1	0.9	0.96	0.04	bd	bd	bd	1.1	1.1	0.03	bd	bd	0.1	0.4	0.4	0.04	47.20
15F							bd	bd	bd	0.9	0.9	0.05							58.83
16E	bd	bd	bd	0.9	0.9	0.04	bd	bd	bd	0.9	0.9	0.03	bd	bd	bd	0.2	0.2	0.03	52.81
19D	bd	0.16	0.2	0.9	1.06	0.09	bd	0.14	bd	1.4	1.54	0.07	bd	0.26	bd	bd	0.26	0.07	51.05
19K	bd	0.17	bd	0.8	0.97	0.11	bd	0.12	bd	1.2	1.32	0.07	bd	bd	bd	0.5	0.5	0.07	53.99
21D	bd	0.07	bd	0.4	0.47	0.07	bd	bd	bd	0.9	0.9	0.05	bd	0.07	bd	0.9	0.97	0.07	51.07
21I													bd	bd	bd	0.3	0.3	0.05	32.16
26D	bd	bd	0.1	0.6	0.6	0.03	bd	0.06	0.1	0.9	0.96	0.02							45.99
26F	bd	bd	bd	0.3	0.3	0.03													45.08
28D	bd	bd	bd	0.2	0.2	0.02	bd	bd	bd	bd	bd	0.02	bd	bd	bd	bd	bd	0.03	45.44
41A	bd	bd	bd	0.2	0.2	0.02	bd	bd	bd	0.3	0.3	0.02	bd	bd	bd	0.3	0.3	0.04	26.28
41B	bd	bd	0.2	0.6	0.6	0.02	bd	bd	bd	0.2	0.2	0.02	bd	bd	bd	0.1	0.1	0.02	37.00
45D	bd	bd	bd	0.1	0.1	0.02	bd	bd	bd	0.4	0.4	0.03	bd	bd	bd	0.1	0.1	0.03	44.52
48A	bd	bd	bd	0.1	0.1	0.02	bd	0.05	bd	0.6	0.65	0.02	bd	bd	bd	0.2	0.2	0.02	32.27
50A	bd	0.08	bd	0.2	0.28	0.03	bd	bd	bd	0.6	0.6	0.03	bd	bd	bd	0.1	0.1	0.03	43.83
52B	bd	0.06	bd	bd	bd	0.02	bd	0.06	bd	0.4	0.46	0.02	bd	bd	bd	bd	bd	0.02	22.28
58B	bd	bd	0.1	1.1	1.1	0.06	bd	bd	bd	1.1	1.1	0.03	bd	0.14	0.2	1.5	1.64	0.03	51.54
58G	bd	bd	0.1	0.7	0.7	0.03	bd	bd	bd	1.3	1.3	0.02	bd	bd	0.2	1.5	1.5	0.04	44.81
58I	bd	bd	0.1	1	1.0	0.04	bd	bd	bd	1.3	1.3	0.03	bd	bd	0.2	1.7	1.7	0.04	47.07
58J	bd	bd	0.2	1.6	1.6	0.05	bd	bd	0.1	1.6	1.6	0.03	bd	bd	0.2	1.4	1.4	0.06	47.19

59B	bd	bd	0.1	0.8	0.8	0.03	bd	bd	0.1	1.2	1.2	0.02	bd	bd	0.2	1.6	1.6	0.03	37.17
59C	bd	bd	0.1	0.7	0.7	0.02	bd	bd	bd	1.2	1.2	0.02	bd	bd	0.3	1.5	1.5	0.02	33.02
60C	bd	0.10	0.1	0.6	0.70	0.02	bd	bd	bd	1.1	1.1	0.02	bd	bd	0.4	1.4	1.4	0.02	37.35
64B							bd	bd	bd	0.8	0.8	0.04	bd	bd	0.3	1.3	1.3	0.04	50.55
64C							bd	0.06	bd	0.6	0.66	0.04							42.78
64E							bd	0.06	bd	0.8	0.86	0.04	bd	0.05	0.1	1.3	1.35	0.04	50.91
65C	bd	0.08	0.1	0.7	0.78	0.06							bd	bd	0.3	1.9	1.9	0.06	56.08
66A	bd	bd	0.1	bd	bd	0.02							bd	bd	bd	bd	bd	0.02	52.80
69A	bd	bd	bd	0.8	0.8	0.07	bd	bd	bd	0.2	0.2	0.05	bd	bd	bd	0.5	0.5	0.08	40.83
70G							bd	bd	bd	0.1	0.1	0.03							46.92
72C	bd	bd	bd	0.6	0.6	0.04							bd	bd	bd	0.2	0.2	0.03	44.15
74B	bd	bd	bd	0.2	0.2	0.04	bd	bd	bd	0.7	0.7	0.03	bd	bd	bd	0.3	0.3	0.04	34.39
74C	bd	bd	bd	bd	bd	0.04	bd	bd	bd	0.7	0.7	0.03	bd	bd	bd	0.4	0.4	0.05	33.68
82A	bd	bd	0.1	0.7	0.7	0.03	bd	bd	bd	0.9	0.9	0.04	bd	bd	bd	1.7	1.7	0.02	47.95
83C	bd	bd	0.1	0.6	0.6	0.02	bd	bd	bd	0.7	0.7	0.02	bd	bd	bd	1.6	1.6	0.02	30.15
89A	bd	0.14	0.1	0.5	0.64	0.09	bd	0.11	bd	0.1	0.21	0.07	bd	0.05	bd	0.8	0.85	0.07	45.17
90A	bd	0.05	0.1	1.3	1.35	0.02	bd	bd	0.1	1	1.0	0.02	bd	bd	bd	2.2	2.2	0.03	40.79
93C	bd	bd	bd	0.1	0.1	0.04	bd	bd	bd	bd	bd	0.03	bd	bd	bd	0.1	0.1	0.04	48.88
Median		**0.13**	**bd**	**0.65**	**0.70**	**0.04**		**bd**	**bd**	**0.90**	**0.90**	**0.03**		**bd**	**bd**	**0.70**	**0.70**	**0.04**	**45.99**
Max		**0.21**	**0.50**	**1.60**	**1.60**	**0.11**		**0.17**	**0.20**	**1.60**	**1.60**	**0.07**		**0.26**	**0.40**	**2.20**	**2.20**	**0.08**	**58.83**

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

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.

All nutrient concentrations shown in mg/L

TSI = Trophic State Index, a quick indicator of canal health.
All sites this quarter scored as GOOD.

June

3rd Canalwatch

July

1st Canalwatch

24th Intro to Florida Friendly Gardening
6 – 9:00PM
Rotary Park
Info: 549-4606

25th Summer Native Plant Sale
9:00 AM to 2:00 PM
Rotary Park

25th Rain Barrel Workshop
9:00 am – 12:00 pm
Rotary Park
Info: 549-4606

August

5th Canalwatch

21st Presentation on Florida's Mammals
1:00 PM
Rotary Park
Info: 549-4606

28th Guided Paddle of Matlacha Pass
9:00 to 11:00 AM
Info: 549-4606

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