Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 4th Quarter 2008

Iguana Talk

Proposed at Rotary Park

Iguanas – what are they good for? Nothing, according to some residents, so what's to be done about this non-native reptile? While these nuisance exotic species are too numerous to eradicate, most feel education is the key to preventing these critters from becoming more of a nuisance.

This department feels the same way and would like to hear from those interested in attending a talk about iguanas and the problems they pose to our southwest Florida landscape (natural and man-made).

Cape Coral Environmental Resources Division is teaming up with Lee County Extension Service to provide a talk and discussion on the problems associated with Iguanas in this area.

If you are interested in attending please email or call our department. Once we get an idea of how many are willing to attend this presentation more details will be forthcoming. Feel free to contact either Harry or Kim through email or call our office number listed below.

Inside This Issue:

Questions? Comments? Let us know!
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Native Plant Profile

Sweet Gum

Liquidambar styraciflua

The Sweet Gum is an aggressive tree that is prevalent throughout the eastern portion of the United States, which includes Florida, and creates woodlands in moist swampy areas. Locally, this tree is at home with cypress trees and red maples – and like those trees sweet gum demonstrates beautiful fall foliage during autumn.

Sweet gum grows to 80 feet and can tolerate full sun to partial shade. However its affinity to moist acidic soils (like those found in swamps) would keep this tree out of most of Cape Coral (the soils here are more alkaline).

If you're driving north to see peak fall foliage one season, the sweet gum is one of the top color producers in the lower regions of the east.

wikimedia.org (Ikmo-ned)

Hey, look! A turtle!

One of the most visible animal friends in our canals is the turtle. Whether it's just a head poking out of the water or a cluster of turtles soaking up the sun, these animals can easily be smiled at. Some of the turtles you may see in your canal are:

Chicken Turtle
Softshell Turtle
Florida Red-bellied Turtle
Florida Cooter

Photo by Nancy Patti

The chicken turtle is characterized by a very long neck and a yellow stripe down each leg.

The softshell turtle has a leathery shell, a long neck, and a long nose that looks like a snorkel. Adult females can be almost 2 feet long!

The red-bellied turtle and cooter are the turtles you're most likely to see basking. They are very similar - both have shells with a dome shape and lots of yellow stripes on their faces. However, there are a couple of characteristics that can help you tell them apart. To start with, check the face: while both are striped, the cooter has yellow stripes above the eye, but the red-bellied does not. Next, check the shell, if you can see it. The cooter has a yellow stripe on each costal scute (scutes are the puzzle pieces that make up the shell – there are 3 rows of large scutes going down the back; the costal scutes are the ones that aren't in the center row). The red-bellied's costal scutes, on the other hand, have a red stripe. This clue may not be useful if the turtle's carapace (the top part of its shell) is covered in algae. But you can also tell which species it is based on the shape of the carapace! The height of the dome on the red-bellied is about halfway back, making it look very symmetrical. The highest point of the dome on the cooter is about 1/3rd of the way back – slightly forward. This difference in shape can also help you ID a turtle at a distance.

Unfortunately, water bodies are not the only places we can see aquatic turtles – sometimes we see them smashed on a road. Turtles could cross a road for many reasons: dispersal (the young going out and looking for new homes); drought (needing to find a place with more water); and reproduction (females looking for a place to nest).

In aquatic and semiaquatic turtles (as opposed to terrestrial turtles, which spend their whole lives on land), females are much more likely to be traveling along roads and thus, much more likely to be hit by a car. In several surveys of road-killed turtles, females made up the majority of kills - 60-66%. In a turtle population that's completely unaffected by humans, you might expect 50% of the turtles to be male and 50% to be female. There is growing evidence that turtle populations in areas with lots of roads are becoming skewed towards males: anywhere from 60-80% of the population may be male!

This is worrisome. Turtles are long-lived (on the order of decades) and slow to grow and reproduce. The loss of females can cause severe declines in a turtle population.

So what can you do? Perhaps the biggest action is to slow down. If you see a turtle in the road, attempt to avoid it. If it's safe, you can even pick it up and carry it to the side of the road that it was attempting to get to. DO NOT put yourself in danger.

The websites listed below give information about even more of the turtle species found in Florida. Next time you're near a canal with some exposed rocks or shore, look closely and see if you notice any of these shelled creatures basking in the sun!

Sources:

http://edis.ifas.ufl.edu/UW159

http://www.corkscrew.audubon.org/Wildlife/Turtles.html

Aresco, M.J. 2005. The effect of sex-specific terrestrial movements and roads on the sex ratio of freshwater turtles. Biological Conservation 123:37-44.

Gibbs, J.P. and D.A. Steen. 2005. Trends in sex ratios of turtles in the United States: implications of road mortality. Conservation Biology 19:552-556.

Steen, D.A., M.J. Aresco, S.G. Beilke, B.W. Compton, E.P. Condon, C. Kenneth Dodd Jr., H. Forrester, J.W. Gibbons, J.L. Greene, G. Johnson, T.A. Langen, M.J. Oldham, D.N. Oxier, R.A. Saumure, F.W. Schueler, J.M. Sleeman, L.L. Smith, J.K. Tucker & J.P. Gibbs. 2006. Relative Vulnerability of Female Turtles to Road Mortality. Animal Conservation 9:269-273.

Canalwatch's record year

We received 58 samples in December of 2008 – setting the record for a single month in our program!

Over the course of the whole year, we received 589 samples – up from 564 in 2007.

1995 was the first year of Canalwatch. 80 samples were received that year.

Mark your calendar!

The Annual Barbeque will be held April 1st, 2009 at the Yacht Club Pavilion.

Recent Cape TV Episodes

The 3rd quarter 2008 newsletter contained a list of episodes ERD had taped through October. Here are the ones that have aired more recently:

November 2008: Yard Weeds. Hosts: Kraig and Harry.

December 2008: Christmas Gift Guide. Hosts: Kraig and Harry.

January 2009: Yard Makeover Results and New Year's Resolutions. Hosts: Kraig and Harry.

Kraig and Harry also hosted the November 2008 **Public Works** show, entitled Public Works: Year in Review.

bd = below detection benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.

	October 2008						November 2008						December 2008						
	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
1A	bd	0.25	0.1	2.4	2.65	0.22	bd	0.10	0.2	1.3	1.40	0.10	bd	0.07	0.5	0.8	0.87	0.06	64.91
1D	bd	0.35	bd	1.6	1.95	0.20	bd	0.05	0.9	1	1.05	0.06	bd	0.22	0.3	0.6	0.82	0.06	61.35
1E							bd	0.18	bd	1.4	1.58	0.11							67.04
3F	bd	0.15	0.1	1.4	1.55	0.10	bd	0.10	0.3	1.4	1.50	0.06	bd	0.08	0.2	0.5	0.58	0.05	57.51
4D							bd	bd	2.2	1	1.00	0.06							57.47
4E	bd	0.36	bd	1.7	2.06	0.19	bd	0.05	2.1	1.1	1.15	0.07	bd	0.24	0.3	0.6	0.84	0.06	62.62
6F	bd	0.21	0.1	1.9	2.11	0.22	bd	0.12	0.2	1.4	1.52	0.10	bd	bd	0.3	0.7	0.70	0.07	62.57
6G	bd	0.20	0.1	1.8	2.00	0.21	bd	0.08	bd	1.5	1.58	0.08	bd	bd	0.3	0.7	0.70	0.08	62.94
7B	bd	0.19	0.2	1.7	1.89	0.18	bd	0.05	0.1	1.4	1.45	0.07	bd	0.05	0.3	0.6	0.65	bd	58.72
10B							bd	0.07	0.1	1.2	1.27	0.05	bd	0.06	0.2	0.7	0.76	0.06	55.85
11C													bd	bd	0.3	0.7	0.70	0.08	48.94
11D	bd	0.19	0.1	1.9	2.09	0.19	bd	bd	bd	1.4	1.40	0.06	bd	bd	0.2	0.7	0.70	0.06	60.42
13A	bd	0.07	0.1	1.8	1.87	0.12	bd	0.05	0.1	1.5	1.55	0.07	bd	0.06	bd	0.8	0.86	0.06	59.72
15D	bd	0.16	0.2	1.7	1.86	0.17	bd	bd	0.2	0.6	0.60	0.05	bd	0.07	0.3	0.7	0.77	0.06	64.69
17B							bd	bd	bd	1.7	1.70	bd	bd	bd	bd	1.5	1.50	bd	51.19
18G	bd	0.05	bd	1.2	1.25	bd	bd	bd	0.1	1.7	1.70	bd	bd	0.09	bd	1.6	1.69	bd	50.36
19D	bd	0.07	0.1	2	2.07	0.19	bd	0.06	0.1	1.5	1.56	0.08	bd	0.07	0.6	0.8	0.87	0.07	64.02
19E	bd	0.19	0.3	1.9	2.09	0.19	bd	0.13	0.2	1.5	1.63	0.11							
19G	bd	0.22	0.2	1.9	2.12	0.19	bd	0.17	0.1	1.5	1.67	0.10	bd	0.05	0.2	0.7	0.75	0.07	62.12
19H	bd	0.15	0.2	2.2	2.35	0.19	bd	0.15	0.1	1.5	1.65	0.10	bd	0.07	0.3	1	1.07	0.07	64.54
19I	bd	bd	bd	1.88	1.88	0.14													74.93
21D	bd	bd	bd	1.4	1.40	0.09	bd	bd	bd	1.21	1.20	0.06	bd	bd	0.1	0.9	0.90	0.06	62.78
21F	bd	0.06	bd	1.4	1.46	0.10	bd	0.05	0.2	0.7	0.75	0.07	bd	bd	bd	1.7	1.70	0.06	61.21
21G							bd	0.08	0.4	0.7	0.78	0.06	bd	0.12	bd	1.6	1.72	0.06	58.34
22B							bd	0.05	0.1	1.4	1.45	bd	bd	0.05	0.2	1.7	1.75	bd	47.43
22C	bd	0.09	bd	0.9	0.99	0.05							bd	bd	bd	1.6	1.60	bd	48.28
22D							bd	bd	bd	1.4	1.40	bd	bd	0.06	bd	1.4	1.46	bd	41.47
22F	bd	0.10	bd	1.2	1.30	bd	bd	bd	bd	1.2	1.20	bd	bd	0.05	bd	1.5	1.55	bd	45.88
26C	bd	bd	bd	0.8	0.80	0.05							bd	bd	bd	1.3	1.30	bd	62.10
26D							bd	0.05	bd	1.1	1.15	bd	bd	0.11	0.2	1.6	1.71	bd	51.63
26F													bd	0.11	bd	1.5	1.61	bd	41.47
26G	bd	0.10	0.1	1.4	1.50	0.05													62.71
28D	bd	bd	bd	1	1.00	bd	bd	0.08	0.1	1.5	1.58	bd	bd	0.19	2	1.9	2.09	bd	43.57
30A													bd	0.12	bd	1.5	1.62	0.06	61.65

35A	bd	bd	bd	0.6	0.60	bd	bd	bd	bd	bd	bd	bd	bd	0.07	0.3	1.3	1.37	bd	30.73
41A	bd	0.06	bd	0.7	0.76	bd	bd	0.06	bd	bd	0.06	bd	bd	0.16	0.4	0.9	1.06	bd	27.74
43A	bd	0.05	bd	0.6	0.65	bd							bd	0.06	0.3	0.8	0.86	bd	42.97
48A	bd	0.07	bd	0.8	0.87	bd	bd	0.05	bd	0.4	0.45	bd							43.20
51A							bd	0.08	0.1	1.5	1.58	bd	bd	bd	0.2	1.4	1.40	bd	23.73
52B	bd	0.06	bd	0.7	0.76	bd	bd	0.06	bd	bd	0.06	bd	bd	bd	bd	bd	bd	bd	20.77
55B	bd	bd	bd	1.7	1.70	0.14							bd	bd	0.2	1.2	1.2	bd	63.29
58B													bd	0.06	0.9	1	1.06	0.07	59.59
58E													bd	0.06	1.4	1.5	1.56	0.06	61.28
58F	bd	bd	0.1	1.1	1.10	bd	bd	bd	0.3	1.2	1.20	bd	bd	bd	1.7	1.8	1.80	0.07	53.47
58G	bd	bd	bd	1.2	1.20	bd	bd	bd	0.1	0.7	0.70	bd	bd	bd	2	2.2	2.20	0.07	51.09
59B	bd	bd	bd	1.2	1.20	bd	bd	bd	bd	0.9	0.90	bd	bd	0.06	0.5	1.9	1.96	0.06	47.26
60B	bd	bd	bd	1	1.00	bd	bd	bd	bd	1.1	1.10	bd	bd	bd	2	2	2.00	bd	42.55
62C	bd	bd	bd	0.3	0.30	bd	bd	bd	bd	0.5	0.50	bd	bd	bd	bd	1.7	1.70	bd	44.35
64B	bd	0.22	0.1	1	1.22	0.13	bd	0.06	1.9	0.6	0.66	0.06	bd	0.07	2	1.5	1.57	0.06	56.44
64C	bd	0.26	0.1	0.9	1.16	0.14	bd	0.08	2.3	0.7	0.78	0.06	bd	0.08	2	1.4	1.48	0.05	51.42
66A	bd	bd	bd	0.5	0.50	bd	bd	bd	bd	1.5	1.50	bd	bd	bd	bd	1.4	1.40	bd	47.28
67A													bd	0.07	0.40	1.2	1.27	0.06	59.24
67C	bd	0.17	0.1	0.9	1.07	0.14	bd	bd	0.4	0.7	0.70	0.10	bd	bd	2	1	1.00	0.06	53.84
69A							bd	0.07	bd	1.9	1.97	0.08	bd	bd	2	1.2	1.20	bd	53.08
70E	bd	bd	bd	0.9	0.90	0.08	bd	bd	bd	1.5	1.50	bd	bd	bd	0.3	1.8	1.80	bd	48.40
72A	bd	bd	bd	0.6	0.60	0.06	bd	0.50	bd	1.6	2.10	0.12	bd	bd	0.2	1.4	1.40	bd	50.69
74B	bd	bd	bd	1.1	1.10	0.06	bd	0.05	bd	1.6	1.65	0.05	bd	bd	0.2	1.6	1.60	bd	57.92
74C	bd	bd	bd	1.3	1.30	0.06	bd	bd	bd	1.7	1.70	0.05	bd	bd	0.2	3	3.00	bd	55.63
80A	bd	bd	bd	bd	bd	bd	bd	bd	bd	0.6	0.60	bd	bd	bd	bd	1.6	1.60	bd	37.33
83A	bd	bd	bd	1.3	1.30	bd	bd	bd	0.3	1.4	1.40	bd	bd	bd	0.2	1.4	1.40	bd	51.42
85C	bd	0.05	bd	bd	0.05	bd							bd	0.25	0.3	1.3	1.55	bd	25.52
88B	bd	0.06	bd	0.7	0.76	0.05							bd	bd	0.1	0.2	0.20	bd	48.03
90A	bd	bd	bd	1.2	1.20	bd	bd	bd	bd	1.3	0.30	bd	bd	bd	1	1.4	1.40	bd	39.92
Median		**0.15**	**0.10**	**1.20**	**1.24**	**0.14**		**0.07**	**0.20**	**1.40**	**1.40**	**0.07**		**0.07**	**0.30**	**1.40**	**1.40**	**0.06**	**53.66**
Max		**0.36**	**0.30**	**2.40**	**2.65**	**0.22**		**0.50**	**2.30**	**1.90**	**2.10**	**0.12**		**0.25**	**2.00**	**3.00**	**3.00**	**0.08**	**74.93**

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

TSI = Trophic State Index, a quick indicator of canal health.
43 sites this quarter scored as GOOD (<60). 18 sites scored FAIR (60-70), and one was POOR (>70).

TN was high at many sites in October due to high TKN values. It was lower again in November and December.

All nutrient concentrations shown in mg/L

January

7th
Canalwatch

9th
Mangrove Gathering
Eco Café
Rutenberg Park
7:30-10 pm

18th
Under the Sea
Yacht Club
5-7 pm

February

4th
Canalwatch

14th
Rain Barrel Workshop
Rutenberg Park
9-11 am $35
Info: 533-7503

21st
Burrowing Owl Festival
Rotary Park
10am – 4pm

March

4th
Canalwatch

13th
Mangrove Gathering
Eco Café
Rutenberg Park
7:30-10 pm

15th
Canal Clean-Up Day
Yacht Club Pavilion
8 am – noon
Info: 574-0785

28th
Rain Barrel Workshop
Rutenberg Park
9-11 am $35
Info: 533-7503

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