

# aqua-notes

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## Mark your calendars...

- May 12-15—First Coast Birding and Nature Festival, St. Augustine. See <http://www.visitoldcity.com/interests/nature/festival/> for information.
- May 19—Duval Environmental Educator Network meeting. 3pm at Jacksonville Zoo Education Building. For information about DEEN, see [www.enviroedjax.org](http://www.enviroedjax.org)
- More on back page!

## Lots of goings-on...

April through July is a very busy time period in the Sea Grant office—I apologize that this newsletter is a little late getting off the presses! In April, I was pleasantly surprised to be presented with the John Beakley Marine Science Educator of the Year award at the Florida Marine Science Educators Association conference. Last month, in addition to helping organize the FMSEA conference, I helped coordinate and teach two week-long classes. In May, the big event for me is the First Coast Birding and Nature Festival, where I'm helping coordinate their first "Kids' Day" and am leading two field trips. In June, I'm teaching another "Exploring our Environment" class (see below) as well as a 6-day teacher workshop. In July, it's off to Maui for the National Marine Educators' Association conference. Phew!

*M. P. McGuire*

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## Hurricane-delayed class explores the coastal environment

From April 25-29, sixteen residents from Duval, St. Johns, Putnam, Flagler and Volusia Counties participated in the third "Exploring our Environment—from the ocean to the river" program at the GTM NERR office in Marineland. Topics covered included beaches, sea beans, sea turtles, estuaries, coastal birds, marine mammals, hydrothermal vents, watersheds, invasive species and coastal hammocks. This adult "day camp" will be repeated in June and October. For a brochure/registration form, go to <http://stjohns.ifas.ufl.edu>, click on Sea Grant and follow the education link.

## Interacting with wildlife



Many people feed or give water to wild animals. It is important to realize that feeding many wild animals, including manatees, alligators and raccoons is illegal as it can result in a dangerous situation for the animal, humans, or both.

Wild animals learn behaviors, in the same way that domesticated animals can be trained. By feeding or giving water to wild animals, we are teaching them that people (or boats) are sources of food. This makes wild animals more likely to approach humans, in hopes that they will be fed. Unfortunately, this can lead to problems. Manatees that have learned to approach boats or docks for food or fresh water are potentially more likely to be struck by a boat. Manatees can obtain all of the fresh water that they need from the plants that they eat—they do not require additional fresh water. Alligators and raccoons that learn to approach humans for food quickly become pests, and alligators that are deemed to pose a threat to people may be trapped and killed.



It is also illegal to release non-native animals into the wild (Florida Statutes 372.265; FWCC Rule 68A-23.008). While releasing a pet bird, turtle or fish may seem like the kindest thing to do, it is very likely that that animal will not survive. If the animal does survive, there is the chance that it will thrive and compete with native species for resources (e.g. food, space). Many of Florida's "nuisance" species are the result of the release of pets (examples include monk parakeets, red-eared sliders and lionfish)



## May 21-27 is National Safe Boating Week

The US Coast Guard reminds the boating public that May 21-27 is "National Safe Boating Week." Local Coast Guard Auxiliary flotillas may be offering special activities during this week. The Coast Guard recommends four key points to boaters:

1. Wear a life jacket
2. Take a boating safety course
3. Get a vessel safety check (free through the Coast Guard Auxiliary)
4. Don't boat under the influence.

Statistics show that 86% of all boaters who drowned in 2003 were not wearing life jackets. Alcohol was a contributing factor in about 1/3 of these fatalities. 80% of those who died were on board boats whose operators had never received boating safety instruction.

- For boating safety information, check out [www.uscgboating.org](http://www.uscgboating.org)
- To find boating safety classes near you, go to [www.cgaux.org](http://www.cgaux.org)
- To find out where to get a free vessel safety check, go to [safetyseal.net](http://safetyseal.net).
- For information about the US Coast Guard Sea Partners campaign against marine pollution, see [www.uscg.mil/hq/g-m/nmc/seapart.htm](http://www.uscg.mil/hq/g-m/nmc/seapart.htm)

## Taking a closer look at crabs...

Have you ever wondered why some crab shells collected from the beach REALLY stink, while others do not? The next time you find a crab shell, take a look at the eyes. Are they black, or clear? If the eyes are black, you've found a dead crab, and if it isn't already stinking, it will soon! However, if the eyes are clear, you have found an empty crab shell, or molt, which has been left behind by a crab which outgrew it.

Unlike snails and clams, which can continually enlarge their shell, crabs and other marine crustaceans (lobsters, shrimp, etc.) will outgrow their shells. When this happens, their shell splits along a joint (for crabs, this split occurs at the back edge of the upper portion of the shell). The crab then backs out of the shell, carefully pulling each body part out of its protective hard covering (even the eyes have a clear covering). At this point, the crab has a soft shell (yes, softshell crabs are just blue crabs that have just molted) which is slightly stretchy. The crab then takes in water, causing the soft shell to expand in size. The crab will find a hiding place for a day or two, until the new shell has hardened. Then the crab can release the extra water, and will have some room to grow into its new shell. The molting process is repeated as needed until the crab reaches its maximum size. The frequency of molts is affected by the size/age of the crab, the amount of food available, and environmental conditions like water temperature. On average, blue crabs increase in size by 1/3 with each molt.

In addition to looking at the eyes of your crab shell, turn it over and look at the underside. You can tell if your crab was a male or a female by the shape of the abdomen. The male crab will have a narrow abdomen (see picture) while female crabs have a much wider abdomen, as this is where they will brood their eggs. Female crabs carrying eggs are often called "sponge crabs", as the egg mass looks spongy. In blue crabs, the new egg mass is orange in color—the color changes to gray and black as the eggs develop into larvae. The larvae spend about 6-7 weeks as plankton (two stages, called zoea and megalops) in the water column. Blue crab zoea molt seven times before developing into a megalops. When the megalops molts, it becomes a tiny crab, which settles to the sea floor.

A good starting point for people interested in finding out more information about blue crabs is [www.blue-crab.net](http://www.blue-crab.net).



Blue crabs—the top crab is male, the two lower crabs are females (immature on the left; mature on the right.)



Blue crab zoea larva (left) and megalops larva (right). Photos from Smithsonian Environmental Research Center.



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## More “Mark your calendars”

- May 20—Waterways and Waterfronts: Issues of Law, Policy and Planning. Ft. Lauderdale. See [http://www.eluls.org/pdf\\_flyers/O160-EN-p05.pdf](http://www.eluls.org/pdf_flyers/O160-EN-p05.pdf) for details.
- June 1-25—Coastal Master Naturalist class. (Jacksonville). See [www.masternaturalist.org](http://www.masternaturalist.org) for information or to register.
- June 13-19—Exploring our Environment—from the ocean to the river. GTM NERR office in Marineland. Class is almost full at the time of printing—to find out if space is available, call Maia at 904-824-4564.
- June 19-24—COSEE teacher workshop at Cedar Key. Contact Karen Blyler at 352-846-0996 ext 246.
- July 1—Educator Collecting Permit Workshop, Mainland High School, Daytona Beach. Contact Maia for more information (904-824-4564).
- July 9—8-11 am. Shoreline cleanup along Shore Drive (St. Augustine)—boaters and landlubbers welcome! Sponsored by St. Augustine Marine. For information, call Bub Pritchard at 824-4394.
- July 12-16—National Marine Educators Association conference, Maui, Hawaii. See link at [www.marine-ed.org](http://www.marine-ed.org).
- October 3-7—Exploring our Environment—from the ocean to the river. GTM NERR office in Marineland. Download a registration brochure from <http://stjohns.ifas.ufl.edu> (click on Sea Grant and follow the education link.)

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