

Mark your calendars...

- Nov 6—Invasive plant removal (tamarisk trees) at Buck Island, Jacksonville. Contact Richard Bryant (Richard_bryant@nps.gov) for information.
- Nov 10, 6-8 pm, Whitney Lab. Public meeting to discuss possible designation of a portion of the Matanzas River as an Outstanding Florida Waterway. Contact Annette Odom at 904-823-4500 for information.
- More on back page!

Looking ahead to 2009

The Sea Grant Extension Program in NE Florida is looking ahead to 2009. There are several exciting new programs in the early planning stages. These include a campaign targeting pet owners (through pet stores) to teach them not to release pets into the wild. Another program (described on page 2) will teach science standards to elementary school students using a manatee theme. We hope to see family science night programs reaching all elementary schools in St Johns and Flagler Counties. Invasive species awareness programs will continue, in hopes that recreational boaters will become more aware about the potential "hitchhikers" on their boats' hulls. Water quality protection and marine debris will also continue to be educational priorities.

M. P. McGuire

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Marine Extension Agent

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2009—Year of Science

The Coalition on the Public Understanding of Science (COPUS) is coordinating events throughout 2009 to engage the public in science and to improve public understanding about how science works. Each month has been assigned a theme: **January** - Process and Nature of Science; Communicating Science, **February** - Evolution, **March** - Physics and Technology, **April** - Energy Resources, **May** - Sustainability and the Environment, **June** - Oceans and Water, **July** - Astronomy, **August** - Weather and Climate, **September** - Biodiversity and Conservation, **October** - Geosciences and Planet Earth, **November** - Chemistry, **December** - Science and health. For more information and resources about the Year of Science, visit

**YEAR
of SCIENCE**
2009
Explore. Empower. Engage...

<http://www.yearofscience2009.org/>

Inside this issue:

Manatee K-5 program	2
Freshwater turtle harvest rule	2
Mole crabs and coquina clams	3

Volunteers needed for education program!

Starting in 2009, the Sea Grant Extension Program hopes to offer science education programs for elementary schools using the Florida manatee as the theme. We are recruiting volunteers who are willing to visit elementary school classes in St Johns or Flagler County to conduct 30-60 minute programs for grades K-5. As part of the volunteer enrollment process, a background screening will be conducted. Volunteers will work in groups (yes, we'll need someone to wear the costume!) and will need to be able to be available on a regular schedule (e.g. Tuesday mornings.) Training and all materials will be provided. If you are interested in volunteering to help with this program, please contact Maia at mpmccg@ufl.edu or by phone at 386-437-7464. If you leave a message, please provide your name, phone number and e-mail or mailing address. Thanks!



New rule affects freshwater turtle harvest

An additional rule restricting the harvest of freshwater turtles went into effect on Oct. 23. The Florida Fish and Wildlife Conservation Commission (FWC) passed the rule at the September Commission meeting.

This restriction limits the harvest of wild Florida freshwater turtles to five per day per person. Each fisherman with a commercial license will be allowed to harvest an additional 15 Florida softshell turtles per day, for a total of 20 turtles per day.

This rule has been passed to protect freshwater turtle populations while the FWC develops a long-term comprehensive strategy for sustainable use of amphibian and reptile populations. Recent reports of unusually large freshwater turtle harvests coincide with reports that the demand for freshwater turtles as food and pets has increased.

The additional rule limits the number of turtles that may be taken from the wild, not from turtle farms or other aquaculture facilities. Farmed turtles represent more than 90 percent of



Softshell turtles, like the one in this photo from FWC, are given additional protection under the new rule

the total freshwater turtles exported from Florida. No changes have been made to the number of turtles people may possess; the existing limits still apply. Furthermore, rules about selling or buying turtles have not changed.

This additional restriction to the existing rules is an interim measure while the FWC works on a long-term strategy for conservation of these species.

For more details about the regulations covering freshwater turtles, see http://myfwc.com/whatsnew/08/statewide/News_08_X_TurtleHarvestRule3.htm

Mole crabs and coquina clams

On a trip to the beach, many of us will play in the sand at the water's edge, uncovering some of the curious creatures that live in this "swash zone." The two most abundant types of animals found here are the mole crab and the coquina clam.

Mole crabs, also referred to as "sand fleas" are small, oval-shaped crabs that are light brownish-grey in color. They have two long, feathery antennae on their heads, and they lack claws. They burrow backwards into wet sand (facing the water) where they sit just below the sand's surface, antennae sticking out into the water. They use the antennae to filter small food particles out of the water. When a wave dislodges them from the safety of the sand, they rapidly re-bury themselves by backing into the sand. As the tide moves up and down the beach, the mole crabs move too. During summer months, female mole crabs (which can be up to an inch long) may be carrying eggs, which appear as either an orange or grey mass near the base of the back legs, on the underside of the crab. As with many other crab species, orange eggs are those that are newly-fertilized, and contain a large proportion of yolk. Grey eggs are more mature eggs that are almost ready to hatch. The grey color comes from the dark eyes of the larvae, which will have eaten most of the yolk before they hatch. Male mole crabs are smaller than females, only reaching about half an inch in length. Mole crabs are commonly sought after by surf fishermen, who use them to catch pompano, spotted sea trout and even sheepshead.



Mole crab or sand flea



Coquina clams—photo from
www.jaxshells.org

Coquina clams, often locally called "periwinkles," are small, sometimes brightly-colored clams that also live in the swash zone, and move up and down the beach with the tides. Coquinas have been described as surfers as they can push themselves out of the sand as a wave washes past them; they then ride the wave to a higher portion of the beach. Like mole crabs, they are filter-feeders, extracting small plankton from the water as it washes over the clams. It is quite fascinating to watch a coquina clam bury itself in the sand—it will extend part of its body out of the more tapered end of its shell, and use that to dig. The shell appears to dive into the sand as the animal buries itself. Coquinas can be collected and used to make a kind of soup or broth. In summer months, coquinas may appear to be sporting a brown "beard"—this tuft is a type of hydroid (a colonial animal related to corals and jellyfish). The nature of this seasonal relationship is

not well understood, however clams that have the hydroid attached may be less likely to be eaten by predatory snails than those that do not have attached hydroids.

Coquina rock is sedimentary rock that formed from layers of sand and coquina shell that have been compressed. Limestone from the shells helps cement the fragments together in the rock. Coquina rock has been widely used in landscaping because of its attractive orange color, and its tendency to weather into interesting shapes. However, coquina rock is protected and people are not allowed to remove it from Flagler County beaches!

In addition to being collected by people, mole crabs and coquinas are hunted by both shorebirds and fish.



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More “Mark your calendars”

- Nov 10-21—Freshwater Wetlands Master Naturalist Program (Nassau Co.) See www.masternaturalist.org to register or for more information.
- Nov 15—4-H Marine Ecology Event (Kissimmee). See http://florida4h.org/projects/marine/state_mee.shtml for materials and information.
- Nov 18-23—St Johns County Fair. See www.stjohnsfair.com
- Jan 8-Feb 12, 2009. Upland Habitats Master Naturalist Program (Volusia Co.) See www.masternaturalist.org to register or for more information.
- Feb 2-26, 2009. Freshwater Wetlands Master Naturalist Program (Clay Co.) See www.masternaturalist.org to register or for more information.
- April 3-May 15, 2009—Coastal Master Naturalist Program (Volusia Co.) See www.masternaturalist.org to register or for more information.
- March 16-20, 2009—Exploring our Environment—from the ocean to the river. Adult “day camp” (Marineland). See <http://stjohns.ifas.ufl.edu/sea/education.html> or contact Maia.
- May 19-21, 2009—From Stem to Stern II: Boating and Waterway Management in Florida (Cocoa Beach). See www.conference.ifas.ufl.edu/boating2009 for more information.

Please check the calendars at <http://calendar.ifas.ufl.edu> for other environmental education programs around the state.

Aqua Notes is provided as one of the many services relating to educational programs offered by the University of Florida/IFAS cooperative extension service. This publication is available on the Web at <http://stjohns.ifas.ufl.edu> or in an alternate format on special request. In compliance with ADA requirements, participants with special needs will be reasonably accommodated with 5 days advance notice by contacting the Flagler County Extension Service at 386-437-7464. Those needing telecommunications assistance, please call the Florida Relay Service (TDD) at 1-800-955-8771. The use of websites or product names in this publication is not a guarantee, warranty or endorsement of the sites/products named and does not signify that they are approved to the exclusion of others. For more information about this document, contact Maia McGuire at the Flagler County Extension Service at 386-437-7464.