

Mark your calendars...

- February 7, 2004—Water Education Festival at MOSH. 10 am—4 pm. FREE admission. For information, contact Cheryl Abbott at 904-730-6261.
- February 19—NE Florida Regional Envirothon.
- March 6—Aquatic Collecting Certificate Workshop for educators. 10 am—noon, St. Johns Co. Ag. Center. Call Maia at 824-4564 for information.
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Focus on Invasive Species

I was awarded a grant from the University of Florida's new School for Natural Resources and the Environment which I used to fund a 2-day program on invasive species at the St. Johns County Ag. Center on January 30 and 31. The goal of the event was to make people more aware about invasive plants and animals and the problems they can cause. We were able to bus 5th grade classes from Osceola and Ketterlinus Elementary Schools to the Ag Center on January 30. The students participated in interactive activities and the teachers were given resource boxes to take back to their classrooms. On January 31, we opened up the event to the general public, expanded the interactive activities, added lectures and a skit by 4-H members. Look inside for more information about invasive species in NE Florida.



4-H members cutting down an invasive Chinese Tallow tree.

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Invasives poster contest

Artists of all ages are invited to submit posters for the 2004 poster contest. The theme this year is invasive species, and posters should be designed to educate people about invasive species or should highlight ways that people can help stop the spread of invasives. For complete rules and entry forms, see the Sea Grant website at <http://stjohns.ifas.ufl.edu/sea/seagrants.htm>. Deadline for entries is April 30, 2004.

Invasive Species

The May 2003 issue of aqua-notes featured the Asian Green Mussel and Lionfish, both of which are marine invasive species. This means that they are non-native species which have a negative impact on native species or the environment. Florida is home to well over 1000 non-native plant and animal species. Fortunately, most of these are not considered invasive. However, in fiscal year 1999-2000, the state spent \$90.8 million on prevention, eradication, monitoring, control and restoration efforts involving invasive species. Invasive plants and animals cost the state an estimated additional \$179 million each year in lost revenue (e.g. because of agricultural crops lost to non-native pests). The Florida Fish and Wildlife Conservation Commission estimates that there are at least 30 species of exotic “wildlife” (terrestrial animals) in Duval and St. Johns counties, and at least 20 species in Nassau, Clay, Putnam and Flagler counties. 29 of the 65 plants listed by the Florida Exotic Pest Plant Council as invasive exotics are found in north Florida. Florida is home to over 120 introduced aquatic species—most of these escaped or were released from tropical fish culture facilities or aquaria.

What can I do?

Many invasive species are introduced into Florida’s environment by residents. Many invasive plants have desirable features like rapid growth, attractive flowers and/or berries. Many aquatic invasives started out as aquarium species which were released into ponds or other waterways. The most important thing that individuals can do to help curb the spread of invasive plants and animals is to become familiar with which plants are invasive (the Florida Exotic Pest Plant Council publishes a list of invasive plants—you can request a copy from the St. Johns County Extension Office or go to <http://www.fleppc.org>). If you have invasive plants in your landscape, the extension office can advise you on the best methods for removing these plants and can suggest alternative plants. At least one local nursery will give homeowners a free native plant if they bring in an invasive plant that they have removed from their landscape. The University of Florida offers a number of publications about controlling invasive plants at <http://edis.ifas.ufl.edu>. The St. Johns County Extension Office and Washington Oaks Gardens State Park both have ongoing invasive plant removal projects—if you would like to volunteer to help with these projects, call the extension office at 904-824-4564.

If you have an aquarium and are considering getting rid of some or all of the plants and animals in it, please check first with your local pet store to see if they will take the plants or animals. If not, your local veterinarian may be willing to euthanize animals for you. Do not dump aquatic plants into ponds or other waterways; dispose of them in the garbage or compost them. Aquatic animals can be humanely euthanized by placing them in the freezer.



Do not release aquarium specimens into local waterways

Ocean Observing Systems

The greater scientific community is very fond of acronyms. I recently attended an ORION meeting which was sponsored by CORE and was held to develop a master plan for OOI, not to be confused with IOOS, which comprises SEACOOS, GOMOOS and others... We learned about NEPTUNE, ROV's, IODP, JGOFS and MOMAR...



So what were we really trying to accomplish? Believe it or not, the outcomes of this and other similar meetings will probably eventually be of great benefit to you, the coastal resident. The federal government is planning to invest a great deal of funding into the development of ocean observing systems. There are existing ocean observing systems in place around the world. These are often buoys which are anchored to the sea floor and have a variety of data-collecting devices which usually transmit their data to researchers via satellites. The data ranges from seismographic information (e.g. earthquake activity on the sea floor) to water temperature, wave height, wind speed and direction and amount of chlorophyll pigment in the water (used to estimate the abundance of microscopic plants or phytoplankton).

The hope of the ocean observing system initiatives is twofold. One portion of the initiatives hopes to greatly increase the number of existing ocean data collecting systems in US waters and to also increase the abilities of these systems (by perhaps incorporating robotic-like gliders which would be “docked” on some part of the buoy or platform, but could be programmed to travel to particular areas on a set schedule to collect data in those locations. Another portion of the initiatives is encouraging scientists to work together to share the oceanographic data that they are collecting, and use that data to produce a variety of products that will be useful to people around the nation.

What does this mean to you? Hopefully it will improve our weather forecasting ability, especially when it comes to storm tracking. It costs coastal municipalities approximately \$1 million to evacuate one mile of coastline in case of an impending hurricane. If the predictive ability allows us to narrow the width of the potential strike zone, evacuations will be able to be better coordinated. Planners may be able to use predictive models, based on ocean observation data, to make educated decisions about where to allow coastal construction so that areas likely to be overwashed during a storm are not built upon. If forecasters are better able to predict the onset and severity of events like El Niño, farmers may be able to minimize crop losses by planning planting schedules accordingly. Emergency responders currently use ocean observation data to help them predict where lost mariners or boats may have drifted. Commercial and recreational fishermen use ocean observation data to help them decide what area to target for fishing (for example to find the location of the edge of the Gulf Stream, where fish are known to aggregate). Surfers may be the most avid non-scientist users of ocean observation data, in their pursuit of the perfect waves. Students can currently use a limited set of ocean observation data to study real-life examples of otherwise abstract principles, like physics. Long-term, the hope is that the data will be improved and more easily accessible to anyone who wants to utilize it.

Want to know more? Check out <http://www.seacoos.org> , <http://www.orionprogram.org> or <http://comps.marine.usf.edu>.



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coastal Florida*

More “Mark your calendars”

- March 20—St. Johns River Cleanup. Watch local news media for details and contact information.
- March 22-26—Exploring our Environment—from the ocean to the river. For information, see <http://stjohns.ifas.ufl.edu/sea/seagrant.htm>. Note that there are very few slots left for this program—we suggest you call 904-824-4564 to check availability before you send in your registration. Space is limited to 20 participants.
- April 15—State Science Fair, Jacksonville
- April 30—Deadline for poster contest entries (see page 1)
- June 21-25—COSEE teacher workshop; pairs up middle school teachers and researchers to give both partners a better understanding of the others’ jobs. Expenses and stipend paid—contact Karen Blyler at 352-846-0996 ext. 246
- July 18-22—National Marine Educators Association annual meeting (St. Petersburg, FL). See www.floridamarine.org/NMEA2004 for information.

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 St. Johns County Extension Service at 904-824-4564. 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 St. Johns County Extension Service at 904-824-4564