

aqua-notes

An Equal Opportunity Institution

SOLUTIONS

VOLUME 14, ISSUE 1

150 Sawgrass Road
Bunnell, FL 32110
386-437-7464

January, 2014

Mark your calendars...

- Feb.1 10 am—4 pm. Water Education Festival (Jacksonville Museum of Science and History). Free admission!
- More on back page!

The right whales are calving...

At the time of writing (Jan 30), six north Atlantic right whale calves have been born in the 2013-14 calving season. There are still several weeks to go in the season, so it will be interesting to hear the “final” count. Some of the Marineland staff (and visitors) were very fortunate on January 8 as three right whales breached, flipper-slapped and generally put on a show just off Marineland Beach. Remember that if you see the V-shaped “blow” of a right whale, or are fortunate enough to see one breach (!), let the folks at the Right Whale Hotline know by calling 888-979-4253. The information is valuable not only because it contributes to our knowledge about which whales are where, but because it is forwarded to ship captains in the area so they can avoid the whales.



Photo credit:
FWC

Inside this issue:

NISAW	2
Plastics in your toothpaste?	2-3

M. P. McGuire

Maia McGuire, PhD
Marine Extension Agent

Exploring our Environment—adult “day camp”

The next offering of the adult class, “Exploring our Environment—from the ocean to the river” has been scheduled for March 31-April 4, 2014. The class, which runs from 9 am to 4 pm each day, is based at the GTMNERR building in the town of Marineland. The class teaches about coastal habitats, coastal wildlife, human impacts on coastal areas, and ways we can change our behavior to help protect wildlife. The week is a mixture of classroom presentations and hands-on field activities. Participants should be prepared to walk on sand and other uneven surfaces. The cost for the class is \$100 and registration information can be found online at <http://OceanToRiver.eventbrite.com>. The fee covers drinks and all materials. Participants should bring a bag lunch each day. Questions? Contact Maia by phone (386-437-7464) or e-mail (mpmcg@ufl.edu).



National Invasive Species Awareness Week

February 24-March 2 is National Invasive Species Awareness Week. Many local parks will be hosting special events during this time, including “Air Potato Round-ups”. Sites in northeast Florida include:

- Fort Mose Historic State Park (St. Augustine)
- Howell Park (Atlantic Beach)
- Jacksonville Arboretum & Gardens
- Jacksonville University
- Jacksonville Zoo and Gardens
- Kathryn Abbey Hanna Park (Jacksonville)
- St. Johns River State College (St. Augustine)
- Tillie K. Fowler Park (Jacksonville)
- Timucuan Ecological and Historic Preserve (Jacksonville)
- Tree Hill Nature Center (Jacksonville)

All air potato round-up events listed above will start at 9 am and end at noon. There will be prizes awarded for the two largest potatoes found. For more information and for additional round-up locations, check the calendar at www.floridainvasives.org.



Is there plastic in your toothpaste?

Many readers have probably heard about the “Great Pacific Garbage Patch.” Unfortunately, researchers are discovering that all ocean basins (and the Great Lakes) contain areas where there are accumulations of pieces of plastic. Many types of plastic are less dense than salt water, so they float. With wind, wave and current action, much of this plastic becomes suspended in the water column, rather than accumulating at the water’s surface. Much of the plastic is therefore not visible from the ocean’s surface. However, when a fine-meshed net is drawn through the water, the amount of plastic retrieved can be much greater than the amount of plankton.

One expert has stated that every piece of plastic ever created is still in existence. Plastic does not biodegrade—it simply breaks apart into smaller and smaller pieces. Microplastics (pieces of plastic smaller than 5 mm in diameter) are the latest concern in the oceans.

Plastic in your toothpaste? (cont.)

These tiny pieces of plastic are often eaten by birds, fish, baby sea turtles and even plankton. Scientists have found that harmful chemicals like pesticides are chemically attracted to these plastics and can end up coating the surface of the plastic pieces. There is concern that when animals eat plastics, they may be becoming exposed to toxic levels of chemicals.

The Flagler Audubon Society asked me to give a talk about plastics in the ocean at one of their recent meetings. In researching microplastics in order to present the latest information, I discovered a new “villain” in the story. Tiny beads of plastic are now being used in many of the types of personal care items that most of us use on a daily basis. Some types of deodorants, facial cleansers, mascaras, lotions and even toothpastes contain these almost microscopic plastic beads. These plastic pieces often end up in our wastewater (after being washed down the sink, bath or shower), but wastewater treatment facilities are not designed to remove such small floating objects. Studies in the Great Lakes have found high densities of microplastic particles at 21 stations. One station, located downstream from two major cities, had over 450,000 particles per km² through which a trawl was pulled. Many of the microplastics were multi-colored spheres, suspected to be from personal care products.

Several companies (Unilever, Johnson & Johnson, Body Shop, L’Oreal, Proctor & Gamble) have promised to phase plastic microbeads out of their products, but it will likely be several years before plastic-free products from these companies can be found on store shelves. So how can you tell if your toothpaste, lotion, deodorant etc. contains plastic microbeads? One way is to read the label. If you see the word “polyethylene” in the list of ingredients, that product contains plastics, and not just in the packaging. If those tiny ingredients labels are too difficult to read, the US Department of Health and Human Services has a Household Products Database on its website. You can search that database for ingredients. Typing in “polyethylene” in the ingredient search produces a list of 172 personal care products, along with a floor restorer liquid, plastic food storage bags and plastic wrap.

What is the potential impact of these microplastics in the ocean? Smaller and smaller plastic pieces can be accidentally consumed by smaller and smaller marine organisms, allowing the impacts of plastic consumption (starvation, potential exposure to toxins, etc.) to occur low down in the food chain.

Many people are trying to reduce their use of “throwaway” plastics by utilizing reusable shopping bags and drink containers. However, it probably never occurred to most of us that we could be introducing plastic into local waterways every time we brush our teeth or use hand lotion (depending on the type of products used).



Location of three major North Pacific “garbage patches”. Image credit: NOAA

We're now on Facebook—check out [facebook.com/NEFLSeaGrant](https://www.facebook.com/NEFLSeaGrant) and “like” it to keep informed about coastal topics in the region. Don't have a Facebook account? That's OK—you can view the page without one :)

NE Florida Sea Grant Extension Program
150 Sawgrass Road
Bunnell, FL 32110

Phone: 386-437-7464

Fax: 386-586-2102

E-mail: mpmcg@ufl.edu

<http://stjohns.ifas.ufl.edu/sea/seagrant.htm>

More “Mark your calendars”

- Feb 7-Mar 14—Coastal Master Naturalist class, Volusia County. See www.masternaturalist.org for more information or to register.
- Feb 11-12—Sustainable Water Resources—4th UF Water Institute Symposium; J. Wayne Reitz Union, UF campus (Gainesville, FL). See <http://waterinstitute.ifas.ufl.edu/symposium2014/index.asp> for more details.
- Feb 18-Mar 6—Coastal Master Naturalist class, St. Johns County. See www.masternaturalist.org for more information or to register.
- Feb 24-Mar 1—National Invasive Species Awareness Week. Look for air potato roundup events at many local parks (most will occur on March 1). See page 2 for more info.
- Mar 6—6:30 pm, Presentation, “Whale Sharks: Connecting the Dots.” UNF University Center Room 1058-2. For more information, contact the UNF Coastal Biology Program at 904-620-2830 or e-mail michelle.davis@unf.edu.
- Mar 31-Apr 4—“Exploring our Environment—from the ocean to the river.” (see page 1)
- Apr 1-May 6—Coastal Master Naturalist class, Volusia County. See www.masternaturalist.org for more information or to register.
- Earth Day Events: Jacksonville Landing (April 19), Washington Oaks Gardens State Park (April 19-20)
- Apr 30-May 4: Florida’s Birding & Photo Fest, St. Augustine. <http://floridasbirdingandphotofest.com>

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>. 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.

The Foundation for The Gator Nation

An Equal Opportunity Institution