

# aqua-notes

An Equal Opportunity Institution

**SOLUTIONS**

VOLUME 13, ISSUE 4

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

November, 2013

## Mark your calendars...

- November 5-21:  
Coastal Master Naturalist class, St. Johns County. See [www.masternaturalist.org](http://www.masternaturalist.org) for more information or to register.
- More on back page!

## Planning and reporting

It's November, and that means it's time for Extension agents to start working on annual reports of accomplishments and plans of work. This is when we reflect back on the past year's successes (and possibly less-successful efforts!) and plan program directions for the coming year. I want to thank all of my advisory committee members, present and past. This group helps me ensure that I am conducting programming that is relevant to my clientele groups—they are the folks who keep me on track and help me focus :) They probably don't get enough recognition, but I rely heavily on them, not just at our semi-annual committee meetings, but throughout the year, when they are often asked to become my sounding board, co-planner or to serve in some other capacity to help me out. Thanks to all of you for helping me be as effective as I can be.

*M. P. McGuire*

Maia McGuire, PhD  
Marine Extension Agent

## Inside this issue:

Sea turtles/fishing	2
Vibrio	2-3

## The right whales are coming...we hope!

It's getting close to calving time for the North Atlantic right whale. In northeast Florida, from St Augustine to Daytona, volunteers play a critical role in collecting data about this critically endangered species. If you are interested in learning how to become a volunteer, or just how to spot and identify right whales, consider attending one of the scheduled Right Whale Introductory Talks. Talks will be given on the following dates, times and locations:

- Dec 4 (1-2:30 pm)—Flagler County Public Library
- Dec 7 (10-11:30 am)—Ormond Beach Public Library
- Dec 7 (3-4:30 pm)—Anastasia Branch, St Johns County Public Library
- Dec 12 (6-7:30 pm)—Ocean Books & Art, Flagler Beach (across from the pier)

All survey volunteers (new and returning) should attend the survey training class on Jan 4, 2014 from 2-4:30 pm at the Whitney Lab's Center for Marine Studies (Town of Marineland).

## Sea turtles and fishing

While sea turtles are only occasionally caught when fishing with a traditional hook and line (they are more commonly caught in the open ocean longline fishery), there are steps that can be taken to prevent sea turtles from becoming injured by a swallowed hook. It is also important to know how to safely release a sea turtle that has been hooked or entangled. Every year, NOAA Fisheries estimates that about 100 sea turtles are caught on hook and line in the snapper and grouper fisheries in the Gulf of Mexico, Caribbean and US South Atlantic. Scientists estimate that about half of these turtles die. Deeply-ingested hooks can perforate the heart, blood vessels or digestive tract, while attached fishing line can wrap around folds in the turtle's gut, leading the turtle to starve.



Baiting a circle hook. Photo credit: Florida Sea Grant

Circle hooks with zero or less than a ten degree offset are less likely to hook a turtle in the gut, even if swallowed. These hooks are much more likely to be pulled back into the turtle's mouth, where they may hook the turtle in the jaw, but can be safely removed. Anglers should not try to remove a hook that has been swallowed and is caught in the turtle's gut. Turtles are more likely to swallow hooks that are baited with squid, as opposed to those baited with fish. Loggerhead and leatherback sea turtles are the most commonly-caught species. Loggerheads typically pursue the bait and may swallow hooks or become hooked in the jaw, while leatherbacks are often externally hooked and entangled in fishing line.

Maximizing gear removal is critical to improving a sea turtle's probability of survival. So, what should you do if you find a turtle is attached to your fishing line? If fishing from a boat, the first thing to do is to try and move the vessel alongside the turtle while minimizing tension on the fishing line (rather than pulling the turtle to the boat). Once the turtle is alongside, put the boat in neutral. If the turtle is entangled but not hooked, NOAA recommends using dehooking tools to secure loose hooks, and then using clippers to cut the line from around the turtle. If the turtle is hooked and the hook is visible (in the jaw or externally), the hook should be carefully removed if possible. If it can be reached, cutting the barb off the hook will simplify the dehooking process. Remember that the turtle is likely to be agitated and that it has powerful jaws! If the hook has been swallowed, or if it cannot be removed, try to remove as much of the line and hook as possible. Gaffs should not be used to try and hold the turtle, as the point of the gaff may damage the animal. However, a gaff may be used to control the line and prevent the turtle from becoming entangled.

The best strategy is to try and reduce the likelihood of catching a turtle by fishing with circle hooks that are baited with mullet or other baitfish. Circle hooks are also less likely than J-hooks to gut-hook a fish. This allows fish to be hooked in the jaw, where they sustain less damage and are more likely to survive if released. For more information on circle hooks, proper fish handling and release techniques, go to <http://catchandrelease.org>.

## Reducing your risk of *Vibrio* infection

Recent deaths in Florida have raised alarm about the saltwater-dwelling bacterium with a hard-to-say name, *Vibrio vulnificus*. According to the Interstate Shellfish Sanitation Conference (ISSC), **MOST HEALTHY INDIVIDUALS ARE NOT AT RISK FOR *V. vulnificus* INFECTION**. However, there are steps that all people can take to avoid becoming infected.

**What is *Vibrio vulnificus*?** It is a bacterium, in the same group of bacteria as cholera. There are two species of *Vibrio* bacteria that can cause illness in similar ways (but with different risk associated with them). Both are present in coastal (mostly brackish) waters, and both tend to be in higher concentrations during warm summer months (primarily April through October).

## *Vibrio* (cont.)

*Vibrio parahaemolyticus* is the more common but less dangerous of the two. In most people, this type of infection causes a short illness, then people recover (there are exceptions for immunocompromised individuals or those who are particularly sensitive to the toxin). The Centers for Disease Control estimates that there may be 4,500 cases of this type of infection in the US every year, although most are not reported because the illness is minor.

*Vibrio vulnificus* is less common than *V. parahaemolyticus*, but it is more deadly (in people with liver disease, close to 50% of infections are fatal). Again, it is primarily a risk for folks with compromised immune systems). According to the CDC, nationwide there are as many as 95 cases, 85 hospitalizations and 35 deaths annually from this bacterium.

**How do these bacteria infect people?** Shellfish like oysters and clams are filter-feeders, so bacteria and plankton that are present in the water become filtered into the shellfish's guts. Since people eat the entire oyster or clam, they also eat whatever is in the animal's gut. *Vibrio* bacteria are killed by cooking, but people can become infected if they eat uncooked or undercooked shellfish, or if they eat other foods that have been contaminated by raw shellfish or shellfish juices. People can also become infected if they have scratches or other wounds that come into contact with raw shellfish or with *Vibrio* bacteria in coastal waters.

**Who is most at risk of contracting a *Vibrio* infection?** High-risk persons include those with liver disorders, insulin-dependent diabetes, iron overload disease (hemochromatosis), stomach disease or those with compromised immune systems (e.g. HIV/AIDS or cancer patients).

**What are symptoms of *Vibrio* infection?** People should immediately contact a doctor or emergency room if they develop vomiting, diarrhea, abdominal cramps, or fever and chills following consumption of shellfish. Skin that turns red, then develops blisters which turn into necrotic ulcers is also a symptom of *Vibrio* infection. Wound infections that rapidly become gangrene-like can occur if skin wounds come into contact with seawater containing *Vibrio vulnificus*. These symptoms may occur within 24-48 hours of ingestion. Death of at-risk individuals can occur within two days.

**How can I reduce my risk of contracting *Vibrio*?** People who are considered high risk should avoid eating raw or undercooked seafood (see recommendations below). They should also avoid activities in seawater if they have open cuts. These activities include swimming, fishing and boating.

Oysters should always be obtained from reputable sources, but *Vibrio* can be present in all coastal waters, even those that are approved for shellfish harvest. Thoroughly cooking shellfish is the only way to destroy the bacteria. When shucking oysters, wear protective gloves and eyewear. Protect wounds from seawater or shellfish juices. Sanitize surfaces after they have been exposed to raw shellfish or shellfish juices.

The US Food and Drug Administration recommends the following:

If cooking oysters at home, throw away any oysters that have open shells prior to cooking.

Cook small quantities of oysters at a time to ensure that all get cooked thoroughly. If boiling in the shell, cook for an additional 3-5 minutes after the shells have opened. If steaming, add oysters to already-steaming water and cook for another 4-9 minutes.

If cooking shucked oysters, boil or simmer for at least 3 minutes or until the edges curl, fry at 375°F for at least 3 minutes, broil three inches from heat for 3 minutes or bake at 450°F for 10 minutes.



Oysters. Photo credit: Florida Sea Grant

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](mailto:mpmcg@ufl.edu)

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

### More “Mark your calendars”

- November 12-December 14—Coastal Master Naturalist class, Brevard County. See [www.masternaturalist.org](http://www.masternaturalist.org) for more information or to register.
- November 16, 10 am-3 pm—Marshfest (Dutton Island Preserve, Atlantic Beach). Fish fry, free canoe/kayak tours, nature hikes, music, 5K and more!
- November 21, 7 pm—“Waltzes with Giants” presentation about journaling, science and right whales by author/artist Peter Stone. UF Whitney Lab.
- November 23, 10 am—4 pm: Right Whale Festival at Sea Walk Pavilion, Jacksonville Beach. Beach cleanup, music, beach run and more! See [www.rightwhalefestival.org](http://www.rightwhalefestival.org) for details.
- November 24, 2 pm—“Waltzes with Giants” presentation about journaling, science and right whales by author/artist Peter Stone. Florida Museum of Natural History, Gainesville.
- January 13-February 8, 2014—Freshwater Wetlands Master Naturalist class, Clay County. See [www.masternaturalist.org](http://www.masternaturalist.org) for more information or to register.
- January 29—St Johns County Regional Science Fair, Held at Sebastian Middle School—judges needed! Contact Elena Beck at [becke@stjohns.k12.fl.us](mailto:becke@stjohns.k12.fl.us).

Please check the calendar 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>. 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