News from around Sarasota Bay. View this email in your browser

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BAY REFLECTIONS

News from the Sarasota Bay Estuary Program

October 2019

Fall in southwest Florida is subtle and slow to arrive. While nighttime temperatures cool and humidity drops (a little), warm days keep dedicated beachgoers satisfied. Around our bays, nesting season has slowed, but migrant birds are showing their feathers.

In this newsletter, we're sharing news about oyster restoration, connections between air and water quality, upside-down jellyfish blooms around Lido Key, and more. Thanks for reading!

- SBEP Staff (Mark, Darcy, Jay, Michael, Christine, and Cheryl)

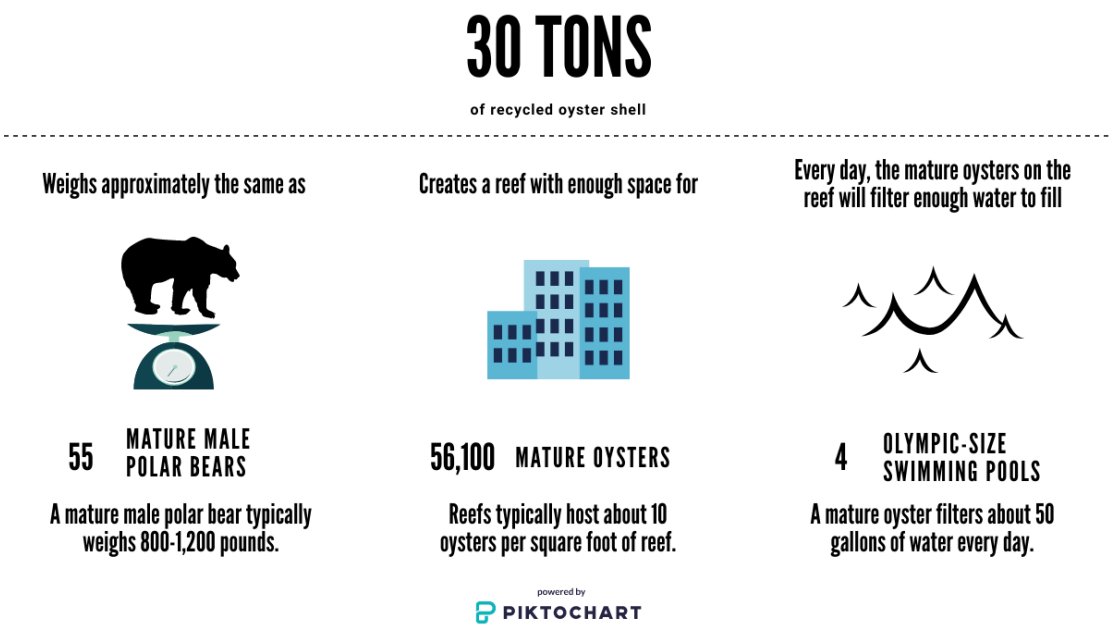
In this newsletter:

- Volunteers set foundation for oyster city in Perico Bayou
- FWC launches living shorelines training workshops for marine contractors
- Air quality is water quality
- Upside-down jellyfish congregate around Lido Key

- Larval stone crabs feel red tide impacts
- Phillippi Creek antenna array spies on snook
- Let's #BringBirdsBack
- Fall events around the Bays
- Water Reading from Around the Web
- Request a Speaker from SBEP

Volunteers set foundation for oyster city in Perico Bayou

There is nothing better than a beautiful fall morning spent working for our bays with super-dedicated volunteers. On September 28, the last day of National Estuaries Week 2019, volunteers transported 30 tons of oyster shells into Perico Bayou, creating new habitat for oysters to settle and grow.



Once mature, the reef's oysters will be water-filtering powerhouses that reduce nutrients and sediment in 2.8 million gallons of water - the equivalent of 4 Olympic-size swimming pools - every single day. What's more, they'll provide habitat for countless small estuarine creatures and foraging area for the fish and birds that eat those creatures.

The shells for this restoration effort were recycled from 11 Manatee County restaurants that participate in the Gulf Coast Oyster Recycling and Renewal

Program. The program keeps bulk out of the landfill while providing an essential ingredient for oyster restoration.

Many thanks to our 65 volunteers and our brilliant partners Tampa Bay Estuary Program, Manatee County Parks and Natural Resources Department, and Gulf Coast Oyster Recycling and Renewal Program.

FWC Launches Living Shorelines Workshops for Marine Contractors

For the marine contractors in our audience... this workshop is for you! Learn how to take advantage of increasing demand for softer, greener shorelines in southwest Florida in the Florida Fish and Wildlife Conservation Commission's first statewide Living Shorelines Training Course for Marine Contractors. It's FREE and CEUs are available.

WORKSHOP DETAILS

October 21 and 22, 2019
NOAA Fisheries Office, 263 13th Ave. S, Saint Petersburg, FL 33701
Contact: Fara Ilami, FWC | fara.ilami@myfwc.com | 386-754-1668

Register for the workshop >

More than 50% of shorelines in Sarasota-area bays have seawalls, bulkheads, or rip rap. Shoreline hardening reduces wildlife habitat and increases scour of the bay bottom. Living shorelines are green solutions for strengthening shorelines against erosion, sea level rise, and other damage. They protect, restore, and enhance natural shoreline habitat and maintain coastal processes through the strategic placement of plants, oyster shell, and other structural organic materials.

Learn more about living shorelines >

Air quality is water quality

When you run into a traffic jam, you probably think first about how you'll be late to wherever it is you're trying to go. Or maybe you're not in a rush, so you think about the air pollution and smog coming from that traffic jam. Then, perhaps, you think about carbon dioxide emissions fueling global climate change. As if all that isn't enough, there's another traffic woe to consider - water pollution.

Fossil fuel exhaust - from cars, planes, even lawn-care equipment - isn't just carbon dioxide. It contains many other compounds with far-reaching effects. The tailpipe emission with the biggest impact on water quality is a group of compounds called nitrogen oxides. Several processes deposit these nitrogen-containing compounds from the atmosphere to surface waters, where they contribute to nitrogen pollution. Nitrogen pollution from various sources in southwest Florida estuaries is the main cause of eutrophication, a process that starts with excessive nutrients and leads to algal blooms and low-oxygen waters that can kill aquatic organisms.

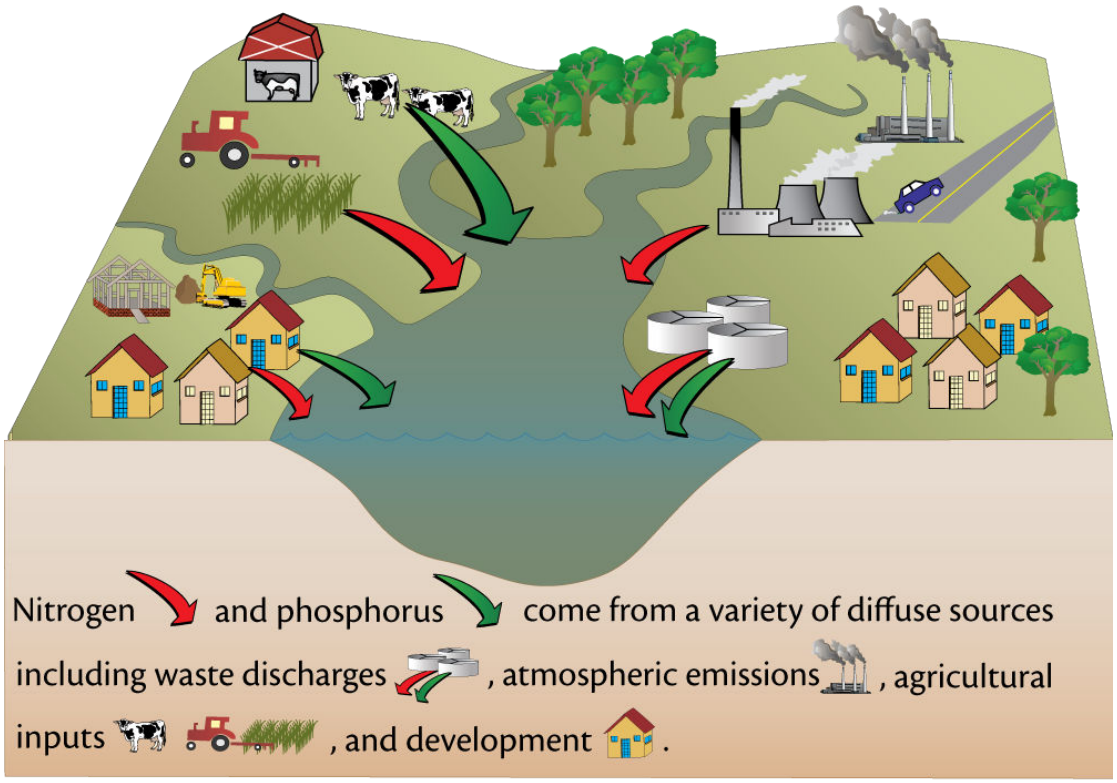


Diagram courtesy of the Integration and Application Network (ian.umces.edu), University of Maryland Center for Environmental Science. Source: Lane, H., J.L. Woerner, W.C. Dennison, C. Neill, C. Wilson, M. Elliott, M. Shively, J. Graine, and R. Jeavons. 2007. Defending our National Treasure: Department of Defense Chesapeake Bay Restoration Partnership 1998-2004. Integration and Application Network, University of Maryland Center for Environmental Science, Cambridge: MD.

Read more about links between air and water quality >

Tampa Bay Times: Vehicle emissions are up sharply, and it's fueling climate change >

Upside-down jellyfish congregate around Lido Key



(This image file is licensed by Nick Hobgood under the Creative Commons Attribution-Share Alike 3.0 Unported license.)

If you've been snorkeling or wading around Lido Key recently, you may have noticed some odd, cauliflower-like animals on the bay bottom. These animals are a type of jellyfish called the upside-down jellyfish (or *Cassiopea* species). As the name suggests, these creatures usually don't swim in open water like most other jellyfish. Instead, *Cassiopea* spend their adult lives on the seafloor with their "arms" facing upward.

In April 2019, Florida Fish and Wildlife Commission researchers discovered large numbers of *Cassiopea* around Lido Key in Sarasota Bay. Up to 121 individuals were found per square meter. Populations this large are rarely found so far north in the animal's range. So why are they here? Unfortunately, there isn't a simple answer.

Read more about upside-down jellies >

Larval stone crabs feel red tide impacts

Stone crabs are a $25 million per year fishery that is mainly concentrated along Florida's Gulf Coast. New research from Mote Marine Laboratory indicates that Florida red tides that persist through summer could have severe negative impacts on the survival and mobility of stone crab larvae. Stone crab harvests could be lower two to three years after a severe summertime Florida red tide bloom.

More on stone crab science from Mote >

Antenna array spies on snook in stormwater canals



Photos courtesy Mote Marine Laboratory.

Microchip technology isn't just for pets. Scientists use passive integrated transponder (PIT) tags to track movement and behavior in wild animals. Mote Marine Laboratory researcher Dr. Ryan Schloesser uses PIT tags to track movements of common snook through Sarasota's Phillippi Creek and the stormwater canals that feed into the creek. Dr. Schloesser's goal is to better

understand what features of stormwater canal systems best support snook. With that information, Dr. Schloesser hopes to inform decisions about canal management so that these common features of Florida landscapes can produce more snook. A strong partnership with Sarasota County's Stormwater Utility ensures that the message will get across.

More on snook spying from Mote >

Let's #BringBirdsBack

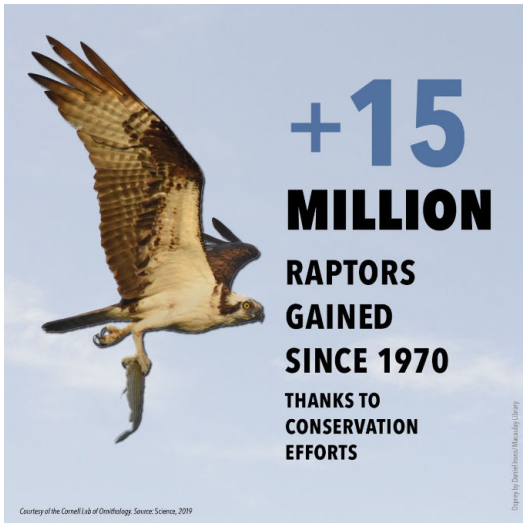


A new study highlights the steep losses in sheer numbers of birds in the United States and Canada: there are 25% fewer birds today than there were in 1970. That's a loss of almost 3 billion birds. Significant losses have affected some of Florida's most charismatic birds, including gulls and terns, sandpipers, herons, plovers, and kingfishers.

Habitat loss is one of the biggest threats to birds across the continent. Accelerated habitat conservation and restoration of diverse ecosystems is the surest path to #BringBirdsBack, but there are 7 simple actions that individuals can take to help. And - bonus! Several of these actions will also help improve local water quality and increase habitat for other kinds of wildlife. Reducing your nitrogen footprint can also help birds.



History shows that conservation efforts work. Raptor populations



have rebounded by millions since DDT was banned. Waterfowl that are dependent on freshwater wetlands have benefited from wetland conservation programs. More efforts like these are needed to #BringBirdsBack.

Learn how you can help #BringBirdsBack >

Join SBEP for one of these fall events

Wild ABOUT nature

Come say hello to SBEP staff at the Conservation Foundation of the Gulf Coast's Wild About Nature Festival on Saturday, November 2 from 10am-4pm at Bay Preserve in Osprey. We'll teach you how to use a hand lens to get closer to nature, plus give you a lens to take home!

Sustainable Communities

The 14th Annual Sarasota County Sustainable Communities Workshop on November 14 features three thought-provoking keynote addresses from Josh Tickell, Chris Castro, and Syd Kitson. Get your ticket today and make sure to say hello at SBEP's sponsor table.

Get your ticket to the Sustainable Communities Workshop >

More Fall Fun Around the Bays

- October 17 – November 2: Eat Local Week (Transition Sarasota)
- October 19: Sarasota County UF/IFAS Rain Barrel Program 10-year Anniversary Party
- October 22 & 23: Climate Change and Me - Choices, Choices (SCF Sarasota-Manatee)
- November 1: Bike To Work Day (City of Sarasota)
- November 16: America Recycles Day (Sarasota County)
- November 23: Solutionary Health Festival
- November 26: Jon Thaxton on Local Red Tide and Water Quality
- December 8: Maritime by Candlelight (Florida Maritime Museum)

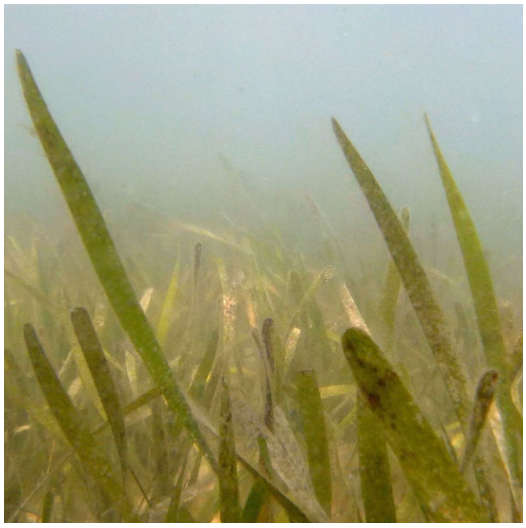
University of Florida/IFAS Extension Classes

Sarasota County

Manatee County

Water Reading from Around the Web

Seagrass meadows harbor wildlife for centuries, highlighting need for conservation

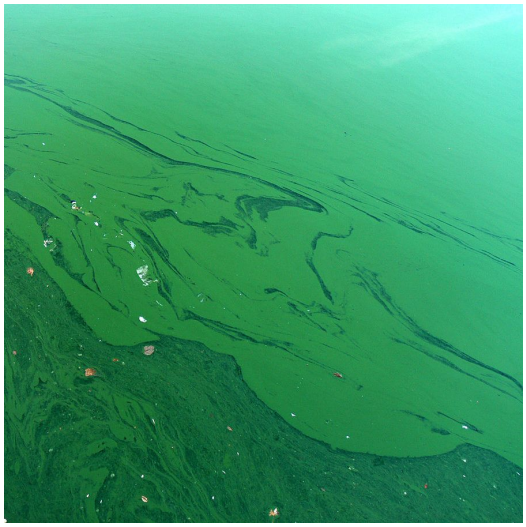


University of Florida researchers recently discovered evidence from estuaries around Big Bend that seagrass ecosystems can inhabit the same locations for thousands of years. The new study shows that these underwater meadows are biodiversity hotspots that persist in time and space - not transient "weeds" that are easily replaced.

Read more on Science Daily >

Blue-Green Algae Task Force Recommendations Released

The Blue-Green Algae Task Force, an advisory body with members



appointed by Florida Governor Ron DeSantis, has approved a set of recommendations for improving waterbodies that have been affected by blue-green algae blooms. The recommendations focus on reducing nutrient inputs, public health, and monitoring.

Read the task force recommendations >

Request a Speaker from SBEP

SBEP staff members regularly speak to homeowner, neighborhood, and community groups and upper-level classrooms about Sarasota Bay ecology and restoration. Weekday and evening presentations are now being scheduled through Spring 2020. Call the SBEP office at (941) 955-8085 or click the button below to request a speaker for your group.



Visit the SBEP website to schedule a speaker >

Bay Reflections is the quarterly e-newsletter from the Sarasota Bay Estuary Program.

The Sarasota Bay Estuary Program is dedicated to restoring the area's greatest natural asset - Sarasota Bay. We offer special thanks to our partners: Sarasota County, Manatee County, City of Sarasota, City of Bradenton, Town of Longboat Key, the U.S. Environmental Protection Agency, the Florida Department of Environmental Protection and the Southwest

Florida Water Management District.

Our office is located in the Federal Building in downtown Sarasota:
111 S. Orange Avenue, Suite 200W | Sarasota, FL 34236 | (941) 955-8085

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