

The Pelican

For wildlife & people since 1923

Volume 64-Number 12. Newsletter of Halifax River Audubon
December, 2018



The President's Column

This month we have an essay by Deborah Green of Orange Audubon Society.

Audubon Assembly Panel Recap: Florida's Coastal Water Crises: What's Aggravating Algae Blooms and Red Tides and How We Can Help

A special session at this year's Audubon Assembly, during one of the worst red tide and blue-green algal blooms in Florida's history, featured leading experts who spoke on **Harmful Algal Blooms**. Panelists reaffirmed that a combination of excess nutrient pollution and increasingly warmer temperatures are causing the problems, and they explored the roles of septic tanks, biosolids, reclaimed water, fertilizer, agricultural wastes, and the loss of filtering wetlands in Florida's nutrient pollution.

The panel's headline speaker was Dr. Edith Widder, a bioluminescence expert, deep ocean explorer, inventor, 2016 MacArthur Fellow, and founder of Ocean Research & Conservation Association. Dr. Widder distinguished three types of Harmful Algal Blooms. First is red tide, which is caused by a dinoflagellate (a type of alga), Karenia brevis that occurs in saltwater. K. brevis occurs in the Gulf of Mexico and blooms almost every year, generally in late summer or early fall, particularly between Clearwater and Sanibel Island.

Red tide causes acute respiratory distress because the K. brevis microorganism releases a neurotoxin called brevetoxin. Florida Fish and Wildlife Conservation Commission (FWC) scientists routinely take water samples from shellfish beds throughout the state and if K. brevis concentrations exceed a given threshold, FWC closes affected shellfish beds to prevent sickness by people eating them. Red tide is stimulated by nutrient pollution, primarily nitrogen.

In early October this year, dead fish began washing ashore along the Atlantic Coast in Palm Beach County. Amounts of K. brevis were high enough to cause fish kills and respiratory distress. Since red tide is rare on the Atlantic coast, the K. brevis is thought to have traveled with currents from the Gulf Coast. Brown tide, also called Texas brown tide, was first documented blooming in state waters in 2012. It is caused by a type of marine algae called *Aureoumbra lagunensis*, which does not emit a toxin. Like red tide, outbreaks of brown tide have been linked to primarily nitrogen pollution. Occurring again in 2016 from Titusville to the Mosquito Lagoon near New Smyrna Beach, these algal blooms block sunlight needed by the seagrasses that support much of the lagoon's marine life. Oysters and scallops dependent on seagrasses die.

Monday, December 17th, Program Meeting- Shorebirds! If these birds have you scratching your head and looking for another field guide, our speaker, Michael Brothers, will be here to help. Michael is the recently retired Director of the Marine Science Center, member of the Records Committee of the Florida Ornithological Society and one of the best birders in the state. We meet at Sica Hall, 1065 Daytona Ave, Holly Hill, FL 32117. Doors open at 6:30 p.m. and the meeting begins at 7:00 p.m. We hope to see you there.

* * * *

Field Trips

Friday, December 7th and Saturday, December 8th, Merritt Island National Wildlife Refuge- Join David Hartgrove for Friday's trip and Joan Tague on Saturday. Each year we try to insure that those among us still working get a chance to go to this very special destination with our group. Winter at MINWR is about as good as birding in Florida gets and being with us means there are plenty of scopes to allow everyone good views of all those gorgeous ducks and other birds. We'll meet both days at 7:30 am at the Target in Port Orange behind Panera Bread. Bring lunch. Questions? Call David, 386-235-1249 or Joan, 386-871-6049.

* * * *

Out of Town Field Trips

Our chapter is sponsoring two out of town field trips that require overnight accommodations. The first is to St Marks National Wildlife Refuge, Tuesday, January 8th through Friday, January 11th. If you went with us last year you know what a great time we had. We will again stay at Shell Island Fish Camp ([website](#)) (850-925-6226); they have 1 and 2 bedroom cabins, motel rooms and RV sites (if you want to bring your RV). Dinners will be as a group at local seafood restaurants. Stay from 3, 4, or 5 nights, whichever is better for you. If interested, please contact Betty Butcher, 863-224-4922, for more information.

Our second overnighter is to Fort DeSoto, in Pinellas County. Spring birding at Fort DeSoto is an excellent opportunity to see migrants headed north. We'll be there from Wednesday, April 17th through Friday, April 19th. We have a block of rooms reserved at a new [Holiday Inn](#) in St. Petersburg. Call them at 727-322-0770 and request the discounted rate for Halifax River Audubon. Call David Hartgrove, 386-235-1249 for more information.

* * * *

See page 5 for info on our local Christmas Bird Counts.

Finally, in freshwater, there are blooms of a blue-green algae (cyanobacteria) called *Microcystis aeruginosa*. These blooms are also caused by nutrient pollution, but in this case primarily phosphorus. *Microcystis* releases a liver toxin (hepatotoxin) called microcystin, which can cause acute poisoning and chronic liver damage. Lake Okeechobee is an ideal habitat for cyanobacteria because it is shallow, sunny, and laden with nutrients from Florida's agriculture.

National headlines from 2016 were about "disgusting, 'guacamole-thick' goop" invading Florida's coastline. Excess water from Lake Okeechobee, pumped west to Port Charlotte through the Caloosahatchee River and east to Port St. Lucie through the St. Lucie Canal, is obviously the cause. Although a reservoir to accept excess water from Lake Okeechobee has been approved, it will take 9 to 10 years to build, and only if state and federal money continues to be appropriated.

Cyanobacteria die as they reach saltwater, but their impact is not over. The red tide microorganism *K. brevis* can actually feed on cyanobacteria directly, although it is not clear if it consumes *Microcystis*. According to Dr. Widder, as *Microcystis* cells die, they break down to release nitrogen and phosphorus, which stimulates growth of *K. brevis*. Cape Coral and Port St. Lucie, at the mouths of the estuaries, experience the compounded effects of *K. brevis* and *Microcystis*. Focusing on the sources of the nutrient pollution in Florida's water bodies, Dr. Widder stated that the major sources are agriculture's fertilizer runoff and human waste. She used Blue Cypress Lake in Indian River County to illustrate the problem of human waste.

As background, a wastewater (sewage) treatment plant receives what is flushed down our toilets. In the plant, much of the organic material is broken down through the work of beneficial bacteria. Through settling processes, the liquid, called effluent, is separated. After all the breakdown work by beneficial bacteria is completed, disinfection is applied to kill these beneficial and any harmful microorganisms. At this point the effluent looks like fresh water and is pumped to re-created wetlands like Orlando Wetlands Park or Viera Wetlands, spread on wetlands adjacent to the plant, or used for commercial or residential irrigation as reclaimed water. Most treatment plants are not required to remove phosphorus and nitrogen from reclaimed water. Recipients of the reclaimed water are generally pleased that, with its included nutrients, it greens up their lawns.

The sludge that remains after dewatering, called Class B biosolids, is a disposal nightmare for wastewater utilities. Special presses are used to dry it so it is compact enough to be transported, often to farms or ranches. The farmers receive this free fertilizer and actually make money by allowing the biosolids to be dumped on their land. Some wastewater utilities put the biosolids through further treatment so the waste can be incorporated into fertilizer that is safe enough to be sold to homeowners, a process pioneered by the City of Milwaukee with Milorganite. Other plants take it to a landfill or incinerate it. A very few make energy out of it. All of these options are much more expensive than land disposal.

In an effort to protect the Northern Everglades watershed and coasts, in 2007 state legislation was passed requiring any land application of biosolids in the Kissimmee, St. Lucie, and Caloosahatchee River watersheds to demonstrate no-net loading for phosphorus.

Now going back to Blue Cypress Lake, which is part of the northward-flowing St. Johns River basin—not in the Kissimmee River watershed and so not part of the 2007 restriction—the

disposal of Class B biosolids increased in this lake's watershed after the 2007 ban took effect in other areas in 2012.

Located in Indian River County near Fellsmere, Blue Cypress Lake is the headwaters of the St. Johns River and was one of the most pristine of Florida lakes. It hosts more than 300 osprey nests.



Osprey family on Blue Cypress Lake. Photo by Paul Eisenbrown

The St. Johns River Water Management District tests water in the Blue Cypress Lake and in June 2018 phosphorus reached its highest concentration in 39 years. Widder and staff found extremely toxic levels of microcystin measuring at 4700 parts per billion. The World Health Organization sets the limit for microcystin in water used for recreation at 10 ppb. This was a clear-cut case of the hazards of land application of biosolids when it reaches a certain amount, and the Department of Environmental Protection in 2018 shut down land application near Blue Cypress Lake through the current rainy season.

Dr. Widder reminded us that there are also "contaminants of emerging concern" in biosolids that are not removed by the treatment processes. Hormones given to stock animals, pharmaceuticals, and flame retardants are several she mentioned. The problem lies in our growing population: In 1980 there were 10 million, but there are now 21 million Floridians.

On a hopeful note, she cited that in the Chesapeake Bay area, utilities can only land apply a set amount of biosolids. The result: phosphorus has been reduced, and sea grasses have come back. Dr. Widder also pointed out that septic tanks have been correctly identified as culprits in water pollution in some areas. However, in Tampa only 4% of the nutrients are from septic and in the Indian River Lagoon only 9.6%.

Dr. Paul Gray, Audubon Florida's Everglades Science Coordinator, next informed us that nutrient pollution carried from Central Florida to Lake Okeechobee by large amounts of rain water after Hurricane Irma caused problems in 2018 by washing extra nutrients into the 450,000-acre lake from developments and farm fields. This is non-point pollution, in which rather than coming out of a pipe, it flows off properties in streams and waterways. For decades, farmers drained water off the fields and into the lake, making it unnaturally enriched with phosphorus and nitrogen. "Legacy nutrients" from 100+ years of fertilizing and solid waste dumping remain. In recent years, tougher regulations have curbed some of the practices, but agricultural runoff is still a major issue. He said there has been too little emphasis on best management practices in agriculture.

The biggest months for algal blooms are July and August. This July at one point up to 90% of Lake Okeechobee's open water area was covered in algae. Dr. Gray said filter marshes, like the Stormwater Treatment Areas (artificial filter wetlands) south of Lake Okeechobee established by the South Florida Water Management District, are very good at cleaning water going south to the Everglades and the same type of treatment should be used elsewhere.

Jason Lauritsen, Director of Audubon Florida's Corkscrew Swamp Sanctuary, spoke about how the hydrology of Corkscrew was affected by developments in the region. Short-hydroperiod wetlands—inundated less than 6 months of the year—have declined by 70%. Short-hydroperiod wetlands, essential habitat for Wood Storks foraging early in the nesting season, are relatively easy and inexpensive to drain or fill, so they have historically been lost in much greater proportion than other wetlands. Shallow wetlands are also vulnerable to degradation caused by non-native invasive plants that tend to flourish at the margins of the disturbed landscape due to rapidly fluctuating water levels.

Chris Farrell, Audubon Florida's Northeast Florida Policy Associate, who had worked on the Central Florida Water Initiative—the water management district/utility effort to plan regionally for water supply—said that overuse of reclaimed water introduces nutrients into the system. Julie Hill-Gabriel, Esq., Vice President of Water Conservation, National Audubon Society, then asked each panelist to name their top solutions to these water quality problems.

Paul Gray said it took 40 years to ban the killing of wading birds for their plumes for ladies' hats, so we can't expect solutions overnight, but enforcement of water quality laws would really help. Dr. Widder said that waste-to-energy plants utilizing dried biosolids could help and that she was watching a plant in Dakar, Senegal. For safety and effectiveness, there needs to be control of the phosphorus ash and liquid ammonia at the end of the process.

Chris Farrell said that treatment wetlands like Orlando Wetlands Park, Wakodahatchee Wetlands near West Palm and the new Sweetwater Wetlands in Gainesville are great solutions since they mimic natural wetlands and allow birdlife to thrive while providing people with a place to visit. Jason Lauritsen said we need enforcement of laws so there is no additional loss of natural wetlands. Elizabeth Perez said stormwater utilities need to be supported by their municipalities. Fertilizer ordinances, including those with a "black-out period" during the summer rainy season when no fertilizers are allowed to be applied, are important. Pinellas County and now Seminole County have good models with a black-out period. Dr. Widder added that grass clipping ordinances would help because the grass clippings going down storm drains add to nitrogen loading.

The panel helped us clear up a lot of confusion about what is going on and pointed to effective methods to reduce the problem. Here's hoping we have the political will to do as they suggest.

Deborah Green, President, Orange Audubon Society

Reprinted from the November 2018 Orange Audubon Society OASis newsletter.

As 2018 winds down, I would like to share my gratitude for the beautiful place in which we live and for the opportunity to share it with others who also appreciate its majesty. It is my great honor to work with you to preserve these areas for future generations of bird watchers and naturalists. Thank you for all you do.

Melissa Lammers

Conservation Notes

The [BIRDING COMMUNITY e-BULLETIN](#) is a valuable resource and the following information is from their latest posting. Black Rails are one of the most difficult birds for birders to see. Spending their entire lives in salt, brackish or fresh water marshes, these cryptic little birds are a nemesis bird for many a birder's life list. Now comes word that the bird is being considered for listing under the Endangered Species Act. Though the eastern population is estimated to have fallen 90% over the past half century, the proposal at this point is to list them as Threatened. Habitat loss due to shrinking wetlands and other land management issues are thought to be the reasons for the decline in the bird's population.



Black Rail, photo courtesy of Audubon Field Guide

The comment period for this proposed listing closes on December 10th. So I filed a comment on our behalf in support of the listing. The USFWS at this point is not designating critical habitat for the eastern Black Rail due to concern that identifying such areas might attract birders seeking out these shy and elusive birds, and placing additional stress on them. We've had them on our Christmas Bird Count (heard only) and there are the very popular Black Rail Trips hosted by the Space Coast Birding & Wildlife Festival to St Johns NWR. So they are in our area.

Some years ago I got a call one night from Glade Koch. Glade was our Education Chair at the time and she'd been on an evening walk at Lake Woodruff NWR, sponsored by the West Volusia Audubon Society. She called to see if I could help her identify a bird she'd seen. As she was walking back to the parking area she noticed her shoe lace had come undone. She stopped to tie it and so fell some distance behind the group. It was getting dark and she said she saw this small bird, dark all over with what appeared to be silvery spots walk casually across the trail about 20 feet ahead of her. She said she'd looked all through her field guides and was stumped. I asked her, "Glade, are you sitting down?" She said, "Yes, why?" I said because you just had a great look at one of the most difficult birds to see in North America. Glade passed away last year and donated a treasure trove of books on birds and wildlife to our chapter. They're for sale at our meetings and when we have our table set up at events here locally. Her educational legacy continues to contribute to the chapter and she's still one of the few people I know who've had a good look at a Black Rail.

David Hartgrove

Pelican History

When John Carr, our former Chapter Historian, passed away recently he had amassed copies of the Pelican dating back to April, 1996. At that time Carlton Smith was the Pelican editor and long time President, Roy Stevenson, was announcing his retirement. At our last board meeting on November 5th we decided that we wanted to get this valuable record of our chapter's history digitized so that it would be available for future members. This would be an expensive project. Unless someone stepped forward to volunteer their time and expertise to scan all of those copies. Quietly, board member, Steve Underwood, pulled me aside after the meeting to say that he'd be happy to do the job. He's already completed the task and we're now deciding where this valuable archive will be stored. Our chapter owes a Steve and big Thank You! And this is one way of saying it.

Editor

* * * *

Welcome To Our New and Returning Members

We extend a warm welcome to our new and returning members: Bishop Blackwell, Douglas Brown, Christine Castle, Anne Catinna, Cynthia Fowler, Ken & Patsy Hunter, Elizabeth Kelly, William Kisbany, Leslie Kolleda, Gary Lafond, Bernard Martin Jr., Donald Smith, William Sweeters and Donna Thomas. We hope to see you at an upcoming meeting or on one of our excellent field trips.

* * * *



Male Pileated Woodpecker, photo by Dan Gribbin

Identified by his red mustache and crest that extends from the nape to the edge of the bill, Dan caught this bird on a recent photo safari to Spruce Creek Park, in Port Orange.



Time for another in our series, "Everyday Birding"

Birds Looking at Us

Over the years, I have attempted to capture the expression of a bird looking at me. When I have been successful, I placed these special images in a folder called, "Birds Looking at Ray." The composite I share here is a sample of images from that collection.

Of all my longtime birding experiences, I have bonded most closely to birds because of this project. I have come to realize that birds experience similar events as humans, such as: finding food, raising a family, building a house, establishing protection, traveling and having fun. I feel a connection. I feel that these birds are asking me, "How am I doing?"

I dedicate this project to birds fulfilling the promise of a rich full life and to all people who help make it possible.

Ray Scory

Okay readers, can you identify all of the birds in Ray's collage? See the answers on the next page. Editor.

* * * *

From the Quotable Birder

"The sound of the harpsichord resembles that of a bird cage played with toasting-forks."

Thomas Beecham, British conductor

Christmas Bird Counts

The CBC is the longest running citizen science project in the world and your chance to help make a difference in the world of bird science. Yes, we're out there having fun and going to dinner afterward but the numbers we total are sent on to become part of a vast database that is used by ornithologists, students and researchers all over the world. There are four CBC's conducted here locally. First up is the Flagler count on Friday, 12/14. The next day, Saturday, 12/15, is West Volusia. Skip to the following Saturday, 12/22 and it's our own Daytona Beach count. Finally, on the following Saturday, 12/29, it's the Ponce Inlet count. The compilers for all of these counts (including yours truly for the Daytona Beach count) need your help to make these events a success.

If you're unfamiliar with a CBC, here's how it works. The count is done in a 15 mile in diameter circle, called the count circle. Ours is centered at I-95 and the Tomoka River. The count is an all day event but we compilers are happy to have your help and if that means you're available for only half a day we'll work with you to get you back to your car in time for whatever else you have planned. Teams are selected to cover areas within the circle. Ours is roughly split into 5 sections with some including stretches along the ocean and others out west of I-95. Please, if you plan to come out for ours, contact me so I can begin putting teams together: 386-235-1249 or by email: birdman9@earthlink.net. If you have a preference for a particular area you'd like to cover I'll try to make that happen.

Here's the contact information for the other compilers:

Flagler County, 12/14 Priscilla Reed shopcilla72@gmail.com

West Volusia, 12/15 Dr. David Stock dstock@stetson.edu

Ponce Inlet, 12/29 Don Picard
president@sevolusiaaudubon.org

This is about as much fun as you can have with your clothes on so please come out and contribute to the science of bird counts.

David Hartgrove

* * * *



Bald Eagle w/ Laughing Gull photo by Michael Brothers

It's Bald Eagle nesting season and they can get a mite peckish. Michael got this photo at the beach several years ago. Keep an eye on our local nests. It's about time for those eggs to start hatching.

Editor

It's Festival Time

January, 2019 will be full of birding festivals. Two of them are scheduled for the same weekend. [The Everglades Birding Festival](#) and what's now known as [The North Shore Birding Festival](#) will both run from Thursday, January 17th through Monday, January 21st. The Everglades Festival is headquartered in the Fort Lauderdale area and the North Shore refers to the North Shore of Lake Apopka and is sponsored by Orange Audubon Society.

Then there's Grandaddy, the [Space Coast Birding & Wildlife Festival](#). It's the largest birding festival in the country and attracts some of the top nationally known names in birding. It will run from Wednesday, January 23rd through Monday, January 28th.

And finally in February there's the [Birds of a Feather Fest](#) in Palm Coast. So clean up your binoculars and get your hiking boots oiled. There's going to be a lot of fun out there.

Editor

Answers to the Bird Photo Quiz

Top row: Barred Owl, Brown Pelican, Yellow-crowned Night-Heron.

Second row: immature Cooper's Hawk, Osprey, Least Bittern

Bottom row: Bald Eagle, Yellow-rumped Warbler, Red-shouldered Hawk.

THE PELICAN

is published monthly by Halifax River Audubon, a chapter of the National Audubon Society and a member of Audubon Florida serving eastern Volusia County.

PO Box 166
Daytona Beach FL 32115-0166

Email: editor@halifaxriveras.org

Web: <http://www.halifaxriveras.org>

Halifax River Audubon

forbirds@halifaxriveras.org

Meets monthly September through May

President: Melissa Lammers

Vice President: David Hartgrove

Past President: Jim O'Shaughnessy

Treasurer: Ellen Tate

Recording Sec.: Peggy Yokubonus

Membership Sec.: Joan Tague

Corresponding Sec: Vacant

Historian: Holly Zwart-Duryea

At-Large: Ellen Tate, Holly Zwart-Duryea, Joan Tague, Dan Gribbin, Steve Underwood

Committee Members

Conservation: David Hartgrove

Education: Holly Zwart-Duryea

Field Trips: Peggy Yokubonus

David Hartgrove

Newsletter Editor: David Hartgrove

Welcome: Vacant

Webmaster: Joan Tague

* * * * *

We wish to thank our sponsors, whose contributions play a vital part of allowing us to continue our work: Florida Power & Light, Colonial Colony and the Spruce Creek Garden and Nature Club.