the Shellcracker

FLORIDA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

http://www.sdafs.org/flafs

July, 2016

President's Message:

Greetings from the Panhandle! I hope everyone is enjoying their summer. For those of you that teach, go to school, or have kids in school, we are already halfway through the summer vacation! I hope everyone takes some extra time this summer to spend with family and friends. Reports are that scallops are plentiful from St. Mark's to Homosassa. This is such a great social activity and it's nice to hear how great the scallop season has been thus far.

Much of the attention of members of our Chapter has been focused on next year's annual meeting in Tampa. Remember, we will not be having a FL Chapter AFS meeting next year. Our next business meeting will be held at the 2017 Annual AFS Meeting in Tampa. A call for symposia or papers will not be any time before our next newsletter, but it's never too early to be thinking about how to present your research. Now is also the time to get involved regarding sponsorship for the 2017 meeting. Kathy Guindon is heading up the Sponsorship Committee; please contact her at Kathy.Guindon@myfwc.com if you'd like to help. For all other areas of involvement with the 2017 meeting, please contact me at andy.strickland@myfwc.com, Kerry Flaherty-Walia at Kerry.Flaherty-Walia@myfwc.com or Travis Tuten at Travis.Tuten@myfwc.com.

Sincerely,

Andy Strickland
Florida Chapter President

Getting in Touch

American Fisheries Society Florida Chapter Officers

President
Andy Strickland
FWC/FWRI
5300 High Bridge Road
Quincy, FL 32351
Phone: (850) 717-8740
Email: andy.strickland@myfwc.com

President-Elect
Jeff Hill
University of Florida
Tropical Aquaculture Laboratory
1408 24th Street SE
Ruskin, FL 33570
Phone: (813) 671-5230 ext. 118
Email: jeffhill@ufl.edu

Secretary/Treasurer
Kevin Johnson
FWC/FWRI
601 W. Woodward Ave.
Eustis, FL 32726
Phone: (352) 800-5003
Email: kevin.johnson@myfwc.com

Newsletter Editor
Jessica Quintana
FWC/FWRI
601 W. Woodward Ave.
Eustis, FL 32726
Phone: (352) 800-5016
Email: Jessica.quintana@myfwc.com

Past President
Jennifer Rehage
Florida International University
11200 SW 8th Street, ECS 337
Miami, FL 33199
Phone: (305) 348-3804
Email: rehagej@fiu.edu

American Fisheries Society Florida Chapter Student Sub-Unit Officers

President
John Hargrove
University of Florida
Email: tractor@ufl.edu

Vice President
Emily Gipson
University of Central Florida
Email: emilygipson@knights.ucf.edu

Secretary/Treasurer
Amanda Croteau
University of Florida
acroteau@ufl.edu

University Liaison
Natalie Simon
University of Florida
nsimon921@efl.edu

Upcoming Events

July 8, 2016*:* Deadline for early registration for AFS 2016 . Fees go up after this date.
August 21-25: 146th Annual Meeting of the American Fisheries Society, Kansas City, MO

Interested in contributing something to the Shellcracker? Email Jessica Quintana at *Jessica.quintana@myfwc.com* with any articles or information that you would like to be included in the next issue. The deadline for the next issue is September 30, 2016, so start fishing...

July 2016 planning updates for the AFS Annual Meeting in Tampa

AMERICAN FISHERIES SOCIETY
147TH ANNUAL MEETING
TAMPA, FLORIDA 2017

It's hard to believe that another three months have passed by. There has been a lot of prep work for the 2017 AFS meeting within that time, and tasks are starting to be completed.

The Kansas City AFS meeting is less than two months away and Florida Chapter members are getting ready to attend and promote our meeting. We received some good news a few weeks ago that Visit Tampa Bay will send Kylie Briody (Convention Sales Coordinator) to help run the tradeshow booth. There will also be quite a few Florida Chapter members helping with the booth and attending the hand-off meeting. Promotional meeting coozies are complete and ready to hand out. Kim Bonvechio put together a one page promotional ad that will be included in the printed program of the Kansas City meeting. She has also been working with FWC's Gus Holzer (Media Services Supervisor) to get a promotional video made that will be presented at the AFS business meeting and as a looped video in the tradeshow entrance.

There have also been a couple of conference calls in the last two months trying to get a meeting budget squared away, which Dan Cassidy (AFS Deputy Executive Director) and Kevin Johnson will present to the Governing Board in Kansas City. The budget is coming together nicely, and in the last conference call it was decided with a lot of help from Joe Margraf (AFS President-Elect) that we would move forward with finalizing a contract for a Goodbye Networking Event at the Tampa Bay History Center and Columbia Café!!

Eric Nagid and Mike Allen are putting together a First Call for Papers, which will officially go out in the July issue of Fisheries!

Check the Florida chapter website section for the 2017 meeting for updates (http://sdafs.org/flafs/2017-meeting/). A list of planning committee chairs and a password protected site for the sponsorship committee has been posted. Please let us know if you will be at the Kansas City meeting, so that we can sign you up for a shift at the booth!

Kerry Flaherty-Walia and Travis Tuten
General co-chairs of the AFS 2017 meeting

ANNOUNCEMENT

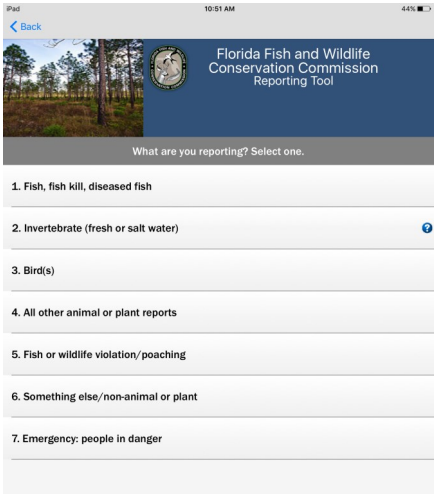
There's An App for That! New Florida Fish and Wildlife Reporting App Available for FREE download in August 2016

Lauren Partridge

Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, St. Petersburg, FL

Using funding from the Conserve Wildlife Tag program, scientists with the FWC have developed a new mobile application designed for users to report up to 50 different types of fish and wildlife incidents throughout Florida. The app will provide a central network that connects various offices within the FWC, as well as partner agencies, such as NOAA, FDEP and the US Coast Guard. Users will be able to report almost anything wildlife or outdoors related, including fish kills, abnormal fish, injured/sick/dead or nuisance wildlife, sightings of rare or endangered animals or plants, suspected exotics, tagged fish, derelict vessels, broken waterway signs, animal poaching and much more. The app is capable of receiving reports in real-time by accessing both the device's location data and its camera. This will make it easier for the public to report accurate and timely data to the FWC with minimal interruption in whatever activity they are engaged.

Mobile applications are the future and are changing how people interact socially and access the Internet. Over the past five years, state and federal agencies have been starting to develop mobile apps to keep up with the technological advancements and increase the accuracy and usability of citizen science. Most state wildlife agencies have apps that enable users to search for state parks, hiking trails, and other recreation areas, while giving them the ability to identify species they encounter, log their hiking tracks or species they fish or hunt, and interact socially with other users. The Florida Fish and Wildlife Reporting App is different in that users are not seeking to obtain information or identify species; they are providing valuable information about their environment directly to FWC scientists and wildlife managers. This is the first mobile application with this type of capability for a state agency and will increase the quality of environmental data received while also decreasing response times by the FWC.



The overall goal of this app is to provide one central platform where the public can report almost anything related to Florida's diverse aquatic and terrestrial landscape. By collaborating with managers and scientists from various departments and research backgrounds, the Florida Fish and Wildlife Reporting App can minimize the need for multiple reporting applications to be developed and incorporate new types of incident reporting in the future. This will save the user from having to download multiple different apps to report various fish or wildlife encounters.

Using this app will help protect and conserve Florida's unique and valuable resources, so please remember to download your FREE copy later this summer from the Google Play Store and/or iTunes App store!

Feature Article

Influence of Lake Productivity on Nearshore Fish Communities and Dissolved Oxygen Patterns

Christopher Anderson[1]

[1]*Florida Fish & Wildlife Conservation Commission, Fish and Wildlife Research Institute, Gainesville, FL*

During the summer of 2015, fisheries biologists deployed mini-fyke nets (MFNs) and dissolved oxygen (DO) loggers in four Florida lakes to assess the influence that lake productivity has on fish community composition, dissolved oxygen regimes, and habitat structure in shallow, vegetated areas of lakes. The four lakes evaluated were Lake Kerr (low productivity), Lake Dorr (medium productivity), Johns Lake (high productivity), and Lake Trafford (very high productivity). For each lake, the same 18 sites were evaluated during two sampling events to assess temporal variability of fish community composition and DO data collected at each site. The MFNs and DO loggers were deployed overnight, and the DO loggers were programmed to collect water temperature, DO, and conductivity data every 15 minutes. Additional environmental data was documented for each site including aquatic plant density and organic sediment depth. Once the MFNs were retrieved, biologists identified, counted, and measured all fish species collected.

Our results showed that fish community composition was similar between sampling events within lakes, but differed among lakes. Within lakes, duration of hypoxia (DO < 2 mg/L) did not differ between sampling events. However, higher productivity lakes (Johns and Trafford) had longer durations of hypoxia than lower productivity lakes (Kerr and Dorr). Differences in environmental data (e.g., aquatic plant density and organic sediment depth) were detected among lakes, but rarely between sampling events within lakes. Understanding how lake productivity influences fish communities, DO regimes, and habitat in near-shore lake environments is important for effective aquatic resource management and policymaking.

Figure 1: FWC Biologists deploying mini-fyke net in a littoral zone site on Johns Lake, FL

Figure 2: Biologist Doug Richards emptying contents of a mini-fyke net to examine the catch

Figure 3: Biologist Gigi Depizzo measuring the organic sediment depth at a littoral zone site in Johns Lake, Florida

Student Section

Student Research Highlight

Kate Harriger
University of Florida

Kate Harriger is a University of Florida graduate student and a fisheries biologist with the Florida Fish and Wildlife Conservation Commission (FWC) at the Blackwater Research and Development Center in Holt. She began working for FWC in 2010, and is involved in long-term monitoring of fish communities in Florida Panhandle rivers, host identification for freshwater mussels, and research on non-game fishes. In 2014 she began her online Masters in Fisheries and Aquatic Science under Dr. Mike Allen to improve her quantitative fisheries skills. Her thesis involves research on an imperiled non-game freshwater fish, the Harlequin Darter (*Etheostoma histrio*).

Harlequin Darters in Northwest Florida

Harlequin Darters have been considered imperiled in Florida since 1977 due to their perceived rarity and restricted range (only the Escambia River watershed in Florida). Population size, population demographics, habitat use, and effective sampling techniques for harlequin darters in the Escambia River watershed are unknown. Therefore, the objectives of Kate's thesis are to 1) determine how darter abundance is related to different habitat types at a site-level, and 2) use these relationships to extrapolate darter abundance stream-wide.

Work to estimate site-level abundance of Harlequin Darters began in 2014 at Big Escambia Creek and continued in 2015 at Pine Barren Creek. Both creeks are wadeable tributaries of the Escambia River with high water clarity and similar in-stream habitat (sand and gravel substrate with ample large woody debris). Site abundance of darters was estimated using mark-recapture and visual snorkeling techniques in 25-m stream reaches (sites). Two snorkelers surveyed sites using small dip nets to capture darters. All captured darters were marked with Visible Implant

Elastomer paint during each sampling occasion. Sites were sampled at least twice, with 2-4 weeks between sampling occasions.

Preliminary results found 374 darters from 24 sites in Big Escambia Creek and 655 darters from 18 sites in Pine Barren Creek. Recapture rate was similar in both creeks: 0.44 in Big Escambia (95% CI = 0.29-0.59) and 0.41 in Pine Barren (95% CI = 0.34-0.49). This suggests that Harlequin Darter abundance estimates are generalizable for other systems of similar water depth, clarity, and habitat conditions. Minimal darter movement was observed between sites (N=2) in Big Escambia, and no movement was observed between sites in Pine Barren.

Kate's work is ongoing, and this year she will focus on estimating stream-wide harlequin darter abundance for Pine Barren and Big Escambia creeks. First, site abundance of darters will be calculated using a closed capture model in program MARK. In-stream habitat (in particular, percent composition of wood) will be quantified using GIS to quantify different habitats from side scan sonar images. With this data, Kate plans to determine site-level darter density-habitat relationships using multiple regression analysis. This information will be used to predict darter density at unsampled sites and extrapolate dater abundance stream-wide. Results of her thesis will help FWC biologists understand the population status and conservation needs of Harlequin Darters in Florida.

Figure 1: Harlequin Darter

Figure 2: Harlequin Darter survey