



Undocumented Flounder Population Decline Discovered

Louisiana Sea Grant-funded research has identified a previously undocumented southern flounder population decline that spans the entire species' range, and researchers are recommending regional collaboration to better understand why.

“If we see a species declining throughout its range, that should be cause for concern that something might be changing,” said Kenneth Erickson, former Louisiana State University (LSU) graduate student on the project and current 2021 Sea Grant Knauss Fellow. “Given that there are many other important species with a similar life history that rely on estuaries, the decline of southern flounder could be a warning sign for other ecosystem changes.”

Southern flounder are an important recreational and commercial coastal flatfish species common to South Atlantic and Gulf of Mexico states. In 2017, the state's recreational southern flounder harvest had dwindled to 124,000 pounds – down from a high of 624,000 pounds in 2013. Originally, one of the researchers' objectives was to provide data to update the stock assessment in Louisiana waters. But lead researcher Steve Midway, an assistant professor in the LSU Department of Oceanography and Coastal Sciences, discovered there were few flounder to be found.

Intrigued, Midway and Erickson (his former student) began looking at southern flounder populations across the species' range from North Carolina to Texas. More than four decades of records covering 34 estuaries provided clear indications that the population decline is not isolated just to Louisiana. “Our findings show a clear range-wide decline of southern flounder, suggesting that local factors are unlikely to be the driving force behind the drop,” said Midway.

The exact cause for the decline is still unknown, but environmental factors such as water temperature could be responsible – especially when it comes to the species' male/female population ratio. Juvenile southern flounder determine whether to become male or female based on water temperatures. Moderate water temperatures tend to result in a 50/50 male/female population split. Warmer waters produce more males than females.

“Male-dominated populations are a concern because with respect to egg production, females are typically the more limiting sex,” said Midway. “So, we hypothesized that warmer winters would be correlated to flounder declines, which we did see in many of the estuaries we studied. Those correlations are clear and worth additional investigation.”

Erickson and Midway have started sharing their research findings with fisheries managers, including through the scientific journal *Global Change Biology*. The article was published online in mid-March and can be found at <https://onlinelibrary.wiley.com/doi/10.1111/gcb.15568>.

“More scientific research should be conducted to pinpoint the drivers of this population decline,” Midway added. “In the meantime, while some states have made regulatory changes in response to their fishery's decline, there should be a larger, coordinated effort to address the problem,” he said. “By sharing our findings with fishery managers, we're encouraging them to create a larger collective to address the problem.”



Dave Smith (left) and Kenneth Erickson (right) with flounder.

The Flower Garden Banks National Marine Sanctuary Adds 14 Additional Reefs

The 14 additional reefs and banks are officially part of Flower Garden Banks National Marine Sanctuary (FGBNMS). As of March 22, 2021, FGBNMS encompasses 17 reefs and banks located approximately 80-125 miles off the coasts of Texas and Louisiana. These banks are a combination of small underwater mountains, ridges, troughs and hard-bottom patches.

The habitats associated with these banks range from thriving shallow water coral reefs and algal-sponge communities, to deeper mesophotic reefs alive with black corals, algal nodules and octocorals. Although each bank is marked with its own separate boundaries, together these banks create a chain of protected habitats for ecologically and economically important species across the northwestern Gulf of Mexico.

All rules and regulations that applied to the previous three banks now apply to all of the new areas as well –

<https://flowergarden.noaa.gov/about/regulations.html>.

Learn more at the expanded sanctuary website home page: <https://flowergarden.noaa.gov/welcome.html>.

Limpkins

A visitor from Florida that has taken up residence in Terrebonne Parish could be good news in Louisiana's fight against the invasive apple snail. At least three pairs of limpkins (*Aramus guarauna*), a wading bird found primarily in Florida's freshwater marshes, are now breeding in Terrebonne Parish.

The upside is that limpkins have a ravenous appetite for apple snails, an invasive species which have exploded in abundance in south Louisiana waterways and marshes, and are difficult to eradicate. Apple snails can easily overpopulate areas by out-competing native species and destroying aquatic vegetation.

Limpkins, once almost hunted to the brink of extinction in the early 20th century, resemble a crane or, perhaps, a long-legged rail. They are found primarily in the American tropics and in Florida in the United States.

Limpkins are known for their loud wails that can be heard at night or dawn. Their long, slightly curved bills are perfectly suited for extracting apple snails from their shells. Dobbs said they pose no downside for Louisiana's other wading birds.

The first recorded observance of limpkins in Louisiana was in 2017 in Lafourche Parish. Then in the spring of 2018, a pair nested successfully near Houma. Other pairs were noted in 2019 at Bayou Black in western Terrebonne Parish and in 2020 near Mandalay National Wildlife Refuge, also in Terrebonne Parish.



Photo of Limpkins Courtesy of LDWF

Delay in the Effective Date for Turtle Excluder Device Use for all Skimmer Trawl Vessels 40 Feet or Longer

NOAA Fisheries is delaying the effective date of the final rule amending the definition of tow time and requiring the use of TEDs designed to exclude small sea turtles in their nets in skimmer trawls 40 feet in length and greater in the Southeastern U.S. shrimp fisheries until Aug. 1, 2021.

Safety and travel restrictions due to the COVID-19 pandemic have limited the Gear Monitoring Team's ability to complete the in-person workshops and training sessions on the final rule.

The delay in the effective date is to allow NOAA Fisheries additional time for training fishermen, ensuring TEDs are built and installed properly, and for responding to installation and maintenance problems when the regulations go in effect.

NOAA Fisheries outreach strategy will use social media, targeted virtual meetings and dockside workshops, instructional videos, digital media and the establishment of a role-based social media and email account (info@noaa.gov).

NOAA Fisheries is also considering taking additional action to protect sea turtles in skimmer trawl fisheries. Specifically, NOAA Fisheries is reconsidering the potential expansion of TED requirements for skimmer trawl vessels less than 40 feet in length and whether additional rulemaking is currently warranted.

Online Ordering for Oyster Hatchery Larvae

Beginning April 12, the Louisiana Department of Wildlife and Fisheries (LDWF) opened its online ordering portal to provide the oyster industry with hatchery reared oyster larvae produced at the Michael C. Voisin Oyster Hatchery.

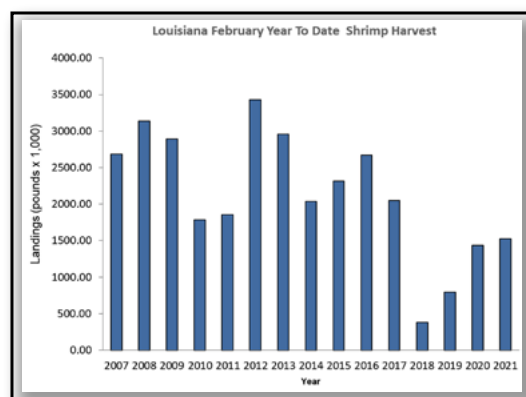
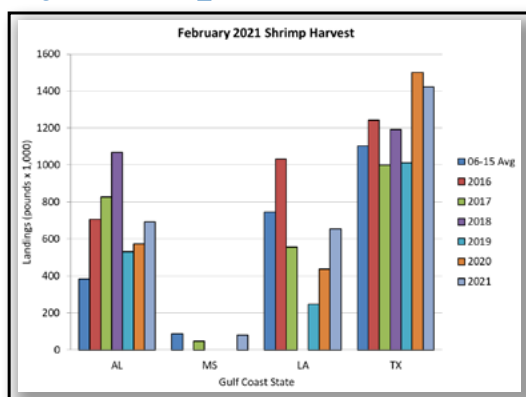
Requests will only be taken via the online ordering portal and will be filled based on the order that they are received with prioritization given to in-state orders. Requests made in writing or by phone will not be accepted. Larger orders may be reduced or split based on availability of larvae and seed. Payment will not be required at the time of request. LDWF will contact those requesting hatchery products at a later date for payment.

The online ordering form can be found at <https://www.wlf.louisiana.gov/page/alternative-oyster-culture>.

For more information, contact Program Development at (225) 765-3980, (855) 262-1764, or at Oversightprograms@wlf.la.gov.

Louisiana Shrimp Watch

Louisiana specific data portrayed in the graphics are selected from preliminary data posted by NOAA on its website. All data portrayed are subject to final revision and approval by NOAA. Shrimp landings are inclusive of all species harvested. Missing, inadequate or withheld reports are portrayed as "zero" in these graphics. For more information, please refer to: www.st.nmfs.noaa.gov/st1/market_news/index.html.



Important Dates & Upcoming Events

March 26, 2021 – the portion of state outside waters between Calliou Boca and the Atchafalaya River Ship Channel at Eugene Island reopened to commercial shrimping.

June 1, 2021 – The red snapper season for federally permitted for-hire vessels will begin and will close on August 3, 2021.

July 11-16, 2021 – Wetland Education Teacher Workshop (WETSHOP) 2021, a coastal awareness workshop for science, history, and social studies teachers. <https://www.wlf.louisiana.gov/page/for-teachers>

THE GUMBO POT

LOUISIANA CRAWFISH CORNBREAD MUFFINS

Recipe courtesy of *Louisiana Kitchen & Culture*.

For more recipes or to subscribe to their magazine or free newsletter, please visit <http://louisiana.kitchenandculture.com/>.



Ingredients:

4 tablespoons butter
 1/2 cup onions, chopped
 1/2 cup corn
 1 jalapeño, chopped
 3/4 cup broccoli, chopped
 1/2 lb. Louisiana crawfish tails, chopped
 4 oz. heavy cream
 3/4 cup cottage cheese
 2 eggs, beaten
 2 1/4 cups corn meal
 3 tablespoons cheddar cheese, grated

Method:

Preheat oven to 400°F.
 Melt the butter in a sauté pan then sauté the onion, jalapeños and corn until they are tender, approximately 5 minutes. Next add crawfish tails and broccoli and cook for 3 minutes. Add heavy cream, stirring to mix into ingredients. Remove pan from heat and pour mixture into a mixing bowl allowing it to cool for moment. Once slightly cooled, add cottage cheese, eggs and cornmeal. Mix the mixture well.
 In a greased muffin pan, distribute cornbread mixture evenly throughout each mold. Top each muffin with a bit of grated cheddar cheese. Bake cornbread for 18-20 minutes, or until golden brown and moist in the middle.

**Be sure to visit the *Lagniappe* blog for
 additional news and timely events between issues.
<https://louisianalagniappe.wordpress.com/>**

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We would like to hear from you! Please contact us regarding fishery questions, comments or concerns you would like to see covered in the Lagniappe. Anyone interested in submitting information, such as articles, editorials or photographs pertaining to fishing or fisheries management is encouraged to do so.

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