



## Turtle Excluder Device Use for all Skimmer Trawl Vessels 40 Feet and Greater in Length

In an effort to strengthen sea turtle conservation efforts, NOAA Fisheries published a final rule to require all skimmer trawl vessels 40 feet and greater in length to use turtle excluder devices (TEDs) in their nets. A TED is a device that allows sea turtles to escape from trawl nets. The purpose of the rule is to aid in the protection and recovery of listed sea turtle populations by reducing incidental bycatch and mortality in the southeastern U.S. shrimp fisheries.

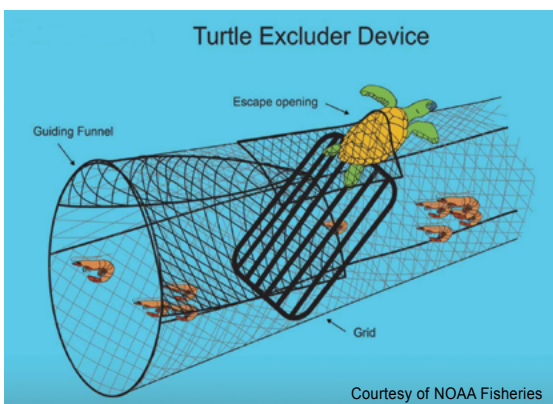
**WHEN RULE WILL TAKE EFFECT:** Skimmer trawl vessels 40 feet and greater in length that are rigged for fishing are required to install TEDs in their nets by April 1, 2021. For purposes of this rule, vessel length is the length specified on the vessel's state registration or U.S. Coast Guard vessel documentation required to be onboard while fishing.

**NEW TED REQUIREMENTS AND ADDITIONAL INFORMATION:** Skimmer trawl vessels 40 feet and greater in length rigged for fishing will be required to install and use TEDs designed to exclude small turtles in their nets. Specifically, the space between the deflector bars of the new TEDs must not exceed three inches; escape openings must be oriented at the top of the net; and there are potential webbing restrictions on the escape opening flap depending on the type of TED grid and escape opening configuration. For purposes of this rule, vessel length is based on state fishery license or vessel registration information required to be onboard while fishing.

Additionally, NOAA Fisheries also amended the allowable tow time definition. The new definition requires all vessels operating under the allowable tow time limit (e.g., skimmer trawl vessels less than 40 feet in length, pusher-head trawl vessels, wing net vessels, live bait vessels, etc.) to remove and empty their catch on deck within the tow time limit (i.e., 55 or 75 minutes, depending on season). We believe the amended definition will improve the inspection of the net for potentially captured sea turtles and allow for their release unharmed.

The Gear Monitoring Team based out of the Southeast Fisheries Science Center Pascagoula Lab's Harvesting Systems Branch will be conducting numerous workshops and training sessions for skimmer trawl fishers. Information on these sessions, as well as additional information (final rule, FEIS, FAQs) on the new TED requirements, will be posted on our website at: [www.fisheries.noaa.gov/southeast/bycatch/turtle-excluder-device-regulations](http://www.fisheries.noaa.gov/southeast/bycatch/turtle-excluder-device-regulations).

This bulletin serves as a Small Entity Compliance Guide, complying with section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996.



A turtle escaping through a TED. Courtesy of NOAA Fisheries

## The Southern Stargazer, *Astroscopus y-graecum*

Ever heard of a southern stargazer? And no, I'm not talking about your nephew in Thibodaux that got a telescope for Christmas. I'm talking about a fish so bizarre it seems like it came from another planet.

Everything about the southern stargazer is alien; so much so that its genus, *Astroscopus*, Latin for “one who aims at the stars,” seems fairly fitting. For one, it gazes up from eyes located on the top of its head alongside nostrils that allow it to breathe (most fish take in water through their mouths) as it lies motionless, buried in sand. The top of its brown body is dotted with white spots, and its dark brown tail and dorsal fin are striped with white – camouflage.

This species is an ambush predator and uses its pectoral fins as shovels to hunker down and wait for unsuspecting fish to swim by – before gulping them down in a second. The lips and nostrils are covered with funky looking, fleshy folds called fimbriae that protect it from inhaling sand. Perhaps most impressive of all is this fish's ability to create electric pulses (up to 50 volts) from a modified muscle between its eyes for anything or anyone that is foolish enough to try and mess with it.



A southern stargazer burying itself in sand. Image credit: Kevin Bryant. <https://www.flickr.com/photos/mentalblock/7160621093/in/photoostream/>

Oh and get this, stargazers also have two venomous spines on each side of their heads, though you would be happy to know these spines become relatively dull and covered with skin as juveniles grow into adults. These fish pack quite a punch for an animal that is most commonly caught at only 13 inches total length and can be found Gulf wide nearshore to just over 200 feet deep. Just remember the next time you wade into crashing surf, you never know what may be hiding beneath the waves.

- Caleb Taylor

Sources:

<https://www.floridamuseum.ufl.edu/discover-fish/species-profiles/astroscopus-y-graecum/>

<https://www.fishbase.se/summary/3704>

<https://txmarspecies.tamug.edu/fishdetails.cfm?scinameID=Astroscopus%20y-graecum>

## New Research Shows That Higher Temperatures Can Masculinize Southern Flounder Populations

Alligators aren't the only ones that rely on temperature to determine sex. Here is a research story from NC Sea Grant's newsletter about southern flounder.

### Research Need

For many reptiles and some fishes, their sex can be determined by the temperatures in their surrounding environment. Southern flounder exhibit this “temperature-dependent sex determination” when exposure to warm or cool temperatures during a critical period early in juvenile development can cause genetic females to develop as males.

For many years, the southern flounder fisheries have been a concern, and stock assessments indicate overfishing. These fisheries use minimum size limits for management and depend heavily on larger-growing females, with males rarely reaching catch sizes.

With warming waters due to global climate change — and with southern flounder fisheries relying on large females — it raises the critical question whether masculinization is occurring in wild populations of the species.



*What did they study?*

From 2014 to 2017, researchers examined the male-to-female sex ratios of juvenile southern flounder populations across a range of nursery habitats along coastal North Carolina and compared them to the water temperatures recorded during the species' critical period of development.

*What did they find?*

Northern habitats had an average water temperature of 73°F (23°C) and produced the greatest number of female flounder and the closest to 50:50 male-to-female sex ratios across all years.

In contrast, southern habitats produced significantly skewed sex ratios over all sampling years, with up to 94 percent of the fish being male. The southern sampling region was also associated with the warmest water temperatures, on average 7.2°F (4°C) warmer than that of northern habitats.

Researchers replicated the male-biased sex ratios in the laboratory by using controlled tank studies to mimic temperatures of the nursery habitats, providing strong evidence that temperature is a key factor influencing sex ratios in nursery habitats.

Although the juvenile sex ratios consistently skewed male in regions with warmer water temperatures, it is still unclear how this translates to the sex ratio of adult populations of southern flounder. However, with a female-dependent fishery and global water temperatures projected to significantly increase, the effects on sex ratios could be a concern for wild flounder stocks — and potentially for other species that exhibit temperature-dependent sex determination.

*What else did they find?*

Interestingly, juvenile flounder captured in the southern region were smaller on average than fish caught in northern or intermediate habitats. The smaller size could be due to slower growth rates or that they were younger and thus were spawned later in the season. In either case, these smaller fish would reach the critical window when they are sensitive to temperature much later in the summer when water temperatures typically are much higher.

*Reading*

Honeycutt, J.L., Deck, C.A., Miller, S.C., Severance, M.E., Atkins, E.B., Luckenbach, J.A., Buckel, J.A., Daniels, H.V., Rice, J.A., Borski, R.J. and Godwin, J., 2019. Warmer waters masculinize wild populations of a fish with temperature-dependent sex determination. *Scientific reports*, 9(1), p.6527. <https://doi.org/10.1038/s41598-019-42944-x>

Summary by Jamie L. Honeycutt, postdoctoral researcher at NC State

Reprinted from: Hook, Line & Science, courtesy of Scott Baker and Sara Mirabilio, North Carolina Sea Grant. [HookLineScience.com](http://HookLineScience.com)

## Utilizing Drone to Catch Illegal Oyster Harvester

LDWF agents began utilizing drones for aerial surveillance on oyster patrols in March of 2018. Recently, LDWF enforcement agents cited an oyster fisherman for alleged oyster violations on Dec. 20 in Calcasieu Parish.

Agents cited an oyster fisherman for taking oysters from a polluted area, violating the sanitary code and failing to display proper numbers on the vessel.

Agents responded to complaints of illegal oyster harvests in lower Calcasieu Parish. Using aerial surveillance from a drone, agents observed and recorded the fishermen illegally harvesting oysters in polluted waters. The vessel also did not display the required numbers visible by air and did not have a human waste receptacle.

## LDWF to Hear Public Comment On Potential Spotted Seatrout Management at Public Meetings

The Louisiana Department of Wildlife and Fisheries (LDWF) announced dates for public meetings to be held on spotted seatrout management. The most recent stock assessment ([www.wlf.louisiana.gov/sites/default/files/pdf/page/37756-stock-assessments/2019louisianaspottedseatroutassessment.pdf](http://www.wlf.louisiana.gov/sites/default/files/pdf/page/37756-stock-assessments/2019louisianaspottedseatroutassessment.pdf)) indicated spotted seatrout are overfished and undergoing overfishing and changes are necessary in order to recover the stock.

The Louisiana Wildlife and Fisheries Commission (LWFC) indicated it would like to hear public input before considering management changes. No action is being taken at this time, however input is being gathered prior to any potential rule changes. LDWF's biological opinion is that a 20 percent reduction in harvest is needed in order to recover the stock by 2025 or sooner, but there are a range of options that can achieve that goal.

Management change options include creel limit only changes, minimum size limit changes only, combined creel and minimum size limit changes, slot limit only changes, and combined slot limit and creel changes.

Below is a list of meeting dates and locations. All meetings will begin at 6:00 p.m., except the meeting in Ruston, which will begin at 1:00 p.m.

- Monday, Feb. 10, 2020 – North Branch Library, 4130 West Park Ave, Gray, La.
- Wednesday, Feb. 12, 2020 – LDWF HQ, Herring Room, 2000 Quail Drive, Baton Rouge, La.
- Thursday, Feb. 13, 2020 – Lafayette Council Chambers, 705 West University Avenue, Lafayette, La.
- Wednesday, Feb. 19, 2020 – East Bank Regional Library, 4747 West Napoleon Avenue, Metairie, La.
- Thursday, Feb. 20, 2020 – Slidell Municipal Auditorium, 2056 Second Street, Slidell, La.
- Wednesday, Feb. 26, 2020 – Calcasieu Parish Extension Office, 7101 Gulf Highway, Lake Charles, La.
- Thursday, Feb. 27, 2020 – Rapides Parish Extension Office, 300 Grady Britt Drive, Alexandria, La.
- Saturday, Feb. 29, 2020 – Lincoln Parish Library, 910 North Trenton Street, Ruston, La.

LDWF is partnering with Louisiana Sea Grant to use interactive voting technology at these public hearings in response to a survey that will be given at the meetings. LDWF will also be sending out an email survey identical to the survey that will be administered at public meetings.

## Important Dates & Upcoming Events

**Dec. 13, 2019:** Recreational and Commercial Harvest of Lane Snapper Closed in Federal waters

**Jan. 17, 2020:** Commercial King Mackerel Season Closed in Louisiana waters.

**Feb. 2020:** Sea Trout management public meetings across LA. See above for the schedule.

**March 11, 2020:** Louisiana Fisheries Forward Summit 2020, The Pontchartrain Center, Kenner [www.lafisheriesforward.org/summit/](http://www.lafisheriesforward.org/summit/)

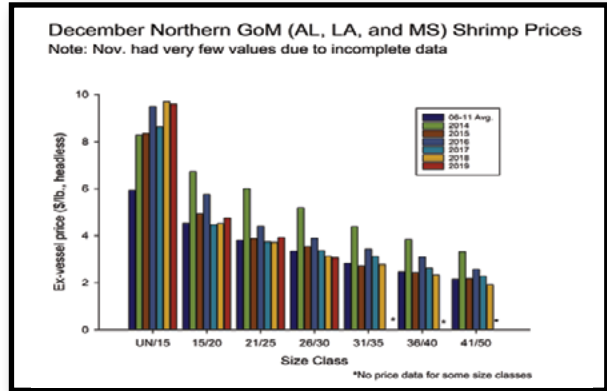
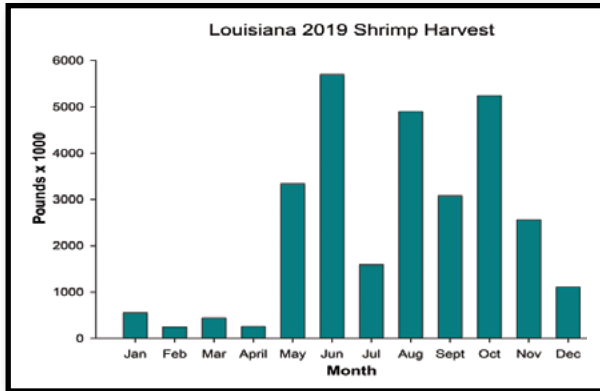
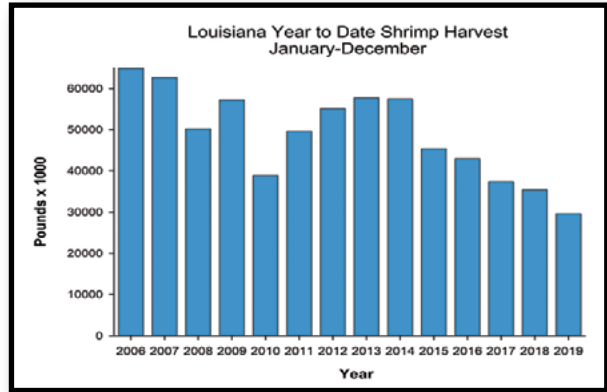
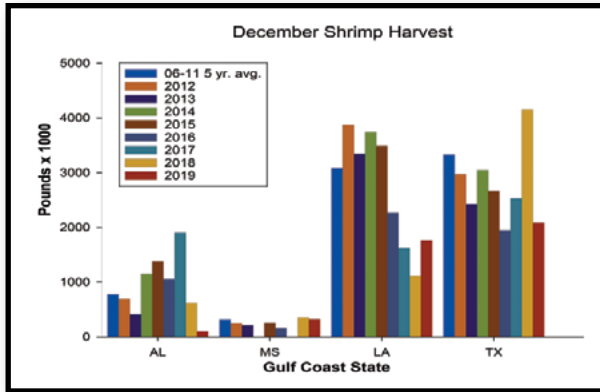
**March 17, 2020:** Shrimpers preseason meeting, Abbeville

**March 18-19, 2020:** TED Checks, Intracoastal City

**March 24, 2020:** Man Overboard Recovery Training, Intracoastal City

# 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 ex-vessel prices, inclusive of all species harvested. Missing, inadequate or withheld reports are portrayed as “zero” in these graphics. Price graphics reflect central Gulf states only (Texas and Florida are reported independently). For more information, please refer to: [www.st.nmfs.noaa.gov/st1/market\\_news/index.html](http://www.st.nmfs.noaa.gov/st1/market_news/index.html).



# THE GUMBO POT

## ACME CHARGRILLED OYSTERS\*

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:

24 oysters, freshly shucked (on the half shell)  
 4 sticks salted butter  
 2 bunches green onions, chopped fine  
 20 cloves fresh garlic, pureed  
 1 teaspoon crushed red pepper  
 3 tablespoons fresh thyme, chopped fine

3 tablespoons fresh oregano, chopped fine  
 2 tablespoons fresh lemon juice  
 1 tablespoon Worcestershire sauce  
 2 tablespoons Creole seasoning  
 2 oz white wine  
 8 oz Romano cheese, grated  
 1 loaf French bread

### Method:

**Sauce:** Butter garlic sauce should be prepared just prior to grilling the oysters. In a large sauté pan, add 2 sticks of butter and place over medium heat. Melt the butter and bring to a simmer. Add green onions, garlic, red pepper, thyme, oregano, lemon juice, Worcestershire sauce and Creole seasoning. Cook for 2 minutes and add white wine. Stir ingredients continuously and cook until green onions are soft. Remove from heat and allow to cool for 3 minutes.

In a large mixing bowl (before mixture is completely cool) combine the remaining butter with the sauce. Blend until butter is melted and folded into the sauce. Final product should have a creamy consistency.

**Grilling Oysters:** Pre-heat grill to 350°. Once at 350°, place freshly shucked oyster on the half shell on the center of the grill. Once the water around the oyster begins to bubble and the oyster begins to rise, ladle 1 tablespoon of the butter garlic sauce on top of each oyster. Top with a dusting of cheese, and allow the cheese to melt. Serve immediately with warm French bread for dipping.

\* Serves 4

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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