



What Makes Wild-Caught Shrimp Unique

At Louisiana Sea Grant, we often discuss the value of wild caught seafood. The shrimp fishery, as one example, is especially valuable to Louisiana's cultural heritage and coastal economies. Louisiana's shrimp fishery in 2023 has had the lowest landings to date from January to June since 2010. These low landings are, in part, a product of low dockside prices driven primarily by the abundance of imported shrimp and the high price of fuel resulting from inflation. The plight of the Louisiana shrimper has not gone unnoticed with multiple government organizations passing resolutions from the parish to the federal level aimed to support struggling fishers. Given this hardship, we'd like to use our platform to discuss what makes wild caught shrimp unique, taste. Please enjoy this article from *Chenier Ecology* written in 2008 by Louisiana Sea Grant Extension Agent Kevin Savoie, titled "Shrimp Flavors".

"Shrimp Flavors"

Approximately 90 percent of all shrimp consumed in the United States is imported, the majority which are farm raised. Many U.S. consumers are oblivious to the taste differences and shrimp flavors. However, for true shrimp connoisseurs there are distinct taste differences. What causes these taste differences was the focus of a research paper by members of the Texas A&M Sea Grant Extension Program.

Flavor is a combination of many stimulating senses such as taste, smell and texture which are encountered when eating food. Taste is a factor in flavor and is normally classified as sweet, sour, salty, bitter, etc. The senses of taste and smell can be quite keen and has led to the investigation of, what tastes are preferred by consumers. In shrimp, flavors have been described as "shrimp like", "ocean like", "crab like" or "slightly iodine". It is incorrectly assumed by many consumers that seafood products are high in salt. In fact, fish and shellfish harvested from ocean waters are actually low sodium foods. For example, a 3.5 oz. serving of shrimp contains approximately 148 mg sodium, while two frankfurters contain 980 mg sodium.

So, what gives wild shrimp its distinct flavors? The answer is a group of chemical compounds known as bromophenols which occur in very small amounts in the muscle tissue of wild sea foods. The absence of bromophenols in aquaculture produced and freshwater fish and shellfish is described as mild-flavored, bland and even earthy. An attempt by shrimp aquaculture operations to mimic the unique flavors of wild shrimp led to the addition of bromophenol compounds to the diet of farm raised shrimp. However, repeated trials have not been able to replicate the flavors of wild shrimp and there is also an economic limitation to bromophenol addition to feeds.

Freshwater simply does not have phenols or bromine to impart into the flesh of its inhabitants while seawater has an average concentration of 65 parts per billion (ppb) bromine. The source of bromophenols in wild caught shrimp is derived through their natural diet. The benthic (or bottom dwelling) organisms which are fed on by shrimp are high in bromophenol concentrations. The highest concentrations have been found in polychaete worms. Polychaetes from muddy sea bottoms have the highest concentrations of bromophenols, while those from sandy or shell bottom areas had significantly less. Research has found that the average concentration in seafood is about 3 ppb, and that bromophenol does not accumulate in muscle tissue, but leaches out over time causing varying degrees of the flavor depending on the organism's recent feeding habits. At around 23 ppb or greater bromophenol, shrimp are described as having a strong iodine flavor and are considered by some as tainted flavor. Remember, our sense of taste is quite sensitive, and the difference in optimum and tainted flavor (20ppb) is miniscule.

Source: Naturally-occurring Compounds which Create Unique Flavors in Wild-harvested shrimp. Russell Miget and Michael Haby. May 31, 2007.

Gulf Council Recommends Modifications to the Greater Amberjack Recreational Season, Commercial Trip Limit

After hearing a summary of public comment received, the Gulf of Mexico Fishery Management Council took final action on a Framework Action that considers modifying the recreational closed season and the commercial trip limit. The council chose to modify the recreational season so it opens on Sept. 1 and remains open through Oct. 31 unless the annual catch target is projected to be met earlier. The council also chose to reduce the commercial trip limit to seven-fish which is equivalent to about 210 pounds gutted weight.

These changes are being made to extend both commercial and recreational seasons while simultaneously ensuring that harvest is constrained to catch limits that were recently reduced in Reef Fish Amendment 54 to allow the greater amberjack stock to rebuild by 2027. This Framework Action will be transmitted to the secretary of commerce for approval and implementation as soon as practicable.

In anticipation that this rule may not be implemented before the beginning of the 2024 commercial fishing year, the council requested that NOAA Fisheries implement an emergency rule to reduce the commercial trip limit to seven-fish at the start of the year. Since Amendment 54 reduced catch limits by about 83 percent and the 2023 commercial annual catch limit was exceeded, a payback provision will reduce the 2024 commercial annual catch target to 56,661 pounds. Under the current 1,000-pound trip limit, the commercial fishing season is expected to be incredibly short and may increase discards through the remainder of the year.



NOAA Fisheries Announces Extension of Interim Measures to Reduce Overfishing of Gag in the Gulf of Mexico

Key Messages:

NOAA Fisheries is extending interim measures intended to reduce overfishing of gag under the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Gulf). The Gulf of Mexico Fishery Management Council (Gulf Council) requested these interim measures.

How Long are the Interim Measures Effective?

The extension of Interim Measures will be effective through May 2, 2024, or until the final rule for Amendment 56 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Amendment 56) is effective, whichever comes first.

Summary of Interim Measures:

This temporary rule for interim measures reduced the catch limits for Gulf gag as specified in Table 1:

Table 1: Previous and current annual catch limits (ACL) and annual catch targets (ACT) for Gulf gag. All numbers are in pounds gutted weight.

	Stock ACL	Commercial ACL	Recreational ACL	Commercial ACT/Quota	Recreational ACT
Previous*	3,120,000	1,217,000	1,903,000	939,000	1,708,000
Current*	661,901	258,000	403,759	199,000	362,374

*Note that the "Previous" and "Current" catch limits cannot be directly compared. This is because "Previous" recreational catch is estimated using the Marine Recreational Information Program (MRIP)-Coastal Household Telephone Survey (CHTS), while the "Current" recreational catch limits are estimated using MRIP-Fishing Effort Survey (FES). MRIP-FES estimates of effort and catch are substantially higher than MRIP-CHTS estimates. In addition, since the commercial catch limits are rounded in the "Current" catch limits, the commercial and recreational ACLs do not add up to the stock ACL.

The temporary rule for interim measures changed the dates of the recreational season for gag such that it opened on Sept. 1, 2023. NOAA Fisheries recently announced that the federal recreational season closed on Oct. 19, 2023, and will not reopen until the 2024 recreational gag season begins.

The reduction in harvest and modification of the recreational fishing season was implemented to reduce overfishing of gag in 2023 while maximizing the amount of fishing days.

This was being done while Amendment 56, which includes a rebuilding plan for the Gulf gag stock, was developed by the Gulf Council. Amendment 56, if approved and implemented, would reduce the gag overfishing limit, acceptable biological catch, annual catch limits and annual catch targets.

Formal Federal Register Name/Number: 88 FR 69553, published Oct. 6, 2023.

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



Frequently Asked Questions (FAQs):

Why were the reductions in this temporary rule so drastic?

Based on the 2021 stock assessment, Gulf gag are overfished, and overfishing is occurring. This means that the abundance of the gag population is very low compared to historic levels, and that too many fish are being caught to allow the population to sustain itself. For this reason, gag catch limits need to be reduced.

NOAA Fisheries Southeast Fishery Science Center calculated the reduction in harvest necessary to ensure that the gag stock was able to rebuild in an appropriate time frame. The Southeast Fishery Science Center calculated that the catch limit should be reduced in 2023 to 661,901 pounds. This reduction in harvest would allow for the stock to rebuild consistent with the timeframe the Gulf Council considered in Amendment 56.

Allowing harvest to continue at a higher level than specified in this temporary rule would be expected to prolong the rebuilding timeframe for the gag stock and result in negative effects to both the gag population and the fishing communities that rely on them.

What are the next steps?

NOAA Fisheries is required to implement Amendment 56, including a rebuilding plan for the gag stock, by Jan. 26, 2024. These interim measures would no longer be effective upon implementation of Amendment 56.

Where can I find more information on the Gag Interim Measures?

The Interim Action to Reduce Overfishing of Gag in the Gulf of Mexico Environmental Assessment may be found online at the NOAA Fisheries Southeast Regional Office Web site at: www.fisheries.noaa.gov/action/interim-action-reduce-overfishing-gag-gulf-mexico.

LDWF Announces Commercial Fishing License Sale Locations, Dates

The Louisiana Department of Wildlife and Fisheries (LDWF) will offer new or renewal commercial fishing licenses and boat registration transactions at the following locations:

Lake Charles Office	Lafayette Office	New Orleans Office	Bourg Office
1025 Tom Watson Rd.	200 Dulles Drive	2045 Lakeshore Drive Suite 438	468 Texas Gulf Rd.
Lake Charles, LA	Lafayette, LA	New Orleans, LA	Bourg, LA
Nov. 27 & 28	Nov. 29 & 30	Dec. 5 - 7	Dec. 11 - 13
9 a.m. – 3:30 p.m.	9 a.m. – 3:30 p.m.	8 a.m. – 3:30 p.m.	9 a.m. – 3:30 p.m.

Acceptable forms of payment will include personal checks, cashier's checks, money orders and cash. To avoid processing delays, customers purchasing licenses are asked to bring their license renewal notices with them.

First-time applicants can apply by mail or in-person. When applying in-person you must provide the following:

Resident applicants must provide proof of residency such as a Louisiana driver's license, (held continuously for 12 months) voter's registration, vehicle registration and state income tax.

Non-residents applicants must provide proof of residency from their domiciliary state, such as driver's license, voter's registration, vehicle registration and state income tax.

Applicants applying for a license in a business name must provide documentation showing proof of valid federal tax ID number assigned to business name and proof of authorized signature or an occupational license will be required.

For commercial licenses inquiries, contact (225) 765-2898.



NOAA Fisheries Accepting Applications for 2024 Shark Research Fishery

Applications due Nov. 27, 2023

NOAA Fisheries is now accepting applications from commercial shark fishermen, including directed and incidental permit holders, interested in participating in the 2024 Shark Research Fishery. A completed application and required vessel information must be submitted by Nov. 27, 2023, for consideration.

What the permit covers

Shark Research Fishery permits allow fishermen to land sandbar, other large coastal sharks, small coastal sharks, smoothhound and pelagic sharks from federal waters in the Atlantic Ocean, Gulf of Mexico and Caribbean Sea. The permit is subject to 100-percent observer coverage. This means participants can fish without an observer when not on a Shark Research Fishery trip. The scientific data collected by fishery observers is used in shark stock assessments.

2024 Shark Research Fishery permits will be valid only through Dec. 31, 2024, unless otherwise specified. They are also only valid for the specific vessel and owners listed on the permit and are subject to the terms and conditions listed on the permit.

How to apply

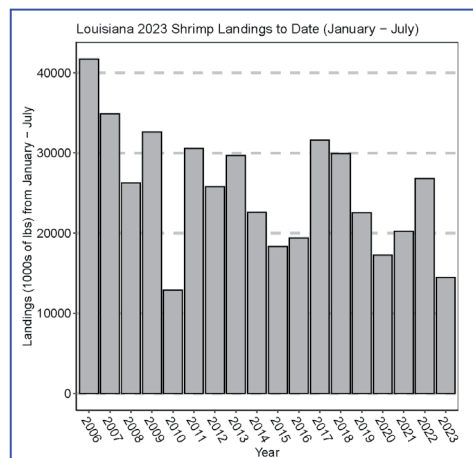
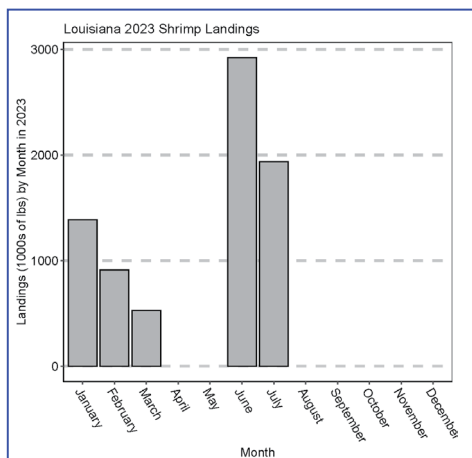
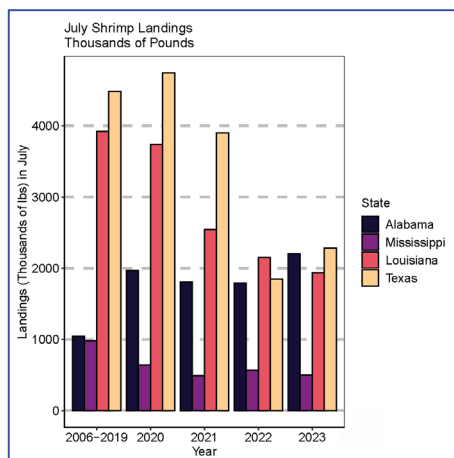
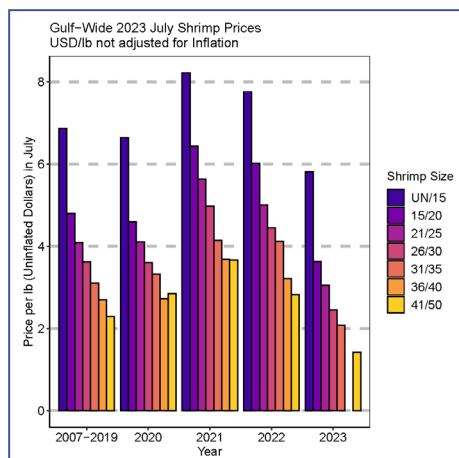
Applications are available for download and by email request. Completed applications can be submitted by email to NMFS.Research.Fishery@noaa.gov.

Be advised applications may be released under the Freedom of Information Act.



Louisiana Shrimp Watch

The shrimp watch data for the November issue includes data through July. All landing data is based on trip ticket data provided by Gulf States and no estimations have been made.



THE GUMBO POT

GRILLED GULF SHRIMP WITH PROSCIUTTO ROSEMARY AND GARLIC*

Recipe courtesy of *Louisiana Kitchen & Culture*

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

Recipe adapted from *Best American Recipes*



Ingredients:

- 6 tablespoons extra-virgin olive oil
- 1/4 cup fresh rosemary, chopped
- 2 tablespoons garlic, sliced
- 2 teaspoons lemon zest, freshly grated
- 1/2 teaspoon crushed red pepper flakes
- 24 large shrimp (8 to 10 per pound), peeled, deveined, tails left intact
- 24 slices prosciutto, paper thin
- salt and freshly ground black pepper to taste
- lemon wedges for serving

Method:

- In a large bowl, combine the oil, rosemary, garlic, lemon zest, red pepper flakes and salt and pepper to taste. Add the Gulf shrimp and toss to coat and cover each piece. Marinate for 1 hour, no longer.
- Prepare the grill for direct grilling on medium-high heat.
- Remove the shrimp from the marinade and snugly wrap each with a slice of prosciutto. (Because the prosciutto is so thin it will stay wrapped).
- Place the Gulf shrimp on the hot grill and cook, turning once, until firm and opaque, 2 to 3 minutes per side.
- Serve on hot platter with lemon wedges.

**Main Course. Serves 6.*



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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.

Please contact Lagniappe editor Jeffrey Plumlee at jplumlee@agcenter.lsu.edu

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additional news and timely events between issues.
<https://louisianalagniappe.wordpress.com/>

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