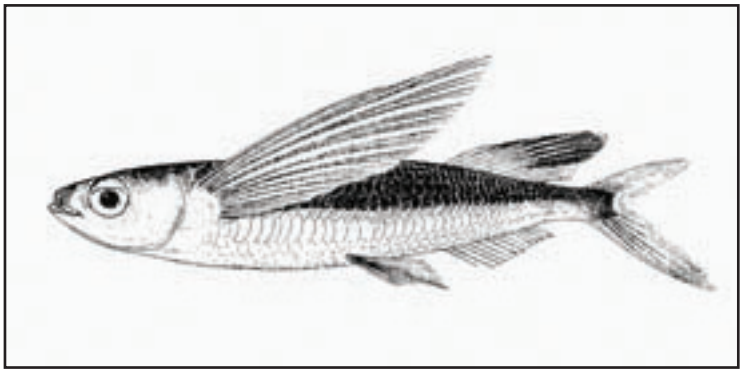
Lagniappe

November 2010 Volume 34, No. 10

Is it a Bird, or a Plane? ...No it's a Flying Fish



Flying fish. Photo credit: FAO

Many fish jump out of water, but only one family of fish can sustain that flight into the great atmospheric unknown for any length of time. Flying fishes (family *Exocoetidae*) have evolved enlarged pectoral fins that function as wings, although actual flapping does not occur. Flying fishes are found in tropical to temperate seas, living near the water surface where they are often abundant. Some species grow to around 12 inches, and they all have cylindrical bodies that are bluish blending to silvery shades on the sides and white on the belly. They are composed of seven to eight genera and more than 50 species worldwide, 11 of which occur in the Atlantic Ocean basin. They are closely related to the halfbeaks (family *Hemiramphidae*; ex. ballyhoo *Hemiramphus brasiliensis*), and some juvenile flying fishes have an elongated lower jaw that regresses into adulthood. While they are commercially important food fishes in some areas like the Greater Antilles, they are more common as prey items of fast-swimming pelagic species (e.g. tuna and marlin) where flight can be used as an escape mechanism. As such, artificial baits targeting these predatory species attempt to mimic the aerobatic display of flying fishes, some going so far as to use kites to suspend the bait just above the water surface.

Flying fishes achieve their aerial feat thanks to adaptations to all of the spineless fins, not just the wing-like pectoral fins. The lower lobe of the caudal fin is longer than the upper lobe. This elongated caudal fin lobe helps to propel the fish out of the water, where the wings take over. While the mechanism for flight in flying fishes is technically gliding, they can remain in flight for over 40 seconds, covering distances of over 1,300 feet at speeds of more than 43 mph. The dorsal and anal fins are placed far back on the body, which are used for maintaining trim or balance. Pelvic fins are abdominal and sometimes very elongated, as is the case with the "four-winged" species. This adaptation greatly increases the area of the gliding membrane, but can result in slower flight due to the decrease in wing loading. In the "two-winged" species, the tandem arrangement of the large pectoral fin in the front and smaller pelvic fin at the back accelerates the air flow towards the tail like a jet, increasing the lift-to-drag ratio and improving its flying performance.

Recently engineers from Korea decided to find out exactly how these aquatic creatures have become so adept at venturing into the gaseous realm. Using similarly-sized dried and stuffed fish, some with "wings" extended and

one with the fins held back against the body, tests were conducted in a wind tunnel to study the aerodynamics of the fins and body. The researchers found that flying fish performed remarkably well – gliding better than insects and as well as birds like petrels and wood ducks. Tilting the fish's body at various angles, they also found that the fish glided furthest when perfectly parallel to the surface which is exactly what they do above the ocean. While flight heights of over 16 feet can be reached by flying fishes, the researchers found that the lift-to-drag ratio increased when they stayed close to the surface of the sea. They found that the fish were very stable as they glided. However, when the fins were pinned back the fish was unstable, which is what is needed for aquatic maneuverability. So basically flyingfishes are amazingly adapted to life in both the aquatic and aerial environments.

Sources:

Bond, C. E. 1996. *Biology of Fishes: Second Edition*. Saunders College Publishing, Fort Worth, Texas. 750 pp.

Gilbert, C. R. and J. D. Williams. 2002. *Field Guide to North American Fishes: Revised Edition.* National Audubon Society. Knopf, New York, New York. 608 pp.

Park, H. and H. Choi. 2010. Aerodynamic characteristics of flying fish in gliding flight. Journal of Experimental Biology. 213: 3269-3279.

-Craig Gothreaux

Green Light for BP Spill Damage Assessment

Sept. 29, 2010 was an important day for Gulf residents concerned about restoring natural resources harmed by the BP oil disaster. The federal and state trustees (see next page) charged with assessing and restoring oil-damaged natural resources on behalf of the public issued a Notice of Intent (NOI) to conduct restoration planning.

The NOI is a significant milestone. It means the government has officially found evidence of oil damage to natural resources to warrant a formal Natural Resource Damage Assessment (NRDA). The NOI signals a start to the quantifying and assessing of the oil spill's impact. The result, ultimately, will be a restoration plan identifying specific measures prescribed to restore natural resources that are critical to the Gulf's fishing- and tourism-based economy. Thus begins the healing of natural resources critical to a way of life.

Since almost day-one of the well blowout, scientists from federal and state trustee agencies have been on the water, in the marsh, on the beach and in the air documenting injury to coastal and marine species and their habitats, as well as the human uses lost due to those injuries. This pre-assessment is where the trustees determine whether harm has occurred, either directly from the spill or from response efforts. Once a NOI is issued, the pre-assessment work transitions to formal studies to fully document and quantify the injury and its significance. This work, in turn, is the basis for a claim against the responsible parties — BP and other liable companies — for the cost of restoring natural resources and lost uses.

So what have the trustees learned thus far? Among their preliminary findings: 950 miles of shoreline habitats have been impacted; thousands of birds, sea turtles and marine mammals have been found oiled or dead; fish and seafloor communities have been affected; and various human uses, from fishing to beach-going, have been impaired. The trustees have also identified eight parties, including BP, who are responsible for the spill. By law, the responsible parties can participate in the NRDA, but trustees direct the process.

The trustees now turn to understanding the nature, extent, and significance of the damage and to identifying restoration strategies to return natural resources to their pre-spill conditions. In coming weeks and months,

trustees will host public meetings across the Gulf states outlining what lies ahead. These meetings are a public dialogue about injury and restoration. Anyone with a stake in a fully restored, healthy Gulf of Mexico — including local residents, tribes and businesses — is encouraged to attend to learn more, get engaged, and stay involved. For more information on these meetings, visit:

http://www.gulfspillrestoration.noaa.gov/what-you-can-do/public-meetings/.

Stan Senner is director of conservation science for Ocean Conservancy. He was formally involved in restoration planning following the Exxon Valdez *oil spill. Gulfrestoration@oceanconservancy.org*

Natural Resource Trustees and the BP Oil Spill

Federal and state laws have authorized the following natural resource trustees to assess injuries to natural resources caused by the BP oil disaster. Trustees will also develop and implement a plan for restoring injured natural resources.

Federal
- United States Department of the Interior
- National Oceanic and Atmospheric Administration
- United States Department of Defense

Alabama
- Department of Conservation and Natural Resources
- Geological Survey of Alabama

Florida
- Department of Environmental Protection

Louisiana
- Coastal Protection and Restoration Authority
- Oil Spill Coordinator's Office
- Department of Environmental Quality
- Department of Wildlife and Fisheries
- Department of Natural Resources

Mississippi
- Department of Environmental Quality

Texas
- Texas Parks and Wildlife Department
- General Land Office
- Commission on Environmental Quality

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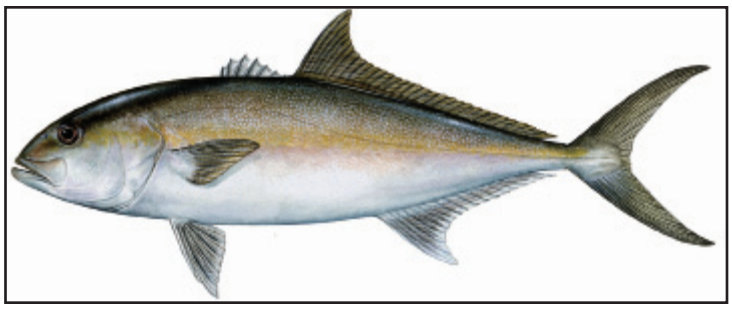
Greater Amberjack Commercial Harvest Closed in the Gulf of Mexico Federal Waters



Greater Amberjack Photo Credit: Diane Rome Peebles

The commercial harvest of greater amberjack in the Gulf of Mexico is closed, effective 12:01 a.m. (local time) Oct. 28 through Dec. 31. NOAA Fisheries Service has determined the 2010 commercial quota of 373,072 pounds of greater amberjack will be reached by this date. During the closure period, no person aboard a vessel for which a commercial Gulf of Mexico reef fish permit has been issued may fish for or retain greater amberjack in federal waters of the Gulf of Mexico. In addition, this closure applies in state waters for persons aboard a vessel for which a federal reef fish permit has been issued.

Closure of the commercial greater amberjack harvest in the Gulf of Mexico complies with regulations implemented under the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico and is necessary to protect the Gulf reef fish resource. NOAA Fisheries Service has determined this action is necessary to prevent overfishing and to keep the commercial sector from exceeding the quota during the 2010 fishing year.

The operator of a vessel with a valid commercial reef fish permit having greater amberjack aboard must have landed and bartered, traded or sold such greater amberjack prior to 12:01 a.m., local time, Oct. 28. The prohibition on sale or purchase does not apply to sale or purchase of greater amberjack that were harvested, landed ashore and sold prior to 12:01 a.m., local time, Oct. 28, and were held in cold storage by a dealer or processor. The commercial harvest will remain closed until 12:01 a.m., Jan. 1, 2011.

Seasonal Prohibition on the Possession of Black, Blackfin, Vermilion, and Silk Snapper in Caribbean Federal Waters

There is a seasonal prohibition on fishing for or possession of black, blackfin, vermilion, and silk snapper from 12:01 a.m., local time, Oct. 1 through Dec. 31 each year in U.S. Caribbean federal waters. Caribbean federal waters are those waters extending 200 nautical miles offshore from the nine-mile seaward boundary of the Commonwealth of Puerto Rico and the three-mile seaward boundary of the territory of the U.S. Virgin Islands.

This action complies with regulations implemented under Amendment 3 to the Fishery Management Plan for the Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands to address required provisions of the Magnuson-Stevens Fishery Conservation and Management Act, and is necessary to protect these resources. The Caribbean Fishery Management Council, in cooperation with NOAA Fisheries Service, developed the amendment to regulate fishing mortality.

King Mackerel Trip Limit Will Decrease to 500 Pounds per Day in the Northern Florida West Coast Subzone

The daily vessel trip limit was reduced to 500 pounds beginning 12:01 a.m., local time, Oct. 26, for commercial vessels fishing for Gulf group king mackerel in the northern Florida west coast subzone. NOAA Fisheries Service is reducing the trip limit after determining 75 percent of the 168,750-pound quota has been taken.

The northern Florida west coast subzone is located in federal waters of the Gulf of Mexico north of 26°19.8' N lat. (a line directly west from the Lee/Collier County, Florida boundary) and east of 87°31.1' W long. (a line directly south from the Alabama/Florida boundary).

The 500-pound daily trip limit will remain in effect for the northern subzone until the quota is reached or through the end of the fishing year, June 30, 2011, whichever occurs first. This bulletin provides only a summary of the information regarding the existing regulations. Any discrepancies between this bulletin and the regulations as published in the *Federal Register* will be resolved in favor of the *Federal Register*.

Public Comments Sought on a Proposed Rule to Establish Annual Catch Limits and Accountability Measures for Nine South Atlantic Snapper-Grouper Species

NOAA Fisheries Service is seeking public comment on a proposed rule that would implement Amendment 17B to the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region (Amendment 17B). This proposed rule, would establish annual catch limits (ACLs) and accountability measures (AMs) for nine snapper-grouper species. The Magnuson-Stevens Fishery Conservation and Management Act requires NOAA Fisheries Service and fishery management councils to establish ACLs and AMs for each species undergoing overfishing (rate of removal is too high) by 2010. ACLs are set at levels that prevent overfishing. AMs are management controls established to ensure that ACLs are not exceeded, or they may correct for overages if ACLs are exceeded during a fishing season.

In the South Atlantic snapper-grouper fishery there are nine species undergoing overfishing including speckled hind, warsaw grouper, snowy grouper, golden tilefish, black sea bass, red grouper, gag, vermilion snapper and red snapper. Amendment 17B includes actions to establish ACLs and AMs for eight of these species as well as black grouper. Red snapper is being addressed in a separate amendment (Amendment 17A to the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region).

The proposed rule for Amendment 17B, if made final, would also specify management measures intended to address overfishing, including a prohibition on harvest and retention of snowy grouper, blueline tilefish, yellowedge grouper, misty grouper, queen snapper and silk snapper, beyond 240 feet (73 m) in federal waters of the South Atlantic. This species prohibition is intended to reduce incidental catch of speckled hind and warsaw grouper.

Request for Comments
Written comments on this proposed rule must be received no later than Nov. 26, 2010, in order to be considered by NOAA Fisheries Service. Please note, a notice of availability and request for comments on Amendment 17B was published in the *Federal Register* on Sept. 22, 2010, with a 60-day comment period ending on Nov. 22.

Electronic copies of proposed rule may be obtained from the e-Rulemaking Portal at http://www.regulations.gov, the South Atlantic Fishery Management Council's Web site at http://www.safmc.net, or: NOAA Fisheries Service, Southeast Regional Office, Sustainable Fisheries Division,263 13th Avenue South, St. Petersburg, Florida 33701

You may submit comments by any of the following methods:
• Electronic Submissions: Federal e-Rulemaking Portal: http://www.regulations.gov, by entering NOAA-NMFS-2010-0091 in the keyword search, then check the box labeled Select to find documents accepting comments or submissions, then select Send a Comment or Submission. All comments received are part of the public record and will generally be posted to http://www.regulations.gov without change. All personal

identifying information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information. NOAA Fisheries Service will accept anonymous comments. Attachments to electronic comments will be accepted in Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only. Comments received through means not specified in this bulletin or the proposed rule may not be considered.

Mail: Kate Michie, NOAA Fisheries Service, Southeast Regional Office, Sustainable Fisheries Division, 263 13th Avenue South, St. Petersburg, Florida 33701 • Fax: 727-824-5308, Attention: Kate Michie

Louisiana Sea Grant Law & Policy Program

Want to stay abreast of legal issues that are impacting coastal Louisiana? The Louisiana Sea Grant Law & Policy program publishes two documents – the Louisiana Coastal Law newsletter (twice a year) and the Louisiana Coastal Law email update (four times a year). The newsletter is available in both a printed and electronic format. If you would like to subscribe, please send your mailing information or email information to Melissa Daigle at mtrosc2@tigers.lsu.edu.

Seasonal Boundary Shifts for Atlantic and Gulf Groups of King Mackerel off the Florida Coast

The boundary between the Atlantic and Gulf groups of king mackerel off Florida shifts, beginning Nov. 1. This change also affects daily commercial trip limits.

The area west of the Florida/Alabama state line is considered the Western Zone for the Gulf group king mackerel year-round with a trip limit of 3,000 pounds. The area north of 29° 25' N. lat. (a line directly east of the Flagler/Volusia County boundary on the east coast of Florida) is considered to contain Atlantic group king mackerel year-round, with a 3,500-pound trip limit.

November 1–March 31 (see map)
During this time period, fish harvested southward of the Flagler/Volusia County line to the Miami-Dade/Monroe County line are considered Gulf group king mackerel. The trip limit for the fishery in this Florida east coast subzone during this time period is 50 fish per day, until Feb. 1, when trip limits may increase to 75 fish per day, if 75 percent of the quota has not been reached.

Fish harvested from Monroe County during this time are considered to be Gulf group king mackerel in the Florida west coast southern subzone. This subzone extends south and west from 25° 20.4' N. lat. (a line directly east from the Miami-Dade/Monroe County boundary on the east coast of Florida) to 26° 19.8' N. lat. (a line directly west from the Lee/Collier County boundary on the west coast of Florida). The trip limit for the hook-and-line sector is 1,250 pounds until 75 percent of the quota is reached. After that, the trip limit is reduced to 500 pounds until the end of the fishing season or 100 percent of the quota is met.

April 1–October 31 (see map)
Beginning April 1, the boundary between Atlantic and Gulf groups of king mackerel shifts south and west from the Flagler/Volusia County boundary on the Florida east coast to the Monroe/Collier County boundary on the Florida west coast. After the boundary shift, fish harvested along the east coast of Florida, including all of Monroe County, are considered to be Atlantic group king mackerel.

After the boundary shift, the commercial trip limit for waters off Volusia County becomes 3,500 pounds per day – the same as the trip limit north of the Flagler/Volusia County boundary. The commercial trip limit for the area southward from 28° 47.8' N. lat. (a line directly east from the Volusia/Brevard County line) to 25° 20.4' N. lat. (a line directly east from the Miami-Dade/Monroe County line) becomes 75 fish per day. The trip limit off Monroe County becomes 1,250 pounds.

The west coast of Florida is divided into Northern and Southern zones at 26° 19.8' N. lat. (a line directly west from the Lee/Collier County line). The Northern Subzone extends to the Florida/Alabama state line and remains the same year-round. However, with the April boundary shift, the Southern Subzone for Gulf group king mackerel is reduced to the area off Collier County. Both the northern and southern subzones have a trip limit of 1,250 pounds until 75 percent of the quota is reached. After that, the trip limit is reduced to 500 pounds until the end of the fishing season or 100 percent of the quota is met.

Commercial Hook-and- Line Quotas for King Mackerel (pounds)	
Gulf Group	
Western Zone	1,010,000
Eastern Zone	
Florida West Coast Subzone Northern	168,750
Florida West Coast Subzone Southern	520,312
Florida East Coast Subzone	1,040,625
Atlantic Group (includes gillnets north of Cape Lookout, NC)	3,710,000

For an additional explanation about mackerel zones, boundaries, and trip limits, please visit our website at http://sero.nmfs.noaa.gov/sf/MakingSenseofMakerel.htm

Asian Carp for Sale: Marketing Invasive Species

The best way to fight the invasion of Asian carp may be to visit the fish counter at your local supermarket, if recommendations from the Asian Carp Marketing Summit come to pass. One conclusion from this gathering of experts is that filleting bighead and silver carp may prove a key tactic in the war against these fish.

Bighead and silver carp are thriving in the Mississippi river and tributaries. The search is on for solutions. "The summit was convened to identify obstacles and opportunities associated with commercial marketing of Asian carp as a way to reduce their numbers in the Mississippi River Basin," said Pat Charlebois, Illinois-Indiana Sea Grant (IISG) aquatic invasive specialist. This two-day event took place at the Lewis and Clark Community College in Godfrey, Ill. It was organized by IISG, with sponsorship from the Illinois Department of Natural Resources (IDNR) and the National Great Rivers Research and Education Center.

Gathered together in one room were representatives from restaurants, commercial fishing, processing and related businesses, plus agencies, and academic institutions. Altogether, experts from eight states, including Louisiana, shared their insights and ideas.

The experts agreed that high value Asian carp fillets marketed to restaurants and retailers may provide the financial incentive for extensive harvesting of these fish. Looking to have immediate impact, they also recommended that whole fish be exported in high numbers to Asian markets, where these species are popular food fish. Because they are filter feeders, bighead and silver carp are regarded as tasty fish and are generally low in contaminants.

Finally, they recommended converting Asian carp by-products into pet food or treats to eliminate waste and maximize profit opportunities.

"Over the course of the two days, the participants came to a consensus on next steps needed to go forward," said Charlebois. "They concluded that it's necessary for people with different expertise, for example, natural resource professionals and entrepreneurs, to work together to successfully market Asian carp.

"Nonetheless, this process will ultimately be driven by those who make their livelihood from the market itself," added Charlebois. "Natural resource agencies can play a role by reducing commercial fishing restrictions and protecting natural resources. Government agencies focused on business can help a company obtain funding. But, ultimately the success of this is in the hands of business people."

When the final summit report is completed, a summary of recommendations will be available online and updated as information progresses.

Underwater Obstructions

September, 2010 coordinates:
In accordance with the provisions of R.S. 56:700.1 et. seq., notice is given that eight claims in the amount of $25,054.90 were received for payment during the period Setp. 1, 2010 – Sept. 30, 2010 .There were eight paid and 0 denied.

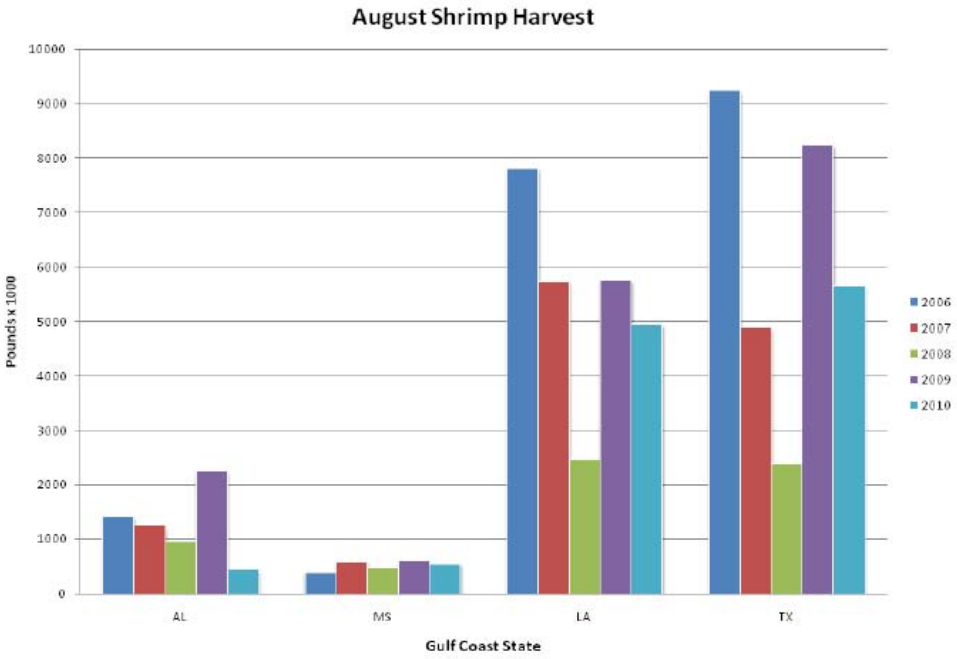
Latitude/Longitude Coordinates of reported underwater obstructions are:

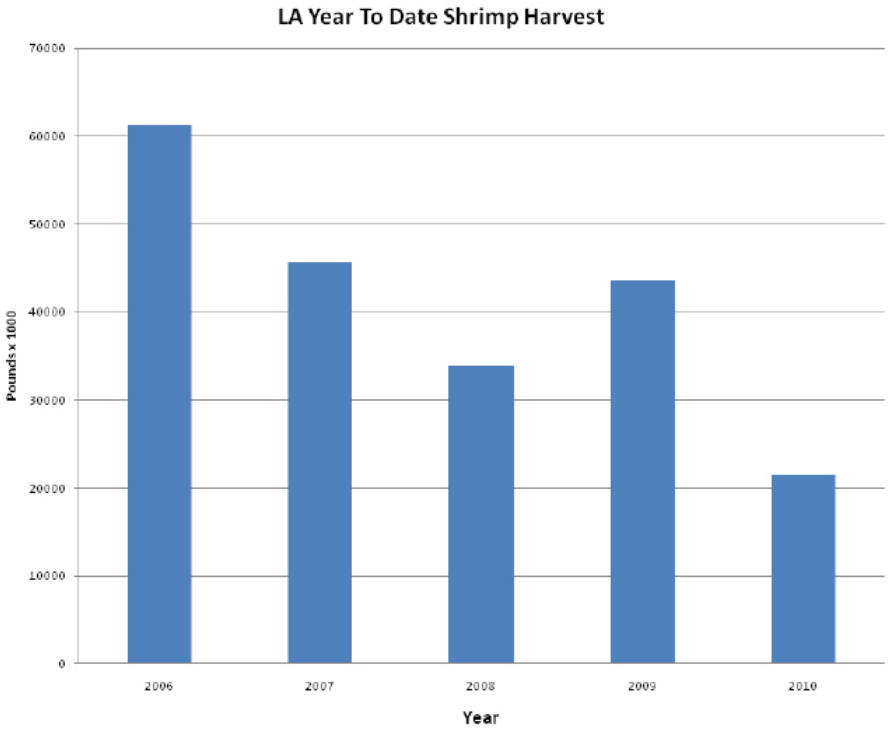
29 03.290	90 38.564	TERREBONNE
29 03.486	90 39.345	TERREBONNE
29 16.058	90 06.273	LAFOURCHE
29 32.146	89 50.913	PLAQUEMINES
29 47.938	89 38.082	ST. BERNARD
29 52.550	93 20.745	CAMERON
29 67.758	89 50.708	ST. BERNARD
30 06.855	89 29.223	ST. BERNARD

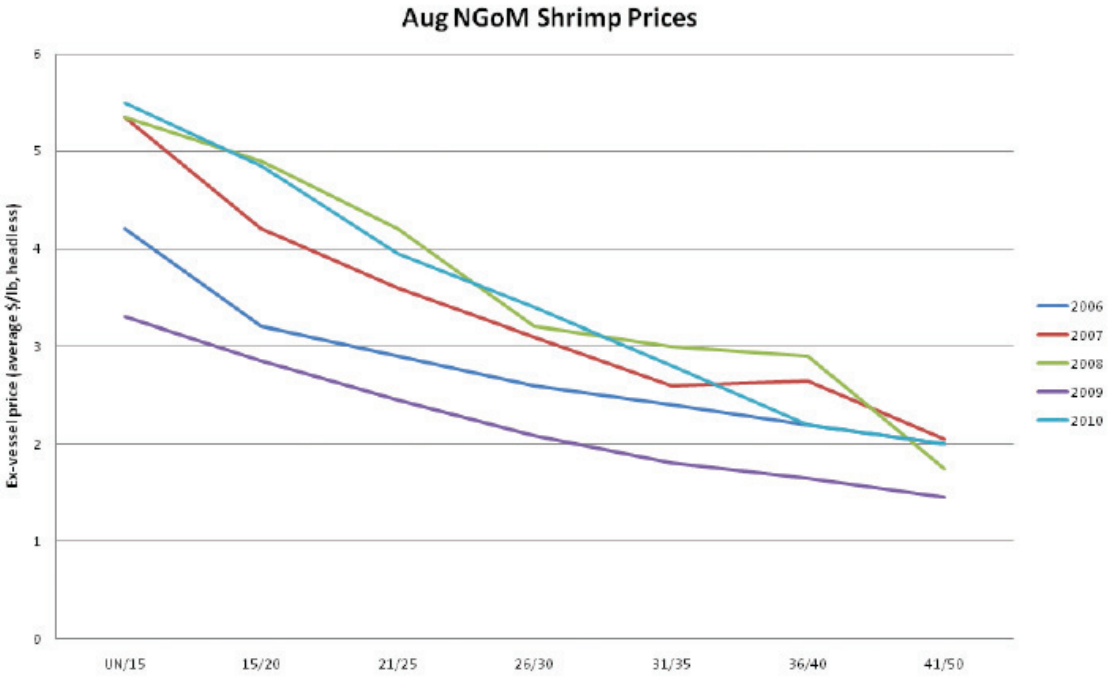
A list of claimants and amounts paid can be obtained from Gwendolyn Thomas, administrator, Fishermen's Gear Compensation Fund, P.O. Box 44277, Baton Rouge, LA 70804 or call (225) 342-0122.

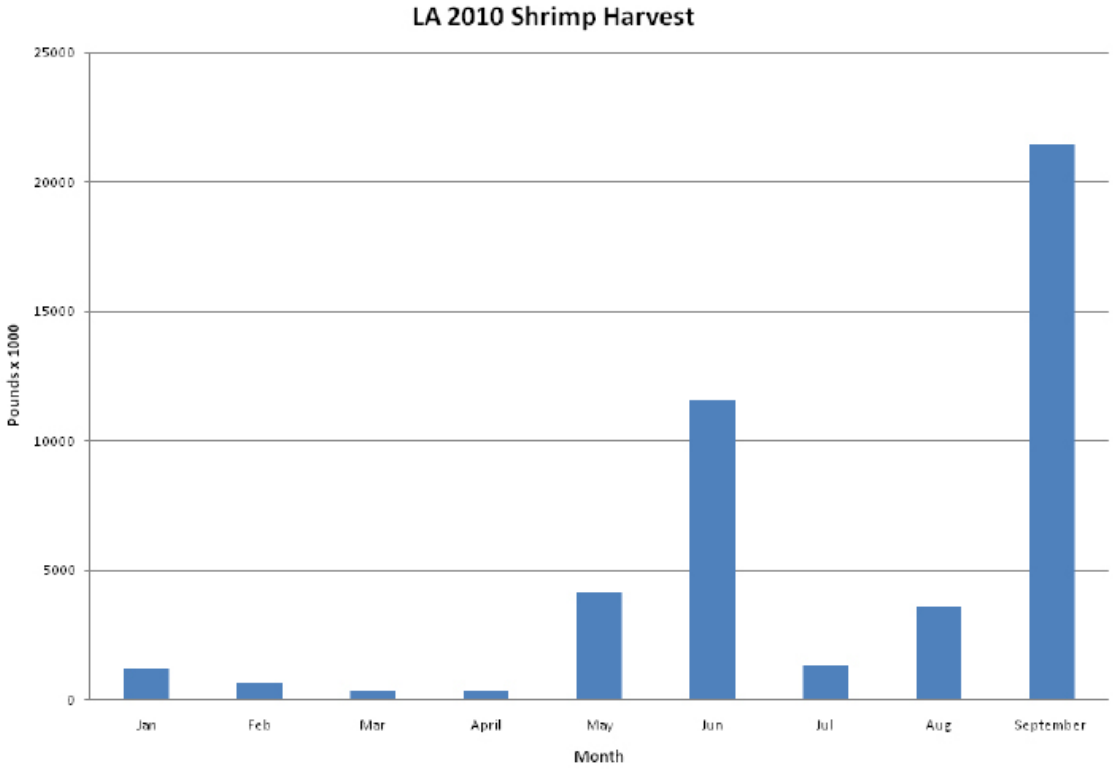
Louisiana Shrimp Watch

Louisiana specific data portrayed in the graphics are selected from preliminary data posted by NOAA on their 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






Aug NGoM Shrimp Prices
Ex-vessel price (average $/lb, headless)
6
5
4
3
2
1
0
UN/15
15/20
21/25
26/30
31/35
36/40
41/50
2006
2007
2008
2009
2010


LA 2010 Shrimp Harvest
Pounds x 1000
25000
20000
15000
10000
5000
0
Jan
Feb
Mar
April
May
Jun
Jul
Aug
September
Month

The Gumbo Pot
Silver Fin Cakes

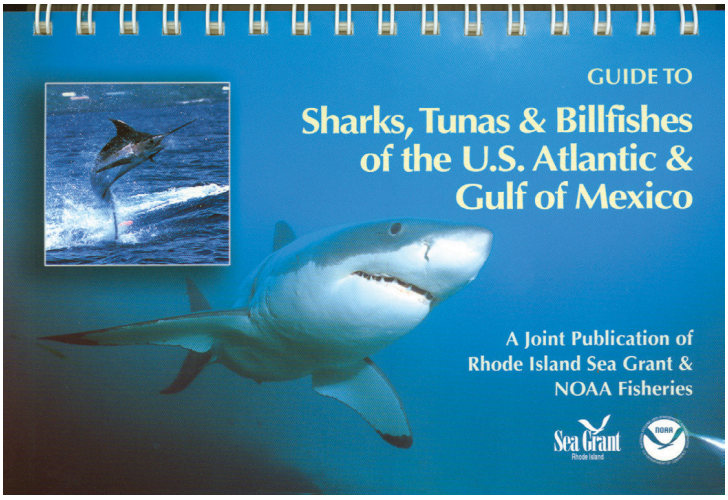
4 servings
1 lb of Silver fin white meat
4 oz of melted unsalted butter
1 Tablespoon of Dijon mustard
1 Tablespoon of lemon juice
1 egg
1 oz of bread crumbs
Seasoning and hot sauce to taste

Poach or steam Silver fin meat until fully cooked than break it up in pieces to remove the bones. Place all the meat into a bowl then add butter, mustard, egg, and lemon juice. Mix well and add bread crumbs. Season to taste. Make small cakes with the mixture. Roll them in beaten egg and seasoned flour. Fry the cakes.

Source: Chef Philippe Parola

If you have a favorite seafood recipe that you would like to share, please send it to Julie Anderson janderson@agcenter.lsu.edu for inclusion in future issues.

Perfect for Holiday Gift Giving



• Content reviewed by species specific experts for accuracy
• Concise species descriptions for rapid identification of 44 species of sharks, tunas, and billfishes found in the U.S. Atlantic, Gulf of Mexico and Caribbean Sea
• Descriptive pages providing information on size, distinguishing characteristics, geographical distribution, habitat and similiar species
• Full-color photographs of each species, as well as field photographs, body profiles and comparison pages to aid in identification
• Waterproof paper and spiral binding for durability in field use

Price: $28 including s/h

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Mail order to: Jessica Schexnayder, Louisiana Sea Grant College Program,
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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 Julie Anderson at janderson@agcenter.lsu.edu

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