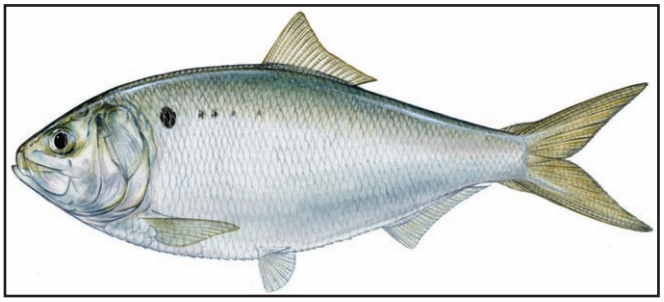
Lagniappe

April 1, 2009 Volume 33, No. 3

The Gulf Menhaden; *Brevoortia patronus.* Part One: Species Profile

The Gulf menhaden might not be the first name that comes to mind when you think of important marine fish, but maybe it should. These unsung heroes are nutrition for sport fish, aquaculture stocks, and even livestock and pets. As a result of this demand, the menhaden industry has been an important economic source for many coastal regions.



Gulf Menhaden *Brevoortia patronus* **by Diane Rome Peebles, artwork courtesy of the artist and the Florida Division Marine Fisheries Management.**

Gulf menhaden, usually called pogies in Louisiana, are in the order *Clupeiformes* and the family *Clupeidae*. They are most closely related to the Atlantic menhaden, though also similar to herrings, sardines and shads. Clupeids are typically small in size, feature a fusiform and streamlined body shape, have only one dorsal fin, and all fins are soft-rayed. In addition, they have cycloid scales (none on the head, though) and scutes (keeled scales) on the belly.

Pogies have certain physical characteristics that aid in identification. They are small and minnow like in appearance, averaging 6-8 inches long and 2-6 ounces in weight. A large, black scapular spot is located just behind the gill cover, and a row of faint spots is present running along the sides of the body. Their coloration is mostly silver with a dark green color on the back.

Having a range from Tampa Bay, Fla., to the Yucatan Peninsula, Mexico, Gulf menhaden are typically found inshore during the summer months and in deeper waters during the colder months. Menhaden are a schooling species that forage on phytoplankton and zooplankton. They can live up to six years, though 2-3 years is more common. Reproduction is thus crucial in sustaining populations. Spawning takes place during the winter, usually peaking in January. Fecund females produce thousands of eggs which hatch offshore before drifting into estuaries to grow.

Pogies are harvested for their natural oils. Processing (reduction) of these fish results in fish meal, fish oil and fish solubles. Fish meal is used in aquaculture and in feed for chickens, pigs, domestic pets and cattle. Menhaden oil is consumed by humans as a nutritional supplement, and is also shipped out for foreign aquaculture. Europeans have even found a way to use the oil in cooking oils and margarine. Fish solubles are used both in the U.S. and overseas as an aquaculture feed supplement.

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Gulf menhaden are caught commercially in large numbers with vessels that surround schools with purse seines. In 2007 more than 1 billion pounds of Gulf menhaden were harvested, worth $62 million. Louisiana was responsible for more than half of the total with 789 million pounds. These figures have been stable since 2000, although the mid 1980s harvest numbers were roughly double of what they are now. Louisiana commercial regulations allow menhaden harvesting beginning the third Monday in April through November 1 of each year. There are no recreational regulations for Gulf menhaden.

While the menhaden fishery appears to be a stable and reliable industry for those involved, some interest groups would like to see menhaden operations drastically reduced. Subsequent articles will discuss the history of the menhaden fishery, and the controversy between the menhaden fishery and groups, such as Save The Bait, that are trying to protect menhaden and establish limits on harvests.

- Will Sheftall IV

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Live Bait can Save the Fishing Trip

Nothing is more disappointing for an angler than to arrive at a favorite fishing hole only to open the bait bucket or live well and discover his live bait is dead. A basic understanding of live bait handling could help prevent this. The first consideration should be water quality. A number of water quality requirements should be considered. These include oxygen, temperature and salinity.

The most popular method of insuring adequate oxygen is to use a l2-volt aerator that sits inside of the bait well. However, external pumps to blow diffused air are recommended because they will not cause heat buildup like a submersible pump. Another method is to use time-released oxygen tablets in the well.

Temperature and salinity should be considered next. If possible, fill your bait well or bucket with the same water the bait was being held in when purchased. If this is not possible, you may acclimate the bait to the water at the fishing site by adding small quantities of water until the desired temperature and salinity are reached. This is especially important if there is a large temperature and salinity difference.

Rapid changes in water temperature and salinity, more than 5 degrees and 10 parts per thousand, can cause temperature shock and osmotic stress. Remember, cooler water holds more oxygen than warm water. Chilling the water with ice will cool the water and not reduce salinity too much. But caution should be taken when adding ice to the water, as too much ice will cool your bait too fast and kill it. These steps may seem unnecessary but, if they are not taken, your bait will die sooner rather than later.

Water contamination from bait handling also is an issue that can be overcome. Use a dip net to remove bait from the live well. The net serves as a means of not contaminating the water in which the bait are living. Insect repellant and sunscreen are two common sources of contamination. After time, the concentration of chemicals can build up to levels that will affect the performance of your bait. Also, wet your hands before hooking bait. All finfish have a protective mucus — "slime" — coat that shields them from external stress. If this mucus is removed by handling the fish, it can cause the fish to become stressed and die.

Many types of tanks are suitable for holding and maintaining live bait. Homemade tanks can be constructed of plastic, fiberglass and untreated wood. All metals should be avoided when possible. Round tanks are preferred, since bait tends to huddle in the comers of square or rectangular tanks. This is especially true of menhaden (pogies).

- Kevin A. Savoie

Source: http://www.seagrantfish.lsu.edu/resources/factsheets/tipslivebait.htm

Proper Handling of Offshore Catch: Sushi Doesn't Just Happen

Offshore fishing in the Gulf of Mexico can require a good deal of effort and resources from the Louisiana sports fisherman. However, the rewards of hooking and bringing on board a highly prized fish such as tuna, amberjack, mahi mahi, marlin and others are greatly increased by the superior eating quality of the meat. Proper onboard handling practices are important for maintaining the good eating quality critical to producing excellent, "just-caught" flavor.

Spoilage of fish is caused by breakdown of the flesh by naturally occurring enzymes or bacteria. The rate or speed of decomposition is increased by high temperatures, similar to those encountered during prolonged efforts in warm Gulf waters. Controlling and maintaining good quality of the fish requires proper chilling. Taking enough ice to chill and store the catch is a must to prolong good quality. No matter how you handle the fish, you must properly chill and store the fish to control decomposition and quality loss. Two pounds of ice for each pound of fish is recommended for icing and storage. Line the bottom of the cooler with a layer of ice, and then surround the entire fish with more ice. Additional recommended handling practices accomplished before iced storage can delay the loss of freshness and quality and produce meat of high, "sushi" quality:

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Editor: Glenn Thomas
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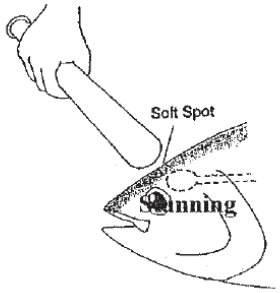
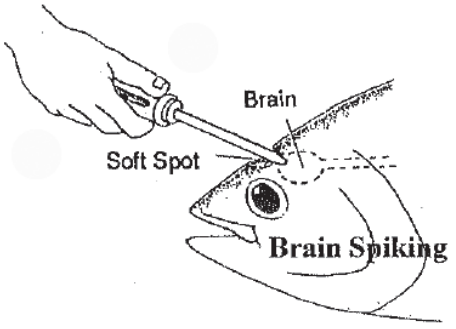
Landing – Bring the fish on board as quickly as possible. Gaff the fish in the head, or the tail region if necessary.



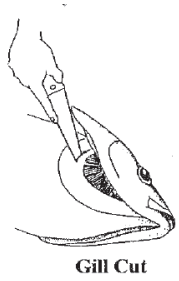
Stunning – Stun the fish immediately after it comes on board to eliminate bruising. It is best to club the fish with a metal bar or wooden bat while the fish is still on the gaff.

Brain Spiking – Spiking, immediately after stunning, is an option that destroys the fish's brain. (This is a required procedure for production of commercial, sashimi grade tuna). Spiking can significantly reduce the rate of early chemical decomposition in the muscle. Before spiking a fish, make sure that you are well balanced and have a firm grip on the fish. Place the tip of the spiking tool (usually a ground-down philips screwdriver or an ice pick) on the soft spot of the fish's head above the eyes. Push the spike at a 30 degree angle into the skull, and move from side to side to destroy the brain. Successful spiking will cause the fish to shudder, muscles to flex and then go limp in a couple of seconds. This may require some practice, and may not be possible under all conditions. Above all, be careful not to injure yourself or fellow anglers!



Bleeding – Bleeding improves the muscle appearance and flavor and may aid in rapid chilling. It is also essential for sashimi grade fish. Bleed the fish on the deck, immediately after stunning or spiking, while the heart is still intact and pumping. Use the method which seems easier for you, or try a combination of cuts:

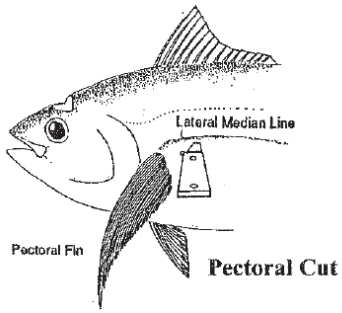
Bleeding Techniques:



Gill Cut – Slice through the blood vessels that supply oxygen to the gills. Lift the gill cover and cut through the gill arch, and then put the knife through the gill membrane and cut up towards the spine to sever the blood vessels at the top of the gills.

Throat Cut – Cut the blood vessels between the heart and gills. Be careful not to cut up the heart. Slice through the V-shaped nape of flesh between the gill covers and the body of the fish, and sever the major artery that is just below the skin surface.

Pectoral Cut – (for tunas) Cut the shallow blood vessels that run near the lateral line. Make a shallow cut with a sharp knife about the width of two fingers below the pectoral fin, cutting through the raised ridge of the skin. You'll know when you've done it right when the blood flows out of the cut. Repeat on the other side.



Gutting — After allowing 5-10 minutes for bleeding, or until blood flow stops, removing the guts or viscera from the fish provides two advantages for maintaining good quality. First, you remove a source of bacteria and enzymes. Second, chilling is improved by removing a significant amount of warm body weight, especially if the fish has been feeding. Cut the belly from the anal opening forward, open the belly cavity and remove the guts. To completely remove them, slice the entrails as close as you can to the gill area. Be careful not to slice through the belly wall and into the meat. This technique will allow

the chilling medium, either slush or ice, to closely contact the muscle both inside and out. Be sure to firmly pack ice into the belly cavity during iced storage.

Rapid Chilling (Slush Icing) – Bring along an extra cooler or use the boat's bait tank if possible. This extra effort may be the most important technique for retaining the excellent" just- caught" quality of the meat. Fish will cool 4 to 5 times faster in slush ice because the fish will be completely surrounded by the 32ºF slush water. This requires bringing extra ice, above the amount for storing the fish. The recommendation is for 2 parts ice to 1 part seawater, but more may be necessary with the warm Gulf waters. Make sure that ice is always present and covering the surface of the slush. Add more ice as it melts.

Transferring the fish to iced storage is recommended when the fish reaches a backbone temperature of 50ºF. For large fish, this can take up to eight hours, or even longer. However, even an hour or less in the slush ice can dramatically lower the high, initial fish temperature.

Slush icing should not hurt properly gutted fish. Transferring the fish to iced storage will depend on when the next fish is caught, the amount of ice left on board, time left before returning to shore, etc. Leaving fish in the slush tank for over 2 hours is not recommended, except for very large fish.

Make sure that you bring plenty of ice and coolers to preserve good food quality of your catch. Performing some or all of these additional recommended handling practices can produce high quality, just-caught freshness for you and your friends to enjoy once you return to shore!

For more information, visit: http://www.seagrantfish.lsu.edu/pdfs/factsheets/handling_offshorecatch.pdf

- Jon Bell

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Recreational Season for Gag Grouper Opens

The recreational season for gag grouper in the federal waters of the Gulf of Mexico reopened April 1. Anglers may keep two gags per person within the five-grouper aggregate.

A pending amendment to the Reef Fish Fishery Management Plan, when implemented, will reduce the aggregate grouper bag limit from five to four and increase the red grouper bag from one to two. Implementation is expected sometime this summer. The minimum recreational size limit for gag is 22 inches total length, 20 inches total length for red grouper.

Shrimp Season in Portion of Louisiana Offshore Territorial Waters Reopened to Shrimping

Louisiana Department of Wildlife and Fisheries (LDWF) announced that the shrimp season in Louisiana offshore territorial waters south of the Inside/Outside Shrimp Line from the eastern shore of the Atchafalaya River Ship Channel at Eugene Island to the U.S. Coast Guard navigational light off the northwest shore of Caillou Boca at 29 degrees 03 minutes 10 seconds north latitude and 90 degrees 50 minutes 27 seconds west longitude, will reopen to shrimping on April 13, 2009, at noon.

According to the most recent trawl samples taken by LDWF Marine Fisheries Division biologists, small white shrimp that have occupied portions of state outside waters from December through mid April are no longer present in the area to be opened. Significant numbers of small white shrimp still remain in state outside waters west of the Atchafalaya River Ship Channel to the western shore of Freshwater Bayou Canal at longitude 92 degrees 18 minutes 33 seconds west longitude and this area will remain closed until further notice.

Preliminary LDWF trip ticket report data indicate that 2008 Louisiana shrimp landings (all species combined) totaled approximately 90.2 million pounds and had a dock-side value of $133.5 million. White shrimp landings totaled 63.2 million pounds and accounted for more than 70 percent of total shrimp landings.

The opening dates for the 2009 spring inshore shrimp season will be considered by the Louisiana Wildlife and Fisheries Commission at the May 7 meeting to be held at LDWF headquarters.

King Mackerel Commercial Fishery Closed

The commercial fishery for Gulf group king mackerel in the western zone is closed through June 30, 2009. NOAA's National Marine Fisheries Service has determined the 2008/2009 western zone commercial quota of 1.01 million pounds of king mackerel has been reached. With this action, the king mackerel commercial fishery in the Gulf of Mexico is closed from the U.S./Mexico border to the Alabama/Florida boundary.

This closure complies with regulations implemented under the Fishery Management Plan for Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic and is necessary to protect the Gulf group king mackerel resource. In cooperative actions, Gulf states (Texas, Louisiana, Mississippi and Alabama) are expected to close commercial harvest of king mackerel concurrently in adjoining state waters.

During the closure period, no person aboard a vessel for which a commercial permit for king mackerel has been issued may fish for or retain Gulf -group king mackerel in or from federal waters of the closed subzone. There is one exception, however, for a person aboard a charter vessel or headboat. A person aboard a vessel that has a valid charter/headboat permit for coastal migratory pelagic fish and a commercial king mackerel permit may continue to retain king mackerel in or from the closed subzone under the two-fish daily bag limit, provided the vessel is operating as a charter vessel or headboat. Charter vessels or headboats that hold a commercial king mackerel permit are considered to be operating as a charter vessel or headboat when they carry a passenger who pays a fee or when more than three persons are aboard, including operator and crew.

During the closure, no king mackerel caught in the closed zone may be purchased, bartered, traded or sold. This includes recreational and tournament-caught fish. The prohibition of sale, however, does

not apply to trade in king mackerel that were harvested, landed ashore and bartered, traded, or sold before the closure and held in cold storage by a dealer or processor.

Underwater Obstructions

In accordance with the provisions of R.S. 56:700.1 et. seq., notice is given that 19 claims in the amount of $71,241.64 were received for payment during the period February 1, 2009 - February 28, 2009. There were 18 claims paid and 1 claim denied.

Latitude/Longitude Coordinates of reported underwater obstructions are:

29 09.010	91 03.040	TERREBONNE
29 10.861	90 28.098	TERREBONNE
29 18.043	89 46.354	TERREBONNE
29 39.120	89 50.137	PLAQUEMINES
29 40.253	90 09.219	JEFFERSON
29 40.655	89 30.425	ST. BERNARD
29 46.128	89 42.105	ST. BERNARD
29 47.130	88 58.810	ST. BERNARD
29 47.953	89 38.105	ST. BERNARD
29 50.192	89 41.331	ST. BERNARD
29 50.239	89 37.199	ST. BERNARD
29 55.363	89 25.880	ST. BERNARD
30 06.239	90 02.040	ORLEANS
30 08.265	90 03.037	ORLEANS
30 08.456	89 56.035	ORLEANS
30 10.142	89 48.172	ST. TAMMANY
30 10.432	89 57.410	ST. TAMMANY
89 48.408	29 40.500	PLAQUEMINES
92 04.464	29 36.103	VERMILION

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 you can call (225)342-0122.

THE GUMBO POT

Crawfish Casserole

1/2 cup butter
1 cup onions, chopped
2 cups crawfish fat (optional)
1/2 cup bell pepper
1/4 cup parsley, chooped
2 lbs crawfish tails
1/2 t black pepper
1/2 t red pepper
salt to taste
2 1/2 cups bread crumbs
1 egg beaten
1 cup mushrooms, stems and pieces
1/4 cup pecans, chopped
1 t garlic powder

Heat butter in skillet. Add onions and saute slowly for 5 minutes. Add crawfish fat and cook for 10 minutes. Add bell pepper, green onions and crawfish tails. Cook 5 minutes. Add seasonings, mushrooms and parsley. Remove from fire and add 2 cups bread crumbs and the well-beaten egg. Stir to mix well. Pour into a buttered casserole dish. Mix pecans and remaining 1/2 cup bread crumbs. Sprinkle on top of casserole. Bake in a preheated 300 degree oven for 25 minutes. Serves 6.

Reprinted from *A Louisiana Seafood Cookbook*, courtesy of the Louisiana Sea Grant College Program.

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