

Lagniappe

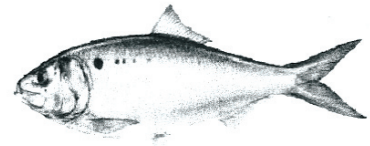


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ONE POGY, TWO POGIES, THREE POGIES, FOUR

That's how many species of menhaden, or pogies as they are often called, exist. Atlantic menhaden, *Brevoortia tyrannus*, are found only on the Atlantic coast from Nova Scotia, Canada, to southeastern Florida. Gulf menhaden, *Brevoortia patronus*, are found over most of the Gulf of Mexico, from southwestern Florida to Veracruz, Mexico. Yellowfin menhaden, *Brevoortia smithi*, are found from North Carolina south around the tip of Florida and up to the Mississippi River Delta in the Gulf. Finescale menhaden, *Brevoortia gunteri*, are found from just east of the Mississippi River Delta to Campeche, Mexico.



Menhaden belong to the herring family, *Clupeidae*, a large group of fish found in freshwater and saltwater and distributed worldwide. Many species are numerous and form large, dense schools. They are important in the food chain because most are filter feeders, straining microscopic plankton from the water and converting it into fish flesh. The menhaden are then, in turn, preyed upon by many species of predator fish.

Many *Clupeids* are heavily fished for sardines, as well as pickled and smoked herring. Both the Atlantic and the Gulf menhaden are the basis (along with a few other species, such as thread herring) for large purse seine fisheries. The catches from these fisheries are processed into fish meal and oil. Finescale menhaden are not actively fished in any fishery. Yellowfin menhaden (and their hybrids) are harvested only for bait along the Florida coast.

Yellowfin menhaden hybridize very often with Atlantic menhaden on the south Atlantic coast and with Gulf menhaden in the eastern Gulf. The further south one goes along the Florida Gulf coast the more Gulf/yellowfin menhaden hybrids occur and also the more pure yellowfins are found.

The Gulf menhaden differs from the yellowfin and the finescale menhaden by having larger scales; by having many small black spots near the large, black shoulder spot; and in fresh fish, by having much more mucus on the body. The flesh of the Gulf menhaden is also softer than that of the other two.

The yellowfin and finescale menhaden differ from each other by such tiny variations as the number of bones in their backbone and the number of large belly scales. It is simpler to just assume that if it

isn't a Gulf menhaden and it is east of the Mississippi River, it is a yellowfin or a yellowfin/Gulf hybrid. If it is west of the Mississippi River and it isn't a Gulf menhaden, it should be a finescale menhaden.

Gulf menhaden spend the warmer months in Gulf waters 5 to 50 feet deep. During the winter months they move to deeper waters 25 to 110 feet deep. Very little east-west movement takes place in any season. Yellowfin and finescale menhaden are nearshore and estuarine species, showing little tendency to move offshore.

All three species spawn in the winter, October into March for Gulf menhaden and November to March for the other two species. Female menhaden produce several batches of eggs during each spawning season.

From the time the egg is laid until the end of their short lifespan (4-5 years), menhaden are fed upon. Their eggs and larvae are important in the diets of predator fish larvae and young, as well as jellyfish and squid. Adults are eaten by virtually every species of piscivorous (fish-eating) fish in their range. Pelicans and ospreys eat large numbers of menhaden, as do porpoises.

Source: *Population Biology and Life History of the North American Menhadens, Brevoortia spp.* Dean W. Ahrenholz. Marine Fisheries Review 53 (4). 1991.

LOUISIANA FRESHWATER MUSSEL SEASON

Last month, the Louisiana Department of Wildlife and Fisheries issued a Declaration of Emergency to establish the 2006 freshwater mussel season to begin on June 15 and close on Aug. 30. The Declaration of Emergency also prohibits the harvest of freshwater mussels from the Pearl River.

Individuals who would like to harvest or buy mussels must first obtain a special permit in addition to normal licenses. Anyone with questions regarding either harvest or buyer permits should contact Mark McElroy at 225/765-2641.

MARINE PROTECTED AREAS PLANNED FOR FLORIDA

Marine protected areas (MPAs) are zones where all or some fishing is prohibited in order to protect spawning areas and/or allow fish populations to rebuild. This strategy has been proven to have some positive effects on fish populations, but other evidence indicates limited efficacy of this management tool. In all cases, local resistance to having favorite fishing areas put off-limits has made implementation difficult.

Three new MPAs are being considered by the South Atlantic Fishery Management Council. The proposed zones would be Type 2 MPAs, meaning no bottom fishing or anchoring would be permitted. Trolling and other types of fishing, such as drifting live baits in the middle of the water column, would be permitted. They are being proposed to protect spawning aggregations of grouper and snapper. If initially approved by the South Atlantic Fishery Management Council, a series of public meetings will be held before the Council will make a final determination.

DEADLINE NEARS FOR DUTY DISTRIBUTION ON SHRIMP IMPORTS

Eligible domestic shrimp producers affected by foreign dumping of shrimp have until July 31 to file written certifications with the Bureau of Customs and Border Protection (BCBP) for an offset of qualifying expenditures under the Continued Dumping and Subsidy Offset Act of 2000 commonly known as the “Byrd Amendment.” Qualifying expenditures are those beginning Feb. 1, 2005, through June 30, 2006. To obtain a distribution of the offset under a given order or finding, an affected domestic producer must submit a certification to the BCBP indicating that the producer desires to receive a distribution.

Written certifications for fiscal year 2006 distributions must be received by the BCBP before July 31, 2006. All claims should be addressed to the Assistant Commissioner, Office of Finance, Bureau of Customs and Border Protection, Revenue Division, Attention: Leigh Redelman, P.O. Box 68940, Indianapolis, IN 46268, or if using the street address; 6650 Telecom Drive, Suite 100, Indianapolis, IN 46278.

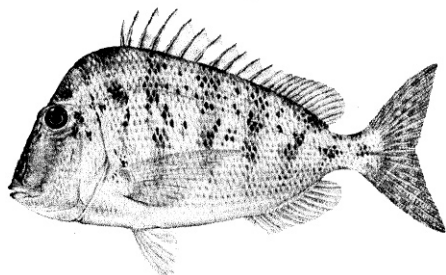
For further information, visit <http://www.seagrantfish.lsu.edu/news/2006/advisory.htm>.

FUNNYFACE: THE KNOBBED PORGY

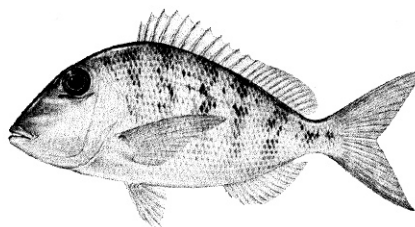
Porgies are some of the most under-appreciated food fish of the Gulf of Mexico. In the northern Gulf, the most common members of the family are found in inshore waters. The Sheepshead is familiar to most fishermen with its vertical black and white stripes, and the Pinfish is mostly known as a bait-stealer, and sometimes bait fish. At least five more species are caught in offshore waters of the Gulf: the red porgy, the whitebone porgy, the knobbed porgy, the jolthead porgy and the longspine porgy.

All of them share two things: 1) They are usually tossed back in the sea or cut up for bait. 2) Most fishermen don't realize they are delicious tablefare, at least as good as snappers. Porgies also are much more common than their catch would indicate because their specialized diets (except for the red porgy, which commonly eats fish) make them difficult to catch.

Scientists in the south Atlantic have conducted detailed research on one of the largest of the offshore porgies, the knobbed porgy *Calamus nodosus*. This species has a deep body, strongly flattened from side-to-side. Its ridiculously steep, straight forehead profile gives the fish an almost triangular appearance when viewed from the side. Its color is silvery, with a rosy iridescence, and its purplish snout has many small dots below the eyes. It most closely resembles the jolthead porgy (*Calamus bajonado*), however the forehead profile of the jolthead is less steep and is bulging rather than straight. Both species can grow to 5 pounds, but are more common at 1 to 2 pounds.



Knobbed Porgy



Jolthead Porgy

The biologists doing the study collected readable scales from 399 hook-and-line-caught and 74 trawl-caught knobbed porgies. The fish were aged by reading the yearly growth rings laid down in their scales. Sizes of hook-and-line fish were 9.6 to 20.5 inches and the trawl-caught fish ranged from 10.9 to 19 inches long.

The oldest knobbed porgy was an 18.4-inch fish that was 17 years old. The largest fish in the study was 21.8 inches long, but the scales from the fish were unreadable. Average size at age is below.

Age	1	3	5	7	9	11	13	15	17
Size (inches)	7.8	11.7	14.1	15.4	16.6	17.2	18.3	19.4	20.2

Growth was rapid the first 4-5 years of life, averaging 3.3 inches per year then it slowed dramatically. From 6 to 10 years of age, it averaged only a half-inch per year and dropped slightly more after that. Knobbed porgy are one of the slowest-growing of reef fishes.

Interestingly, the knobbed porgies caught by hook-and-line averaged 1.6 inches larger each year (after age 2) than fish caught by trawls. It is thought that the large 6/0 and 7/0 hooks used caught the larger fish of any certain age group. Trawls probably caught slightly more of the smaller individual fish of any age group.

In the recreational hook-and-line fishery, fish aged 4 to 9 produced 67 percent of the catch, even though not until age 10 were 100 percent of the fish spawned in any given year large enough to catch. Fish 11 to 17 years old made up only 15 percent of the catch.

Knobbed porgies are mostly protogynous hermaphrodites, meaning that they begin life as females and at some point later in life change to males. Females made up 88 percent of all fish under 17.3 inches long. Males made up 72 percent of fish over that length.

Two fish bucked the numbers. One male was found under 11 inches long and one female was over 21 inches long. This indicates that not all fish change sex. Research on a closely related species, the whitebone porgy, shows that only 60 percent of that species change sex. Still, between the ages of 1 and 7 years old, no males were present. Only one female (of 25 fish) was found between the ages of 8 and 11 years.

Knobbed porgy have strong jaws with molar-like teeth, as well as heavy teeth in their throat called pharyngeal teeth. These teeth are used to crush the hard-shelled food in their diet. Knobbed porgy seem to prefer to eat more, smaller food items rather than fewer larger items. The breakdown on the food items found in the stomachs of the fish in this study are listed below.

Item	Percent Occurrence
Clams, snails, mussels, etc.	30%
Crabs	14%
Polychaete worms	12%
Sea urchin	8%
Starfish	7%
Barnacles	6%

Shrimp	5%
Squid	4%
Nematode worms	4%
Sand	3%
Fish	3%
Sand dollars	1%
Sea anemone	1%
Sea cucumber	1%
Octopus	1%

Source: *Growth, Mortality, Reproduction and Feeding of Knobbed Porgy, Calamus nodosus, along the Southeastern United States Coast.* Mark L. Horvath, Churchill B. Grimes and Gene R. Huntsman. *Bulletin of Marine Science*, 46(3): 677-687. 1990.

COMMISSION MODIFIES RECREATIONAL SPOTTED SEATROUT REGULATIONS

The Louisiana Wildlife and Fisheries Commission ratified a rule modifying recreational harvest regulations for spotted seatrout in a designated area of southwestern Louisiana.

Effective June 20, 2006, the creel limit in the designated area is reduced from 25 fish to 15 fish per person. The area affected by the rule is the same area that has a limit of no more than two fish exceeding 25 inches total length as part of the daily bag and possession limit.

The final rule reads as follows: Within those areas of the state, including coastal territorial waters, south of Interstate 10 from its junction at the Texas Louisiana boundary eastward to its junction with Louisiana Highway 171, south to Highway 14, and then south to Holmwood, and then south on Highway 27 through Gibbstown south to Louisiana Highway 82 at Creole and south on Highway 82 to Oak Grove, and then due south to the western shore of the Mermentau River, following this shoreline south to the junction with the Gulf of Mexico, and then due south to the limit of the state territorial sea, under the authority of the provisions of R.S. 56:325.1(A), the daily take and possession limit shall be 15 fish, regardless of where taken, with no more than two spotted seatrout exceeding 25 inches total length. Those spotted seatrout exceeding 25 inches in length shall be considered as part of the daily recreational take and possession limit.

All other applicable rules regarding the harvest of spotted seatrout established by the commission shall be in effect, including the existing size restriction that requires all spotted seatrout retained recreationally to be at least 12 inches total length.

MERCURY IN FISH: NOT A SIMPLE PROBLEM

The news about mercury contamination in fish has been anything but straightforward. Recently, the Consumer Reports organization advised pregnant women not to eat any canned tuna, which is generally considered a low-mercury seafood. At the same time, a series of studies conducted by the Harvard Center for Risk Analysis confirmed that the health benefits of consuming seafood outweigh any risk due to trace amounts of mercury in fish.

The Harvard studies were published in the November 2005 issue of the *American Journal of Preventive Medicine*, and concluded that for women of childbearing age, cognitive benefits can be achieved with virtually no negative impact on the developing child if the woman eats two servings a week of fish that are low in mercury.

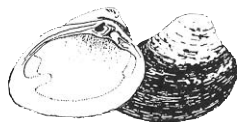
The Harvard researchers stated that if all consumers reduce fish consumption out of confusion about mercury, there will be serious public health consequences, notably higher death rates from heart disease and stroke.

In addition, other researchers have found that simply measuring mercury in food sources may not be a good indicator of possible toxicity. Selenium, which is also present in seafood at varying amounts, has protective properties. Selenium affects all aspects of mercury uptake in humans, including its transport, biogeochemical exposure, bioavailability, toxicological consequences and remediation. The extremely high affinity between mercury and selenium results in the sequestering of mercury and reduces its biological availability.

The bottom line is that the jury isn't in on the whole mercury case. People should be aware of the local mercury advisories: (<http://www.deq.louisiana.gov/portal/tabid/1637/Default.aspx>) and should be careful about consumption of fish that consistently carry significant amounts of mercury (such as shark, swordfish, king mackerel and tile fish). But most sources indicate that, in general, the benefits of seafood consumption far outweigh the risks.

Sources: Mercury in Tuna: New Safety Concerns. Consumer Reports, July, 2006.
 A quantitative risk-benefit analysis of changes in population fish consumption. Cohen, J.T, et al. *American Journal of Preventive Medicine*, November 2005; vol 29: pp 325-334.
 Health trade-offs from policies to alter fish consumption. Teutsch, S.M. and J.T. Cohen *American Journal of Preventive Medicine*, November 2005; vol 29: pp 324-325. A quantitative analysis of fish consumption and stroke risk. Bouzan, C., et al *American Journal of Preventive Medicine*, November 2005; vol 29: pp 347-352. A quantitative analysis of prenatal methyl mercury exposure and cognitive development. Cohen, J.T. *American Journal of Preventive Medicine*, November 2005; vol 29: pp 353-365. A quantitative analysis of prenatal intake of n-3 polyunsaturated fatty acids and cognitive development. Cohen, J.T., et al. *American Journal of Preventive Medicine*, November 2005; vol 29: pp 366-374. Fish: balancing health risks and benefits. Willett, W.C. *American Journal of Preventive Medicine*, November 2005; vol 29: pp 320-321. Fish, health, and sustainability. McMichael, A.J., and C.D. Butler. *American Journal of Preventive Medicine*, November 2005; vol 29: pp 322-323. A quantitative analysis of fish consumption and coronary heart disease mortality. König, A., et al. *American Journal of Preventive Medicine*, November 2005; vol 29: pp 335-346. Mercury: selenium interactions and health implications. Raymond, L.J., and VC Ralston. Seychelles Medical and Dental Journal, Special Issue, Vol 7, No 1, November 2004, 25-34.

COMMON CLAMS



The most common clam in Louisiana's coastal estuaries may be the Atlantic rangia clam, *Rangia cuneata*. This clam is so common, that until recent years, many roads and driveways were paved with shells of these clams instead of gravel. The resulting snow-white roads always amazed first-time south Louisiana visitors.

Rangia clams were heavily used as food by the native Indian tribes of coastal Louisiana. Their shell mounds, essentially their garbage dumps, still exist as small islands of firm land, often crowned with the live oak trees in a surrounding sea of soft marsh.

European settlers in south Louisiana made very little use of rangia clams as food, finding them to have a strong, muddy taste. A serious effort was made by Louisiana State University scientists and

commercial fishermen from St. Bernard Parish in the 1980s to solve the taste problem. The clams were harvested and placed in trays off of the mud bottom to allow them to purge themselves in a process called “relaying.”

Marketed as “Cajun Clams,” these shellfish were targeted at Atlantic Coast markets for littleneck clams. Relayed rangia clams proved to have a very good taste when eaten raw. However, cooking them caused them to develop a strong, musty flavor. In spite of much university research, this problem was never solved and the infant fishery finally disappeared.

Atlantic rangia are found from Maryland’s Chesapeake Bay waters south through the Gulf to Terminos Lagoon in southern Mexico. Its close relative, the smaller brown rangia clam, *Rangia flexuosa*, is found from Louisiana around the western Gulf to Terminos Lagoon.

Atlantic rangia can reach nearly 3 inches in size, while the brown rangia grows to only half that size. Both species are brackish water clams. The Atlantic rangia is most common in salinities of 5 to 15 parts per thousand (full strength seawater is 35 ppt). It is most common in low-clarity waters and in soft bottoms made up of a mixture of sand, mud and vegetation. Highest numbers are found at water depths less than 20 feet deep. Within that depth, Atlantic rangia are more common at 10-foot depths than in deeper waters.

Both rangia clam species are filter feeders, straining small living and dead plant and animal material from the water. Atlantic rangia also get food by eating bottom sediments and digesting the bacteria in the sediments.

A modern fishery for these two clams and the Carolina marsh clam, *Polymesoda caroliniana*, for human consumption does exist in Alvarado Lagoon in Mexico. There, about 450 people are licensed to fish for the clams. Groups of fishermen travel to the fishing grounds in small boats. Clam buyers typically share in boat expenses with the fishermen.

The fishermen cover their fingers with small rubber balloons to protect them from cuts from the shells. The clams are harvested by fishermen who in the water and feel for them in the bottom with their fingers. The fishermen put their harvested clams in floating plastic boxes attached to their waists by a cord. In five hours, a fishermen will harvest an average of 1,500 clams, weighing 130 pounds.

Fishermen receive 32 to 39 cents per pound for Atlantic rangia and less for the other two species. Nearly all the harvested clams are trucked to Mexico City, while smaller amounts are sent to markets in and near Veracruz City. Retail prices for Atlantic rangia in public markets are 70 cents to a dollar per pound.

In spite of their muddy taste, fishermen’s families eat them about once a week. A traditional food preparation is “arroz a la tumbada,” a soup made with the clams and boiled rice. These soups may also contain blue crabs, shrimp, oysters, fish or squid, besides the clams.

The Mexican government has increased its support for the efforts of fishermen’s groups to develop the clam fisheries further, with the goal being to improve conditions in the fishing villages. Under the initiative, clam fishermen are encouraged to propose ideas and marketing strategies to increase their incomes.

Source: *Rangia and Marsh Clams, Rangia cuneata, R. Flexouosa, and Polymesoda caroliniana in Eastern Mexico: Distribution, Biology and Ecology, and Historical Fisheries.* Armando T. Wakida-Kusunoki and Clyde L. MacKenzie, Jr. Marine Fisheries Review 66(3). 2004.

THE GUMBO POT

Shrimp Stew

Submitted by JoPaula Lantier

Ingredients:

1 pound shrimp (or thereabout), peeled, deveined	garlic (tablespoon)
onions (1 large or 2 small)	3 cups of boiling water
(1/2) bell pepper	5 chicken bouillon cubes
celery (2 ribs)	Tony's TM seasoning or (red pepper and salt)

Instructions:

Make a roux (oil and flour) with about 3/4 cup of flour and 3/4 cup canola oil. Brown in a pot large enough to accommodate the ingredients (above). The roux will need to be stirred constantly until it is the color of peanut butter. The roux for shrimp stew is much lighter than the roux used for gumbo.

Have your vegetable mix chopped and ready to throw in the pot. Also have your water (with chicken cubes) boiled and ready to pour. After the roux is peanut butter-colored, put your veggies in the pot and stir making sure that the roux is not stuck to the bottom of the pot. Gradually start adding the hot water/chicken cube mix. You can add the Tony's anytime, but well before you put the shrimp in it. Stirring continuously.

Keep this mixture on a low to medium-low heat stirring every 10-15 minutes, scraping the bottom and sides of the pot. After this has simmered for 2-3 hours, add your peeled shrimp and cook for about another 20-30 minutes. Serve over rice. This will serve 5 hearty portions.

For more information, contact your local extension agent:

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