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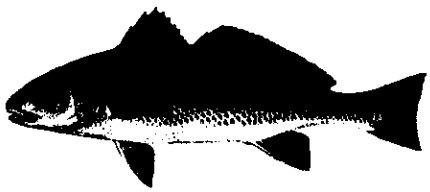
September 2, 2003 Volume 27, No. 9

BULL REDS

Late summer and early fall usually signal the time for Louisiana's annual run of large redfish, or "bull reds" as they are usually called. During this period, the offshore schools of large redfish move nearer to the coast, especially to areas near passes, for their annual spawn. Redfish spend the first years of their lives in inshore estuaries, feeding and growing rapidly. By 4 or 5 years of age, almost all of them have left these waters and joined the offshore schools of adult redfish.



Age and growth research done in the late 1980s by LSU biologists on redfish captured from offshore schools provides interesting information. In this study, the biologists read the growth rings in the otoliths (ear bones) of 1,690 redfish taken offshore by purse seine, gill net and hook and line. The fish were taken from waters between northeast Texas and western Alabama, with most of the fish being captured off the Louisiana coast. The fish ranged in size from 22 to 42 inches in length. The oldest female was 36 years old (40 inches and 26.3 pounds) and the oldest male was 37 years old (38 inches and 23.1 pounds).

Female redfish were significantly larger than males, not because they lived longer, but simply because they grew faster throughout their lives in offshore waters. They found a few 2-year-old redfish in their samples from offshore. At that age, females averaged 27.6 inches and about 9 pounds. Males at that age averaged 26.8 inches and a little over 8 pounds. The size gap between the sexes remained fairly small until 9 years old. At that age, females averaged 33.2 inches and 16.7 pounds and males averaged 32.4 inches and 15.1 pounds. Then the gap widened.

By age-15, the growth rate for both sexes began to slow, but the growth rate for males slowed even more than for females. At that age, females averaged 36 inches, and 22 pounds, and males averaged 34.4 inches and 18.7 pounds. By 30 years old, the average size for females was calculated at 39 inches and 29.3 pounds. Males averaged 35.6 inches and 22.2 pounds and their growth rate had become extremely slow.

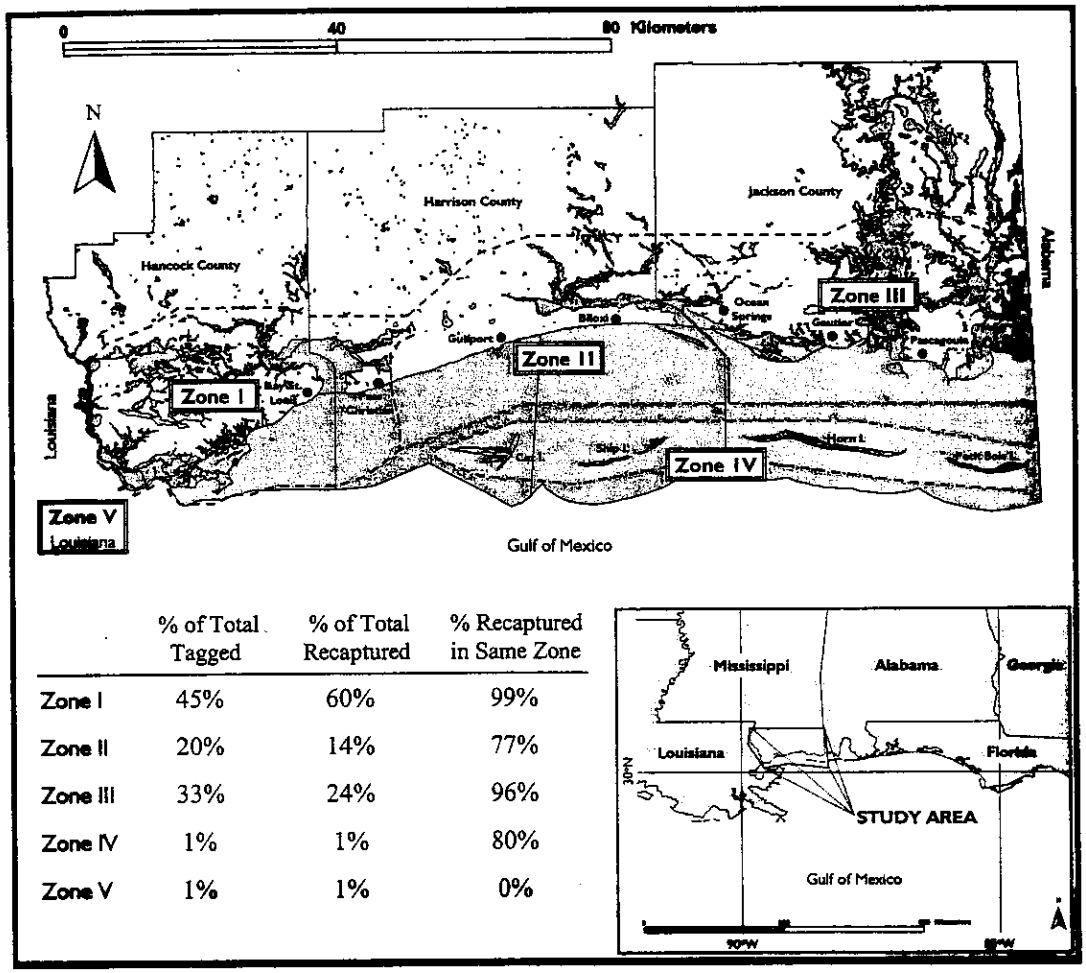
The biologists noted that it was impossible to determine the age of a fish by its size, because the high variation in size of fish at any age provides a great deal of

overlap. For example, at age 21, the largest fish was a female at 42.4 inches and 34 pounds and the smallest fish was a male at 31.2 inches and 15 pounds.

Source: *Age and Growth of Red Drum, Sciaenops ocellatus, From Offshore Waters of the Northern Gulf of Mexico.* Daniel N. Beckman, Charles A. Wilson and A. Louise Stanley. Fishery Bulletin: Vol. 87, No. 1.

MISSISSIPPI SPECKLED TROUT

As in Louisiana, the spotted seatrout (*Cynoscion nebulosus*) is a very popular estuarine fish in Mississippi. In a project by the Gulf Coast Research Lab and the Mississippi Department of Marine Resources, biologists supplied volunteer anglers with tags to tag released speckled trout. The fishermen were asked to record the tagging date, release location and length of each fish. Each tag had a contact telephone number on it to report recaptures. During the 1995-99 effort, 505 anglers tagged and released 15,206 speckled trout in Mississippi coastal waters and 406 were reported as recaptured.



	% of Total Tagged	% of Total Recaptured	% Recaptured in Same Zone
Zone I	45%	60%	99%
Zone II	20%	14%	77%
Zone III	33%	24%	96%
Zone IV	1%	1%	80%
Zone V	1%	1%	0%

The researchers divided the state into 4 zones for analyzing the data. As can be seen above, the vast majority of tagged fish were recaptured in the same zone as they were tagged in. Over 92% of the fish moved less than 6 miles and 82% moved less than 1.8 miles.

Only 8% of the 406 recaptured trout had moved more than one geographic zone east or west. Most of this movement was westward, with 5 of the fish moving into Louisiana waters and one from Zone III, near Gautier, moving to Zone 1 in Bay St. Louis. Seven speckled trout were recaptured more than once (one was caught 3 times), and all were caught at the same location that they were tagged at.

During the study, 16% of the tagged and released fish, and 29% of the recaptures were larger than the 14-inch minimum size. Of these larger fish, 84% moved less than 6 miles and 61% moved less than 1.8 miles. Four specks over 24 inches long were tagged and released. None of these were recaptured.

Eighty-one percent of the recaptures were made within 8 weeks of tagging, and only 2 fish were recaptured more than 1 year after tagging, at 54 weeks and 59 weeks. One fish had moved 10.8 miles and the other was recaptured exactly where it was tagged. For fish at liberty at least 26 weeks, 82% had moved less than 9 miles and 65% moved less than 6 miles.

The study showed very little seasonal movement. This may be at least partially due to the fact that the study relied on volunteer anglers. During the January-April period, fishermen were largely inactive, as 91% of both tags and recaptures were made during May-December.

The researchers concluded that their results showing limited movement for speckled trout agreed with findings in the other Gulf states. They added that this and genetic work recently done indicates that spotted seatrout exist as separate subpopulations across the Gulf states and should not be managed as a single stock.

Source: *Movements of Spotted Seatrout (Cynoscion nebulosus) in Mississippi Coastal Waters Based on Tag-Recapture.* J. Read Hendon, James R. Warren, James S. Franks, and Michael V. Buchanan. Gulf of Mexico Science, Vol. 20 (2), 2002.

OFFSHORE CHARTERBOAT MORATORIUM PUSHED BACK

NOAA Fisheries (National Marine Fisheries Service) has revised the eligibility process for Gulf Charter Vessel/headboat Permits. Since July 29, 2002, a moratorium has been in place on such permits for vessels that would fish for Gulf reef fish or Gulf coastal migratory pelagics. Included in these groups are snappers, groupers, cobia, jacks and mackerels.

This moratorium has been temporarily lifted and new applications are being accepted. All applications for the permit must be submitted (postmarked or hand-delivered) no later than September 15, 2003. Application forms are available from the NOAA Fisheries Regional Office in St. Petersburg, FL, 727/570-5305. People who previously applied for a permit and were informed by NOAA Fisheries that they were eligible, or those who received a permit prior to the moratorium, need not and should not reapply.

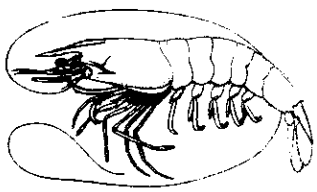
Also, extended are the expiration dates of valid permits until November 13, 2003. After that date, the only valid charter vessel/headboat permits for Gulf reef fish or Gulf coastal migratory pelagic fish are those that have been issued under the moratorium.

The new moratorium period, beginning September 16, during which no new permits will be issued, has also been extended to June 16, 2006. The extension was made to account for the delay caused by this reopening of the application period. For more information, call Phil Steele at 727/570-5305.

SHRIMP OVERFISHING — MEXICO'S STORY

It is a commonly held belief that shrimp cannot be recruitment overfished. Recruitment overfishing is when so many of a species are harvested that not enough parents are left to produce the next generation in full strength. This is compared to "growth overfishing" which simply means that a species is being harvested at too small of a size to get the largest or best harvest from the resource. Shrimp are thought to be unlikely to become growth overfished because of their short life span, high fecundity (egg production), and because fishing for them would become unprofitable before the danger point was reached.

The first evidence that at least some species of shrimp can become recruitment overfished occurred with the tiger prawn (a white shrimp-like species) in Australia. More recently, Mexican scientists have documented what they feel is recruitment overfishing in white shrimp *Litopenaeus setiferus*, the same species that occurs in Louisiana.



White shrimp rank third in importance in Mexico's Gulf of Mexico shrimp fisheries, behind brown shrimp, *Farfante penaeus aztecus* and pink shrimp, *Farfante duorarum.* The white shrimp fishery is concentrated in Campeche Sound, where the fishery began in 1947. Juvenile (young) white shrimp are concentrated in Términos Lagoon. A small-boat fishery using small trawls targeted small white shrimp (67-215 count) in these nursery grounds until 1974, when it was officially banned and only offshore fishing was allowed. (In spite of the inshore ban, a substantial illegal trawl fishery still occurs in the lagoon.)

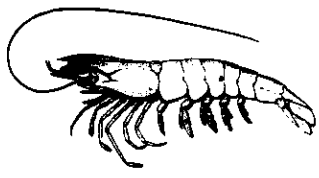
White shrimp harvests peaked at their highest levels between 1973 and 1980 at 2.6 – 4.8 million pounds, with catch variations due to river discharges. Then in 1983, a new small-boat fishery developed, using monofilament gillnets of 2½ to 2¾-inch mesh sizes. The nets were fished with small boats in nearshore waters between 12 and 72 feet deep, the same waters trawled by the offshore fleet. The nets are allowed to drift with currents, so they catch shrimp while they sweep the bottom.

The offshore trawl fishery catches shrimp from 67 count (head-on) to under 10 count, while the drift net fishery catches no shrimp smaller than 37 count and few smaller than 25 count. Shrimp 15 count and larger are far more common in the drift gillnet fishery than the offshore trawl fishery. Mexican fishery scientists point out that the drift gillnet fishery focuses on spawners and that this fishing pressure in addition of the offshore trawl fishery and the illegal inshore trawl fishery. By 1985, the white shrimp harvest declined to 1.1 million pounds. The decline could not be tied to changes in river discharges, but rather seemed the direct result of fishing pressure.

In 1986-87, fishing pressure eased and white shrimp populations increased. By 1988, the size of the drift gillnet fleet increased and applied more fishing pressure. White shrimp landings plummeting downward, finally getting as low as 200 thousand pounds in 1992. Catches remained low after.

Mexican fisheries biologists concluded "Evidently, penaeid shrimp recruitment overfishing can no longer be considered a theory." The inshore shrimp fishery is considered part of the problem because each pound of white shrimp caught in the estuary causes a decline of 2.8 pounds of larger, more valuable per pound shrimp catch offshore. The drift gillnet fishery can continue to exert very high pressure on white shrimp stocks because it is very profitable. Gear and vessel investment costs are low, as are operational costs, and with the large sizes of shrimp caught in the fishery, returns are high.

The biologists did note one bright spot; their monitoring showed that when fishing pressure declines, white shrimp populations can recover very quickly. They estimate that to maintain harvests in the "normal" range, that white shrimp should not be fished below 17-20% of what an unfished population would be.



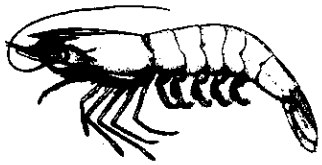
Pink shrimp were once 70-90% of the shrimp catch in the southwestern Gulf of Mexico, with the fishery focused off of Campeche. An inshore fishery for pink shrimp also occurs in the protected coastal waters of Campeche and Yucatán. The offshore fishery is a trawl fishery and the inshore fishery uses two types of non-moving gear to catch pink shrimp during their migration from the estuary to the sea, plus two types of mobile gear.

Pink shrimp harvests began in the 1950s and grew rapidly to maximum levels in the 1970s. Inshore harvests were small and mostly for household use until the beginning of the 1980s, when they increased to commercial levels. Overall landings

dropped to lower levels after 1979, but were somewhat stable until 1986. Then, catches declined sharply, to about 20% of the former averages.

Scientists blame much of the pink shrimp decline on the increase in inshore shrimping, which focuses on 3,400 count to 36 count shrimp, although 31,300 to 8 count shrimp are also caught. Their estimate is that each pound of pink shrimp caught in estuaries results in an average loss of 9 pounds of larger shrimp caught offshore. Because of the higher value of large shrimp, the economic loss is 28 to1.

Other lesser factors are also pointed to as contributing to the decline: 1) deterioration of the fishing fleet resulting in less fishing, 2) loss of fishing areas due to expansion of the offshore oil industry, 3) deterioration of shrimp nursery areas, and 4) a shifting in the inshore fishery to smaller shrimp sizes. It was also noted that some unknown factor may have caused a decline in pink shrimp over a large area of the central Atlantic during the 1980s.



Brown shrimp are the most important species in the Mexican waters of the northwestern Gulf, where they make up 90% of the shrimp catch. The brown shrimp fishery is in better condition than either the white or pink shrimp fisheries. Like for pink shrimp, the brown shrimp fishery began in the 1950s and grew rapidly until the 1970s. Since then it has shown a gradual increase that seems to work in cycles.

Since the beginning of the fishery, it has supported both an inshore and an offshore fishery, with inshore landings providing almost half of the total catch. The harvest of 1 pound of small brown shrimp inshore is projected to reduce the catch of larger shrimp offshore by 3 pounds. In 1993, Mexican scientists began experimenting with a closed season both inshore and offshore which appeared to increase shrimp harvest somewhat. Because of the relative health of the brown shrimp fishery, it is supporting much of the Mexican Gulf shrimp fleet.

Sources: *Impact of Artisanal Fishery on Production of the Pink Shrimp Penaeus Farfantepenaeus duorarum Burkenroad, 1939.* Adolfo Gracia. Ciencias Marinas (1995), 21 (3): 343-359. *White Shrimp (Penaeus setiferus) Recruitment Overfishing.* Adolfo Gracia. Mar. Freshwater Res., 1996, 47, 59-65. *The Effects of Artisanal Fisheries on Penaeid Shrimp Stocks in the Gulf of Mexico.* Adolfo Gracia and Ana Rosa Vázquez-Bader. Fishery Stock Assessment Models. Alaska Sea Grant College Program. AK-SG-98-01, 1998. *Shrimp Fisheries in the South Gulf of Mexico: Present and Future Management Alternatives.* Adolfo Gracia and Ana Rosa Vázquez-Bader, in *The Gulf of Mexico Large Marine Ecosystem: Assessment, Sustainability, and Management.* H. Kumpf, D. Steidinger and K. Sherman (Eds.) Blackwell Science, Berlin: 205-234. 1999.

STRIPER STRIFE

Striped bass have been stocked in over 100 reservoirs in the southern United States since the 1970s. Originally, they were native to the coastal waters and rivers from New England to Florida and in the northern Gulf from the Florida Panhandle to eastern Louisiana, although the original Gulf Coast strain is almost extinct. When the Santee-Cooper River system in South Carolina was dammed, it was found that striped bass could survive in reservoirs without access to coastal waters. Many reservoirs develop very large populations of shad, especially gizzard shad, that grow too large for largemouth bass to eat. Striped bass grow large enough to eat these shad and are open-water fish, as are shad. With that realization, the boom in stocking striped bass in reservoirs began. Although in most reservoirs, striped bass do not reproduce and have to be continuously restocked, in a handful, including Santee-Cooper, the fish can spawn successfully in the rivers above the reservoirs.

The striped bass "success story" has not been without controversy, however. In some reservoirs, anglers for native species have suspected that the stripers feed on native gamefish and/or compete with them for food. The hottest controversy is in Norris Reservoir in Tennessee. The reservoir was dammed in 1939 and experienced the usual explosion in fish after impoundment, but by 15 years later, fish populations showed a dramatic decline. Such a decline is normal in most reservoirs, but in Norris, it was dramatic. In the 1940s, saugers were so plentiful that biologists suggested allowing anglers to use gill nets to catch more of them. By 1975, the sauger fishery was considered "insignificant." Walleye, black bass and crappie (sac-a-lait) also declined. Anglers concerned with declining gamefish populations met with Game and Fish Commission biologists in 1970 to express their concern. Before that meeting in 1966, striped bass stocking began at a rate of almost 9 fish per acre. The stocking rate was increased to 14 stripers per acre in 1975, and to 30 per acre in 1991.

In the meantime, angler concerns increased. In 1988, another meeting was held with the Tennessee Wildlife Resources Agency (TWRA) to express more concern. In response, TWRA reduced crappie limits to 20 per day and began stocking crappie. However, bass and crappie populations didn't improve and fishermen's concerns were giving way to anger with TWRA. Agency biologists cited many studies that showed that striped bass in reservoirs feed almost totally on shad, and they formed a task force of biologists and interested parties to work on the issue.

However, most of the decisions of the task force were pushed by TWRA biologists, and in 1994, fishermen convinced that stripers were the cause of the decline in other gamefish, formed the Tennessee Sportsman's Association (TSA), with over a 1,000 dues-paying members. Concerns expressed over 20 years before hardened in anger that made compromise very difficult. TSA conducted an anti-TWRA campaign, involving the press, billboards and bumper stickers.

In 1995, TSA was behind two bills in the legislature that would have stopped striped bass stocking and lifted all limits on their catch. Both bills failed, but in 1995, TWRA put a moratorium on striped bass stocking. In 1996, three more such bills were introduced. Again, the bills failed, because the Wild Turkey Federation, the Tennessee Striped Bass Association, Quail Unlimited, the Tennessee Smallmouth Bass Association, and the Tennessee Conservation League campaigned that fish and wildlife management decisions were best left to biologists, not politicians. The politicians agreed.

In 1966, TWRA commissioned a study by out-of-state biologists on striped bass interactions with other fish in Norris Reservoir. Their report stated that striped bass preyed very little on other gamefish in the reservoir during the period of their study. The report did state that it was possible that striped bass would compete with other gamefish for food after periods of winter shad kills.

After the study, TWRA formed the Norris Lake Fishery Advisory Committee, composed of equal members from all fisheries interests. The group developed a plan that included resuming stocking of stripers at a reduced rate, increased stocking of walleye and crappie, created more stringent limits on largemouth bass, smallmouth bass, and sunfish, and more liberal limits on spotted bass.

Although fisheries management in the reservoir is still controversial, some of the controversy has eased because the close involvement of all user groups by TWRA. The Norris Reservoir conflict is seen as justifying the need for fish and game management agencies to pay more attention to the human part of modern fisheries management. Agencies can only ignore the desires of anglers, no matter how ill-informed, at their own risk.

Source: *Angler Conflicts in Fisheries Management: A Case Study of the Striped Bass Controversy at Norris Reservoir, Tennessee.* T.N. Churchill, P.W. Bettoli, D.C. Peterson, W.C. Reeves and B. Hodge. Fisheries. Vol 27, No 2. American Fisheries Society. 2002

MORE ON STRIPED BASS AND CRAPPIE

One of the lakes in which striped bass have been stocked and are now naturally reproducing in is Weiss Lake in Alabama. The lake may also be the most famous crappie lake in the state. Local guides and resort owners promote Weiss Lake as "The Crappie Capitol of the World." As good as the crappie fishing is, local fishermen began expressing concern that naturally reproducing stripers were harming the crappie population. They feared that the stripers were feeding on the crappie and/or competing with them for food.

To answer the question, Alabama biologists conducted a study on the food habits of the lake's stripers and the condition of the crappie population. They used gill nets to capture 463 striped bass over a 2-year period and used trap nets to catch a large number of crappie over a 10-year period.

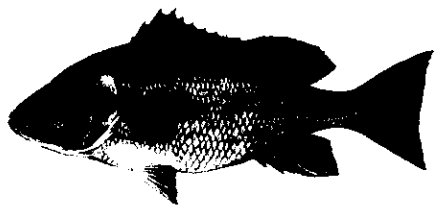
Of the 463 striped bass stomachs, 355 had 2,699 food items in them. Shad made up 2,522 (93.4%) of the items, followed by 6 crappie, 5 sunfish (bream), 3 minnows, 2 gaspergou, and 1 crawfish. Only 160 of the food items were too-digested to be identified. Clearly, the stripers were not feeding on crappie to any great degree. However, stripers could still have been impacting crappie by competing with them for food.

To answer that question, the biologists compared crappie caught before 1993, when stripers first began naturally reproducing in any numbers, to crappie taken after 1993. No clear pattern of slower growth was found for either period. The biologists compared crappie length to weight for both periods, as an indication of their condition or "chunkiness". Crappies from the period after 1993 were actually heavier for their length than those before 1993. Other studies have shown that young-of-the-year crappie feed on entirely different food items than young of the year striped bass.

The biologists concluded that striped bass were having no negative effect on crappies. They pointed out that crappie populations in Weiss Lake, as they do in many places, can vary tremendously from year to year, depending on the success of previous spawns.

Source: *Food Habits of Striped Bass and Their Influence on Crappie in Weiss Lake, Alabama.* Jeffrey W. Slipke, Stephen M. Smith and Michael J. Maceina. Proceedings of the Fifty-fourth Annual Conference, Southeastern Association of Fish and Wildlife Agencies. 2000.

SNAPPER SCIENTISTS SEEK HELP



Louisiana State University scientists are asking for assistance from red snapper fishermen off the Louisiana coast. In an effort to learn more about the movement patterns of the fish, the biologists caught 125 red snapper and implanted electronic transmitters in them.

Each transmitter emits its own unique "ping" that allows the biologists to track it. The snappers were tagged in the South Timbalier "Circle Rigs" area, 30 miles south of Belle Pass, LA. Seven of the rigs in the circle and one nearby artificial reef have had receivers put on them to track the movements of the fish.

The biologists are asking for assistance from fishermen. Each fish with a transmitter also has an external green streamer tag with instructions and a telephone number on it. If a tagged fish is caught and seems to be in good shape, not gut-hooked and the stomach is not out of its mouth, the biologists are asking that the fish be returned to the water. If the tagged fish is injured, and is of legal size, it should be kept

and the telephone number called. These fish with transmitters in them should not be frozen. Any undersized fish should be returned to the water, regardless of their condition.

UNDERWATER OBSTRUCTION LOCATIONS

The Louisiana Fishermen's Gear Compensation Fund has asked that we print the coordinates of sites for which damage has been claimed in the last several months. The coordinates are listed below:

Loran Sites

27475	46969	ST MARY
27626	46916	ST MARY
28570	46894	JEFFERSON
28725	46865	JEFFERSON
28792	46787	JEFFERSON
27519	43929	IBERIA

Lat. & Long. Sites

29 03.180	90 25.440	TERREBONNE
29 04.510	90 53.970	TERREBONNE
29 11.446	91 06.250	TERREBONNE
29 11.449	90 16.487	LAFOURCHE
29 43.200	89 48.300	ST BERNARD
29 51.985	89 42.548	ST BERNARD
29 55.546	93 20.152	CAMERON
29 59.930	89 36.890	JEFFERSON
30 00.520	89 42.800	JEFFERSON
30 04.780	90 04.220	ORLEANS
29 03.770	90 35.160	TERREBONNE

Lat. & Long. Sites

29 04.703	90 14.476	LAFOURCHE
29 05.180	90 11.690	LAFOURCHE
29 08.210	90 35.760	TERREBONNE
29 11.249	90 51.343	TERREBONNE
29 14.794	90 34.646	TERREBONNE
29 15.760	89 37.240	PLAQUEMINES
29 15.760	89 37.240	PLAQUEMINES
29 18.345	89 23.750	PLAQUEMINES
29 34.041	89 40.487	PLAQUEMINES
29 36.351	89 33.771	PLAQUEMINES
29 43.792	93 23.362	CAMERON
29 44.502	93 40.588	CAMERON
29 50.460	89 17.690	ST BERNARD
29 51.317	89 40.143	ST BERNARD
29 52.000	89 37.600	ST BERNARD
29 53.938	89 16.332	ST BERNARD
29 58.510	89 22.550	ST BERNARD
29 13.710	89 26.550	PLAQUEMINES
29 41.867	89 34.752	ST. BERNARD
9 38.122	89 24.284	ST. BERNARD

TUNA/SWORDFISH LONGLINERS NEED V.M.S.

Effective September 1, 2003, all vessels that are permitted to fish for Atlantic Highly Migratory Species with pelagic longline gear on board were required to use vessel monitoring systems (VMS). The requirement had been suspended due to a lawsuit, but will now be reinstated following a court ruling. An approved VMS unit consists of both a mobile transceiver unit placed on the vessel and the communications service provider that supplies the wireless link between the unit on the vessel and the shore-side data user. To obtain copies of the list of NOAA Fisheries-approved VMS mobile transmitting units and communications service providers, call Jonathan Pinkerton, National VMS Program Manager (301) 427-2300.

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THE GUMBO POT

The Patriot

This recipe has quite a pedigree. Its creator, Larry Roussel, was honored by the Louisiana Senate after he cooked it for "A Taste of the Senate". It took first place at the First Annual LSU Tailgate Cookoff in 2002 and first place in the Seafood Category at the North American Wild Game Cookoff in Lafayette. He has prepared it at numerous functions, always receiving allocades. Outdoors media personality Don Dubuc calls it a "giant killer", saying that he has seen Roussel knock off in competition some of the best chefs with their fancy portable kitchens. Roussel calls it "The Patriot" because it uses RED snapper, WHITE shrimp and BLUE crabs. One final note, the LeGout cream soup base has to be the hardest-to-find ingredient I have ever needed. I could not find a single top-end grocer or retail food supply place in the New Orleans area that carried it. Even on the internet, I could only find monster-size containers of it. I tried substituting cream cheese, but it didn't work. Roussel says that he only knows of one place in Louisiana to get it, Veron's Supermarket on Main Street in Lutcher 225/869-3731. It is worth the trouble for this delicious dish.

1	stick butter	1	small diced Creole onion
6	8-oz red snapper fillets, blackened redfish seasoning	1	pinch of salt
		1	stick butter
1	cup water	1	lb jumbo lump blue crab-meat
1	1.75-oz bag LaGout cream soup base		
1	lb peeled white shrimp		salt

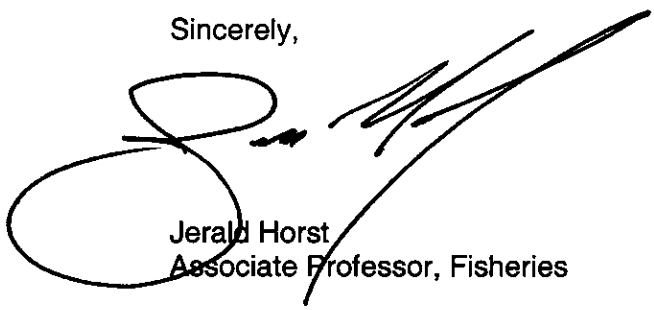
RED DIRECTIONS – Melt one stick of butter in a skillet. Dry each red snapper fillet with a paper towel and thoroughly coat each fillet with the melted butter. Evenly sprinkle the blackened redfish seasoning on both sides of each fillet. Place the fillets in the hot skillet and pan fry for 3 minutes, then flip and pan fry the other side for 2 minutes.

WHITE DIRECTIONS – Pour one cup of water into a skillet. Using a whisk, gradually blend cream soup base into the water until the mixture is smooth (about one minute). Stir ingredients as you add one pound of peeled white shrimp and one small diced Creole onion into the sauce. Add a pinch of salt. Cook on medium heat for 10 minutes, stirring often.

BLUE DIRECTIONS – Melt one stick of butter in a skillet. Place the crabmeat into the melted butter. Add a pinch of salt. Using a wooden spoon, stir the crabmeat for 1 minute or until it is warm.

SERVING DIRECTIONS – Place the red snapper fillets onto red, white and blue plates. Generously spoon the white shrimp sauce onto the fish fillets until the entire fillet is covered. Very generously top the entrée with jumbo lump crabmeat. Garnish with an American flag on a toothpick. Serves 6.

Sincerely,



Jerald Horst
Associate Professor, Fisheries