

Cooperative Extension Service 500 Main Street, Room 314 Franklin, LA 70538 (337) 828-4100, Ext. 300 Fax: (337) 828-0616 gthomas@agctr.lsu.edu Web site: <u>www.lsuagcenter.com</u>

> Research and Extension Programs Agriculture Economic/Community Development Environment/Natural Resources Families/Nutrition/Heatth 4-H Youth Programs

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MAJOR RED SNAPPER RESTRICTIONS PENDING

In August, the Gulf of Mexico Fishery Management Council met in Baton Rouge to consider new regulations to rebuild red snapper populations. However, the council, composed of representatives from management agencies and commercial and recreational fishing interests, voted 10 to 5 to postpone any decisions until at least the end of 2006. The main reason for the delay was uncertainty about how last year's hurricanes altered the fishery and the overall harvest.

The Gulf of Mexico Fishery Management Council is one of eight regional fishery management councils across the U.S. The Gulf council manages the fisheries in the exclusive economic zone (federal waters) of the Gulf of Mexico. States with voting representation on the Gulf council include Texas, Louisiana, Florida, Alabama and Mississippi.

At the August meeting, the council considered a recent study showing that existing measures to rebuild the red snapper population are not working. The stock is at only 3 percent of historical population level and the "rate of removal" each year remains too high to allow the population to recover. Red snapper stocks have been considered over-fished since 1989. The council postponed decisions on a subcommittee proposal that included several options: a two-fish bag limit (now four); a shorter season (May 15 through Sept. 30 instead of April 15 through Oct. 31); a 14-inch-minimum size limit for recreational anglers (16 inches now); a 13-inch commercial minimum size limit; or adjusting the quota for recreational and commercial fishermen.

The council has also delayed addressing the loss of juvenile red snapper to shrimp trawling. Fish Excluder Devices (FEDs) are required in the nets of trawlers in federal waters to achieve a 40 percent reduction in red snapper mortality from trawls, part of the rebuilding model. However, the actual number of juvenile snapper saved has been closer to 12 percent, and decisions about new gear requirements and/or closed areas to trawling will have to be made. One possibility is closing certain areas to trawling after a specified number of "days at sea" are exceeded by the fleet.

The idea behind the reduction in size limits is to reduce mortality on "released" undersized fish. Studies show (and many anglers have witnessed) that most snapper that are caught at depth have little chance for survival. Damage to internal organs from decompression is often severe in fish caught at the depths frequented by snapper. Anglers have often wondered how killing several undersized fish for each retained fish could possibly be good for the population. By reducing the size limit to 14-inches, anglers would be retaining most of the fish that they now see floating off dead under the current regulations.

A State Partner in the Cooperative Extension System

The LSU Agricultural Center is a statewide campus of the LSU System and provides equal opportunities in programs and employment. Louisiana State University and A. & M. College, Louisiana parish governing bodies, Southern University, and United States Department of Agriculture cooperating.

However, many recreational fishing groups are vehemently opposed to the possible two-fish bag limit. They argue that a limit this low will reduce interest to the point that few trips will be made. Many people can't justify a long run in a private boat or the cost of a charter unless they feel they have the chance to catch more than two fish.

At the same time, some conservation groups are incensed that the council is still postponing the steps needed to rebuild snapper populations. The timetables for rebuilding over-fished stocks are established in the Magnuson-Stevens Fishery Conservation and Management Act, but in the case of red snapper in the Gulf, these requirements have not been met.

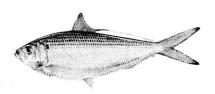
NOAA Fisheries officials have indicated that federal regulators may have to step in where the council has stopped. Overall, the recreational and commercial fishing take of red snapper needs to be reduced by 35 percent and trawl bycatch mortality needs to drop 28 percent to get the fishery in line with requirements. Federal regulators are required to comply with Magnuson-Stevens Act rules that put restoration of depleted fish stocks on a strict timetable, though some consideration may be given to economic and social impacts.

No matter which options become regulations, it is certain that the courts will be involved. Representatives of both the shrimp industry and charter fishing groups have promised to pursue court intervention if the proposed regulations that most affect their livelihoods are implemented. All the while, environmental groups are demanding immediate federal action to protect red snapper populations.

SARDINES, ANYONE?

The Atlantic thread herring (*Opisthonema oglinum*) and the scaled sardine (*Harengula jaguana*) are two of the several sardine-like fishes in the Gulf of Mexico. Both are members of the herring family, Clupeidae, as are the Spanish sardine and all three Gulf species of menhaden.

Clupeids are a lot less glamorous than predator fishes such as marlins, tunas, jacks and cobia. Yet they, along with members of the family Engraulidae (anchovies), are the foundation for most of the pyramid of fish life in the Gulf. Herrings and anchovies feed on microscopic, one-celled plants (phytoplankton) and very tiny animals (zooplankton). Then they in turn became a food source for the many predators of the sea.



The two species resemble each other, being deep-bodied and slab-sided, predominantly silver in color, with a black spot on each side behind the gill cover. The Atlantic thread herring is easy to separate from the scaled sardine by having a long thread-like extension on its dorsal (back) fin. It carries many local names, including hairyback, greenie, greenback, thread or shiner.

Thread herring grow to 4-8 inches in length, typically reaching a length of 5 1/2 inches their first year, when they mature. Growth is very slow after their first year, and few live more than three years.

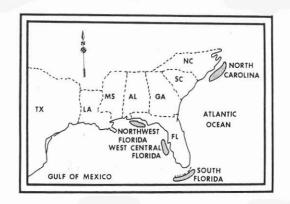
Like menhaden, thread herring travel in dense schools, typically in the top 10 feet of water in waters less than 130 feet deep. They seem to prefer waters that are "bluer," with higher salinities and higher temperatures than menhaden. Some quantities are caught by menhaden purse seine boats and are reduced with menhaden to fish meal and oil. Although purse seines are the tool of choice for

commercial harvest, thread herring are more difficult to catch then menhaden, as their schools travel faster and are more agile.

Recreational harvest of thread herring for bait can be important locally. In Florida it is estimated that 14 percent of the total harvest of thread herring is made by recreational fishermen.

Scaled sardines, most often called pilchards or white bait, lack the thread-like dorsal fin of the thread herring. Also, they have a more brassy back color, compared to the greenish back of the thread herring.

Scaled sardines grow to a length of about 5 inches their first year and 6 inches by age three. Females can mature by 4 inches and those spawned early in a year may spawn before fall in that same year.



In spite of being very common in the Gulf of Mexico, the scaled sardine is of only minor commercial importance as bycatch in the purse seine fishery. However, the potential exists for huge harvests. In 1977, a scientific estimate pegged the potential Gulf harvest of scaled sardines as 90-200 million pounds per year.

The scaled sardine is an enormously popular bait species with recreational fishermen on the Gulf coast of Florida. Some fishermen swear that they are one of the greatest of all live baits for most predatory fish.

They are a difficult fish to keep alive in bait shop tanks, so most fishermen catch their own. Scaled sardines are easy to attract with chum, such as oatmeal, grains, bread or canned sardines. When they become concentrated, fishermen catch them with cast nets, sabiki rigs or pilchard rings. Pilchard rings are a series of interlocking rings made of leader material. The fish became wedged or gilled as they try to swim through the rings.

Sources: Age and Growth of the Scaled Herring, Harengula jaguana, from Florida Waters, as Indicated by Microstructure of the Sagittae. Daryl J. Pierce, Behzad Mahmoudi and Raymond R. Wilson Jr. Fishery Bulletin 99: 202-209. 2001. Atlantic Thread Herring, Opisthonema oglinum. Florida Fish and Wildlife Commission. 2003. Biology and Fishery for Atlantic Thread Herring, Opisthonema oglinum along the North Carolina Coast. Joseph W. Smith. Marine Fisheries Review 56(4). 1994

SCIENTIFIC MINDS TO PRIORITIZE GULF ISSUES

Spread out along 1,631 miles of coastline, scientists studying the Gulf of Mexico are interested in similar topics: seafood safety, fisheries, wetlands restoration and the balance between conservation and development. Yet many are unfamiliar or unaware of complimentary research being conducted in neighboring states. Now, one effort will bring them and other stakeholders together to plan and coordinate marine research in the Gulf region.

Planning, Prioritizing, and Implementing Gulf of Mexico (GOM) Regional Marine Research and Information Needs begins this summer and will continue through 2011. By the end of 2008, a strategic research plan will be completed. Plan implementation will begin in 2009.

With a \$600,000 grant, the four Sea Grant College programs along the Gulf (Texas, Louisiana, Mississippi-Alabama and Florida) are spearheading this effort to create the regional research and information plan. The majority of the funding is coming from the National Sea Grant Office, a federal government-university partnership program under the umbrella of the National Oceanic and Atmospheric Administration (NOAA).

The four Sea Grant programs will work with state and federal agencies, non-profits and private industry along the Gulf to prioritize research and information needs and implement a strategic plan. They also will consider ways to leverage their financial resources and in-house assets to provide the most impact in the top-priority areas. Research agencies along Mexico's Gulf coast also are expected to participate

Regional cooperation was highlighted in the U.S. Commission on Ocean Policy's report, and a GOM regional research plan is in line with the commission's recommendation that federal agencies dealing with ocean and coastal issues improve coordination and use their funding to focus on regional priorities. The goal of a Gulf research plan and implementation strategy will also directly address and complement the Governors' Action Plan. Through this plan all five Gulf of Mexico governors have formally adopted the objectives of improving water quality, conserving and restoring wetlands, expanding environmental education, improving habitat characterization and reducing nutrient inputs, all clearly benefiting from coordination and direction of the Gulf's many research initiatives.

NEW LOUSIANA RECORD FISH!

Where there is fishing, there are records to be made and records to be broken. Many interesting new catches have been added to the Louisiana record books recently (see below). Anglers should be aware that there are many categories of fish within the state records that have relatively few, if any, entries. Some of these are in the fly fishing group, in both fresh and salt-water divisions. The rod and reel division also has many "openings," especially in the recently-added species of 2005 and 2006. Remember, applicants need to include digital pictures of the catch.

Applications and required rules for both rod and reel and fly-fishing can be downloaded from *www. laoutdoorwriters.com* under "Fish Records".

Scott Walls Gag Grouper (*Mycteroperca microlepis*) 54.0 tie for 4th Rod & Reel, Saltwater April 28, 2006 in the Gulf of Mexico at the South Timbalier Blks

Austin Dier Gray Triggerfish (*Balistes capriscus*) 4.13 2nd Rod & Reel, Saltwater May 22, 2006 in the Gulf of Mexico at Grand Isle Blk. 83

Renee Hart Grey Triggerfish (*Balistes capriscus*) 3.80 3rd Rod & Reel, Saltwater May 6, 2006 in the Gulf of Mexico at BP Rig 43AA

John Langlois Red Snapper (Lutjanus campechanus) 37.25 8th Rod & Reel, Saltwater May 26, 2006 in the Gulf of Mexico Darren Dier Bearded Brotula (Brotula barbata) 10.50 4th Rod & Reel, Saltwater May 26, 2006 in the Gulf of Mexico at the Midnight Lump Darren Dier Bearded Brotula (Brotula barbata) 4.40 6th Rod & Reel, Saltwater May 26, 2006 in the Gulf of Mexico at the Mississippi Canyon Kent Riche Lane Snapper (Lutjanus synagris) 4.70 3rd Rod & Reel, Saltwater July 16, 2006 in the Gulf of Mexico at the West Delta Blks Keith J. Bergeron Blue Runner (Caranx chysos) 7.50 1st Rod & Reel, Saltwater July 27, 2006 in the Gulf of Mexico, at Blk. 20 Terry K. Perkins Broadbill Swordfish (Xiphias gladius) 132.70 6th Rod & Reel, Saltwater July 14, 2006 in the Gulf of Mexico Jim Sisco Ladyfish (Elops saurus) 4.64 1st Rod & Reel, Saltwater August 16, 2006 off the shore of Lake Pontchartrain. Robert J. Korose Sheepshead (Archosargus probatocephalus) 5.94 4th Fly Fishing, Saltwater July 30, 2006, off of Grand Isle, LA at the rocks at buoy 13.

FEDERAL PLAN FOR ENDANGERED SAWFISH

The Smalltooth Sawfish Recovery Team, convened by NOAA Fisheries and comprising sawfish scientists, managers and environmental managers, has released a plan to help recover the U.S. Distinct Population Segment (DPS) of smalltooth sawfish (*Pristis pectinata*). Some scientists believe this to be one of the most critically endangered fish species in America; it has been designated as endangered under the Endangered Species Act since April 1, 2003. The plan is intended to reduce the number accidentally caught in commercial fishing nets and lines, as well as protect coastal habitats. The recovery plan also provides recommendations intended to guide federal fishery managers as they set rules for the different fisheries in the southeastern United States. To see the full plan, visit *http://www.nmfs.noaa.gov/pr/.*

The plan calls for research on where sawfish are being accidentally caught and on what types of gear. It calls for fishing boats to carry modified gear that would minimize captures of sawfish and to carry equipment to release any that are caught. It also calls for better education of commercial and recreational fishermen. To protect the habitat of juvenile sawfish, the plan would require other agencies to consult with the National Marine Fisheries Service before approving developments that affect the most important mangrove and other heavily vegetated coastal habitats.

Sawfish, like sharks, skates and rays, belong to a class of fish called elasmobranchs, whose skeletons are made of cartilage. Sawfish are actually modified rays with a shark-like body and gill slits on their ventral side. Early sawfish arose around 100 million years ago, but these first sawfish are actually distant cousins to the modern day sawfish, which first appeared around 56 million years ago. Sawfish get their name from their "saws" — long, flat snouts edged with pairs of teeth which are used to locate, stun and kill prey. Their diet includes mostly fish but also some crustaceans. Smalltooth sawfish are the only domestic marine fish, and the only elasmobranch listed under the ESA.

Sawfish saws have great significance to many cultures around the world, and practioners of traditional Chinese medicine make remedies from sawfish livers, eggs and gall bladders. The fish use their saws as a weapon to kill and capture prey, and also as a sensory organ in murky water or to detect buried prey.

Smalltooth sawfish are one of two species of sawfish that inhabit U.S. waters. Smalltooth sawfish commonly reach 18 ft (5.5 m) in length and may grow to 25 ft (7 m). Little is known about the life history of these animals, but they may live up to 25-30 years, maturing after about 10 years. Like many elasmobranchs, smalltooth sawfish are ovoviviparous, meaning the mother holds the eggs inside of her until the young are ready to be born, usually in litters of 15 to 20 pups.

Worldwide, all seven species of sawfish are listed by the World Conservation Union as critically endangered.

Sawfish species inhabit shallow coastal waters of tropical seas and estuaries throughout the world. They are usually found in shallow waters very close to shore, over muddy and sandy bottoms. They are often found in sheltered bays, on shallow banks and in estuaries or river mouths. Certain species of sawfish are known to ascend inland in large river systems, and they are among the few elasmobranchs that are known from freshwater systems in many parts of the world.

Smalltooth sawfish have been reported in the Pacific and Atlantic oceans and Gulf of Mexico; however, the U.S. population is found only in the Atlantic Ocean and Gulf of Mexico. Historically, the U.S. population was common throughout the Gulf of Mexico from Texas to Florida, and along the east

coast from Florida to Cape Hatteras. The current range of this species has contracted to peninsular Florida, and smalltooth sawfish are relatively common only in the Everglades region at the southern tip of the state. No accurate estimates of abundance trends over time are available for this species. However, available records, including museum records and observations from fishermen, indicate that this species was once common throughout its historic range; in places it was once so abundant it was considered a nuisance. Populations of smalltooth sawfish have unquestionably declined dramatically in U.S. waters over the last century.

While there is little reliable data available for this species and no robust estimates of historic or current population size exist, available data indicates that the species' distribution has been reduced by about 90 percent, and that the population numbers have declined dramatically, perhaps by 95 percent or more. Sawfish are extremely vulnerable to overexploitation because of their propensity for entanglement in nets, their restricted habitat and low rate of population growth. The decline in smalltooth sawfish abundance has been caused primarily by bycatch in various fisheries, especially in gill nets. Because adults can grow large, potentially damage fishing gear or even pose a threat to fishermen, many incidentally captured sawfish were killed before they were removed from fishing gear, even if the fishermen had no interest in keeping them.

Juvenile sawfish use shallow habitats with a lot of vegetation, such as mangrove forests, as important nursery areas. Many such habitats have been modified or lost due to development of the waterfront in Florida and other southeastern states. The loss of juvenile habitat likely contributed to the decline of this species.

Under the Endangered Species Act, it is illegal to catch or harm an endangered sawfish. However, some fishermen catch sawfish incidentally while fishing for other species.

NOAA's National Marine Fisheries Service (NMFS) and the Smalltooth Sawfish Recovery Team have developed guidelines for fishermen that inform them on how to safely handle and release any sawfish they catch. Some states have taken additional steps to protect this species; the states of Florida, Louisiana and Texas have prohibited the "take" of sawfish. Florida's existing ban on the use of gill nets in state waters is an important conservation tool. Three National Wildlife Refuges in Florida also protect their habitat.

The IUCN Red List also lists the smalltooth sawfish as endangered. The smalltooth sawfish was added to the candidate species list in 1991, removed in 1997 and placed back on the list again in 1999. In November 1999, NOAA's NMFS received a petition from the Ocean Conservancy (formerly the Center for Marine Conservation) requesting that this species be listed as endangered under the ESA. On April 1, 2003, NMFS announced its final determination to list smalltooth sawfish as an endangered species under the Endangered Species Act (ESA). NMFS completed a status review in December 2000. On April 16, 2001, NMFS published a proposed rule to list the U.S. distinct population segment (DPS) of this species as endangered. On April 1, 2003, NMFS published a final rule listing this DPS as an endangered species.

Comments on the recovery plan may be sent by fax, e-mail or mail to:

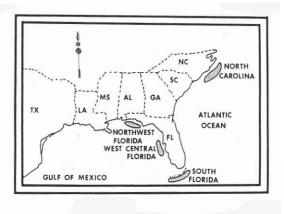
- smalltoothsawfish.recoveryplan@noaa.gov, include in the subject line the following document identifier: Smalltooth Sawfish Recovery Plan.
- Smalltooth Sawfish Coordinator, NOAA Fisheries Service, Southeast Regional Office, Protected Resources Division, 263 13th Avenue South, St. Petersburg, FL 33701
- or, fax: (727) 824-5309

PISCIVOROUS GROUPERS

"Piscivorous" is one word — meaning fish eating — that describes the dietary habits of the gag, the most commonly caught grouper in Louisiana waters. Gag (*Mycteroperca microlepis*) are found in the Atlantic from New York to Brazil, and are most common in the Gulf of Mexico.



Federal fisheries biologists looked into the stomachs of 2,377 gag from 1979 to 1981. The fish were caught from four areas, North Carolina, south Florida, west-central Florida and northwest Florida (see map below). All stomachs were removed and preserved and then later, the contents were sorted and identified.



North Carolina gag ranged in length from 14 to 36 inches. Finfish made up 96.4 percent of the volume of the food items in their stomachs. Fish from three families, herrings, jacks and porgies, were identifiable and they made up 45.9 percent of the total volume. The most important fish species eaten were Spanish sardines, Atlantic bumpers and pinfish. Invertebrates (animals without backbones) were found in 11.1 percent of the gag, but made up only 3.6 percent of the volume of food items. Sea slugs (essentially snails without shells), clams and coral made up the invertebrate foods. The coral was likely eaten incidentally with other food items.

South Florida gag ranged in size from 13 to 38 inches in length. Finfish made up 99.8 percent of the volume of foods eaten. Porgies, drums and grunts were the three identifiable families and comprised 39.5 percent of the total volume. The most common species eaten were pinfish, spot, pigfish and white grunts. The only invertebrates eaten were shrimp, which were found in 2.3 percent of the fish and made up only 0.2 percent of the total volume of food items.

Gag from west-central Florida were 16-48 inches long. Finfish accounted for 98.6 percent of the total volume of foods. Seventeen different fish families were identified, but the two most common, herrings and mullets, made up 54.4 percent of the total volume. Besides mullets, the most important species was the Spanish sardine. Invertebrates made up 1.4 percent of the total volume and were found in 8.8 percent of the fish. They consisted of assorted crustaceans, squid and a piece of coral.

Strangely, four gag from this area had eaten the stomachs of other fish. No other parts of the intestines were found attached to the stomachs. Three gags had one stomach each in their stomachs, and one gag had eaten four stomachs. Of the seven stomachs, one contained a squid and a Spanish sardine, and two others each had a Spanish sardine in them. The biologists doing the study speculated that the stomachs may have been used as bait by other fishermen.

Northwest Florida gag ranged from 10 to 50 inches long. Finfish made up 95.1percent of the total volume of foods eaten, with porgies and jacks being the dominant fish families and accounting for 48.8 percent of the total volume. The most commonly eaten species were pinfish and Atlantic bumpers. Invertebrates were found in 11 percent of the gag and made up 4.9 percent of the total volume of items eaten. The most important invertebrates were crabs (3.0 percent by volume) and squid (1.0 percent by volume).

The only stomach parasites found in any gag were found in northwest Florida fish. Round worms, flukes and tapeworms were found in gag from this area.

Source: Food of Gag (Mycteroperca microlepis) From North Carolina and Three Area of Florida. Steven P. Naughton and Carl H. Saloman. NOAA Technical Memorandum NMFS-SEFC-160. 1985.

Participants Needed For Louisiana Mercury Study

The Harvard School of Public Health (HSPH) and the Louisiana Universities Marine Consortium (LUMCON) are recruiting recreational anglers who fish in coastal Louisiana to participate in a study about fish consumption and exposure to mercury.

The goal is to understand how much fish and what types of fish coastal Louisiana recreational anglers eat, and to estimate recreational anglers' exposure to mercury by measuring the amount of mercury in small hair samples that study participants provide. When you consume fish, most of the mercury in that fish is absorbed by your body. Within a few hours after eating, that mercury can be found circulating in your blood.

Blood transports mercury throughout the body. Over time, some of the mercury gradually shifts out of the blood and into various body tissues. For example, 10 percent of the mercury from a given fish meal will eventually end up in brain tissue. Smaller percentages of mercury also accumulate in heart muscle and in other organs.

Some mercury also ends up in hair. As new hair is being made in the scalp, some mercury is deposited from blood into the newly forming hair. The amount of mercury that ends up in hair is related to the amount that was in the blood at the time the hair was being made. So, if a person eats a lot of fish, their hair likely contains more mercury than a person who eats little or no fish.

In this way, hair is considered a good "biomarker" of mercury exposure.

To measure recent exposure to mercury (the past few months), it is important to measure the newest hair - the hair that is closest to the head.

To participate in the study, you must live in Louisiana and fish recreationally in coastal Louisiana (saltwater), either inshore, offshore or both. After you take the Web survey you will be sent an instruction kit with a self addressed stamped envelope to return the hair sample. All results from the survey will be completely confidential. To get more information and to take the online survey visit *https://webapps.sph.harvard.edu/eer/LRAS/*.

This survey will be available online until Oct. 31. Participants will be entered into a raffle for ten \$25 gift certificates to an outdoor sporting goods store.

Underwater Obstruction Locations

In accordance with the provisions of R.S. 56:700.1 et. seq., notice is given that 3 claims in the amount of \$14,900.00 were received for payment during the period August 1, 2006 - August 31, 2006.

Latitude/Longitude Coordinates of reported underwater obstructions are:

29.14.211	89 35.550	PLAQUEMINES
29.18.377	89 45.784	PLAQUEMINES
29.24.448	89 59.976	JEFFERSON

There were 3 claims paid and 0 claims denied.

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

THE GUMBO POT Baked Crab Meat and Shrimp Supreme

Submitted by Taylor Blanco 2006 parish recipe winner, St. Mary Parish 4-H

Ingredients

pound frozen or fresh backfin lump crabmeat
pound shrimp
green pepper, chopped
onion, chopped
cup chopped celery
1/4 cup mayonnaise
teaspoon Worcestershire sauce
salt and pepper to taste
cup bread crumbs
Butter flavored vegetable oil spray

Directions

1. Combine all ingredients except bread crumbs in a 7" x 11" glass baking dish.

- 2. Sprinkle the bread crumbs on top the dish
- 3. Spray the top of the dish with the vegetable oil spray
- 4. Bake in 350 degree oven for 30 minutes.

May be prepared ahead of time

Serves

Four to six people

For more information, contact your local extension agent:

David Bourgeois – Area Agent (Fisheries) Lafourche & Terrebonne Parishes Phone: (985) 873-6495 E-mail: dbourgeois@agctr.lsu.edu

Albert 'Rusty' Gaudé – Associate Area Agent (Fisheries) Statewide Phone: (504) 682-0081 ext. 1242 E-mail: agaudet@agctr.lsu.edu

Thomas Hymel – Watershed Educator Iberia, St. Martin, Lafayette, Vermilion, St. Landry, & Avoyelles Parishes Phone: (337) 276-5527 E-mail: thymel@agctr.lsu.edu

Kevin Savoie – Area Agent (Southwest Region) Natural Resources-Fisheries Phone: (337) 475-8812 E-mail: ksavoie@agctr.lsu.edu Mark Schexnayder – Coastal Advisor (Fisheries) St. John, St. Charles, Jefferson & parts of Orleans Parishes Phone: (504) 838-1170 E-mail: mschexnayder@agctr.lsu.edu

Mark Shirley – Area Agent (Aquaculture & Coastal Resources) Jefferson Davis, Vermilion, Acadia, St. Landry, Evangeline, Cameron, Calcasieu, Lafayette, Beauregard, & Allen Parishes Phone: (337) 898-4335 E-mail: mshirley@agctr.lsu.edu

Glenn Thomas – Associate Area Agent (Fisheries) St. Martin, St. Mary, Iberia, Iberville & Assumption Parishes Phone: (337) 828-4100, ext. 300 E-mail: gthomas@agctr.lsu.edu