

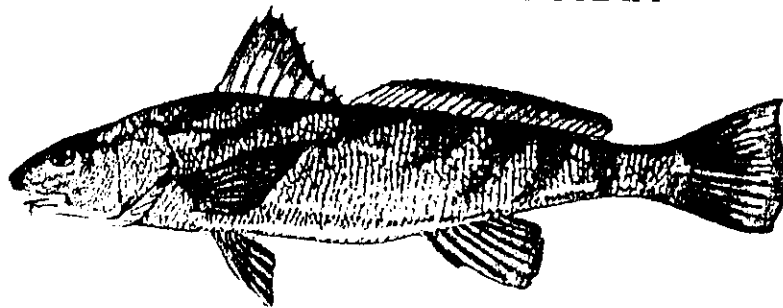


Louisiana State University  
**Agricultural Center**  
Louisiana Cooperative Extension Service

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## SEA GRANT PROGRAM



### LAGNIAPPE

#### UNDERWATER OBSTRUCTIONS HEARING

The Louisiana Senate Natural Resources Committee will be holding hearings in south Louisiana to discuss the problems associated with underwater obstructions and the problems they cause for trawling and navigation. Oil and gas companies are unhappy with continually paying into the hang fund for damaged vessels and lost trawls. Fishermen are unhappy about the increasing number of hangs and bottom obstructions. The purpose of these meetings is to get opinions from fishermen on proposals to remove underwater obstructions rather than to keep paying for them with the hang funds. **These are important meetings.** The two meetings for eastern Louisiana are as follows:

**September 12**  
7:00 p.m.  
Lafitte City Hall  
Lafitte, LA

**October 1**  
7:00 p.m.  
Houma Municipal Auditorium  
880 Verret St. Houma

**Mark your calendars**

#### FINFISH BYCATCH REDUCTION PUBLIC HEARINGS

The Gulf of Mexico Fishery Management Council will be holding a series of public hearings on Amendment 9 to the Shrimp Management Plan. Under this amendment, the use of bycatch reduction devices (BRDs) will be required in shrimp trawls in federal waters. The times and places of the hearings in eastern Louisiana are as follows:

October 8  
7:00 p.m.  
Thibodaux Center  
310 N. Canal Blvd.  
Thibodaux, LA

October 9  
7:00 p.m.  
Airport Radisson Inn  
2150 Veterans Blvd.  
Kenner, LA

## **FINFISH BYCATCH ECOLOGICAL RESEARCH**

With the current interest in reducing finfish bycatch in shrimp trawls, many questions have been raised about the ecological impacts of bycatch reduction. One question is, what will be the effect on shrimp populations if more fish survive to eat them? Another is, what will be the impact on animals that have come to depend on discarded bycatch as food?

In order to attempt to answer the first question, federal fisheries biologists have developed a model to try to predict what will happen. It is important to remember that ecosystem models are enormously complex and that the results of such models are based on assumptions and the quality of scientific data available.

Of the total of 161 fish species examined from Alabama to Texas, only 14 were identified as shrimp predators. They are the Atlantic croaker, sand sea trout, spotted seatrout, silver seatrout, ocellated flounder, inshore lizardfish, bighead searobin, smooth puffer, red snapper, lane snapper, spanish mackerel, rock sea bass, dwarf sand perch and the Atlantic sharpnose shark. Of these fish, spotted seatrout (specked trout) had the largest percentage of their diet as shrimp, followed by the Atlantic sharpnose shark, the ocellated flounder and the sand seatrout (white trout). White trout were considered to be the biggest overall shrimp predator however, because their large population in the Gulf.

Four model scenarios were designed to predict the effect of fish predation on shrimp with the use of bycatch reduction devices (BRDs). Scenarios 1 and 2 predict shrimp stock (population) changes based on two views of how BRDs released fish. Scenarios 3 and 4 predict shrimp stock change based on two views of how the fish released by the BRDs will feed on the shrimp.

### **Scenario 1**

Under this scenario the BRDs would release all types of fish in equal numbers including ones that eat shrimp and ones that don't. The predicted results are after one year of using BRDs.

- \* A 10% lowering of finfish bycatch would reduce shrimp stocks by 0.8%
- \* A 25% lowering of finfish bycatch would reduce shrimp stocks by 5.5%
- \* A 50% lowering of finfish bycatch would reduce shrimp stocks by 10.7%

The predicted decline in shrimp stocks would be mainly due to finfish predation on shrimp but also due to the loss of food supply (nutrients supplied by the dead fish) for the shrimp.

## Scenario 2

Under this scenario, it is taken into consideration that some BRDS release more of one type of fish than another. Three types of BRDs that are being considered for mandatory use are listed below along with their expected results on shrimp stocks. The average amount of finfish released from the bycatch with all three types of BRDs is 31.4%. These will add to the stock of finfish that eat shrimp with the results below.

- \* Front position fisheye BRD use would reduce shrimp stocks by 6.7%
- \* Middle position fisheye BRD use would reduce shrimp stocks by 5.9%
- \* Extended funnel BRD use would reduce shrimp stocks by 8.2%

It is a well-known fact however, that as finfish grow larger they often change their diets. Ones too small to eat shrimp may eat them when they get larger. Others shift their diet away from shrimp to other food, like fish, as they get larger. The two scenarios below consider these possibilities and their possible effect on shrimp stocks.

## Scenario 3

Under this scenario, the effect on shrimp stocks was examined if the increase in average size of the finfish due to release by BRDs would cause an increase in the amount of shrimp being eaten. Here the average escapement of 31.4% of fish from the trawls would cause a 6.2% decrease in shrimp stocks. The results were then examined with the possibilities of predation on shrimp (due to increased fish size) increasing by 10%, 25% and 50%.

- \* A 10% increase in predation would reduce shrimp stocks by 8.2%
- \* A 25% increase in predation would reduce shrimp stocks by 10.8%
- \* A 50% increase in predation would reduce shrimp stocks by 16.7%

## Scenario 4

Under this scenario, the effect on shrimp stocks was examined if the increase in average size of the finfish due to release by BRDs would cause a decrease in the amount of shrimp being eaten. Here again, the fish release rate by BRDs of 31.4% was used. The results were examined with the possibility of predation on shrimp (due to increasing fish size) decreasing by 10%, 25% and 50%.

- \* A 10% decrease in predation would reduce shrimp stocks by 4.1%
- \* A 25% decrease in predation would reduce shrimp stocks by 1.3%
- \* A 50% decrease in predation would increase shrimp stocks by 4.7%

The conclusion with this model is that with the use of BRDs, shrimp stocks could change anywhere between a 4.7% increase to a 16.7 decrease. The decreases are mostly due to predation on shrimp by fish, but also due to a reduction in the recycling of nutrients into the ecosystem to feed shrimp.

The researchers caution that there are a large number of unknowns which could may have major effects on how the ecosystem reacts to changes in resources. They also note that natural year-to-year changes in the production of the shrimp fishery may be quite large. Because of this variation, changes in shrimp stocks due to BRD use may be difficult to separate from natural changes. The researchers finally end by saying that the actual effects of BRD use on shrimp stocks will not be known until they are used and we see what happens.

Source: A model for Assessment of Ecological Interactions Among Living Marine Resources in the Gulf of Mexico: Implications for Bycatch Management and Shrimp Production. by Eduardo X. Martinex, James M. Nance and Roger J. Zimmerman. National Marine Fisheries Service. March, 1996.

### **RED SNAPPER T.A.C. TO INCREASE**

If action undertaken as this newsletter was being printed is approved as expected the National Marine Fisheries Service will increase the total allowable catch (TAC) on red snapper from 6.0 to 9.12 million pounds annually. With this increase, the commercial red snapper season would reopen on September 15 and last until their 1.59 million pound share of the increase is harvested.

For recreational fishermen the increase in allocation will prevent their daily limit from dropping any lower than the current 5 fish limit. Without the increase, a drop in the limit was almost certain, as recreational fishermen have harvested over their quota for four straight years, as shown below.

<u>Year</u>	<u>Quota(lbs)</u>	<u>Actual Harvest(lbs)</u>
1992	2.94 million	3.84 million
1993	2.94 million	6.04 million
1994	2.94 million	5.66 million
1995	2.94 million	4.47 million

The slight drop in actual harvest in 1994 was due to an increase in the minimum size to 14 inches. The drop in 1995 was due to increasing the minimum size to 15 inches and lowering the limit from 7 fish to 5 fish.

### **NO STRIKE NETTING ON WEEKENDS**

On August 7, Federal Judge G. Thomas Porteous dissolved his preliminary injunction against certain parts of Act 1316 (the gill net law). The major change is that

now it will be illegal to use strike nets on weekends between 5:00 am Saturday and 6:00 pm Sunday.

Right now, pompano strike net season is open in Breton and Chandeleur Sounds. Strike net seasons for mullet and other restricted species such as drum and sheepshead will open on October 21. Speckled trout strike net season will open on November 18. These will be the last strike net seasons for speckled trout and restricted species under the current law.

### **FISH KILLS ON THE BEACH**

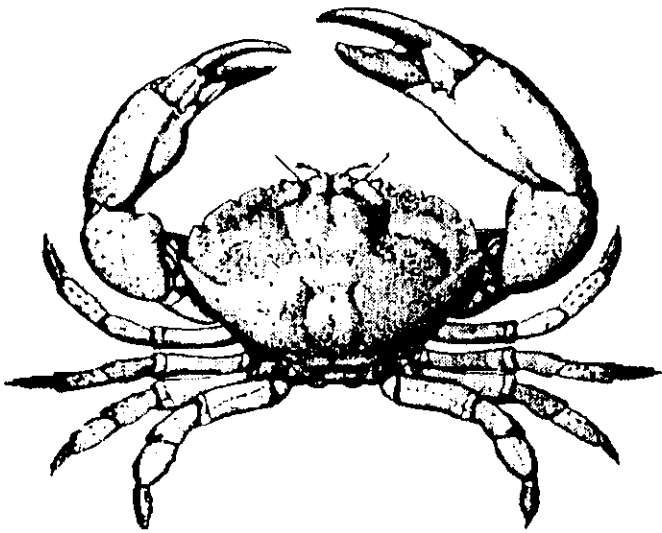
Last month we had a fish kill on the beaches of southeast Louisiana. It was widely publicized that the persistent north wind had caused the problem. A lot of people called my office, asking how a north wind could cause a fish kill. I'll try to explain what happened as simply as possible.

- 1) Hot water like we get in July and August holds much less oxygen than cooler water.
- 2) When surface waters get hot they stop mixing with deeper waters and form layers (stratification).
- 3) The surface water layer holds more oxygen as it gets it both from the air and from microscopic plants (phytoplankton) that give off oxygen.
- 4) The deeper layer of water tends to run out of oxygen because fish and other animals use it and because oxygen is used up when dead plants, and animals sink to the bottom and decay. There is not much phytoplankton to produce oxygen in this deep layer because sunlight does not penetrate the depths very well.
- 5) When a north wind lasts for several days, it blows the surface water (which has the oxygen in it) away from the beaches.
- 6) When this happens, water has to come from somewhere to replace the water blown away from the beaches. The only place it can come from is the deeper waters that don't have much oxygen.
- 7) So, as the oxygenated surface water moves south due to the wind, the deoxygenated bottom waters move north toward the beach to replace it.
- 8) The result is a low oxygen fish kill near the beaches.

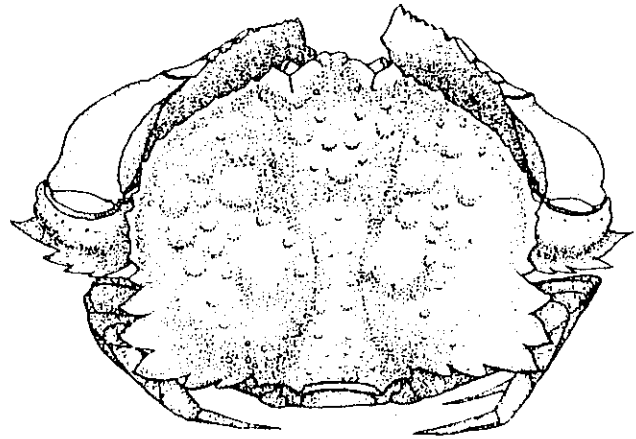
Whether the low oxygen waters are a normal occurrence in the Gulf or whether they are due to the hypoxic zone (dead zone) is open to debate. This event has happened before, in the summer of 1990, and will probably happen again. Persistent north winds in July and August are the trigger.

### **STONE CRABS, BOX CRABS AND LOBSTERS**

Recently I have received quite a few questions about stone crabs. Louisiana, does indeed have stone crabs, Menippe adina, which are a close first cousin to the stone crab caught in Florida in large numbers. Another crab caught off of the Louisiana Coast that is called a stone crab is not really a stone crab, but a box crab.



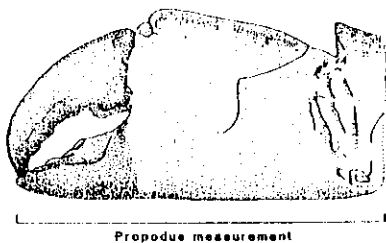
Stone Crab



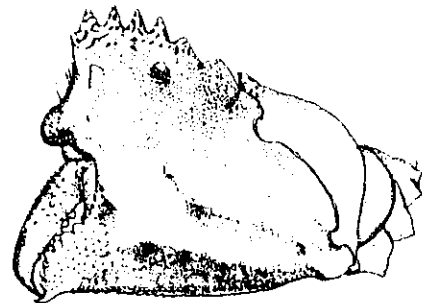
Box Crab

Stone crabs are usually found in inshore or beach waters and turn up most often in blue crab traps and also occasionally in trawls. There are four different species of box crabs. They are most often caught in shrimp trawls. Box crabs are also called bashful crabs, as well as other local names.

Box crabs do not have any Louisiana or federal regulations. There is no minimum size on the claws and it is legal to take either claw or both claws. Louisiana law also does not provide a minimum size on stone crabs, nor is there a closed season in state waters.



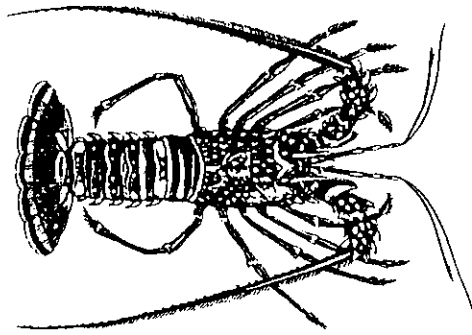
Stone Crab Claw



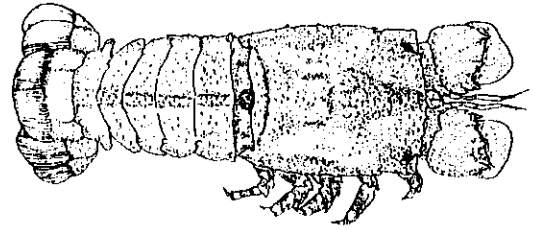
Box Crab Claw

While very few stone crabs are found as far as the 3 miles offshore of Louisiana there are federal regulations on stone crabs taken in federal waters. First, the claw must have a propodus length of 2 3/4 inches. Either claw or both may be taken. Second, there is a closed season from May 16 to October 14. The reason for the regulations in federal waters is the large offshore stone crab fishery off of Florida.

Occasionally, shrimp trawlers, sportsfishermen fishing near oil and gas platforms, and scuba divers will catch lobsters. Most often they are spiny lobsters but occasionally trawlers will catch slipper or spanish lobsters, locally called "bulldozers."



Spiny Lobster



Slipper Lobster

While there are no seasons or size limits on slipper lobsters, there are both on spiny lobsters for federal waters. First, they must have carapace (head) length of more than 3 inches. There is also a closed commercial season from April 1 to August 5 of each year. The recreational season is the same except for a special non-trap open season the last Wednesday and Thursday of each July. Possessing undersized spiny lobsters or lobsters taken out of season in federal waters will result in a citation.

### **NEW RECREATIONAL REEF FISH REGULATIONS**

The National Marine Fisheries Service is taking written public comment on Amendment 12 to the Reef Fish management Plan. The Amendment proposes the following changes:

- 1) Lowering the recreational limit on greater amberjack from 3 to 1 and including the lesser amberjack and banded rudderfish in that one fish limit.
- 2) Putting a 28 inch fork length minimum size on lesser amberjacks and banded rudderfish.
- 3) Putting in a 20 fish aggregate limit (all species combined) on any reef fish for which there is no limit already. This includes vermilion snapper (b-liner), lane snapper, all porgies, triggerfish, and tilefish. All other reef fish already have a bag limit.

Written comments will be accepted until September 30, 1996 and must be sent to Robert Sadler, NMFS, Fishery Operations Branch, 9721 Executive Center Dr. North. St Petersburg, FL 33702. A copy of proposed Amendment 12 can be obtained by calling (813) 228-2815.

### **MARINE MAMMAL STRANDING NETWORK**

The Louisiana Marine Mammal Stranding Network (LMMSN) is a volunteer organization dedicated to assisting stranded marine mammals such as dolphins, whales and manatees in Louisiana coastal waters. LMMSN collects information on stranded marine mammals and as a high priority, assists live stranded marine mammals back to sea. LMMSN is very dependent on public assistance on locating strandings. Whether the animal is dead or alive, a person may report it by calling (504) 934-5337 and leaving their number. In the case of live animals, the following directions should be followed:

- \* DO NOT RETURN THE ANIMAL TO THE SEA.  
Keep people and pets away from it. Only one or two people are needed until expert help arrives.
- \* Relieve pressure on the flippers by digging pits under them in the sand.
- \* Keep the animal cool and wet by splashing water on the skin. Avoid getting water in the blowhole.
- \* Apply wet cloth to the animal. Keep the blowhole free of obstructions and take care not to cover the dorsal fin, flippers or tail.
- \* Apply sunscreen or zinc oxide, not oil.
- \* Apply ice packs to the dorsal fin, flippers and tail to keep the animal from overheating, but do not let the ice contact the skin directly.
- \* Be careful around the powerful tail.

For more information about the LMMSN, call Terri Jordon at (504) 389-0508.

## **WETLANDS WORKSHOP**

The Coalition to Restore Coastal Louisiana will be holding the Eighth Annual Louisiana Coastal Wetlands Workshop in Cocodrie on October 19 and 20, 1996. Included in the workshop will be boat tours to nearby marshes and remote barrier islands. Local residents and guest speakers will talk about efforts to restore fragile wetlands and the value of these wetlands as fisheries nurseries, bird sanctuaries, storm buffers and a home for thousands of people. Registration is \$95 and includes two night's accommodations, five meals, lectures, two boat trips and local entertainment. Attendance is on a first-paid basis. Call (504) 280-6680 for registration information.

## **LIMITED ENTRY FOR SHARKS AND SWORDFISH**

The National marine Fisheries Service (NMFS) is proposing a limited entry management system for the commercial shark and swordfish fisheries of the Gulf and south Atlantic. Currently, 1,531 vessels have permits for swordfish, although only about 300 are actively fishing for swordfish in the Gulf and south Atlantic now. The swordfish fishery is biologically stressed. The average weight of swordfish landed has dropped from over 200 pounds (dressed weight) to 66 pounds. Fish that have never had a chance to spawn once make up 84% of the number of swordfish landed.

The commercial shark fishery currently has 2748 vessels with permits. Only about 250 of them actively land sharks. Recent research shows that shark stocks are declining and a reduction in the commercial quota will probably take place.

NMFS proposes that only those who held a permit between July 1, 1994 and December 31, 1995 and landed at least the amount of fish listed below would qualify:

- \* Swordfish -- 155 landed between January 1 1987 and June 30, 1995
- \* Sharks -- 250 between January 1, 1991 and February 22, 1994 and 125 sharks between that date and June 30, 1995.



NMFS estimates that under these qualifications, that 200 vessels would be eligible for swordfish permits and 177 vessels for shark permits.

Commercial landings in Louisiana for 1995 were 633,648 pounds worth \$1,612,662 for swordfish and 1,301,195 pounds worth \$598,626 (including fins) for sharks. By comparison, commercial landings of speckled trout were worth \$626,013 in 1995.

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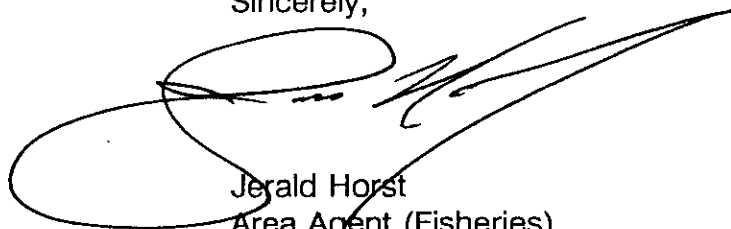
**THE GUMBO POT**  
**Pancit Bihon**

This month's recipe is from Eden Tablan a native of Bataan in the Philippines. Everyone has a gumbo recipe, so I try to give you recipes that are new. This is one. It is very good and much like a south Louisiana-type dish. The rice noodles and the oyster sauce are available at any Vietnamese grocery store. The broths can be made by simmering pork scraps and shrimp heads in separate pots.

1 pack rice noodles	1 lb peeled shrimp
4 cloves garlic, minced	1 jar oyster sauce
1 medium onion, slivered	1 cup pork broth
3 shallots, chopped	1 cup shrimp broth
3 carrots, diced	salt and pepper
1/4 small head cabbage, shredded	cooking oil

Soak noodles according to instructions. While noodles are cooking, in a wok or another pot, over medium heat saute garlic until light brown, add onions and saute until clear, then add shrimp and saute till pink. Remove from wok. Stir fry cabbage and carrots over high heat until tender. Add 3 tbsp. oyster sauce. Remove from wok. Put drained noodles in wok. Add half each of pork stock and shrimp stock. Add 3 tbsp oyster sauce. Cook over low heat until noodles are soft, adding stock as needed. Mix all ingredients, and warm until hot. Sprinkle chopped green onions over top. Serves 4-6.

Sincerely,



Jerald Horst  
Area Agent (Fisheries)  
Jefferson, St. Charles, St. John