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Louisiana Cooperative Extension Service

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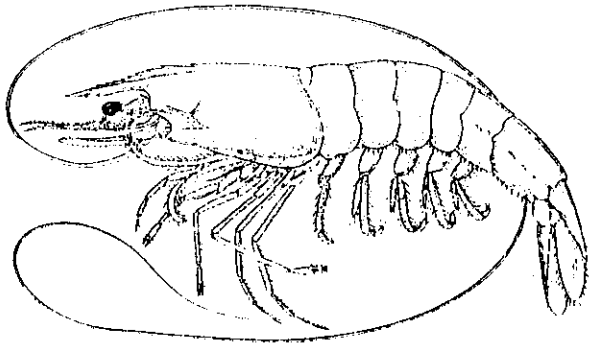
SEA GRANT PROGRAM



LAGNIAPPE

The Gulf of Mexico Fishery Management Council will be holding public hearings in Louisiana on Amendment 9 to the Shrimp Management Plan. The preferred alternatives in this plan would require the use of bycatch reduction devices (BRDs) in all shrimp trawls except test trawls 16 feet and under, which are used in federal waters west of Cape San Blas, Florida. The times and places of the hearings are listed below. All hearings will begin at 7:00 p.m.

Monday, October 7, 1996	Tuesday, October 8, 1996	Wednesday, October 9, 1996
Lake Charles Civic Center	Thibodaux Civic Center	Airport Radisson Inn
900 Lakeshore Dr.	310 N. Canal Blvd.	2150 Veterand Blvd.
Lake Charles, LA	Thibodaux, LA	Kenner, LA

CRAB LAW REMINDERS

I've received several questions lately about various laws on crab traps. Here is a summary of some of the laws.

* No crab traps shall be set in navigable channels or entrances to streams.
* Crab traps which are no longer usable must be removed from the water by the owner.

* Crab traps, both recreational and commercial , may not be run from one-half hour after legal sunset until one-half before legal sunrise.
* All crab traps, recreational and commercial, must be tagged according to regulations.

HAACP TRAINING MEETINGS

By December 1997, all seafood processors will be required to be in compliance with the new HACCP seafood inspection regulations. One of the requirements is that in each business, a person who is trained in the HACCP training class must keep and review all plant records. Any seafood processing business without such a person will be operating in violation of the law.

In order to assist seafood processors in coming into compliance, the Louisiana Cooperative Extension Service will be holding nine HACCP training meetings between now and May, 1997. The schedule is as follows:

Commodity	Date	Place
Shrimp	October 9-11, 1996	Cocodrie
Crawfish	October 16-18, 1996	Crowley
Finfish	November 13-15, 1996	Alexandria
Finfish	December 10-12, 1996	Harahan
Shrimp	February 18-20, 1997	Harahan
Shrimp	February 25-27, 1997	LaRose
Crab	March 3-5, 1997	Des Allemands
Shrimp/Oysters	April 8-10, 1997	Lake Charles
Oysters	May 12-14, 1997	New Orleans

Several important points:

1) If you process more than one product you don't have to attend several programs. Only one training meeting is required.
2) I recommend that the owner of each business participate. An employee may quit the business and leave the owner with no one trained. Several people from each business may attend.
3) Registration is first come, first served. Classes are limited to 30 people.
4) All seafood processors who have a numbered permit from the Louisiana Department of Health and Hospitals must have this training. Also, seafood importers who take physical possession of the product must attend.
5) You don't currently have to be a processor to attend. If you intend to process seafood in the future, you may want to get trained now.

You must preregister for these classes. Send the names and addresses of each person you want to attend and a check for $100 per person to Michael W. Moody, LCES, P O Box 25100, Baton Rouge, LA 70894-5100. **Make checks out to AFDOSS.** For more information call my office.

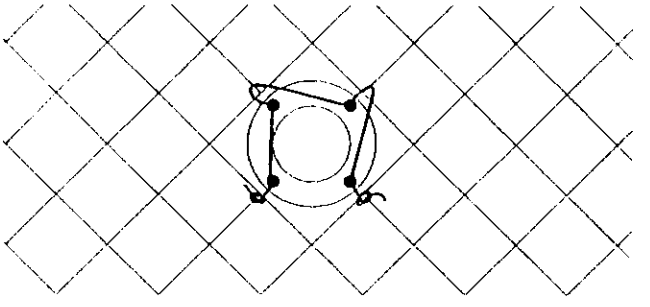
HOOP NET MESH SIZE STUDY

Louisiana Department of Wildlife and Fisheries biologists conducted a two year study on the effects of different hoop net mesh sizes on channel catfish catches. The study took place in Lake Verret, Lake Palourde and Lake Fausse Pointe.

The first part of the study compared the catches of 1-inch mesh (square),1 1/8-inch mesh and 1 1/4-inch mesh sizes. The nets were 2 1/2-feet in diameter, with 7 flues, and were fished in strings of 3. Cheese was used for bait in cooler months and soybean cake in warmer months.

Not surprisingly, the smaller the mesh size, the more catfish that net caught. Almost all of the increased catch was channel catfish under 11 inches. Channel catfish smaller than eleven inches made up 69% of the catch in 1-inch mesh nets, 59% in the 1 1/8-inch mesh nets and 8% in the 1 1/4-inch mesh nets. There was no difference in catch in fish larger than 11 inches in any of the mesh sizes.

The second part of the study involved testing the use of escape rings sewed into the net's meshes. The drawing on the right shows how they were installed. The purpose of this part of the study was to see if currently used 1-inch mesh nets could be modified for use, if the minimum legal mesh size on hoop nets was increased. Nets were fished with 4 and 8 escape rings of either 1 2/3-inches and 1 1/4-inches. The most successful of the modified hoop nets showed a 22% lower catch of catfish under 11 inches than the nets without rings.



Source: Hoop Net Selectivity and Catch Rate, for Channel Catfish, by M. Walker, G.Tilyou and M. McElroy, in proceedings of the Forty Eighth Annual Conference, Southeastern Association of Fish and Wildlife Agencies. 1994.

KEMP'S RIDLEY TURTLES NESTING IN TEXAS

Kemp's ridley sea turtles are considered to be the most endangered of the five species of sea turtles in the Gulf of Mexico. Their low numbers are what pushed the creation of TED regulations in shrimp trawls.

This year 6 female kemp's ridley sea turtles nested on the lower Texas coast. These turtles have nested on the Texas coast before, but on average of only one nest every 3 years. Their main nesting area is the beach at Rancho Nuevo in Mexico.

The 590 eggs from the 6 nests were incubated and 390 baby turtles were hatched and released at the Padre Island National Seashore.

Two of the 6 mothers were "headstart" turtles. These are turtles produced by the headstart program, which hatched turtles from eggs taken from Rancho Nuevo nests and that were released in Texas. One mother was hatched in 1983 and one in 1986. Between 1978 and 1988 about 14 thousand turtles were released under the headstart program. Some of the other four females could likely be headstart turtles, but sea turtles were only marked with "living tags" from 1983 to 1988. An additional 22 thousand kemp's ridley turtles were released between 1989 and 1993 using a different hatchery.

The purpose of the headstart program was to develop another breeding ground for this turtle, in case something happened at Rancho Nuevo. The theory was that the sea turtles would return to the area where they first went to sea after hatching. This year's headstart turtles may be proving that theory to be true.
Source: Texas Shores. Vol. 29, No. 2. Texas Sea Grant College Program.

MORE SALTWATER ANGLERS

If you think that you've been seeing more saltwater sportsfishermen on the water, it is because there are more. Resident saltwater fishing licenses have increased substantially since they were first issued in 1984.

FISHING YEAR	NUMBER OF LICENSES
1984-85	102,125
1985-86	169,149
1986-87	198,852
1987-88	195,099
1988-89	204,686
1989-90	208,292
1990-91	206,088
1991-92	229,805
1992-93	245,952
1993-94	265,759
1994-95	280,360

LARGE MOUTHBASS RESEARCH

With all of the stocking of Florida largemouth bass in Louisiana, many fishermen have expressed interest how their behavior is different from our native bass, which is the northern largemouth bass. In order to answer some of these questions, research was conducted in Lake Tawakoni, a 37 thousand acre reservoir in Texas.

In this study, 12 northern largemouth bass (NLMB) and 12 Florida largemouth bass (FLMB) were obtained from a state hatchery and tagged with ultrasonic tags. They were all released in the same area at the same time. The researcher checked their movement with a radio receiver every two weeks for an entire year. Hatchery fish were used to make sure that pure strain fish were tested, not hybrids like may be found in the wild. Some interesting results were found.

* NLMB had bigger home ranges than FLMB. On average, NLMB spent 75% of their time within a 54 acre area and 95% of their time within a 165 acre area. FLMB spent 75% of their time within a 48 acre area and 95% of their time within a 110 acre area.
* Both subspecies heavily used shallow water. FLMB spent 83% of their time and NLMB spent 95% of their time in water shallower than 7 feet, even though water 40 feet deep was close by. The deepest water that NLMB moved to was 18 ½ feet. The deepest water for a FLMB was 22 feet. FLMB definitely preferred somewhat deeper water.
* FLMB showed a distinct movement pattern toward shallow water as water surface temperatures increased. No such pattern was seen for NLMB.
* FLMB were located significantly further from shore than NLMB. FLMB averaged 44 yards (maximum 226 yards) and NLMB averaged 10 yards (maximum 101 yards) from shore.
* Aquatic vegetation (water plants) was by far the most heavily used habitat by both subspecies. The table below shows the habitat preference of each.

Habitat type	% Use	
	FLMB	NLMB
Aquatic vegetation	28.2	33.9
Brushy shoreline	14.9	26.2
Clean shoreline	14.9	9.2
Open-water	7.0	0.0
Pier/boathouse	18.4	16.9
Hump	3.5	0.0
Stickups*	0.0	10.8
Dropoff	9.6	1.5
Rocky riprap	3.5	1.5

*A solitary bush or tree limb exposed above the water surface.

Source: Distribution and Habitat Selection of Florida and Northern Largemouth Bass in Lake Tawakoni, Texas, by Barry W. Lyons, in Proceedings of the Forty-Seventh Annual Conference, Southeastern Association of Fish and Wildlife Agencies, 1993.

MORE SHRIMP VIRUS NEWS

The few shrimp farms that exist in the United States are mostly in Texas and South Carolina. Several months ago, virus-caused diseases appeared in Texas shrimp farms . As these virus's are not native to the U. S., there was concern that if the virus escaped to our native gulf shrimp, that our shrimp would have no resistance to the diseases and serious problems could be caused.

Now one of the virus's, the Taura Syndrome Virus (TSV), has been found in four South Carolina shrimp farms. In order to prevent any possibility of the escape of the virus into the wild, the South Carolina Department of Natural Resources has ordered the

infected farms to disinfect thier ponds. This would kill both the virus and the shrimp. South Carolina shrimp farmers have filled a lawsuit to stop the DNR order.

Source: Aquaculture Magazine July/August, 1996.

WHAT DO PORPOISES EAT?

Fishermen often see porpoises breaking water near them while they are fishing. Some fishermen feel that porpoises scare fish away. Others feel that porpoises go where the fish are, so fishing around porpoises is good. Everyone, though, wonders what they eat.

Research done by a scientist at Hubbs Sea World in Florida has shed some light on porpoise, more properly known as bottlenose dolphins (scientific name *Tursiops truncatus*), food habits in the wild. Dead porpoises that washed up on beaches were cut open and their stomach contents analyzed. Several hundred porpoises were checked in the late 1980s and early 1990s.

Even when the food animals were digested, the fishes' otoliths (ear bones), squid beaks and shrimp spines and tail flippers were left in their stomachs. Otoliths can be used to identify the species of fish they came from

In one study, finfish were found in 99% of the stomachs that contained food, squid in 37% and shrimp in 15%. The most commonly found food items in this study were sliver perch (a small silvery fish similar to croaker), Atlantic croakers, sand seatrout, mullets, small squid and spots, each of which occurred in over 20% of the stomachs.

Another study, done in 1990, found the following species and the percentage of stomachs they occurred in: Atlantic croakers (76%), silver perch (70%), sand sea trout (57%), star drum (46%), anchovies (41%), pinfish (38%), and kingfish or channel mullets as they are locally known (32%).

A total of 43 different species were found in the first study and 46 in the second. A small amount of speckled trout and black drum were found in the stomachs. No redfish were noted. However, porpoises do eat some redfish. In 1992, a tag from a redfish tagged in Texas was found in a porpoise stomach.

It was suggested that at least some porpoises feed on shrimp trawling bycatch. The mix of species in their diets closely matches the species mix in trawl bycatch. Also, it was noted that porpoises in areas with no trawling spent much more of their time hunting for food than those in trawled areas.

Sources: Food Habits of Bottlenose Dolphins in the Southeastern United States, by Nelio B. Barros and Daniel K. Odell, in *The Bottlenose Dolphin*, Academic Press, 1990. Food Habits, by Nelio B. Barros, in Report on Investigation of

1990 Gulf of Mexico Bottlenose Dolphin Strandings, National Marine Fisheries Service, Southeast Fisheries Center, 1992. Bottlenose Dolphin Feeding in Texas: Playing Tags with Fish Prey, by Nelio B. Barros, in Texas Stranding Newsletter, November 1993.

COASTAL WETLANDS WORKSHOP

A public workshop will be held at 2:00 p.m. on Monday, October 21 in Harahan, to help the Louisiana Department of Natural Resources develop a comprehensive Coastal Wetlands Conservation Plan. The meeting will be held in the 2nd Floor Council Chambers at the Joseph S. Yenni Building at 1221 Elmwood Park Blvd. in Harahan.

The plan will outline how wetland losses due to activities permitted with Coastal Use Permits or Section 404 permits will be mitigated. The goal is no net loss of wetlands.

Landowners, oil and gas companies, marine construction companies, pipeline companies and the public are encouraged to attend.

WAKE LAW ON JEFFERSON WATERWAYS

On September 9, the Jefferson Parish Council passed an ordinance which makes it illegal for a vessel to throw a wake of over 15 inches high in portions of Bayou Barataria and Bayou Segnette. The Jefferson Parish Marine Fisheries Advisory Board received two petitions with many signatures requesting such an ordinance. The Board drafted the ordinance and forwarded it to the Council, which passed it.

Apparently, the waves from vessel wakes were causing shoreline erosion and damaging property and moored boats. The areas that this ordinance will apply to will be posted with "No Wake" zone signs. This is not a speed limit! One boat may travel faster than another, yet still throw a smaller wake.

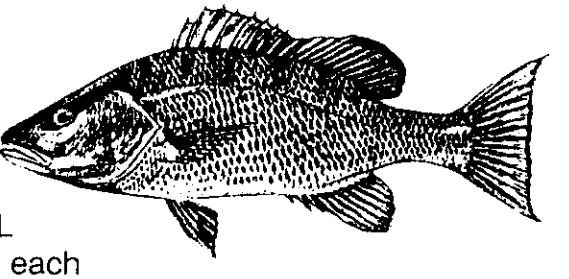
NEW FACT SHEETS

We have developed several new one-page fact sheets for our fisheries fact sheet series. We made them available at the last Louisiana Sportsmen's Show in New Orleans. If you didn't get them there, call, write, or come by my office in Marrero for a copy of the ones you would like. The titles are:

* **What is Hypoxia and How Does It Affect Fisheries** - Discusses the area often incorrectly called the "dead zone" in the Gulf of Mexico.
* **Red Snapper Facts** - Details on the management and biology of red snappers..
* **Tips For Keeping Your Live Bait Alive**
* **Estimating Fish Catches** - Explains how fisheries scientists come up with numbers on fish catches.

MANGROVE SNAPPER AGE AND GROWTH

Gray snappers (also called mangrove snappers) are a common snapper in the Gulf and south Atlantic. They are both recreationally and commercially important. Unlike most other snappers, these (especially the smaller ones between 8 and 14 inches) are found all the way inshore to the beaches and even inside the passes in the major lakes and bays.



Little was known about the life history of the gray snapper, especially how fast they grow. Researchers from the National Marine Fisheries Service recently measured and aged 432 gray snappers caught between Ft. Pierce, FL and Grand Isle, LA. They determined the age of each fish by cross-cutting the otoliths (ear bones) of the fish and counting the rings. Gray snappers, like most other fish, lay down a new layer of bone on their otoliths each year. The results of their direct aging effort are shown below.

AGE	NUMBER OF FISH	MINIMUM LENGTH	MAXIMUM LENGTH	AVERAGE LENGTH
2	19	9.4"	13.4"	**11.1"**
4	84	11.6"	21.8"	**16.1"**
6	53	12.0"	23.6"	**18.3"**
8	22	12.8"	25.6"	**21.0"**
10	16	15.0"	25.8"	**23.0"**
12	12	17.0"	28.1"	**24.3"**
14	5	22.6"	25.6"	**24.4"**
16	5	23.2"	28.4"	**26.6"**
18	12	20.7"	28.4"	**25.0"**
20	11	22.0"	30.6"	**26.8"**
22	1	29.2"	29.2"	**29.2"**

Some observations:

* Gray snappers grow rapidly the first 6 to 7 years of their life and then slow down.
* They are a long-lived fish with a fair number reaching 20 years old, with one (not included in the table above) reaching 25 years.

* Gulf of Mexico gray snappers are larger than Atlantic Coast gray snappers up to 10 years old and then their growth slows, and thereafter they are smaller than Atlantic fish over 10 years old.

Source: Age Size Structure of Gray Snapper from the Southeastern United States: A Comparison of Two Methods of Back-calculating Size at Age from Otolith Data, by A. Johnson, L. Collins, C. Keim, in Proceedings of the Forty-Eight Annual Conference, Southeastern Association of Fish and Wildlife Agencies., 1994.

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THE GUMBO POT
Elmer's Island Angel Hair

This month's recipe comes from my food friend and fellow fisheries agent, Sandy Corkern of Franklin, Louisiana. He cooked it one evening after a day of surf fishing on Elmer's Island. This recipe is simple, yet it is just delicious. Before you add garlic or anything else, try it like it is.

1 (12-oz) pkg. fresh angel hair pasta
1 stick margarine
2 tsps. liquid crab boil
1 ½ tsps. seasoned salt
2 cups (about 1½ lbs) peeled, deveined shrimp
1 tbsp. chopped parsley

1. While pasta water is heating, melt margarine in saucepan and add crab boil and seasoned salt.
2. Saute' shrimp in margarine mixture. If using large shrimp you may want to cut them into smaller pieces. DO NOT OVERCOOK.
3. Cook pasta according to package directions (approximately 1-2 minutes) drain and return to pot.
4. Remove shrimp from saucepan and pour margarine mixture over pasta, tossing to coat pasta.
5. Add shrimp and parsley and toss to mix. Serves 4 to 6.

Sincerely,

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