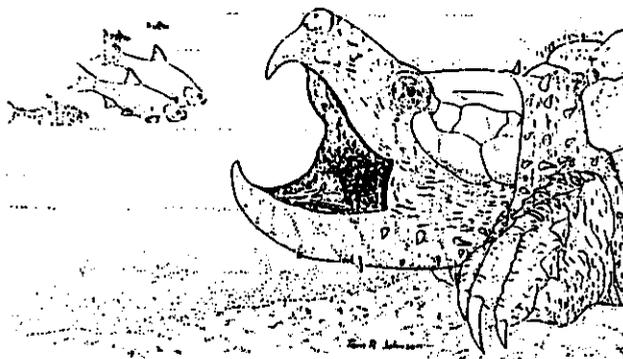




June 1, 1998  
Volume 22, No. 6

## SEA GRANT PROGRAM



### LAGNIAPPE

#### ALLIGATOR SNAPPERS

The alligator snapping turtle, locally called the loggerhead turtle, is the largest freshwater turtle in the U. S., reaching weights of well over one hundred pounds. According to Johnny Tarver, Assistant Secretary of Louisiana Department of Wildlife and Fisheries, the species is thriving in the state and... can be found in every ditch, pond, lake and bayou in Louisiana".

Last year, Tarver went head-up with the U. S. Fish and Wildlife Service (USFWS) when they proposed listing the species as "endangered" at the recent Convention for International Trade in Endangered Species (CITES). He was able to show there was no scientific justification for the listing and the result was that it was not listed.

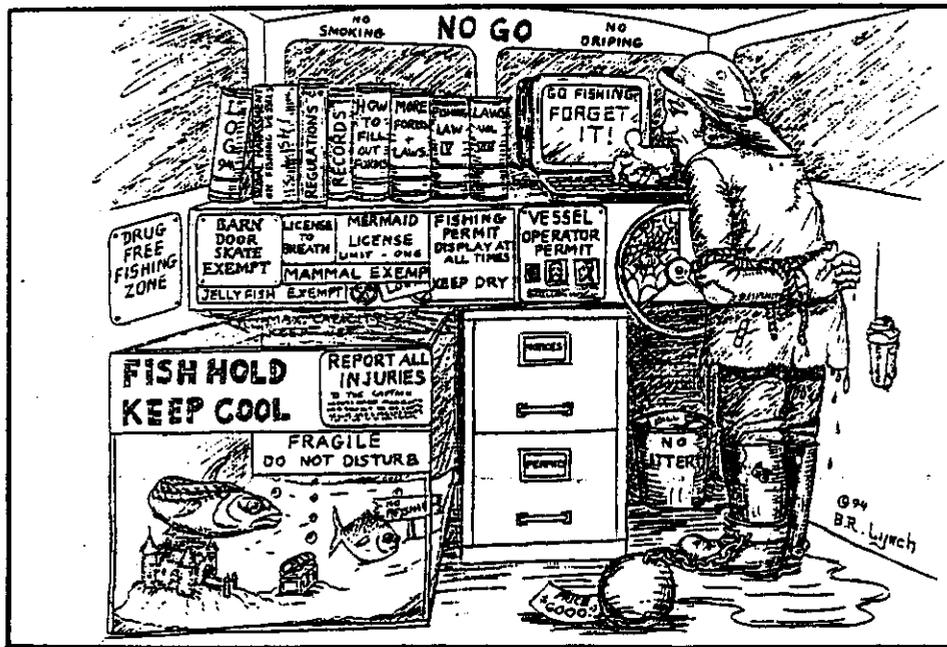
Pressure for the listing was brought by the Humane Society of the U. S., the New York Turtle and Tortoise Society, and the Defenders of Wildlife. A CITES endangered listing would have made it illegal to export alligator snapping turtles without a special license from the USFWS. According to the Department of Wildlife and Fisheries, the USFWS intended to stop international trade of the species and prevent the annual export of thousands of turtles of other species each year from Louisiana. These turtles are produced by 48 licensed turtle farms and two farm brokers in the state. Export of these farm-raised turtles does not affect the wild turtle population. During the last five years, no more than five alligator snappers have been exported.

Current studies being conducted in Louisiana are finding alligator snapping turtles in good numbers. The studies also indicate that current harvest levels are biologically safe. Present regulations place a 15-inch carapace (shell) length on the turtle for commercial harvest. There is no size limit for recreational fishermen, but they are limited to four of these turtles per day.

Source: *Louisiana Department of Wildlife and Fisheries News Release 97-277.*

## GRIDLOCK!

In recent years the spirit of cooperation between research scientists, fisheries managers, and commercial fishermen has broken down to an alarming level. Good fisheries management depends on this cooperation. Poor information going into the process will almost always produce poor fisheries management results. Why has this happened?



From the commercial fisherman's point of view, he sees himself buried under an avalanche of regulations. From his perspective, all of them seem designed to put him out of business or at least make his life difficult. They

often complain that when they provide information to scientists and managers, that it is used against them. A commercial fisherman recently told me "If they are going to put me out of business, they are going to do it without my help".

Fisheries scientists and managers have a different view from their labs and offices. They see a serious challenge in managing fisheries stocks in a biologically "safe" way, and at the same time maximizing harvest by fishermen. As fisheries management becomes more complex, the need for good information and cooperation from fishermen becomes even greater. When they don't have good information, they become very

cautious. When data does not exist to go into a fisheries management formula, scientists must make their best scientific guess (an assumption). Because of their caution, these assumptions are often very conservative in order to prevent the possibility of overfishing. I have heard several fisheries scientists state that their first responsibility is to the resource, rather than to the people that harvest it. Biologists are trained to think that way.

People being out of the equation has a danger. It can be argued that a resource has value only if it is important to people. This may explain why we give a fish like speckled trout the attention we do, and ignore a species like sawfish, which has come close to extinction in the last 20 years.

Managing a resource on biological information alone, and "letting the chips fall where they may" can create a situation where the fishermen themselves become even more hostile to the management process. Social and economic information is important to make the process work to everyone's benefit.

There are two factors which would greatly improve cooperation and trust within the management process.

- 1) Fishermen, seafood dealers, and scientists **MUST** work together. Fishermen are expert observers because of the thousands of hours they spend on the water. They can tell you **WHAT** is happening. Where fishermen get into trouble is in interpreting what they see to explain **WHY** things are happening.

On the other hand, scientists are expert interpreters. That is what they are trained to do. Where scientists get into trouble is making their interpretations based on tens or hundreds of observations, rather than the thousands of observations of fishermen.

Getting these two groups together in **MEANINGFUL** discussions is where an opportunity for progress exists. The strengths of one group can complement the weaknesses of the other group.

- 2) Develop the needed biological, economic, and social information. Attempting to estimate the numbers of active (which may be different than the number licensed) vessels and fishermen, and fisheries catch this late in the process is a major problem.

Fisheries management models cannot yield more accurate results without accurate information to put in the model. To get this, fishermen, seafood dealers, and marine businesses are going to have to trust the management process and provide accurate biological, economic, and social information.

If fishermen and others that depend on fisheries resources don't like the results of the management process now, they will like them even less if they withhold cooperation and information and just sit back and criticize the management process.

Sources: Illustration: *Waterman's Gazette*, Vol. 25, No. 4. Text: Greg T. Waugh. *South Atlantic Update*. South Atlantic Fishery Management Council. January, 1998.

## SKIN CANCER

Fishermen, both sport and commercial, spend a lot of time in the sun. Sun exposure has increasingly been linked to skin cancer.

There are 3 types of skin cancer. Two of them, basal cell and squamous cell carcinomas, seldom become life-threatening. The third type, melanoma, can and in fact 7,500 people die from it every year. Roughly, one in 87 Americans will suffer melanoma in their lifetime. Fishermen spend more time in the sun than the average American.

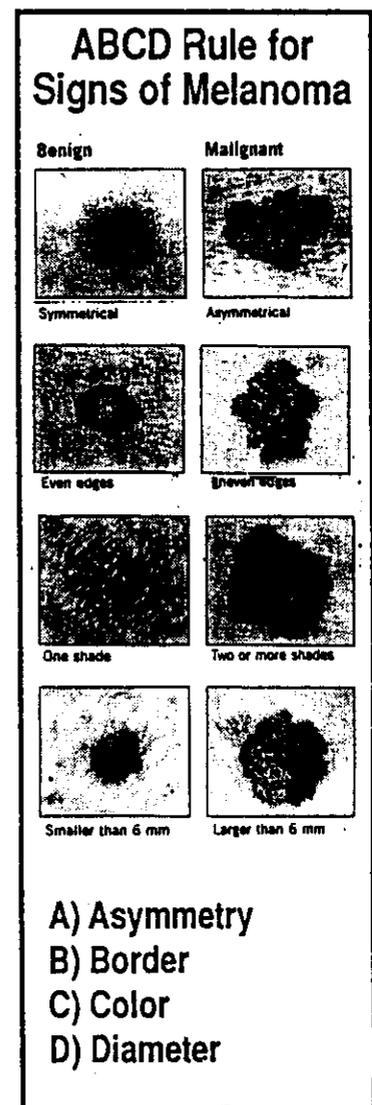
The good news is that if melanoma is caught early it is easily cured. Therefore, it is important to be able to recognize changes in your skin that could be melanoma.

Almost everyone has moles, an average of 25 per person. Most are harmless. However, any change in a mole or the sudden appearance of a new one should be watched closely. The simple ABCD rule illustrated in the picture at right can help you remember the signs of melanoma.

**A. Asymmetry** - This is when one half of a mole does not match the other half, Normal moles are round in shape.

**B. Border Irregularity** - Normal moles have smooth edges on borders. Melanomas often have irregular or uneven edges.

**C. Color** - Normal moles are usually a single shade of



brown. Melanomas often have different colors of tan, brown and black. Red, white and blue colors may also be present, giving the melanoma a mottled appearance.

**D. Diameter** - Normal moles are less than 6 millimeters (about the size of a pencil eraser) in diameter. Any sudden or continuing increase in the size of a mole is of special concern.

If you see any of the ABCD signs in a mole, immediately call your doctor. Early detection is the key to easy cure. Delay can be fatal.

Source: Angela Peterman in *Waterman's Gazette*. September, 1997.

## **RELEASING FISH SUCCESSFULLY**

Fishermen have always had to release fish taken that didn't meet legal size limits. In recent years, however, many recreational fishermen have been practicing voluntary "catch and release" fishing. Many of these people feel that by releasing what they catch that they don't have an impact on the resource. This may not be entirely true. Some almost always die after being released, due to hooking damage, handling, and stress. In some cases, this mortality can be significant.

Researchers in North Carolina studying striped bass, found a mortality (death) rate of 19% within 3 days on caught and released fish. While this may not seem high, they determined that the number of fish that died after release was larger than the entire yearly legal harvest quota.

As one would expect, more fish hooked in the gills and throat died than fish hooked in the mouth or jaw. The mortality rate was also higher for fish caught with live bait than for artificial baits, due to the fish being hooked deeper.

How fish are played, handled and released also has a strong affect on their survival. The following tips can increase the survival rate of released fish.

- \* Use the right tackle. Using the lightest weight tackle possible may increase the "sport", but will lengthen the time it takes to land the fish and may result in playing the fish down so far that it cannot recover. Exertion on the part of the fish while being played causes lactic acid to accumulate in the fish's muscles. This leads to blood acidification and a temporary disruption of many metabolic processes. Very high levels of lactic acid can cause the brain to start mixing up signals from other organs and may cause shock and death. Survival is dependent upon blood acid levels returning to normal. Usually, if levels are not restored in 72 hours the fish will die. Stressed fish have an increased oxygen demand, but if oxygen can't reach

the muscle tissue because of increased lactic acid levels, the fish becomes badly stressed and dies.

- \* Protect the mucous layer on the fish. When a fish is handled and comes in contact with a dry surface, its protective mucous layer may be partially removed, presenting an opportunity for bacteria or other disease-causing organisms to invade the skin. Avoid using a landing net, because in the process, fish lose some of their protective mucous layer. If the fish must be handled, do so with moist hands.
- \* Handle the fish gently. Placing the fish in a wet towel, keeping the eyes covered, and holding the fish with its belly up have a tendency to quiet the fish. While removing the hook, avoid touching the gills or squeezing the gill covers or the soft underbelly. Fish have sensitive internal organs that are not supported out of water. When dislodging the hook, hold the fish firmly and use a tool to work the hook free by backing it out of the hole. It is best to use a tool such as a hook-out, hemostat, or long-nosed pliers. With the exception of potentially dangerous fish, it is best to grab the lower jaw to remove the hook.
- \* Cut the line or the leader on fish that are deep hooked, or are too large or dangerous to easily handle. Use hooks that will rust quickly such as bronze hooks.
- \* Do not throw the fish back onto the water. Instead, return the fish to the water by letting it swim out of your hands.

Research Source: *Hooking Mortality of Striped Bass in Roanoke River, North Carolina*. North Carolina Wildlife Resources Commission. 1994.

### **SHRIMPERS SUE OVER B.R.D.s**

The Texas Shrimp Association (TSA), with eight other fisheries trade associations, has sued the National Marine Fisheries Service (NMFS) in May over its requirement that Gulf of Mexico shrimpers use bycatch reduction devices (BRDs) in shrimp trawls. Mandatory BRD use in federal waters went into effect on May 14.

According to NMFS, the stock of red snappers in the Gulf will not recover from overfishing by the target date of 2019 without bycatch reduction. Also according to NMFS, 88% of the red snapper population is removed by shrimp trawls. The lawsuit claims that the new regulations violate the Magnuson-Stevens Fishery Conservation and Management Act, the Regulatory Flexibility Act, and the Administrative Procedure Act. Wilma Anderson, Executive Director of TSA called the government's regulations "an exercise in futility that will bring unnecessary financial injury to most shrimpers". She further stated that "the

government's overly gloomy estimate of the health of the red snapper population is hurting everyone."

TSA's challenge is based around the following points:

- \* Red snapper bycatch is overestimated. An independent biological consultant hired by TSA states that it is 47% lower than NMFS estimates. TSA also maintains that shrimping levels in red snapper waters have not increased as much as NMFS states it has.
- \* BRD efficiency at excluding small red snapper is overestimated because of a very low number of tests which were taken at the wrong time of the year.
- \* Low oxygen levels (the dead zone) in the Gulf have moved red snappers out of the area sampled by NMFS, biasing the sampling results.
- \* No credit for bycatch reduction due to TED use has been given.
- \* The SPR level for red snapper is set too high and based on guesswork. SPR is the biological measurement used to judge the health of a fish population.
- \* The direct hook and line fishery for red snapper has three times greater impact on the fish population than shrimp trawl bycatch.
- \* Total mortality (death rate) of young red snapper is overestimated by NMFS. Present survival rates have produced large year classes of red snapper in 1989, 1990, 1991, 1993, and 1996, and very large year classes in 1994, 1995, and 1997.
- \* Actual shrimp loss due to BRD use is 2½ to 3 times higher than NMFS estimates.
- \* The results of the Independent Stock Assessment contracted by NMFS suggests that the red snapper stock is nearly recovered, if not recovered from overfishing.
- \* NMFS has disregarded the Peer Review Panel's recommendation that the shrimp industry should participate in development of studies necessary to reach practical bycatch reduction solutions.

The lawsuit has been filed in the Federal District Court in Brownsville, Texas. The plaintiffs (shrimp industry) have asked the court to give their case the earliest possible

attention, since a preliminary ruling to prevent enforcement of BRD regulations is not likely.

## **NEW NON-RESIDENT CHARTER BOAT LICENSE PROPOSED**

Acting on recommendation of its Budget Committee, the Louisiana Wildlife and Fisheries Commission has given notice of intent to increase the fees for non-resident licenses issued by charter boat operators from \$2.50 to \$15. These licenses are valid only while fishing from a vessel on which the charter fishing guide is present and for the duration of the trip shown on the face of the license at the time of issue. No other changes are proposed.

Final action by the Commission on the proposal will probably take place in October. Anyone wishing to comment on the proposal should do so in writing to Janis Landry, Fiscal Section, Louisiana Department of Wildlife and Fisheries, PO Box 98000, Baton Rouge, LA 70898-9000. Comments will be accepted until 4 pm, August 4, 1998.

## **ENDANGERED SPECIES LISTINGS**

The recognition of a species as being endangered or threatened with extinction under the Endangered Species Act can at times have far-reaching consequences. The controversy over the use of TEDs in shrimp trawls to protect endangered sea turtles is an example.

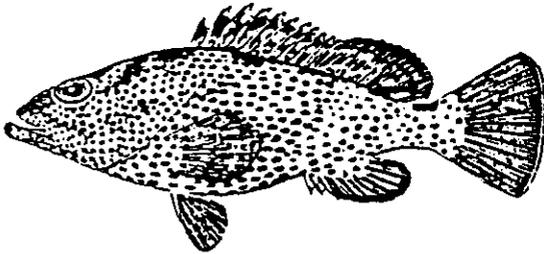
In the coastal waters of Louisiana and the northern Gulf of Mexico, the gulf sturgeon is currently listed as threatened. This large fish is found east of the Mississippi River, especially in Pearl River and Lakes Ponchartrain and Borgne. Outside of prohibiting the harvest of this species, very little has yet been done that impacts fishermen.

Fishermen should be aware that several other species of fish are currently being considered for listing as threatened or endangered. The eight species are:

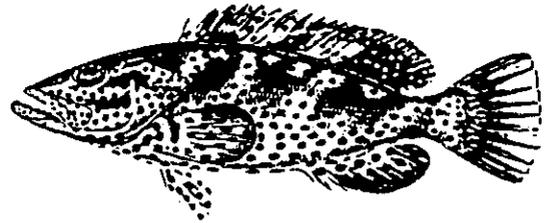
Warsaw grouper	<i>Epinephelus nigritus</i>
Nassau grouper	<i>Epinephelus striatus</i>
Speckled hind	<i>Epinephelus drummondhayi</i>
Jewfish	<i>Epinephelus itijara</i>
Dusky shark	<i>Carcharhinus obscurus</i>
Night shark	<i>Carcharhinus signatus</i>
Sand tiger shark	<i>Odontaspis taurus</i>
Salt marsh topminnow	<i>Fundulus jenkinsi</i>

Warsaw groupers, one of our largest groupers, are a prize for Louisiana spearfishermen, although they are also caught by recreational and commercial hook and line fishermen. The speckled hind is a brightly-colored grouper, closely related to red and

rock hinds. (All three species are referred to as strawberry groupers, calico groupers or kitty mitchells.)



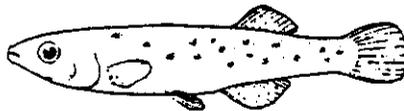
Red Hind  
*Epinephelus guttatus*



Rock Hind  
*Epinephelus adscensionis*

Both red and rock hinds have bright-colored speckles on a light background color. The speckled hind has light-colored speckles on a dark background color.

The salt marsh topminnow is a brackish marsh species that only reaches two inches long. While it is not likely to be caught on a hook, it could possibly be captured in bait minnow traps.

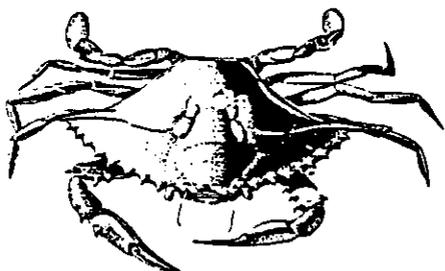


Salt Marsh Topminnow  
*Fundulus jenkinsi*

It may be positively or negatively affected by marsh management and restoration projects that affect salinity and habitat, as well as pollution and development.

Source: *Endangered Species Bulletin*. January/February 1998. U. S. Fish and Wildlife Service.

## BAYOU DULARGE BUSTER CRABS



Bayou Dularge in Terrebonne Parish is a well known hotspot for the production of buster crabs to put into softshell crab shedding systems. Soft crab shedders from Jefferson, St. Charles, Lafourche, Terrebonne and St. Mary Parishes all shed Bayou Dularge crabs.

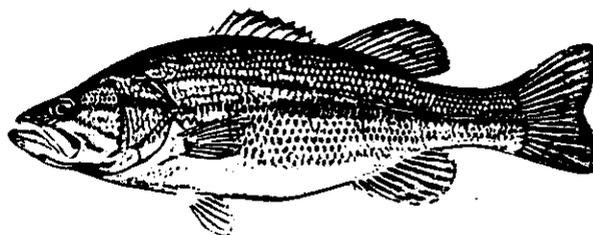
Unfortunately, at some times of the year, crabs from this area mysteriously start to die once placed in a shedding system. At times, 70 to 80% will die before they begin to molt.

This has happened often enough over a period of years that research is needed to determine the problem. Research will not be possible without the cooperation of soft crab fishermen and shedders. We will need to know when one of these dying events begins so that the waters in the area and the crabs can be tested.

Any crabber or shedder who would be willing to help work on this problem should call me at my office in Marrero, (504) 349-5644.

## MARINE ADVISORY BOARD NEWS

The Jefferson Parish Marine Fisheries Advisory Board has received the first two installments on the Florida bass stocking program it is sponsoring. On April 20, approximately 50 large surplus brood fish from the Department of Wildlife and Fisheries (DWF) were delivered and stocked east of the Pen near Lafitte. These fish were from 3 to 5 pounds.



On May 15, Department biologists guided by Marine Advisory Board Chairman, Randy Gros, stocked 150,000 Florida bass fingerlings near the same area. Gros, who initiated this project, says that he hopes to get another delivery of about the same size this month to stock in the Delta Farms area.

These fingerlings were slightly over one inch long. DWF Inland Fisheries Division District Biologist Howard Rogillio is optimistic about the project, but cautions fishermen not to expect overnight magic. He expects that it will take 5 to 10 years for these fish to grow near 10 pound trophy status. Of course, conditions have to be right to produce fish of that size anywhere.

Rogillio said that DWF plans to stock the area for 3 years and then sample the fish population to see if the effort has been effective. After sampling, DWF biologists will make a decision on whether or not to continue stocking.

## **NEW FISHERIES LAWS**

The recent special session of the 1998 Louisiana Legislature passes several bills of interest concerning fisheries. If you would like more information on these new laws call me at my office in Marrero.

### House Bill 25 - McCain & Michot (Act 155)

Allows the use of up to 35 crawfish traps by recreational fishermen with a \$15 gear license. Each trap must be marked with a waterproof tag with the gear license number on the tag. People over 60 years of age or who are declared permanently disabled by a doctor are exempt from this license. Also creates a recreational limit of 150 pounds.

### House Bill 32 - Rousselle (Act 54)

Changes the loss of license provisions for any class 3 or greater fisheries violation from loss of the commercial fisherman's license to loss of the commercial rod and reel license.

### House Bill 60 - Daniel & Romero (Act 31)

Makes a technical change in the law to allow the Department of Wildlife and Fisheries to allow the department to continue their program of wildlife and fisheries information and education.

### House Bill 114 - Gautreaux & others (Act 3)

Creates the Atchafalaya Basin Program within the Department of Natural Resources. The program will serve as the state authority to work with the U.S. Army Corps of Engineers and other agencies on the federally sponsored Atchafalaya Basin Floodway System, Louisiana Project.

### House Bill 177 - Daniel, Romero & others (Act 164)

Allows for an automated electronic system for issuing fishing and hunting licenses. Effective only after the commissioner of administration notifies the Secretary of the Department of Wildlife and Fisheries that enough funds have been approved for the program.

### House Concurrent Resolution No. 19 - Odinet

Re-creates the Louisiana Oyster Task Force through December 31, 1999.

### House Concurrent Resolution 29 - Rousselle

Urges and requests the Department of Natural Resource and the Governor's office of Coastal Activities to prevent salinity fluctuations that are harmful to oyster production by including the rebuilding and restoration of barrier islands in coastal restoration projects.

### House Concurrent Resolution 34 - Rousselle

Urges and requests the Department of Wildlife and Fisheries to develop a program to control black drum populations to prevent their damage to oysters located on leases, and to assist oyster leaseholders in their battle against expanding populations of black drum.

## **FLOUNDER BIOLOGY**

Southern flounder biology has been of interest ever since a 10 fish limit for commercial and sports fishermen was put in place in 1996. Researchers at L.S.U. recently studied age and growth in flounders in Louisiana. Some of the results are interesting.

Male southern flounder do not live as long and get as large as females. Most male flounders are only 7 to 10 inches. The largest male found in the 1086 flounders sampled was only 13 ½ inches long. The oldest male was 4 years old, with most adults being 1 to 2 years old.

Females get much larger, up to 23 inches long, with most adult females being between 10 and 20 inches long. The maximum age for females was 6 years old, and most adults were 2 or 3 years old.

Almost no male southern flounders were found in inshore waters. The theory is that males stay offshore and that the females move out from inshore waters to the males offshore to spawn.

Source: *Examination of Southern Flounder, Paralichthys lethostigma: Otolith Symmetry, Increment Validation, and Sexual Dimorphism in Age and Growth.* Andrew J. Fisher and Bruce A. Thompson. Coastal Fisheries Institute, CCEER, Louisiana State University.

## **MARKING LINES AND NETS**

I have lately received quite a few questions about the legality of use of "highwater lines" and unattended nets in freshwater.

Highwater lines, or as they are legally known, elevated trotlines, are trotlines that are usually stretched between two poles staked into the water bottom. The main line is entirely out of the water and stagings with hooks on them hang into the water. The baited hooks fish just under the surface of the water and are very effective at capturing large catfish that feed near the surface of the water during some seasons of the year. Because of their construction, some boaters consider them to be dangerous, especially under conditions of poor visibility.

According to the Region 8 Enforcement Office of the Department of Wildlife and Fisheries, elevated trotlines are prohibited by Section 321 of Title 56 of Louisiana law. The law, however, is written in such a way that as long as the hooks are underwater, an elevated trotline is legal.

Fishermen using elevated trotlines may want to consider their legal liability on the boating safety issue, in spite of the fact that most of these lines are set in relatively shallow water. Anything that would catch a boater's eye, such as strips of brightly-colored flagging or reflectors hung from the main line, would be useful. Boat operators should also be aware of the possibility of encountering such a line, particularly in shallow freshwater lakes.

The issue of marking gillnets and trammel nets in freshwater areas is very clear. It is addressed in Section 320.F of Title 56 and Section 181 of Title 76. The law says that each such net must be marked with a waterproof tag attached to the corkline at each end of the net no more than 3 feet from the edge of the webbing. The tags must be supplied by the commercial fisherman and must have the fisherman's full name (no initials) and commercial fisherman's license (not the gear license) number printed in legible English.

Unlike what many fishermen believe, unattended trammel nets and gill nets are legal in the freshwater area of the state. What is freshwater is defined by law and includes lakes such as Salvador and Cataouache.

## **COASTAL RESTORATION TOWN MEETINGS**

Coast 2050 is an effort to develop a strategic coastal restoration and preservation plan. Its intent is find a common ground between the efforts needed to maintain the coast and the concerns of the people that live, work, and recreate on coast. This is very important since many coastal restoration projects will have impacts on fisheries and other resources.

Scientists, parish and state officials, and private citizens have actively been meeting under the initiative. In June, Coast 2050 will be holding a series of public town meetings to bring a draft of their effort to the public. Public participation, especially from those people who earn their living from coastal resources is very important at this stage. After the plan is done, it may be difficult to get your voice heard on this effort.

The schedule of meetings in eastern Louisiana is listed below. All meetings begin at 7:00 p.m.

June 15,	Cut Off Youth Center, Cut Off
June 23,	Port Sulphur Civic Center, Port Sulphur
June 24,	SLU University Center, Hammond
June 25,	St. Bernard Government Complex, Chalmette
July 7,	Jean Lafitte Auditorium, Lafitte

Coast 2050 is a joint effort of the Breaux Act Task Force, the State Wetlands Authority and the Department of Natural Resources.

### COMMERCIAL LICENSE TRENDS

Recently, I was asked to deliver a presentation on the number of people participating in commercial fishing in Louisiana. In examining the numbers of commercial licenses sold over the last 10 years, I noticed some interesting trends.

YEAR	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
Resident Commercial Fisherman	15,421	16,229	15,062	14,699	15,879	17,709	18,548	20,370	22,374	24,433

First, there has been an almost steady decline in the number of people licensed to fish commercially. In ten years the decline was almost 37% or over one-third.

The number of shrimp gear licenses has dropped even more sharply. A gear license is required for each trawl, butterfly net, or skimmer used. From 1988 to 1997, the number of resident trawl gear licenses sold dropped 56%. Total shrimp gear licenses (trawl, skimmer, and butterfly net) fell 44%. Skimmers (which were licensed under the butterfly net gear license before 1992) are the only shrimping gear that showed an increase in numbers.

YEAR	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
Resident Trawl	9,048	9,847	10,095	10,231	11,349	13,866	14,959	16,736	18,750	20,578
Resident Butterfly	2,442	2,776	3,050	3,294	3,809	4,746	7,984	8,142	8,351	9,810
Resident Skimmer	5,427	5,686	5,447	4,887	4,583	3,748	NA	NA	NA	NA
Total Commercial Shrimp Gear	16,917	18,309	18,592	18,412	19,741	22,360	23,943	24,878	27,101	30,388
Nonresident trawl	3,128	3,639	3,553	3,373	3,216	3,454	3,757	4,097	4,067	4,276
Resident Recreational trawl	4,684	4,893	4,075	4,173	4,456	4,169	4,847	4,580	4,311	682

Nonresident commercial trawl gear licenses also showed a decrease of 27%, but the decline was less than that for resident licenses. Recreational shrimp trawl license numbers have remained relatively stable since 1989, the first full year that they were issued.

YEAR	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
Oyster dredge	1,131	1,082	1,084	1,014	1,159	1,107	1,107	1,541	1,713	1,780
Hoop net	1,873	1,924	1,752	1,678	1,704	1,750	1,775	1,674	1,689	1,583
Recreational hoop net	3,787	3,879	3,873	3,775	3,709	3,519	2,853	2,329	1,599	625
Crab trap	2,529	2,905	3,423	2,498	2,836	2,734	2,579	2,757	2,957	2,751
Recreational crab trap	3,582	3,152	2,797	2,795	2,818	2,270	2,230	1,946	1,589	223

Other resident commercial gear license numbers did not show the same decline that commercial fishermen licenses and commercial shrimp gear licenses did.

Oyster dredge license numbers have been relatively stable for 7 years, since 1991. Hoop nets, the gear most commonly used to capture freshwater commercial fish, have shown a gradual increase in numbers, in spite of strong market competition from farm-raised catfish. Recreational hoop net gear license sales have grown tremendously since 1989, the first full year of their issue. With this license, a recreational fisherman may use up to 5 hoop nets but is not allowed to sell his catch. Last year, twice as many people used hoop nets recreationally as commercially.

Commercial crab trap gear license numbers have been relatively stable. A significant jump in numbers took place in 1995, when the Louisiana Legislature passed a 3 year (1996 through 1998) moratorium on sales of these licenses to people who did not historically hold one. Licenses issued in 1997 were near the lower end of their 10-year range. The moratorium on new licenses will expire on December 31, 1998 and anyone will again be able to purchase a commercial crab trap gear license.

Recreational crab trap licenses (10 traps per license holder) showed a strong increase in numbers, especially since the commercial crab trap moratorium went into place in 1996. As with hoop nets, more people use crab traps recreationally than commercially.

## SEISMIC MEETING

Heather Warner Finley of the Department of Wildlife and Fisheries (DWF) Seismic Section will be holding four meetings in coastal Louisiana to inform fishermen and the public about proposed changes in DWF Seismic regulations and take public comments. Recent dramatic increases in seismic activity in coastal areas have often placed seismic operators and commercial fishermen in conflict. Some of the changes include requirements for public meetings before and site clearance after each job. Also, a proposed change gives the DWF Secretary the power to shut a seismic project down when conflict occurs. The meeting in this area will be at 7:00 p.m., Wednesday, June 17, at the Lafitte Civic Center in Lafitte, Louisiana.

\*\*\*\*\*

### THE GUMBO POT Shrimp a la Cantrelle

Simple is good! Sometimes we forget that. When Phil and Bernice Cantrelle of Jennings, Louisiana sent me this recipe, I thought that it was too simple. I was used to long lists of ingredients and lots of steps. Good south Louisiana cooking is supposed to be simple. You may substitute the Cajun/Creole seasoning of your choice, if you choose not to use the Cantrelle seasoning.

#### Seasoning Mix Ingredients

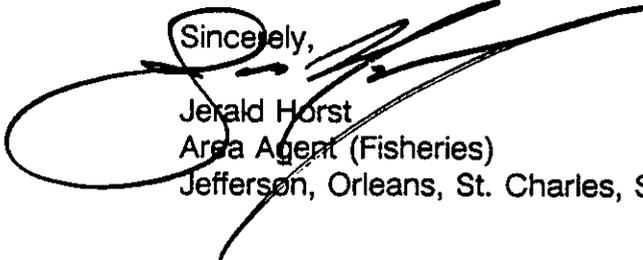
1	cup salt	1/4	cup Accent
2/3	cup red pepper	1/4	cup white pepper
1/3	cup garlic powder		

#### Recipe

1	lb headless unpeeled shrimp
1	stick margarine seasoning mix

Melt butter in large skillet. Season shrimp with seasoning mix and place in melted butter. Stir constantly. While cooking on medium heat 3 to 5 minutes or until shell slightly separates from the meat. Sample a shrimp for seasoning. When the salt is right to your taste, the dish is ready to serve. Do not overcook. Overcooking will toughen the shrimp and cause the shell to stick to the meat. Serves 4.

Sincerely,

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