

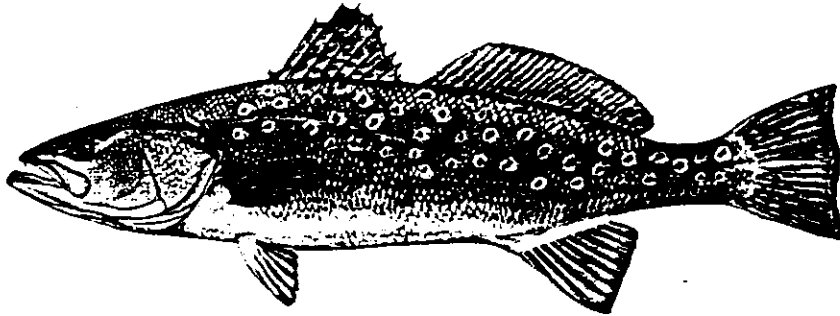


Louisiana State University
Agricultural Center
Louisiana Cooperative Extension Service

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SEA GRANT PROGRAM



LAGNIAPPE

FRESHWATER DIVERSION FORUM

The use of river diversions to restore coastal marshes has been a topic of interest to fishermen, environmentalists, and the public for several years. Much of the debate is centered around what the impacts of freshwater from the river will be on marine fisheries and ecosystems.

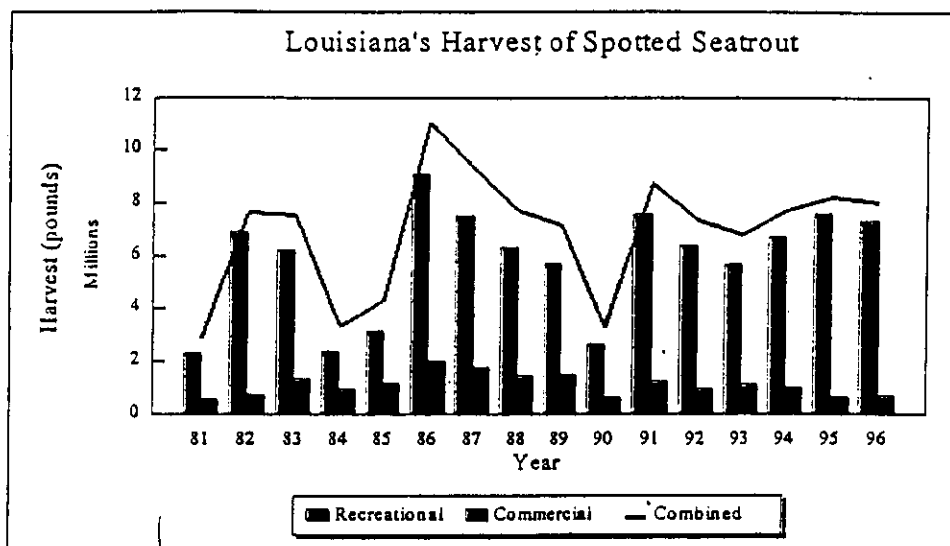
In order to answer many of these questions, the Jefferson Parish President's Office and the Jefferson Parish Marine Fisheries Advisory Board are sponsoring a one day public information meeting on the subject. Experts will be at the meeting to discuss a wide range of subjects including fisheries impacts, river water quality, current and planned diversions, and other marsh restoration options. Time will also be allowed for questions.

Saturday, December 6, 1997
9 am - 5:45 pm
Jefferson Parish School Board Office
501 Manhattan Blvd., Second Floor
Harvey, LA

Attendance is free, so mark your calendar.

SPECKLED TROUT STOCK ASSESSMENT

Speckled trout are Louisiana's most popular saltwater recreational fish. They are also harvested by commercial fishermen for Louisiana restaurants, although in much lower numbers. In September, the Louisiana Department of Wildlife and Fisheries released its latest status report on speckled trout.

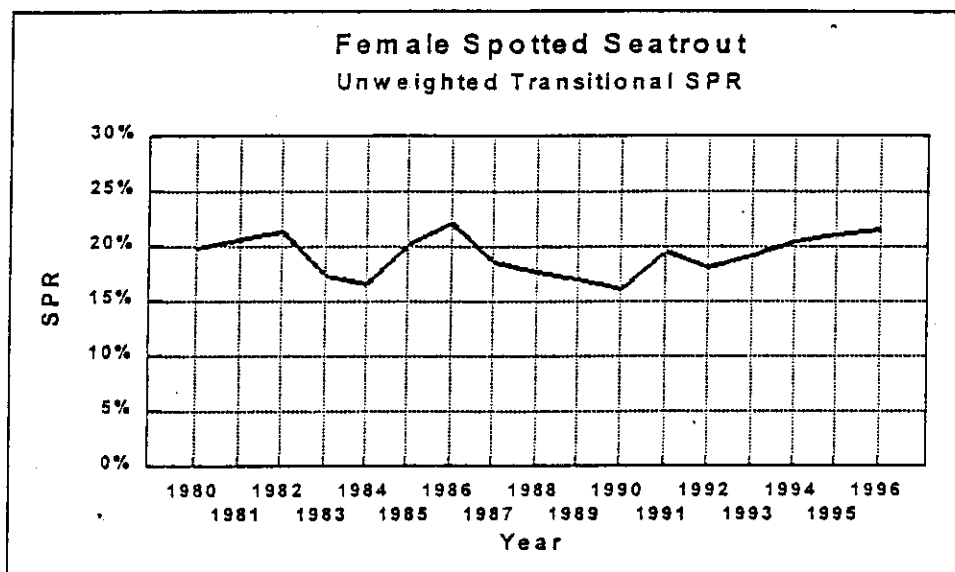


The figure above shows Louisiana's harvest of speckled trout. In each year the bar on the left is recreational harvest, and the bar on the right is commercial. Notice the sharp drop in harvest in the year following the fish-killing freezes of 1983 and 1989, followed by a strong rebound in harvest after each freeze. The highest harvest years occurred two years after each freeze.

In addition to monitoring recreational and commercial catches, the Department of Wildlife and Fisheries samples with seines and gill nets. Seine samples are taken each summer and fall to get some early estimate of each year's spawn and survival of young-of-the-year (1-4 inch) fish. Gill nets with three mesh sizes are used to sample older fish. Samples are taken in January to March and May-June. Speckled trout move to different areas in the estuary during cool weather months and warm weather months. Sampling is not done during April and September as these are "transition" months, when the fish are not in their warm weather or cool weather patterns.

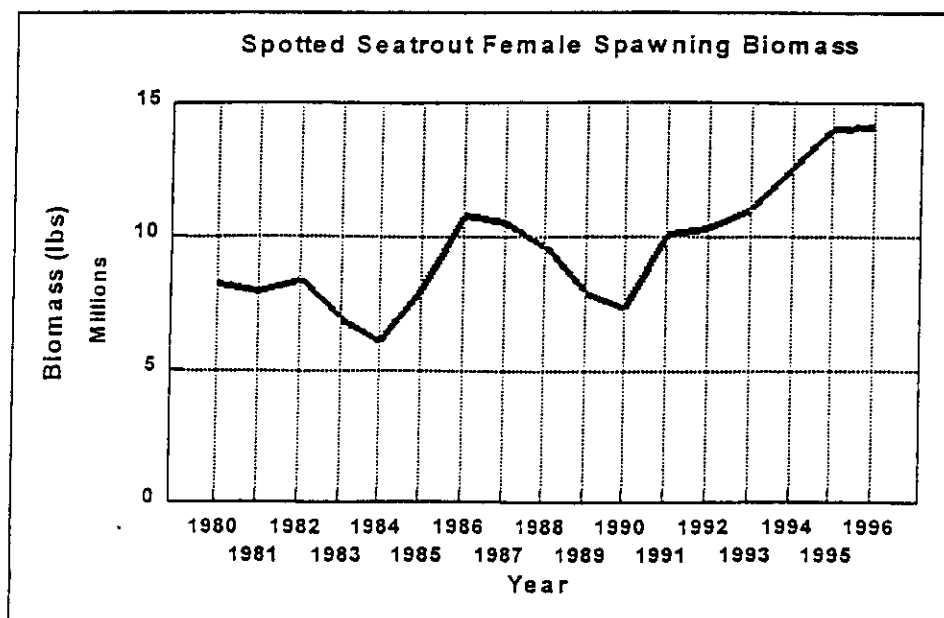
Spawning potential ratio (SPR) is the yardstick used to measure the relative biological health of the stock of speckled trout. SPR is simply the ratio of the estimated egg-producing ability of all mature fish in a fished stock of fish as compared to the egg-producing ability that would exist if the stock was unfished.

In earlier analyses of speckled trout stocks, the Department of Wildlife and Fisheries recommended a minimum of 15% SPR as a conservation standard for this fish. A more recent analysis of the data and a change in scientific approach has resulted in the department using 18% as the minimum SPR necessary for the biological health of the stock.



Current analysis places the SPR of speckled trout at 21.6%. This is the highest level since 1986, and is above the minimum conservation standard of 18%.

It is important to understand that fisheries management is very dynamic and frequently changes. Minimum SPR values can change because of improved data or scientific methods of assessment. Harry Blanchet, one of the authors of this section of the report, stressed to me that more important in the SPR of the stock at this time, is the long-term trend, which is positive.



The figure at the bottom of the previous page shows the estimated amount of fish in pounds (biomass) actually out there for fishermen to chase. This also is very positive, with estimated biomass being larger than at any other time in recent history.

Based on this stock assessment, the department is recommending that no change in regulations should take place that would increase harvest by fishermen. They have two reasons:

- 1) Fishing effort, could possibly increase if the number of fishermen increases or if the fishermen in the fishery catch more fish.
- 2) The current SPR is not that far above the minimum conservation standard of 18%.

The socioeconomic section of the report is also interesting. Commercial speckled trout landings in 1996 were 774,474 pounds worth \$713,381. The average price was 92 cents per pound. This is the lowest price since the peak price of \$1.54 per pound in 1990.

In 1996, only 186 commercial fishermen held spotted seatrout permits. The average income per fisherman from all sources for commercial fishermen holding such permits was \$11,870. The 186 permit holders were broken down by parish as follows:

<u>Parish</u>	<u>Number of Permit Holders</u>	<u>%</u>
Plaquemines	88	47.3%
Jefferson	24	12.9%
Terrebonne	20	10.8%
St. Bernard	17	9.1%
Lafourche	11	5.9%
Cameron	8	4.3%
St. Tammany	6	3.2%
St. Mary	3	1.6%
Orleans	3	1.6%
Other (5 parishes)	<u>6</u>	<u>3.2%</u>
Total	186	100.0%

Numbers of recreational saltwater fishermen have increased rapidly, 45.5% in 5 years. Because people under 16 and over 59 years old do not have to buy a license, an exact figure does not exist, but current estimates are from 413,000 to 454,000 in Louisiana.

Since the first survey was taken in 1981, more sport fishermen have targeted speckled trout than any other saltwater fish. Recreational fishermen targeting speckled

trout typically come from families that are financially much better off than average. Median household annual income in Louisiana is \$26,312. Medium family income for sports fishermen that target speckled trout is in the \$40,000 to \$44,999 range. Over 50% of the anglers that target speckled trout live in 5 parishes.

<u>Parish</u>	<u>% of Speckled Trout Anglers</u>
Jefferson	19.83%
E. Baton Rouge	9.44%
St. Tammany	7.54%
Orleans	7.36%
Lafourche	7.36%

Surveys of sports fishermen who target speckled trout showed that a large majority of them agreed that the more fish they caught, the happier they were, although a smaller majority felt that a fishing trip could be successful even if they caught no fish. Most did not want to keep all the fish they caught, but neither did they usually give away what they kept. This indicates that for most of them, that eating their catch was part of their enjoyment from fishing.

Most (79%) speckled trout fishermen were happy with current regulations. Management for more and smaller fish was preferred by 14.2%, and fewer, larger fish by 6.8%.

Source: *1997 Report on the Status of Spotted Seatrout*. Louisiana Department of Wildlife and Fisheries. 1997.

HOW MUCH S.P.R. IS ENOUGH?

Spawning Potential Ratio (SPR) is increasingly being used to measure the biological health of fisheries resources. SPR is simply the ratio of the estimated egg-producing ability of all mature fish in a fished stock as compared to the egg-producing ability that would exist if the stock were unfished.

SSBR (spawning stock biomass per recruit) is another measurement very similar to SPR and is also used to measure the status of a fish population's health. SSBR measures the ratio of the total weight of mature fish in a fished stock as compared to the total weight that would exist if the stock were unfished.

The big question is, *How high of an SPR or SSBR is enough to ensure that enough adult fish are present to spawn and replace the fish being harvested?* Sometimes not enough information is known about the biology of a particular fish to determine the SPR needed. In such cases, fisheries managers sometimes use 20% as a "threshold". This standard is based on work done on north Atlantic groundfisheries in the early 1980's.

Where enough biological information exists on a species, an SPR or SSBR can be recommended specifically for that species. A SSBR of 35% has been recommended for Spanish mackerel, and 20% for king mackerel by the Gulf of Mexico Fishery Management Council. A SSBR of 8-13% is considered to be enough for gulf menhaden (pogies).

For speckled trout, the Louisiana Department of Wildlife and Fisheries has in the past used an SPR of 15%. The department is now using an SPR of 18%. The change is because of better biological information and a change in assessment methods.

Two researchers in 1993 examined 90 fisheries stocks of 27 different species and recommended that an SPR of 30% be used when there is no information to use another figure. They noted that the 30% figure may be too conservative for an "average" stock of fishes, but that the number is sufficient for 80% of the stocks they studied. The average SPR needed for the stocks they considered was 18.7%. The most resistant to overfishing one-fourth of the stocks in the study only needed an SPR of 8.6%. Three-quarters of the stocks required SPR of 27.1%.

Source: *Profile, Stock Assessment and Biological Condition of Spotted Seatrout*. R. H. Blanchet, J. A. Shepard, and M. J. Bourgeois. Louisiana Department of Wildlife and Fisheries. 1997.

NEW COMMERCIAL FISHING AND DEALERS LICENSES

The 1997 Louisiana legislature with Act 376, has restructured the license system for commercial fishermen and seafood dealers. Under the new system, three licenses will be offered for sale, the commercial fishermen's license for \$55, the retail seafood dealer's license for \$105, and the wholesale/retail seafood dealer's license for \$250.

One of the biggest changes is that holders of the commercial fishermen's license may sell only to people that hold a wholesale/retail seafood dealer's license. Sales by fishermen to the public, to restaurants, and to retail outlets will no longer be permitted unless the buyer holds a wholesale/retail seafood dealer's license.

If a commercial fishermen wants to sell his catch to the public, to restaurants or to retail stores, he must purchase the \$250 wholesale/retail dealer's license in addition to his \$55 commercial fishermen's license. Fishermen should be aware that holders of the wholesale/retail dealers license must submit monthly reports on the seafood products they handle. Purchase of the seafood wholesale/retail dealers license exempts softshell crab producers from the purchase of the \$100 softshell crab shedder's license.

Another major change is that restaurateurs that buy only from wholesale/retail seafood dealer license holders and serve only cooked seafood will no longer have to buy a license. Restaurants that serve raw seafood such as oysters or sushi will have to purchase the \$105 retail seafood dealer's license.

All new licenses go on sale on November 15 at the Baton Rouge and New Orleans offices of the Department of Wildlife and Fisheries.

NO CHECKS!

The Louisiana Department of Wildlife and Fisheries has announced that beginning with the issuance of new commercial fisheries licenses on November 15, 1997, that they will no longer accept checks as payment for licenses. The only acceptable methods of payment will be cash, money orders, or cashiers checks.

Licenses may be purchased as usual through the mail from the Baton Rouge office of the department, and in person at both the Baton Rouge and New Orleans offices.

HARMFUL ALGAE BLOOMS

After the opening of the Bonnet Carre Spillway this spring, stories about a "toxic algae bloom" in Lake Ponchartrain appeared in the news nearly every day for several weeks. Calls flooded my office during that time about the safety of eating seafood from the area affected by the spillway opening.

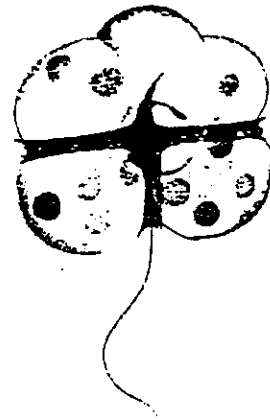
Additionally, there has been a great deal of interest in the hypoxic zone (dead zone) located off of Louisiana's coast. Some researchers blame the die-off of large algae blooms in the Gulf as the cause of the hypoxic zone.

Algae are simply microscopic one-celled plants. They occur naturally in all waters, fresh and salt, and are what makes water green in color. They are the "grass of the sea" and are the base for the food chain that creates the fabulous fisheries in Louisiana. Generally, the more algae in the water, the larger the base of the food chain, and therefore the larger the crop of harvestable fish and shellfish. There are two major exceptions to this generalization.

First, one can get too much of a good thing. A change in environmental conditions can cause a huge growth in what are normally "good algae." This is called a "bloom". The problem occurs when this massive growth dies off and begins to decay. The bacteria involved in the decay process may use enough of the oxygen in the water to stress or even kill fish.

The second exception is in the case of harmful algae blooms. There are many kinds of undesirable or harmful algae. All of them exist naturally in the habitat, usually in small numbers. Under certain conditions, sometimes associated with human-caused changes such as nutrient pollution, the numbers of these algae increase rapidly to form a harmful algae bloom. Some of these undesirable algae such as bluegreen algae may not kill fish directly or harm humans. They can however, give fish flesh an unpleasant taste and drinking water a bad odor.

Others are directly harmful. An example of such, is the red tide organism, *Gymnodinium breve*, pictured at right. This organism, when it occurs in large numbers, can produce a toxin that can kill fish and accumulate in oysters. Humans may be affected by eating oysters that have accumulated the toxins or by breathing in surf or water spray that contains the toxins.



Scientists studying the 1997 algae bloom in Lake Ponchartrain feel that they have established a direct link between the bloom and the introduction of plant nutrients into the lake from the Mississippi River through the spillway opening. The nutrients are nitrogen and phosphorus, two of the same nutrients that a person would apply to a garden or lawn to promote plant growth. Of the two, nitrogen appears to be the one that has the most effect.

One of the researchers, Dr. Gene Turner predicts that algae blooms will almost certainly occur when nutrient-rich river waters are directed into coastal waters. It is important to note that there is some scientific disagreement on this issue and more research is needed.

Researchers have looked at various methods of lessening the effects of nutrients in river water diversions into wetlands. Probably the most promising, is running diversion waters through areas that have a lot of plants. These plants could possibly remove and use some of the nutrients from the water before the waters reach coastal lakes and bays.

One scientist, Dr. John Day of LSU, has proposed doing just that for the possible river diversion into Lake Ponchartrain. His proposal would route diversion waters through the Maurepas swamps rather than the area of the Bonnet Carre Spillway. His calculations show a possible reduction of 73% for nitrogen, and 48% for phosphorus.

Day also studied the current river diversion at Caernarvon for nutrient uptake and removal by marsh plants. His analysis there showed significant nitrogen removal by marsh plants.

Again here, however, there is some scientific disagreement. Research by Dr. Gene Turner indicates that flowing diversion waters over wetlands will remove some nutrients, but only in small amounts. Turner's research in the Atchafalaya Basin showed only a 6% reduction nutrient load by the swamp's plants from river water. Further research on this subject is sure to occur.

Sources: *Harmful Algae Blooms in Louisiana Coastal Waters*. Q. Dortch. *Control of Algae Populations in Lake Ponchartrain*. R. E. Turner and others. *1997 Algae Bloom: Identification, Toxicity, and Similar Occurrences Elsewhere in Louisiana Coastal Waters*. Q. Dortch and S. Achee. *Bonnet Carre' Diversions: Will Significant Nutrient Removal Occur in Wetlands?* R. E. Turner. *Assimilation of Nutrients from Diverted River Water by Wetland Overflow*. J. W. Day and others. All papers presented at "Clean Enough?" A Conference on Mississippi River Water Quality. September, 1997.

RECREATIONAL FISHING LICENSES

I have received several requests to print a summary of all license requirements for recreational fishing in Louisiana. This is very timely, since the 1997 legislature made several changes in recreational licensing regulations.

Basic Requirements

With only a few exceptions (see **Exemptions and Exceptions** section below), all fishing activities require some sort of license. All recreational licenses expire June 30 each year. Fishermen must possess a valid original license and produce it upon request by a law enforcement officer. All licenses, except recreational gear licenses, are not transferrable. Recreational gear licenses may be transferred to and used by anyone possessing valid fishing licenses. Basic requirements are as follows:

Basic Fishing License - This \$5.50 license (\$31.00 nonresident) allows the use of a rod and reel, bow and arrow, barbless spear (for some species), frog gig or grab, scuba gear, trotline, cast net (8½ ft. radius and smaller), dip net, minnow trap and seine in legally defined freshwater areas. In the legally defined saltwater areas of the state, it may be used to fish for and keep freshwater fish, but not saltwater species.

Saltwater Anglers License - This \$5.50 license (\$36.00 nonresident) must be purchased to fish for and keep saltwater species of fish. This license also allows the use of cast nets of 8½ ft. radius or smaller in saltwater areas. It must be purchased **in addition** to the basic fishing license.

Marine Resources Conservation Stamp - This is a temporary license (until June 30, 1998) which must be purchased in addition to the basic and saltwater angler's licenses to fish in saltwater. The \$3.00 price is the same for residents and nonresidents.

Hook and Line License - This license, also known as the cane pole license, costs \$2.50. The license may be used by fishermen using only a pole **without** a reel and **without** artificial bait and is purchased **instead of** a basic fishing license. It is not available for nonresidents.

Basic Trip License - This is a 3 day nonresident license for fishing in freshwater. The license costs \$20.00.

Saltwater Trip License - This is a 3 day nonresident license for fishing in saltwater. It must be purchased **in addition** to the basic trip license. The cost of the license is \$20.00

Charter Trip License - This is also a nonresident-only license. It is good for one trip only on a charter boat. The price is \$2.50 and it is sold by the charter boat captain. Each non-resident shall possess a valid out of state motor vehicle operator's license or other such proof of residency while fishing from a vessel operated by a licensed charter boat fishing guide.

Lifetime Licenses

Lifetime licenses are permanent licenses valid for the life of the holder. They apply to saltwater as well as freshwater fishing. Lifetime licenses **do not** cover recreational gear license requirements. Refer to the **Recreation Gear License** section below for their prices. Five types of lifetime licenses are available.

Resident Lifetime Fishing (14 & older)	\$ 300.00
Resident Lifetime Fishing (younger than 14)	\$ 200.00
Resident Lifetime Hunting and Fishing (14 & older)	\$ 500.00
Resident Lifetime Hunting and Fishing (younger than 14)	\$ 300.00
Nonresident Lifetime Hunting and Fishing	\$ 3000.00

Recreational Gear Licenses

<u>Gear Type</u>	<u>Resident</u>	<u>Nonresident</u>
Crab Traps (limit 10)	\$10.00	\$ 40.00
Crab Traps on Trot Lines (per trap up to 10)	\$ 1.00	\$ 4.00
Hoop Nets (limit 5 nets)	\$20.00	\$ 80.00
Wire Nets (limit 5 nets)	\$20.00	\$ 80.00
Slat Traps (limit 5 traps)	\$20.00	\$ 80.00
Trawls (up to 16 feet)	\$25.00	\$100.00
Oyster Tong (per tong)	\$ 5.00	\$ 20.00

Federal Fishing Permits

With two exceptions, no federal permits are required for recreational fishing. One exception is that a Yellowfin Tuna Permit is required to keep any species of tuna except blackfin tuna. (A proposal is currently being considered to include blackfin tuna in the requirement.) The recreational Yellowfin Tuna Permit may be ordered through the Automated Permitting System by dialing the toll-free number 1-888-872-8862 on your

telephone, or through the internet at www.usatuna.com. Applications may take up to 30 days to be processed. A special permit is also required to keep a giant bluefin tuna.

Exemptions and Exceptions

The exemptions covered in this section are for fishing only. Similar or different exemptions exist for hunting, but not covered here.

- 1) Residents and nonresidents younger than 16 years of age, and residents 60 years of age and older who have lived in Louisiana for two years are not required to get licenses (**except for gear licenses**). Proof of age must be carried by the person.
- 2) Louisiana citizens on active duty in the U. S. Armed Forces and who are assigned to an active duty post outside the state are not required to get a license (including gear licenses) while visiting the state. They must have in their possession, however, written evidence that their absence from active duty is authorized.
- 3) Any person on active duty in the U. S. Armed Forces and their resident dependents may purchase licenses at resident fees.
- 4) Texas residents 65 years old or older do not need a license to fish in Louisiana. However, they must carry proof of age and residency such as a driver's license.
- 5) No license is required for the recreational use of crawfish nets, crab dropnets, crab trotlines without hooks, string, dip nets, minnow traps, and legal bait seines.
- 6) No license is required to fish in private ponds on private property. Size and creel limits also do not apply to private ponds on private property.
- 7) Crawfish traps, oyster dredges, butterfly nets, skimmer nets, freshwater gill nets, strike nets, trammel nets, and seines (except legal bait seines), may be used only with commercial licenses. No recreational gear licenses exist for these gear.
- 8) Veterans having a permanent service-connected disability classification of 50% or more and who are Louisiana residents, or residents who are blind, paraplegic or single and multiple amputees can get free licenses at the Baton Rouge office of the Department of Wildlife and Fisheries, with proper identification and proof of disability.
- 9) A Louisiana resident who is totally and permanently disabled and receiving federal social security disability benefits may purchase a basic recreational fishing license for \$2.50 and a saltwater anglers license for \$2.50 from the Baton Rouge office of the Department. A Marine Resources Conservation stamp is also required until June 30, 1998.

- 10) Louisiana residents who are required to use one or more artificial limbs or permanent braces for mobility as a result of permanent and total disability can get free fishing licenses if they submit a doctor's statement to the Department of Wildlife and Fisheries recreational license office in Baton Rouge. Call (504) 765-2887 for details.

This summary addresses only recreational fishing license requirements, and does not cover numerous regulations regarding gear construction, restricted use areas, species restrictions, size limits, seasons and other regulations. Refer to the DWF Louisiana Fishing Regulations Pamphlet or call your local enforcement office for more information.

Source: Thanks for review to Janis Landry and Sandy Dares, Louisiana Department of Wildlife and Fisheries.

IMPROVING OYSTER YIELDS

The whole world loves an oyster, especially a salty and fat one. A "fat" oyster is an oyster with a plump body full of glycogen, an energy reserve that the oyster stores up for the summertime spawning process.

Oysters begins spawning in late spring and spawn until late summer, burning the glycogen or fat reserves the entire time. By August or September the result is an oyster with a shrunken body in a large shell, what we call a "skinny oyster." When the weather cools, oysters begin rapidly building up their glycogen reserves, producing a fat select oyster to start the cycle all over again.

Fat oysters are high-yield oysters producing 8 or more pints of shucked meat per sack. Skinny oysters only produce 3½-4 pints per sack. Obviously, fat oysters are more desirable. Shucking houses must shuck twice as many skinny oysters to get a pint (or gallon) of meat as they would fat oysters.

Since unshucked oysters (shellstock) are purchased by the sack, the results of this yearly cycle are higher expenses for shucking houses and high prices for consumers in the summer months. Consumers also find it very difficult to find high-quality oysters to eat raw during the summer and early fall.

Scientists have puzzled for years over methods to produce high-yield oysters during these months. What probably holds the most promise is the culture of triploid oysters. Triploid oysters are produced by manipulating the oyster spawning process in a hatchery to produce a sterile, non-spawning oyster. Since triploid oysters never spawn, they never burn off their glycogen and stay fat year around.

Dr. John Supan, a scientist with the Louisiana Sea Grant Program has put this theory into practice with work done at the Sea Grant Program's Grand Isle Oyster

Hatchery. Supan began work to produce triploid oysters in 1993. He cultured some of these oysters on-bottom during 1994-96 and compared their yield to normal (diploid) oysters.

Both types took two years to reach market size. The yield of the triploid oysters was higher than the normal diploid oysters, but what not what was hoped for.

This year's results showed some real improvement. These triploid oysters were cultured off-bottom in floating mesh bags near the Grand Isle Hatchery. Yields were 8-9 pints per sack, which is much higher than normal summer-time yields. Additionally, the oysters grew to market size in only 12-15 months. The sacks averaged 88 pounds and 300 oysters per sack.

Anyone interested in more information may call Dr. John Supan at (504) 388-6527.

LAKE DRAWDOWNS AS A MANAGEMENT TOOL

A drawdown is simply the lowering of the water level in a lake to a level lower than what is "normal". Drawdowns are increasingly being used by biologists for fisheries and aquatic weed management. In spite of their common use, drawdowns still surprise fishermen who travel to their favorite lake and find boat ramps high and dry, and the stumps, points, and brush piles that they are used to fishing are better habitat for birds than for fish.

According to Gary Tilyou, Biologist Program Manager for the Inland Fisheries Division of the Department of Wildlife and Fisheries, fisheries management drawdowns are usually done to improve spawning conditions or to allow predator fish to better control overpopulations of forage (food) fish.

Lakes, (especially backwater lakes) that have been flooded for a long time, often accumulate a thick layer of muck on the bottom. Nest-spawning fish like bass and bluegill have very poor nesting success on these soft bottoms. These fish search for a firm bottom on which to spawn. Tilyou stated that a good indicator of poor spawning bottoms is when bass and bluegill nest on top of stumps and logs because they can't find firm bottom elsewhere.

A drawdown exposes these soft bottoms to the air, which allows the organic muck to decay and break down. It also allows the inorganic silts to consolidate and become firmer. Often several drawdowns over several years are needed to get the job done.

Without a drawdown, spawning success may become erratic, and successful only in years of high rainfall when high lake water levels flood areas not normally underwater. Spring Bayou, a reservoir in Avoyelles Parish, was a prime example. Before its

drawdowns, nesting was successful only about 1 in 3 years, producing poor recruitment to the harvestable fish population.

The second reason for fisheries management drawdowns, stated Tilyou, is when a lake has too many forage or food fish or a large population of stunted bluegills. This condition is usually, but not always, associated with large amounts of aquatic plants in a lake. A drawdown drives the small fish out of the vegetation and concentrates them where bass and other predator fish can more easily feed on them and control their numbers.

Drawdowns are also an effective tool when used to control submersed aquatic plants such as hydrilla. According to Richard Brassette, Program Manager of the Aquatic Plant Research & Control Section of the Department of Wildlife and Fisheries, hydrilla infestation in Louisiana's freshwater lakes have become extremely serious.

Chemical control of submersed plants is very expensive and difficult, especially in large areas. Additionally, the department said Brassette, has not been provided funding for submersed weed control. Grass carp, an imported planted-eating fish, are effective at hydrilla control, but their stocking is very controversial and closely regulated.

This leaves drawdowns as the best tool for hydrilla control. Summer drawdowns seem to be most effective at hydrilla control because the timing disrupts the plant's ability to form underground tubers from which new plants may sprout.

Summer drawdowns typically begin in early July and extend into November. Louisiana lakes under summer drawdowns currently are Spring Bayou, Iatt in Grant Parish, Kepler in Bienville Parish, Saline in Winn Parish, and Cocodrie in Evangeline and Rapides Parishes.

Fall/winter drawdowns are also practiced for lake management. With such a drawdown, the water level is lowered in September and held at a low level until sometime in January. Lakes currently undergoing fall/winter drawdowns are Chicot in Evangeline Parish, and Ivan in Bossier Parish.

Drawdowns of either type, have in recent years been used in Lakes Bistineau, Henderson, Black, Vernon, Bundicks, Bruin and Indian Creek. Not all drawdowns are biological. Occasionally a drawdown is used for levee maintenance, bulkheading, or lane cutting in standing timber.

In spite of their positive benefits, there are also possible negative impacts to drawdowns. During hot weather, the possibility of an oxygen-related fish kill is present. Boat ramps and shoreside camps and piers are stranded on land. Fish feeding patterns may also be temporarily disrupted, resulting in poor short-term fishing.

The effectiveness of drawdowns may also be limited by weather. Periods of high rainfall or high river stages can make drawdowns difficult or may refill the lake early. Drawdowns also cannot be used in totally natural lakes, where humans have no control over water levels.

FEDS ISSUE SPECIES STATUS REPORT

Under the requirements of the Sustainable Fisheries Act passed by U. S. Congress last year, the National Marine Fisheries Service (NMFS) is required to identify fisheries that are overfished or nearing overfishing each year. In September NMFS issued its first report on overfishing. Listed below are Gulf of Mexico species of interest to Louisiana fishermen and their status.

Species	Overfished?	Approaching Overfished Condition?
Brown shrimp	No	No
Pink shrimp	No	No
White shrimp	No	No
Seabob	Unknown	Unknown
King mackerel (gulf group)	Yes	No Applicable
Spanish mackerel	No	No
Cobia	No	No
Dolphin	Unknown	Unknown
Bluefish	Unknown	Unknown
Red snapper	Yes	Not Applicable
Jewfish	Yes	Not Applicable
Red drum	Yes	Not Applicable
Vermillion snapper	No	Yes
Greater amberjack	No	No
All other Gulf reef fish species	Unknown	Unknown

VERMILION SNAPPER SIZE LIMITS

Effective immediately, the minimum size for vermilion snappers (b-liners) caught in federal waters of the Gulf of Mexico has been increased from 8 inches to 10 inches, total length. The increase in size limit was made by interim rule and is effective until March 10, 1998, but will almost certainly become a permanent rule.

THE GUMBO POT

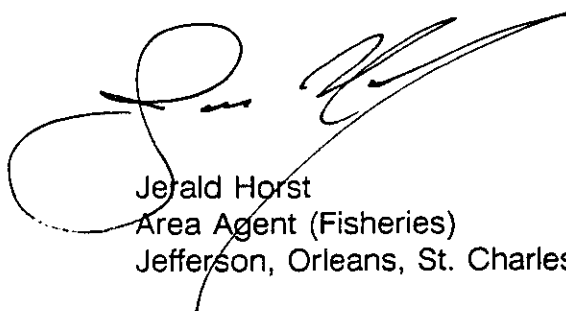
This month's recipe comes to us from Pansy Bray of Hoquiam, Washington. Pansy is a food writer and her husband and sons are commercial fishermen. Pansy says that this dish has its origin in the gold mining town of Hangtown, California. The town got its name from the frequency with which they hung bad characters from the nearest tree. The town's name was later changed to Placerville, for obvious public relations reasons. Hangtown fry was invented when a gold miner who hit a big find came into town and asked what the most expensive thing on the menu was. When he was told that oysters were, he asked for some to be scrambled up with some eggs, and a new dish was born.

Hangtown Fry

1	10-ounce container oysters	6	eggs, beaten
3	strips bacon, chopped	3	tablespoons milk
¼	cup onion, chopped	½	teaspoon worcestershire sauce
¼	cup celery, chopped		salt and pepper to taste

Drain oysters and chop them into bite sized pieces. Set aside. Fry chopped bacon. When crisp, add celery and onions and stir fry for several minutes. Add chopped, drained oysters. Stir and fry until oysters are firm. Mix eggs, milk and seasonings. Pour slowly over oyster mixture. Stir gently. Cook just until eggs set. Serves 3-4.

Sincerely,



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