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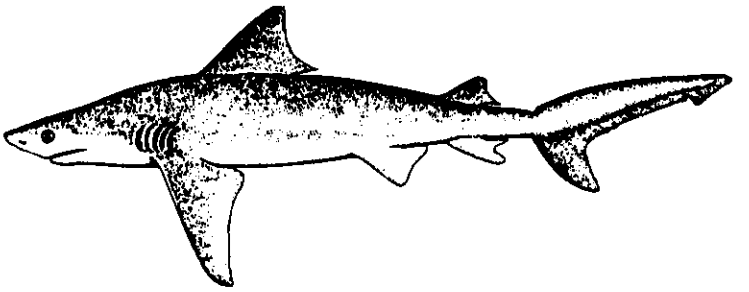
SEA GRANT PROGRAM



LAGNIAPPE

SHARK CLOSURE

In 1999, the Louisiana Wildlife and Fisheries Commission approved a measure which largely made Louisiana's shark fishing regulations more compatible with regulations in federal waters. One major, but little known change that was made was a commercial and recreational closure on all shark harvest in state waters between April 1 and June 30 of each year. During this period no one may possess any sharks in state waters.

FARMERS MARKET LOOKING FOR FISHERIES PRODUCERS

The Crescent City Farmers Market is expanding and looking for more commercial fishermen. The current market, at 700 Magazine Street. in New Orleans has been open each Saturday morning for the last 5 years.

Approximately 1000 shoppers pass through the market each morning to make purchases from 65 fruit, vegetable, and seafood stalls. The current market has shrimp, oyster, crab, and finfish venders.

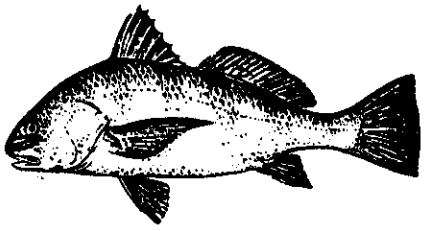
With the expansion, the Loyola Economics Institute will open a midweek market in Uptown New Orleans, probably on Wednesdays. Some of this expansion is being funded by fisheries disaster relief funds from the Bonnet Carre Spillway opening, channeled through the Louisiana Department of Wildlife and Fisheries Seafood Promotion and Marketing Board.

Because of this, market managers are particularly interested in commercial fishermen who fish in the area affected by the spillway, although interested fishermen from all areas should apply. Market rules require that sellers must actually produce the seafood that they sell and that each seller has the necessary licenses to sell to the public.

Processed seafood products such as picked crab or crawfish meat, shucked oysters, and filleted fish must have been processed through an approved facility. Unprocessed products such as unpeeled shrimp, softshell crabs, whole finfish, and live crabs, crawfish, and oysters do not have such a requirement. Turtle meat, alligator meat, frog legs, and stone crab claws are other products of interest.

Commercial fishermen interested in applying for a space in the market should call Kay Roussell at 861-5898.

LOUISIANA FINFISH STOCK ASSESSMENTS



Act 1316 of the 1995 Louisiana Legislature requires that the Louisiana Wildlife and Fisheries Commission shall deliver to the legislature each year, a peer-reviewed report on the biological condition of mullet, black drum, sheepshead, and flounder stocks.

The act further requires that if the spawning potential ratio (SPR) of any of these fish is below 30%, that the Department of Wildlife and Fisheries must close the season for that fish for one year. SPR is the ratio of the egg-producing ability of all the mature fish in a fished stock of fish as compared to the egg producing ability that would exist if the stock was unfished. SPRs are often used as targets for managing stocks of fish. Listed below are the 1999 assessment results.

Striped Mullet	31% - 69% SPR
Black Drum	42% - 67% SPR
Sheepshead	56% - 92% SPR
Flounder	27% - 56% SPR

Black drum numbers stayed the same, largely because the species has not needed an in-depth reassessment. Harvest of this fish has remained well below safe quota levels established some years ago. A future detailed analysis may show SPR numbers to be higher than those above.

Striped mullet showed a slight change upward on the higher number of the SPR range over last year (52% to 56%). The change is not significant and was due to a change in the calculated fishing mortality (death) rate for this species. These rates often change year to year.

SPRs for flounder and sheepshead showed upward shifts primarily due to improved assessment methods. The change in the sheepshead SPR range was significantly different from the 1998 range of 40-71%.

WHAT HAPPENED TO JEWFISH?

The jewfish, *Epinephelus itijara*, is the largest and probably the most peculiar member of the grouper family found in the Gulf of Mexico and the Caribbean Sea. Since 1990, a complete moratorium on their take has been in place and it has been "red listed" as a candidate for endangered species status.

Jewfish are an easy grouper to identify, with their "tubby" shape, short dorsal fin spines, very broad flat head, and small beady eyes. In spite of this, divers under offshore oil rigs currently report an almost complete absence of this big fish. This was not always the case. In the early 1950's, when the first SCUBA-equipped spearfishermen dove on the rigs offshore of Louisiana, jewfish were common.

Jefferson Parish Marine Fisheries Advisory Board member Art Cormier was one of those early pioneer spear-fishermen. Cormier states "When I first began diving in 1953, jewfish looked like herds of cows under the rigs. It was easy for divers to take 2 or 3 of them over 300 pounds each per boat, if we wanted to shoot them. Occasionally, we would take 5 or 6 a trip." Cormier further noted that not only big fish were present, but smaller fish were there too, fish as small as 50 or 60 pounds.

Jewfish numbers have not just declined off of Louisiana, but throughout the Gulf and the Caribbean. They are large animals, often reaching 500 pounds and occasionally, over 600 pounds and 7 feet long. The all-tackle world record is 678 pounds.

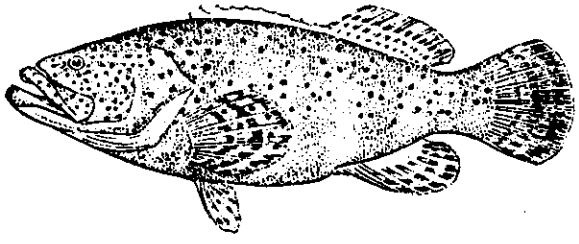
Growth averages 4 to 8 inches a year for the first 6 years of their life, declines to about 1 to 2 inches per year by age 15 and to less than ½-inch per year after age 25. However, jewfish are long-lived, the oldest on record being a 37 year old female taken from the eastern Gulf of Mexico.

Their growth is fueled by a diet heavy in crustaceans such as spiny lobsters, crabs, and slipper lobsters (bulldozers). They also eat some fish and at least two studies show sea turtles in their diet. Young jewfish also consume quantities of shrimp.

Jewfish reach spawning maturity at 4 to 7 years of age and a length of 44 to 54 inches. Very little research has been done on their fecundity (egg production), with only 2 females examined. A 53-inch female was estimated to have 39 million eggs and a 56-inch female was estimated to have about 56 million eggs.

While spawning has never been observed by scientists, jewfish are thought to spawn in the summer because of the timing of the appearance of their young. Jewfish are known to move some distance to form spawning groups called aggregations. These groups may consist of from a few fish to over 100 individuals.

Interestingly, no jewfish spawning aggregations have been found in the northern or western Gulf. They have been found only off of the southwest tip of Florida and in the Caribbean, and even some of these known aggregations have disappeared.



Young jewfish seem to show a strong preference for mangrove swamps, although they have been collected in other areas, even stagnant brackish-water canals. However, the science seems to indicate that without the presence of mangrove swamps nearby, a strong population of jewfish in an area is not likely to occur.

Large adults stake out an area and seem to move very little except to form spawning aggregations. They show a strong preference, in general, for holes, caves, high-profile reefs, shipwrecks and oil platforms. They are not a very deep-water fish, almost never being found as deep as 150 feet of water.

Before 1990, jewfish were harvested both recreationally and commercially, although in the Gulf recreational take was substantially larger than commercial. The state of Florida accounted for 99% of the total Gulf harvest between 1979 and 1990. This, plus the presence of spawning aggregations nearby, and mangrove swamps in Florida seems to indicate that waters off of Florida were the primary habitat for jewfish. Waters off of Louisiana may have been more on the "edge" of the species' range.

Most of the commercial harvest in the Gulf was made with electric and hydraulic reels, bandit rigs (snapper reels), and spearguns. The percentage taken by speargun increased substantially after 1984. The recreational fishery was made primarily with spearguns because of the difficulty of landing these large fish with typical rods and reels.

In the 1960's, the recreational harvest of offshore jewfish was limited except in Louisiana, where the presence of oil platform made them easier to locate. As the use of LORAN navigational systems spread to recreational boats and LORAN numbers for shipwrecks and reefs were published in books and sportfishing magazines, fishing pressure on jewfish increased.

Large jewfish are easy to approach closely by divers, making them susceptible to spearfishing. Spawning aggregations also became targets, both because the fish are highly concentrated and because they are even less cautious than at other times.

Commercial fishing pressure also increased. At one time, few commercial fishermen directed much effort to catching jewfish because they did not bring as high of a price as snappers and other groupers. However, as demand increased, so did prices, from an average of 39 cents per pound in 1979 to 74 cents in 1987. Commercial landings increased as the price per pound rose.

The rapid increase in overall fishing effort, followed by a decline in landings, alarmed the Gulf of Mexico Fishery Management Council, which approved a 50-inch minimum size limit in 1989. Following reports that the stock was much more severely overfished than previously thought, the Gulf Council placed a complete harvest moratorium on jewfish in1990. It was the Gulf Council's opinion that, without a moratorium, jewfish would become threatened or endangered. The Caribbean Fishery Management Council followed with their own jewfish harvest moratorium in 1993.

Source: *Synopsis of Biological Data on the Nassau Grouper, Epinephelus striatus (Bloch, 1792), and the Jewfish, E. itijara (Liechtenstein, 1822).* Yvonne Sadovy and Anne Marie Eklund. NOAA Technical Report NMFS 146. 1999.

SEA TURTLES & TEXAS SHRIMPERS

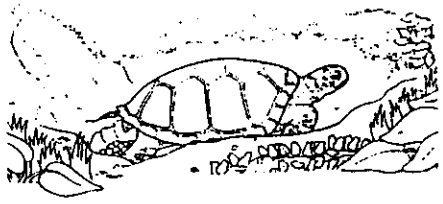
Environmental activists with the Texas Sierra Club have called upon the Texas Parks and Wildlife Department (TPW) to protect Kemp's ridley sea turtles by putting more restrictions on shrimpers. Specifically, they have asked TPW to close all waters along the Texas coast less than 42 feet (7 fathoms) deep to shrimping. Additionally, they are calling for closure out to 60 feet (10 fathoms) along Padre Island National Seashore during turtle mating season, March 1 to August 31.

The basis for their closure requests are that 132 Kemps ridleys washed ashore in 1998, and another 95 in 1999, in spite of good compliance by shrimpers on the use of TEDs in their trawls. The requested closures are strongly opposed by the Texas Shrimp Association which says that other causes of sea turtle deaths are being ignored. TPW officials have replied that they must carefully consider the economic impact that a closure would have on shrimpers before taking any action.

TPW is currently conducting a review to decide how to stabilize the shrimp industry and reduce the environmental impact of shrimping. Recommendations from the review should be available in early summer.

SEA TURTLE POPULATIONS

Five species of sea turtles are found in the Gulf of Mexico and the South Atlantic, all of them protected by the Endangered Species Act. While scientists in the 1980's agreed that sea turtle populations were in trouble, they are very difficult animals to count. After hatching on a beach, males spend all their lives at sea. Females return to land only to lay their eggs, a project that only takes a few hours.



In 1987, before turtle excluder devices (TEDs) were required in trawls, scientists from the National Marine Fisheries Service (NMFS) spent time on commercial shrimp trawlers in the Gulf and South Atlantic studying sea turtle catches in shrimp trawls.

While there is general agreement that TEDs now release 97% of sea turtles from shrimp trawls, current sea turtle strandings (dead turtles washed up on beaches) are not lower now than they were in the pre-TED period. While it is accepted that not all turtle strandings are due to shrimp trawls, many scientists expected at least some reduction in strandings, unless sea turtle populations have grown much larger.

Since no work had been done since the NMFS assessment in 1987, the Gulf and South Atlantic Fisheries Development Foundation funded such work in 1996. Between May 1997 and May 1998, observers spent 722 days at sea on commercial trawlers counting sea turtles caught in shrimp trawls to compare to the 1987 NMFS data. The foundation received permits for the trawlers to pull trawls without TEDs for the study. A total of 125 days were spent in the South Atlantic, 134 days in Gulf waters shallower than 15 fathoms and 463 days in offshore Gulf waters deeper than 15 fathoms.

The original 1987 NMFS study showed that the sea turtle catch rate in the South Atlantic was then 18 times larger than the Gulf. The research done in 1997-98 showed very little change in the catch of sea turtles per tow in the Gulf, but it showed a huge increase in the South Atlantic. In fact, the 1997-98 data showed the sea turtle catch rate in the South Atlantic to be 133 times higher than in the Gulf of Mexico for all species of sea turtles combined. The ratio was 318 times higher for loggerheads, 53 times higher for Kemp's ridleys and 8 times higher for green sea turtles. This seems to indicate a large increase in sea turtle numbers, at least for the South Atlantic. It should be remembered, however, that in 1987, no shrimp trawls had TEDs in them, while in 1997-98 only the trawls permitted in the study were without TEDs.

Sources: *Alternatives to TEDs Final Report. 1998. Revisions to the Estimates of Incidental Sea Turtle Capture Aboard Commercial Shrimp Trawling Vessels.* Thomas Vergel C. Jamir. 1998. Gulf and South Atlantic Fisheries Development Foundation.

BOATERS CAUTIONED ABOUT DIVING FLAGS

Both commercial and recreational boating and diving are increasing rapidly in Louisiana waters. Unfortunately, diving can be a hazardous sport or occupation. Besides drowning and marine hazards, divers face the possibility of meeting a boat propeller turning at 5500 revolutions per minute. Captain Sandy Dares, Captain of District 8 Enforcement for the Department of Wildlife and Fisheries offers the following guidance.

Divers are required to display warning flags in the area where they operate. There are two flags in common use. Most recreational SCUBA and snorkel divers generally display a red flag with a white diagonal stripe, which is known as the **Divers Down Flag.** Federal law requires commercial diving operations to display the **Alpha Flag.** This flag is actually a pennant, with the mastside-half white and the outside-half blue. Some divers also mark the boundaries of their areas with buoys.

Boaters should maintain a constant vigil for vessels flying these flags, and should exercise extreme caution near them. Some commercial dive operations using surface air have as much as six hundred feet of hose, meaning the diver could be working almost that far from the tender vessel. SCUBA divers could be even further from their tenders. In shallow waters, there might not be enough clearance if a boat passes over a diver, and a tragic accident could occur.

Divers in turn should be diligent in displaying the proper flags, using caution and good judgment wherever they operate. Divers should never stray very far from their tender vessels and warning flags, and should have a lookout stationed on the tender vessel.

A COOKBOOK FOR A MUSEUM

The Louisiana Marine Fisheries Museum Foundation is offering for sale a colorful 96-page cookbook called SIMPLY THE BEST SEAFOOD, produced by the Louisiana Seafood Promotion and Marketing Board. The recipes in the cookbook are winners of the board-sponsored annual 4-H Seafood Cookery Contest. To win the contest, an entrant has to beat its competition in 4 contests, school, parish, region and state, so the recipes

are the best of the best of the best of the best. The contest is conducted by the Louisiana Cooperative Extension Service.

The cost of the book is $10.00 plus $2.50 for handling and shipping, for a total cost of $12.50 per book. Cookbooks may be ordered by writing:

Dr. Mary Curry
The Parish of Jefferson
1221 Elmwood Park Blvd.
Jefferson, LA 70123

Checks should be made out to La. Marine Fisheries Museum Foundation or LMFMF. The foundation is a non-profit corporation. The foundation's share of the sales of the cookbook will be used in the development of the Louisiana Marine Fisheries Museum. The museum is dedicated to showing the history of Louisiana's coastal commercial and recreational fishermen and their associated occupations and lifestyles.

MORE OYSTER SEED GROUNDS

The Louisiana Wildlife and Fisheries Commission has passed a notice of intent to create more oyster seed grounds in Terrebonne, Lafourche and Jefferson Parishes. Oyster seed grounds are managed to produce small oysters for lease holders to transplant to their oyster leases for production.

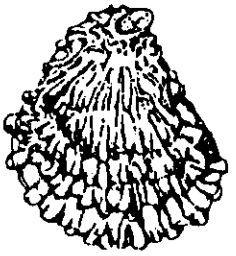
The area between the Mississippi River and the Atchafalaya River currently contains 64% of the total acreage of oyster leases in the state. As much as 80% of the production of these leases depends on seed oysters from oyster seed grounds, yet only about 1% of the current seed grounds are located in this area.

According to Ron Dugas of the Louisiana Department of Wildlife and Fisheries, the expansion will also allow managers to adjust to changing salinities due to saltwater intrusion in some areas and freshwater diversions in others. Dugas emphasizes that none of the area considered for expansion is presently under lease, so no lease loss or relocation will be necessary.

GRAND ISLE AQUACULTURE PARK

The Grand Isle Port Commission and the LSU Sea Grant College Program are cooperating in the development of an aquaculture park focusing on new oyster culture techniques. The park will be administered by the Port Commission. Sea Grant, through Assistant Research Professor John Supan, will provide technical expertise to operate the park. When established, the park will be the first of its kind in the five Gulf states.

Supan, who also supervises the LSU Sea Grant Grand Isle Oyster Hatchery, says that the park will be used as a site where triploid and other genetically improved oysters can be grown to market size rapidly using off-bottom culture methods. Off-bottom culture can double the growth rate of oysters and the oysters have thinner shells and better meat yields after shucking.



Hatchery-produced triploid oysters cannot spawn during the warmer months, as typical oysters do. Spawning is a huge energy drain on oysters, resulting in what are often called "skinney" oysters of the late summer months. The biggest drawback to off-bottom triploid oyster culture is the high labor cost involved.

Supan and Grand Isle Port Commission Executive Director Andy Valence will be looking for oyster growers to actually farm the oysters to market size in the park to evaluate their market potential. "If everything goes as planned" Supan states "the park should be ready by early summer. Supan also stresses that "this would not have been possible without the cooperation of the Port Commission. It is a perfect economic development project".

The 55-acre park is located in approved oyster-growing waters where Caminada Pass opens into Caminada Bay. Anyone interested in growing oysters in the park in the future or needing more information, may contact Supan at 504/787-3131 between April 1 and September 30 and at 225/388-6527 at other times of the year.

TEXAS LIMITED ENTRY NEWS

Several years ago, after Texas Parks and Wildlife (TPW) Department officials determined that the state had too many commercial fishing vessels for the resource, the Texas legislature put in place a cap on the number of shrimping licenses. Also created at that time was a "buyback program" where commercial shrimp license holders could voluntarily sell their licenses back to the state to be permanently retired.

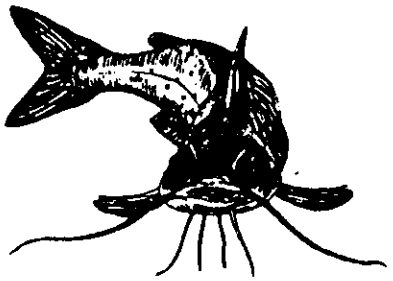
This was followed by a similar program for the commercial crab fishery and then another passed by the legislature last year for the commercial finfishery. In the past, these voluntary license buyback programs have been funded by a $25 surcharge on commercial shrimp licenses and by public and private donations. Additional funding will be produced from $100 earmarked from crab license sales and $60 from finfish licenses.

Unfortunately, with the funds produced mainly from commercial license sales, TPW officials estimate that it will take decades to buy enough licenses out to reach a balance between the number of fishermen and the amount of the fisheries resource. As a result, the TPW Commission's Regulatory Committee has proposed a temporary $1 to $3 surcharge on recreational saltwater fishing stamp fees in order to generate more money.

TPW officials estimate that a $3 increase would produce $8.8 million annually. This amount of money would allow TPW to reach its goal of retiring 50% of the shrimp licenses and 36% of the crab and finfish licenses within 5 years. After the public comment period the issue will be considered for passage by the Commission.

TROPHY CATFISH MANAGEMENT

When a person in the South thinks of channel catfish (eel cats) he may think of many things—running trotlines in the dark, fried catfish and hush puppies, hoop nets loaded with thrashing fish, or maybe even catfish farms, but never trophy fish. But channel catfish are indeed managed for trophy fish in one place in the country.



The Red River of the North forms the boundary between North Dakota and Minnesota and flows due north (yes, north) for 386 miles before entering Manitoba, Canada. In spite of the cold climate and short growing season, this river has been famous for some time for producing really big channel cats.

The two states and the Province of Manitoba created trophy management regulations for the river in the late 1980's with a low daily total limit and no more than one fish over 24 inches allowed to be kept. The last restriction alone gives some idea of the fishery. One would have to look very long and hard to find a channel catfish that length in Louisiana. The large size of channel catfish in the Red River of the North may be partly accounted for by their long life spans of up to 24 years.

A recent survey of fishermen on the river showed that channel catfish were the most fished-for species in the river and that anglers from 15 states traveled to the river to fish for catfish. Quite a statement for a part of the country that considered catfish a trash fish until recent years. The fishery is also big business. During the four month survey period, fishermen spent an estimated $1.7 million on the fishery.

Source: *Red River of the North Angler Survey.* Dennis Topp. *Descriptive Characteristics and Management of a Trophy Channel Catfish Fishery.* Henry Drews, Dennis Topp and Gene Van Eeckhart. 1st International Ictalurid Symposium. 1998

CHARTER GUIDE MEETING

Three meetings have been planned for Louisiana charter fishing guides to discuss the preliminary results of the Pilot Charter Boat Research Project. The project will be reviewed at the beginning of the meeting, followed by a presentation of the results to date.

A representative of the National Marine Fisheries Service (NMFS) will discuss their decision to use this approach as the official method of determining charter boat fishing effort.

This program is a cooperative effort of NMFS, the Gulf States Marine Fisheries Commission and the Louisiana Department of Wildlife and Fisheries. The meeting for this area will be from 7 p.m. to 9 p.m. on Tuesday, March 28, at the West Jefferson Regional Library, 2751 Manhattan Blvd, Harvey. All charter boat operators are urged to attend.

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THE GUMBO POT
Golden Oyster Stew

Is it a soup or is it a stew? I dunno, but it sure tastes good. Now is the time to try this dish. While I love oysters year round, they are really primo at this time of the year.

- ½ cup chopped onion
- ½ cup chopped celery
- ¼ cup margarine
- 2 cups sliced mushrooms
- ¼ cup all-purpose flour
- 1 tsp salt
- ½ tsp black pepper
- 2 cups milk
- 1 ½ cups grated sharp cheddar cheese
- 1 pint oysters
- 1 can (10 ½ oz) cream of potato soup
- 1 jar (2 oz) diced pimentos
- ¼ tsp hot sauce

Saute onions and celery in margarine until tender. Add mushrooms and cook one minute. Over low heat, stir flour, salt and pepper into mixture. Add milk and stir until thickened. Add cheese and stir until melted. Add oysters, soup, pimentos and hot sauce. Heat for 10 minutes or until oysters begin to curl. Serves 4.

Sincerely,

Jerald Horst
Associate Specialist (Fisheries)