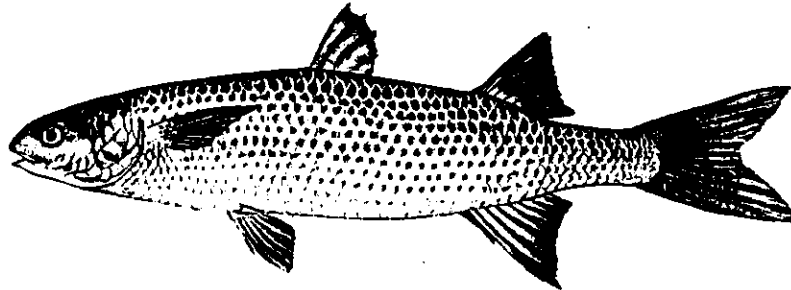




SEA GRANT PROGRAM



LAGNIAPPE

MULLET MANAGEMENT IN LOUISIANA

The striped mullet, (*Mugil cephalus*), is certainly one of our most common medium-sized fish, being found in most of coastal Louisiana's fresh, brackish and salt waters. Striped mullet, along with their less common relative, the white or silver mullet, (*Mugil curema*), serve as a valuable food source for other fish and are widely used as bait. Striped mullet have been a major fishery in Louisiana for over 15 years. Much of the commercial fishery occurs in the winter months of November, December and January when they are harvested both for their roe and their flesh. Some of the most commonly asked questions about the mullet fishery are answered below.

What is the life cycle of the striped mullet? The striped mullet is an estuarine dependant species spending a major part of its life cycle in coastal bays, lakes, bayous and marshes. During the spring and summer, many mullet move substantial distances inland into brackish and even fresh waters. Young mullet show a strong preference for shallow, protected habitats in the marsh. During the fall, spawning-size mullet gather into larger schools, as they move from the fresher inland habitats to the saltier coastal areas. Warmer weather in the fall delays this movement and cooler weather speeds it up. During the late fall and winter, usually November to January, adult mullets migrate to waters as far as 50 miles offshore to spawn. Following spawning, the adult mullet move back inshore in early spring to begin their yearly cycle again. Postlarval (baby) and juvenile mullet also move to the estuaries to begin their life cycle at this time.

How many kinds of mullets occur in Louisiana? Six species of mullets occur in the Gulf of Mexico. By far the most common in Louisiana is the striped mullet, followed by the silver or white mullet. The other four species, the fantail, the redeye, the mountain, and the lebranco or liza are mainly found in southern Florida and not here. What is commonly

known in Louisiana as the channel mullet is not really a mullet at all, but rather one of two species of kingfish which are members of the drum family.

How is the mullet fishery managed to prevent overfishing? The commercial mullet fishery is currently allowed to only use a minimum mesh size of 3 1/2 inches stretched in gill nets. This allows most mullet to spawn at least once before being large enough to be captured by that size mesh. Usually, fishermen use even larger mesh sizes as larger mullet produce more valuable roe sacs. Both sexes generally mature at age two, with males maturing at 8 to 8.8 inches and females 8.8 to 9.2 inches in length. Daily commercial limits are also in place for 9 months of each year, from January 15 through September 14. Recreational fishermen have daily limits of 100 pounds of mullet per person, year-round. Mullet can support a large fishery, since as herbivores (plant-eaters) they are very low on the food chain, and therefore very plentiful. A food habits study in Texas identified over 120 different species of plants, mostly microscopic free-floating plants (phytoplankton) in their diet. Ecosystems always support far more plant-eating animals than predators.

Does it harm the mullet population to fish them for their roe? Contrary to popular belief, it makes very little difference for most fish when they are harvested. It is an oversimplification to say that a species is protected by prohibiting harvest during the spawning period. Frequently, biologists will answer that "a dead fish is a dead fish, no matter when it is harvested." A female fish is removed just as certainly from the spawning population if she is harvested six months before spawning or one day before spawning. The only exception to this rule, may in some cases, be fish that form dense concentrations during spawning that make them peculiarly more susceptible to capture during spawning.

Why are gill nets used in the mullet fishery? Since mullet are herbivores, they are very difficult to capture with a hook-and-line. Purse seines are illegal to use for food fishes in Louisiana. Trammel nets allow small fish to escape, but often catch fish larger than the target size. Gill nets are most selective in that smaller fish swim through the meshes and fish too large to fit in the meshes usually can back away and avoid being caught. Selectivity is desirable because it allows regulation of the size of fish harvested.

How much bycatch occurs in the commercial mullet fishery? The method of mullet fishing precludes significant bycatch. Mullet are schooling fish, especially during the November to January period. Activity at the water's surface indicates a mullet school. When this is found, the net is set to directly intercept that school and then quickly retrieved. A 1989 study by the LSU Coastal Fisheries Institute showed the bycatch of other species in the mullet fishery to be less than one-half of one percent.

How are mullet used? During the spring, summer, and early fall, mullet are harvested in limited amounts for human consumption and as bait for recreational and commercial fishermen. During the winter months, mullet roe is also produced. Both female and male gonads are used and are called red roe and white roe, respectively. Most roe is exported to the orient and is a valuable source of export earnings. The flesh that isn't used for human consumption is an important source of bait for the crab fishery.

SHRIMP SANCTUARY SCOPING MEETING

The Governor's Task Force on Shrimp Management will be holding several meetings in this area to gather ideas from fishermen on the use of sanctuaries to manage shrimp. The purpose of the possible sanctuaries is to protect very small shrimp in shallow water areas. Fishermen attending the meetings will be asked to identify such nursery areas that hold mostly very small shrimp.

Shrimpers will also have a chance, at the meetings, to fill out a detailed questionnaire with their opinion of current and possible shrimp management regulations. This is the fishermen's chance to give input on shrimp management, so mark your calendar for the meeting most convenient for you. All meetings begin at 6:30 p.m. and will end by 9:30 p.m.

March 1, 1994 (Tuesday), Cut Off Youth Center, Cut Off.

March 2, 1994 (Wednesday), Grand Isle Community Center, Grand Isle.

March 8, 1994 (Tuesday), Lafitte Civic Center, Lafitte.

March 10, 1994 (Thursday), Buras Auditorium, Buras.

March 15, 1994 (Tuesday), St. Bernard Auditorium, 8245 W. Judge Perez Dr., Chalmette.

RED SNAPPER MINIMUM SIZE INCREASES

The National Marine Fisheries Service has announced that an increase in the minimum size of red snappers from 13 inches to 14 inches total length. The Amendment to the Reef Fish Management Plan also provides that the minimum size will increase to 15 inches in 1996 and 16 inches in 1998. This size limit applies to both commercial and recreational fishermen.

COMMERCIAL FISHING VESSEL SAFETY

The Commercial Fishing Vessel Safety Act of 1988 included several regulations that were phased in over a period of years. One of these concerned the requirements for survival craft for documented vessels. As of September 1, 1994, the following requirements go into effect.

- * **Boats operating less than 12 miles offshore - No requirement.**
- * **Boats operating 12 to 20 miles offshore - Life float with a light and line.**
- * **Boats operating 20 to 50 miles offshore - Inflatable life raft with SOLAS B pack.**

- * **Boats operating over 50 miles offshore - Inflatable life raft with SOLAS A pack.**

Survival craft must be large enough to hold everyone aboard the vessel. These regulations only apply to documented vessels, but state numbered commercial vessels will come under the same regulations beginning in 1995.

E.P.I.R.B. REQUIREMENTS

The current requirements for EPIRBs are complicated by different starting dates and categories of EPIRBs. The following covers most situations:

1. The vessel does not operate beyond three nautical miles - No EPIRB required.
2. The vessel operates beyond three miles, is 36 feet or more in length, will not float when flooded, and has galley and berthing facilities - Must have category 1 EPIRB now.
3. As in number 2, but vessel does not have galley and berthing facilities, did not have a 121.5/243 Mhz EPIRB on board on April 26, 1993 or has on board a 121.5/243 Mhz EPIRB that was built before October 1, 1988 - Must have a category 1 EPIRB by March 10, 1994.
4. As in number 3, but vessel had a 121.5/243 Mhz EPIRB on board April 26, 1993 and the EPIRB was built on or after October 1, 1988 - Must have a category 1 EPIRB by February 1, 1998.
5. The vessel is operating beyond 3 miles is less than 36 feet and had no 121.5/243 Mhz EPIRB on board on April 26, 1993 or has an EPIRB built before October 1, 1988 - Must have a category 1 or 2 EPIRB by March 10, 1994.
6. As in number 5, but has a 121.5/243 Mhz EPIRB on board on April 26, 1993 and the EPIRB was built on or after October 1, 1988 - Must have a category 1 or 2 EPIRB by February 1, 1998.

CHANGES IN STATE HANG FUND

Martha Swan, the Administrator for the Louisiana Fishermen's Gear Compensation Fund (State Hang Fund) has announced a change in the regulations concerning the fund. Effective immediately, all claims will have to have proof of ownership of the damaged gear or vessel.

In the case of nets, this should be a purchase receipt from when gear was originally purchased. This receipt must have the dealer name on it and it must be signed by the dealer or his representative.

If a vessel or boat is damaged, the boat registration papers must be included as proof of ownership. Ownership of outboard motors is proved with the purchase receipt from when the motor was bought.

THE 1993 DEAD ZONE

During the last two years, I've tried to keep you updated on the so-called "dead zone" off of the Louisiana coast. In this area, little or no oxygen exists in near-bottom waters. This condition is known as hypoxia.

During July 24-28, 1993, researchers found a large area of hypoxic waters between the Mississippi River Delta and the Calcasieu estuary. In fact, the area was twice as large as that found the year before. Hypoxic waters were found from very near the shore in most of Louisiana out to 30 miles offshore in southeastern Louisiana and out to 70 miles offshore in the southwestern part of the state.

The problem became even worse in August, with the area becoming even larger and oxygen levels going to zero. Video and diving operations showed large areas of sea bottom with no fish, crabs or shrimp. Sand and mud had turned black (a sign of no oxygen) and large mats of bacteria existed. Bottom animals such as worms and starfish were lying on the bottom stressed, dying or dead. Results from research conducted in the Fall are not available yet.

Source: Louisiana Chapter, American Fisheries Society, Newsletter. January 1994.

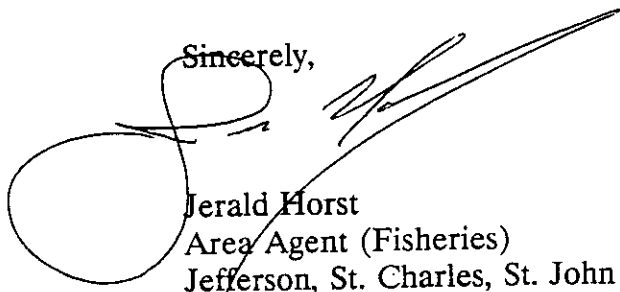
THE GUMBO POT

Canned Shrimp a la King

¼	cup chopped bell pepper	½	tsp. hot sauce
2	Tbsp. margarine	¼	cup chopped pimentos
2	Tbsp. flour	1	can small shrimp
1½	cups milk	4	slices of toast
½	tsp. salt		

Over low heat cook bell pepper in margarine until soft, about five minutes. Blend in flour, then milk. Stir constantly until thickened. Add salt, hot sauce, pimentos and shrimp. Serve on toast. Serves 2 to 4.

Sincerely,



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

LOUISIANA COOPERATIVE EXTENSION SERVICE
LSU AGRICULTURAL CENTER
U.S. DEPARTMENT OF AGRICULTURE
LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
KNAPP HALL, BATON ROUGE, LA 70803-1900

OFFICIAL BUSINESS

Penalty for Private Use \$300