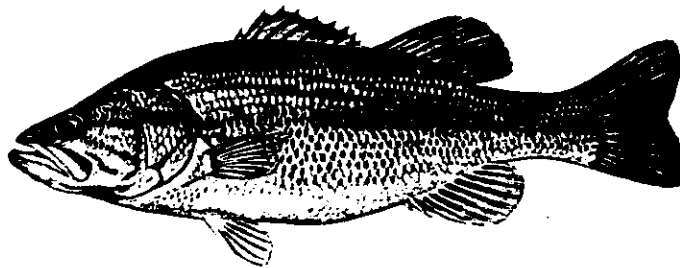




July 3, 2000
Volume 24, No. 7

Jefferson Parish Fisheries Office
1855 Ames Blvd.
Marrero, LA 70072
(504) 349-5644
Fax: (504) 349-8817

SEA GRANT PROGRAM



LAGNIAPPE

TRAWLS AND WATER BOTTOMS

Scientists in Texas are conducting research to determine if pollutants buried in water bottoms are being stirred up by shrimp trawlers and storms. According to Gary Gill, one of the researchers, pollutants brought to the coast by rivers are not washed into the Gulf, but rather they settle out in bottom sediments in coastal bays.

Gill says that 20 to 30 years ago the amount of pollutants brought into the bays was much higher than now and these are stored in the mud. "If you have an event that comes along and resuspends those sediments, then you are essentially re-distributing the contaminant up into the water column where it could potentially harm marine life."

The first part of the research, focused on trawling in Galveston Bay, has been completed. Working with Texas A & M geologist Tim Dellapenna, Gill found that shrimp trawls affect bottom sediments less than expected. The trawls disturbed only the top 3/4-inch of sediment. The findings surprised him because other studies have found that trawls disturb sediments much deeper. "So far, the sediment re-suspension caused by trawling does not appear as significant as we thought it would," he said.



The second half of the study, ending in February 2001, will focus on the effects of storm winds on sediments. Until it is completed, a comparison of storm effects against trawl effects cannot be made. This type of research is very important, as the use of bottom trawls is receiving more and more criticism for bottom damage.

Sources: Personal communication with Gary Gill, Texas A & M University. *Texas Shores*. Spring 2000. Sea Grant College Program. Texas A & M University.

MORE ON TEXAS SHRIMPING PROPOSAL

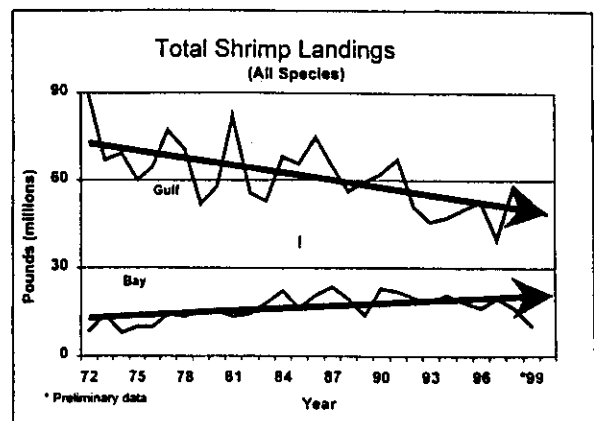
In April, the Texas Parks and Wildlife Department (TPW) proposed a sweeping set of changes in the way shrimping is done in Texas inshore and nearshore waters. The primary focus of the TPW proposal is to reduce shrimping pressure in Texas bays. If adopted, the plan would put in place year-round count sizes, close areas to shrimping, increase minimum mesh sizes, require bycatch reduction devices (BRD's) in all commercial trawls, and increase fees to provide more funds for the state Shrimp License Buyback Program.

TPW maintains that the serious problems in the Texas shrimp fishery are real and continue to worsen. They maintain that the "growth overfishing" now occurring in Texas bays will likely lead to "recruitment overfishing" which could result in a collapse of the shrimp stock. They define growth overfishing is when more and more smaller, and fewer large shrimp are landed. Recruitment overfishing is when not enough shrimp escape from the fishery to spawn offshore to replace the population in the bays.

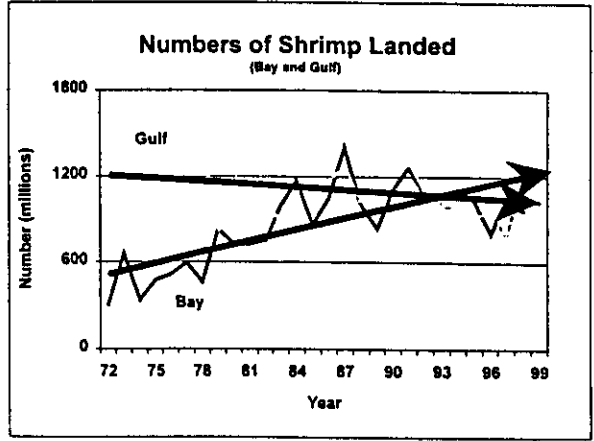
All of this has Louisiana shrimpers wondering what is happening in their neighboring state. Some Texas shrimpers also question TPW's conclusion, as many of them testified at the agency's Shrimp Advisory Committee meeting on the subject. It was pointed out that the Gulf of Mexico Fishery Management Council has found no problem with Gulf states' shrimp stocks.

TPW Executive Director Andrew Sampson says "We're seeing biological warning signs" The warning signs are based on trends in the fishery over 30 years. Some of these trends are as follows:

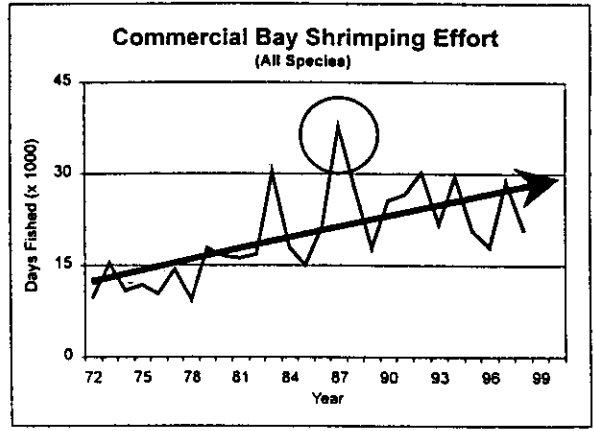
- Pounds of food (not bait) shrimp landed from the bays have increased 150% since 1972 while landings from the Gulf have decreased 28%.



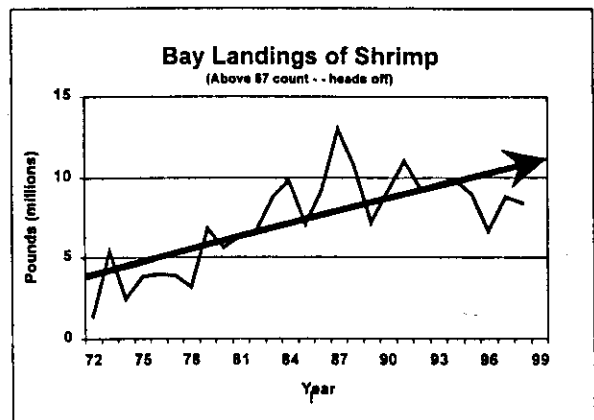
- Since shrimp landed from bays are smaller in size than Gulf caught shrimp, the trend of increased bay and decreased Gulf landings is even stronger when the numbers of shrimp landed are compared. Since 1972, the number of shrimp landed from Texas bays has increased 300%.



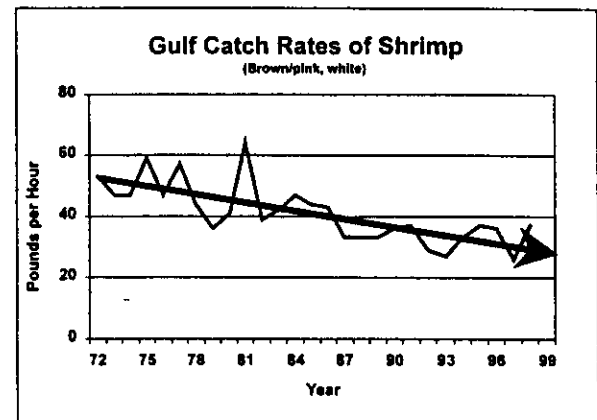
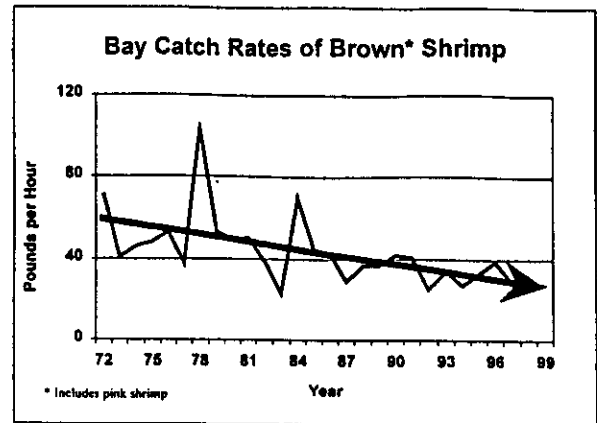
- Shrimping effort (pressure) in Texas bays has also increased more than 300% since 1972. TPW is particularly concerned by the ability of the bay fleet to produce a lot of effort (see the circled area) in any particular year. The limited entry and license buyback programs begun in 1995, seem to have halted the upward trend, but have not brought it downward.



- Landings of the smallest sizes of shrimp, those smaller than 67 count (heads off), have increased the most, at 400% for all shrimp and 600% for brown shrimp. TPW maintains that if the trend continues, shrimp stocks could collapse as they have in other fisheries.



- The brown shrimp catch rate in bays, measured in pounds of caught per hour trawled, has dropped more than 50%, in spite of shrimpers using better equipment. The improvement in equipment should have resulted in an increase in catch rate if shrimp populations were the same. TPW says that the decreased catch rate indicates a reduced abundance of shrimp migrating to the Gulf to spawn.
- Catch rates of adult shrimp in the Gulf have also declined by 30% since 1972. TPW maintains that this shows a reduction in the number of spawning adult shrimp available to restock the estuaries with young shrimp each year.



Sources: TPW News Release, June 1, 2000 and *Data Supporting the Need for Additional Regulations in the Texas Shrimp Fishery*, as presented to the Gulf of Mexico Fishery Management Council Shrimp Management Committee. TAB D No. 4(b). May 17, 2000.

COMMERCIAL SHARK REGS

Beginning July 1, 2000 the taking of following species of sharks will be off limits to both commercial and recreational fishermen: whale, basking, white, bigeye sand tiger, sand tiger, dusky, bignose, Galapagos, night, Caribbean reef, narrowtooth, Caribbean sharpnose, smalltail, Atlantic angel, longfin mako, bigeye thresher, sevengill, sixgill, and bigeye sixgill. While all of these species have been on the federal no-take list for recreational fishermen for some time, only the first five species formerly were prohibited to commercial fishermen due to complications from a lawsuit.

WHO'S GOT THE SPECKS?

Spotted seatrout or as we know them in Louisiana, speckled trout, are one of the most popular inshore saltwater fish in the Gulf. Louisiana is blessed with an abundance of speckled trout as the figures below show. The figures in the table are in estimated numbers of recreationally caught trout, not pounds. The Gulf total is for all 5 Gulf states combined.

YEAR	LOUISIANA	GULF TOTAL	%LOUISIANA CATCH
1981	1,757,893	6,010,978	29%
1982	6,200,925	11,289,008	54%
1983	3,044,675	9,917,040	31%
1984	786,580	7,101,852	11%
1985	3,233,401	7,280,814	44%
1986	8,629,850	18,590,308	46%
1987	6,551,965	11,455,843	57%
1988	4,002,086	10,541,005	38%
1989	3,683,416	8,976,453	41%
1990	2,116,977	3,963,088	53%
1991	6,620,102	10,382,020	64%
1992	5,674,293	9,055,121	63%
1993	5,299,431	8,348,937	63%
1994	5,918,500	9,027,263	66%
1995	6,819,709	10,048,979	68%
1996	5,951,780	8,506,706	70%
1997	6,803,742	11,102,455	61%
TOTAL	83,095,325	161,597,870	51%

Note that Louisiana's share of the recreational catch was substantially larger the last 8 years as compared to the first 9 years of the period. In fact, from 1990 forward, Louisiana fishermen caught over half of all the specks caught in the 5 Gulf states combined. Even in the first 9 years, Louisiana sportsmen caught over 50% of the total

Gulf catch in 2 years. In 1985 and 1986, Louisiana fishermen did not catch over 50% of the total catch, but still caught more specks than any other state.

The numbers also show the effects of what hard winter freezes can do to speckled trout populations. South Louisiana experienced two serious freezes in this period in 1983 and 1989. Each freeze was followed by a large drop in speckled trout catch the following year.

What is also very interesting is that the trout population bounced back without any protective changes in regulations. In fact, two years after the collapse in catches due to the 1983 freeze, recreational speckled trout catches reached an all time record.

WATER PLANTS AND BASS

Underwater or submersed plants are an important part of largemouth bass habitat. The amount and kinds of these plants can affect spawning, survival and growth of bass. The debate over the use of grass carp to control hydrilla in Caney Lake, Louisiana's premier trophy bass lake, is a case in point.

Florida Game and Fresh Water Fish Commission biologists conducted a study of 10 lakes to determine whether bass food habits (diets) and growth rates were different in lakes with heavy growths of submersed plants as compared to lakes with very little plant life. Four lakes in the study had at least 40% each of their total area grown up with water plants, mostly hydrilla, 4 lakes had almost no submersed plants because of control by grass carp, and 2 others had up and down levels of plant life during the study.



A total of 5,818 largemouth bass were collected from the lakes using electrical shocking equipment. The bass were measured, aged by counting the growth rings in their otoliths (ear bones), and had their stomach contents analyzed. Some of the results of the study were very interesting.

- Bass from lakes vegetated with a lot of plants fed on more different species of fish than those from unvegetated lakes (23 vs 15 species).
- In smaller bass, 2½-6 inches, 43% of the bass from vegetated lakes had empty stomachs as compared to 23% from unvegetated lakes.
- Bass from unvegetated lakes fed on very different food items than those from vegetated lakes until they reached 14 inches long. After that size, bass from both types of lakes fed on the same foods.

- Bass shifted their diet from insects and other small animals to fish at a much smaller size (2½ inches) in unvegetated lakes than in vegetated lakes (5 inches).
- The earlier shift resulted in bass from unvegetated lakes growing faster than those from vegetated lakes for the first 3 to 4 years of their life. This may also be partially explained by the fact that bass in unvegetated lakes fed more heavily on shad than those from vegetated lakes. Previous research has shown that shad are a superior food fish species.
- Populations of bass in unvegetated lakes are not as heavy as in vegetated lakes and may under certain circumstances be increased by stocking with hatchery-produced fish.
- Management of submersed aquatic plants to reduce them some times of the year and allow strong growth at other times can increase survival of largemouth bass spawns, increase bass growth rates and improve bass catch rates by fishermen.

Source: *Differences in Largemouth Bass Food Habits and Growth in Vegetated and Unvegetated North-central Florida Lakes*. R. L. Cailteux, W. F. Porak, S. Crawford, and L. L. Connor. Proceedings of the Fiftieth Annual Conference, Southeastern Association of Fish and Wildlife Agencies. 1996.

SALES TAX EXEMPTION FOR PROCESSORS

While many seafood dealers are aware that commercial fishermen are eligible for sales tax exemptions, few know that some seafood processors are also eligible. With a little-known action, Act 896, the 1991 Louisiana Legislature also created a sales tax exemption for some seafood processors. Under the provisions of Section 305.20 of Louisiana Revised Statutes, seafood processors are exempt from paying state sales taxes on materials and supplies if the processor owns or leases a commercial fishing vessel or has an exclusive contract with a commercial fishing vessel.

Additionally, in some parishes, depending on the decision of their sheriff, holders of an exemption may also be exempt from local taxes as well as state taxes. Either way, substantial savings are possible for eligible seafood processors.

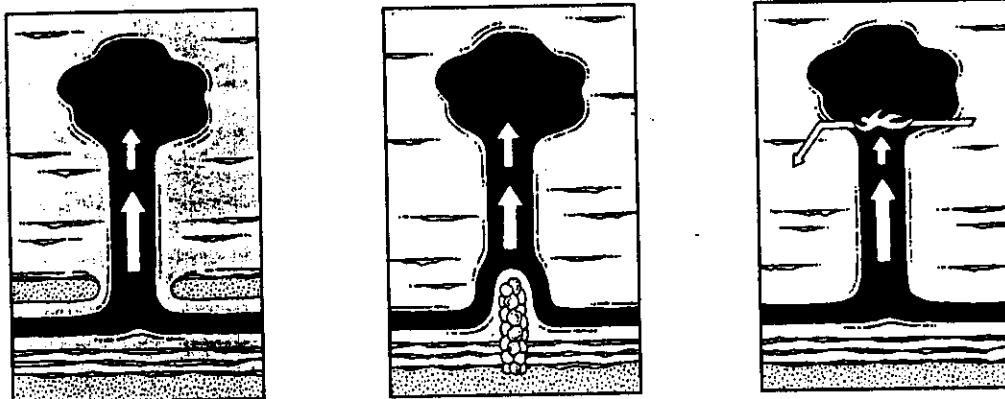
The Louisiana Department of Revenue and Taxation handles these exemptions. Their telephone number in Baton Rouge is 225/925-7356. Their mailing address is Department of Revenue and Taxation, Sales Tax Division, P O Box 3863, Baton Rouge, LA. 70821-3863. If you go in person, their address is 330 N. Ardenwood St. in Baton Rouge.

Doing this through the mail will get your exemption in 3 to 4 weeks. If you go in person, you will get it the same day. If you are going in person, call beforehand to make sure that you bring everything that you need.

UNDERTOW

Surf fishing season is in full swing from the Chandeleur Islands to Holly Beach. It can be a challenging sport, with the risk of stepping on a stingray or having one's fish stringer ripped off by a shark. One situation many surf fishermen fear, but few have experienced are rip currents, often incorrectly called undertow.

Rip currents are simply a way for water that has been pushed to the beach by wind to get back offshore. The outflowing current washes a gap in the sandbar offshore of the beach. Rip currents may also be created when longshore currents are diverted out by a jetty or groin.



In some parts of the country rip currents can be powerful, up to 100 feet wide and traveling at up to 3 mph. While in most instances, rip currents in Louisiana are much smaller, they can on occasion be a concern, especially after a storm.

Rip currents can be seen if one knows what to look for. Often the water is a different color, either due to carried sediment or because it is deeper. Most noticeable is a difference in the waves. They are always choppy and often larger than the waves on either side of the current. Also, foam or floating objects in the current will move steadily seaward instead along the shore. Wearing polarized sunglasses helps cut the glare and makes it easier to spot rip currents.

If you are caught in one, rule number one is DON'T PANIC. If you are a strong enough swimmer, swim across the current parallel to shore. Most rip currents are less than 30 feet wide. Don't attempt to swim against the current. A weak swimmer who doesn't panic can calmly float with the current until it breaks up, and then swim diagonally to the shore. Non-swimmers should stay at wading depth, never over waist deep. The

more of a person's body that is above water, the more weight is effectively applied to keep the person's feet planted on the bottom.

UNDERWATER OBSTRUCTION LOCATIONS

The Fishermen's Gear Compensation Fund has asked that we print the coordinates of sites for which damage has been claimed in the last month. The LORAN coordinates are as listed below.

26644	46979	CAMERON
26731	46980	CAMERON
26756	46979	CAMERON
26603	46977	CAMERON
26631	46980	CAMERON
27105	46943	VERMILION
27922	46832	TERREBONNE
27473	46963	IBERIA
28854	46994	ST. BERNARD

BLUE CRABS, SALINITY & PREDATORS

Blue crabs are an important commercial and recreational species in Louisiana. The biology of the animal — fast growth, early maturity, short life span, and production of large numbers of young, means that their population can rise or fall dramatically from one year to the next, dependent upon environmental conditions. In an attempt to explain some of this variation, Louisiana Department of Wildlife and Fisheries (LDWF) biologist Vince Guillory examined the relationship between blue crab populations and river discharges and salinities.



Guillory used trawl data from the LDWF assessment and monitoring program from 1967-1998, commercial blue crab landings data, commercial crab trap license numbers, and annual Mississippi River discharge figures. Since blue crabs will grow to a harvestable 5-inch size in 12 months, Guillory was able to compare landings and sampling data with what the salinity and river discharge conditions were when the crabs were spawned. He found a definite link between river discharges and blue crab landings. In 8 of 9 high river-flow years, crab landings were higher than the year before. In 6 of 8 low-flow years, landings were down from the previous year. Guillory concluded that the results suggested that high Mississippi River discharge and low salinity are good for blue crabs.

His interpretation of why this is so is very interesting. Lab tests show that blue crab larvae (babies) survived best at high salinities rather than low. So why did low salinity years produce larger crab populations? His conclusion was that salinity influences the distribution and abundance of fish predators. Previous research by Guillory and also by researchers in other states showed that predators kill more young blue crabs than any other single thing. His work showed that redfish were a particularly important predator, especially on crabs smaller than 1½ inches. Blue crabs were the single most important food item for redfish and redfish were ranked as the top predator of small blue crabs in estuaries.

The link between blue crab populations and low salinities has also been noted in Florida and Texas. Guillory noted that low salinities should also reduce the effects of the parasitic crab barnacle, *Loxothylacus texanus*. This high-salinity-loving barnacle can effect crab populations by sterilizing infected crabs.

Source: *Relationship of Blue Crab Commercial Landings and Recruitment to River Discharge and Salinity*. Vincent Guillory. Manuscript submitted to Southeastern Association of Fish and Wildlife Agencies. 2000.

LESS REPORTS?

Can you believe it! In this time of commercial fishermen having to make more reports than ever, the Louisiana Wildlife and Fisheries Commission has issued notices of intent to drop five commercial monthly reports. The five are the traversing permit (used to transport gill nets across state waters to federal waters), the mullet permit, the pompano permit, the spotted seatrout permit, and the bull drum permit. The efficiency of the trip ticket system now in place has made these reports unnecessary. Final action will take place this fall.

FEDERAL WATER SHRIMPING PERMITS

At its May meeting in New Orleans, the Gulf of Mexico Fishery Management Council decided to consider establishment of a permit to fish for shrimp in federal waters. Dr. Bill Hogarth of the National Marine Fisheries Service noted that virtually every other Gulf commercial fishery is required to have a permit.

He stated that the shrimp trawl fishery is affecting the recovery of red snapper stocks, but that managers don't have enough information on the shrimp fishery such as gear used, vessel characteristics and fishing locations to make decisions. Hogarth said that the most effective way to gather such data would be through a permit system.

An options paper on registration and permit systems will be developed for the council.

THE GUMBO POT Shrimp and Broccoli Braid

When I first saw Terrebonne Parish resident Jessica Daigle's preparation, I thought it was a king cake, that Mardi Gras season tradition. When I checked closer, I saw that it contained seafood. When I tasted it, I loved it. This is a delightful dish, but it still looks like a seafood king cake to me. The only hitch to the recipe is that you will need a baking stone, but what the heck, you probably wanted one anyway.

- | | |
|---------------------------|-------------------------------------|
| ½ teaspoon black pepper | ½ cup chopped bell pepper |
| ½ teaspoon ground cumin | 1 cup shredded sharp cheddar cheese |
| ½ teaspoon oregano | 1 garlic clove, pressed |
| ½ teaspoon garlic powder | ½ cup mayonnaise |
| 2 tablespoons soy sauce | 2 8-oz packages crescent rolls |
| Juice of 1 medium lemon | 1 egg white, lightly beaten |
| 2 cups raw shrimp, peeled | 2 tablespoons slivered almonds |
| 1 cup chopped broccoli | |

In a mixing bowl, combine pepper, cumin, oregano, garlic powder, soy sauce, and lemon juice. Add shrimp. Mix well. Cover and marinate overnight. Chop shrimp into small pieces. Saute the shrimp and marinade sauce in a saucepan over medium heat until there is a creamy sauce. Remove from heat. Combine broccoli, bell pepper, cheese, garlic, mayonnaise, and chopped shrimp in mixing bowl. Mix well. Preheat oven to 375 degrees. Unroll 1 package of crescent dough. Do not separate. Arrange the longest sides of dough across the width of 12x15 inch baking stone. Repeat with the other package. Using a dough roller, roll dough to edges of baking stone, sealing perforations. On the longest side, cut dough into strips 1 ½ inches apart, 3 inches deep. Spread filling evenly over middle of dough. Braid dough strips over filling. Brush with egg white. Sprinkle with almonds. Bake 28 minutes. Serves 4-6



Jerald Horst
Associate Specialist (Fisheries)

Mark Schexnayder
Area Agent (Fisheries)
Jefferson, Orleans, St. Charles, St. John