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## SEA GRANT PROGRAM



**LAGNIAPPE**

### DERMO, THE OYSTER KILLER

Oysters have a tough life. Blue crabs love to munch the tiny newly set spat. When their shell gets heavy enough to resist blue crabs, stone crabs work on them. When they get large enough to attract the attention of black drum, the fish pulverizes the oysters' shells and swallows the meat. When water salinities are too low for too long, they die. When salinities get high, snails known as oyster drills or "conchs" move onto the reefs and bore through their shells to eat the oysters.

On top of all this, oysters get diseases too. Probably the disease of most concern is one known as "dermo." The name is a shortened version of the protozoan parasite's old scientific name, *Dermocystidium marinum*. This name was given to the disease organism when it was discovered in the late 1940's and was then thought to be a fungus. Its proper scientific name is now *Perkinsus marinus*, although it is still most commonly called "dermo."

While dermo-infected oysters have been found as far north as Massachusetts, dermo is far more common in warmer, more southerly waters. It is so common in Gulf waters that one survey of 49 sites from Florida to Texas found only one site that less than 50% of the oysters were infected.

Oysters become infected by picking up the microscopic protozoan while filter feeding. Once in the oyster it multiplies rapidly, especially in high salinities and warmer waters. Dermo spreads rapidly and kills oysters at water temperatures higher than 77°F and salinities higher than 12 parts per thousand. (Full strength seawater is 30-36 ppt.) Oyster deaths due to dermo are highest from July through November.

Infected oysters grow slower and are weakened. Meat yields are also lower, as much as 20% in the winter and 50% in the summer. The oyster's muscle strength is also weakened, which may explain why late-summer oysters are prone to gape during storage after harvesting. Finally, they die, with the death rate especially high in oysters 2 years old or older.

John Supan, Assistant Research Professor at the LSU Office of Sea Grant Development has been, in cooperation with the Louisiana Department of Wildlife and Fisheries, conducting surveys of dermo infestations of oyster growing areas in eastern Louisiana. The results of the 1999 survey are shown below.

	Seed		Market	
	Prevalence	Weighted Incidence	Prevalence	Weighted Incidence
Bay Gardene	83%	0.8	80%	0.6
Lonesome I.	57%	0.5	63%	0.3
Mozambique Pt.	40%	0.5	43%	0.2
E. Black Bay	27%	0.2	63%	0.5
S. Black Bay	83%	1.0	67%	0.4
Bay Crabe	64%	0.8	87%	0.6
Telegraph Pt.	21%	0.1	83%	0.4
Cabbage Reef	63%	0.3	57%	0.3
Three Mile	67%	0.6	65%	0.5
Hackberry Bay	68%	0.8	93%	1.0

"Prevalence" is simply the percentage of oysters found with dermo infections in that area. "Weighted Incidence" is an indicator number that measures the concentration of dermo parasites in the oysters.

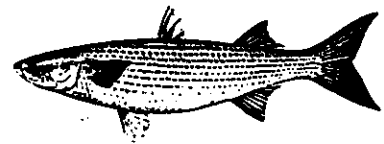
Supan makes the following recommendations:

- 1) Oyster farmers should harvest leases exposed to higher salinity waters before water temperatures increase in the summer.

- 2) Since dermo is contagious and easy to spread by moving infected oysters into areas with no infection, oystermen would be wise to transplant seed oysters from areas with low infestations rather than from areas with high infestations.
- 3) Oyster farmers may want to consider removing all oysters from an area where they plan to bed seed oysters and, if possible, let the area "lie fallow" for one or two years so that infected oysters can die before bedding uninfected or low-infected seed oysters.

## **POPEYE**

The striped mullet or as it was often called years ago, the "popeye mullet" is a fish more known for its abundance than its size. Last month, however, a Texas resident, David Kana, came up with a supersized mullet that really must have been eating its spinach like the cartoon character, Popeye.



When Kana was draining a small freshwater pond near El Campo, Texas, he noted a large silvery fish mixed in with the many gar, buffalo fish and carp. Recognizing that it was the largest mullet he had ever seen, Kana took the fish to a local Texas Parks and Wildlife Department office. The monster mullet was 30.5 inches long and weighed 14 pounds, about 14 times the size of a typical large mullet. How the fish got in the freshwater pond is unknown.

Striped mullet are a preferred food fish of large speckled trout wherever they are found together. Interestingly, this mullet is almost a half pound larger than the Texas state record speckled trout.

## **TAX TIME TIP**

With the exception of the person out for a relaxing day of recreational fishing, almost everyone else involved with fishing is in a fisheries business. This includes commercial fishermen, charter guides, seafood processors and marketers, marinas, tackle stores, net shops, and marine dealers. Almost all of these are small businesses that usually don't have their own tax expert on staff.

Tax-time is always stressful to small business owners. The rules are complicated and often raise questions. People who have contacted the Internal Revenue Service (IRS) about a problem and haven't had the problem resolved, or people who have experienced hardship because of IRS treatment or delay have an option—the Taxpayer Advocate Service. This service is the voice at the IRS that works independently to assist the taxpayer. The call is toll-free, 1-877-777-4778.

## KING MACKEREL PERMIT MORATORIUM

The Gulf of Mexico Fishery Management Council has announced a proposal to extend the moratorium on issuing new commercial king mackerel permits until October, 2005 or until the moratorium can be replaced with a license limitation, limited access or individual transferable quota system, which ever occurs earlier. Public comments on the proposal will be accepted until May 1, 2000 and should be sent to Steve Branstetter, Southeast Regional Office, NMFS, 9721 Executive Center Drive N., St. Petersburg, FL 33702, or FAXED to 727/570-5583.

## WHAT IS A BARREL OF SHRIMP?

When the early settlers came to the New World, wooden oak (oaken) barrels accompanied them on their journey. Oak barrels were the containers most widely used to transport goods between Europe and the New World. During that era, scales were not common, so most commodities were bought and sold by volume rather than weight. Wooden barrels were widely available in early America since most incoming products from Europe were shipped in barrels. Wooden barrels were also hand-made in the United States.



Barrel

While fresh produce such as onions, potatoes, vegetables, and some grains were often shipped in sacks, bushels, baskets, and pecks as well as barrels, the barrel was the basic standard of measurement. A tremendous variety of farm products such as corn, rice, wheat and other grains, tobacco, flour, sugar, and spirits such as whiskey and rum were shipped in barrels.

Seafood was also commonly shipped in barrels. Oysters in the shell, fresh shrimp and even fish were iced and shipped in barrels. Salted fish, dried fish and dried shrimp were shipped in barrels from Louisiana by rail and vessel all over the United States and across the world as far as Asia.

In spite of the use of barrels for shipping shrimp, barrels were never used on-board shrimp harvesting boats except to store drinking water. Yet by 1930 and even until today, shrimpers have used the term "barrel" as a gauge to estimate the amount of their catch. It has been accepted in the shrimp industry for some time that 210 pounds of head-on shrimp equals a barrel.

In the early days of the shrimp industry, shrimp were unloaded from boats by being shoveled from the deck of the boat into hand-made woven oak slat baskets. Each conical-shaped basket held 105 pounds of shrimp and it was accepted that two of these baskets equaled a barrel of shrimp, although some fishermen realized that the filled basket bulged in the middle and probably held more than the agreed 105 pounds.

This basket was called a half-barrel or chinee (pronounced shine-nee') by shrimpers. The origin of the basket and its name are lost in history. Some say that the basket has its origin in China and found its way to Louisiana through the Chinese operators of shrimp drying platforms in the Barataria Estuary. Shrimp drying in Louisiana by Chinese immigrants began as early as 1873. Some research also indicates that the knowledge of basket weaving may have been passed on from the Chitimacha Indians of south Louisiana.



Chinee

Chinee baskets were also commonly used by shrimp iceboats or freight boats. These larger vessels bought shrimp directly from the smaller shrimp harvesting boats on the fishing grounds and transported them in to port for processing. When buying shrimp from the shrimp boats, the shrimp would be measured by the basket, but the shrimpers would be paid by the barrel. When a freight boat was able to consign 100 or more barrels of shrimp per trip, the captain proudly flew an American flag on the vessel's mast on his journey home through the lakes and bayous.

Shrimp drying platforms began declining in number and activity for a variety of reasons. Mechanically produced ice and refrigeration became widely available. This allowed shrimp to be shipped nationally, creating more demand, which priced shrimp higher than drying platforms could pay. The demand increase was accelerated by improved transportation and the invention of mechanical shrimp processing. Tropical storms and hurricanes destroyed many platforms. After Hurricane Betsy struck in 1965, all of the shrimp drying platforms in the Barataria Estuary went out of business, although a few remained elsewhere in Louisiana. The chinee basket followed the Barataria shrimp drying platforms into extinction.

A smaller basket, referred to as a "champagne basket", gradually came to be used on shrimp boats. Apparently, the early champagne baskets were so named because they were originally used to package bottles of champagne (wine) imported into New Orleans from France.



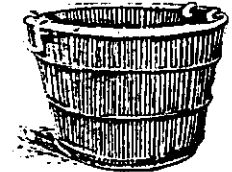
Champagne

Like the larger chinee basket, the champagne basket was made of hand-woven wooden slats, but held only 70 pounds instead of 105 pounds. Conveniently, three of the baskets equaled a 210 pound barrel. Trawlers sorted their catch from the deck into champagnes as they were called by shrimpers. After sorting, the shrimper could keep count of the baskets and thereby estimate how many pounds of shrimp he had in his vessel's ice hold.

In the 1940's, wire baskets began to be used in the shrimp industry. Many of the earlier wire baskets used were probably originally made for other commodities. Filled to

the top they only held 60 pounds of shrimp. When filled, three of these baskets were less than a barrel and four were more than a barrel. In spite of the fact that the shrimp would be weighed at the dock and the shrimpers paid by weight, shrimpers kept to the barrel volume tradition for estimating their catch. They simply partially filled four of the wire baskets to get their estimated 210 pound barrel.

Another larger wire basket also appeared in use in the shrimp industry to replace the chinee basket. This basket, called a half-barrel basket was and still is used mostly on shrimp docks to unload and weigh shrimp in 100 pound quantities. These baskets are never used to ship shrimp; instead wooden and currently plastic containers are used to transport iced shrimp by truck.



Eventually a wire basket was manufactured to duplicate the 70-pound champagne basket. While these baskets received some use, they were unpopular because they would damage the decks of wooden shrimp boats. They were also relatively expensive and would immediately sink if inadvertently dropped overboard.



Finally, in the 1950's, B.C.M. Inc., a Texas firm no longer in business, began to manufacture a plastic champagne basket. Like the old wooden champagne and the later wire basket, it held 70 pounds of shrimp. While they will sink if dropped overboard, they are inexpensive, lightweight, and easy to handle. Plastic champagne baskets, or as they are called by some, shrimp baskets, are currently being manufactured in a variety of colors by several companies and are found on almost every shrimp boat.

Source: This article was contributed by Daniel P. Alario Sr. of Westwego. Daniel is president of the Westwego Historical Society, curator of the Westwego Historical Museum, and consultant for the Sala Avenue Historical District. He and his wife "Be Be" have authored the books, *Westwego from Cheniere to Canal* (1996), *Westwego Remembered* (1999) and *Westwego Salutes the Military* (2000).

## ABANDONED BOAT CLEAN-UP

Pete Chocheles, Jefferson Parish Port Director has announced a clean-up program to remove approximately 10 abandoned vessels on Bayou Barataria. Chocheles and Town of Jean Lafitte Mayor Tim Kerner obtained the assistance of Bruce Ballard, Administrator of the Louisiana Underwater Obstruction Removal Program for the effort.

The project will cost \$98,350 and is set to begin this month. Abandoned vessels are an eyesore and dangerous to navigation. They create multiple underwater hazards as they break up and their parts move into navigable waters.

A clamshell dredge will break up and remove the vessels. The salvage material will be placed on barges and hauled to SEMCO Inc., a local boat-building firm which has graciously agreed to handle the material.

Chocheles may be reached for questions or comments at 225/833/1881, ext. 344.

## **FLOUNDER FOOD HABITS**

An understanding of fish biology can often make a fisherman more successful. This is especially true for the food and feeding habits of a fish species such as southern flounder, *Paralichthys lethostigma*.

Flounder are well adapted for ambushing quick-moving prey such as fish or shrimp. Their flattened shape allows them to become nearly invisible on the bottom. Their brain has large optic lobes to serve their large eyes, and they have large mouths and strong teeth. Typically, they remain motionless on the bottom and wait for their prey to come within striking distance before attacking. While waiting, flounder show rapid eye movements as they track their prey.

Research indicates that flounders will eat from 4 to 8 percent of their body weight in food each day. Feeding activity is heaviest at water temperatures of 61 to 77°F and during the 3 day period following a first quarter moon and the 3 day period before a new moon.

Flounders eat a wide variety of food items including shrimp, mullet, anchovies, croakers, and menhaden (pogies). One research project in Texas reported southern flounders to be the dominant fish predator on brown shrimp during the spring in Galveston Bay. The researcher also noted an increase in the predation rate on brown shrimp in muddy water. This may have been due to murky water giving the flounder a feeding advantage or to a change in shrimp behavior. When flounder feed on fish, they seem to prefer smaller fish. Unlike most predatory fish which eat larger fish as they get larger, flounder just eat higher numbers of small fish.

## **NEW DERELICT CRAB TRAP RULES IN EFFECT**

The Louisiana Department of Wildlife and Fisheries has announced new rules that allow shrimpers who catch unserviceable crab traps in their nets to keep them on board for proper disposal. At the same time the rules still protect crabbers from trap theft.

The new law requires shrimpers who catch an otherwise serviceable crab trap without a float to return the trap to the water with a common float attached. A common float is defined as an all-white, plastic, one gallon or larger bleach bottle.

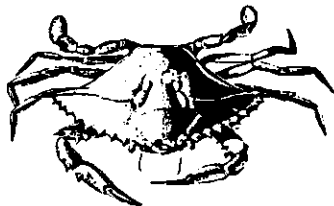
Any person with a crab fishing license may raise and check any trap with a common float to determine ownership. The owner of the trap shall return the common float to any shrimper for reuse.

A "serviceable crab trap" is defined as any crab trap of legal construction and condition maintained in such a manner with the potential to harvest crabs. This includes being legally tagged, legally marked with a solid 6-inch or larger float and a non-floating 1/4-inch or larger line and 2 escape rings.

Another rule change also allows commercial and recreational crabbers the option of using a plastic bait box lid cover marked with either the commercial fisherman license number or the recreational gear license number. The previous rule required the use of a two-inch stainless steel tag to bear the numbers.

## **CRABMEAT IMPORT PROTECTION**

In March, a group called the Blue Crab Coalition filed a petition to temporarily restrict crabmeat imports into the United States. The petition was filed with the International Trade Commission (ITC) under Section 201 of the Trade Act of 1974. After an investigation and recommendation by the ITC, the President of the United States is authorized to grant various types of import relief, such as quotas, when increasing imports cause serious injury to a domestic industry, according to James Taylor, a lawyer with the Washington D.C. law firm of Ablondi, Foster, Sobin & Davidow, p.c. which represents the U.S. crabmeat industry. The Blue Crab Coalition is a group of crabmeat processing plant owners from the South Atlantic and Gulf states. Several Louisiana businesses are members.



Crabmeat imports between 1994 and 1999 have tripled from 9.2 to 27.2 million pounds. Between 1994 and 1998, sales of US-produced crabmeat have dropped 38% and 43 of 162 crabmeat processing plants have gone out of business. Louisiana has been particularly hard hit.

To try to compete with imports, the blue crab industry has adopted a logo that will be used nationwide to educate consumers about the differences between domestic and imported crabmeat. A labeling program is being developed through a first-ever agreement between the seafood marketing boards of the six most affected crabmeat producing states: Louisiana, Maryland, North Carolina, Virginia, South Carolina, and Florida.



## NEW SHRIMP NAMES

If you keep up with that sort of thing, scientists have assigned new scientific names to three of the most common saltwater shrimp in Louisiana. Knowledge of these names is useful for reference work or occasionally when talking to scientists.

<u>Common Name</u>	<u>Old Scientific Name</u>	<u>New Scientific Name</u>
White Shrimp	<i>Panaeus setiferus</i>	<i>Litopenaeus setiferus</i>
Brown Shrimp	<i>Penaeus aztecus</i>	<i>Farfante penaeus aztecus</i>
Pink Shrimp	<i>Panaeus duorarum</i>	<i>Farfante duorarum</i>

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### THE GUMBO POT Crabmeat au Gratin

If you've eaten many seafood au gratins you know that a good one is a delight, but a poor one is a sticky, guey nightmare, and there are all too many bad ones. This one is great! It has just enough cheese to be an au gratin but not enough to overwhelm the seafood.

1	medium onion, chopped	½	teaspoon salt
1	rib celery, chopped	½	teaspoon black pepper
1	bell pepper, chopped	¼	teaspoon red pepper
½	cup margarine	1	teaspoon worcestershire sauce
¼	cup flour	1	pound crabmeat
1	12-ounce can evaporated milk	¼	pound grated sharp cheddar cheese

Saute onion, celery and bell pepper in margarine. Blend in flour, then add milk gradually, stirring constantly. Add salt and pepper. Cook for 5 minutes. Add worcestershire sauce. Mix in crabmeat. Put in lightly greased 2 quart casserole dish and sprinkle with grated cheese. Bake at 375 degrees F 10 to 15 minutes. Serves 4.

Sincerely,



Jerald Horst  
Associate Specialist (Fisheries)