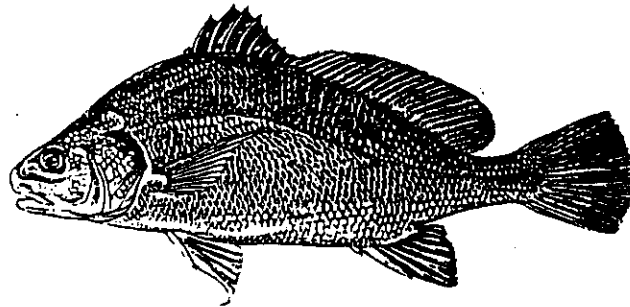




September 3, 1993
Volume 17, No. 8

SEA GRANT PROGRAM



LAGNIAPPE

NO TRAWLING ON OYSTER LEASES

The Louisiana Department of Wildlife and Fisheries reminds commercial and recreational fishermen that Louisiana law makes it illegal to use shrimp trawls, skimmers or seines on properly marked oyster leases. A properly marked lease is posted with a sign reading "NO TRAWLING OR SEINING -- OYSTER LEASE." Violators can be held liable for any damages to leases.

GRASS CARP USE LEGALIZED

The restricted use of triploid grass carp has been liberalized in the state of Louisiana this year. Before this change, grass carp were only legal for use by certified catfish farmers. These fish are valuable because they are very good at eating and controlling heavy growth of underwater plants. Their use had been very tightly controlled in the past, because of the fear that if they escaped to the wild and spawned successfully they could destroy water plants used by ducks for food and fish for cover. The development of a triploid or sterile form of this fish has eased these fears.

There are still some restrictions on their use, however. The fish must be certified as triploid and anyone selling, possessing or transporting them into the state must be permitted by the Department of Wildlife and Fisheries. Department personnel will make an inspection of the site they are to be released in and the site cannot be connected directly to any other stream or lake. Record-keeping requirements are also very strict. Anyone wishing to obtain a permit should contact the Inland Fisheries Division, Louisiana Department of Wildlife and Fisheries, P O Box 98000, Baton Rouge, La 70898-9000. (504) 765-2328.

REFRIGERANTS, SEAFOOD AND THE ENVIRONMENT

The release into the environment of refrigerants from air conditioners, refrigerators, coolers and freezers has been widely blamed for the destruction of the earth's ozone layer. Ozone is a form of oxygen which forms a layer high over the earth in the stratosphere and protects the earth from ultraviolet radiation. Increased radiation may cause skin cancers, breakdowns in human immune systems and interrupt the ocean's food chain that produces fish and seafood.

Refrigeration is very important to the seafood industry, as larger shrimp vessels often use on-board freezers and all seafood processors use coolers, freezers or ice-makers. While the amount of refrigerants used by the seafood industry is tiny compared to that used in automobile and home air conditioners and in other industries, the new laws on the use of refrigerants will apply to everyone.

Most refrigerants fall into three major groups. Chloroflourocarbons (CFCs) include R-12 and R-502 and do the most damage to the ozone layer. Production rates of CFCs is decreasing and they will no longer be manufactured after 1995. Hydrochloroflourocarbons (HCFCs), which include R-22, have less effect on ozone. They do have some effect as shown in Table 2 below and so are only seen as a short-term solution to the use of CFCs. A production slowdown of HCFCs is proposed to begin in 1996 and production of HCFCs is set to drop to zero by at least 2030.

Hydroflourocarbons (HFCs) are a new class of refrigerants that have no chlorine and therefore have no effect on the ozone layer. An example HFCs is R-134a which is now beginning to replace R-12 in common systems such as chillers and automobile air conditioners.

Table 1. Refrigerant phase-out schedule^a

Action	Current U.S. Law	Expected Changes in U.S. Law
Production slowdown will begin on this date	CFC: 1990 HCFC: 2010	CFC: 1990 HCFC: 1996
Production is prohibited after this date	CFC: 1995 HCFC: no ruling	CFC: 1995 HCFC: 2030
New equipment cannot be supplied with this refrigerant after this date	CFC: no ruling HCFC: no ruling	CFC: Unknown HCFC: 2020
All use of this refrigerant is banned after this date	CFC: no ruling HCFC: no ruling	CFC: Unknown HCFC: Unknown

^a Doesn't apply to automotive air conditioning, which already has more stringent regulations

Table 2. Common refrigerants and some anticipated substitutes

Refrigerant	Chemical Type	Excise Taxes (\$/lb)			Approximate Retail Cost * (March 1993, \$/lb)	Ozone Depletion Potential	Global Warming Potential
		1993	1994	1995			
R-12	CFC	\$3.35	\$4.35	\$5.35	\$11.50	1.0	3700
R-134a	HFC	0	0	0	\$12	0	400
MP-39	Blend (HCFC base)	10¢	13¢	16¢	\$11.50	.03	370
R-290	Propane					0	0
R-22	HCFC	17¢	22¢	27¢	\$3	.05	510
MP-66					\$11.50		
R-502	Azeotrope (CFC/HCFC)	\$1.03	\$1.34	\$1.64	\$9.50	.307	7300
R-69S	Blend (HCFC base)						
MP-717	Ammonia	0	0	0	60¢	0	0
HP-81	Blend (HCFC base)				\$17		
HP-62	Blend (HCFC base)						
R-125						0	3195

* Prices may vary significantly in some areas

The problem in all this, concerns the conversion of cooling, freezing and ice-making systems from the refrigerants being phased out to another refrigerant. If you have R-12 in your system, the new refrigerant R-134a has temperature and pressure levels close to those of R-12, but it can't be used with oil used in R-12 systems. It is very hard to remove all of the old oil and replace it with the new synthetic oil needed for R-134a. There are also problems with oil distribution and compatibility with drier materials, O-rings and other materials. In some cases, replacement of all the equipment may be necessary.

R-22 is sometimes given as a temporary solution, but its use in an old R-12 system will require a slowdown of the compressor and resizing of some parts, such as expansion valves and piping. Oil return may be a problem and head pressures (and temperatures) are much higher, which may cause crankcase failure in some converted compressors. Finally, MP-39 has also been discussed as an alternative. This refrigerant is a blend of three refrigerants including 52% R-22. Being a blend, it has boiling and condensing temperatures that vary over a range. This is known as temperature glide.

If you have a system with R-502 the use of R-22 may be a temporary solution. Blends such as HP-62 and R-69 may possibly be used. Ammonia (MP-717) would give good performance in the low temperature range needed, but it would require all new equipment, since ammonia is incompatible with the copper and brass used in CFC and HCFC systems. Also ammonia systems smaller than 10 to 15 horsepower are not available. Ammonia is poisonous and flammable, but it is such an environmentally safe refrigerant that it is getting increasing attention.

Source: The CFC Issue: Refrigerant Options for Fishing Vessels and Small Shore-based Operations by Edward Kolbe. Oregon Sea Grant Program.

FISH FACTS AVAILABLE

The Louisiana Sea Grant College Program has recently published a series of ten fact sheets authored by researchers Charles Wilson and Talat Farooqi. Each Fishfact is on a different species of fish and covers their biology, harvesting times and methods, and notes on their taste, texture, nutrition and cooking methods. The ten species covered are, king mackerel, southern flounder, spotted seatrout, striped mullet, gafftopsail catfish, Atlantic croaker, cobia, red drum, sheepshead and black drum. For a free set of these fishfacts, write **Communications Office, Louisiana Sea Grant College Program, LSU, Baton Rouge, LA 70803** or call **388-6349**.

MARINE ADVISORY BOARD NEWS

In March of this year, the Jefferson Marine Fisheries Advisory Board worked with Peggy Bourgeois of Congressman Billy Tauzin's office to establish the Barataria Bay Navigational Improvement Committee. The purpose of the committee was to et navigational improvements made in the Barataria Waterway, and Barataria and Caminada Passes. The committee met with the Coast Guard and provided input at public meetings in Westwego and Grand Isle.

After studying the requests of the committee and the public input from the meetings, the Coast Guard agreed to make the following changes:

BUOYS

1. Establish the following buoys to mark the entrance to Barataria Pass
 - * Barataria Pass Buoy 1
 - * Barataria Pass Buoy 3
 - * Barataria Pass Buoy 5
 - * Barataria Pass Buoy 7
 - * Barataria Pass Lighted Buoy 9
2. Relocate Bayou Rigaud Buoy 4 (LLNR 15325) to approximate position 29-16-12N, 087-57-37W to better define the channel and help prevent vessels from grounding on the north side of the channel between Buoy 2 and Day beacon 6.
3. Increase the size of the following unlighted buoys from 6th to 5th class:
 - * Grand Isle Turning Basin B2 (LLNR 15345)
 - * Barataria Waterway B 48 (LLNR 16050)
4. Increase the sinker size on Barataria Pass Buoy 11 (LLNR 15285) to reduce the buoys movement from its position to the south.

LIGHTS

1. Establish the following lights
 - * Barataria Waterway Lt. 8A
 - * Dupre Cut. Lt. 8

2. Change the following day beacons to lights to better mark the eroding land cuts.
 - * Barataria Waterway Dbn 15 (LLNR 15855)
 - * Barataria Waterway Dbn 18 (LLNR 15865)
 - * Barataria Waterway Dbn 25 (LLNR 15900)
 - * Barataria Waterway Dbn 36 (LLNR 15375)

OTHER CHANGES

Require Texaco to mark their pilings and other structures along Barataria Waterway. Originally these pilings and structures were near the shoreline but erosion of the bank has made them a hazard to navigation.

Additionally the Coast Guard is making numerous changes to update navigational charts 11352, 11364 and 11365. Listed below are the names and affiliations of the people who served on the Barataria Bay Navigation Improvement Committee.

William "Gene" Adams*	Commercial Shrimper
Claude Boudreaux	La. Dept. of Wildlife & Fisheries
Peggy Bourgeois	Aide to Congressman Billy Tauzin
Paul Candies	President of Otto Candies, Inc.
Jimmy Frickey*	Commercial Shrimper
Jerald Horst*	LSU Ag Center's Sea Grant Program
Gareth LeBlanc Jr.	Commercial Shrimper
Alan Matherne	LSU Ag Center's Sea Grant Program
Rickey Matherne+	Commercial Shrimper
Andrew Metzger	Vice Pres. Jefferson Rod & Gun Club
Marco Picciolo	Owner, Pirates Cove Marina
Karl Thayer	Owner, Bon Voyage Marina
Andy Valence	Mayor, Town of Grand Isle

- * Current member of Jefferson Parish Marine Fisheries Advisory Board.
- + Former member of Jefferson Parish Marine Fisheries Advisory Board

THE GUMBO POT

This month's recipe is from Brent Scott of Catahoula Parish, who won the 5th Annual 4-H Seafood Cookery Contest, sponsored by the Louisiana Seafood Promotion and Marketing Board. In order to win, Brent's recipe has to beat the competition at the

parish contest, the district contest, and the state contest, so it's the best of the best of the best.

A cookbook of over 150 winning 4-H seafood recipes is available from the Louisiana Seafood Promotion & Marketing Board at a cost of \$9.00 each. To order, send a check or money order to **SIMPLY THE BEST COOKBOOK**, P O Box 70648, New Orleans, La 70172.

Seafood Brenton'

1 pound boneless, cube catfish	1 (10 3/4 ounce) can low sodium cream of mushroom soup
3/4 cup chopped green onion	1 (2 1/2 ounce) can sliced mushrooms,
8 cloves garlic, crushed	3/4 cup cooked, long grain white rice
1 teaspoon Creole seasoning	1/2 cup chopped onion
1 teaspoon Italian seasoning	2 slices toast, cubed
1 teaspoon hot sauce	1 teaspoon hot sauce
1 teaspoon grated lemon peel	1/2 teaspoon Creole seasoning
3 tablespoons reduced calorie margarine	1 1/2 cup grated low fat cheddar cheese
1 pound peeled, deveined shrimp	1 cup unsalted cracker crumbs
1 (8 ounce) package low fat cream cheese	
2 tablespoons skim milk	

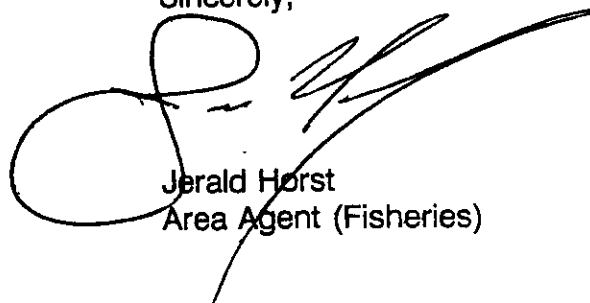
Preheat oven to 350 degrees

Season fish with half of green onion, garlic, Creole seasoning, Italian seasoning, hot sauce and lemon peel. Saute' fish in large skillet with 1 1/2 tablespoons margarine, until just done, being careful not to crumble fish. Drain fish on paper towel. Season shrimp with remaining green onions, garlic, Creole seasoning, Italian seasoning, hot sauce and lemon peel. Saute' shrimp in remaining 1 1/2 teaspoons margarine until shrimp are pink. Drain on paper towel.

In medium pyrex bowl, heat cream cheese, milk and soup in microwave until cream cheese melts. Stir to blend. Add mushrooms, rice, onion, cubed toast, hot sauce and Creole seasoning. Mix well.

Spray 9" x 13" casserole dish with non-stick vegetable spray. Layer 1/2 cooked fish, 1/2 cooked shrimp, and 1/2 sauce. Repeat layers. Sprinkle with grated cheese, then cracker crumbs. Bake at 350 degrees for 25 minutes. Serves 8.

Sincerely,



Jerald Horst
Area Agent (Fisheries)