

# Lagniappe



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## FROM THE RIVER TO THE SEA AND BACK AGAIN - AMAZING MIGRATIONS OF THE RIVER SHRIMP *MACROBRACHIUM OHIONE*

Recent work conducted at the University of Louisiana Lafayette has shed new light on a species that has a long fishery history in the state. The river shrimp is well known in the Mississippi, Atchafalaya and Red River systems. It was a common item on New Orleans menus early in the 1900s, but now supports only a limited bait fishery in some areas of Louisiana. River shrimp are still very common in many rivers, and undoubtedly are a major component of riverine ecosystems.



**River Shrimp *Macrobrachium ohione***  
 Photo credit: Ray Bauer

*Macrobrachium ohione* are the best-known of the freshwater shrimp in North America. They grow to around four inches long, in contrast to the much larger Malaysian prawn, *M. rosenbergii*. The Malaysian prawn is the species that is being successfully pond cultured in the southern U.S. (and other places in the world, particularly India) and is sometimes available in our seafood markets. Both of these freshwater shrimp are delicious and are quite different from saltwater shrimp (see this month's recipe). The meat is white and not as dense as that of marine shrimp and the flavor tends to be mild. In 1937, Gordon Gunter, the greatest of early Louisiana naturalists, wrote:

"In Louisiana many fishermen along the Mississippi derive part of their income during the summer months from the catch of *M. ohionis* (*ohione*). As sales are often made from door to door no adequate statistics of the catch are available. It is believed to amount to several thousand pounds a year. Commercially, the shrimp are taken in box traps made of wood strips, baited with fish and meat scraps, and sunk in shallow water not far offshore. These traps have an inverted V-shaped inset running lengthwise along the bottom of the box with an open groove at the angle of the V. Pressed cottonseed cake is sometimes used as bait, but fishermen state that decayed meat is better and is more frequently used. The cottonseed cake is often sprinkled on the shrimp before they are taken to market, in order to make the fastidious buyer believe the less objectionable bait had been used. Shrimp attack fish kept alive in live-boxes in the river, feeding on whatever part of the body to which they happen to attach. Catfish are especially vulnerable and are often virtually skinned alive. Live-boxes are therefore covered with screenwire to protect the fish. Shrimp are sometimes captured by lifting willow bushes out of the water and catching the animals in a dip net as they drop off."

UL professor Ray Bauer has been studying Atchafalaya populations of river shrimp with Lafayette naturalist Jim Delahoussaye. These scientists have documented the downriver migration of reproducing female shrimp, followed by massive migrations of juveniles out of the estuaries and back up the river. Additionally, they have shown that brackish water is essential for the early development of the “freshwater” shrimp larvae. Juvenile shrimp were found to move upstream in late summer and early fall. At night, in the quiet water along the bank, a band of juvenile shrimp several yards wide swim steadily upstream. These researchers calculated that an embryonic shrimp hatched at the Atchafalaya Delta would take about 100 days to reach Butte La Rose, a distance of 91 river miles. During this time the shrimp grow to about 2 inches. This cycle of repeated migrations between rivers and estuaries is a type of diadromous life cycle that has been called amphidromy (where the migration is for purposes other than breeding, which in *M. ohione* occurs in the river).

While the populations of river shrimp in Louisiana are still robust, the species is becoming rare in the northern portions of its range, the Missouri and Ohio Rivers. Dams, water control structures and changes in water quality may be factors in the loss of upstream populations.

Bauer and Delahoussaye are looking for folks who can help sample river shrimp along their Atchafalaya migration route. A couple of sweeps of a dipnet on a few summer nights would provide needed information on growth and body composition changes. Folks who have easy river access – particularly camps along the Atchafalaya – are encouraged to contact the researcher:

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#### **Sources:**

Gunter, G. 1937. Observations on the River Shrimp, *Macrobrachium ohionis* (Smith). American Midland Naturalist 18; 6: 1038-1042.

Bauer, R. T. and J. Delahoussaye. In review. Life history migrations of the amphidromous river shrimp *Macrobrachium ohione* from a continental large river system. Department of Biology, University of Louisiana, Lafayette. 70504.

United States Freshwater Prawn and Shrimp Growers Association. [www.freshwaterprawn.org](http://www.freshwaterprawn.org).

## **BASS ANGLER PLATES AVAILABLE**

The Louisiana Wildlife and Fisheries Foundation, in association with the Louisiana Department of Wildlife & Fisheries, have announced the availability of the Louisiana “Bass Angler” License Plate. Plates are available for \$26 each for autos and boat trailers (in addition to regular license fees) through the local Office of Motor Vehicles. Funds collected are dedicated to the Louisiana Department of Wildlife and Fisheries black bass stocking program.

## **NOTICE OF FEDERAL DATA COLLECTIONS IN THE GULF SHRIMP FISHERY IN 2008**

NOAA’s National Marine Fisheries Service (NOAA Fisheries Service) is working to improve the quality of information available for the Gulf of Mexico shrimp fishery. Having appropriate and current data enables the Gulf of Mexico Fishery Management Council and NOAA Fisheries Service to carry out responsive and timely fisheries management.

With the implementation of the permit moratorium, NOAA Fisheries Service's Southeast Fisheries Science Center is starting new data collections. This bulletin provides permit holders an overview of the data collection requirements related to the federal Gulf of Mexico moratorium shrimp permit.

Federal Gulf shrimp permits are renewed annually. The application for renewal needs to be received within one year of the permit's expiration date. The permit office can be reached at 1-877-376-4877 (toll free). Permit related information also can be found at: <http://sero.nmfs.noaa.gov>.

Besides the annual permit renewal, every permit holder is required to complete and submit the following:

1. "Annual landings form" (Gulf of Mexico Shrimp Federal Permit Reporting Form): This one-page form collects total annual shrimp landings in pounds and dollars by shrimp species harvested from state and federal waters of the Gulf of Mexico. This data collection is being introduced this year, asking for 2005, 2006 and 2007 information. In subsequent years, the request will only be for the previous year.
2. Gulf Shrimp Vessel & Gear Characterization Form: This six-page form collects information about total annual fishing effort (such as number of trips, days at sea and crew), and about the gear most commonly used during the past year (such as details on typical gear configuration, bycatch reduction device and turtle excluder device used, and on-board electronics). This year, information will be requested for both 2006 and 2007. In subsequent years, the request will only be for the previous year.

Both these forms are required for all permit holders. Please direct any questions to Rebecca Smith at (409) 766-3783. Forms are expected to be mailed beginning February 2008. The due date is April 30, 2008.

In addition to the above forms, permit holders may be selected to participate in one or more additional data collections. Only a limited number of vessels will be sampled to minimize the overall reporting burden on shrimp fishermen. Permit holders will be notified if selected for any of the following data collections. If selected, participation is required for permit renewal.

3. Annual Economic Survey of Federal Gulf Shrimp Permit Holders: If selected, permit holders are required to provide data about operating expenses and the cost of owning shrimp vessels to determine the economic and social effects of regulations and other factors affecting the profitability of the fishery. The two-page survey will be sent annually to a random sample of 20 percent of permitted vessels, but no vessel will be selected two years in a row. Please direct any questions to Christopher Liese at (305) 361-4263. Selection letters are expected to be sent out beginning in February 2008. The information requested in this survey should be readily available from tax or similar forms. The due date is April 30, 2008.

4. Electronic Logbook (ELB) Program: If selected, a vessel will be equipped with an electronic logbook provided by NOAA Fisheries Service. The ELB program collects information regarding the geographic location of effort. The memory units will be changed two to four times during the year, at no cost to the fisherman. The contacts for the program are Benny Gallaway or John Cole at LGL Ecological Research Associates Inc., (979) 775-2000. Selection is an ongoing process and notification is through the mail.

5. Onboard Observers Program: If selected, a vessel will carry a NOAA Fisheries Service-approved observer on selected trips. Observers collect catch, effort, bycatch and other scientific information, as necessary. Please direct any questions to Elizabeth Scott-Denton at (409) 766-3571. Sampling

is conducted for three periods in 2008, starting in January, May and September. Notification is by certified letter.

6. Trip Interview Information: If selected, permit holders need to provide information for any fishing trip, as requested by authorized statistical reporting agents of the NOAA Fisheries Service, including, but not limited to, vessel identification, gear, effort, amount of shrimp caught by species, shrimp condition (heads on/heads off), fishing areas and depths and the person to whom the shrimp was sold.

This information is critical for more responsive and timely management of the fishery. All individual information will be treated as strictly confidential.

## **NEW TOLL-FREE TELEPHONE NUMBER AND OTHER CHANGES ANNOUNCED FOR NOAA FISHERIES SOUTHEAST PERMITS OFFICE**

The Southeast Regional Office (SERO) of NOAA's National Marine Fisheries Service advises constituents that a new toll-free telephone number and other changes are now effective for the permits office. The new toll-free telephone number is (877) 376-4877.

Please note, the regular business telephone number is still active and callers also may contact the permits office by dialing (727) 824-5326. Incoming calls on both the toll-free and regular business lines will be greeted by an automatic answering system. By using the menu provided below, callers are directed to the appropriate party for a response. All calls are recorded for quality assurance purposes.

The menu selections for the new automated answering system are:

1. Find out the SERO Permits Office mailing address and operating hours.
2. Transfer to the red snapper IFQ customer support line to:
  - Submit a 3-hour notification of landings;
  - Obtain assistance with IFQ account;
  - Obtain information about IFQ program;
  - Submit a VMS declaration; or
  - Obtain assistance with VMS Program requirements.
3. Speak with a permits office representative.
4. Access the staff directory or enter a permit staff extension.
5. Leave a message for later response by the permits office.

Applicants can now check on the status of the processing of their applications for dealer and vessel permits on the SERO Web site. This information, including tables listing current holders of vessel and dealer permits, can be accessed from the SERO Web page for the "Constituency Services Branch (Permits): <http://sero.nmfs.noaa.gov/permits/permits.htm>.

Three tables are listed at the bottom of that Web page under "Additional Links:"

- List of Current Permit Holders
- Vessel Application Status
- Dealer Application Status

Names and addresses of current holders of dealer and vessel permits are listed specifically by Gulf, South Atlantic and highly migratory species (HMS) fishery. Application status is listed by vessel

number (U.S. Coast Guard Documentation or state registration) or dealer name, respectively. These tables are updated on a daily basis.

Landings data for many vessels commercially fishing in the southeast EEZ that have submitted logbook data to the Science and Research Director (SRD) may be available and requested from NOAA Fisheries Service. A form requesting catch history data is available and can be downloaded from the Web site listed below: <http://sero.nmfs.noaa.gov/permits/permits.htm>

Landings data are considered confidential under the Magnuson-Stevens Fisheries Conservation and Management Act and are made available only to the owner of the permit at the time of the catch. A permit holder or corporate officer specified in the articles of incorporation, or a court-appointed legal representative/guardian may request catch history data and, if desired, specify that the landings be released and sent to a new owner, prospective buyer or another entity.

### **SEAFOOD HACCP TRAINING OFFERED**

The LSU AgCenter and Louisiana Sea Grant Seafood Technology program are offering seafood Sanitation Control Procedures (SCP) and Hazard Analysis Critical Control Point (HACCP) training courses in Baton Rouge on the LSU campus. The one-day SCP course is offered on Monday, April 28, 2008, from 8 a.m. to 4:45 p.m. The three-day HACCP course takes place from Tuesday-Thursday, April 29-May 1, 2008, starting at 8 a.m. each day. The location will be 212 Efferson Hall.

Both courses are sponsored by the Association of Food & Drug Officials, and students will receive certificates of completion from AFDO. The HACCP certificate is recognized as proof of training required by the FDA seafood HACCP regulation. The SCP training is not required but covers key sanitation controls and monitoring that are covered by GMP and HACCP regulations.

The SCP course registration fee is \$90, and the three-day HACCP course registration is \$180, which includes refreshments but not meals or lodging. Forms are available at: [http://www.lsuagcenter.com/en/our\\_offices/departments/Food\\_Science/Extension\\_Outreach/SeafoodNET/Features/Events/ADFO\\_LSU+AgCenter+Basic+Seafood+HACCP+Training++Certification+Workshop.htm](http://www.lsuagcenter.com/en/our_offices/departments/Food_Science/Extension_Outreach/SeafoodNET/Features/Events/ADFO_LSU+AgCenter+Basic+Seafood+HACCP+Training++Certification+Workshop.htm).

For more information, contact:

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### **UPDATE ON MARINE DEBRIS IN LOUISIANA**

The Louisiana Department of Natural Resources (LDNR) is asking fishermen, boaters, and other users of the state's public waterways to "Report It!" if they see storm-related debris in coastal waters. A special Web site ([www.louisianamarinedebris.com](http://www.louisianamarinedebris.com)) and a toll free number 1-866-579-4DNR (4367) have been set up to make reporting marine debris and underwater obstructions easy.

"The message is simple – if you see, hit or snag marine debris, tell us where it is," said LDNR's Garrett Broussard, the state's point of contact.

This information gathering precedes a multi-million dollar marine debris assessment and removal effort by the National Oceanic Atmospheric Administration (NOAA), U.S. Coast Guard and the Federal Emergency Management Agency (FEMA) designed to survey and assess over 900 nm<sup>2</sup> of inshore

and near-shore waterways in Louisiana. Information collected through submissions to the Web site will be used to direct debris removal in the state.

### ***NOAA surveying continues***

The NOAA-launched Gulf of Mexico Marine Debris Program Web site (<http://gulfofmexico.marinedebris.noaa.gov/>) will continue to be updated with Louisiana-specific hydrographic information throughout 2008. Users can access interactive maps of marine debris, or view images, as well as view project updates.

## **NEW FEDERAL RULES FOR BYCATCH REDUCTION DEVICES IN SHRIMP NETS**

NOAA's National Marine Fisheries Service (NOAA Fisheries Service) has published a final rule making the following changes regarding bycatch reduction devices (BRDs) used by the shrimp fishery:

- The BRD certification criterion is changed for the western Gulf of Mexico.
- The BRD Testing Manuals (also known as the BRD Protocols) have been revised and consolidated.
- New BRDs are certified for use in the shrimp fishery.

BRDs have been required in shrimp trawls since 1997 for the South Atlantic, since 1998 for the western Gulf of Mexico (western Gulf) and since 2004 for the eastern Gulf of Mexico (eastern Gulf). Both the Gulf of Mexico (GMFMC) and South Atlantic (SAFMC) Fishery Management Councils established Bycatch Reduction Device Testing Protocol Manuals, outlining procedures to test and certify additional BRDs.

BRD certification criteria have differed by area. In the western Gulf, BRDs have been certified based on their ability to reduce red snapper bycatch. In the eastern Gulf, BRDs are certified if they reduce the weight of the finfish bycatch by at least 30 percent. Originally, BRDs were certified for the South Atlantic based on their effectiveness at reducing Spanish mackerel and weakfish, but in 2005, the SAFMC changed the criterion to a 30-percent finfish reduction.

The new rulemaking modifies the bycatch reduction certification criterion for the western Gulf to match the criterion of the eastern Gulf and South Atlantic. A BRD that reduces the weight of finfish in a trawl by 30 percent will be certified for use in the shrimp fishery of the western Gulf. This change makes the BRD certification criterion consistent throughout the jurisdiction of the GMFMC and SAFMC. In addition, NOAA Fisheries Service has created a "provisional certification" category for BRDs. A provisional certification would apply to a BRD that excludes at least 25 percent of the finfish by weight in a trawl. A provisional certification will allow the BRD to be used in the Gulf of Mexico or South Atlantic for two years. This time period allows additional wide-scale industry evaluation of the BRD to further refine the design or application of the BRD so it can eventually meet the 30 percent finfish exclusion rate to be fully certified.

With a consistent certification criterion throughout the southeast, NOAA Fisheries Service has consolidated and revised the BRD testing manuals for the Gulf of Mexico and the South Atlantic. The original manuals spelled out rigorous "one-size-fits-all" testing procedures to be followed by every applicant. The primary change in the manual's procedures now allows applicants to describe how they intend to test a new BRD. This allows additional flexibility for a specific test. In addition, NOAA Fisheries Service changed the statistical procedure used to evaluate the data collected during a test. The changes are intended to promote additional research on BRDs, while ensuring an acceptable level of statistical precision and accuracy in the results.

Based on the changes from this rulemaking, NOAA Fisheries Service has certified new and more effective BRDs for use in the shrimp fishery. The BRDs may be used in the fishery beginning March 14, 2008. The Modified Jones-Davis BRD is certified for use in the Gulf of Mexico and South Atlantic regions. The Composite Panel BRD is provisionally certified for use in both areas as well, until Feb. 13, 2010.

In addition, the Extended Funnel BRD is currently certified for use in the eastern Gulf of Mexico and South Atlantic, but it is not certified for the western Gulf. With the change to the certification criterion for the western Gulf, the Extended Funnel BRD will be allowed in the western Gulf. However, recent tests in the Gulf of Mexico indicate the Extended Funnel BRD only meets the requirements to be provisionally certified. Therefore, the Extended Funnel BRD will be provisionally certified throughout the Gulf of Mexico through Feb. 13, 2010.

For information regarding these new BRDs, please contact NOAA Fisheries Service's Pascagoula Laboratory, Harvesting Technology Branch, 3209 Frederic Street, P.O. Drawer 1207, Pascagoula, Mississippi 39568; phone: (228) 762-4591.

All the new tests on the Extended Funnel BRD were conducted in the Gulf of Mexico. The fishery in the South Atlantic is conducted in shallower water, using somewhat different gear and methods, and the bycatch is different from the bycatch found in the Gulf of Mexico fishery. Therefore, the results from the Gulf of Mexico tests do not apply to the South Atlantic, and the Extended Funnel BRD will remain certified for use in the South Atlantic.

Copies of the final rule and the revised BRD Testing Manual are available by contacting NOAA Fisheries Service's Southeast Regional Office at 263 13th Avenue South, St. Petersburg, Florida 33701. The final rule can be obtained in electronic form from the Federal Register Web site: <http://www.gpoaccess.gov/fr/index.html> (do an advanced search for final rules using "AU59" as a keyword), and from the Southeast Regional Office Web site: <http://sero.nmfs.noaa.gov/sf/sf.htm>.

## **THE GUMBO POT**

### **Prawns and Grits Casserole**

**Recipe Courtesy Lauren Farms and United States Freshwater Prawn  
and Shrimp Growers Association**

4 cups chicken broth  
 ½ teaspoon salt  
 1 cup regular grits  
 1 cup (4 oz.) shredded sharp Cheddar cheese, divided  
 1 cup (4 oz.) shredded Monterey Jack cheese with peppers  
 2 tablespoons butter or margarine  
 6 green onions, chopped  
 1 green bell pepper, chopped  
 1 garlic clove, minced  
 1 lb. medium prawns, peeled and cooked  
 1 (10 oz.) can diced tomatoes and green chilies, drained  
 ¼ teaspoon salt  
 ¼ teaspoon pepper



**Prawns and Grits Casserole**

Bring 4 cups chicken broth and ½ teaspoon salt to boil in a large saucepan. Stir in grits. Cook until thickened according to package directions. Stir together grits, ¾ cup Cheddar cheese and Monterey Jack cheese. Melt butter in a large skillet over medium heat; add green onions, bell pepper, and garlic, and sauté 5 minutes or until tender. Add shelled prawns. Cook until barely pink – the prawns will finish cooking in the oven. Stir together green onion mixture, grits mixture, prawns, and next 3 ingredients. Pour into a lightly greased 2 quart baking dish. Sprinkle top with remaining ¼ cup shredded Cheddar cheese. Bake at 350 for 30-45 minutes.

### For more information, contact your local extension agent:

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