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Agriculture Economic/Community Development Environment/Natural Resources Families/Nutrition/Health 4-H Youth Programs

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Fisheries of the Atchafalaya: 1897

In 1897, the ichthyologist of the United States Fish Commission, Dr. Barton Evermann, made a trip to Louisiana. One of his goals was to report on the significant catfish industry in the Atchafalaya River. At that time, fishermen kept their fish alive in "live-boxes" and sold them to fish companies from Morgan City or Melville. The fish companies used tugboats with large live-fish wells or "live-cars" that ran the river every week or two to buy fish from fishermen. While this aspect of the fishery is different from modern conditions, many of his observations could still be made today. Some major differences are that in 1897, all catfish in the market were wild catfish and few people ate crawfish!

Most fishing was done between September and May, using trot lines and brush lines. A few catfish were also taken with hoop nets that had been set primarily for buffalo. One fisherman in Grand Lake (which was still grand in 1897) was said to fish one trot line that was 12 miles long.

Hooks were baited with live bait or cut bait. Live bait included shad, perch (sunfish) or crawfish; with shad being the best (100 shad would catch as many catfish as 200-300 crawfish). Cut bait could be almost any fish, but cut eel was thought to be the best.

Evermann wrote: "The Atchafalaya River is, in some respects, a peculiar stream. It has its sources in Avoyelle and Pointe Coupee parishes, near where the Red River joins the Mississippi, and is at all seasons more or less connected with both of those rivers by a number of anastomosing channels and bayous. The Atchafalaya River is, in fact as well as historically, one of the mouths of the Mississippi River, and during the floods which come periodically to that region a vast amount of the surplus water of the Mississippi and Red rivers is carried to the Gulf by the Atchafalaya. The distance from the sources of the Atchafalaya River in a straight line to its mouth (about 90 miles southwest of New Orleans) is about 125 miles. The river is, however, very sinuous in its course, and its actual length is

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therefore many miles greater. The general course is a few degrees east of south, and forms a narrow angle with that of the Mississippi. The country through which the river flows is very low and level, often lower than the river itself, and made up for the most part of cypress swamps. The highest land is in many places the immediate banks of the river These swamps are reticulated and intersected by a very complex and intricate network of bayous and lakes, all comparatively shallow except during the time of floods, when they become passable for the pirogue of the fisherman and the swamper and the tugboats of the fish companies at Morgan City and Melville. During excessive floods, such as that of April and May, 1891, practically the entire country north of Morgan City is inundated. To provide against such conditions many of the natives live in house-boats. All of the residences built upon the ground are two stories high, and the people hold themselves in readiness to vacate the ground floor and betake themselves and remove their household goods to the second story whenever the flood comes. Every family possesses one or more boats, which are an absolute essential in that country. Bee-culture is of some importance in this part of Louisiana, and it was noticed that the beehives in all the apiaries seen were placed upon scaffolding or posts which raised them several feet above the surface of the ground. Such live-stock as chickens, pigs, and goats are also protected from the flood by placing them upon similar platforms. Ducks and geese are the only possessions which do not cause some trouble or anxiety during the times of flood.

"The majority of the people of this region are either swampers or fishermen, or both. The cutting of the cypress timber for commercial purposes and getting the logs out into the river, so that they may be gotten to the mills, is called 'swamping,' and those who engage in it are termed 'swampers.' The cypress trees are cut into logs, which are dragged over the ground or pulled through the water to the nearest float road, by means of which it is easy to float them to the river, in which they may be rafted or otherwise taken to the sawmills. A 'float road' is made by cutting away all the trees and bushes in various places through the swamps where roads are desired, and when the flood comes these become open waterways, through which the pirogue finds easy passage. These float roads also have an important relation to the fishing industry, as will appear later on in this report.



ICTALURUS furcatus Blue cat LeSueur

"There are four species of commercial catfishes handled by the firms at Morgan City and Melville, viz: the blue cat or poisson bleu (*Ictalurus furcatus*), the yellow cat or goujon (*Leptops olivaris*), the eel cat (*Ictalurus anguilla*), and the spotted cat (*Ictalurus punctatus*). The blue cat and the goujon are by far the most important species, and probably constitute 98 per cent of the entire catch." (Note: The yellow cat or goujon or flathead cat is now classified as *Pylodictus olivaris*; and in the 1940s taxonomists

demonstrated that Evermann's eel cat and spotted cat were in fact the same fish: the channel cat, Ictalurus punctatus.)

Evermann continued: "The goujon is most easily and usually taken with live bait. It is by no means a handsome fish, but its great size, the excellence of its flesh, and its superior keeping qualities render it a very important food-fish. It rarely reaches a weight of 100 pounds; but examples of 50 to 60 pounds weight are said to be not at all unusual. The goujon is more voracious than the blue cat, and large individuals are



ICTALURUS ANGUILLA Eel cat (= *I. punctatus*) Everman & Kendall

apt to feed on smaller examples of the latter when confined in the same live-box. To prevent this, it is said that the fishermen sometimes sew up with wire the mouth of the very large goujon.

"The blue cat has the same general habits as the goujon, but the best fishing for this species is said to be during the high water in the spring. Then the fish leave the river, lakes, and bayous and take to the woods. Good 'woods' or 'swamp' fishing is sometimes had as early as March. The impression among the fishermen is that the fish run out over the flooded districts on account of the more abundant food supply to be found there. This consists chiefly of crawfish inhabiting the shallow pools and ponds made accessible to the catfish through the agency of the floods.

"All river fishing during the fall and winter is done on the bottom, while all lake fishing is at the surface. During the spring, when the country is flooded, the fish betake themselves to the woods, and the fishing is then carried on chiefly along the edges of the float roads. The old tackle, which had been previously used in the river and lakes, is now cut up into short lengths and tied, as single lines called brush lines, to the limbs of trees in such a way as to allow the single hook to hang about 6 inches under the water. Each fisherman ties his lines to trees along the edges of the float roads if he can find such territory not already preempted by some one else. The fishing is thought to be better in such places; besides, it is easier to visit the lines when so located. Any fisherman who is unable to find unoccupied space along the float roads selects the best places he can find at various points around through the woods. In order that he may readily find his lines when he wishes to visit them, the limbs to which they are tied are marked with a white rag or the tree is blazed."

Source: Evermann B.W. 1898. Report on investigations of the US Fish Commission in Mississippi, Louisiana, and Texas, in 1897. US Government documents 1898. U.S. Government Printing Office, Washington, D.C. Serial Set 3816 287–310.

Eat More Seafood: Part IV - More Seafood in Mom's Diet Means Smarter Babies

In addition to the health benefits from omega-3 fatty acids in seafood that have been reported recently, these nutrients are also essential for optimum neural development in developing fetuses. A recent study reported in Lancet, the preeminent British medical journal, demonstrated that excluding seafood (omega-3's and DHA) from the diets of pregnant women had more negative effects than any risk from exposure to trace elements, such as mercury.

The study tracked the diets of 11,875 pregnant women. Their children were then evaluated using a number of tests at ages from six months to seven years. Women who ate little or no seafood put their babies at risk of being in the lowest 25 percent for verbal IQ. In addition, mom's low seafood intake was also associated with lower scores in social behavior, fine motor skills, communication skills and social development. In every test, the researchers found that the lower the intake of seafood during pregnancy, the higher the risk of suboptimum development in the child.

In the U.S., pregnant women are advised by the FDA to limit their seafood consumption to 340 grams (12 ounces) per week in order to limit mercury intake. This new study also showed that babies born to women who ate more than the recommended amount did better than those whose mothers ate less than the recommended limit. The authors concluded "advice to limit seafood consumption could actually be detrimental."

Source: Joseph R Hibbeln ; John M Davis; Colin Steer; Pauline Emmett; Imogen Rogers; Cathy Williams; Jean Golding. The Lancet 2007; 369:578-585

Youth Outdoor Journalism Contest

Sponsored by the Louisiana Outdoor Writers' Association and *The Advocate* Educational Services, this essay and photography contest is designed to stimulate an interest in outdoor journalism and photography in Louisiana youth. Besides cash prizes, and other awards, the winning entries will be published in *The Advocate* and other publications and Websites across the state.

CONTEST RULES:

1. The contest shall be open to all students.

2. The contest is not open to the immediate family members of any Louisiana Outdoor Writers Association member. "Immediate family member" is defined as a son, daughter, stepson, stepdaughter, grandchild, or step-grandchild.

AGE DIVISIONS:

1. For the essay category, prizes will be awarded for two separate age groups: Senior (14-18 years of age) and Junior (13 years of age and under).

2. For the photography category, any age 18 years of age and under is eligible.

CATEGORIES:

ESSAY

An original, unpublished essay about personal experience pertaining to hunting, fishing, boating, camping, hiking, or other related outdoor experience. The essay must be at least 300 words in length, but not more than 1,000 words in length. The submitted essay must be typed, double-spaced, and only on one side of each sheet of paper. The essays will be judged on the following criteria: interest, subject matter, readability, spelling and grammar. Winning essays should be available in an e-mail format to facilitate publication.

PHOTOGRAPHY

An original, unpublished photo, in either color or black-and-white print form. The photo may be either a 4x6 inch, 5x7 inch, or 8x10 inch print, center mounted on 8x10 inch poster or mounting board. Slides will not be accepted.

THE FOLLOWING MUST BE INCLUDED WITH EACH SUBMISSION:

At the top of the first page of each essay or attached to the back of the mounting board of the photos: NAME: AGE: SCHOOL: HOME ADDRESS: TELEPHONE NUMBER:

PRIZES:

FIRST PLACE in each of the categories will receive a \$150 cash prize and will be presented a certificate from the Louisiana Outdoor Writers Association.

SECOND PLACE in each category will receive a \$100 cash prize and an award certificate from the Louisiana Outdoor Writers Association.

THIRD PLACE in each category will receive a \$50 cash prize and an award certificate from the Louisiana Outdoor Writers Association.

SUBMISSIONS: All entries should be postmarked no later than March 26, 2007. Submissions cannot be returned unless accompanied by a SASE.

JUDGING:

All entries will be judged by professional educators and outdoor communicators.

• Winners will be notified by mail by May 5, 2007.

• All winners and their chaperones will be honored at the annual LOWA Fall conference held in August this year.

SUBMIT YOUR ENTRIES TO: THE ADVOCATE ED. SERVICES/LOWA P.O. BOX 588 BATON ROUGE, LA 70821

Kemp's Ridley Turtle Conservation

Luis Jaime Peña, Curator of Conservation Programs at the Gladys Porter Zoo in Brownsville, TX, reports the latest information on the continuing efforts from both the U.S. and Mexico to restore the population of the world's most endangered sea turtle, the Kemp's ridley.

Continued good news: while the number of registered nests fluctuates between seasons, the number of released Kemp's ridley hatchlings from the seven camps in Mexico has been climbing every year since 1996:

Year	Hatchlings
1996	119,196
1997	149,567
1998	183,920
1999	227,040
2000	395,150
2001	317,127
2002	402,969
2003	476,138
2004	500,767
2005	630,737
2006	782,319



Photo credit: Luis Jaime Pena



Photo credit: Luis Jaime Pena

And 2006 was a record-breaking year with not only 12,143 registered nests for the whole season, but also the largest single "arribada" recorded since the start of the Binational Project in 1978: 2,085 Kemp's ridley females nested in Rancho Nuevo on May 11, 2006.

Of the eight species of sea turtles in the world, the Kemp's ridley, *Lepidochelys kempii*, is the most endangered. It is also the smallest sea turtle and the only species that nests primarily during the daytime.

In 1978, a collaborative bi-national program between Mexico and the United States was developed to try and restore this species' population to a self sustainable level. In 1981, the U.S. Fish and Wildlife Service asked the Gladys Porter Zoo to administer the United States' field portion of the joint U.S./ Mexico effort to protect and increase the production of Kemp's ridley sea turtles in their natal beaches located in the State of Tamaulipas, Mexico. To date, the zoo still carries out that role.

Sea turtle research and conservation in Mexico was formalized in 1962 with Instituto Nacional de la Pesca (INP), then named Instituto Nacional de Investigaciones Biologico Pesqueras (INIBP), being the lead agency. Conservation efforts for the Kemp's ridley were initiated in 1966; when the National Program for Research and Conservation began. The project field station was located on the beach near the ranching community of Rancho Nuevo, in the municipality of Aldama, Tamaulipas. This locale is the only one in the world where massive nesting aggregations of this sea turtle were and are known to occur. Because it is the only known major nesting beach for the Kemp's ridley, this beach was declared the first National Reserve for the Management and Conservation of Sea Turtles in Mexico on July 4, 1977.

Populations of the Kemp's ridley sea turtle were declining at an alarming rate from the 1940s to the 1980s. A film made in 1947 showed an estimated 40,000 female Kemp's ridleys nesting on one beach at one point in time. This was the first time that this type of massive synchronized nesting behavior had been documented. This extraordinary phenomenon is termed "arribada" or "arribazon" in Spanish. It has two literal translations; "great arrival," and "to put into port under stress," both of which are appropriate in this case.

Over the last 28 years, the Mexican and U.S. biologists working with the Kemp's ridley sea turtle have learned a lot about the biology of nesting sea turtles. It is now known that most turtles nest only every other year. There are about three nests per female per season, each clutch being one hundred or so eggs which require 42-62 days incubation, depending on the temperature. Although some nests have been recorded as early as the first week of March, most Kemp's ridleys begin nesting around the second week in April.

Some turtles which were originally tagged on the eastern seaboard of the U.S. have returned to Mexico to lay their eggs. Turtles from batches of experimentally started juveniles on Padre Island National Seashore have also nested at Rancho Nuevo in Mexico during the same nesting season. Apparently, the experimentally imprinted "head started" turtles were able to navigate to Padre Island National Seashore and were then able to interact with wild ridleys returning to the Tamaulipan coastline's historic nesting grounds.

Kemp's ridley turtles will return to nearly the same spot on the beach where they nested in previous seasons. If they are disturbed, they possess the behavioral "plasticity" to move a few kilometers down the beach to a new nest site. In the past years a few ridleys have been found at night even though the norm for this species is diurnal (or daytime) nesting. The United States field assistance group, along with the Mexican federal and state government crews, under the supervision of trained sea

turtle biologists, aid in beach patrols. Relevant data are recorded and subsequently most of the egg clutches are moved to facsimile nests within protective corrals..

The fact that the fishing industry is working with governmental agencies and environmentalists in both Mexico and the United States is a big step in the right direction and hopefully one which will serve as a model for the other endangered species programs where difficult economic and socioeconomic issues exist.

Since 1978, there have been more than 70,000 registered nests, and a little over 4.5 million hatchlings have been released into the Gulf of Mexico. At present, nesting aggregations (arribadas) number in the hundreds. But thousands of arribadas will be necessary to guarantee the species' survival. Peña believes that "clearly we are going in the right direction but we cannot diminish our efforts if we are to succeed." (<u>http://www.gpz.org/</u>)

Shrimp Vessel Moratorium Permits Required Beginning March 26, 2007

All shrimp vessel owners are reminded a commercial shrimp vessel moratorium permit needs to be issued and aboard vessels fishing for or possessing shrimp in federal waters of the Gulf of Mexico beginning on March 26, 2007.

In October 2006, a 10-year moratorium on the issuance of new federal shrimp vessel permits for the shrimp fishery of the Gulf of Mexico was established. All currently active open access federal shrimp vessel permits will no longer be valid as of March 26, 2007. As of that date, only vessels eligible for a federal shrimp vessel moratorium permit will be allowed to fish for or possess shrimp in federal waters of the Gulf of Mexico.

To be eligible for a commercial shrimp vessel permit under the moratorium, vessels must have been issued a valid commercial shrimp vessel permit prior to and including Dec. 6, 2003. Additionally, an owner who sold his qualified vessel, had his qualified vessel repossessed, or otherwise lost use of his qualified vessel (i.e., damage, sinking, unaffordable repairs), but who obtained a valid commercial shrimp vessel permit for the same vessel or another vessel equipped for offshore shrimp fishing, of at least five net tons, and was documented by the Coast Guard, prior to Sept. 26, 2006, is eligible for a shrimp vessel permit under the moratorium.

NOAA Fisheries Service permit records are the sole basis for determining eligibility based on permit history. A person who believes he/she meets the permit eligibility criteria based on ownership of a vessel under a different name, as may have occurred when ownership has changed from individual to corporate or vice versa, must document his/her continuity of ownership.

Over the past few months, the Permits Branch of NOAA Fisheries Service's Southeast Regional Office has attempted to provide information to all active shrimp vessel owners letting them know of the new moratorium permit requirements, application procedures, and the time frame of the moratorium.

Nevertheless, it is the responsibility of the vessel owner to ensure an application is obtained and submitted to NOAA Fisheries Service within the specified time frame. Owners of vessels who desire a commercial vessel permit for Gulf shrimp must submit an application to the Southeast Regional Office Permits Branch, postmarked or hand delivered not later than Oct. 26, 2007. After that date, no applications for additional commercial vessel permits for Gulf shrimp will be accepted under the

moratorium. Failure to apply in a timely manner will preclude permit issuance even when the applicant otherwise meets the permit eligibility criteria. Owners who have not received application materials should contact:

NOAA Fisheries Service Southeast Regional Office Permits Branch 263 13th Avenue South St. Petersburg, Florida 33701 Phone: 727-824-5326; FAX 727-551-5747

A fee will be charged for each application for a permit or a written request for replacement of a permit. The applicable fee is specified on the appropriate form.

Applications for a moratorium vessel permit are available via NOAA Fisheries Service's Southeast Regional web site at <u>http://sero.nmfs.noaa.gov</u>. The application may be filled out online, printed and mailed to the Permits Branch at the address above, along with all other pertinent information and payments.

Incomplete applications. If an application that is postmarked or hand-delivered in a timely manner is incomplete, the Permits Branch will notify the applicant of the deficiency. If the applicant fails to correct the deficiency within 30 days of the date of such notification, the application is considered abandoned.

Notification of ineligibility. If the applicant does not meet the applicable eligibility requirements, the applicant will be notified in writing of such determination and the reasons for it.

Permit transferability. Commercial vessel moratorium permits for Gulf shrimp are fully transferable, with or without the sale of the vessel. The owner who is transferring the permit must sign on the reverse of the permit, and the signature must be notarized. The person who is to receive the transferred permit must ensure the transfer information on the reverse of the permit is complete and return the permit and a completed application for transfer to the Permits Branch.

Renewal. Renewal of a commercial vessel moratorium permit for Gulf shrimp is contingent upon compliance with the recordkeeping and reporting requirements. A commercial vessel moratorium permit for Gulf shrimp that is not renewed will be terminated and will not be reissued during the moratorium. A permit is considered to be not renewed when an application for renewal, as required, is not received within one year of the expiration date of the permit.

Modern Day Sea Monsters

Once a thing of legend for sea-goers, the gargantuan monsters of the deep have not only been seen, but have been caught. Recently a colossal squid (*Mesonychoteuthis hamiltoni*) was caught off of the Antarctic coast by a group of New Zealand fishermen. The colossal squid is a slightly larger and much heavier version of its cousin the giant squid (*Architeutis spp*). This particular specimen, caught while fishing for Patagonian toothfish (which the squid was eating when caught), took two hours to land and was about 33 feet long and weighed an estimated 990 pounds. One expert said calamari rings made from it would be like tractor tires. The specimen was barely alive when brought to the surface, and great care was taken to keep it in good condition so that it could be frozen and brought back to New Zealand for scientific examination.

The colossal squid was first identified in 1925, but very few specimens have been found. They are thought to reside deep in Antarctic waters, whereas the eight species of giant squid are found worldwide, including the Gulf of Mexico where they reside with their chief predator - the sperm whale.

A little known shark, the sleeper shark, that lives in waters off Antarctica is only the second creature known to science that hunts giant squid for food. Gut contents of sleeper sharks caught in trawls indicate they even appear to target the colossal squid, which is about double the size of the shark. It is still unclear if the sharks actually hunt the large adults, or just scavenge their bodies. The huge sperm whale was previously the only animal thought to rely on giant and colossal squid for food.

Squids are classified in the *Phylum Mollusca*, which also includes clams, oysters and snails. While giant squids have eight arms like octopus, they also possess two elongated tentacles that are used to capture prey. The tentacles grab prey and transfer it to the eight arms where the squid's muscular, beak-like mouth bites out chunks to swallow. A major distinction between squid and octopus is that the suckers of some squid have secondary armature: circular-saw-like sucker rings in giant squid, and swiveling hooks in the colossal squid. The bodies of sperm whales often bear the scars from what would seem epic battles between these huge animals.

Recent estimates put the maximum size of giant squid at 33 feet for males and 43 feet for females from the caudal fin to the tip of the elongated "feeding" tentacles. The colossal squid is estimated to reach up to 46 feet. However, the length of these squids excluding the tentacles is only about 16 feet. There have been claims reported of specimens of up to 66 feet, but no animals of such size have been scientifically documented. The eyes of these monster squid are the largest of any living creature, and can reach over 1 foot.

Giant squid, once thought to be sea serpents, are very rarely seen and live at depths of 650-3,300 feet making studying in the wild virtually impossible. The first picture of a live giant squid was not taken until 2004, when a group of scientists from Japan's National Science Museum lured the beast to the surface using a line baited with small squid.

- Craig Gothreaux

Sources: February 2007. "NZ fishermen land colossal squid." BBC News. <u>http://news.bbc.co.uk/2/hi/asia-pacific/6385071.</u> <u>stm</u>

de Pastino, Blake. December 2006. "Photo in the News: Giant Squid Captured, Filmed for First Time." National Geographic News. <u>http://news.nationalgeographic.com/news/2006/12/061222-giant-squid.html</u>

Rincon, Paul. January 2004. "New giant squid predator found." BBC News. http://news.bbc.co.uk/2/hi/science/ nature/3370019.stm

THE GUMBO POT

This recipe comes from Dr. Allyse Ferrara at Nicholls State University, who is chief editor of *Recipes For Recovery: A Cookbook of Louisiana Seafood Recipes*. Recipes for Recovery was also the theme for this year's meeting of the Louisiana Chapter of the American Fisheries Society. For copies of this interesting and unusual cookbook, contact Kristi Butler <u>kbutler@wlf.louisiana.gov</u>)

Undercover BBQ Shrimp and Scallops

Cookware: Heavy skillet (cast iron is best)

Ingredients:

- 1 lb fresh or frozen scallops (if you don't want scallops, double shrimp 2 lbs)
- 1 lb fresh large Louisiana shrimp peeled and deveined
- 1/2 cup green onion tops and bottoms chopped
- 1/3 cup parsley finely chopped
- 6 garlic cloves minced
- 1 teaspoon fresh thyme leaves
- 4 bay leaves
- 1 teaspoon freshly ground black pepper
- 1 teaspoon red pepper
- 1 teaspoon dry oregano
- 1 teaspoon Slap Ya Mamma or Tony Chachere's seasoning mix
- 4 tablespoons Worcestershire sauce
- 1 teaspoon favorite hot sauce
- Crushed red pepper to taste
- 1/2 cup fresh lemon juice (not lemon juice from a bottle, jar, or plastic lemon)
- 1/2 cup white wine
- 4 tablespoons of butter divided

Bisquick instant biscuit mix (mix enough for one batch of biscuits according to package instructions)

Methods:

Sauté scallops and shrimp in 2 tablespoons of butter until the shrimp are pink and curled. Remove shrimp and scallops from skillet. Add onion and garlic and sauté for 4 – 5 minutes. Add wine, lemon juice, Worcestershire sauce, black and red pepper, salt, Slap Ya Mama seasoning mix, thyme, oregano, bay leaves, hot sauce, and remaining butter and cook over medium heat until between ¼ to ½ inch of liquid remains in skillet. Turn off heat and stir in shrimp and scallops. Cover the shrimp and scallops with ¼ inch of the Bisquick mix. It's ok to have areas thicker than ¼ inch, but try to cover shrimp and scallop mixture with a ¼ inch layer of biscuit mix. Bake in a preheated 350° oven until the biscuit top is golden brown and cooked throughout. Serves four.

For more information, contact your local extension agent:

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