

# Lagniappe



**EXTENSION PROGRAMS**  
Agriculture and Forestry  
Community Leadership  
Economic Development  
Environmental Sciences  
Family and Consumer Sciences  
4-H Youth Development  
Natural Resources

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## MARINE PROTECTED AREAS: CONTROVERSY OR CURE-ALL

On May 26, President Clinton signed Executive Order #13158 which directs each federal agency that has the authority to manage marine protected areas (MPAs) to "enhance and expand protection of existing MPAs and to establish and recommend new MPAs." The order called for all types of U.S. marine ecosystems to be included in these MPAs.

The executive order was prompted by a letter to Clinton from the Marine Conservation Biology Institute (MCBI). As MCBI requested, Clinton directed the creation of a "Marine Protected Area Center" to develop a framework for a national MPA system and provide federal, state and local governments with a clearinghouse for information, technologies, and strategies to support the system. MCBI is calling for 20% of each marine ecosystem type to be set aside as MPAs by the year 2015.

Marine protected areas have been called a variety of names, including marine fishery reserves, marine reserves, no-take reserves, zones or areas, conservation districts, non-consumption zones, sanctuaries, and others. The serious consideration of using areas closed to all fishing as a management tool first arose in the U.S. in 1990 from a report delivered to the South Atlantic Fishery Management Council by its Snapper-Grouper Plan Development Team. The team was created to review the status of trends in the snapper-grouper fishery and make management recommendations to the council. They concluded that area closures were needed to protect both ecosystems and the reef fish fishery.

When first proposed, few people thought that any agency would seriously consider closing areas to all fishing, but the idea kept coming up as a solution to problems that other management didn't handle. Now a growing number of scientists (and environmentalists) are reaching agreement that marine protected areas deserve serious consideration.



Unfortunately, MPA's have produced a very negative reaction from much of the national recreational fisheries leadership. At the recent *RecFish 2000* symposium in San Diego, Mike Hayden, President of the American Sportfishing Institute went on record strongly opposing MPAs, calling them the most serious threat to recreational fishing being done under the disguise of marine conservation. The Recreational Fishing Alliance has also expressed disapproval of MPA use. An editorial expressing strong concern over MPAs was published by *Salt Water Sportsman* magazine in August. The International Game Fish Association in the July/August, 2000 edition of its *International Angler* magazine published an open letter (which 35 other organizations had signed) to President Clinton asking him to reconsider his executive order. The letter calls MPAs "ill-advised" and states that the right to fish is being taken from American families. Finally, National Marine Fisheries Service has been sued over the creation of closed areas in the Gulf of Mexico to protect concentrations of spawning gag grouper. How did such a controversial fisheries management tool come into consideration?

Fisheries management techniques such as size limits, bag limits, quotas, and seasons have been the methods traditionally used by managers to manage fisheries. Often, these don't work to prevent overfishing. Trip and bag limits can be gotten around by taking more trips. Size limits can fail due to bycatch mortality (deaths) from other fisheries and from high mortality levels of undersized released fish. Some measures fail because of poor compliance or poor enforcement.

Also, traditional fisheries management does not protect biodiversity, the web of life in which all the different species present in an ecosystem affect and depend upon each other. Fisheries managers focus their attention only on those individual species that fishermen target and usually only after those species are in biological trouble. These single species fisheries management programs can fail because they ignore interactions between all the species present, variations in the environment, and the genetic impacts of fishing.

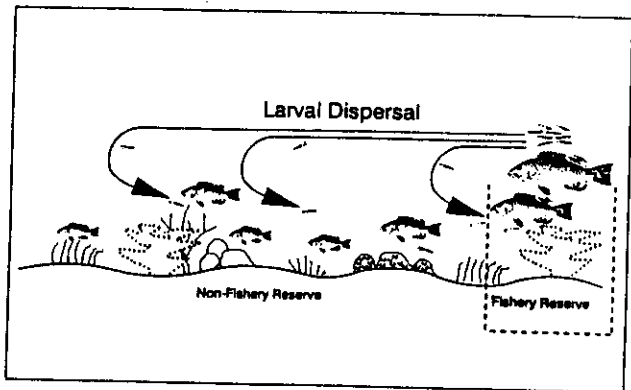
The fact that animals inherit from their parents such genetic traits such as size, growth rate and even behavior is the basis for animal breeding programs that have produced faster horses, bigger, easier to handle cattle, woollier sheep, and chickens that lay more eggs. Unfortunately, we work backwards in fisheries. We catch the bigger, faster growing, easier to catch fish and leave the smaller, slower growing, harder to catch fish to spawn and produce more fish like them.

Scientists are becoming increasingly concerned that heavy fishing pressure over many fish generations managed under traditional regulations, will produce inferior populations of fish. One estimate is that fishing pressure on wild fish may put one-fourth to one-third as much selective breeding pressure on fish as do breeding programs for

domestic animals in agriculture. This pressure may have as much as 5,000 to 12,000 times as much genetic effect as the natural forces of nature have.

An increasing number of scientists are beginning to accept the view that setting aside good-sized blocks of waters from all fishing pressure may be the most effective way to prevent overfishing and to protect the genetics of fish populations. They view marine protected areas as providing many benefits.

- 1) Eggs and larvae (baby fish) from fish spawning in an MPA could restock areas outside of the MPA. It is estimated that putting 20% of red snapper habitat in MPAs would increase egg output 12 times over what it would be without MPAs. Scientists point out that one 24-inch red snapper will produce as many eggs as 212 seventeen-inch fish.



- 2) MPAs can protect the stock of fish from genetic changes towards smaller, slower growing fish caused by fishing pressure. With no fishing, fish that have the genetic tendency to grow larger will be protected and allowed to mature and spawn.
- 3) MPAs can help protect against collapse of a fish stock if several years of poor spawning survival occur due to poor environmental conditions.
- 4) MPAs can provide protection against stock collapse if more traditional management does not work to prevent overfishing in a fishery.
- 5) MPAs can provide better data on the natural life cycles and death rates of fish, which will allow for better management in waters that are open to fishing.
- 6) In an MPA, fishermen using one type of gear would not be favored over fishermen using a different gear type. Since no fishing would be allowed, all fishermen would be treated equally.
- 7) With MPAs in place, more fishing with less restrictions could safely be allowed in waters open to fishing.

- 8) MPAs help prevent serial overfishing and bycatch overfishing. Serial overfishing occurs when one species of fish is overfished and fishermen move to the next species, and when it is overfished, on to the next, the whole time catching some of the protected species as bycatch, some of which dies upon release.
- 9) MPAs may provide some trophy fish production when large individuals wander from the MPA into fished areas.
- 10) MPAs provide unfished areas for scientific research and education, and also for ecotourism/diving, the fastest growing type of international tourism.
- 11) Enforcement is easier, since anyone fishing is in violation.

Not all points on MPAs are positive and some trade-offs exists.

- 1) Harvest from areas permanently closed to fishing is lost, at least temporarily, until fish stocks increase in areas open to fishing.
- 2) Benefits produced by MPAs will not be seen for a number of years after their creation. Time is required for overfished stocks or damaged habitat to recover.
- 3) Fishermen near MPAs will have to travel greater distances to fish, and someone's favorite fishing area will be put off-limits, no matter where MPA's are placed.
- 4) Fishing pressure and crowding will likely increase in areas open to fishing.
- 5) MPAs are not likely to provide many benefits for highly migratory species like tuna, mackerel and dolphin.

While President Clinton's executive order did not specify how much of U.S. marine waters should be put into MPAs, scientists have discussed a range of 10% to 50%. Most environmental groups are calling for 20% of all waters and many scientists agree with that number.

The entire issue of MPAs will be challenging for both recreational and commercial fisheries leadership. The basis now for recreational leadership's objections to MPAs is that recreational fishing is allowed in national parks and refuges and therefore should be allowed in MPAs. Parks on land are protected from habitat-altering activities such as logging and mining, while minor activities such as fishing are allowed.

What is difficult for recreational fisheries leaders to accept is that in marine ecosystems, environmentalists and many scientists see fishing as the equivalent to mining and logging on land as an ecosystem-altering activity. The very thing that MPAs are designed to do is to prevent fishing. In November 1999, a total of 19 respected fisheries scientists endorsed the idea of marine protected areas in *Fisheries*, the publication of the American Fisheries Society, the largest professional organization of fisheries scientists in the world. They go beyond fisheries management alone as a reason for MPA's, stating that "The economic and social benefits of non-extractive uses of a reserve in many cases can exceed its extractive value." The non-extractive uses they list are "... education, ecotourism, photography, recreational diving, fish watching, cultural activities, and wilderness enjoyment." Fishing is an extractive use.

Almost every national, state and local recreational fishing group lists conservation of the resource as a top priority. Fisheries scientists also place conservation as their top priority, which makes the MPA conflict more pointed.

Sources: *How Marine Fishery Reserves Can Improve Reef Fisheries*. James A. Bohnsack. Proceedings of the 43<sup>rd</sup> Gulf and Caribbean Fisheries Institute. 1994. *Review of the Use of Marine Fishery Reserves in the U.S. Southeastern Atlantic*. C. Roberts & others. NOAA Technical Memorandum NMFS - SFFSC - 376. 1995. *Incorporating No-Take Marine Reserves into Precautionary Management and Stock Assessments*. James A. Bohnsack. Proceedings 5<sup>th</sup> NMFS NSAW. NOAA Technical Memorandum NMFS - FISPO - 40. 1999. *No-Take Reserve Networks: Sustaining Fishery Populations and Marine Ecosystems*. Steven N. Murray and others. *Fisheries*, Vol. 24, No. 11. November, 1999. *Ethics, No-Take Marine Reserves, and Ecosystem Management*. James A. Bohnsack. Proceedings First International Workshop on Marine Reserves, Murcia, Spain. 1999.

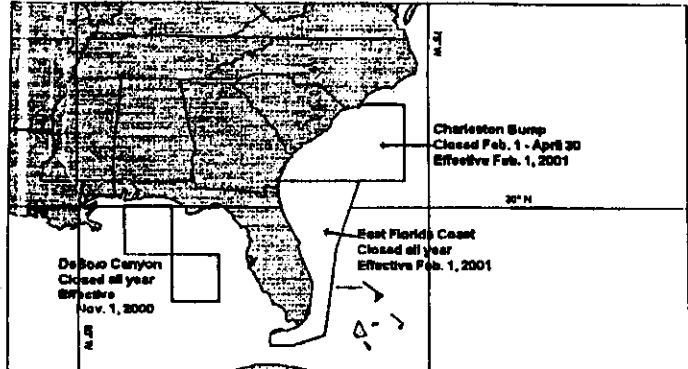
## UNDERWATER OBSTRUCTION LOCATIONS

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:

28171	46937	TERREBONNE	28631	48869	PLAQUEMINES
28659	46854	JEFFERSON	28775	46845	JEFFERSON/PLAQUEMINES
28554	46879	JEFFERSON			

## NEW LONGLINE RULES

The National Marine Fisheries Service (NMFS) has published new rules for pelagic (off-bottom) longlining to reduce bycatch in the fishery. In the Gulf of Mexico, two large blocks (DeSoto Canyon) will be permanently closed to pelagic longlining, effective November 1, 2000. The exact latitude and longitude coordinates of the closed areas can be downloaded from the internet at [www.nmfs.gov/sfa/hmospq.html](http://www.nmfs.gov/sfa/hmospq.html).



Also, in the Gulf of Mexico, pelagic longline fishermen are no longer allowed to use live bait. Setting up a live well or maintaining live baitfish on board a vessel with pelagic longline gear is illegal. This was done to reduce the bycatch of billfish which occurs more often when live bait is used.

NMFS also reminds all operators of vessels permitted in the tuna, swordfish and shark fisheries that they must have, as of October 1, 2000, installed and activated a vessel monitoring system (VMS) whenever they leave port with pelagic longline gear aboard. For more information on the VMS program, contact Jill Stevenson at 727/570-5447.

## YEAR 2000 LEGISLATIVE ROUNDUP

After a special legislative session, a regular session, and then a second special session, part of the Louisiana Department of Wildlife and Fisheries (LDWF) budget problems were taken care of, at least for the short term. During the regular session, 14 bills concerned with funding LDWF were introduced and none passed. Legislation passed in both sessions is as follows:

### REGULAR SESSION

#### House Bill 140 (Act 33) - Alario

Provides that purchases of supplies, equipment, fuel, bait, and related items other than vessels, used for harvesting farm-raised catfish and crawfish must now pay the full 4% state sales tax instead of 3%.

#### House Concurrent Resolution 13 - Daniel

Requests the U.S. Congress and the Louisiana congressional delegation to provide funding for LDWF enforcement from money received from offshore oil and gas activity on the Outer Continental Shelf (OCS).

House Concurrent Resolution 28 - Frith

Requests that local law enforcement agencies enforce criminal laws and increase enforcement efforts to prevent the theft of crawfish from crawfish farms.

## SECOND EXTRAORDINARY SESSION

House Bill 12 (Act 1) - Daniel

Increases the fee for motor boat registration from a flat \$15, to \$20 for boats 14 feet or less, \$25 for boats 14 to 18 feet long, and \$30 plus \$2 for foot for boats over 18 feet long. Changes the registration renewal fee from \$10, to the same price as initial registrations, and creates a handling and mailing fee of \$3 for each transaction.

The act creates four new licenses.

Senior Hunting and Fishing License (\$5) Hunters or fishermen who reach age 60 on or after June 1, 2000 must purchase this license. It covers basic fishing and hunting, saltwater angling, all recreational fishing gear, big game hunting, bow, muzzleloader, and state duck and wild turkey stamps. Persons who reach the age 60 before June 1, 2000 are not required to purchase a senior license.

Wildlife Management Area Hunting Permit (\$15) Required of any person aged 18-60 who hunts on any LDWF wildlife management area. The act also provides that the Wildlife and Fisheries Commission shall authorize persons over the age of 60 to use trails in wildlife management areas which are set aside only for use by disabled persons.

Louisiana Sportsman's Paradise License (\$100) This one license for residents covers the following licenses: basic fishing and hunting, saltwater angling, all recreational gear licenses, big game, bow, muzzleloader, and duck and wild turkey stamps.

Infant Lifetime Hunting and Fishing License (\$200) A lifetime hunting and fishing license which may be purchased for persons from birth to 5 years old who were born in Louisiana.

The fees for the recreational licenses below were increased. Any license not listed remains at the old fee.

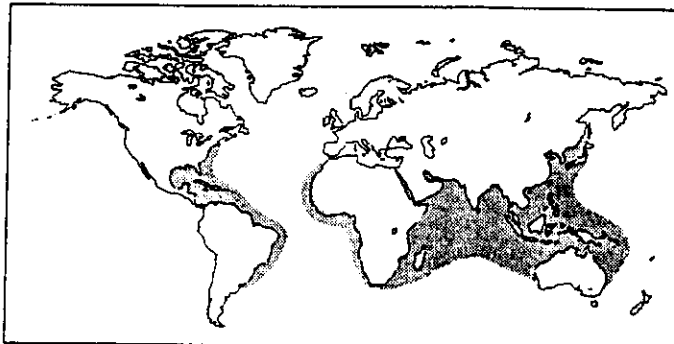
<u>License Type</u>	<u>Old Fee</u>	<u>New Fee</u>
Annual basic resident fishing	\$ 5.50	\$ 9.50
Annual basic nonresident fishing	\$ 31.00	\$ 60.00
Annual saltwater angler nonresident fishing	\$ 36.00	\$ 50.00
3-day basic nonresident fishing	\$ 10.00	\$ 30.00
3-day saltwater angler nonresident fishing	\$ 15.00	\$ 40.00
3-day nonresident charter passenger fishing trip	\$ 2.50	\$ 5.00
Season resident hunting	\$ 10.50	\$ 15.00
Season resident big game	\$ 10.50	\$ 14.00
Season nonresident hunting	\$ 86.00	\$200.00
Season nonresident big game	\$160.50	\$225.00
5-day nonresident hunting	\$ 51.00	\$100.00
5-day nonresident big game	\$ 95.50	\$110.00
3-day nonresident migratory bird	\$ 45.50	\$ 75.00
Nonresident muzzleloader	\$ 25.50	\$ 50.00
Nonresident bow	\$ 25.50	\$ 50.00
Nonresident duck stamp	\$ 13.50	\$ 25.00
Nonresident wild turkey stamp	\$ 10.50	\$ 20.50

#### House Bill 21 (Act 21) - Odinet & Robichaux

Requires buyers of crab trap gear licenses to pay a one-time only fee of \$45, between November 15, 2000 and December 21, 2001, with the funds used to try to get a federal tariff (import tax) and/or a quota on imported crabmeat.

#### **COBIA**

Cobia, *Rachycentron canadum*, are a fairly common offshore finfish species, highly prized by both recreational and commercial fishermen. They are excellent table-fare and usually appear on everyone's list of favorite fish to eat.



Range of Cobia

Cobia are the only living species in their family and have no close relatives. They are found almost worldwide in tropical, subtropical and warm temperate waters. They are open water fish but tend to locate around pilings, buoys or drifting objects. They even orient themselves under sea turtles and floating boats. They also appear to be attracted

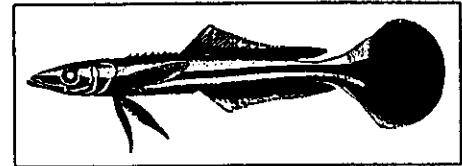


to noise. They range from saline bays inshore out to offshore waters 4,000 feet deep. They are found over mud, sand, and gravel bottoms, over coral reefs, and in mangrove sloughs.

In the Gulf of Mexico, cobia winter in the Florida Keys and move north and west along the Gulf coast to Louisiana and Texas in the spring. The cobia fishery reflects these migratory habits. In south Florida, cobia are fished mostly in the winter. Off of Louisiana, the fishery takes place in spring and summer. Some research also indicates that cobia also move offshore to deeper waters during cooler months.

Male cobia mature earlier than females, at 21 inches and 2.5 pounds, in their second year. Females begin to mature in their third year at 27 inches and about 7 pounds. Cobia form spawning groups in the northern Gulf of Mexico between May and August. Egg counts made from 6 females from the Atlantic Coast ranged from 1.9 to 5.4 million eggs per female.

Fertilized eggs are buoyant and are kept afloat by a large oil globule in the egg until they hatch in 36 hours. Highest hatching rates occur in full-strength sea water at temperatures of 80°F. Cobia grow rapidly, reaching 7 inches in a matter of months and 13 to 15



7-inch Juvenile Cobia

inches by one year old. Cobia are known to live at least 10 years and may reach 15 years of age. The world record for rod-and-reel caught cobia is a 135 pounder from Australia, although 150 pound fish have been reported. Females are somewhat larger than males and slightly outnumber males.

Cobia are not bashful feeders, chasing down food from the top to the bottom of the sea. Cobia seem to especially prefer crabs and shrimp. Cobia raised in captivity will not grow well unless they are fed crabs or shrimp. Cobia also feed on squid and a variety of small fish, especially bottomfish such as sea catfish, eels, and white trout. Feeding seems to slow down at lower water temperatures. Also, cobia may stop feeding during spawning.

Cobia are at their highest abundance in the Arabian Sea and the Gulf of Mexico. Throughout most of their range, cobia are an incidental catch in other commercial fisheries. Pakistan is the world's largest commercial cobia producer, but substantial production also comes from Mexico, the Philippines, the Persian Gulf, and India.

Cobia are also highly prized by recreational fishermen. The world's largest recreational cobia fishery exists in the United States, followed by Australia. Over half of the U. S. recreational cobia catch is made in the Gulf of Mexico. In the U. S., the recreational cobia catch is substantially larger than the commercial catch.

Source: *Synopsis of Biological Data on the Cobia Rachycentron canadum (Pisces: Rachycentridae)*. Rosalie Vaught Shaffer and Eugene L. Nakamura. NOAA Technical Report NMFS 82. 1989.

## SHRIMP AND CHARTERBOAT HEARINGS SCHEDULED

The Gulf of Mexico Fishery Management Council has scheduled several public hearings of interest to Louisiana shrimpers and charterboat operators. The council has made the long awaited step of formally proposing permits for shrimp vessel operators in the EEZ (federal waters), as well as permits or some form of registration for shrimp vessels. The council maintains that without permits or registration, the numbers of vessels in the shrimp fishery can only be estimated. Requiring permitting would be done to get more information to better manage the fishery both for shrimp and for bycatch.

Also, one hearing will be held on the Council's proposal to place a moratorium on reef fish (snapper/groupers) and coastal migratory pelagic (mackerels/dolphin) permits for charter and headboats. Several options for permit transfers and reissuing permits not renewed during the moratorium will be presented. Dates, times and places of hearings are as follows:

**Friday, October 6, 2000**

SHRIMP PERMITTING 7:00 P.M.  
Police Jury Annex  
Courthouse Square  
Cameron, LA

**Monday, October 9, 2000**

SHRIMP PERMITTING 3:00 P.M.  
CHARTER PERMITS 7:00 P.M.  
Larose Regional Park  
20001 East 5<sup>th</sup> Street  
Larose, LA

**Tuesday, October 10, 2000**

SHRIMP PERMITTING 7:00 P.M.  
New Orleans Airport Hilton  
901 Airline Dr.  
Kenner, LA

## MANATEES

Manatees are large endangered fresh and saltwater mammals, averaging 10 feet long and 1000 pounds in weight. They are gentle grazers, eating about 100 pounds of plants per day. Since they are slower swimmers, boat motor propellers are one of their two major enemies. The other one is cold temperatures. Manatees need water temperatures at or above 68°F, which is why they are associated so closely with Florida.



Recently, manatee sightings are on the increase in Louisiana, especially in Lake Pontchartrain and surrounding waters. Manatees have even been noted as far inland as Blind River. While manatee sightings have been made since 1943, in 1995 a peak number of 21 separate reports were made, of at least that many animals. One report that year was a rare winter sighting in the Michoud Entergy hot water canal. While only two sightings were made the next year, 16 sightings were made between 1997-99, and there has been an increase in the number of manatees seen per sighting.

The summertime increase in manatee sightings in recent years may be due to improved local environmental conditions or to a larger population in Florida. Much of the increased Florida population is credited to habitat protection and enforced boat speed zones. Who knows, maybe we will get our own boat speed zones if we get enough manatee visits.

Source: *Distribution of the Manatee (Trichechus manatus) in the Lake Pontchartrain Estuarine System*. S. W. Abadie, C. G. Brantley, S. Mickal, and S. Shively. Basics of the Basin Research Symposium. May, 2000.

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### THE GUMBO POT Shrimp and Asparagus Soup

Asparagus is a delightful vegetable, but it refuses to grow in the Deep South. By the time we get it in our stores, the bottom ends of the stalks have usually become woody and tough. I usually cut this tough end off at the first place on the stalk that doesn't feel woody to the knife blade. I usually also go one step further in that I will gently peel the lower inch or two of each remaining stalk with a potato peeler. It's a lot of work, but good asparagus is worth the effort.

1 ½	lb fresh asparagus	¼	tsp pepper
¼	cup margarine		nutmeg
⅓	cup flour	1 ½	qt milk
1	tbsp salt	1	lb small peeled shrimp
3	cups grated sharp cheddar cheese		paprika

Clean asparagus and cut into ½-inch pieces. Boil until tender and set aside. Melt margarine in a large saucepan. Blend in flour, salt, pepper, and a dash of nutmeg. Add milk gradually, stirring constantly until thickened and smooth. Add asparagus, shrimp and cheese. Cook over low heat until cheese melts and shrimp are cooked. Garnish with paprika. Serves 6.

Sincerely,



Jerald Horst  
Associate Specialist (Fisheries)