

Lagniappe



EXTENSION PROGRAMS
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ARE WHITE MARLIN ENDANGERED?

In response to a petition from the Biodiversity Legal Foundation and James R. Chambers, the National Marine Fisheries Service (NMFS) Office of Protected Species will conduct a status review to determine if the Atlantic white marlin, *Tetrapturus albidus*, should be listed as threatened or endangered under the Endangered Species Act. The fish was originally listed as overfished by NMFS in 1997.



According to the petitioners, the main cause of the decline of the Atlantic white marlin is bycatch in the international swordfish and tuna longline fisheries. The latest stock assessment indicates that the white marlin stock is only 15%, by weight, of its ideal level. Fishing mortality (death rate) is 7 times higher than what is sustainable.

An Endangered Species Act listing could have serious consequences for U.S. fishermen. Even if all U.S. longline fishermen were put out of business, the foreign fleet would be unaffected. The white marlin is a highly migratory species that roams most of the Atlantic. Potentially, an Endangered Species Act listing could even affect recreational catch-and-release fishermen. Provisions of the Endangered Species Act make it illegal to even harass a listed species.

NMFS must make a decision on the listing petition by September 3, 2002.

FISHERIES MANAGEMENT FOR FISHERMEN

On Saturday, February 16 the Rummel Alumni Association Fishing Rodeo Committee will be sponsoring a public seminar, **Fisheries Management for Fishermen**. The three hour program, which will begin at 9 a.m., will feature speakers from the LSU AgCenter's Sea Grant Program and the Louisiana Department of Wildlife and Fisheries. It will be held at Archbishop Rummel High School on the corner of Severn and W. Napoleon Avenues in Metairie.



The four topics addressed will be:

- 1) Fisheries Management Principles and Myths.
- 2) Redfish Biology and Management
- 3) Largemouth Bass Management and the Effect of Freshwater Diversions on Bass.
- 4) Managing for Trophy Speckled Trout.

The program was conceived by rodeo committee member and local outdoors radio personality Don Dubuc, who will also emcee the seminar. According to Dubuc, "A lot of fishermen at meetings and callers to my radio show want to get involved in setting regulations for managing certain species. I think we need programs like this to provide them accurate information on which to intelligently base their opinions when appealing to state agencies and the legislature."

A \$10 registration fee is charged, which will cover the cost of beverages, donuts before the program, and a jambalaya lunch afterward. The program is open to the public. Attendees may register at the door or by calling the Rummel Alumni Association office at 504/833-9625.

SHARK ENEMIES

Most sharks are considered to be apex predators in marine ecosystems. As the "top dog" in the "dog-eat-dog" marine world, nothing should feed on them — in theory. But sharks do have enemies, small ones but tough ones. They are parasites.

A parasite is simply a smaller animal that harms a larger animal known as a "host" by living off of it. The name is derived from a Greek word meaning "one who eats at another's table." A perfect parasite is one that robs nutrients from its host but doesn't kill it. If the host dies, the parasite also dies. However, large numbers of parasites can indeed affect the host animal's ability to survive.



Many types of parasites pester sharks, including viruses, bacteria, protozoans, worms, crustaceans, even fishes. A subgroup of the crustacean class has been particularly successful at parasitizing sharks. Copepods are simply small or even tiny relatives of shrimp and crabs, which are also crustaceans. Like them, they have a hard shell, which they shed as they grow. While most copepods are small free-living critters that are important in marine and freshwater food chains, about 1,500 species have become parasites of fishes. These come in many shapes, but all of them have saw-toothed jaws that they use for feeding.

Virtually all sharks have copepod parasites, but the blue shark possibly holds the record for variety and number. Most blue sharks have at least 5 different species of copepod parasites including one that lives in the nose, another on the gills and one that attaches in dense clusters on the pectoral (side) fins. All totaled, these copepods may number over 3,000 per blue shark.

While a single copepod is usually not likely to injure a shark, large numbers of them in sensitive places can affect a shark's ability to survive and grow. Those on sharks' gills can disrupt water flow over the gills and the ability of the gills to oxygenate the blood.

Sometimes, however, a single copepod can have a serious impact. For example, virtually all Greenland sharks, a sluggish Arctic species, are partially blind due to the copepod, *Ommatokoita elongata*. Typically a large single adult female copepod is anchored in cornea of each eye. The feeding action of the copepod, in addition to its rubbing action against the eye, so damage the eye that it cannot form images. It is thought that Greenland sharks feed primarily by smell under the ice in the cold, dark, food-rich water of the Arctic.

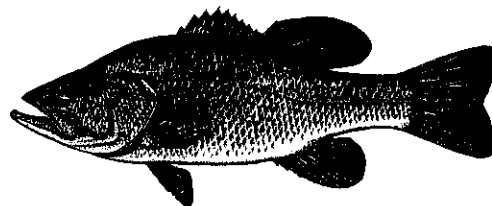


The top prize for originality amongst parasitic copepods has to go to *Anthosoma crassum*. This dark acorn-shaped copepod actually lives between the teeth of the great white shark. Here it digs a deep hole where it lives and feeds, totally protected by the teeth of its great host.

Source: *Putting the Bite on Jaws: Copepods as Enemies of Sharks*. George W. Benz and Susan M. Dippenaar. The Shark Tagger 1998 Summary. National Marine Fisheries Service.

FRESHWATER DIVERSIONS AND BASS

Freshwater diversions are widely viewed as one of the most important tools for restoration of Louisiana's rapidly eroding marshes. The latest major diversion project is the Davis Pond project located in the upper Barataria Basin. One of the side benefits of these diversions is that they create excellent largemouth bass habitat.



In preparation for the opening of the Davis Pond diversion this year, the Louisiana Department of Wildlife and Fisheries (LDWF) has been stocking Florida-strain bass in the area. In 1998, at the request of the Jefferson Parish Marine Fisheries Advisory Board,

LDWF stocked 164,856 fingerlings in the nearby area known as The Pen. In 1999, they followed with 185,000 fingerlings in the Davis Pond area. Another 102,624 were added in 2000.

In contrast to those years, the Florida-strain bass stocked in 2001 were fewer in number, but individually larger. A total of 8,139 young bass between 4 and 13 inches long were stocked by LDWF in December. These larger fish are called "phase 2" fish in hatchery terminology.

The number of these phase 2 bass stocked in 2001 may seem small compared to the larger number of phase 1 fish stocked earlier, but the larger fish have tremendously better survival according to the LDWF Program Manager Mark McElroy. "Fewer, larger fish are better for the Davis Pond area than lots of smaller fish." Small fingerlings get eaten quickly by the many freshwater and saltwater predators that already exist in an area like Davis Pond.

Florida largemouth bass appeal to anglers because they can grow larger than native largemouth bass. Standing weight records have increased dramatically for almost every waterbody where LDWF has consistently stocked Florida bass fingerlings. Prior to the introduction of Florida largemouth bass into Louisiana waterways, a bass above eight pounds was considered a trophy. That threshold now exceeds 12 pounds.

COMMISSION PROPOSES MULLET PERMIT TRANSFER RULES

The Louisiana Wildlife and Fisheries Commission proposed, at its January meeting, rules changes that would allow some transfer of mullet permits between people. Act 1316 of the 1995 Louisiana Legislature outlawed the use of saltwater gill nets in Louisiana and permitted only a limited strike net fishery, under strict rules, for striped mullet and pompano. No options for transferability of these permits were provided, so as fishermen became disabled or retired, the number of permit holders declined. Under the commission proposal, mullet permits would be transferable from one fisherman to another with the following provisions.

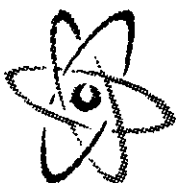
- The recipient must possess a valid commercial fishing license and provide proof that more than 50 percent of his earned income was derived from the legal capture and sale of seafood species in the calendar year immediately prior to the year of application.
- The recipient shall not currently possess a mullet permit nor have been permanently barred from the mullet fishery.

- Financial gain may not be realized by the permit holder or the recipient. Any permit transferred for financial gain will be rendered void and will not be reissued.
- In the case of a proven physical hardship, LDWF may transfer a valid mullet permit to the permit holder's spouse, parent or legal guardian, or child or legal dependent of such person with documentation of the relationship (a marriage license, birth certificate or judgement of legal guardianship) and a doctor's statement that explains the nature of the disability and certifies that the condition prevents participation in commercial fishing activities, is provided.
- A valid mullet permit may only be transferred to or from a commercial fisherman who has no pending mullet charges for violations.
- Permits under suspension or revocation are not to be transferable during the suspension or revocation period.
- Anyone who transfers a mullet permit is prohibited from obtaining a mullet permit in the future.

Interested persons may submit comments regarding to the proposed rule to Janis Landry, License Section, Louisiana Department of Wildlife and Fisheries, P.O. Box 98000, Baton Rouge, LA 70898-9000, prior to Thursday, March 7, 2002.

ATOMIC SNAPPERS

Red snappers are easily the most heavily managed and thoroughly researched fish in the Gulf of Mexico. Any analysis into the biology and health of a fish population, including this one, requires accurate information on the ages of fish in the population. The most accurate method of aging fish is now considered to be one done by counting the growth rings in fishes' otoliths (ear bones). Still, some controversy exists over how accurate even this method is for aging these popular fish.



As part of a research product done at LSU, two scientists did a background check on the accuracy of using otoliths to age red snappers. They compared ages, as determined by counting otolith rings, of 2908 commercially harvested red snappers caught between 1997 and 2000, with the amount of carbon 14 in the otoliths. Carbon is a very common element and is taken up and used by all living plants and animals as part of the process of growth. Carbon 14 is simply a rare form or isotope of carbon that is produced by nuclear explosions.

Carbon 14 did not exist in measurable amounts before the testing of nuclear bombs in the atmosphere began in 1958. The theory is that the more carbon 14 that exists in the environment, the higher the percentage of carbon 14 will be in the otoliths of the fish. Clearly, more carbon 14 should be present in the environment and in otoliths produced after nuclear testing began than before. If the calculated ages from counting otolith rings didn't match up to the levels of carbon 14 for these years, the method of aging could be assumed to be inaccurate.

As it turns out, the match was perfect. Carbon 14 levels in the earliest formed parts of the red snapper otoliths showed very low levels between 1943 and 1950, higher and increasing levels for fish hatched between 1960 and 1975, and high but decreasing levels for fish hatched between 1985 and 1996. This proves that aging by counting otolith rings is accurate.

Comparison of the length breakdown of the fish in this study was made with those of a previous study done in 1995-1997. Comparison of the two studies did show that even though the percentages of fish in each size category were very similar, that red snappers from the 1997-2000 study were growing slower than those from the 1995-1997 study. The biologists felt that this was due to increasing competition between higher numbers of fish over food and space.

They did note that the age and size make-up of these commercially harvested fish may not be the same as for the natural population as a whole. The 15-inch minimum size, 2000 pound trip limit, and the limited number of days in an open season may push commercial fishermen towards harvesting younger, smaller fish from waters closer to shore. They did note that this has not seemed to injure the population in any way.

Source: *Age and Size Distribution of Commercially Harvested Red Snapper Lutjanus campechanus in the Northern Gulf of Mexico*. Charles A. Wilson and David L. Nieland. LSU Coastal Fisheries Institute. MARFIN Cooperative Agreement No. NA77FF0544. December, 2000.

CHARTER CAPTAINS' MEETINGS

The Louisiana Department of Wildlife and Fisheries (LDWF) in cooperation with the National Marine Fisheries Service (NMFS) and Gulf States Marine Fisheries Commission (GSMFC) is planning a series of meetings across the state to present information to charter boat captains concerning a proposed economic survey to be conducted in addition to the established charter boat effort survey. Meeting dates and times are under development and announcements will be mailed directly to all licensed charter boat operators.

In the year 2000, NMFS adopted the charter boat telephone survey as the official method for determining charter boat angler effort in the Gulf of Mexico. Due to the cooperation of the Louisiana and other Gulf State charter boat operators, the telephone survey has been very successful at improving the precision of data for the charter industry.

This year, NMFS will make an effort to determine the value of the charter fishing industry in Louisiana by collecting economic information about charter boat operations through a telephone survey. The economic questions would be asked at the end of the regular telephone survey and will target one trip during the sample week that the captain is reporting on. Proposed questions on the survey would include the average charter fare per passenger, amount paid for bait and fuel and taxes paid on the trip. It is anticipated that the survey will begin in the summer of 2002 and will continue for one year.

Representatives from NMFS, GSMFC and LDWF will be present at the meetings. A NMFS representative will give a presentation on the purpose and importance of this economic survey. Time will be given at the end of the presentation for charter boat representatives to provide input and opinions on the economic survey questions. All charter boat operators are encouraged to attend one of the meetings.

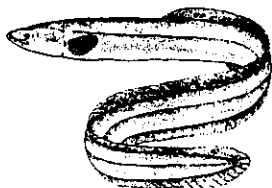
Meetings will be held in the New Orleans, Houma and Lake Charles areas at the end of February. LDWF will be mailing meeting dates, places and times to known charter boat operators. If you have questions please contact Mr. Joe Shepard (225/765-2371) or Ms. Michelle Kasprzak (225/765-2376) with Louisiana Department of Wildlife and Fisheries.

UNDERWATER OBSTRUCTION LOCATIONS

The Louisiana Fishermen's Gear Compensation Fund has asked that we print the coordinates of sites for which damage has been claimed in the two months. The coordinates are listed below:

<u>Loran Sites</u>			<u>Lat. & Long. Sites</u>		
26839	46968	CAMERON	29 14.399	89 59.326	JEFFERSON
27577	46952	IBERIA	29 26.455	90 08.950	LAFOURCHE
28468	46864	LAFOURCHE	29 27.420	91 57.680	VERMILION
28568	46863	JEFFERSON	29 46.431	89 15.750	ST. BERNARD
28958	46892	LAFOURCHE	30 06.623	89 30.718	LAFOURCHE

A SLIPPERY ONE



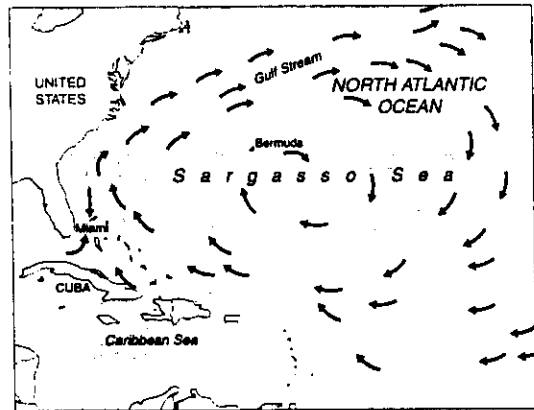
Eels are indeed slippery creatures, as many a freshwater fisherman has found when trying to remove one from a hook. While eels seldom if ever take an artificial lure, they are quick to accept most natural baits. The American eel, *Anguilla rostrata*,

has a big range, from Greenland south to Venezuela. But in spite of being common fish, they are a mystery too.

For centuries, no one had ever seen an eel with eggs, yet eels appeared everywhere in freshwater, even in lakes which were previously dry and cut off from rivers or streams. This gave rise to all sorts of myths about where eels came from. Not until the 20th century did scientists learn that eels begin their lives, and presumably spawn, in the Sargasso Sea, an area of clear seaweed-filled water in the middle of the North Atlantic Ocean.

Within this vast, two million square mile area, eels start their lives as long, flat leaf-like larvae called leptocephali. They drift in the circular currents of the Sargasso Sea for about a year before changing into 2 to 3 inch long, "glass eels." At this stage, they move toward land and begin to travel up freshwater streams and rivers, gradually darkening and changing color into yellow eels. Eels may travel hundreds or even over a thousand miles up rivers, and to everyone's mystery, appear in landlocked lakes and ponds.

The Mysterious Seaweed Sea



Eels will spend 5 to 25 years in the yellow eel stage, feeding, growing, and storing fat. One of the mysteries of eel biology is that in the yellow eel stage, some areas of the U.S. have mostly male and other areas mostly female eels. In general, males seem to be found nearer river mouths, bays and estuaries, and females further upstream in inland, totally freshwater areas. The current theory is that eels can change sexes, becoming males in crowded areas where competition for food is strong, and females in areas of low population and low food competition.

At a certain size, depending on location, the eels quit feeding and change again, in a "silver eel" and begin their long migration downstream and back to the Sargasso Sea to spawn and start the cycle again. On average, female eels, are over 16 inches long before they begin the spawning migration, and males are under 16 inches long. By looking for eel eggs and newly hatched larvae, scientists have identified the approximate area where eels must spawn, although no one has ever been able to capture an adult eel there.

A fair-sized commercial fishery for American eels exists on the Atlantic Coast, especially in Maryland, Virginia and North Carolina. Most of these eels are exported live to Europe and Asia. Yellow, and especially silver stage eels, are high-fat and make a wonderful smoked product. In spite of several attempt to start a commercial eel fishery in Louisiana, none has yet succeeded.

Source: *American Eel Biology, Mystery, Management*. Wendy Morrison, Maryland Marine Notes. Volume 19, Number 3. Maryland Sea Grant College Program.

THE GUMBO POT


Fillets with Shrimp Cream Sauce

Sauced fillets are staple around which New Orleans Creole Seafood cooking is based. They always involve a white-fleshed fish fillet, a sauce, and one or more kinds of shellfish. This is a particularly good variation. I used red snapper, but any white-fleshed fish is fine.

4	6-8 oz fish fillets	1	tblsp diced garlic
½	cup vegetable oil	1	lb small, peeled shrimp
1	cup eggwash (1 egg, ½ cup water, ½ cup milk, blended)	¼	cup dry white wine
1½	cups seasoned flour	2	cups heavy whipping cream
1	4 oz can sliced mushrooms	½	cup finely chopped green onion tops
½	cup chopped green onions		salt and black pepper to taste
¼	cup diced red bell pepper		

In a ten inch heavy bottom saute pan, heat oil over medium high heat. Dip fillets in eggwash and coat generously with seasoned flour. Saute fillets until golden brown, approximately three to five minutes on each side. Once cooked, remove and keep warm. In the same saute pan, cook mushrooms, ½ cup of green onions, bell pepper and garlic until vegetables are wilted, approximately three to five minutes. Add shrimp and saute until shrimp are pink. Deglaze with white wine, add heavy whipping cream, bring to a low boil and cook until sauce is thickened. Add finely chopped green onion tops and season to taste using salt and pepper. Place serving of cream sauce in the center of a serving plate, top with fish fillet and garnish with shrimp. Remaining sauce may be added at the table as desired. Serves 4

Sincerely,



Jerald Horst
Associate Specialist (Fisheries)