

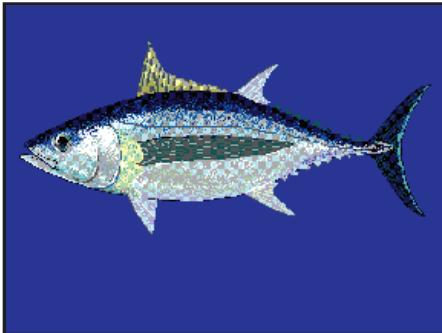
Lagniappe



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Know Your Tunas – The Medium Tunas: Albacore, Bigeye and Yellowfin

This is the third of three articles on the species of tunas that inhabit the Gulf of Mexico and focuses on the medium sized tunas.



Albacore Tuna
 Image credit: FishBase artist Robbie Cada

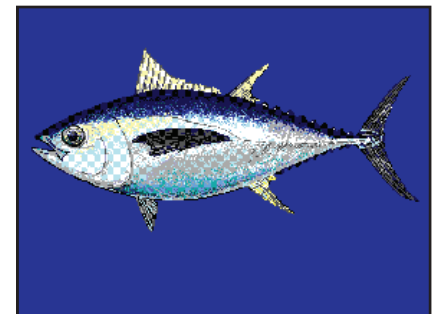
Albacore (*Thunnus alalunga*) – Albacore range Gulf-wide in the open sea away from shore. However, they are quite rare in the Gulf of Mexico. The ones that are present are often migratory stragglers intermixed with blackfin and yellowfin tunas, with most being caught in the northern Gulf.

Albacore are deep-bodied, streamlined fish that can easily be identified by their long pectoral fins, which can reach beyond the origin of the second dorsal fin when folded back. Another identifying characteristic is the white trim on the rear edge of the caudal fin.

Occasionally near the surface, they tend to seek temperatures of 62° to 70°F, so they spend much of their time below the thermocline or temperature break.

They can live at least 10 years and begin to spawn around age 5, with spawning being done in large groups. Male albacore live longer and grow larger than the females. The typical diet consists of a variety of fish, as well as squid and crustaceans. Almost all albacore are caught either with pole-and-line and surface trawling (which target younger fish), or long lines (which target the older, deep-swimming fish). Most catches are under 60 pounds, but this species can reach 100 pounds.

Albacore meat is of excellent quality, has a white appearance and is sometimes referred to as “chicken of the sea.” They have an unusual bone structure and soft meat consistency, making fillets virtually impossible. As a result, fresh or frozen albacore is sold only as loins or steaks, but the majority of albacore is marketed as canned tuna.



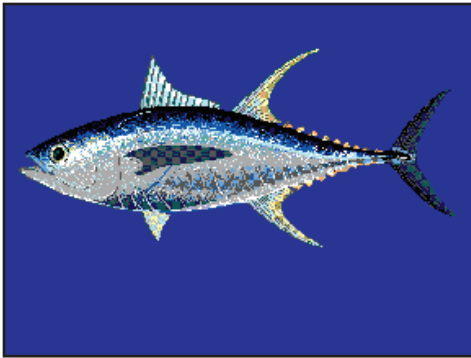
Bigeye Tuna
 Image credit: FishBase artist Robbie Cada

Bigeye (*Thunnus obesus*) – This species ranges Gulf-wide in the open ocean. Sometimes at the surface, they seem to spend more time in deeper (up to 1,000 feet) than do other tunas. As a result, they have a higher fat content for insulation, making them very

popular in the Japanese sashimi market (considered almost as good as bluefin tuna). This adaptation allows for tremendous vertical migrations. One fish tagged with a radio transmitter was observed to dive 822 feet in less than one minute. The resulting temperature differential was 27 degrees, a shock which would kill many other fish.

Although they do have a larger eye, bigeye tuna are sometimes hard to distinguish from yellowfin tuna, unless you have both for comparison and a trained eye. Bigeye hunt at night as well as in daylight, feeding on a diet of shrimp, larval crabs, squid and a variety of fish including smaller tuna. They are commonly caught up to 80 pounds and can reach nearly 500 pounds.

Bigeye tuna live more than 10 years of age, and beginning at age 3, they spawn several times each summer in the open sea. Excellent for grilling and broiling, the meat of bigeye is best marketed as fresh fillets or whole fish, as opposed to canning.



Yellowfin Tuna

Image credit: FishBase artist Robbie Cada

Yellowfin (*Thunnus albacares*) – This species is found Gulf-wide in the open ocean away from shore. Seasonal concentrations occur near diapirs (lumps) in the northern Gulf of Mexico.

Their deep, streamlined body has a deep blue back, changing to yellow and silver on the belly. The belly often has about 20 vertical broken lines, a characteristic unique to yellowfin tuna, although sometimes they are not noticeably present. Large fish can be identified by the long crescent-shaped extensions of the anal and second dorsal fins.

Yellowfin tuna are associated with the surface to mid-depth waters where they feed by sight and smell during the day. They have a very keen olfactory sense which they use to sniff out the trail of oils and amino acids left by their prey, which includes a huge variety of finfish, squid, shrimp and crabs. Some fish reach sexual maturity during their first year, but most are age 2 or 3 when they first spawn. Yellowfin spawn several times a year in the warm, open ocean, where a large female can produce eight million eggs. They are common to 80 pounds, and occasionally reach 200 pounds. The maximum size is a length of six feet and a weight of nearly 450 pounds.

Yellowfin tuna make both seasonal and daily migrations. They are often found associated with floating debris, which they leave for journeys of up to nine miles, then return to the same floating object the next day. This has made catching yellowfin tuna a bit easier for the fleets of purse-seine boats from across the world. They also congregate with dolphins, which was dangerous for the dolphins in the early days of mechanized purse seiners. Now, the adoption of dolphin-safe fishing practices result in fewer losses of dolphins and account for the “dolphin-safe” logo on canned tuna, which is the primary market for yellowfin tuna.

– Craig Gothreaux

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Ciguatera Fish Poisoning in the Northern Gulf

Most people who have heard of ciguatera associate it with tropical locations – maybe the South Pacific or Caribbean. In fact, Bob Shipp’s 1994 version of *Guide to the Fishes of the Gulf of Mexico* states “ciguatera is strictly a tropical malady, with no verified reports from the United States mainland areas.” But this has changed: Recent studies have shown some occurrences in Gulf and mid-Atlantic areas.

Ciguatera poisoning is the most common fish-borne toxin poisoning in the United States, yet relatively unknown in the northern Gulf of Mexico. It is a common problem in Australia, the Caribbean and the South Pacific islands. Each year some 3,000 cases are reported in the U.S. and 50,000 cases are reported worldwide. As with many conditions, the experts think that these numbers miss a significant number of unreported cases: The actual number of poisonings could be 10 times higher.

The U.S. cases come from southern Florida, Hawaii, Puerto Rico, Guam, Virgin Islands and the Pacific island territories. The result is an annual U.S. health cost of around \$21 million, which accounts for almost all the national health costs that stem from problems with “toxic algae” (health-care statistics lump dinoflagellates into this group).

The ciguatera toxin is produced by a dinoflagellate, *Gambierdiscus toxicus*., that grows on reefs and hard structures. Highest concentrations are found on dead coral.

Bioaccumulation (biomagnification) is the process that leads to the condition: Small fish accumulate the toxin (harmlessly) in their tissues as they graze on the surfaces containing the toxic algae. Predatory fish then concentrate more of the toxin as they feed on the grazers. Hundreds of different species can have the toxin, but those that are most likely to end up on a plate are barracuda, snapper, grouper, shark, mackerels and amberjack and other jacks. All are piscivorous species that would be expected to consume smaller reef fishes.

Ciguatera poisoning can be serious but is rarely fatal. The toxin affects the digestive, nervous and cardiac systems. Symptoms can include nausea, vomiting, abdominal pain, diarrhea and slowed heartbeat. Patients also report intense itching, joint pain and tingling sensations. The reversal of cold-hot sensations, where cold is felt as burning hot, is also common. Symptoms can first appear in an hour or two, and for some patients, tingling sensations have lasted as long as 25 years. People who have been exposed to the toxin become sensitized – each subsequent exposure results in amplified symptoms. Researchers have demonstrated that the South Pacific form of ciguatoxin is particularly potent – as much as 10 times more active than the Caribbean form.

In the last 10 years several isolated cases of ciguatera poisoning have occurred in the U.S. outside of expected areas. In 1998, two people who ate snapper and barracuda caught at a rig off Texas experienced probable ciguatera poisoning (no fish was left for testing). In 2004, two people who ate barracuda caught off the coast of South Carolina definitely experienced ciguatera poisoning (remaining fillets tested positive). And this last March, a Galveston couple grew ill after eating portions of a 34-lb gag grouper caught at the Flower Garden Banks off the Texas-Louisiana border.

It had been generally assumed that concentrations of ciguatoxin below 0.5 parts per billion won’t cause illness (and some experts say that 1 ppb is the illness threshold for Caribbean ciguatoxin). However, the grouper that sickened the Texas couple had a ciguatoxin concentration of 0.6 parts per billion, and the poisoned man said that the effects were the worst thing that had ever happened to him. His wife was hospitalized for 13 days. Treatment for ciguatera poisoning has traditionally been to address the individual symptoms, but recent publications indicate that intravenous mannitol may be

fairly effective overall (there is a treatment hotline 305/361-4619 or 305/661-0774).

No one really knows whether the fish that caused these three cases picked up the toxin locally or migrated in from areas with chronic infestations of *Gambierdiscus toxicus*. A study conducted in 2003 (Villareal and others, 2006) found some *Gambierdiscus toxicus* on each of six oil rigs tested off the Texas coast. Tests of 20 barracuda taken near Texas showed traces of ciguatera in half the fish, though none were classified as toxic. This study also reported some Gulf tagging and tracking data for several fish species. Barracuda proved to be long-distance travelers. Three of the barracuda migrated more than 600 miles across the Gulf; one barracuda was caught near Sanabel Island, Fla., in 1992 and then near the south Texas coast in 1994. Some king mackerel and amberjack also moved long distances.

Should Louisianans change their fishing or dining habits because of ciguatera? Definitely – if they are in Guam.

When considering fish from the northern Gulf of Mexico, we have to remember that there are millions of fish eaten every week that are perfectly fine. The risk of ciguatera poisoning from these fish is extremely low. If anything, the few people who eat barracuda from the northern Gulf (and barracuda is surprisingly good) may want to know that there is a slight risk. Stay tuned: researchers have proposed that the problem may get worse with global climate change, with widespread coral dieoffs or with more artificial reefs.

– Glenn Thomas

Source:

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NMFS Seeks Comments on Snapper and Shrimp Amendments

NOAA's National Marine Fisheries Service is seeking public comment on the joint amendments for Gulf of Mexico red snapper (Reef Fish Amendment 27) and shrimp (Amendment 14) submitted by the Gulf of Mexico Fishery Management Council for review, approval and implementation by the Secretary of Commerce. The Notice of Availability for public comment on this joint amendment published in the *Federal Register* July 26, 2007.

A proposed rule that would implement measures outlined in joint Amendment 27/14 has also been received from the Council. In accordance with the Magnuson-Stevens Act, NOAA Fisheries Service

is evaluating the proposed rule to determine whether it is consistent with the FMPs, the Magnuson-Stevens Act and other applicable law. If that determination is affirmative, NOAA Fisheries Service will publish the proposed rule in the *Federal Register* for public review and comment. NOAA Fisheries Service will also announce this request for comment through the release of another Southeast Fishery Bulletin.

Joint amendment 27/14 proposes actions to reduce the red snapper catch, bycatch and discard mortality in the directed commercial and recreational fisheries and the shrimp fishery. The intended effect of joint Amendment 27/14 is to end overfishing for red snapper by 2010 and rebuild the stock by 2032 in compliance with the red snapper rebuilding plan.

Elements of Amendment 27/14 constitute a revised rebuilding plan that has at least a 50-percent probability of rebuilding the red snapper stock by 2032. Actions in Amendment 27/14 include:

- Total allowable catch would be reduced to 5 million pounds (MP), with a commercial quota of 2.55 MP and a recreational quota of 2.45 MP.
- To help constrain the recreational harvest to the new quota, recreational bag limits would be reduced from four fish to two fish; the bag limit for captains and crews of for-hire vessels would be set at zero and the recreational fishing season would be shortened. The 16-inch total length minimum size limit for recreational fishermen would stay the same.
- The commercial minimum size limit would be reduced to 13 inches total length with the intent of reducing regulatory discards.
- To reduce discard mortality in the directed fisheries, Amendment 27/14 would require the use of venting tools, dehooking devices and non-stainless steel circle hooks (when using natural baits) for all reef fish fishery sectors.
- Shrimp effort, and the associated bycatch discard mortality of juvenile red snapper, would be controlled through time-area closures to reduce red snapper mortality 74 percent from the 2001-2003 time period. This reduction could be relaxed in the future as red snapper rebuild.

A final determination on the length of the recreational fishing season will be based on a number of factors. The proposed two-fish bag limit alone would allow a June 1 through September 15 (107 days) recreational fishing season. In addition to the two-fish bag limit, constraining the captain and crew of for-hire vessels to a zero-fish bag limit would allow the fishing season to be extended through the end of September (122 days).

Based on extensive public comment, the Council chose to assume a 10-percent reduction in post-hurricane fishing effort and landings when evaluating recreational management measures. Application of this assumption along with implementation of a two-fish bag limit and zero-bag limit for captain and crew of for-hire vessels would allow the recreational fishing season to extend from May 15 through October 15 (154 days). This assumption is controversial because although preliminary data suggest some declines in effort have occurred since the 2005 hurricane season, the magnitude of reductions vary by fishing sector, are often less than 10 percent, and in some cases effort and landings have increased.

Further, it is unknown how long post-hurricane reductions in landings and fishing effort may continue as the fisheries recover. Therefore, NOAA Fisheries Service is specifically requesting comments on the proposed action to assume a 10-percent reduction in post-hurricane fishing effort, which would affect the designation of the length of the recreational fishing season.

The Magnuson-Stevens Act requires each Regional Fishery Management Council to submit any fishery management plan or amendment to NOAA Fisheries Service for review and approval,

disapproval or partial approval. The Magnuson-Stevens Act also requires NOAA Fisheries Service to publish an announcement in the *Federal Register* notifying the public that the plan or amendment is available for review and comment.

DATES: Written comments must be received no later than 5 p.m., eastern time, on Sept. 24, 2007.

ADDRESSES: You may submit comments by any of the following methods:

- E-mail: 0648-AT87.NOA27-14@noaa.gov. Include in the subject line the following document identifier: 0648-AT87-NOA27-14.
- Federal e-Rulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Mail: Peter Hood, Southeast Regional Office, NMFS, 263 13th Avenue South, St. Petersburg, FL 33701.
- Fax: 727/824-5308, Attention: Peter Hood.

Copies of joint Amendment 27/14, which includes an Environmental Impact Statement, a Regulatory Impact Review and an Initial Regulatory Flexibility Analysis, are available in electronic format from the Council's Web site at <http://www.gulfcouncil.org>, or by contacting the Council at 2203 North Lois Avenue, Suite 1100, Tampa, FL, 33607; phone: 813/348-1630; fax: 813/348-1711; e-mail: gulfcouncil@gulfcouncil.org.

Comments received by Sept. 24, 2007, whether specifically directed to the amendment or the proposed rule, will be considered by NOAA Fisheries Service in its decision to approve, disapprove or partially approve the amendment. Comments received after that date will not be considered by NOAA Fisheries Service in this decision. All comments received by NOAA Fisheries Service on the amendment or the proposed rule during their respective comment periods will be addressed in the final rule.

Underwater Obstructions

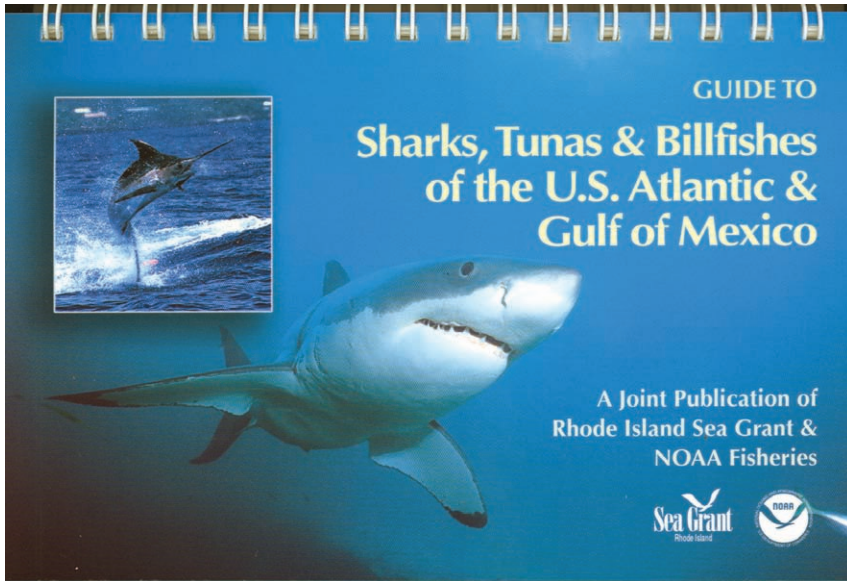
In accordance with the provisions of R.S. 56:700.1 et. seq., notice is given that six claims in the amount of \$28,680.71 were received for payment during the period June 1, 2007 - June 30, 2007.

There were six claims paid and 0 claims denied.

Latitude/Longitude Coordinates of reported underwater obstructions are:

29 08.976	90 45.181	TERREBONNE
29 17.715	89 52.639	JEFFERSON
29 33.980	92 31.547	VERMILION
29 41.493	90 05.495	JEFFERSON
29 48.871	89 38.700	ST. BERNARD
30 09.785	89 46.929	ST. TAMMANY

A list of claimants and amounts paid can be obtained from Marjorie McClinton, Administrator, Fishermen's Gear Compensation Fund, P.O. Box 44277, Baton Rouge, LA 70804 or you can call (225)342-0122.



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THE GUMBO POT

Crabmeat Spaghetti

Fran Joffrion

2 lbs onion, chopped	1 can (8-oz) Parmesan and Romano cheese
2 lbs butter	salt and pepper
3 toes garlic, chopped	tomatoes, quartered
2 lbs crabmeat	parsley
2 lbs thin spaghetti, cooked	

Suate onions and garlic in butter until onions turn clear. Add crabmeat. Stir until hot. Add mixture to cooked spaghetti. Add cheese. Toss thoroughly. Salt and pepper to taste. Garnish with tomatoe wedges and parsley.

Reprinted from *A Louisiana Seafood Cookbook*, available for \$6 from Louisiana Sea Grant. Make checks payable to Louisiana Sea Grant College Program, 105 Sea Grant Building, LSU, Baton Rouge, LA 70803.

For more information, contact your local extension agent:

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