Lagniappe

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Chesapeake Blue Crab Woes

Blue crab. Image courtesy Wikimedia.

The blue crab (*Callinectes sapidus*) is the iconic symbol of the mid-Atlantic coast. Locals conjure up images of cold waters and the delicious smells of crab cakes and stews. Their blue crab fishery has a weathered past, much like the men who catch them, but the crab fishery in the Chesapeake Bay is struggling. Stocks have declined in recent years to the point where a sustainable fishery is in question.

Researchers conduct annual winter dredge surveys in the Chesapeake Bay to predict the amount of crab that can be caught the following year. Dredging involves the scooping of dormant crabs from the bottom with gear similar to a big oyster dredge. These surveys count the number of crabs per 1000 m^2, and then extrapolate to determine the bay-wide population. The 2008 survey reported 120 million crabs of reproductive age (1+ years old), which is above the minimum level of 86 million crabs needed to sustain the population. The 1990 population level, however, was 70 percent higher. The conservation target number is 200 million crabs, a number that will not be reached without a change in harvest strategy.

Harvest figures have gone from 102.5 million pounds of crab in 1990 to 39.8 million pounds in 2007, the most recent year for data. The 2007 harvest ranks among the lowest on record. While it is difficult to pinpoint the exact cause for the decline in Chesapeake blue crab, researchers have come up with two strong possibilities.

Hypoxia (dissolved oxygen concentrations below 2 mg/ L) in the bay is one factor commonly blamed for reducing crabs. According to *Science*, the Chesapeake Bay is one of the 400-plus oxygen-deprived dead zones around the world. Water, usually in a layer near the bottom, becomes deprived of oxygen during warmer months when algal blooms die and are consumed by bacteria. When hypoxia occurs, marine animals must move to different areas or they will not survive. As a result, prime blue crab habitat has diminished and has lead to disruptions and instability in food webs.

Dead zones are fueled by excess nitrogen and phosphorus that is deposited from runoff and effluent. The Chesapeake Bay is notorious for its water quality problems. Urbanization within its watersheds continues to expand; 17 million people live along the bay with an estimated 130,000 new residents

inhabiting the area each year. Runoff from lawns and streets, as well as effluent from businesses and factories continues to strain the bay's resources. In 2000, an agreement with the EPA was reached to reduce nutrient pollution levels by the year 2010. Nitrogen, phosphorus, dissolved oxygen and water clarity are frequently monitored to assess the health of the bay. Little progress has been made, though, and parties such as the Chesapeake Bay Foundation and the Maryland and Virginia watermen's associations have filed a notice of action for the EPA to quickly begin reducing nutrient pollution. If the water quality standards cannot be met in time, the EPA will be forced to designate the bay as "degraded waters."

Overfishing is the other strong possibility a factor in declining Chesapeake blue crab numbers. In 2007, an estimated 55 percent of the blue crab population was caught in the Chesapeake, two percentage points higher than what is deemed the threshold for overfishing. The ideal exploitation fraction is 46 percent; however, this goal has been exceeded in 9 of the last 10 years. In an effort to protect female crabs and promote reproduction, specific changes in harvest have been put forward within the last year. The 2008 female harvest was to be reduced by 34 percent, which would reduce the total harvest by 17 percent. This reduction, if carried out, would not fix the fishery, but would be a step in the right direction. Also, Virginia recently decided to close its 2009 winter dredge fishery for dormant crabs, a move that while helping blue crabs rebound will affect 53 boats and crew. This winter's survey, which comes out in April, will tell if the reductions are working.

Even though the blue crab fishery is very prominent in the Chesapeake Bay, plenty of crabs are harvested every year in the Gulf. Louisiana, in particular, harvests more crab than all other Gulf states combined. The past 10 years has seen Louisiana alone bring in 506 million pounds of blue crab, nearly that of the Chesapeake Bay (637 million pounds). And in contrast to the Chesapeake Bay crab population, Gulf of Mexico blue crab populations seem, for now, to not have significant problems with water quality or fishing pressure.

Current crab regulations in Louisiana are minimal compared to those in the Chesapeake Bay region. There are currently no commercial limits for blue crabs in Louisiana state waters: A 5 inch minimum carapace width is required for hard shell crabs, and peeler crabs must be identified as such if the carapace is less than 5 inches across. Dredges are not allowed, and, in most cases, traps must be fitted with "escape rings" to allow small crabs to escape. For recreational crabbers, there is a limit of 12 dozen per person, per day, with no minimum size required.

- William Sheftall IV

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Coastal Fishing Equals Jobs

NOAA Fisheries Service recently released an economic report on the impacts of commercial and recreational saltwater fishing in the U.S., titled *Fisheries Economics of the United States, 2006,* which covers 1997 to 2006. Results of the study indicate that commercial and recreational saltwater fishing nationwide generate more than $185 billion in sales and supported more than two million jobs in 2006.

The commercial fishing industry — harvesters, seafood processors and dealers, seafood wholesalers and seafood retailers — generated $103 billion in sales, $44 billion in income and supported 1.5 million jobs in 2006. Recreational fishing generated $82 billion in sales, $24 billion in income and supported 534,000 jobs in 2006. The report documents the importance of coastal fishing in the U.S. and the importance of managing fisheries resources at sustainable levels.

The report gives detailed landings, prices and recreational fishing economic impacts by regions, by states and by specific species. This will be an excellent resource for planning and resource management.

Some of the more glaring statistics include the increase in Louisiana's recreational harvest of spotted seatrout. In 1997, Louisiana anglers harvested 6.7 million spotted seatrout while in 2006, more than 24 million were caught (13 million of which were harvested and more than 10 million released). Another set of numbers which stood out was the number of charter trips taken in Louisiana. In 1997, there were76,000 charter trips while in 2006 more than 176,000 were taken.

In the Gulf of Mexico region, the recreational catch of spotted seatrout is the most caught species with more 36 million fish caught in 2006. Louisiana accounted for 24 million of these fish or 66 percent. Also, the number of anglers in Louisiana increased by 63 percent between 1997 (616,000) and 2006 (1.2 million anglers). Certainly this is an indication of the economic importance of the spotted seatrout to Louisiana.

In 2006, Louisiana anglers' total trip expenditures and durable equipment expenditures topped $2.8 billion. In 2006, the commercial fishing industry in Louisiana accounted for $2.1 billion to the economy of the state.

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The report also includes descriptive statistics on commercial fish landings, revenue and price trends; recreational fishing effort, catch and participation rates; and employer and non-employer establishments, annual payroll and annual receipt information for fishing-related industries such as seafood retailers and ship and boat building. The entire report can be viewed online at www.st.nmfs.noaa.gov/st5/index.html.

- Kevin A. Savoie

Source: Fisheries Economics of the United States, 2006.

L.D.W.F. Requesting Public Comment on Proposed Artificial Reef Plan

The Louisiana Department of Wildlife and Fisheries (LDWF) is soliciting public comment on proposed changes to the Special Artificial Reef Site (SARS) amendment of the Artificial Reef Plan and SARS evaluation process.

At the request of the Artificial Reef Council, LDWF is re-evaluating the SARS amendment and SARS proposal evaluation process. One of the most important proposed changes is the creation of an advisory committee composed of representative Gulf users to evaluate SARS proposals and advise the Artificial Reef Council.

A link to the proposed changes can be found on the Artificial Reef Program's Web site at: http://www.wlf.louisiana.gov/fishing/programs/habitat/artificialreef.cfm. LDWF is soliciting comments through April 30, 2009.

LDWF is responsible for developing, maintaining and monitoring Louisiana artificial reefs. The Artificial Reef Plan was developed in 1987 and its amendments provide guidance in artificial reef development. Amendment II to the Louisiana Artificial Reef Plan allows for the establishment of artificial reefs outside the nine artificial reef planning areas known as Special Artificial Reef Sites (SARS).

Public comments can be sent to:
Doug Peter Artificial Reef Coordinator Attn: SARS Comments LA Department of Wildlife and Fisheries PO Box 98000 Baton Rouge, LA 70898.

Commercial Fishing for Large Coastal Sharks to Open

Commercial fishing for Large Coastal Sharks, as defined by Louisiana rule (L.A.C. 76:VII.357), opened in Louisiana waters at 12:01 a.m. Jan. 23, 2009. The National Marine Fisheries Service also opened the federal waters of the Gulf of Mexico at that time. The commercial season will remain open in federal waters until 80 percent of the federal quota for large coastal sharks has been harvested in the Gulf. The commercial season in Louisiana state waters will close at 12:01 a.m. April 1, 2009, unless the season in adjacent federal waters closes or is projected to close before that date.

During the open season, commercial harvest of large coastal sharks shall be regulated by the existing federal and state rules regarding trip limits, allowable species, and requirements for permits and landings.

The large coastal shark group is composed of the great hammerhead, scalloped hammerhead, smooth hammerhead, nurse shark, blacktip shark, bull shark, lemon shark, sandbar shark, silky shark, spinner shark and tiger shark. Only specifically designated federally permitted vessels may take sandbar shark.

There is no allowable harvest at any time for prohibited species, which include basking shark, white shark, bigeye sand tiger, sand tiger, whale shark, smalltooth sawfish, largetooth sawfish, Atlantic angel shark, Caribbean sharpnose shark, smalltail shark, bignose shark, Caribbean reef shark, dusky shark, Galapagos shark, narrowtooth shark, night shark, bigeye sixgill shark, bigeye thresher shark, longfin mako, sevengill shark and sixgill shark.

Requirements for the Gulf Commercial Reef Fish Fishery

NOAA Fisheries Service reminds fishermen of several requirements for the Gulf of Mexico reef fish fishery.

Vessel Monitoring System (VMS)

Owners and operators of vessels with Gulf of Mexico commercial reef fish permits must:

(a) Have a type-approved VMS unit operating onboard their vessels, and

(b) Make a trip declaration prior to all fishing trips.

Any time a vessel with a VMS unit leaves port, the owner/operator of the vessel must supply pre-trip information. Declarations can be made through the VMS terminal (computer) or through a call-in system accessible at 888-219-9228. If a vessel is being moved in port for activities such as fueling, changing docks, or getting ice, a trip declaration is not needed. Power down exemptions are available. For additional information on VMS units, specifications, and reporting requirements, contact the Office for Law Enforcement (OLE) Southeast Region for information. For specific questions on VMS, OLE can be contacted at 800-758-4833.

Turtle and Sawfish Placards and Release Gear

Owners and operators of vessels with Gulf of Mexico reef fish commercial or charter vessel/headboat permits must:

(a) Follow protocols for the proper care and release of sea turtles and smalltooth sawfish, and

(b) Have specific release gear and instruction placards onboard.

These requirements must be met at all times, even when recreational fishing.

For specific questions on sea turtle and smalltooth sawfish release protocols, contact Charles Bergmann at the NOAA Fisheries Service Pascagoula Laboratory: Phone: 228-762-4591; Cell: 228-623-0748; E-mail:*Charles.Bergmann@noaa.gov*

New Grouper, Amberjack Regulations

NOAA Fisheries Service has established seasonal closures for gag, red grouper, black grouper, and greater amberjack, and has added changes to grouper regulations for federal waters. Fishermen should check with state agencies for regulations in state waters. The following regulations are in effect for federal waters:

Recreational Fishery

The recreational fishery for gag will be closed Feb. 1–March 31, 2009, and the recreational fishery for red grouper and black grouper will be closed Feb. 15–March 14, 2009.

The daily bag limits are: Two fish per person for gag; One fish per person for red grouper; and Five fish per person for all grouper in aggregate.

Commercial Fishery

The commercial fishery for gag, red grouper, and black grouper will be closed Feb. 15–March 14, 2009. The commercial greater amberjack fishery will be closed March 1–May 31, 2009.

The possession, sale, or purchase of these species harvested from the exclusive economic zone (EEZ) in the Gulf of Mexico is prohibited during the closure. No person may possess these species in the Gulf of Mexico EEZ regardless of where harvested.

The operator of a vessel with a valid federal commercial Gulf reef fish permit having gag, red grouper, or black grouper aboard must have landed or sold those fish prior to 12:01 a.m., local time, Feb. 15, 2009. The commercial fisheries for these species will reopen at 12:01 a.m., local time, on March 15, 2009.

This prohibition on the sale/purchase does not apply to gag, red grouper, or black grouper that were harvested, landed ashore, and sold prior to February 15 and held in cold storage by a dealer or processor. The operator of a vessel with a valid federal commercial Gulf reef fish permit having greater amberjack aboard must have landed or sold those fish prior to 12:01 a.m., local time, March 1, 2009. The fishery for this species will reopen at 12:01 a.m., local time, on June 1, 2009.

This prohibition on the sale/purchase does not apply to greater amberjack that were harvested, landed ashore, and sold prior to March 1 and held in cold storage by a dealer or processor.

Federal Consistency

Effective Jan. 1, 2009, a person aboard a federally permitted Gulf of Mexico commercial or for-hire reef fish vessel must comply with federal regulations for red snapper, greater amberjack, gray triggerfish, and gag regardless of where the fish are harvested (federal or state waters).

Proposed Regulations

The Gulf of Mexico Fishery Management Council has submitted Amendment 30B to the Reef Fish Fishery Management Plan for approval. This amendment proposes actions affecting gag and red grouper regulations. Amendment 30B has not yet been implemented, but an interim rule implemented the regulations pertaining to gag effective Jan. 1, 2009 (see table below). Changes to the grouper fishery proposed in Amendment 30B are also listed in the table below. These changes are expected to occur during the 2009 fishing season.

Gulf of Mexico Grouper	Current Regulations (as of 1/1/2009)	Amendment 30B (proposed)
Recreational measures		
Grouper Aggregate Bag Limit	5 grouper/person/day	4 grouper/person/day
Gag Bag Limit	2 fish/person/day within 5-fish grouper aggregate	2 fish/person/day within 4-fish grouper aggregate
Red Grouper Bag Limit	1 fish/person/day within 5-fish grouper aggregate	2 fish/person/day within 4-fish grouper aggregate
Recreational Fishing Season	Red grouper and black grouper closed 2/15 – 3/14 Gag closed 2/1 – 3/31	All shallow water grouper (gag, red grouper, black grouper, yellowfin grouper, yellowmouth grouper, rock hind, red hind, and scamp) closed 2/1 – 3/31
Commercial measures		
Red Grouper Minimum Size Limit	20 inches total length	18 inches total length in 2009
Gag Quota	1.32 mp (GW)*	1.32 mp (GW)
Red Grouper Quota	5.31 mp (GW)	5.75 mp (GW)
Shallow-Water Grouper Quota	7.48 mp (GW)	7.48 mp (GW)
Commercial Fishing Season	Gag, red grouper and black grouper closed 2/15 – 3/14	No closed season

*GW – gutted weight; mp – million pounds

THE GUMBO POT

File Gumbo D'Ecrevisse

20 lbs live crawfish
1 cup oil
1 cup flour
2 cups onions, chopped
1 cup celery, chopped
1/2 cup bell pepper, chopped
4 garlic cloves, minced
1 gallon warm water
salt and cayenne pepper to taste
1/2 cup green onion tops and parsley chopped
2 teaspoons file

Scald and peel crawfish. Set tails and fat aside seperately. Make a roux with oil and flour. Mixed chopeed onions, celery, bell pepper and garlic into roux and cook over medium heat until onions are wilted. Add water and far, stirring until roux comes to a boil. Boil slowly in an uncovered pot for one hour. Season to taste with cayenne and salt. Then add crawfish tails and cook 30 minutes. Add onion tops, parsley, and two teaspoons of gumbo file when ready to serve. Serve in soup plates with cooked rice. Serves 6.

Recipe taken 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.

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