

Commercial Gag Grouper Fishing in the Gulf of Mexico States

Gag grouper (*Mycteroperca microlepis*) is also known as Grouper, Copper belly, or Charcoal belly¹. The name “microlepis” means “small scales”¹. The species inhabits the western Atlantic from North Carolina to the Yucatan Peninsula in Mexico, including the Gulf of Mexico^{1,2}. Juveniles occur as far north as Massachusetts and live in estuaries with structured habitat, such as seagrass beds, oyster reefs, and shipwrecks^{1,2}. Adults live solitary or in groups of 5 – 50 individuals². They primarily inhabit offshore areas with hard bottom (rocks, reefs, wrecks) and/or live bottom (corals, sponges)¹. Gag is the most common species of grouper on rocky ledges in the eastern Gulf of Mexico².



Figure 1. Gag grouper (*Mycteroperca microlepis*). Illustration by Joe Jewell. Mississippi Saltwater Fish. Mississippi Department of Marine Resources, Biloxi, Mississippi.

The coloring of gag grouper varies with size¹. Large fish have darker coloring on their dorsal (top) side and pale coloring below, with wavy marks on their sides¹. Small fish are lighter in color with dark, kiss-shaped marks¹. Gag can reach a maximum size of nearly 5 feet and 80 pounds, but commonly reach approximately 2 feet^{1,2}. They grow slowly and are long-lived (up to 30 years)¹. Gag are protogynous hermaphrodites, beginning life as females, becoming sexually mature around age 4, and transitioning to males around age 8¹. Spawning occurs from January – April in the Gulf of Mexico, and the fish spawn in large groups along the continental shelf¹. Females spawn several times per season and release between 60,000 and 1.7 million eggs during each spawning event¹. Gag grouper consume fish, crabs, shrimp, and

squid¹. Sometimes, adult gag prey on juvenile gag¹. Adult gag are prey for sharks and other top predators¹.

Gag grouper supports valuable commercial and recreational fisheries¹. NOAA Fisheries and the South Atlantic and Gulf of Mexico Fishery Management Councils manage gag grouper¹. The South Atlantic stock and the Gulf of Mexico stock are managed separately; according to recent stock assessments (2014 and 2016, respectively), neither is considered to be overfished or undergoing overfishing¹.

References:

- <https://www.fishwatch.gov/profiles/gag-grouper>
- <http://www.fishbase.org/Summary/SpeciesSummary.php?ID=1212&AT=gag+grouper>

Recipe

Broiled Grouper Parmesan



Figure 2. This recipe is courtesy of allrecipes.com. For ingredients and cooking instructions, please visit <https://www.allrecipes.com/recipe/103991/broiled-grouper-parmesan/>.

Commercial Landings

The long-term commercial gag grouper landings in the Gulf of Mexico states are shown in Fig. 3. Since 2011, the Gulf of Mexico states supplied about 63 percent of the total gag grouper domestic landings. The east and west coasts of Florida supplied about 72 percent of the total domestic landings during the past six years. Fig. 4 shows the average dockside prices of gag grouper in the Gulf of Mexico.

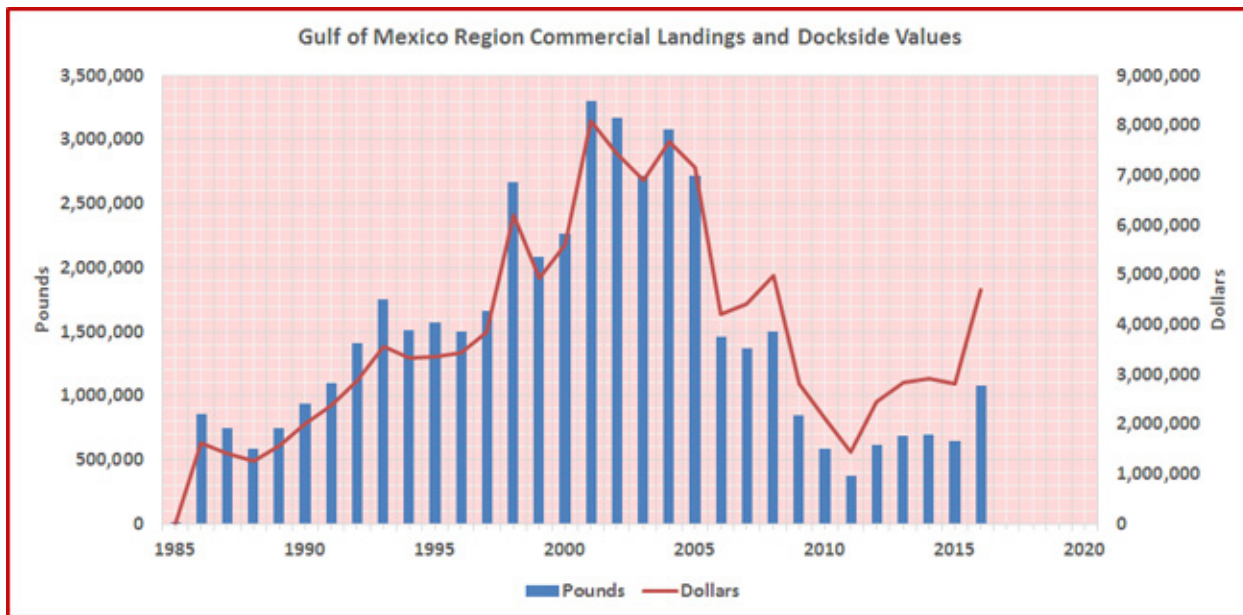


Figure 3. The primary vertical axis shows the yearly commercial landings in pounds while the secondary vertical axis indicates the annual commercial dockside values in dollars. Source of raw data: NOAA Fisheries. Last visited: August 30, 2018. <http://www.st.nmfs.noaa.gov/>.

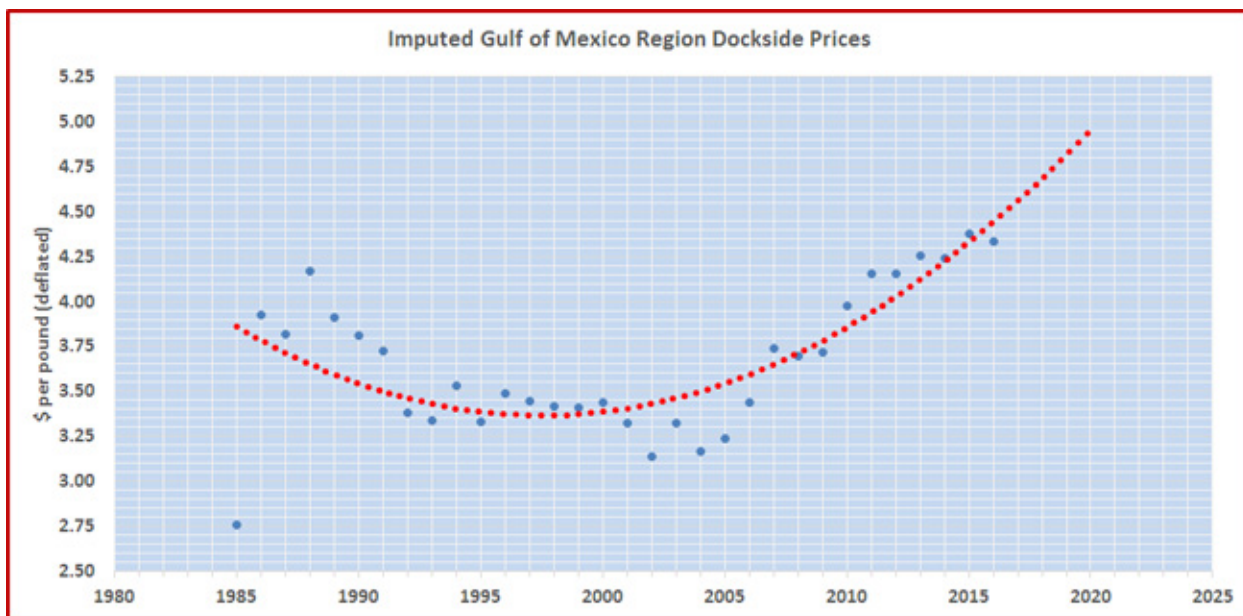


Figure 4. The vertical axis shows the average yearly dockside prices (deflated by the consumer price index) in dollars per pound. Source of raw data: NOAA Fisheries. Last visited: August 30, 2018. <http://www.st.nmfs.noaa.gov/>.

MarketMaker Businesses

In 2016, the Gulf-wide commercial landings of gag grouper reached almost 1.1 million pounds with dockside values of almost \$4.7 million. Gag grouper are harvested year-round (Fig. 5). More than 12,000 businesses which catch, process, and sell seafood products are registered in MarketMaker nationwide. There are more than 200 businesses which promote their seafood products and services in Mississippi MarketMaker (Fig. 6).

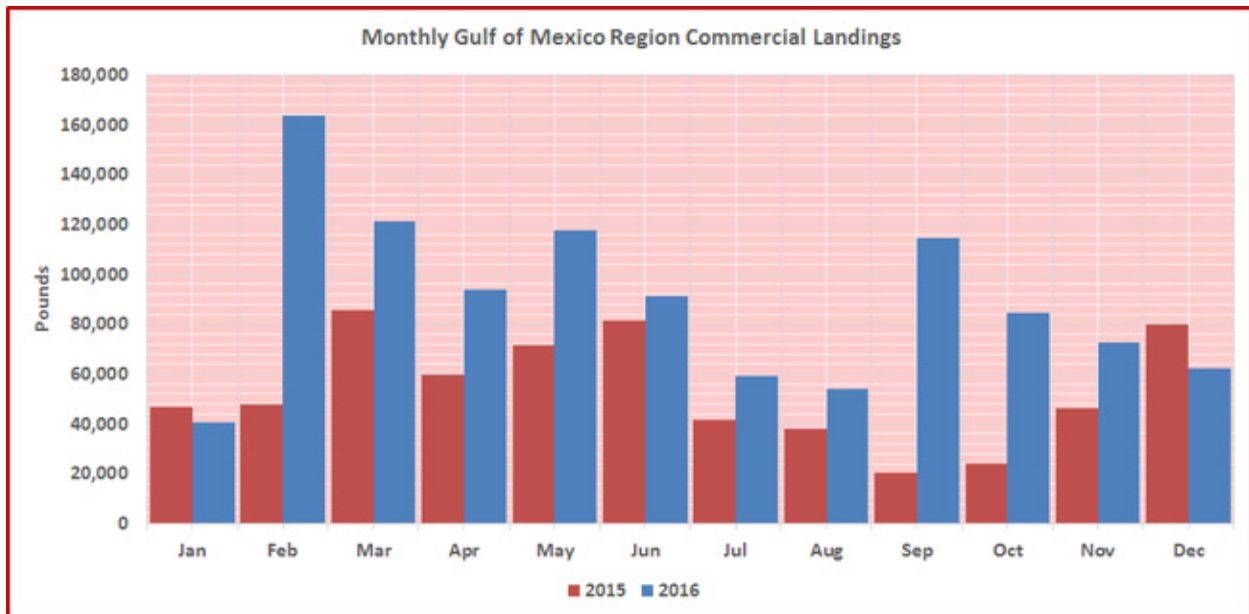


Figure 5. The vertical axis shows the monthly commercial gag grouper landings in pounds. Source of raw data: NOAA Fisheries. Last visited: August 30, 2018. <http://www.st.nmfs.noaa.gov/>.

To search for seafood businesses in MarketMaker, perform the following procedures:

1. Go to <http://ms.foodmarketmaker.com>
2. Click “search” and type “**Seafood**” in the product box.
3. You can sort the search results by relevance and name.
4. You can also limit online searches by state, county, city or number of miles from a specified location, and type of business.

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Business Type

Products

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Eat Healthy Mississippi (1)

Mississippi Certified Farmers Markets (1)

Southern Shrimp Alliance (2)

clear

Certifications

Product Forms

Method of Sale

all text SEARCH

Sort by: Relevance Name 229 businesses

☰
Quality Poultry & Seafood, Inc., Biloxi, Mississippi

🏠
Southern Seafood, Hattiesburg, Mississippi

☰
Crystal seas seafood, Pass Christian, Mississippi

☰
Shemper Seafood Co, Biloxi, Mississippi

☰
North Bay Seafood Inc, D'Iberville, Mississippi

☰
R A Lesso Seafood Inc, Biloxi, Mississippi

🏠
Labama Seafood, D'Iberville, Mississippi

☰
C F Gollott & Son Seafood Inc, D'Iberville, Mississippi

🐟
Fair maiden seafood llc, Ocean Springs, Mississippi

☰
David's Seafood, Hattiesburg, Mississippi

☰
Quality Seafood, Biloxi, Mississippi

🐟
Bradley's Seafood, Long Beach, Mississippi

VIEW MAP

Figure 6. Businesses which promote their seafood products in Mississippi MarketMaker. Last visited: August 14, 2018. <http://ms.foodmarketmaker.com>.

Economic Contributions

The economic contribution commercial gag grouper fishing makes region-wide is crucial information in making private investment decisions, formulating government policy, and developing

research and extension programs for the industry. The IMPLAN (<http://implan.com/>) software and the 2013 input-output data for the five Gulf States were used to estimate the economic contribution of commercial fishing to the Gulf of Mexico regional economy in 2016. The economic analysis used sector 17 or commercial fishing of the 2013 IMPLAN input-output data.

The annual commercial dockside values of gag grouper in the Gulf of Mexico states in 2016 reached \$4.7 million, which was 88% more than the average yearly dockside values in the region from 2011 to 2015. The total output contribution of commercial gag grouper fishing in 2016 amounted to \$9.0 million (Fig. 7). This output of goods and service created by the gag grouper commercial fishing and related industries sustained 126 jobs and generated labor income amounting to \$3.2 million in the Gulf regional economy.

The gag grouper commercial fishing industry generates annual tax revenues for the Gulf States and the U.S. federal government. More than \$548,000 was projected to have been paid by households and businesses in 2016 to the federal government as social insurance tax, tax on production and imports, corporate profit tax, and personal income tax. The Gulf States were anticipated to have collected taxes from households and businesses in 2016 amounting to almost \$268,000 as social insurance tax, tax on production and imports, corporate profits tax, and personal tax.

Economic contribution of commercial gag grouper fishing in the Gulf of Mexico region				
Impact Type	Employment (Jobs)	Labor Income (\$M)	Total Value Added (\$M)	Output (\$M)
Direct Effect	103	2.0	2.4	4.7
Indirect Effect	8	0.5	1.0	2.1
Induced Effect	16	0.7	1.3	2.2
Total Effect	126	3.2	4.7	9.0

Figure 7. The total economic contribution includes direct, indirect and induced effects estimated by using 2016 annual landing values and 2013 IMPLAN data. The local purchases percentage was set at 100%. The number of jobs is rounded off.

Suggested citation:

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<http://extension.msstate.edu/newsletters/mississippi-marketmaker>.