

Commercial Rock Shrimp Fishing

Brown rock shrimp (*Sicyonia brevirostris*) are also known as “rock shrimp” and “Florida Brown rock shrimp”. They have a thick, rigid shell and are known as the deep-water cousin of white, pink, and brown shrimp. Brown rock shrimp inhabit Atlantic waters from Norfolk, VA south through the Gulf of Mexico to the Yucatan. They prefer sandy bottoms in deep water (80 – 215 feet) and have been found in depths up to 600 feet. Brown rock shrimp burrow during the day and are active at night.

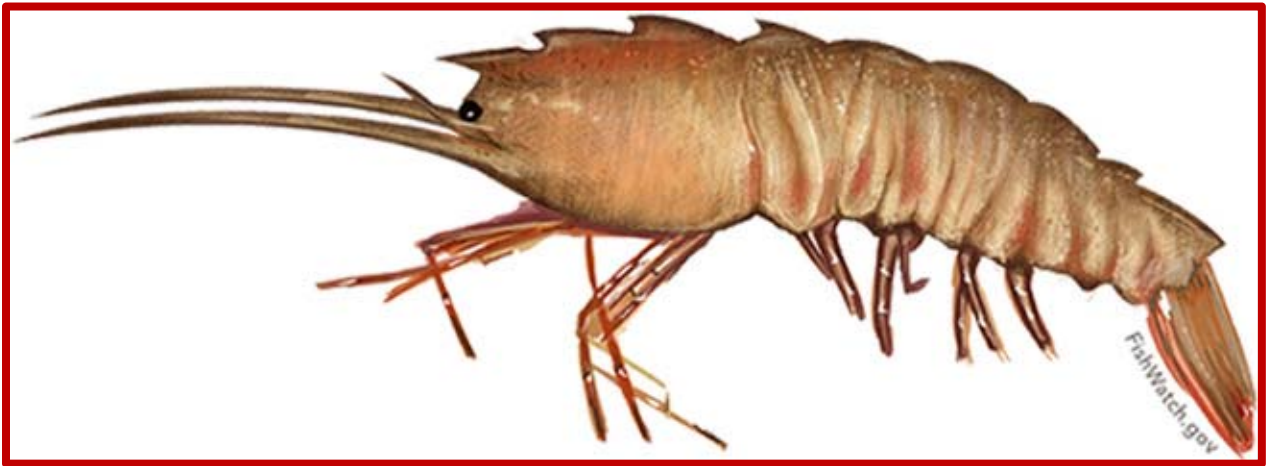


Figure 1. Brown rock shrimp (*Sicyonia brevirostris*). Source: <https://www.fisheries.noaa.gov/species/brown-rock-shrimp>. Last visited: May 28, 2019.

Brown rock shrimp grow and develop in response to environmental variables like water temperature and salinity. They can grow up to 6 inches in length but commonly grow to <2 inches long. They are highly productive, becoming sexually mature at 1 inch in length, and have a lifespan of only 20 – 22 months. Brown rock shrimp spawn year-round offshore, and females can spawn at least 3 times per season. Larval brown rock shrimp live in coastal estuaries and move offshore as they mature. Juvenile and adult brown rock shrimp feed on bivalve mollusks and crustaceans.

The size of the brown rock shrimp population is unknown but varies naturally based on environmental conditions. According to a 2016 assessment, brown rock shrimp are not subject to overfishing.

Reference:

1. <https://www.fishwatch.gov/profiles/brown-rock-shrimp>

Recipe for Rock Shrimp



Figure 2. This recipe is courtesy of <https://allrecipes.com/>. For ingredients and cooking instructions, please visit <https://www.allrecipes.com/recipe/256263/rock-shrimp-tempura-pan-fried/>. Last visited: May 28, 2019.

Commercial Landings

The long-term commercial landings of rock shrimp harvested from the Gulf of Mexico Region are shown in Fig. 3. The commercial landings databases are compiled from the NOAA Fisheries website. On average, about 708,000 pounds of rock shrimp were landed each year, valued at \$1.72 million annually, during the past six years after the Deepwater Horizon oil spill.

Since 2011, the Gulf of Mexico states provided most of the domestic market for rock shrimp. The domestic market share of the Gulf rock shrimp fishery rose from 69.5 percent in 2011 to 100 percent in 2016 (Fig. 4).

In 2016, Florida West Coast landed 80 percent of the domestic landings of rock shrimp (Fig. 5). Alabama harvested 13 percent. Texas and Mississippi produced six and one percent, respectively.

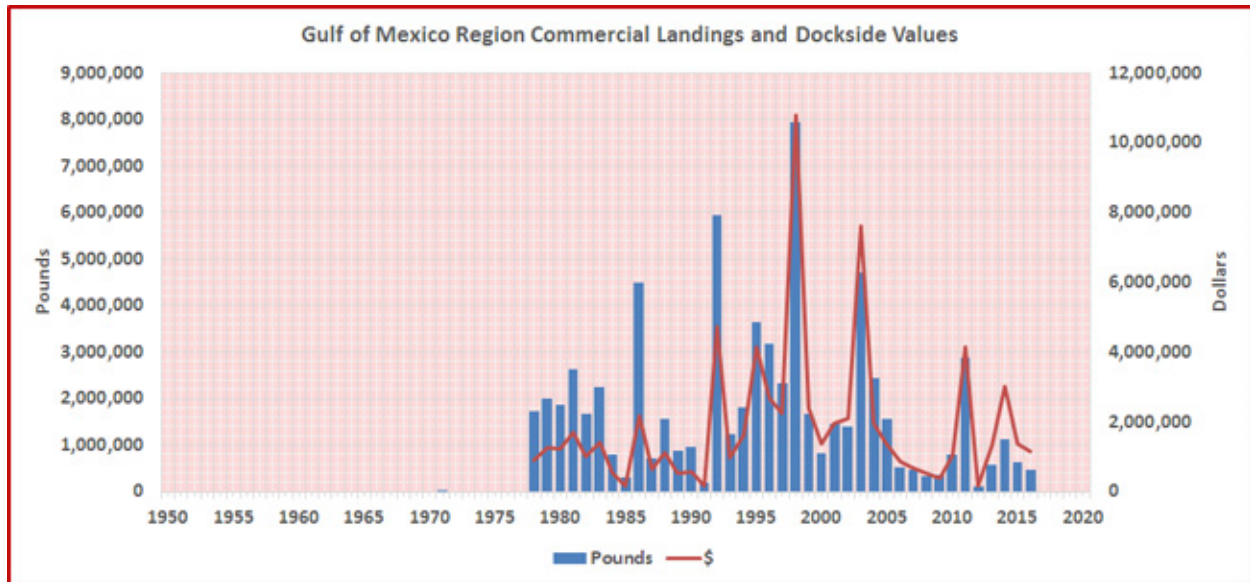


Figure 3. Commercial landings of rock shrimp in the Gulf of Mexico region. The primary vertical axis shows the yearly commercial landings in pounds. Source of raw data: NOAA Fisheries. <http://www.st.nmfs.noaa.gov/>. Last visited: May 28, 2019.

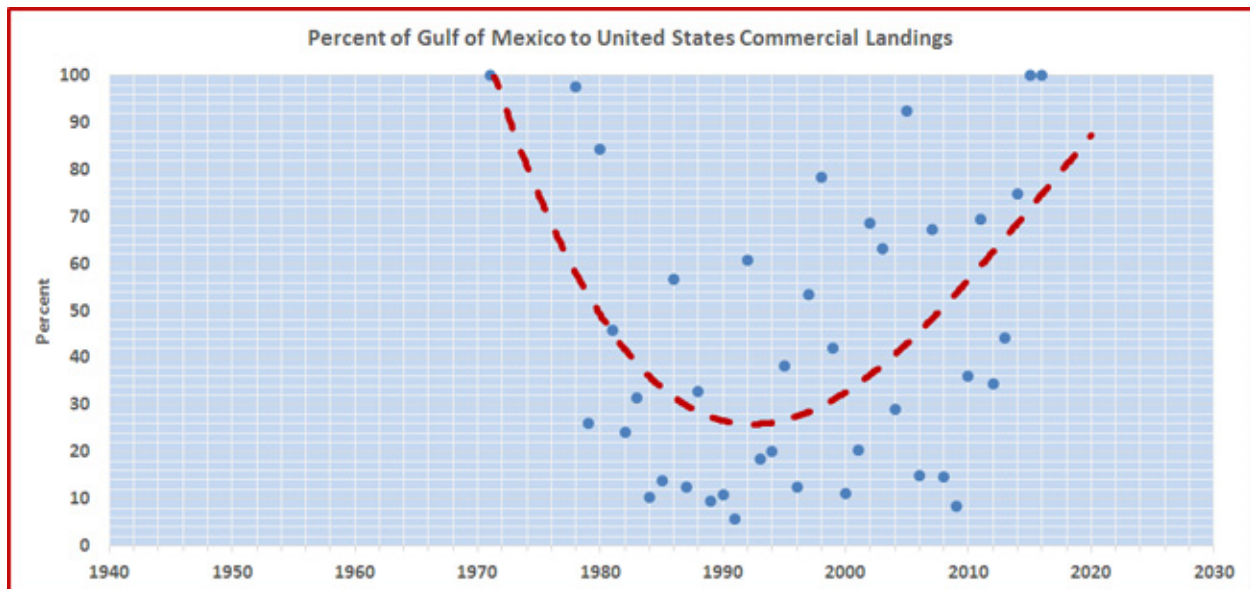


Figure 4. The vertical axis shows the percent of the Gulf of Mexico region to United States commercial landings of rock shrimp. Source of raw data: NOAA Fisheries. <http://www.st.nmfs.noaa.gov/>. Last visited: May 28, 2019.

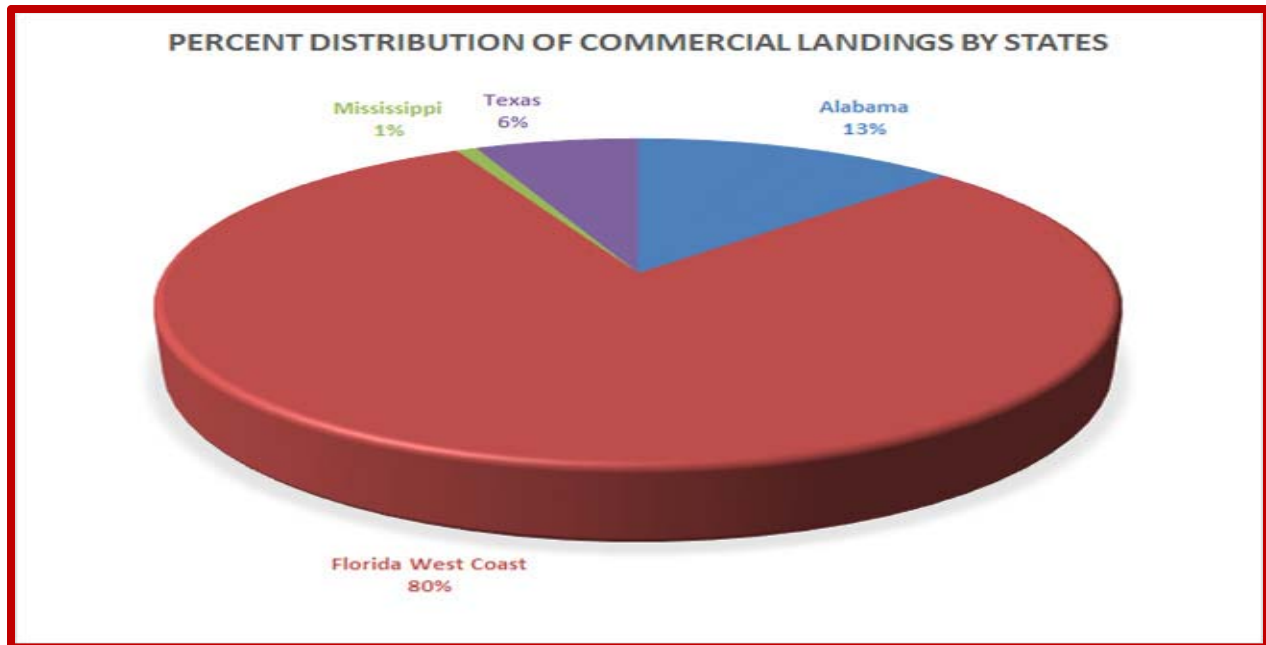


Figure 5. The pie chart shows the 2016 percent distribution of commercial landings by producing states. Source of raw data: NOAA Fisheries. <http://www.st.nmfs.noaa.gov/>. Last visited: May 28, 2019.

The dockside prices (EVP) of rock shrimp in the Gulf of Mexico states averaged about \$2.41 per pound during the past six years (Fig. 6). The ex-vessel prices were deflated by the consumer price index (2016=100). The average EVP of rock shrimp in the entire United States averaged slightly lower at \$2.22 per pound during the past six years after the oil spill.

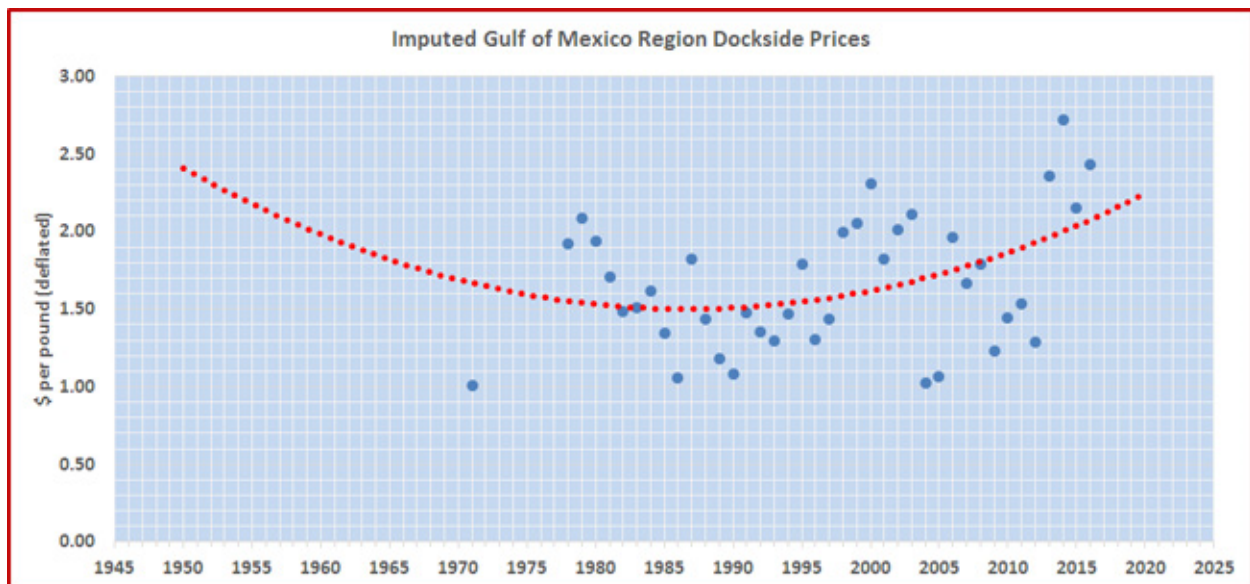


Figure 6. The vertical axis shows the average yearly dockside prices in dollars per pound deflated by the consumer price index. Source of raw data: NOAA Fisheries. <http://www.st.nmfs.noaa.gov/>. Last visited: May 28, 2019.

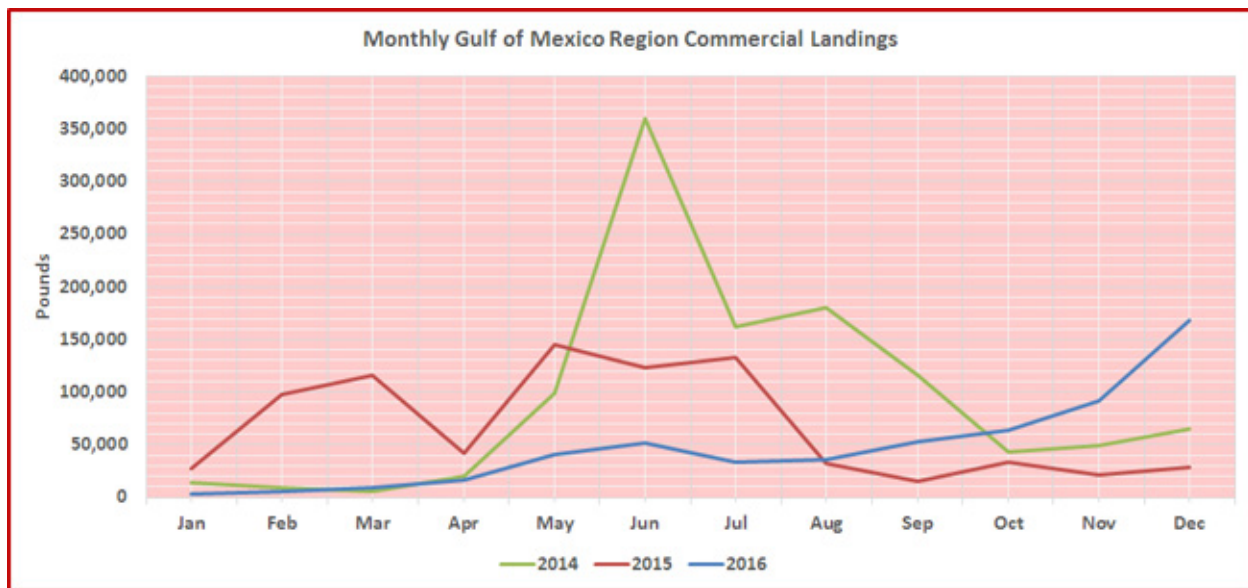


Figure 7. The vertical axis shows the monthly commercial landings of rock shrimp in pounds in 2014-2016. Source of raw data: NOAA Fisheries. <http://www.st.nmfs.noaa.gov/>. Last visited: May 28, 2019.

MarketMaker Seafood Businesses

In 2016, the Gulf-wide commercial landings of rock shrimp reached 480,289 pounds with dockside values about \$1,166,981. Rock shrimp are harvested year-round with peaks between May and September (Fig. 7). 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.

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

1. Go to <https://ms.foodmarketmaker.com/main/mmsearch/>
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, and type of business.

Economic Contributions

The economic contribution that the commercial rock shrimp 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 in creating the regional economic model of commercial fishing in the Gulf of Mexico in 2016. The economic analysis used sector 17 or commercial fishing of the 2013 IMPLAN input-output data.

The annual commercial dockside values of rock shrimp in the Gulf of Mexico states in 2016 reached \$1.166 million, which was about 68 percent of the average dockside values in the region since

2011. The total output contribution of commercial rock shrimp fishing in 2016 reached \$2.227 (Fig. 8). This output of goods and service created by the rock shrimp commercial fishing and related industries supported 31 jobs and generated labor income amounting to \$0.798 million in the Gulf regional economy.

Economic contribution of commercial rock shrimp fishing in the Gulf of Mexico region				
Impact Type	Employment (Jobs)	Labor Income (\$M)	Total Value Added (\$M)	Output (\$M)
Direct Effect	25	0.493	0.605	1.167
Indirect Effect	2	0.123	0.241	0.515
Induced Effect	4	0.183	0.333	0.544
Total Effect	31	0.798	1.178	2.227

Figure 8. 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.

The rock shrimp commercial fishing industry generates annual tax revenues for the Gulf States and the U.S. federal government. It was estimated that more than \$136,000 would 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 more than \$66,700 in social insurance tax, tax on production and imports, corporate profits tax, and personal tax.

Suggested citation:

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