

# Royal Red Shrimp Discussion Paper



4/11/2018



## PURPOSE OF DISCUSSION

*The royal red shrimp fishery is not federally managed. The Council is not considering management at this time, but it would be very helpful to have an explanation for the drastic changes in landings. The discussion document will be used to develop a document similar to fishery performance reports that have been developed for other stocks managed by the Council. It is designed to provide background information and observations from fishermen. We have very little information on the royal red shrimp fishery and fishermen are going to be the best source of information.*

## BACKGROUND

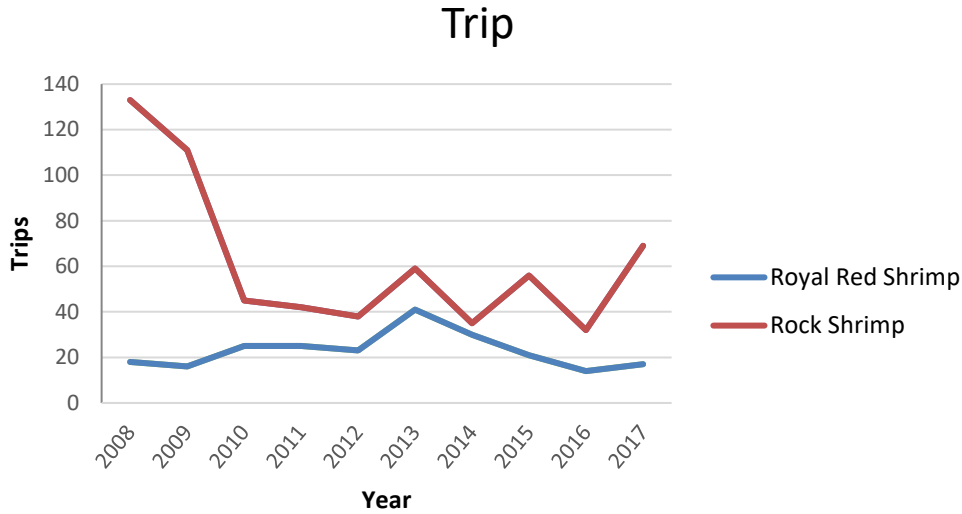
Royal red shrimp landings were first reported in the South Atlantic region beginning in 1990 (**Table 1**). Most of the landings occur in Florida with few years of landings occurring in Georgia. Over the entire time period, royal red shrimp landings average 283,000 pounds. The average landings increased in the more recent time period (since 2008) to 490,000 pounds (all landings were reported from Florida). The highest landings occurred in 2013 (937,811 pounds). Since the peak in landings in 2013, landings decreased to the fifth lowest landings reported since royal red shrimp were reported.

**Table 1.** Pounds of royal red shrimp landings and value from 1990 to 2016 from [National Marine Fisheries Service Commercial Landings Query](#) accessed 4/11/2018.

Year	Unadjusted		Year	Unadjusted	
	Pounds	Value		Pounds	Value
1990	158,717	\$299,571	2004	69,466	\$139,168
1991	251,614	\$484,055	2005	126,982	\$211,752
1992	232,315	\$445,594	2006	152,435	\$282,271
1993	98,182	\$172,953	2007	516,432	\$937,119
1994	88,197	\$250,262	2008	321,648	\$627,720
1995	31,182	\$55,845	2009	196,506	\$340,779
1996	25,316	\$50,878	2010	494,264	\$916,343
1997	186,253	\$457,657	2011	593,511	\$886,050
1998	82,291	\$250,331	2012	717,070	\$1,297,538
1999	153,193	\$357,830	2013	937,811	\$1,860,808
2000	353,572	\$861,488	2014	708,273	\$1,617,837
2001	87,674	\$222,009	2015	358,212	\$805,595
2002	350,645	\$525,221	2016	82,568	\$180,014
2003	270,605	\$410,747			

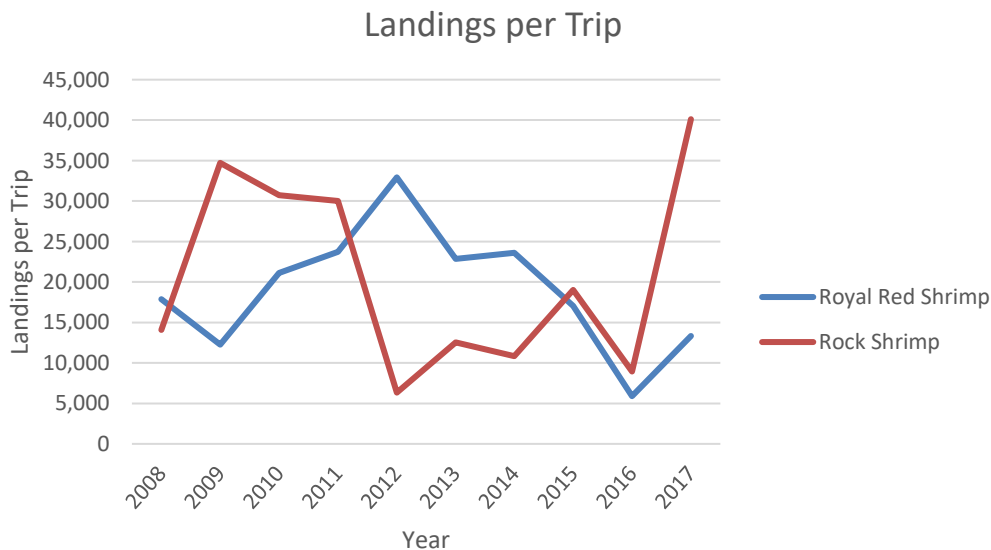
The royal red shrimp fishery includes vessel that fish in the rock shrimp and penaeid fisheries. The effort in the royal red shrimp fishery off Florida peaked in 2013 (41 trips) and has declined since (Figure 1). Since some fishermen may target both rock shrimp and royal red shrimp, effort

for both stock were plotted together. Effort in the rock shrimp fishery off Florida dropped from 2008 and 2009 and has remained between 30 and 70 trips per year. Although the royal red shrimp fishery had a consistent decline in number of trips, the number of trips in the rock shrimp fishery has been variable.



**Figure 1.** Number of trips off Florida reporting landings royal red shrimp and rock shrimp. Data were accessed from [FWC’s Commercial Landings Query Page](#).

Catch per trip was calculated for trips catching rock shrimp and royal red shrimp off Florida from 2008 to 2017 (**Figure 2**). The catch per trip for royal red shrimp peaked in 2012, which corresponded to the lowest catch per trip for rock shrimp. Since the catch per trip of royal red shrimp and rock shrimp have had opposite trends.



**Figure 2.** Catch per trip off Florida for royal red shrimp and rock shrimp. Data were accessed from [FWC’s Commercial Landings Query Page](#).

## Temperature Impacts

Several species have been observed to be moving further northward due to increasing ocean temperature. White shrimp migration has been noted in both fishery dependent and independent data sets. Other species of shrimp may migrate northward or move to deeper waters. It is unknown if royal red shrimp may find thermal refuge in deeper waters or may migrate northward.

## Parasites

There has been an increasing trend in black gill disease for Penaeid shrimp in the South Atlantic region. Black gill typically shows up in late summer when waters are warm. Northern red shrimp have also been documented to have a different variety of black gill. It is not known if royal red shrimp are impacted by black gill disease.

## Catch

*How has the fishery changed since it began in 1990?*

*How has the fishery changed in the last five years?*

*How or when do fishermen decide to target royal red shrimp over other species?*

*Has the fishing season changed over time?*

*What has been driving the change in catch per trip?*

## Social and economic influences

*Has price and/or demand for royal red shrimp changed?*

*What communities are dependent on the royal red shrimp fishery or deepwater shrimp fishery?*

*Have changes in infrastructure (docks, marinas, fish houses) affected fishing opportunities for royal red shrimp?*

*How have fishermen and communities adapted to changes in the royal red shrimp or deepwater fishery?*

## Environmental/ecological

*Have there been any changes in the royal red distribution over time? Are they moving north or to deeper water?*

*Is black gill present in royal red shrimp? If so, has there been any change in the prevalence of black gill disease?*

*Has there been a change in abundance of royal red shrimp?*

*Are small royal red shrimp in the same area as large royal red shrimp?*

*Has the abundance of small shrimp changed in the past five years?*

## Other

*What is else important to know about royal red shrimp?*