

Biological Review of the 2021 Texas Shrimp Closure

A Report to the Gulf of Mexico Fisheries Management Council

Gulf Branch

Sustainable Fisheries Division

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Introduction

In 1981, the Gulf of Mexico Shrimp Fishery Management Plan (FMP) was implemented with the primary objective to increase the yield of brown shrimp harvested from Texas offshore waters. Since then, various aspects of the Texas closure management measure have been analyzed and reported on by scientists at the Southeast Fisheries Science Center (SEFSC). This report contains an overview of selected effects of the 2021 Texas closure and will be presented by the SEFSC to the Gulf of Mexico Fishery Management Council (GMFMC), Shrimp Advisory Panel at the March 2022 meeting.

Background

The Shrimp FMP regulates fishing for brown shrimp in the Exclusive Economic Zone (EEZ) off the coast of Texas. Provisions in the Shrimp FMP prohibited brown shrimp fishing from the coastline to 200-miles off Texas during the periods: May 22-July 15, 1981; May 26-July 14, 1982; May 27-July 15, 1983; May 16-July 6, 1984; and May 20-July 8, 1985. In 1986-1988 only the portion of the EEZ from 9 to 15-miles was closed to fishing. In 1986, the area was closed May 10-July 2, while in both 1987 and 1988, Texas offshore waters were closed from June 1-July 15. In 1989, the 200-mile closure again went into effect and has remained in effect each year since that time. Closure periods were: June 1-July 15, 1989; May 15-July 8, 1990; May 17-July 6, 1991; May 15-July 6, 1992; May 15-July 6, 1993; May 13-July 7, 1994; May 15-July 15, 1995; June 1-July 15, 1996; May 15-July 15, 1997; May 15-July 8, 1998; May 15-July 15, 1999; May 11-July 5, 2000; May 15-July 8, 2001; May 15-July 15, 2002, May 15-July 15, 2003, May 15-July 15, 2004, May 15-July 15, 2005, May 15-July 10, 2006.

Since 2006, the closure period has consistently occurred from May 15 to July 15 each year. State of Texas regulations, implemented in 1960, prohibited shrimp fishing in the territorial sea off Texas during these same periods, with the exception of allowing white shrimp fishing from the beach out to 4 fathoms. In 1990, however, state law prohibited all shrimping activities including the 4-fathom daytime fishery. This closure has been in effect during each of the subsequent closures (1991-present).

The management objectives of the Texas closure regulation (as specified in the Shrimp FMP) are to increase the yield of brown shrimp and eliminate the waste of the resource caused by discarding undersized shrimp caught during a period in their life cycle when they are growing rapidly. The objective of the 1960 through 1980 Texas territorial sea closures was to ensure that a substantial portion (>50%) of the shrimp in Gulf waters had reached 65 tails/pound or 112 mm in length by the season's opening. Thus, this temporary closure of the offshore fishery from mid-May to mid-July each year results in larger shrimp to the fishery and a higher market value.

The state trip ticket systems in Louisiana, Mississippi, Alabama, and Florida, collect shrimp statistics on the catch, effort, and fishing location of shrimp vessels operating in the Gulf of Mexico. These data provide information on the species, size and location of capture, as well as information on the catch rates and fishing effort of the vessels in the fleet. In addition, the electronic logbook program collects detailed data on fishing location and effort for the offshore fishing fleet (Gallaway et al. 2003).

Texas Fishing Trends

In Texas bays from May through August 2021, 511,194 pounds of brown shrimp were landed in inshore Texas waters. This represents below average landings relative to the historical inshore landings for this period since the closure began in 1981 (1981-2011 average was 4.2 million pounds).

Offshore landings during May through August 2021 was 10.4 million pounds, with 10.1 million pounds (96.8%) of the catch landed in the July through August period. The total landings for this period represent a below average level when compared to average landings since EEZ closures were initiated in 1981 (1981-2011 average was 13.6 million pounds). During the July through August 2021 period only about 4.6% of the landed shrimp were in the > 67 count size category (Figure 1).

Texas Shrimp Landings by Region

The distribution of shrimp landings in Texas ports was examined to determine if changes in shrimp landings at the various ports had occurred since the initial closure in 1981. In previous years, the May through August Texas shrimp catch was summarized by port of landing. Beginning in 2020, shrimp landings data come from state reported Trip Tickets (i.e., from dealer reported landings and no longer from NMFS port agent interviews). Since landed catch is typically only reported on Trip Tickets using a county code and not with a port code (as was the case with NMFS port agent interviews), the May through August Texas shrimp catch is now being summarized across the three Texas regions (lower, middle and upper Texas) and no longer by port of landing.

Figure 2 shows the proportion of landings by lower Texas ports (including Aransas, Nueces, Port Isabel, and Brownsville ports), middle Texas coast ports (including Brazoria, Port Lavaca, Matagorda, Palacios and Seadrift ports), and upper Texas ports (including Jefferson, Chambers, Galveston, Harris, and Kemah ports). Among the three regions, upper Texas had the highest percentage of landings (48.5%), compared to 22.9% and 28.5% for the middle and lower Texas regions, respectively. The upper and lower Texas regions experienced a slight proportional increase in landings relative to last year, whereas the proportion of landings in the middle Texas region was slightly lower this year (22.9% < 27.8%).

White Shrimp Catch off Texas

For the 30th consecutive year, the 0-4 fathom white shrimp fishery off Texas has been closed in conjunction with the Texas closure. Following the 2021 closure, most of the offshore white shrimp landed in July were in the 15-20 count size range (Figure 3). This year 368,962 pounds of white shrimp were landed in offshore Texas waters during July, which is less than the average landings, from 1980-2020 (442,409 pounds). Most of the offshore Texas white shrimp landed in August were in the 15-20 count size range (Figure 4). The 2021 offshore white shrimp landings in August (328,251 pounds) were lower than the average landings for August (517,800 pounds), from 1980-2020.

References

Gallaway, B. J., J. G. Cole, L. R. Martin, J. M. Nance, and M. Longnecker. 2003. Description of a simple electronic logbook designed to measure effort in the Gulf of Mexico shrimp fishery. *North American Journal of Fishery Management*: 23: 581-589.

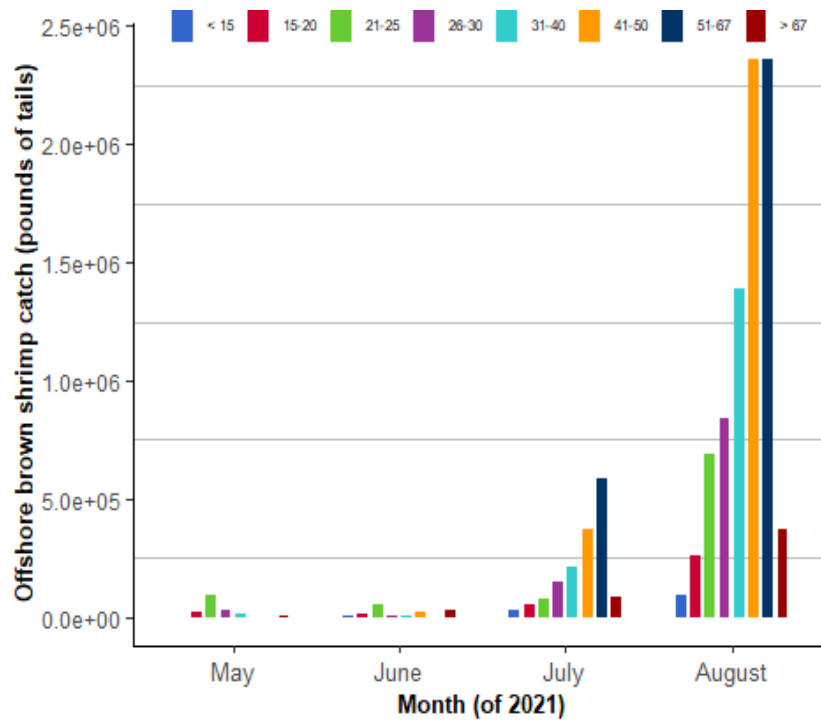


Figure 1. Size composition of brown shrimp catch from offshore Texas, May-August 2021.

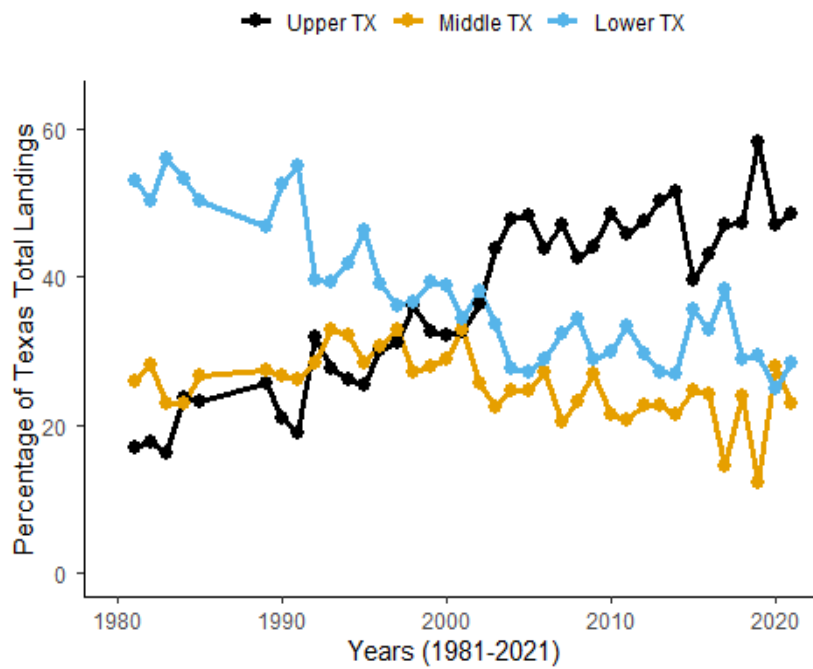


Figure 2. Proportion landed by region (upper, middle and lower Texas ports), from May and August (1981-2021).

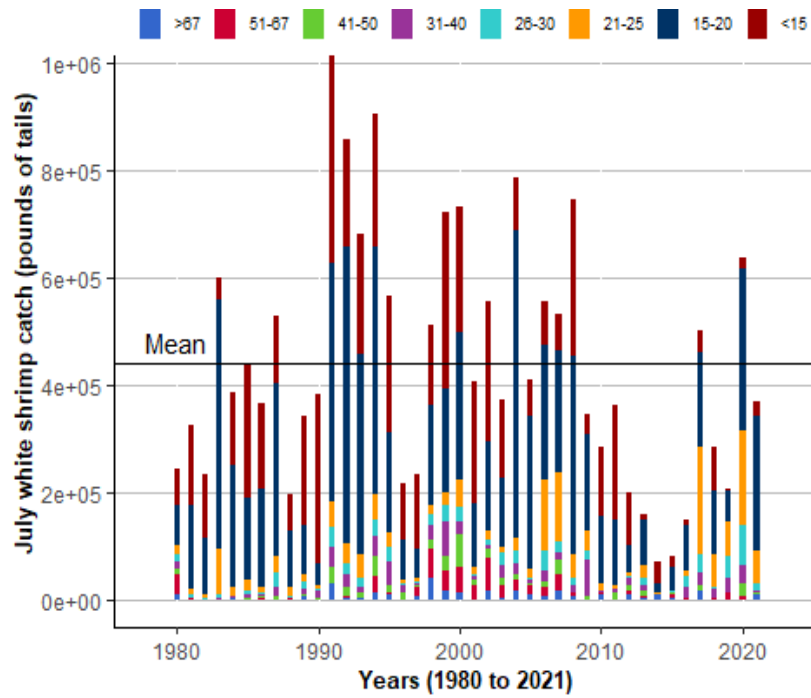


Figure 3. Size composition of Texas July offshore white shrimp catch, 1980-2021.

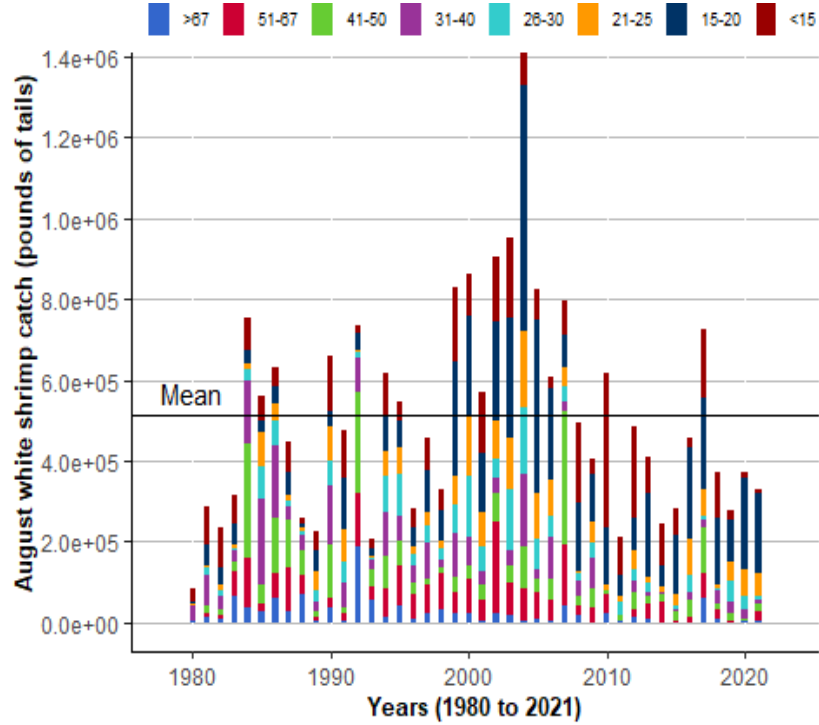


Figure 4. Size composition of Texas August offshore white shrimp catch, 1980-2021.