

# Fishery-independent Catch of Young-of-the-Year Red Snapper in the Texas Territorial Sea, 1985–2007

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*Abstract:* Between 1985 and 2007, Texas Parks and Wildlife conducted a trawl survey in the Texas Territorial Sea, extending from the beach out to 16.7 km and within 24.1 km on either side of passes at Sabine Pass, Galveston, Matagorda, Aransas Pass, and Brazos-Santiago Pass, where sampling occurred in an area 48.2 km north from the Texas-Mexico border. All samples were within NMFS statistical zones 17–21. Random sample locations were stratified by Gulf area and 16 month<sup>-1</sup> stratum<sup>-1</sup> were collected ( $n = 21,353$ ). Mean total length (TL) of red snapper (*Lutjanus campechanus*) was 90 mm ( $\pm 0.31$  SE,  $n = 7,688$ ). Coastwide mean catch h<sup>-1</sup> (CPUE) was 2.1 ( $\pm 0.11$  SE), although catch rates were low along the northern Texas coast with only 16.6% of red snapper CPUE from Sabine Pass to Matagorda (zones 17–19). Aransas Pass (zone 20) and Brazos-Santiago Pass (zone 21) dominated red snapper catches with 43.8% and 39.6% of total CPUE, respectively. Coastwide mean CPUE was higher during fall ( $5.6 \pm 0.36$  SE) than in any other season and highest in September ( $8.1 \pm 0.67$  SE). Time series analysis of monthly CPUE revealed water temperature and one-month lagged commercial shrimping effort were statistically significant. Dissolved oxygen and salinity were not significant although the observed range of these variables was narrow. Recent increases in red snapper CPUE from 2000–2007 may be associated with reduced bycatch due to decreasing commercial shrimping effort resulting from increased fuel prices, decreased ex-vessel prices, competition from foreign imports, and areal and seasonal closures off Texas.

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