



Pigfish, *Orthopristis chrysoptera*
(Linnaeus, 1766)



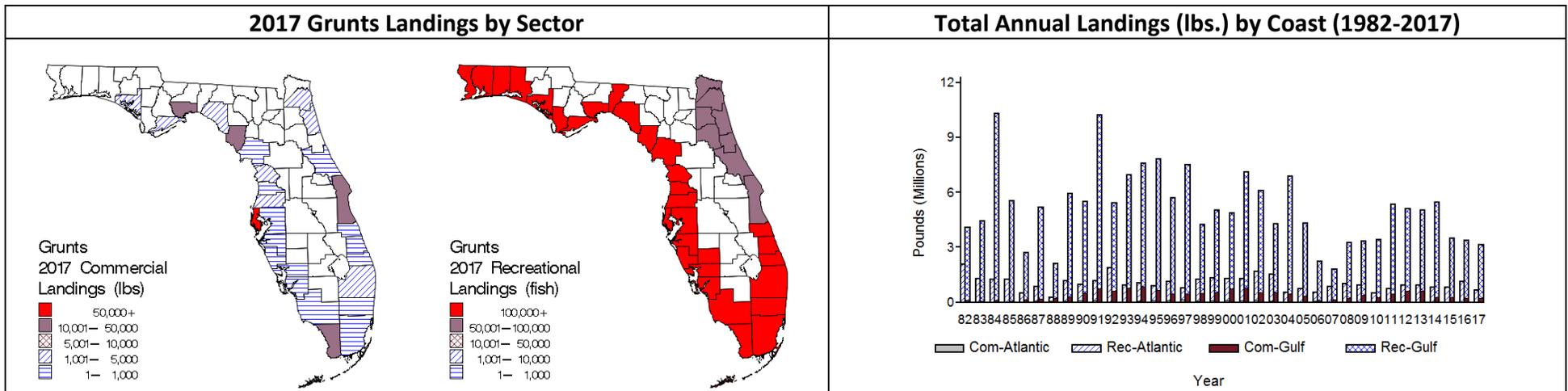
White Grunt, *Haemulon plumierii*
(Lacepède, 1801)



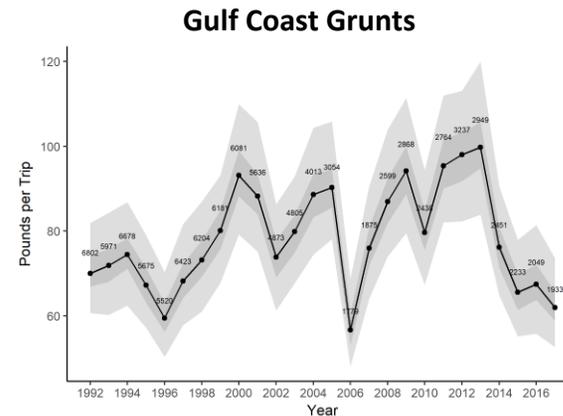
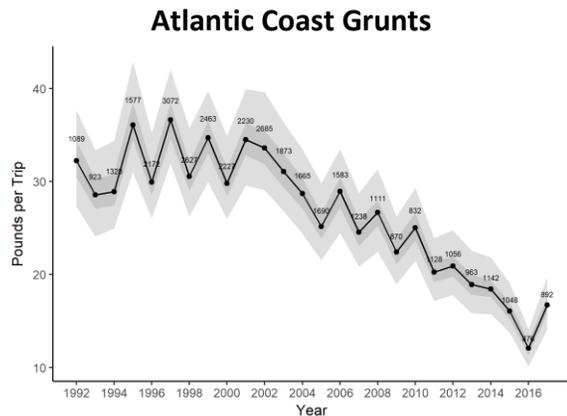
Tomtate, *Haemulon aurolineatum*
(Cuvier, 1830)

Life History

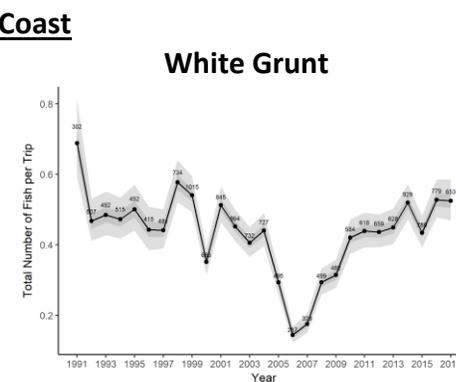
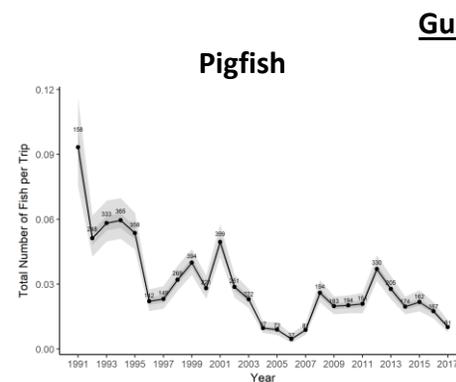
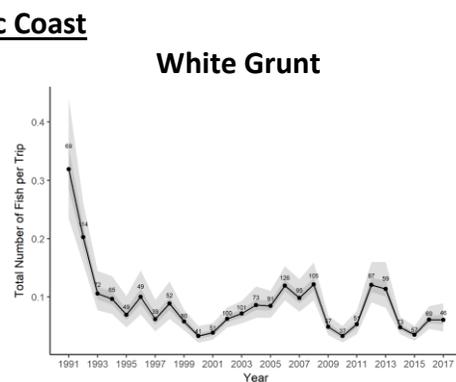
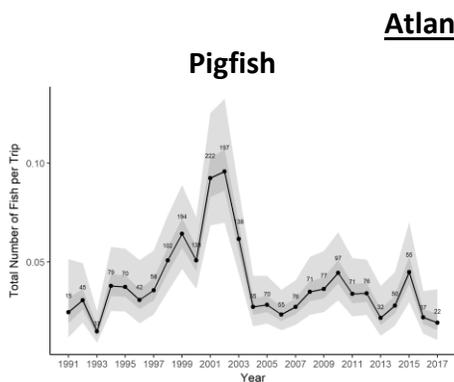
Several different species of grunt are caught in Florida waters. Inshore fishers typically encounter Pigfish, *Orthopristis chrysoptera*, while offshore fishers are more likely to encounter White Grunt, *Haemulon plumierii*, or to a lesser extent tomtate, *H. aurolineatum*. Numerous grunt species with more tropical affinities are also caught in Florida waters including black margate, *Anisotremus surinamensis*; porkfish, *A. virginicus*; margate, *H. album*; French grunt, *H. flavolineatum*; cottonwick, *H. melanurum*; sailors choice, *H. parra*; and striped grunt, *H. striatum*. Darcy (1983a, 1983b) summarized life histories of Pigfish, White Grunt, and tomtate. Most grunt are small- to medium-sized fishes that occur in areas of moderate relief or with seagrass beds. White Grunt reach about 21" total length (TL) and 9–12 years old; Pigfish reach 18" standard length (SL) and 3–4 years old. White Grunt mature at age 3 or 10.6" fork length (FL), and Pigfish mature at age 2 or 7.4" FL. Peak spawning activity for White Grunt and Pigfish occurs during spring; although, some year-round spawning may occur in offshore areas. Growth is rapid until maturity is reached. Findings from a study of White Grunt life history in the eastern Gulf of Mexico indicate that White Grunt get as old as 18 years (Murie and Parkyn 2005). Growth is rapid through ages 4 or 5 then reaches a plateau at about 275–325 mm total length (TL) and showed sex-specific and regional differences. An estimate of total annual mortality from catch curves was 0.30 for White Grunt sampled from the headboat fishery catch in the eastern Gulf of Mexico during 1998 (Murie and Parkyn 2002). Predators of Pigfish included spotted seatrout, sand seatrout, and sharks and rays (Darcy 1983b). Randall (1967) reported dog snappers as one of the major predators feeding on White Grunts.



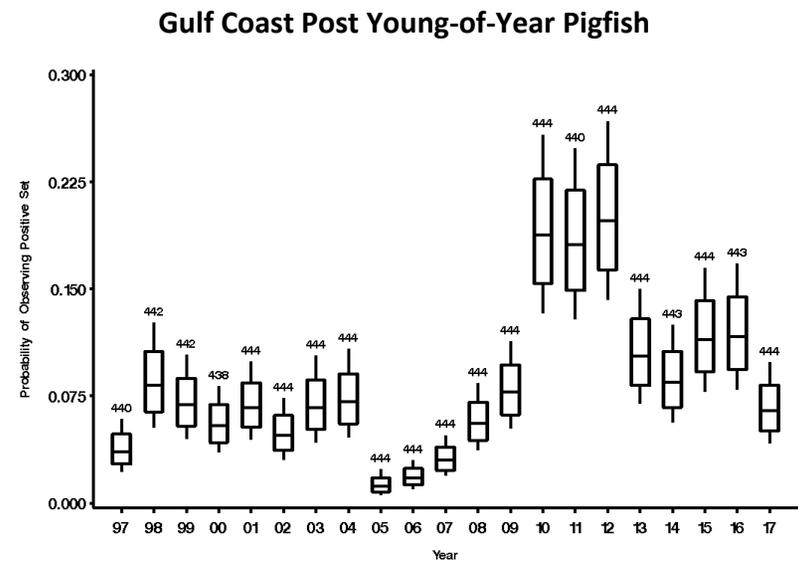
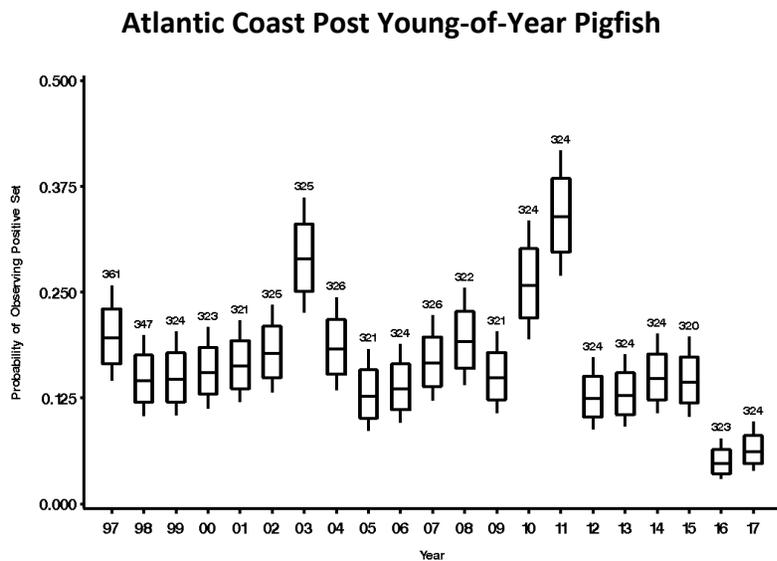
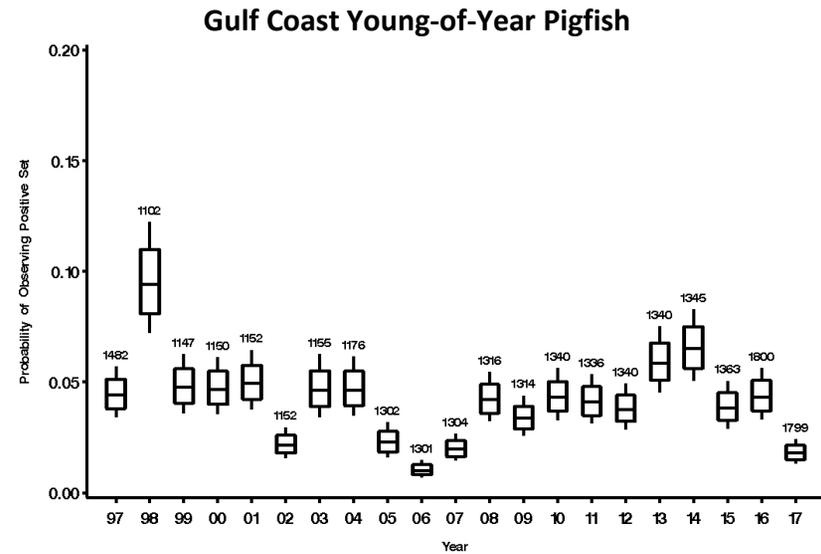
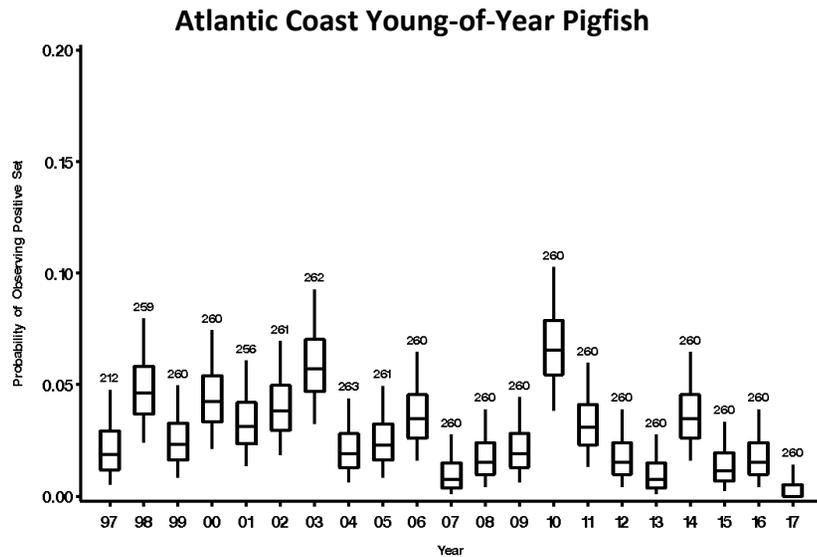
Fishers landed 3,785,372 pounds in 2017 which were 30% lower than the previous 5-year average (2012-2016). Coastwide, 82.3% of these were from the Gulf and 17.7% were from the Atlantic. Recreational landings constituted 93.7% of the total landings.



Standardized Commercial Catch Rates: Atlantic coast commercial catch rates fluctuated with no apparent trend through 2001 then declined steadily through 2017. Gulf coast commercial landings rates have fluctuated widely since 1992 with high catches in 2000, 2005, 2009, and 2011-2013; low catches were in 1996, 2006, and 2015-2017. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.

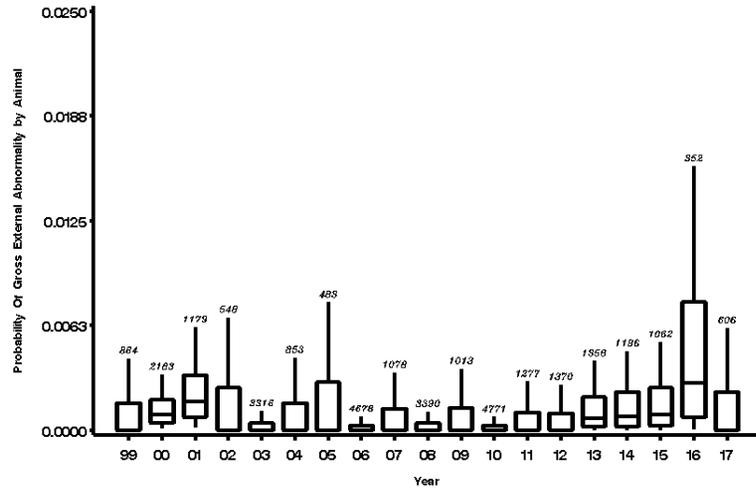


Standardized Recreational Total Catch Rates: Total catch rates for Pigfish on the Atlantic coast increased in trend from 1991-2002, sharply declined through 2004, and have remained stable through 2017. On the Gulf coast, catch rates decreased through 1996, increased through 2001, sharply declined in 2006, increased again through 2012, and markedly declined again through 2017. White Grunt catch rates on the Atlantic coast displayed an initial decline from 1991-1993, after which rates stabilized. Recreational catch rates on the Gulf coast fluctuated from 1992-2004, markedly declined through 2006, and have since increased to former levels. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.

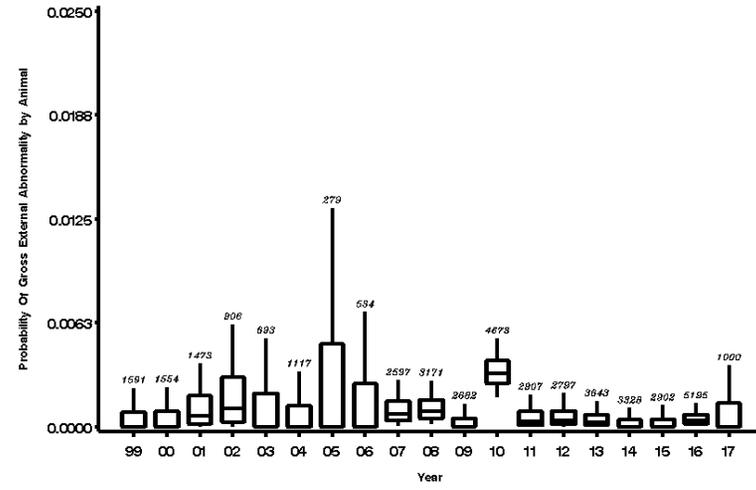


Fishery-Independent Monitoring: Indices of YOY Pigfish abundance on the Atlantic coast show cyclic fluctuations increasing trends followed by drops in abundance in 2004, 2007, 2013, and 2017. On the Gulf coast abundances have remained fairly stable save strong year class in 1998 and low abundances in 2006 and 2017. Post-YOY abundances of Pigfish on the Atlantic coast have remained stable with higher abundances in 2003 and 2010-2011, but have declined in 2016-2017. On the Gulf coast abundances were variable from 1998-2004, declined sharply in 2005, showed a steep upward trend through 2012, then decreased again to earlier timeseries levels. Abundances of Post-YOY have since declined, approaching historic levels in 2013-2015.

Atlantic Coast Proportion to Total Collected



Gulf Coast Proportion to Total Collected



Atlantic Coast Percentage of Abnormality Types

No Data Available

Gulf Coast Percentage of Abnormality Types

No Data Available

Fish Health: Occurrence of gross external abnormalities in Pigfish was low throughout the time series and varied without trend for both coasts, however a notable increase occurred on the gulf coast in 2010.

Stock Status

Current Condition: unknown

Management History: Estimates of White Grunt biomass indices showed a flat to slight downward trend on both coasts of Florida (Murphy *et al.* 1999). During 1994-1998, recruitment of White Grunt varied without trend on the Atlantic coast; recruitment has varied without trend on the Gulf coast during 1987-1998. The 1999 stock assessment indicated that White Grunt populations in Florida were likely to be able to sustain their current levels of fishing mortality rates (0.47–0.49 per year on the Atlantic coast and 0.25–0.28 per year on the Gulf coast; Murphy *et al.* 1999). Estimated spawning potential ratios ranged from 32% to 35% on the Atlantic coast and from 43% to 46% on the Gulf coast. Based on growth and age information collected in South Florida (Potts and Manooch 2001), Potts (2000) used an uncalibrated separable virtual population analysis to estimate population size in numbers-at-age by year. Age at entry for southeast Florida was 1 year and age at full recruitment was 3 years. With natural mortality (M) set equal to 0.3 per year, fishing mortality on fully recruited ages was 0.33 per year for southeast Florida. Based on $M = 0.3$, yield per recruit was 0.24 pounds, and the spawning potential ratio (SPR) for White Grunt in southeast Florida was estimated at 61% (Potts, 2000). Potts (2000) also noted that the 1998 fishing mortality rate could be increased by a factor of three to increase the yield per recruit by 40% while maintaining the stock above 40% SPR. Finally, de Silva and Murphy (2001) noted the difficulties in estimating commercial catch of White Grunt when assumptions were required about the species composition within the inclusive ‘grunt’ categories. No formal stock assessment for Pigfish is available at this time.