



Gulf Flounder, *Paralichthys albigutta*
(Jordan & Gilbert, 1882)

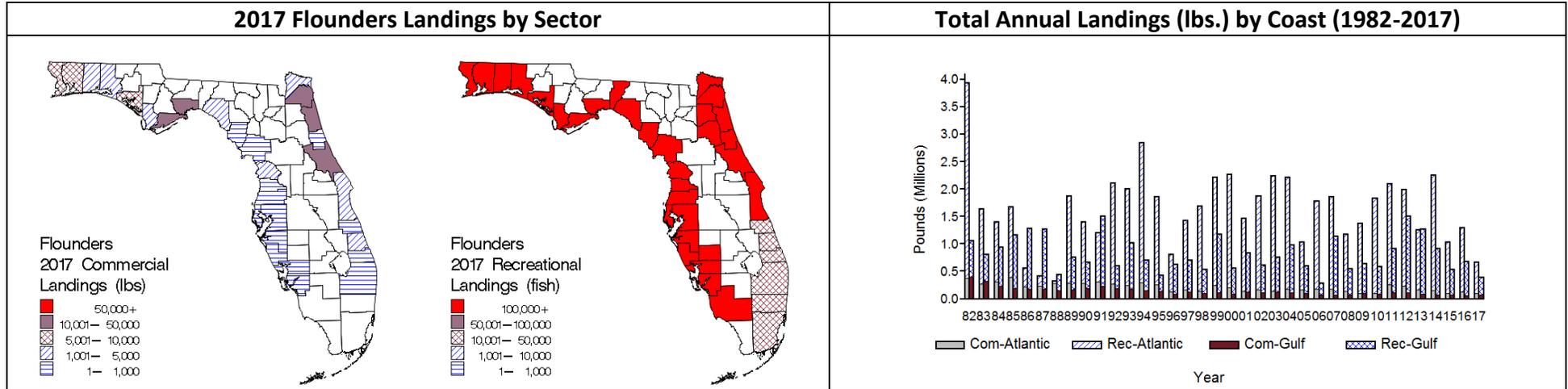
Flounders, *Paralichthys* spp.



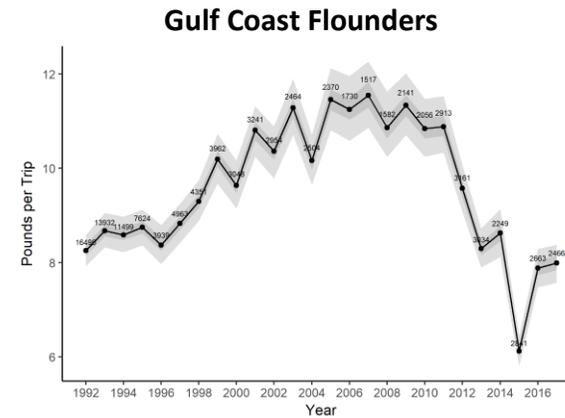
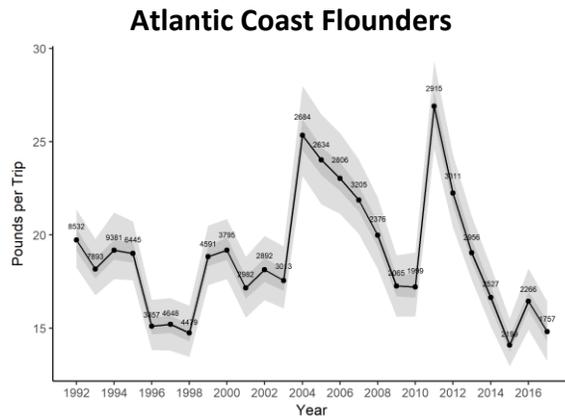
Southern Flounder, *Paralichthys lethostigma*
(Jordan & Gilbert, 1884)

Life History

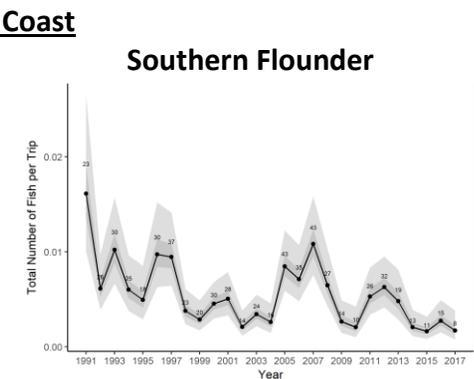
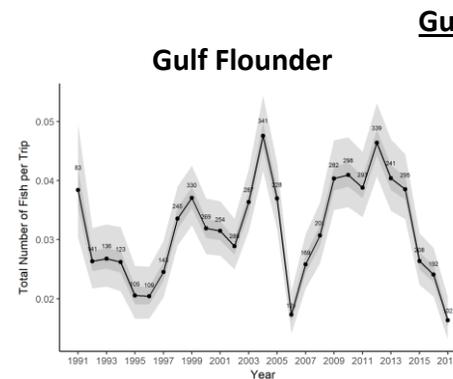
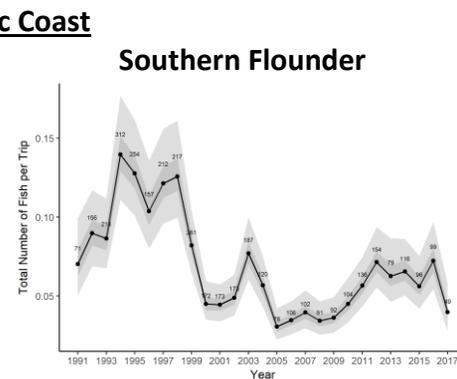
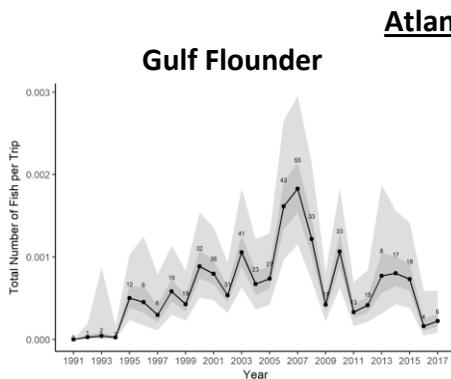
Nearly all flounders landed by anglers in Florida are one of three species in the genus *Paralichthys*: Gulf Flounder *P. albigutta*; Southern Flounder, *P. lethostigma*; or Summer Flounder, *P. dentatus*. Gulf Flounder are the only species to range along the entire Florida coast. Summer Flounder are only a minor component of the flounder landings in northeast Florida; their center of distribution is off the U.S. Mid-Atlantic Bight. Southern Flounder are generally only found north of the Loxahatchee River on the Atlantic coast and north of the Caloosahatchee River on the Gulf coast. Southern Flounder are found on silt and mud, and Gulf Flounder are found mostly on sand. Studies have shown that female Southern Flounder reach about 28" and 7 years of age while female Gulf Flounder reach only about 18" and 3 years of age (Wenner *et al.* 1990; Stokes 1977). More recently, Fitzhugh *et al.* (1999) reported that Gulf Flounder attain older ages than previously thought: the oldest Gulf Flounder found in offshore waters off northwest Florida was age 11. While estuarine samples of Southern Flounder show maximum ages of about 4 years (Stunz *et al.* 2000; Fitzhugh *et al.* 1999), older fish probably occur in shelf waters. Males of both species do not get as large as females. Female Southern Flounder mature at age 3 or 4 (Wenner *et al.* 1990), and female Gulf Flounder mature at age 1 (Fitzhugh *et al.* 1999). Both species spawn in offshore waters during late fall–winter (65 ft–200 ft). Gulf Flounders are benthic carnivores. Large juveniles feed primarily on small fish and crustaceans (shrimp and crabs). Adults feed on schooling fish such as menhaden, bay anchovy, pinfish, grunts, pigfish, Atlantic croaker, and mullets (Springer and Woodburn 1960; Topp and Hoff 1972; Benson 1982).



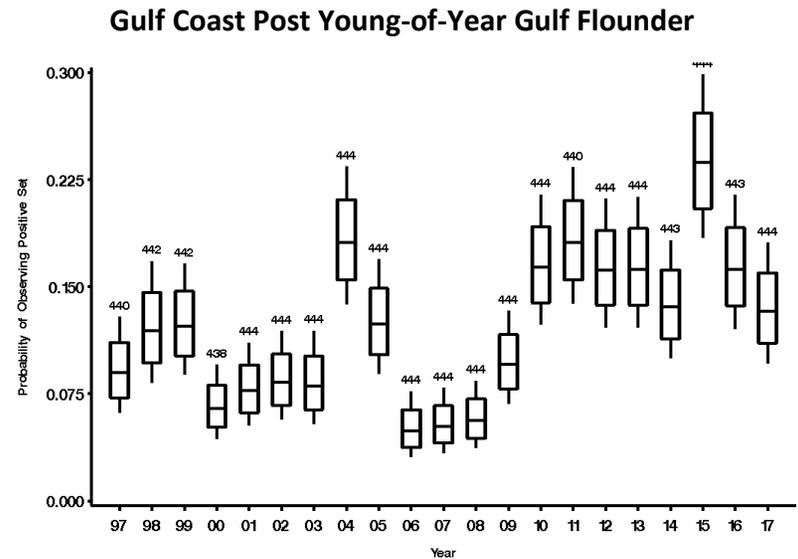
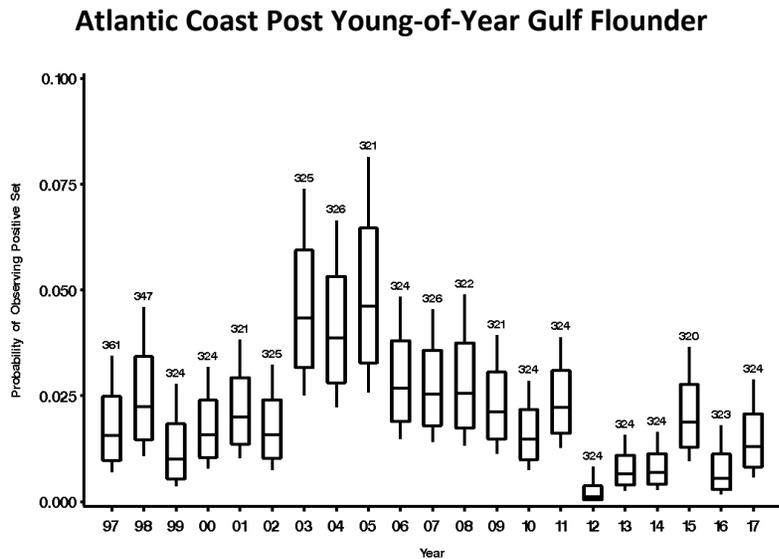
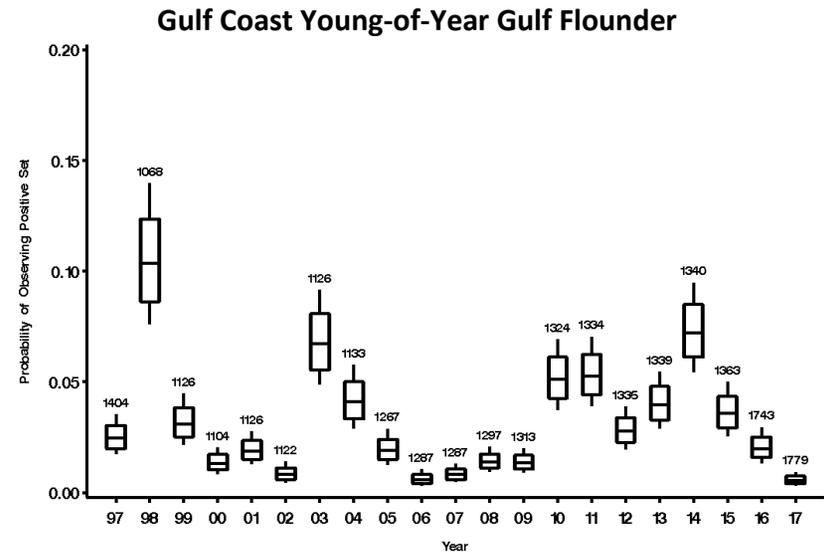
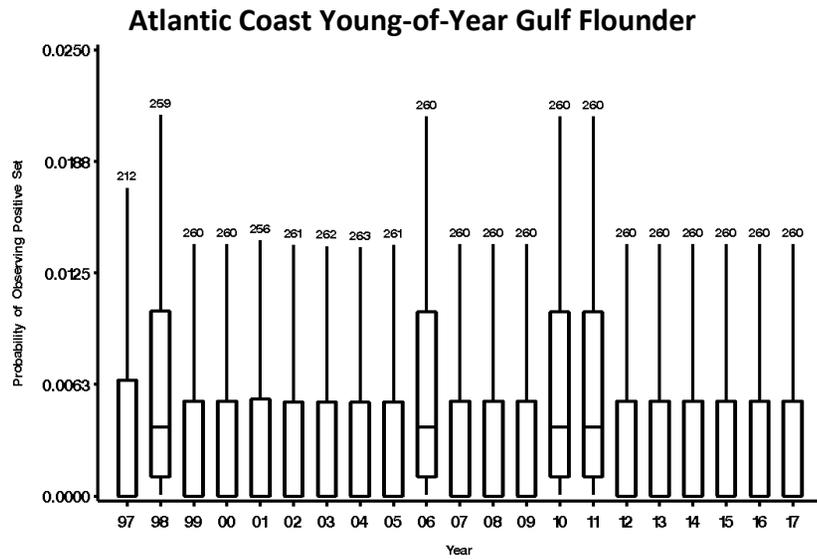
Fishers landed 1,046,460 pounds in 2017 which were 58.8% lower than the previous 5-year average (2012-2016). Coastwide, 63.1% of these were from the Atlantic and 36.9% were from the Gulf. Recreational landings constituted 83.9% of the total landings.



Standardized Commercial Catch Rates: Atlantic coast commercial catch rates for mixed flounder species were steady from 1992-2003, then peaked in 2004 and steadily decreased through 2010, followed by another peak in 2011 and steep decline through 2017. Gulf coast commercial landings rates variably increased through 2011, markedly declined through 2015, then began to increase in 2016-2017. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.

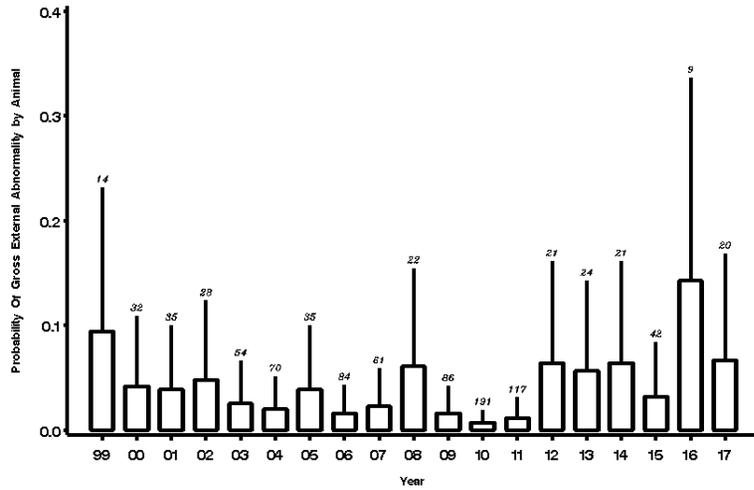


Standardized Recreational Total Catch Rates: Total catch rates for Gulf Flounder on the Atlantic coast increased in trend from 1995-2007 followed by a fluctuating decline through 2017. On the Gulf coast, catch rates decreased through 1996, increased through 2004, sharply declined in 2006, increased again through 2012, and markedly declined again through 2017. Southern Flounder catch rates on the Atlantic coast display a declining trend from 1994 through 2005, after which rates have slowly increased. Recreational catch rates on the Gulf coast show a gradual and highly variable decline throughout the time series. 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 abundance for young-of-the-year (YOY) Gulf Flounder were consistently low on the Atlantic coast and variable on the Gulf coast with stronger recruitment in 1998, 2003, and 2010-2014. Abundances of post-YOY Gulf Flounder on the Atlantic coast were low from 1997-2002, show a steep upward trend in 2003-2005 before decreasing to lower levels through 2017. On the Gulf coast, post-YOY gulf flounder show cyclic patterns of abundance with peaks in 1998-1999, 2004, 2010-2013, and a record high in 2015.

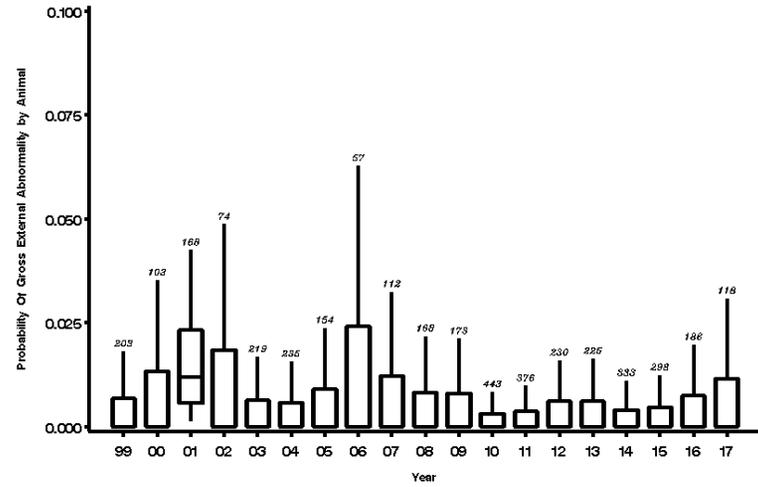
Atlantic Coast Proportion to Total Collected



Atlantic Coast Percentage of Abnormality Types

No Data Available

Gulf Coast Proportion to Total Collected



Gulf Coast Percentage of Abnormality Types

No Data Available

Fish Health: Incidences of gross external abnormalities were low and variable for both coasts.

Stock Status

Current Condition: unknown

Management History: Murphy et al. (1994) found that adequate information was not available to assess the condition of Southern or Gulf Flounder stocks in Florida. A rough characterization of Gulf Flounder's population dynamics suggested it was unlikely that they were being fished at a maximum level of yield-per-recruit. Summer and Southern Flounder populations, which mature at a larger size and older age, are possibly more sensitive to fishing than Gulf Flounder. New life history information (Fitzhugh et al. 1999) needs to be considered in future assessments of Gulf or Southern Flounder.

Assessments of the status of summer flounder in North Carolina northward found that the stock abundance in 1993–1994 was at the lowest average level since the 1960s. Although data indicated that 1993 year-class was very poor, some stock rebuilding had occurred due to good recruitment in 1991 and 1992. The Atlantic States Marine Fisheries Commission (1982) developed a Fishery Management Plan for summer flounder for the stock north of North Carolina.

Recent models run for Florida flounder show that the net ban and size limits may have had a positive effect on flounder stock sizes by reducing effort in the commercial fishery (Chagaris et al. 2012). Both the ASPIC and catch-based MSY analyses indicated that overfishing was likely occurring during the period leading up to those regulations and that fishing mortality has decreased and stock sizes increased during the period after their implementation. Modeling approaches were informative but should be viewed with caution. To fully assess flounder stocks in Florida, species-specific age composition data over appropriate temporal and spatial scales is necessary (Chagaris et al. 2012). There is an Atlantic coast-wide assessment for Southern Flounder currently underway by North Carolina Division of Marine Fisheries.