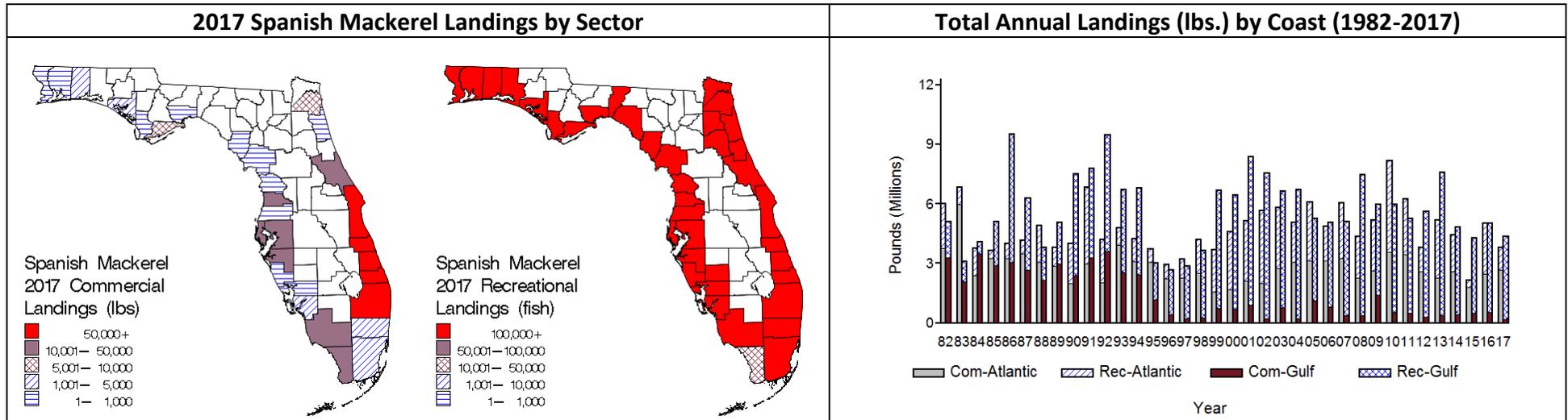


Spanish Mackerel, *Scomberomorus maculatus* (Mitchill, 1815)



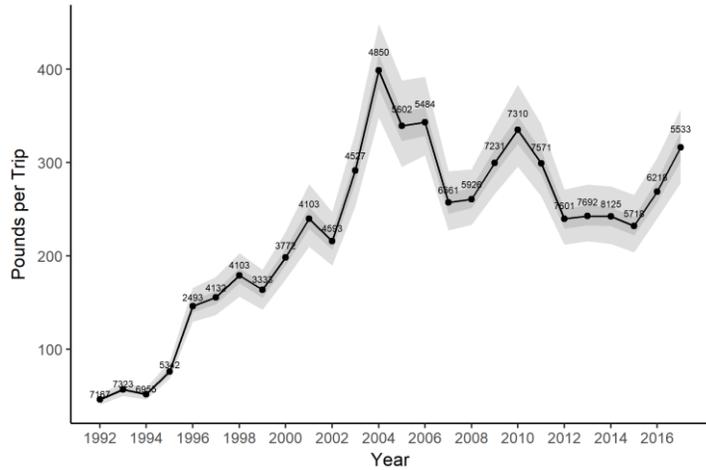
Life History

Spanish Mackerel is an epipelagic neritic species that inhabits coastal waters of the western Atlantic Ocean from the Gulf of Maine to Yucatan, Mexico. Depending on water temperature, Spanish Mackerel migrate seasonally along the coastline (Collette and Nauen 1983). In the eastern Gulf, these fish move northward during late winter and spring, appearing off the central west coast of Florida about April 1 (Moe 1972, Sutherland and Fable 1980). Movement continues westward and terminates along the northern Gulf coast. During fall, Spanish Mackerel migrate back southward to the wintering grounds in south Florida waters (Moe 1972, Sutherland and Fable 1980). Based on observed patterns of movement and spawning, it appears that one Atlantic and one or more Gulf groups of Spanish Mackerel occur in Florida waters. Spawning occurs from May through August. Larval and early juvenile Spanish Mackerel grow about 1.9 mm d⁻¹ for their first 23 days. Growth then increases to nearly 5 mm d⁻¹ until about 40 days of age, when growth slows to 2.1 mm d⁻¹ (Peters and Schmidt 1997). Ninety-five percent of females along the Atlantic coast are mature by age-1 and 14.1" fork length (FL). All males are mature at age-1 and 13.3" FL (Schmidt *et al.* 1993). Females can get older and grow to larger sizes than males. On the Atlantic coast, the oldest females reach about age-11 and 29.1" FL, and the oldest males reach about age-6 and 18.3" FL (Schmidt *et al.* 1993). In South Florida and the Gulf of Mexico, maximum observed ages were 9 years (28.8" FL) for females and 7 years (26.4" FL) for males (Fable *et al.* 1987). Spanish Mackerel are primarily piscivorous, preying heavily on small schooling fishes in the families Clupeidae, Carangidae, and Engraulidae (Saloman and Naughton 1983b).

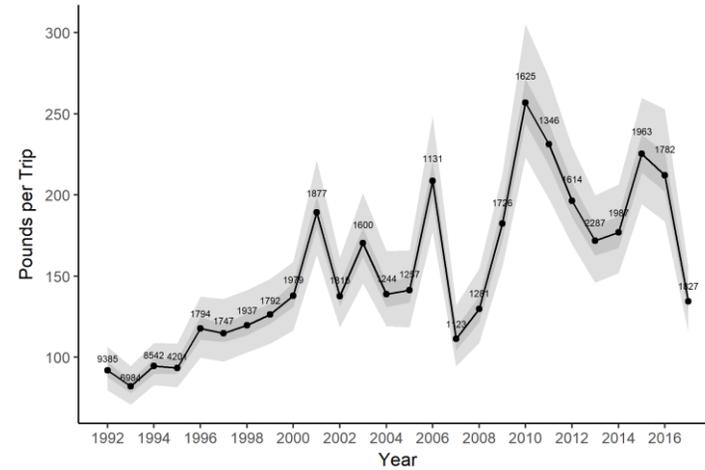


Fishers landed 8,157,757 pounds in 2017 which were 14.8% lower than the previous 5-year average (2012-2016). Coastwide, 53.2% of these were from the Gulf and 46.8% were from the Atlantic. Recreational landings constituted 65.2% of the total landings while commercial landings constituted 34.8%.

Atlantic Coast

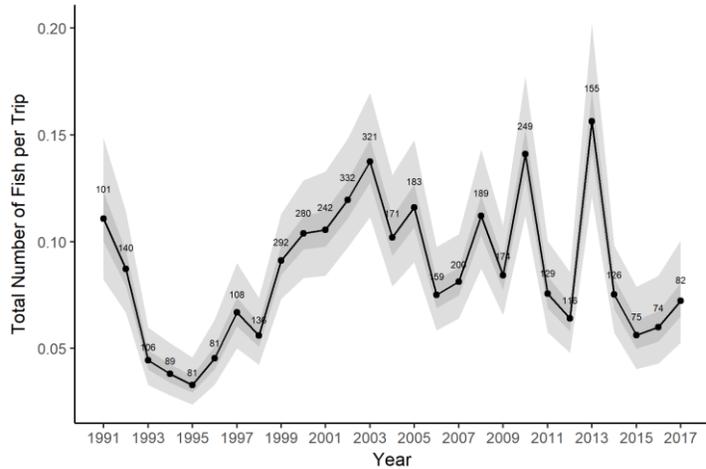


Gulf Coast

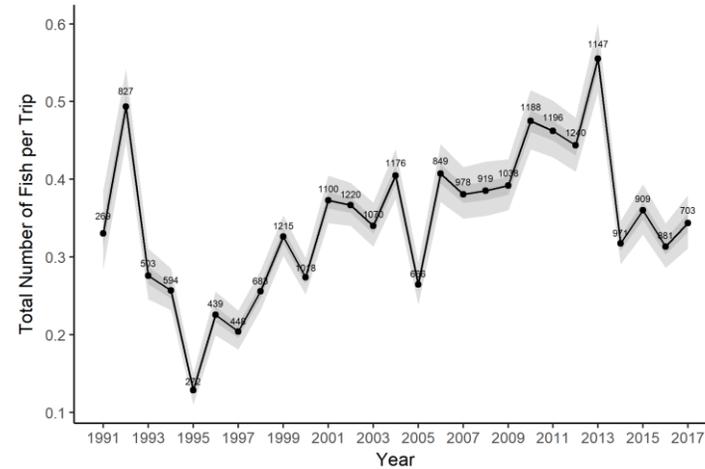


Standardized Commercial Catch Rates: Atlantic coast commercial catch rates varied in an upward trend through 2004 to remain at a greater level of variable catch through 2017. Gulf coast commercial landings rates steadily increased through 2000, then became widely variable through 2017. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.

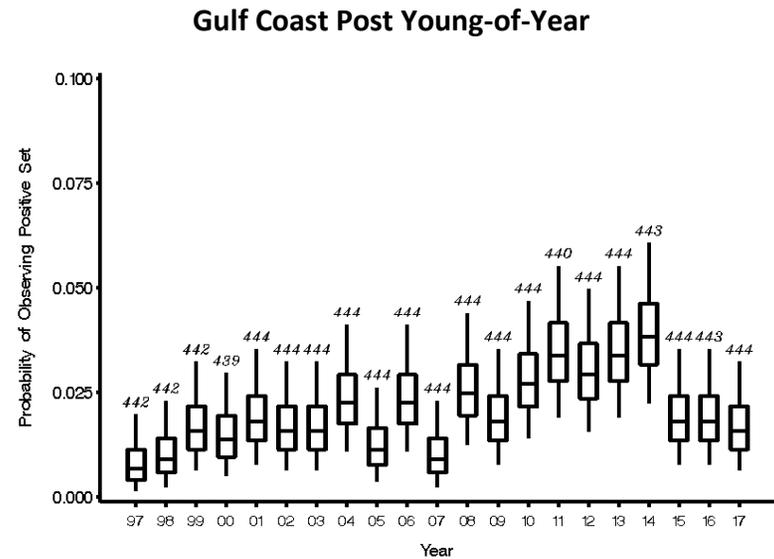
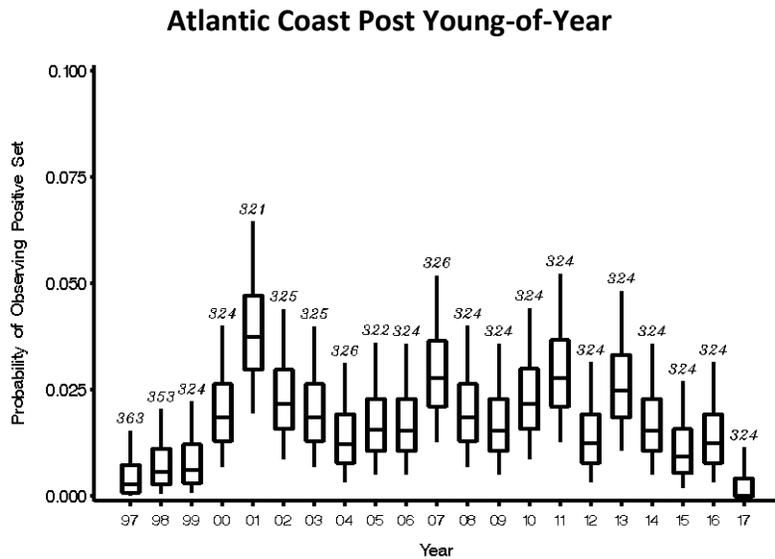
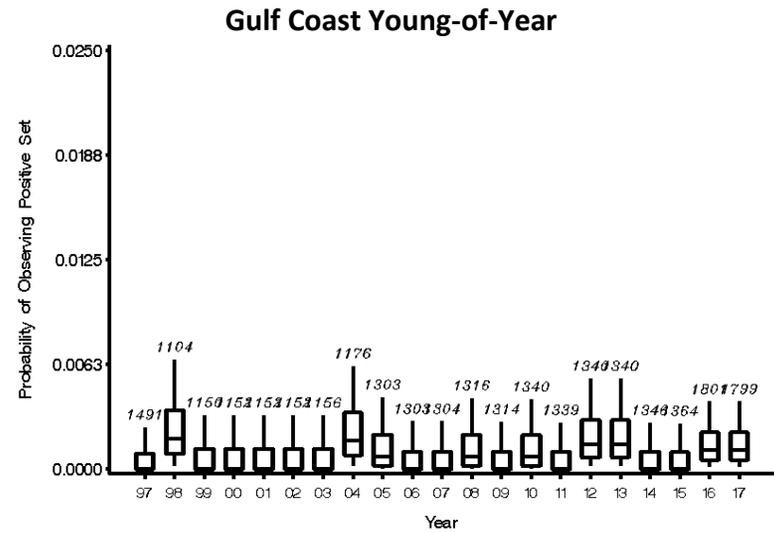
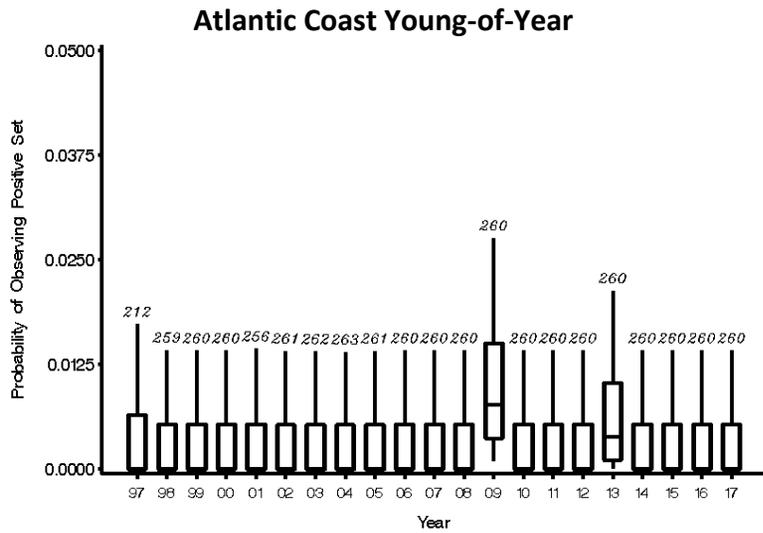
Atlantic Coast



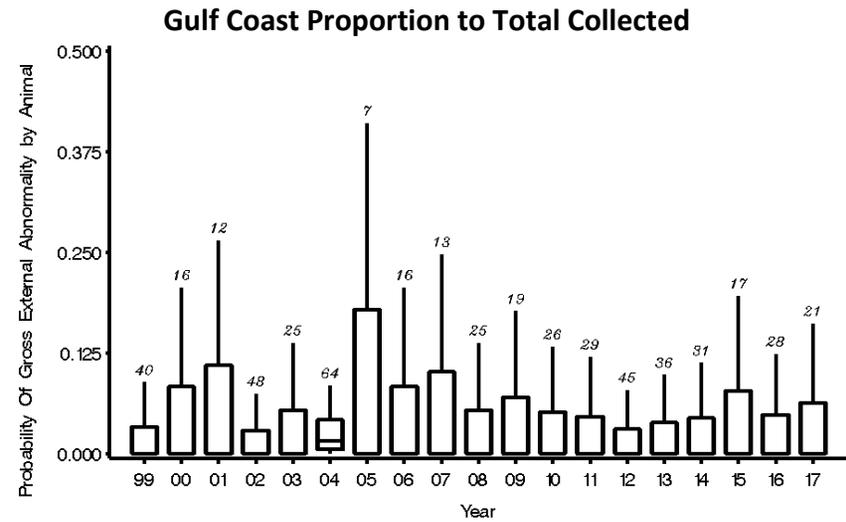
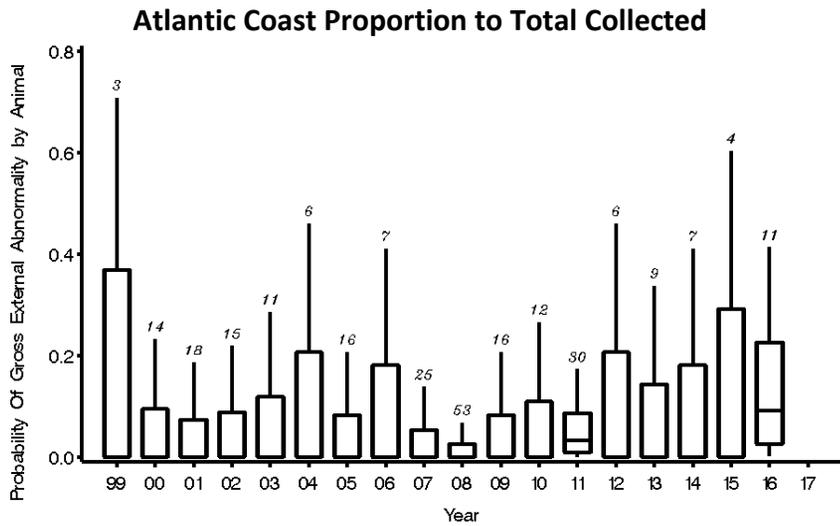
Gulf Coast



Standardized Recreational Total Catch Rates: Total catch rates for recreational anglers on the Atlantic coast declined initially through 1995, then increased through 2003, and decreased slightly to a widely variable trend. On the Gulf, total catch rates also initially declined through 1995, increased through 2013, then decreased again to a lower level of catch through 2017. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.



Fishery-Independent Monitoring: Encounter rates of young-of-the-year (YOY) Spanish Mackerel were low on both coasts during fishery-independent monitoring. Atlantic coast post-YOY abundances show cyclic patterns with peaks in 2001, 2007, 2011, 2013, and 2016. The Gulf coast post-YOY index has varied with gradual increase through 2014, then declined to earlier abundances through 2017.



Atlantic Coast Percentage of Abnormality Types

Gulf Coast Percentage of Abnormality Types

No Data Available

No Data Available

Fish Health: Gross external abnormalities observed have been low and variable on both coasts, with peaks observed in 2011 and 2016 on the Atlantic coast and 2004 on the Gulf coast. No data are currently available on the types of observed afflictions.

Stock Status

Current Condition: South Atlantic – not overfished nor undergoing overfishing; Gulf of Mexico - indeterminate

Management History: On both coasts of Florida, Spanish Mackerel have a 12 inch fork length minimum size limit for recreational and commercial fisheries. The National Marine Fisheries Service updated the assessments for the both the Atlantic and the U.S. Gulf of Mexico Spanish Mackerel stocks in 2003 (Mackerel Stock Assessment Panel 2003). The spawning stock of both groups was projected to continue to increase since dropping to lows in 1989 (Gulf) or 1991 (Atlantic). For both the Atlantic and Gulf Spanish Mackerel stocks in 2003, estimated F_{2003}/F_{MSY} suggested overfishing was not occurring as well as the estimated percentages of B_{2003} less than MSST indicated that the stocks were not depleted or overfished (Mackerel Stock Assessment Panel 2003). A benchmark assessment for South Atlantic Spanish Mackerel was conducted in 2008 incorporating a statistical catch-at-age model (SEDAR 17 2008a). The model was sufficient to conclude that overfishing was not occurring in 2007, but point estimates and overfished status could not be determined due to the amount of uncertainty. In 2013, another assessment was conducted for both Gulf of Mexico and south Atlantic stocks using an age-structured model. Results indicated the south Atlantic Spanish Mackerel stock is not overfished ($SSB_{2011}/SSB_{MSY} = 1.49$; $SSB_{2011}/MSST=2.29$) and that overfishing is not occurring ($F_{2009-2011}/F_{MSY} = 0.526$; $F_{2011}/F_{MSY}=0.57$) (SEDAR 28 2013). However, no clear stock status could be determined for the Gulf of Mexico stock as the reviewers differed on the appropriateness of the assessment for making such determinations.

South Atlantic Spanish Mackerel (SEDAR 28 2013)

