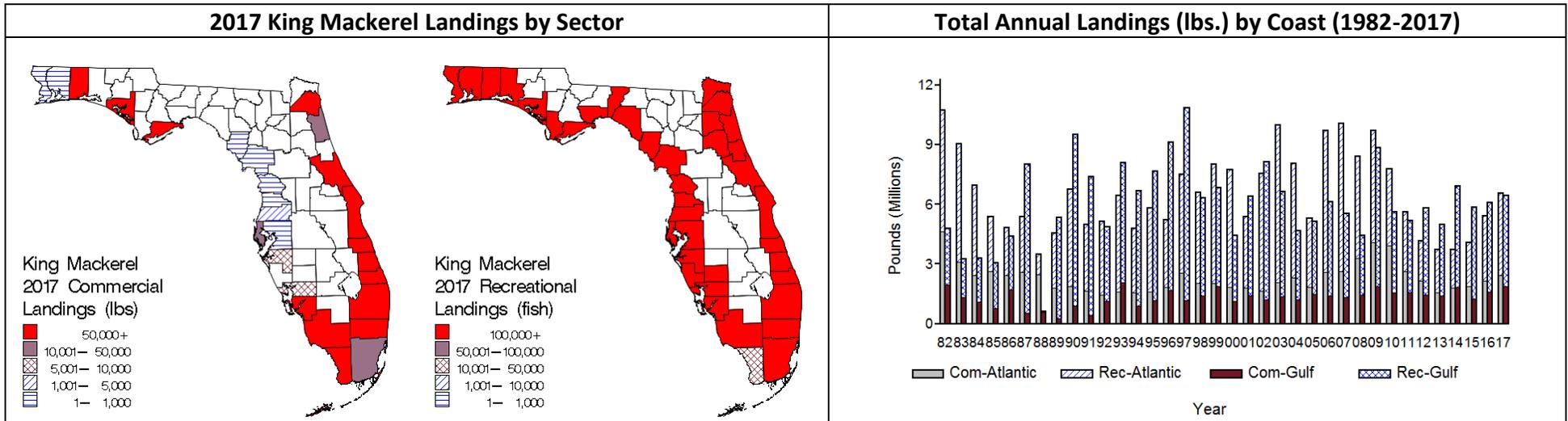


## King Mackerel, *Scomberomorus cavalla* (Cuvier, 1829)



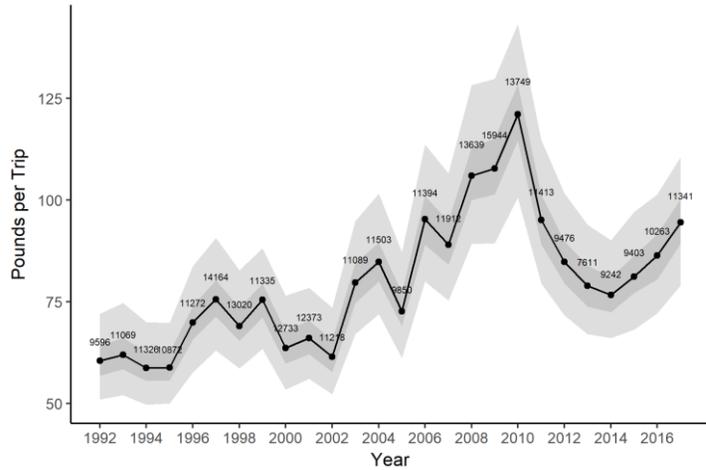
### Life History

King mackerel are found year-round off south and southeast Florida and only seasonally in north Florida waters. There are apparently at least two highly migratory groups of king mackerel in the western North Atlantic: one on the Atlantic coast that ranges from North Carolina to southeast Florida (“Atlantic stock”) and one that ranges throughout the northern Gulf of Mexico and into southeast Florida (“Gulf-Atlantic stock”). A third group may be found in the western gulf in Mexico, Texas, and seasonally, in Louisiana (Grimes *et al.* 1987; Johnson *et al.* 1994; DeVries and Grimes 1997; Roelke and Cifuentes 1997); however, allozyme evidence for the existence of this group may simply be a historical artifact (Gold *et al.* 1997). King mackerel generally follow the 20 °C isotherm during their north-south migrations (Beaumariage 1969). This species spawns in the coastal waters of the southern and northern Gulf of Mexico and off the south Atlantic coast (Burns 1981; Grimes *et al.* 1990). Because of the protracted spawning season, larvae have been collected off Florida from May through October. Females, which reach at least 26 years and 62.2” fork length (FL), grow older and larger than males (DeVries and Grimes 1997). Females mature before reaching 33.9 inches FL or 5–6 years of age (Johnson *et al.* 1983). King mackerel are piscivorous and feed on schooling fishes. The clupeids, carangids, sciaenids, trichiurids, exocoetids, engraulids, and scombrids, were all found to be important food sources (Saloman and Naughton 1983a). Of the eight identified species of Clupeidae, Spanish sardine, scaled sardine, and Atlantic thread herring were eaten in the Atlantic and the Gulf of Mexico. Of the carangids, round scad, blue runner, and Atlantic bumper were especially important prey species in northwest Florida (Saloman and Naughton 1983a).

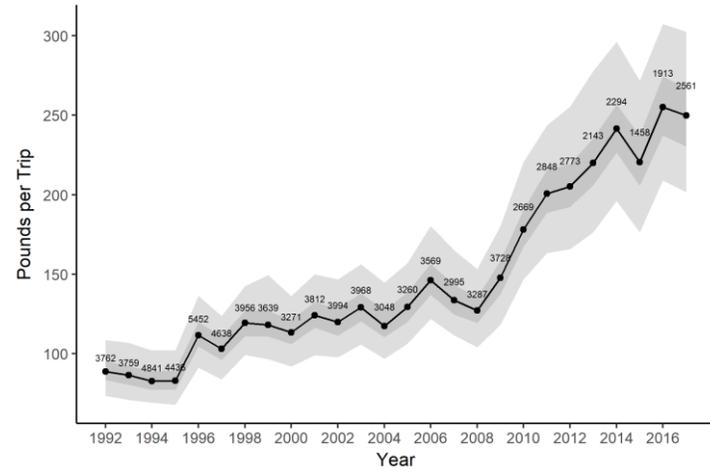


Fishers landed 12,976,018 pounds in 2017 which were 27.8% higher than the previous 5-year average (2012–2016). Coastwide, 50.4% of these were from the Atlantic and 49.6% were from the Gulf. Recreational landings constituted 66.6% of the total landings while commercial landings constituted 33.4%.

**Atlantic Coast**

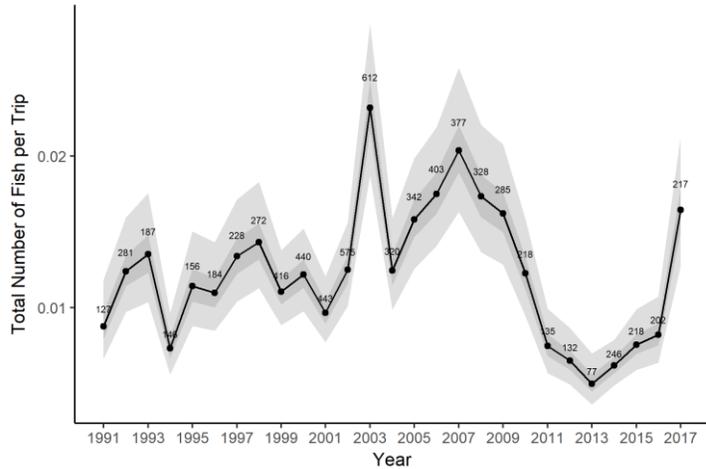


**Gulf Coast**

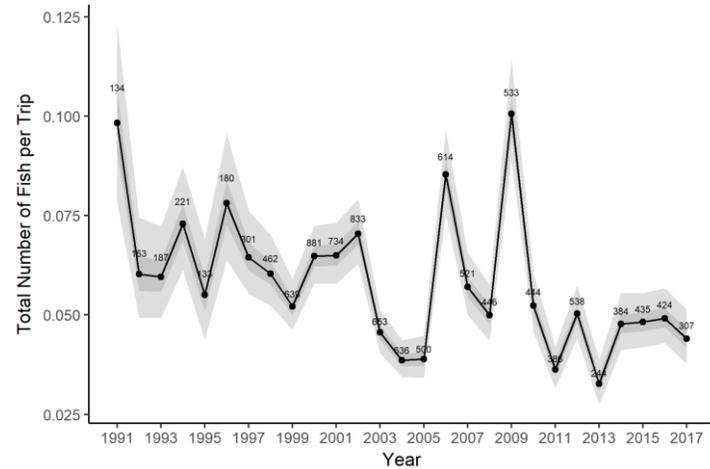


**Standardized Commercial Catch Rates:** Atlantic coast commercial catch rates increased to a peak in 2010, decreased through 2014, then began increasing again. Gulf coast commercial landings rates have increased in trend through 2017 with fastest increases between 2008-2014. Dark grey figure lines represent 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 varied through 2001, increased through 2007 with an abrupt peak in 2003, decreased to a timeseries low in 2013, and began increasing through 2017. On the Gulf, total catch rates varied widely in an overall declining trend through 2017 with peaks in 1991, 2007, and 2009. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.

## **Stock Status**

**Current Condition:** Both Atlantic and Gulf of Mexico stocks are not overfished nor undergoing overfishing

**Management History:** In Florida, King Mackerel have a 24 inch minimum fork length minimum size limit for recreational and commercial fisheries. A recreational daily bag limit of 2 fish per harvester applies (Nassau – Miami-Dade) while a 3 fish per harvester bag limit applies for the Gulf (Monroe – Escambia). For commercial fishers, King mackerel are divided into two separate fisheries: the Atlantic fishery (north of Miami-Dade/Monroe County line) and the Gulf-Atlantic fishery (south and west of the Miami-Dade/Monroe County line). Commercial trip limits vary by fishery, zone/region and season.

An earlier stock assessment for Gulf of Mexico and South Atlantic king mackerel incorporated a virtual population model for evaluating stock status and providing management advice (SEDAR 16 2009). The Gulf of Mexico king mackerel migratory group was not considered to be overfished and was not undergoing overfishing in FY2006, while the South Atlantic migratory group was not considered to be overfished, however the fishing mortality rate in 2006 was slightly above MFMT at  $F_{2006}/MFMT = 1.01$ . Both the Gulf of Mexico and Atlantic spawning stock biomass levels in 2006 were above the MSST.

In 2014, Gulf of Mexico and South Atlantic King Mackerel stock assessments were completed concurrently using Stock Synthesis (SS3) models (SEDAR 38 2014a, 2014b). The Gulf of Mexico stock was not estimated to be overfished in 2012 ( $SSB_{2012}/SSB_{MSY} = 2.0$ ) or at any point in the time series and was found to not be undergoing overfishing in 2012 ( $F_{2012}/F_{MSY} = 0.5$ ). Sensitivity analyses indicated that the Gulf of Mexico model was fairly robust in the estimates of long-term trends in stock biomass, recruitment, and fishing mortality. The Atlantic stock was also not overfished ( $SSB_{2012}/SSB_{30\%} = 1.86$ ) nor undergoing overfishing ( $F/F_{SPR30\%} = 0.17$ )