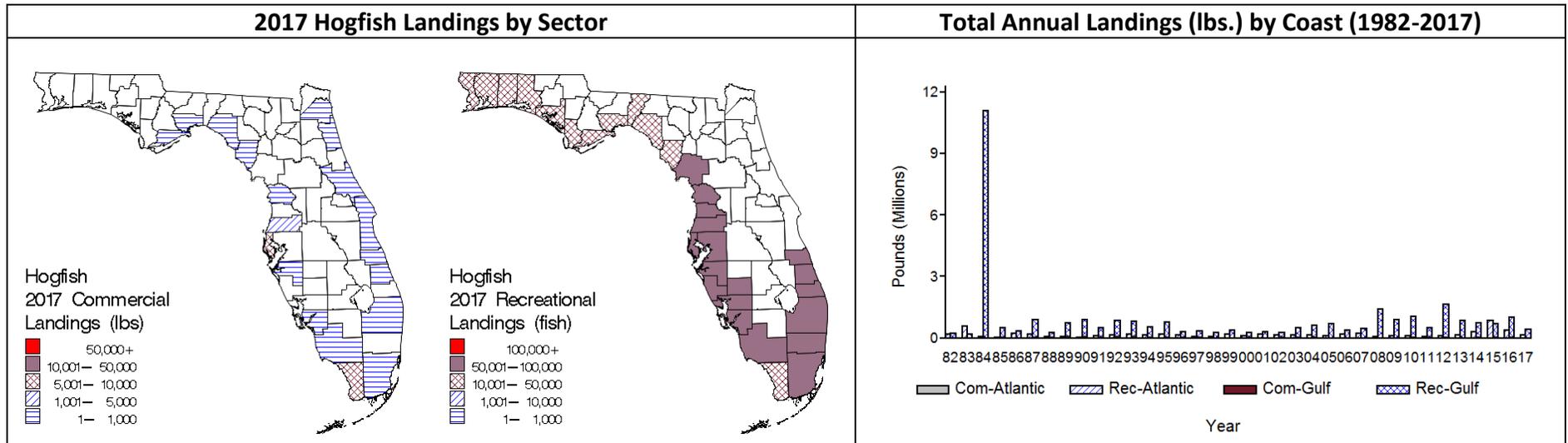


Hogfish, *Lachnolaimus maximus* (Walbaum, 1792)



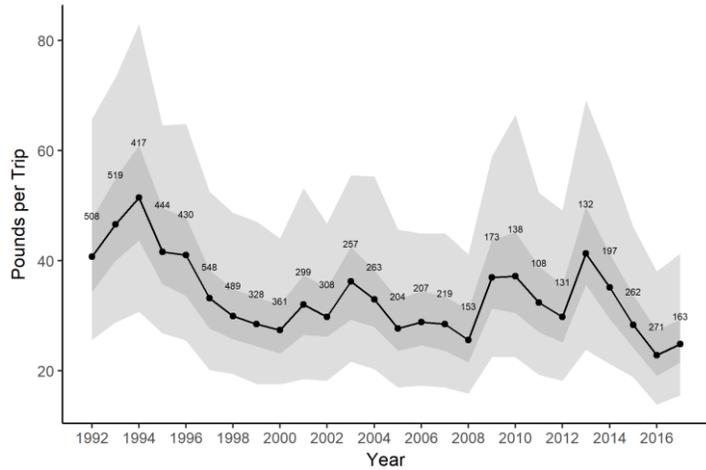
Life History

Hogfish are large wrasses (family Labridae) that inhabit areas of moderate-high relief in shelf waters from North Carolina south throughout the Caribbean Sea to the northern coast of South America. Juveniles can be found in shallow seagrass beds in Florida Bay (Tabb and Manning 1961). Mature Hogfish have sex-specific coloration and are protogynous hermaphrodites, i.e., they begin life as females then change to males (Davis 1976). An age and growth study by McBride and Richardson (2007) validated otolith aging among Hogfish sampled in various regions of Florida. The maximum age in the eastern Gulf of Mexico has been recorded to be 23 years (McBride and Richardson 2007). Scale marks seem to indicate that females reach 3 years old and about 14.2" long before they change to males (Davis 1976). Females first mature to spawn at 7.9" FL. Males transform from females and are able to first spawn at 10.2–11.8" FL (Davis 1976). Peak spawning occurs during February and March in south Florida and may vary due to a narrow temperature requirement, 24°C–27 °C (Colin 1982). Juvenile Hogfish are reported to feed on benthic crustaceans, mollusks, and echinoderms (Sierra *et al* 1994; Randall 1967). Adults consume bivalves, gastropods, sea urchin, crabs, and other mollusks (Sierra *et al* 1994; Randall 1967). Adult Hogfish typically feed by winnowing hard shelled animals from the bottom substrate and crushing their prey with their pharyngeal jaws (Clifton and Motta 1998).

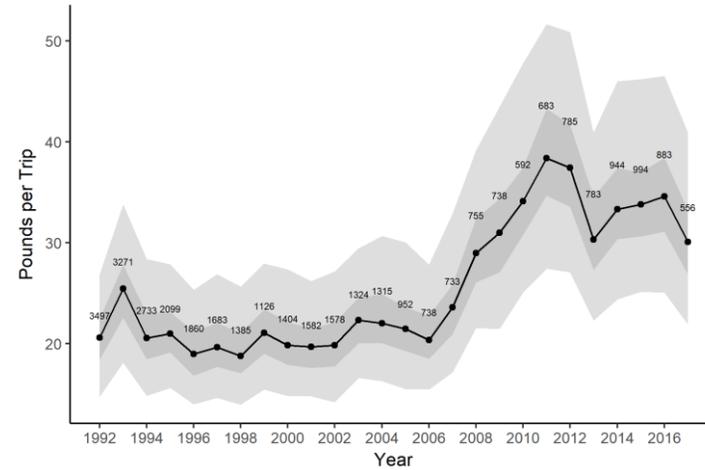


Fishers landed 542,747 pounds in 2017 which were 59.6% lower than the previous 5-year average (2012-2016). Coastwide, 75.6% of these were from the Gulf and 24.4% were from the Atlantic. Recreational landings constituted 95% of the total landings. The 1984 high value estimated for Hogfish landings on the Gulf coast is probably an indication of the degree of variability in the early recreational catch estimates that used small sample sizes. In fact, the aberrantly high landings estimate was the result of two angler interviews that recorded catch-rates of 100 Hogfish per trip. Early estimates of recreational harvest are quite imprecise for Hogfish, partly because few Hogfish anglers were interviewed during any given year.

Atlantic Coast

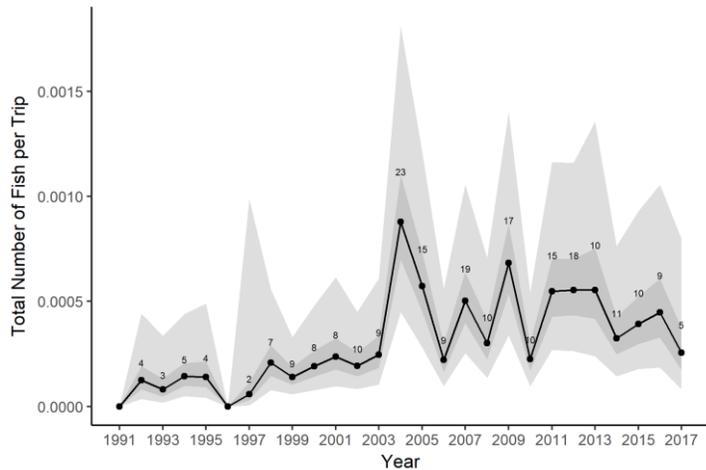


Gulf Coast

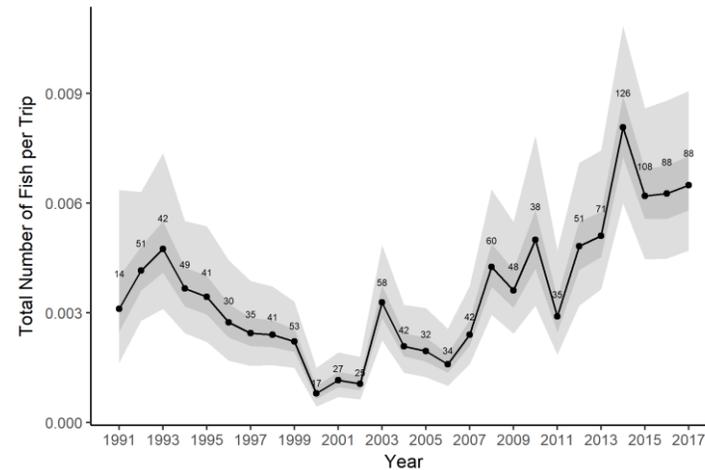


Standardized Commercial Catch Rates: Atlantic coast commercial catch rates declined through 2000 then remained variably stable. Gulf coast commercial landings rates were stable through 2006 then increased to greater rates of catch through 2017. Dark grey figure lines represent first and third quartiles while the light grey lines represent the 2.5% – 97.5% quantiles.

Atlantic Coast



Gulf Coast



Standardized Recreational Total Catch Rates: Total catch rates for recreational anglers on the Atlantic coast have gradually increased through the timeseries becoming more stable from 2011-2017. On the Gulf, total catch rates declined through 2002 then increased variably through 2017. 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: Florida Keys and Dry Tortugas – overfished and undergoing overfishing; West Florida Shelf – not overfished nor undergoing overfishing; GA -NC – not overfished but experiencing overfishing.

Management History: In 2014, Cooper et al. (2014; SEDAR 37) provided three independent stock assessments for Hogfish along strong genetic breaks between the Carolina region (GA-NC), Southeast Florida including the Keys and Dry Tortugas (FLK/EFL), and the West Florida shelf (WFL). Results from the WFL stock suggest the stock is neither overfished nor experiencing overfishing. Results from the FLK/EFL stock suggest that Hogfish were currently overfished and experiencing overfishing and have been for the majority of time since the model start in the mid-1980s. Results from the GA-NC stock suggest that Hogfish are experiencing overfishing in the most recent years, while the depletion of the stock is near the overfished limit.

An update assessment was provided for the West Florida shelf region (Addis et al. 2017; SEDAR 37 Update 2017). This continuity model suggests the WFL Hogfish stock is neither overfished nor experiencing overfishing. The uncertainty in the data input remains high and other sources of uncertainty remain in the model specification and diagnostics as assessed through retrospective analysis. However, the bootstrap results support the conclusion made in regards to stock status. Total abundance remained relatively constant from the model start in 1986 through the model timespan but increased starting in 2006 and remained high until 2013 when there is an apparent decline. Likely, this decline in overall abundance in recent years is a result of increased landings made by the recreational spear and hook and line fisheries. To support these increased landings, the model estimated a large recruit class in 2006 which supported the increased abundances during 2006 to 2012. This increase was also detected by the surveys and fisheries dependent CPUE indices.

