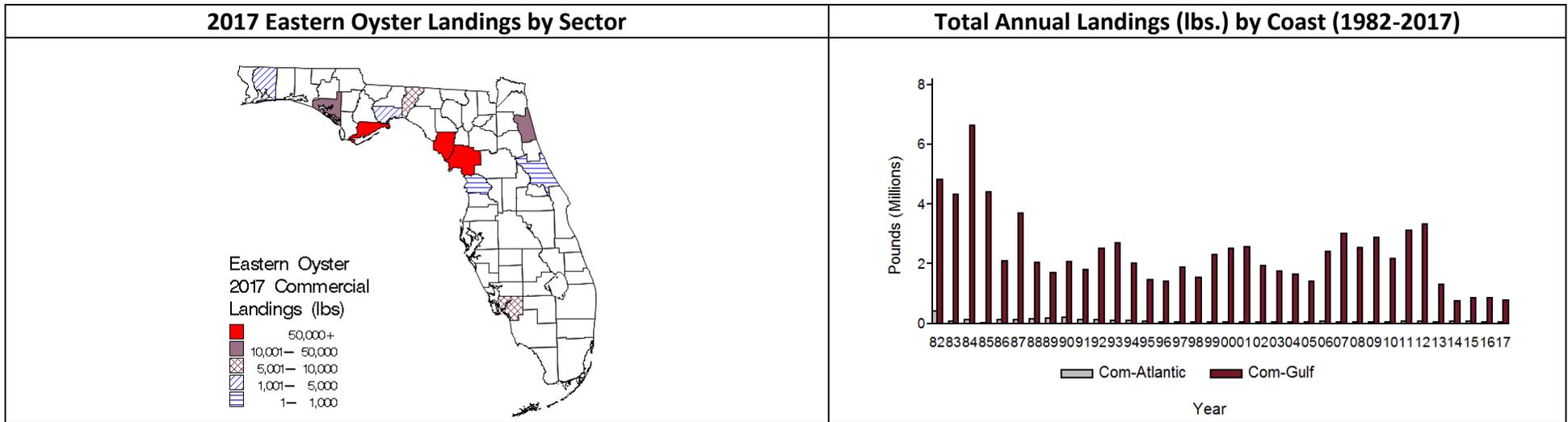


Eastern Oyster, *Crassostrea virginica* (Gmelin, 1791)

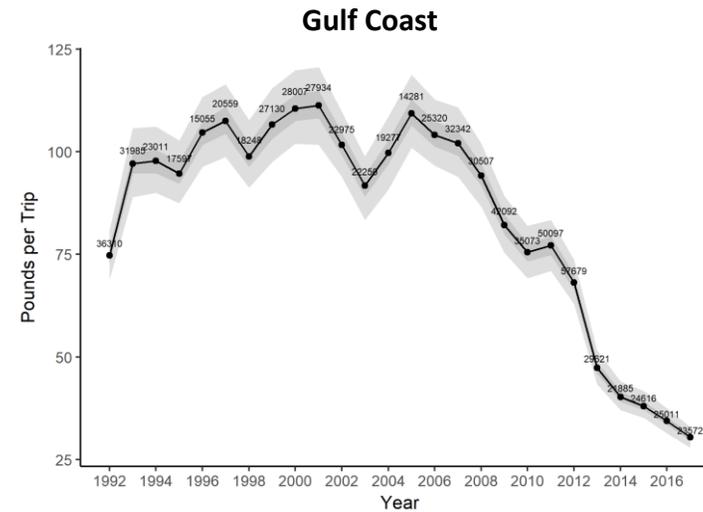
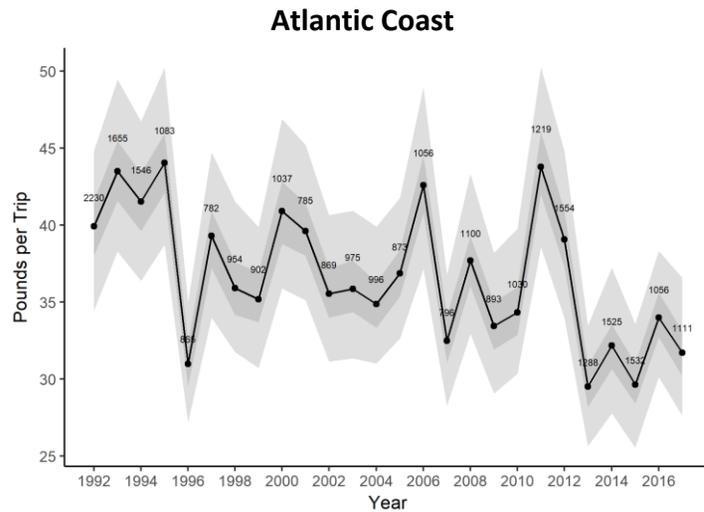


Life History

Eastern oysters occur from the Gulf of St. Lawrence, Canada, through the Gulf of Mexico to the Bay of Campeche, Mexico, and into the West Indies. They exist in every major bay system within their range but are not evenly distributed among or within bays. Two genetic stocks occur in Florida, an Atlantic coast stock that occurs from Maine south to Key Biscayne, and a Gulf stock that occurs from the Florida Gulf coast to Corpus Christi, Texas (Buroker 1983). The availability of clean, firm substrate sites for attachment limits the distribution of eastern oyster. Eastern oysters filter-feed for planktonic organisms and detritus. They are prey to protozoans, anemones, coelenterates, helminths, mollusks, crustaceans, and fish (Berrigan *et al.* 1991). In the Gulf of Mexico, eastern oysters typically reach about 3 inches long in 18–24 months and 5.9 inches long in 5 or 6 years. They can apparently live up to 25–30 years and reach a maximum size of 11.8 inches (Martin 1987). Eastern oysters are protandrous hermaphrodites, but can become alternate hermaphrodites after an initial male state; they can even alternate sex within a spawning season (Galtsoff 1964). Maturity is reached in as little as 4 weeks after settling. Spawning is initiated and maintained when water temperatures reach about 20 °C and salinities remain higher than 10 parts per thousand.



Fishers landed 831,250 pounds in 2017 which were 43.6% lower than the previous 5-year average (2012-2016). Coastwide, 94.5% of these were from the Gulf and 5.5% were from the Atlantic. Commercial landings constituted 100% of the total landings. Atlantic coast landings have historically been very small relative to the statewide total. The sharp decline in Gulf landings after 1985 can be attributed to hurricane Elena’s destruction of productive beds and the prolonged drought during 1987–1989 (Berrigan *et al.* 1991).



Standardized Commercial Catch Rates: Atlantic coast commercial catch rates have varied between 30-50 pounds per trip with decreased landings since 2013. Standardized commercial landings rate (pounds-per-trip) estimates on the Gulf coast increased between 1992 and 1994 and remained since at near historically high levels through 2005 with some periodic (3-4 year) cycles apparent in the trends. Landing rates have decreased precipitously from 2006-2017. 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: unknown

Management History: The Gulf States Marine Fisheries Commission has developed a regional management plan for the eastern oyster fishery. Oyster production in Florida is partially managed by strategic construction of cultch reefs. Specific management recommendations in the Gulf States Fishery Commission’s fishery management plan include the following: increased cultch planting; restoration of freshwater flows; encouragement of aquaculture and replanting; size, gear, season, and area restrictions; limited access; and quota and bag limits (Berrigan *et al.* 1991). Recently, Lenihan and Micheli (2000) showed that clam harvesting from intertidal oyster reefs did not negatively impact the production of oysters on those reefs.