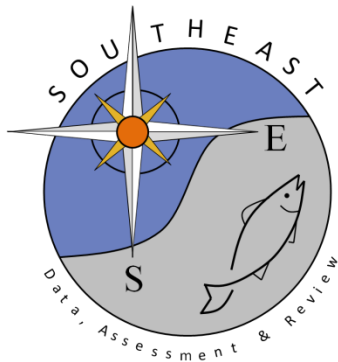


**Evidence of increasing Black Seabass stock structure from  
commercial trip data in 2017**

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## **Evidence of increasing Black Sea Bass stock structure from commercial trip data in 2017**

by: James Hull

SEDAR 56 panelist and Snapper Grouper AP Vice-Chairman

A consensus opinion by SAFMC Snapper-Grouper AP members (see November 2017 Black Sea Bass fishery performance report) is that abundance and stock structure of Black Sea Bass (BSB) landings are affected by variation in temperature regimes on shelf environments along the South Atlantic. Specifically, both fisheries dependent and independent indices of abundance resulting from trap or pot landings are highly variable, both seasonally and annually. Larger BSB are known to migrate from an offshore to inshore gradient based upon the movement of cooler water onto shelf systems that are a preferable “temperature window.” As a result of variable shelf temperature conditions, abundances of larger sized BSB may vary significantly, decoupling both fisheries dependent and fisheries independent landings data as an actual indicator of stock structure and stock abundance.

As described in the aforementioned BSB fishery performance report, fishermen in Florida and North Carolina have reported increasing landings of larger BSB in 2017, after several years of decreased landings. Specifically, oceanographic conditions resulting in colder bottom temperatures off of east Florida following the September 2017 hurricanes have resulted in marked increased landings of larger BSB, versus previous years. Overall, for 2017, there appears to be a larger proportion of “larger” length (hence, age) BSB in the population. In Figure 1, below, length frequencies of my pot landings along east Florida from 2009 to 2017 are plotted from official NMFS Trip Interview Program (TIP) data provided by our port sampler. From the historical length frequency plots it is obvious that in 2017 there are more “larger” BSB being landed in pots. This is in contrast to previous years where larger cohorts of “new recruits” are evident in the length frequencies, but larger BSB that are a significant portion of the “spawning stock biomass” were in lower proportions or absent.

The increased proportion of larger BSB in the length-frequency plots are supported by observations by fishermen in North Carolina that are also reporting a higher abundance of larger BSB in their landings. As widely known among fishermen, and reported in the 2017 BSB fishery performance report, the onset of cooler water moving onto the shelf supports to presence and increase abundance of larger BSB. In Figure 2., below, length- frequencies of the for 2017 commercial landings described above for Florida, and the data supplied by the North Carolina Division of Marine Fisheries commercial TIP program are provided. Both plots are indicative of significant proportions of “larger” BSB in the stock structure.

I provide these data as advice to the NMFS-SEFSC in that they should be aware and cognizant of changes in the BSB stock abundance and stock structure as described in the 2017 TIP data. This is important, as the strong recruitment event described in the 2013 SEDAR 25 BSB Update defied expectations from spawning stock biomass estimates in the previously completed (2011) benchmark stock assessment, and resulted in drastic increases in BSB ACLs. Likewise, it is important the Science Center uses the most up to date information for stock projections based upon SEDAR 56.

Figure 1. Annual length frequencies of Black Sea Bass from east Florida pots fished by J. Hull from data reported through the NMFS TIP database.

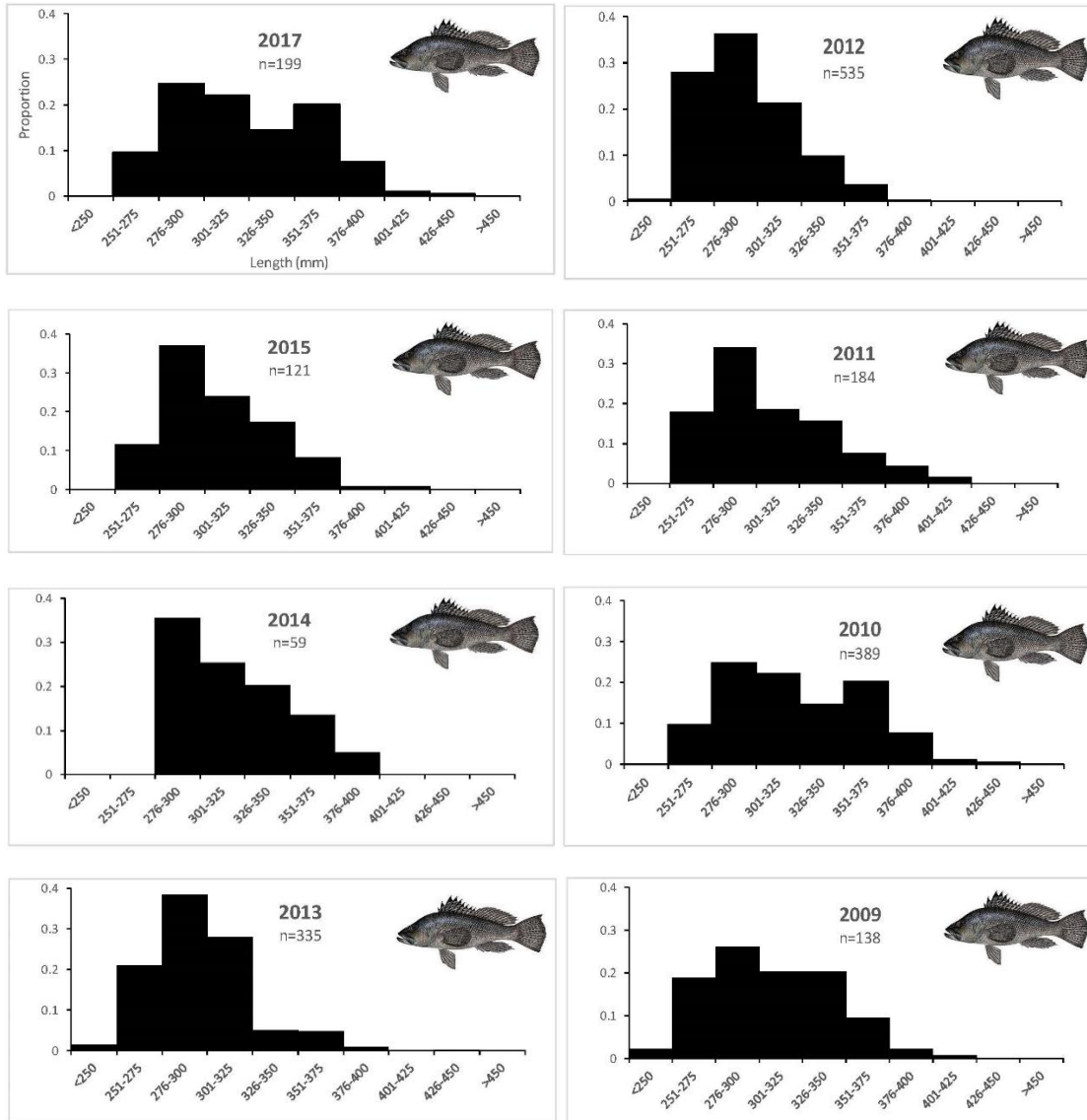


Figure 2. Annual length frequencies for 2017 commercial TIP data from North Carolina and Florida.

