

SEDAR 68 Stock ID Webinar I
Gulf of Mexico and Atlantic Scamp
August 7, 2019 from 10:00 AM to 12:00 PM
Summary Report

The charge of the Stock ID workgroups and the terms of reference for the Stock ID portion of the SEDAR 68 research track for Gulf of Mexico and Atlantic Scamp was reviewed.

Life History

Age bias and precision data are being analyzed, but will not be available for the Stock ID workshop. Differences in growth curves, and in the size and implementation dates for size limits, exist in the Gulf and Atlantic, which will affect selectivity between the regions. The LHWG thinks the age, length, growth, and size at age data could be heavily confounded by these factors.

Age-0 and age-1 scamp sampled in the Gulf of Mexico were collected in depths < 50 m, with the greatest density of individuals caught in depths < 30 m. Spawning individuals were sampled from the eastern Gulf (primarily on the west Florida shelf) and from St. Augustine, Florida north to North Carolina in the Atlantic. Samples are largely absent west of the Mississippi River. Spawning in the Gulf is predicted to occur between January and April, and occurs in March to May in the Atlantic. The Life History Working Group (LHWG) will provide additional information to the Genetics Working Group (GWG) on spatiotemporal spawning patterns.

A study examining hydrodynamic models to investigate reproductive ecology and larval biology for scamp was reviewed. The investigation uses the connectivity modeling system (CMS) to predict the results of a given larval dispersal pattern. The model simulation showed that, largely, particles released in the Gulf stayed in the Gulf, and the same for the Atlantic. Some occasional particles from the southeastern Gulf did settle in the Atlantic, in the areas around the southern Florida Keys (~8%). Further investigation will examine the proportion of propagules originating in the Gulf that end up in the Atlantic. Limited data are available to inform preferential settlement habitat for juvenile scamp, and the vertical distribution of larvae.

The misidentification issues between scamp and yellowmouth grouper was discussed. The LHWG will focus on morphometric differences between the species. Information on how port samplers, observers, and survey staff differentiate between the species will be helpful in determining any correction factors for landings estimates.

Presently, no data exist suggesting the stocks of scamp in the Gulf or Atlantic exist in such a way to merit changing the current stock boundary (the Council jurisdictional boundary).

Spatial Distribution and Movement

The Florida Fish and Wildlife Research Institute (FWRI) At-Sea Fishery Dependent Monitoring Program was reviewed. All participating biologists must pass an annual fish ID test to work independently in the field. From 2009-2018, 1,181 scamp were tagged, with 53 recaptures of 51

individual fish. Fish were at-large for an average of 230 days. Most tagged and recaptured fish are from the Gulf. Of the 23 recaptures with GPS data, four moved more than 10 miles from their tagged location. Those individuals without GPS data had general recapture location data, and suggested movement of less than 25 miles from the tagging location. Only one yellowmouth grouper was tagged in the same survey time period in the Gulf, and 17 tagged in the Atlantic.

Three fishery-independent surveys were presented: the Gulf stereo camera surveys, the Florida Keys reef fish visual census, and the South Atlantic trap camera survey. Abundance metrics differ between these surveys, and are not directly able to be standardized. Presence/absence was plotted for 2011-2017. The data show that scamp are generally abundant and distributed in the eastern Gulf and the Atlantic (north of Cape Canaveral), and occasionally in the Florida Keys.

Genetics

Scamp are protogynous hermaphrodites, with females maturing at age-2 and transitioning to males at age-11. The maximum age is estimated to be 30 years, with a 16.5 year generation time. High site fidelity is demonstrated with peak spawning between March and May in the Atlantic, but can occur from February to August. Larval duration is predicted to be 30-50 days. A study by Zatcoff et al. (2004) did not find significant genetic differences between the Gulf, Florida Keys, and the Atlantic, with sample sizes between 17 and 86 per site.

An SC DNR working paper (SEDAR68-SID04) collected samples of scamp from 1996-2018, with a total of 823 samples across all sites in all years. The bulk of the SC DNR data come from the Atlantic. There was not much variability between sample locations with respect to genetic differentiation. Some slight difference was shown between the samples from Mexico and the Atlantic, and it was noted that there were no samples from the western Gulf of Mexico. Overall, the study concludes no evidence of clear genetic differentiation between regions.

A study by FWRI (SEDAR68-SID03) examined scamp from Gulf and Atlantic Florida coastlines from 2013-2018, with strong sample power. More information on this study is pending.

The second Stock ID Webinar will be held the week of September 2 nd , 2019 The final Stock ID Report will be due on October 18, 2019
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