

Scientific Uncertainty

Abundance vs Stock Status

Last week we highlighted the high variability in estimates of Speckled Trout abundance from one stock assessment to the next, using Spawning Stock Biomass (SSB) estimates for 2008 from each of the three assessments to show the uncertainty.

The 2009 assessment estimated ~800,000 lbs of mature females in 2008.

The 2015 assessment estimated ~3,000,000 lbs of mature females in 2008.

The 2022 assessment estimated ~4,000,000 lbs of mature females in 2008.

Remember, these highly unreliable SSB estimates are compared to the SSB threshold, or level of abundance considered to be sustainable, to determine if a stock is overfished and if reductions are needed.

This raises a very important question that most people seem to overlook.

How many mature female Speckled Trout are needed to sustain the stock?

- a. 900,000 lbs
- b. 1.3 million lbs
- c. 2.4 million lbs

If you picked 900,000 lbs you are correct, at least according to the 2015 stock assessment.

Of course, if you were to go by the 2009 or 2022 stock assessments, 900,000 lbs of SSB would represent an overfished, or unsustainable stock, as they had SSB thresholds of approximately 1.4 million lbs and 2.5 million lbs respectively.

That's right, a Spawning Stock Biomass of 900,000 lbs was considered

sustainable in 2015, but 2,400,000 lbs of SSB (2.5 times higher abundance) would be overfished according to the 2022 assessment.

Nine hundred thousand pounds of mature females is good, 2.4 million pounds of mature females is not good enough, doesn't add up, does it?

In most people's minds, the number of fish needed to sustain a stock is constant, anything less is overfished and anything more is sustainable, but that's not necessarily the case.

Now that you've had a minute to digest that information, let this one sink in.

In 2015, 900,000 pounds of SSB would have been sustainable, and the most recent SSB estimate is 4.4 million pounds of mature females in 2022, yet the Marine Fisheries Commission is actually considering approving a 26.7% recreational harvest reduction and 38.3% commercial reduction!

Southern Flounder and Blue Crab

Many of you, especially those who participate in the Southern Flounder or Blue Crab fisheries, are probably wondering why we focused on Speckled Trout to illustrate the uncertainty in FMP's, when there are other very important fisheries on the MFC's agenda.

The truth is, despite being the last FMP adopted by the MFC, Speckled Trout is the only FMP currently before the Commission where we have three, somewhat similar, peer reviewed and approved stock assessments to compare.

While the Southern Flounder FMP (adopted in 2005) has included multiple assessments, there have been many changes that make comparisons of their results impossible.

Initially the flounder overfishing threshold was based on a 20% spawning potential ratio (SPR). Upon review in 2009 the fishery was nearly recovered with an SPR of 19% but the decision was made to raise the threshold to the current 25% SPR, making it easier

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to trigger overfishing.

This also makes it impossible to compare the SSB thresholds as the threshold had to change when the SPR percentage changed.

DMF also changed the flounder management unit from pounds of fish, to numbers of fish, and back to pounds of fish, which not only makes it hard to compare but also tough to determine if previous reductions were achieved.

Still the biggest change has been the unit stock definition. Until 2018, the Southern Flounder fishery was managed and assessed as a North Carolina stock. Since then, it has been considered and assessed as a multi-state stock, including data from North Carolina, South Carolina, Georgia, and Florida's east coast.

Obviously, we can't compare abundance estimates from NC alone, to abundance estimates for four states.

The reason for not comparing Blue Crab assessments is much simpler.

In the 27 years since the Blue Crab FMP was adopted, there has only been one stock assessment (conducted in 2018) and when it was updated in 2024 it was deemed not usable for management.

That's right, due to lack of "*necessary data needed to accurately assess the status of the Blue Crab Stock*" the fishery has largely been "*managed*" without the required stock assessment, a tradition the MFC seems to be trying to revive.

As you can see, actually managing a fishery, rather than merely regulating it, seems to be easier said than done.

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Important Blue Crab Update

Although the Marine Fisheries Commission (MFC) meeting has been postponed until March 12-13, the location is still Kitty Hawk and the agenda items remain mostly the same. The biggest change which I have heard people discussing is the removal of the Blue Crab Adaptive Management discussion.

Everyone needs to know, although this was removed from the agenda the schedule for final vote has not changed.

Final vote on Blue Crab Adaptive Management is still scheduled for May 2025.

People need to come out and give public comment on this important issue. I also personally think the MFC should comment on blue crab at this meeting as well. The public deserves to hear their opinions on the management options presented by the DMF.

More details will be provided as we get closer to the meeting dates.

Blue Crab Timeline

March 12-13 - Public comment needed at MFC meeting in Kitty Hawk

March 18,19,20 - Public comment needed. Advisory Committee (AC) meeting scheduled 6:00-8:00pm each night for blue crab. Locations TBD (most likely Washington, Morehead, and Wilmington)

May 21-23, 2025 - Final vote on Adaptive Management for Blue Crab at MFC meeting

TBD - Management measures implemented through proclamation

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