

Review of: "Sex Ratio, Spawning Cycle, and Size at Maturity of Bluespotted Seabream (*Pagrus Caeruleostictus*, Val 1987) From the Coast of Ghana"

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Potential competing interests: No potential competing interests to declare.

Comments/Suggestions

Abstract:

The authors state that specimens were sampled monthly but don't list the months. What are the five distinct maturity stages? It would be nice if the authors listed them instead of just in roman numerals. The authors state that the highest peak spawning was in March and April for females and males, respectively, but do not list the percentages. The abstract should state the results.

Materials and Methods:

I have concerns about how maturity was assigned. The authors cite that the maturity of females was determined macroscopically based on "morphology and color" from Holden & Raitt 1975. The authors need to expound on this quite a bit. What color and morphological characteristics led them to determine a "mature" female? The lack of detail is too great for a published paper. The formula for GSI is incorrect and should promptly be corrected ($GSI = (GonW/BodW) * 100$).

Results:

This paper would benefit greatly from maturity identification photos. I understand the study was limited to macroscopic analyses, but the authors should make the best of that by providing as much detailed information as possible that future studies can work from. I recommend that the authors take pictures of the gonads for males and females from each maturity stage and add notations for classification purposes. This will also allow readers to feel confident in the results the authors are describing.

There are no descriptions in the results pertaining to oocyte development (i.e., cortical alveolar oocytes, vitellogenic, hydration). I recommend the authors better describe what type of oocytes they are seeing macroscopically.

Figure 2: Please add sample numbers to the figure.

Figure 7 & 8: I thought the authors were using a logistic function to calculate the proportion mature? The shape doesn't appear sigmoidal.

Discussion:

The sentence “GSI is a physiological factor widely used as an indicator of the reproductive successes” is not correct. It is not a measure of success necessarily, just a tool to help understand when the spawning season is. Maybe just word this a little differently.

I recommend that the authors put some recommendations in the discussion for future studies. For example, macroscopic analysis is notoriously known for not being as accurate as microscopic histological analysis. However, I understand this process can be difficult to obtain (i.e., extra cost and experience, formalin/preservation concerns). I would love if the authors could look into expanding this study using histology to get a more confident estimation of maturity.

The observation by the authors of a third spawning period should not be taken lightly until more thorough macroscopic evaluation is described and/or histological techniques are performed. This study is a good foundation. However, overall, I think more work needs to be done to increase the confidence I have in the accuracy of the results. If the authors could go back and add more details and make certain corrections following other reviews, that would go a long way.