**Summary of peer review comments and responses for the "Status Review of the Gulf Grouper (*Mycteroperca jordani*)" – ID 285**

On March 4, 2015, five potential reviewers were solicited for review of the Gulf Grouper status review. By March 9, 2015, three reviewers had agreed to be peer reviewers and provide reviews. Each of the reviewers were presented with draft copy of the status review and the charge statement. The last of the peer reviews were received on April 13, 2015. Comments and responses are summarized in Table 1. Purely editorial comments related to spelling, grammar, or minor changes in wording or sentence structure are not reported here but are available upon request.

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Table 1. Summary of substantive comments and responses.

| Reviewer | Page Number | Comment | Response |
|---|---|---|---|
| B | Charge | Does not feel that an extinction risk analysis (convening experts and consulting on a range of risk factors/uncertainties) was conducted in the status review | A convening board of experts is not conducted for all status reviews. The Risk analysis is a synthesis of the earlier sections |
| A | ii | Commented about the lack of conclusions from the Extinction Risk Section in the Executive Summary | Added conclusion |
| C | 6 | Gulf grouper were placed in the wrong family (Serranidae as opposed to Epinephelidae) based upon Smith and Craig (2007) article. | Made no changes. The phylogeny was based upon the ITIS and is confirmed through Craig and Hastings (2007). Added additional citation of Craig and Hastings article. |
| B | 6 | Stated that "many" as opposed to "most" groupers are hermaphroditic | Changed "most" to "many" |
| C | 7 | Sex structure for Broomtail and Sawtail grouper questioned. | Could not find my source for those two, so I changed them back to Unknown. Double checked all of the other species, and confirmed their sex structures. |
| C | 8, 16 | Stated that the conclusions of the Allsop and West (2003) paper (dimensionless theory that size at sex change is based upon max. size) were erroneous and text referring to it should be removed. Reviewer provided papers that explained why. | There is no scientific consensus on the validity of this theory. Scientific papers are still being published on both sides of this issue. Consulted with a grouper biologist [Demartini (NMFS-PISCI)]. Decided to remove text referencing this subject and any corresponding text. |
| C | 9 | Stated that gulf grouper inhabit reefs up to 100m deep and seamounts. | The literature (Heemstra and Randall 1993, Sala et al 2003) states that they use shallow reefs (5-30 m). So no changes were made concerning depth. They do use seamounts, so I will make sure that language is consistently present. |
| B | 9 | Suggested that more emphasis upon gulf grouper having a limited distribution spatially and how it may impact them | Expanded that statement explaining how a limited distribution makes them more vulnerable to local stochastic events |
| B | 9 | Asked what is meant by their distribution being fragmented | Specified that they are currently found in only a few scattered locations |
| C | 11 | Stated that "the nursery state can last up to two years" is data from leopard groupers. | I reread the paper, and the reviewer was incorrect. The data referred to all groupers. No changes made. |

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| C | 13 | Stated that Gulf Grouper are very abundant in Cabo Pulmo and the data was published in Aburto-Oropeza et al 2011. | There is no gulf grouper information in that paper. No changes were made. This paper is discussed later in the status review in the review of MPAs. |
| A | 14 | Suggested adding some conclusions from Shiffman et al 2014 paper concerning trophy fishing. | Added some conclusions from the Shiffman paper. |
| C | 14 | Questioned whether or not "golden bass" were referring to a different grouper species. | The source was very specific in stating that gulf grouper were originally marketed as "golden bass" in southern California fish markets. No changes were made. |
| B | 15 | Asked for list of reports that created the graph for Figure 3 to be added. | Added all the bulletin numbers to the citation |
| C | 16 | Stated that it is likely that gulf grouper are protogynous hermaphrodite but is not confirmed. | Improved the language. Based upon their life history and the commonality of protogynous hermaphrodite in their genus, this is most likely. Also, one paper referred to them as protogynous hermaphrodite. |
| B | 19 | Asked what is meant by sub-adults | Subadults are really juveniles. Removed references to subadults and referred to larger juveniles where appropriate |
| C | 19 | Disagreed that the statement that "gulf groupers are dependent on coral reefs". Stated that no true coral reefs exist anywhere in the entire range of this species. | Added more information to the habitat section. Gulf grouper primary habitats are reefs – rocky reefs, often with a coral component. True coral reefs exist (i.e. Cabo Pulmo) and used, and corals are found throughout the GOC. |
| A | 26 | Suggested adding some conclusions from Sadovy et al 2012 "Fishing Grouper towards extinction..." paper. | Conclusions from that paper are well represented in the status review. I did have the year wrong for the citation (which I fixed) so that might have caused some confusion. I did add one additional conclusion. |
| B | 26 | Suggested adding comments about harvest trends in the future | Trends discussed in status review. No change. |
| C | 30 | Asked to emphasize the lack of protection and management regulations for groupers. That if you have a permit you can fish them with no size or catch limits | Added some additional text specifically referencing gulf grouper and spawning aggregations sites. This is already pretty well represented in the text. |

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| C | 32 | Pointed out that Nassau grouper are not protogynous hermaphrodites. | Removed and fixed related language. Some of the early literature had them that way, but more research has proven that wrong |
| C | 37 | Commented that the "Impacts upon corals" section is not relevant and should therefore be removed. | Gulf grouper use habitats that have corals, and would therefore be impacted if that habitat was degraded or lost. The reviewer even refers to Cabo Pulmo as one of the most import locations for gulf grouper. Cabo Pulmo is a coral reef (Brusca and Thomson 1975). No changes were made. |
| B | 40 | Suggested indicating how effective current management or protection is? Beyond what the rules are, but do they work? | This is discussed throughout status review (that management/protection is a problem). Some additional language was added. |
| A | 48 | Suggested adding some details Aguilar-Medrano and Calderon-Aguilera 2015 paper | Added some details from article concerning Cabo Pulmo |
| A | 50 | Suggested Kittinger et al 2014 book for more information on historical baselines | Could not gain access to that book. Feel comfortable with the two resources that I used for historical/shifting baselines which were discussed earlier in the status review. |