

Review of: "Captive breeding and larval rearing of the endemic ornamental fish Moustached Danio, *Danio dangila* (Hamilton, 1822) – First report"

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Potential competing interests: No potential competing interests to declare.

Reviewer comments QEIOS DGT17P

The present manuscript, entitled "Captive breeding and larval rearing of the endemic ornamental fish Moustached Danio, *Danio dangila* (Hamilton, 1822) – First report" by Bhosale and Mugale aims at evaluating the feasibility of breeding and larval rearing of *Danio dangila*, an ornamental freshwater fish species under controlled conditions.

Unfortunately, I found that, in the current form, this manuscript is not suitable for publication. I have concerns especially in the Materials and Methods making difficult to be confident in the data presented.

Given the uncertainty I have on the quality of the data and the way they have been analysed, I focused my review report on the Introduction and Materials and Methods sections.

I hope the following comments will help the authors to revise their manuscript.

1 – Introduction

This section is a bit vague and general. The reasons of selecting this species are not really well argued. Based on the information provided it is not really clear how this species is really threatened by the ornamental trade. Providing some figures about the importance of this species in the pet trade would be relevant.

Overall, some statements made in the first paragraph need to be better supported. For instance, the authors wrote: "600 species of which North-East India is blessed with 296 (49.33%) potential ornamental fish species contributing 11.6% share to the world freshwater ornamental fish species trade (Dhar and Ghosh, 2015)". I do not understand this value. What means 11.6% (volumes, market value...)? Most of the freshwater for ornamental market are coming from aquaculture (about 90% of the volumes traded are usually reported as coming from captive breeding) and most of these species are not endemic to India. So, I do not understand such statement.

I think that a description of the ornamental aquaculture industry in India could be a good starting point to introduce this study avoiding general statements that can be out of context.

The use of hormone to induce spawning/maturation should be not systematic and only considered as an alternative when

natural spawning failed. This choice should be well justified in the Introduction

2 – Materials and Methods

This section should be deeply revised. As presented, the quality of the data and the repeatability of the experiment are questionable. A lot of information is unclear or missing including:

- brooders transportation: packaging, O2 addition...
- acclimation conditions: acclimation time,
- description of the RAS: filtration, water renewal...
- feeds and feeding: frequency of feeding, type of live feeds used, nutritional values of the feeds...
- fish observations: details on morphological and health criteria recorded, frequency...
- brooders: sex ratio, life-history information...
- replicates: Number of true replicates. As presented, I assumed that a pseudo replication has been performed with several spawning structures (happas) in a same aquarium.

The statistical analysis seems not appropriate. Indeed? some variables with only 3 values per treatment available have been analysed using a parametric ANOVA.

In addition, an ethical statement is missing in this study involving living fish. All the procedures to reduce pain, stress, etc should be described. For instance, nothing is indicated neither about how the fish were anesthetized prior to handling nor how the rearing environment was equipped to reduce stress related to the captivity.

Minor comments

An annotated pdf is available attached.