

Review of: "Damsels in a Hidden Colour: Development of Ultraviolet Sensitivity and Colour Patterns in Damselfishes (Pomacentridae)"

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Potential competing interests: No potential competing interests to declare.

This is truly a splendid piece, and I note that it is one of the best readings I've had for a long time. I congratulate the authors and strongly recommend this paper. The proposed goals are fully achieved, and the writing does present important and novel information that should be highlighted. Clear phrases and solid scientific presentation are to be highlighted. Damselfishes are a vast, successful, cosmopolitan group of marine fishes, and their life histories are now more enriched with this paper.

On page 16, the authors' detail on DGE mapping is especially relevant and informative, clearly showing the complexity of the subject while also expressing the results in a "reader-friendly" design.

All figures are important, very well presented, and add compelling information for readers, even if they are not full specialists. Self-explanatory and clearly showing what does matter in the results are advantages for a good perception of the figures. I would also highlight the importance of figure 6 as an example of the paper's quality, since it does show very efficiently the crucial results of this piece, namely the highly valuable ontogenic aspects.

The discussion is coherent and supported by both the authors' results and the most relevant references - this is also a carefully studied part of the paper, showing a high domain of the subject. If I had to choose a specific part of the discussion, those would be points 4.2 and 4.3 for the straightforward and efficient approach by the authors. Evolution, from point 4.2, is not easily dealt with in the manner the authors succeeded, and so much for point 4.3, clearly explaining Opsin gene repertoires both intraspecific and ontogenic, the latter being especially difficult to deal with.