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.

The article is commendable due to its importance in the current era. However, the following comments can be utilized to improve the article more accurately, which will make it relevant to the scientific fraternity.

1. Simplify the explanation of when UV patterns appear in ontogenetic stages, with clearer diagrams and examples for better visualization.

2. Use uniform terms for developmental stages (e.g., "larvae," "juvenile," "sub-adult") throughout the text to avoid confusion.

3. Provide more context or visual aids (e.g., phylogenetic trees) for explaining the sws1 gene duplication and its evolutionary significance.

4. Expand on why certain species maintain complex UV patterns while others lose or simplify them. Include more behavioral or ecological explanations.

5. Highlight the broader implications of differences in opsin gene expression at various stages, especially for ecological adaptation or predator avoidance.

6. Provide more detail on how UV photography and transcriptomics data were standardized and validated to ensure replicability.

7. Elaborate on how the presence of UV patterns influences behaviors like mating, feeding, or predator evasion across species and environments.

8. Clarify the hypothesis regarding UV as a "private communication channel" and its evolutionary advantages, supported by more examples or data.

9. Reduce the use of overly technical terms or explain them for a broader readership, making the study more accessible to non-specialists.