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 paper is exemplary, presenting a thorough analysis of opsin gene expression in damselfish and its connection to UV body coloration. The manuscript is well-written, with only minor suggestions needed. The authors examined 11 damselfish species, gathering valuable expression data across three developmental stages (larval, juvenile, and adult). This study offers remarkable insights into both the proximate mechanisms of intraspecific communication and the ultimate evolutionary aspects, supported by a detailed phylogenetic analysis of the sws1 opsin gene. Despite the complexity of the data, the manuscript is highly accessible, with methods meticulously described. One of the most relevant aspects of this study is the understanding of how the specific pattern of UV coloration develops at the juvenile stage. From a behavioural perspective, this is highly interesting and provides a foundation for further investigation into various aspects of communication.