

**BETWEEN THE JFB COVERS**

## Shining light on larval fish diversity on reefs

Early life stages are notoriously opaque phases in the life cycle of many fishes. Investigations of the embryos, larvae and juveniles of fishes face many challenges, including inefficient and biased sampling methods and the frequent inability to visually identify early life stages with taxonomic precision. These challenges are well-addressed in this issue of *JFB* where we feature an exemplary, richly illustrated study by Grande *et al.* (2018) of settlement-stage reef fish post-larvae from the Bay of Tamandare in northeastern Brazil.

Grande *et al.* summarize five years of data, encompassing 425 light trap catches and 4,422 post-larval fishes from 76 species, 56 genera, and 36 families. They analyzed these data using a bootstrapped species accumulation curve that indicated a regional richness of 86 species. As with many highly biodiverse tropical ecosystems, the assemblage structure they observed reflected a pattern in which relatively few species were highly abundant and many species were rare.

Despite their overall conclusion that their light trap sampling was effective at capturing a representative sample of regional larval fish diversity – including a regional first record of the blenny species *Hypoleurochilus pseudoaequipinnis* – they did observe some methodological biases. Some taxa such as the wrasse genus *Halichoeres* and the family Haemulidae, which are closely associated with substrates or have short larval periods, were under-represented in the light trap samples.

This first study of settlement stage post-larvae reef fishes from tropical southwestern Atlantic Ocean adds to a growing global

database of knowledge on the assemblage structure of settlement stage reef fish larvae. As such, it provides a foundation for studies of fisheries stock recruitment and the effects of global climate change. Fortunately for the reader, the value of these data is matched by high quality images of live or recently dead larval fish specimens that the authors have included.

I'm confident that you will be as impressed as I was to see some of the spectacular diversity in juvenile color patterns and body shapes of the fishes collected for this study!

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### REFERENCE

Grande, H., Rezende, S. M., Simon, T. E., Félix-Hackradt, F. C., García-Charton, J. A., Maida, M., ... Ferreira, B. P. (2018). Diversity of settlement-stage reef fishes captured by light-trap in a tropical southwest Atlantic Ocean coastal reef system. *Journal of Fish Biology*, 94, 210–222. <https://doi.org/10.1111/jfb.13858>

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