



## **Illuminating the mesophotic: taxonomy on the hidden half of coral reefs**

Yi-Kai Tea (Australian Museum Research Institute and University of Sydney). Mesophotic coral ecosystems are rich and unique realms within tropical and subtropical reefs, characterized by deep coral communities typically found at depths of 30 to 150 m. At this depth, light is very attenuated, though present in sufficient quantity to support some primary production via photosynthesis. As a result of this difference in depth and photic properties, the faunal composition of mesophotic reefs are unique and brimming with species new to science, many of which display high levels of localised endemism and depth specificity. While these communities provide an exciting new frontier for coral reef taxonomists, research on mesophotic ecosystems is not homogenous at the global level. Australia in particular has received comparatively little attention in the mesophotic scene, yet the few studies conducted all show support for Australian reefs rich in new species and new distribution records. Here I summarise the research conducted on mesophotic fish communities across the Indo-Pacific, with special attention to Australasian coral reef fish fauna.

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