



Conference Abstract

DNA Barcoding approach reveals 17 exploited fish species, including an unrecognised species of the yellow-lined snapper complex

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Abstract

Management of wild fisheries resources requires accurate knowledge on which species are being routinely exploited, but it can be hard to identify fishes to species level, especially in speciose fish groups where colour patterns vary with age. Snappers of the genus *Lutjanus* represent one such group, where fishes can be hard to identify and as a result fisheries statistics fail to capture species-level taxonomic information. This study employs DNA barcoding approaches to identify adult and juvenile *Lutjanus* species harvested in Malaysian wild-capture fishery. We uncovered two divergent groups of bigeye snapper ('*Lutjanus lutjanus*') distributed on either side of the Malay Peninsula, displaying a biogeographical pattern similar to distributions observed for many co-occurring reef distributed fish groups. One of these bigeye snapper groups almost certainly represents an unrecognized species in need of taxonomic description. The study demonstrates the utility of DNA barcoding in identifying overlooked diversity and for assessing species catch composition in a complicated but economically important taxonomic group.

Keywords

DNA barcoding, genetic divergence, marine fisheries, phylogeny, species identification

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Ethics and security

All fish products examined in this study were commercial products available in markets and retailers. Permission to undertake collection was not required because it did not involve extinct species or wildlife trades.

Author contributions

Adibah Abu Bakar: Field sampling and data analysis

M. Siti Azizah: Funding acquisition and data analysis.

Conflicts of interest

The authors declared that no competing interests exist.