

## **Utilization of DNA Barcodes for the Identification of Larval Fishes in Tropical Estuarine Waters (Malacca Straits, Malaysia)**

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Larval descriptions of tropical marine and coastal fishes are very few, and the taxonomic problem is further exacerbated by the high diversity of fish species in these waters. Nonetheless, accurate larval identification is crucial in ecological and early life history studies of larval fishes for the purpose of fishery management and habitat protection. The present study aimed to evaluate the usefulness of DNA barcodes to support larval fish identification since conventional dichotomous keys based on morphological traits are not efficient due to the lack of larval traits and the rapid morphological changes during ontogeny. The molecular analysis uncovered a total of 48 taxa (21 families) from the larval samples collected from Klang Strait waters encompassing both spawning and nursery grounds of marine and estuarine fishes. Thirty-two (67%) of the larval taxa were matched at the species level, whereas two taxa (4%) were identified at the genus, and 14 taxa (29%) identified at family level. The relatively low rate of species-level identification is not necessarily due to the DNA barcoding method per se, but a general lack of reference sequences for speciose and non-commercial fish families such as Gobiidae, Blenniidae, and Callionymidae. Larval morphology