



Conference Abstract

# Development of species-specific *Cichla* species eDNA primers for alien invasive species (AIS) monitoring in Malaysia

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## Abstract

Peacock bass or the cichlids are known locally as top predator fishes which are invasive in Malaysia freshwater system. Detection probabilities for these fishes are typically low, especially using conventional capture-survey method due to the fish's behaviour of hiding beneath the water's surface. Hence, the environmental DNA (eDNA) monitoring is a relatively new approach that can be used to assess the distribution of these invasive fishes. Here, we report the strategy to develop small fragment (280- 400 bp) specific-specific primers for three selected invasive *Cichla* species namely, *C. ocellaris*, *C. monoculus*, and *C. kelberi* based on mitochondrial DNA (*mtDNA*) sequences. Current research showed that the developed species-specific primers from cytochrome oxidase I (COI) gene has high resolution at species level. Species-specific amplification tests also

proved the specificity of the developed primers, securing the high- level species identification potential which may help in controlling the spread of alien invasive fish species.

## **Keywords**

Species- specific primer, COI primer, eDNA marker, invasive species.

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