



Characterization of 10 novel microsatellite loci for the brown marbled grouper, *Epinephelus fuscoguttatus* (Serranidae)

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ABSTRACT. *Epinephelus fuscoguttatus* is a commercially important marine fish species in southeast Asia. Due to overfishing and water pollution, this species has been declared as near-threatened. Thus, to provide information to help maintain and preserve the species, microsatellites were developed, using an enriched genomic library method. Thirty individuals were collected from the hatchery of the Fishery Research Institute, Terengganu, Malaysia. These individuals, from four to six years old, originated from Sabah and are maintained in captive culture as broodstock. Genomic DNA was extracted from the fins of selected individuals that weighed 3-8 kg. Ten microsatellite loci were found to be polymorphic in this population, with 5 to 21 alleles per locus. Observed and expected heterozygosities ranged from 0.53 to 0.97 and 0.59 to 0.95, respectively. Only one locus deviated significantly from Hardy-Weinberg equilibrium and no significant linkage disequilibrium was found among the pairs of loci. These

polymorphic microsatellite loci will be used by the Malaysian Fishery Research Institute for investigating genetic diversity and for developing breeding strategies.

Key words: *Epinephelus fuscoguttatus*; Enriched genomic library; Microsatellite; Grouper