



# Isolation and characterization of new microsatellite markers in red tail prawn, *Fenneropenaeus penicillatus*, an endangered species in China

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**ABSTRACT.** Until recently, *Fenneropenaeus penicillatus* was considered a commercial shrimp species. However, in 2005, it was included on the Red List as an endangered species by the Chinese government. In this study, 19 new microsatellite markers in *F. penicillatus* were developed and tested in samples of 32 wild individuals from Nanao, China. Twelve loci were polymorphic and 7 were monomorphic. Of the 12 polymorphic loci, the number of alleles per locus ranged from 3 to 6, with an average of 4.42 alleles per locus. The polymorphism information content ranged from 0.302 to 0.670, with a mean of 0.4817. The observed and expected heterozygosities ranged from 0.2250 to 0.8889 and from 0.1111 to 0.7750, respectively. Significant deviations from Hardy-Weinberg equilibrium (HWE, adjusted  $P < 0.0042$ ) after a Bonferroni correction were observed in 3 loci (NA-9, NA-57, and NA-64), whereas the other 9 loci were in HWE.

These new microsatellite markers will be useful in further research on the population genetic structure of *F. penicillatus*.

**Key words:** *Fenneropenaeus penicillatus*; Microsatellite markers; FIASCO protocol