

Development of 11 polymorphic microsatellite markers for *Xylocarpus granatum* (Meliaceae) using next-generation sequencing technology

ABSTRACT

Human impacts have seriously damaged mangroves, and conservation of mangroves will require information on local and regional population genetic structures. Here, we report the development and polymorphism of eleven novel microsatellite markers, developed using next-generation sequencing on 56 samples of widespread mangrove species *Xylocarpus granatum* (Meliaceae) from nine populations across the Indo-West Pacific region. All loci were found to be polymorphic, with the number of alleles per locus ranging from four to 19. In a population from Sabah (Malaysia), the mean observed and expected heterozygosity per locus was 0.59 and 0.58, respectively. No null allele, significant linkage disequilibrium or deviation from Hardy-Weinberg equilibrium was detected among all loci. The eleven markers developed can be valuable tools to conservation genetics of this species across its distributional range.

Keyword: Conservation; Genetic diversity; Indo-West Pacific; Mangrove; Pyrosequencing; SSR