



# Development and characterization of microsatellite markers for *Ulmus chenmoui* (Ulmaceae), an endangered tree endemic to eastern China

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**ABSTRACT.** *Ulmus chenmoui* (Ulmaceae) is an endangered tree found on Langya Mountain, eastern China. To better understand the population genetics of *U. chenmoui* and conserve the species, we developed microsatellite markers. Using a suppression-polymerase chain reaction technique, 74 compound microsatellite primer pairs were designed. Twelve microsatellite markers were polymorphic in 39 individuals, and the number of alleles per locus ranged from 3 to 9. The observed and expected heterozygosities ranged from 0.051 to 0.769 and from 0.533 to 0.768, respectively. Significant linkage disequilibrium was detected for three pairs of loci ( $P < 0.01$ ), which may be due to

a recent population bottleneck and the small population size. Nine of the 12 loci deviated from the Hardy-Weinberg equilibrium ( $P < 0.01$ ), which could be explained by significant inbreeding rather than the presence of null alleles. These markers will provide a solid basis for future efforts in population genetic studies of *U. chenmoui*, which in turn will contribute to species conservation.

**Key words:** Conservation; Microsatellite marker; Population genetics; Ulmaceae; *Ulmus chenmoui*