



Development of polymorphic microsatellite markers based on expressed sequence tags in *Populus cathayana* (Salicaceae)

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ABSTRACT. *Populus cathayana* occupies a large area within the northern, central, and southwestern regions of China, and is considered to be an important reforestation species in western China. In order to investigate the population genetic structure of this species, 10 polymorphic microsatellite loci were identified based on expressed sequence tags from *de novo* sequencing on the Illumina HiSeq 2000 platform. All microsatellite primers were tested on 48 *P. cathayana* individuals from four locations on the Qinghai-Tibet Plateau. The observed heterozygosity ranged from 0.000 to 1.000, and the null-allele frequency ranged from 0.000 to 0.904. These microsatellite markers may be a useful tool in genetic studies on *P. cathayana* and closely related species.

Key words: *Populus cathayana*; Microsatellite; EST; Qinghai-Tibet Plateau