



Development and characterization of SSR markers from *Pinus massoniana* and their transferability to *P. elliottii*, *P. caribaea* and *P. yunnanensis*

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ABSTRACT. *Pinus massoniana* (Masson's pine) is a widespread tree species in central and southern China and northern Vietnam; it is valued for rosin and paper production. Despite the significant economic value of Masson's pine, little work has been done on its molecular genetics. We developed 318 SSR primers from genome sequences of *P. massoniana*, and we identified 10 polymorphic markers. The

number of alleles in the population of *P. massoniana* that we examined ranged from two to four, and the Shannon diversity index ranged from 0.150 to 1.133. Cross-species transferability of the 318 SSRs was also analyzed in the slash pine (*Pinus elliottii*), the Caribbean pine (*Pinus caribaea*) and the Yunnan pine (*Pinus yunnanensis*); 15, 10, and 10 primer pairs generated polymorphic amplification, respectively. These sets of polymorphic SSR markers will be useful for population genetics studies of *P. massoniana*, for genetic identification of interspecific hybridization, and for phylogeographic studies of *Pinus* spp.

Key words: *Pinus massoniana*; SSR; Cross-species transferability