



# Development of microsatellite markers in *Hagenia abyssinica* (Bruce) J.F. Gmel, an endangered tropical tree of eastern Africa, using next-generation sequencing

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**ABSTRACT.** *Hagenia abyssinica* (Bruce) J.F. Gmel is an endangered tree species endemic to the high mountains of tropical Africa. We used Illumina paired-end technology to sequence its nuclear genome, aiming at creating the first genomic data library and developing the first set of genomic microsatellites. Seventeen microsatellite markers were validated in 24 individuals. The average number of alleles per locus was 7.6, while the observed and expected heterozygosities ranged from 0.000 to 0.958 and from 0.354 to 0.883, respectively. These polymorphic markers will be used as tools for further molecular studies to facilitate formulation of appropriate conservation strategies for this species.

**Key words:** Afromontane, *Hagenia abyssinica*; Microsatellites; Rosaceae; SSR; Next-generation sequencing