Cross-amplification of microsatellite loci in the endangered stone-crayfish

The major aim of this study is to describe the first microsatellite loci for the stone-crayfish (Austropotamobius torrentium), by cross-species amplification. Austropotamobius torrentium is a priority species in the EU Habitats Directive and it needs effective conservation management efforts throughout Europe. We tested cross-species amplification of 55 decapod microsatellite primer pairs in A. torrentium and only ten of these loci, from relatively close related species, yielded PCR products of expected sizes. Five of the ten microsatellites proved to be polymorphic (allele numbers ranging from 4 to 14 in a set of 35 individuals). Three of the loci exhibited departure from Hardy-Weinberg equilibrium which could be explained by the presence of null alleles. A forth locus exhibiting HWE deviation, but no null alleles, suggest the possible presence of population substructure of the species in the investigated area. These microsatellite markers are useful for population genetic studies of stone-crayfish.

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