Structure and genetic diversity in Colliguaja odorifera Mol. (Euphorbiaceae), a shrub subjected to Pleisto-Holocenic natural perturbations in a mediterranean South American region

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Aim: Colliguaja odorifera Mol., a Euphorbiaceous shrub of central Chile, inhabits the matorral formation, growing at low altitudes on both Andean and coastal mountain range slopes. In the recent geological past, this region was subjected to climatic changes and geological disturbances that most probably caused population shrinkages on the Andean mountain slopes. This study tested the hypothesis that under such a scenario, existing populations should show lower genetic diversity in the Andean than in the coastal areas; these coastal populations being the potential source populations for recolonization. Location: The study was carried out in central Chile by comparing the genetic diversity between the Andean and coastal areas, each represented by five localities distributed from 32°30? S to 34° S. Methods: Genetic diversity was estimated by DNA analysis using 18 dominant multilocus Random Amplified Polymorphic DNA (RAPD) loci, characterizing 73 genetic phenotypes. Results: The comparison