



Genetic diversity of *Vriesea cacuminis* (Bromeliaceae): an endangered and endemic Brazilian species

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Genet. Mol. Res. 12 (2): 1934-1943 (2013)

Received November 23, 2012

Accepted March 29, 2013

Published June 13, 2013

DOI <http://dx.doi.org/10.4238/2013.June.13.2>

ABSTRACT. Data about the genetic structure can help to understand the evolutionary process of natural populations as well as to drive strategies of conservation. *Vriesea cacuminis*, an endemic Brazilian Bromeliad, has been found in 2 areas of Minas Gerais State. One is a legal preservation unit (Ibitipoca State Park) and the other an unprotected area (Serra Negra). The 2 areas belong to the Mantiqueira Mountain Range Complex; both are characterized by steep relief with high altitudes and by heterogenic vegetation formed by a mosaic of rocky fields and forest fragments. According to International Union for Conservation of Nature criteria, *V. cacuminis* is designated as “vulnerable”. We examined the genetic variability and population structure of 70 individuals (3 populations) of *V. cacuminis*, using 16 ISSR markers. Although *V. cacuminis* is considered a rare species, the estimated genetic diversity was found to be relatively high (Shannon index = 0.33; percentage

of polymorphic bands = 87%). The populations were found not to be structured (AMOVA test, $\Phi_{ST} = 0.16$), probably due to the cross-breeding. Based on Bayesian analysis, this species includes one cluster containing the populations from Ibitipoca State Park and another cluster including the population from Serra Negra. This information will help determine strategies to maintain the genetic variability of these populations.

Key words: Bromeliaceae; *Vriesea cacuminis*; Endemism; Conservation; Genetic diversity