



## Genetic variability of an endangered Bromeliaceae species (*Pitcairnia albiflos*) from the Brazilian Atlantic rainforest

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**ABSTRACT.** *Pitcairnia albiflos* is a Bromeliaceae species endemic to Brazil that has been included as data-deficient in the extinction risk list of Brazilian flora. We analyzed genetic variability in *P. albiflos* populations using RAPD markers to investigate population structure and reproductive mechanisms and also to evaluate the actual extinction risk level of this species. Leaves of 56 individuals of *P. albiflos* from three populations were collected: Urca Hill (UH, 20 individuals), Chacrinha State Park (CSP, 24 individuals) and Tijuca National Park (TNP, 12 individuals). The RAPD technique was effective in characterizing the genetic diversity in the *P. albiflos* populations since it was possible to differentiate the populations and to identify exclusive bands for at least two of them. Even if there is low genetic diversity among them (CSP-UH = 0.463; CSP-TNP = 0.440; UH-TNP = 0.524), the populations seem to be isolated according to the low genetic diversity observed within them ( $H_{pop}$  CSP = 0.060;  $H_{pop}$  UH = 0.042;  $H_{pop}$  TNP = 0.130). This fact might be the result of clonal and self-reproduction predominance and also from environmental degradation around the collection areas. Consequently, it would be important to protect

all populations both *in situ* and *ex situ* to prevent the decrease of genetic variability. The low genetic variability among individuals of the same population confirms the inclusion of this species as critically endangered in the risk list for Brazilian flora.

**Key words:** *Pitcairnia albiflos*; RAPD markers; Clonal reproduction; Genetic diversity