

Anatomy and genetic diversity of two populations of *Schinus terebinthifolius* (Anacardiaceae) from the Tibagi River basin in Paraná, Brazil

E.A. Ruas^{1,3}, C.F. Ruas¹, P.S. Medri², C. Medri¹, M.E. Medri², E. Bianchini², J.A. Pimenta², L.A. Rodrigues¹ and P.M. Ruas¹

¹Departamento de Biologia Geral, Centro de Ciências Biológicas, Universidade Estadual de Londrina, Londrina, PR, Brasil

²Departamento de Biologia Animal e Vegetal, Centro de Ciências Biológicas, Universidade Estadual de Londrina, Londrina, PR, Brasil

³Departamento de Agronomia, Centro de Ciências Agrárias, Universidade Estadual de Londrina, Londrina, PR, Brasil

Corresponding author: E.A. Ruas
E-mail: edu_wicca@yahoo.com.br

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ABSTRACT. Knowledge of the effects of flooding on plant survival is relevant for the efficiency of management and conservation programs. *Schinus terebinthifolius* is a tree of economic and ecological importance that is common in northeast Brazil. Flooding tolerance and genetic variation were investigated in two riparian populations of *S. terebinthifolius* distributed along two different ecological regions of the Tibagi River basin. Flooding tolerance was evaluated through the investigation of young plants, submitted to different flooding intensities to examine the morphological and anatomical responses to this stress. The growth rate of *S. terebinthifolius* was not affected by flooding, but total submersion proved to be lethal for 100% of the plants. Morphological alterations such as hypertrophied lenticels were observed in both populations and lenticel openings

were significantly higher in plants from one population. Genetic analysis using DNA samples obtained from both populations showed a moderate degree of genetic variation between populations (13.7%); most of the variation was found within populations (86.3%). These results show that for conservation purposes and management of degraded areas, both populations should be preserved and could be used in programs that intend to recompose riparian forests.

Key words: Flooding; Morphoanatomy; RAPD; Riparian forests