

MARCELA B. F. NASCIMENTO¹, HELENA T. SUZUKAWA¹, PAULO C. BOTOSSO², EDIMILSON BIANCHINI¹, and MOACYR E. MEDRI¹: ¹Laboratório de Anatomia Vegetal, Departamento de Biologia Animal e Vegetal, Universidade Estadual de Londrina, Londrina, PR, Brazil, mablagitz@gmail.com, tiemi_imeit@yahoo.com.br, bianchini@uel.br, moacyrmedri@uel.br
²Embrapa Florestas, Colombo, PR, Brazil, botosso@cnpf.embrapa.br – **Wood anatomical features of growth rings of tree species from semi-deciduous forest in southern Brazil**

Growth rings are formed due to the dynamics of cambial activity which can be influenced by abiotic and biotic factors and by the genotype of individuals. Basic studies that describe these wood structures are essentials and of great interest to dendrochronology, climatology, forest management, conservation and restoration. In this way, the goal of this study was to verify the occurrence and characterize macroscopically and microscopically growth ring markers in tree species naturally occurring in semi-deciduous forest belonging to the Atlantic Rain Forest biome. The study site was Godoy Forest State Park a remnant forest situated in the north of Paraná State (23°27'S; 51°15'W). The region is characterized by seasonal climate changes with a hot-humid season (October-March, rainfall exceeding 200mm) and a cooler-dry season (April-September, rainfall less than 70mm). Wood samples were collected using a Pressler borer. Cross wood sections were polished and analyzed under a stereomicroscope. For microscopic analyses, a sliding microtome was used, sections were stained with astra blue and basic fucine. Analyses were made following IAWA Committee instructions. *Alchornea glandulosa*, *Alchornea triplinervea*, *Chrysophyllum gonocarpum* and *Croton floribundus* presented fibers with thicker walls in latewood. *Aspidosperma polyneuron*, *Cabralea canjerana*, *Prunus sellowii* and *Trichilia clausenii* had marginal bands of axial parenchyma associated with thick walled fibers. *Cedrela fissilis* had marginal band of axial parenchyma and changes in vessel diameter, forming semi-porous ring. Tree species that showed better distinction in the growth rings were deciduous or semi-deciduous: *Alchornea glandulosa*, *Alchornea triplinervea*, *Aspidosperma polyneuron*, *Cedrela fissilis*

and *Chrysophyllum gonocarpum*. However the evergreen tree species *Cabrlea canjerana*, *Prunus sellowii* and *Trichilia clausenii* have slightly distinct growth rings. In this study it is apparent that the pattern of fall leaves is related to the degree of differentiation of the growth rings, although variations in information about environmental conditions or genotype should not be discarded.