

MONIQUE S. **COSTA**¹, MAXMIRA S. **ARÊDES**¹, PAULO C. **BOTOSSO**², and CÁTIA H. **CALLADO**¹: ¹Departmento de Biologia Vegetal, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil, nique_bio@yahoo.com.br, maxmiradig@yahoo.com.br, catiacallado@terra.com.br² Embrapa Florestal - Brazilian Agricultural Research Corporation Ministry of Agriculture, Livestock and Food Supply, Colombo, PR, Brazil, botosso@cnpf.embrapa.br – Assessing the distinctiveness of growth rings in juvenile and adult wood of tropical species from Tabuleiro Forest

Wood quality of plantation trees is related to the transition from juvenile to adult wood. An important way to evaluate it is through the analysis of growth rings patterns along a stem disc. Thus, this study aims to assess the distinctiveness of growth rings in the inner and the outer part of stem discs from Tabuleiro forest species. The samples were obtained from a forest stand with known establishment date, at Reserva Natural da Vale, Espírito Santo, Brazil. Four trees of *Schizolobium parahyba*, *Macrolobium latifolium*, *Parkia pendula*, *Pterocarpus rohrii*, *Bowdichia virgilioides* and *Senna multijuga* were examinated macroscopically and microscopically. Stem discs taken from breast height were polished



and blocks were produced to obtain cross sections of 16-20 μ m, in order to analyze growth rings structure. In the adult wood all the studied species showed distinct rings, however *M. latifolium* showed a high tendency to form wedging rings. The rings were marked by parenchyma bands in *M. latifolium*, *P. pendula* and *S. multijuga*; by fibre zones in *P. rohrii* and by the conjunction of the above features in *S. parahyba* and *B. virgilioides*. Distinctiveness of juvenile growth rings was good in *S. parahyba*; visible in *B. virgilioides* and *P. rohrii*; but poor in *M. latifolium*, *P. pendula* and *S. multijuga*. These results are the initial analysis aiming to establish which species develop early transition to adult wood. The following investigations on tree features from natural tropical forests will allow further comparisons on wood quality in plantations, in order to support the implementation of sustainable forest stands, since it decreases exploitation pressure on natural forests.