

PD1.11 Poster

Cedrela fissilis Vell. (Meliaceae): Dendrochronology and dendroclimatology in Blumenau, Santa Catarina, Brazil

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Cedrela fissilis Vell. (Meliaceae) presents a large ecological distribution on the Brazilian landscape and previous research has indicated that this species has potential for dendrochronological approaches due to its semi-ring porous wood anatomy and formation of annual rings reasonably well demarcated in the juvenile and adult wood in other tropical forests. The present work aimed at developing an exactly dated tree-ring chronology of *C. fissilis* and model the climatic response of its tree-ring chronology. The site studied was a partially disturbed fragment of dense ombrofila forest in Blumenau, Santa Catarina State, Brazil (26°54' S e 49°06' W). Increment cores were taken from the lower bole from thirteen remnant trees using the Presler's increment borer of 5 mm diameter. For each host tree, four radii were bored. Skeleton plots were prepared within and between trees to allow recognition of patterns and problems in ring series. The crossdated tree-ring widths were then measured interfaced with a microcomputer. Crossdating was confirmed with the COFECHA computer program. The age of each tree, correlations and response function analyses were computed between the chronology and monthly total precipitation and average temperature from a location some 30 km distant from the collection site with the test of Pearson. The results indicated that the age of trees ranged from 34 to 87 years and that showed average increase of 3,026mm, highlighting the good state of conservation of the forest, that phenological events are related to precipitation, which also has direct relationship with the tree growth of *C. fissilis* analyzed.

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