**Seasonal and phenological effects on two semi-deciduous species tree growth in the south-eastern Cameroon**

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Inter-annual and intra-annual changes in growth rings of *Entandrophragma cylindricum* and *Erythrophleum suaveolens* trees were studied in order to refine their respective natural populations management settings in semi-deciduous rain forest of the south eastern Cameroon. A combination of methods experimenting sequential cambial marking, anatomical analysis, growth-rings measurement and phenological monitoring of leaves, flowers and fruits was used to determine both frequency and variation in growth across time. Growth correlation with climate and species phenology was also investigated.

After a 38-month study of both tree species, anatomical and statistical analyses of collected data showed that: (*i*) growth rings were annual, with greater rates between March and November and slower rates from December to February; (*ii*) if intra-annual variations in growth rings width were significant across seasons, inter-annual variations were non-significant, and (*iii*) tree growth correlated with climate parameters (total rainfall and solar radiation intensity) and with species leaf phenology (leaf recovery rate). These results confirmed (*i*) the periodicity and synchronicity of growth and phenology of both studied species, and (*ii*) their dependence on climate factors. This thus suggests that the definition of the minimum logging diameter which depends on the biological age of the target species, could be affected by climate change. Climate forecasts on a medium or long term should therefore be taken into account for sustainable forest management practices.

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