Sapwood estimates of pedunculate oak (Quercus robur L.) in eastern Baltic

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Pedunculate oak (*Quercus robur* L.) is one of the most dendrochronologically investigated woods in Europe. However, oak is a problematic object to date as its sapwood which indicates the felling date is often missing. Therefore the number of sapwood rings in living trees is examined to estimate the number of missing sapwood rings on dating objects. This method has widely been used in Europe but for the Baltic States no estimation of oak sapwood rings has been done. In this work, a total of 660 samples of living trees from 43 sites in southern Finland, Estonia, Latvia and Lithuania were investigated. Ring widths were measured and the number of sapwood rings was determined according to two criteria: change of colour and absence of tyloses in earlywood vessels. In cases of a lack of coincidence between these criteria the colour was used rather than the tyloses. The samples were divided into two sets, according to the t_H-values between site chronologies and the major geobotanical sub-provinces: the West Baltic (southern Finland and western Estonia) and the East Baltic region (eastern Estonia, Latvia and Lithuania). As the result of a statistical analysis, the number of oak sapwood rings ranges between 4 and 21 in southern Finland and western Estonia and between 6 and 19 in eastern Estonia, Latvia and Lithuania. The ranges are presented within 95% confidence limits. Comparing the results with earlier studies, the general European trend of decreasing sapwood ring number towards the East was confirmed.