

Factors affecting daily variations of Scots pine stem size at the end of vegetation season

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High precision dendrometers are efficient tools for the investigation of the dynamics of tree radial growth as well as the changes in tree stem size, physiological conditions, dependence on hydrological and meteorological conditions and tree ring formation studies. In our study dendrometers DRL 26 were used to identify the impact of climatic and microclimatic conditions on tree physiology and stem size changes. The dendrometers were installed on 5 Scots pine (*Pinus sylvestris* L.) trees growing in raised bog habitats. The sites for installation of the dendrometers were selected by following criteria: representative research location, degree of anthropogenic disturbance, even distribution of research sites in Lithuania and estimation of climatic, hydrologic and anthropogenic conditions. Considered all these criteria three sites in raised bogs were chosen, in which automatic data loggers for recording water temperature and, water level in wells and dendrometers were installed in measurement areas. Research period lasted from the end of the vegetation to the beginning of dormancy season. Factors affecting tree stem size changes and synchronicity among different trees at the end of vegetation season were established. Daily variations and reaction of stem size to moisture fluctuations almost ceased at the beginning of November when mean daily temperature dropped below +7C°.