

Pointer years of Norway spruce (*Picea abies* L. Karst.) tree rings on dry forest sites in Lithuania

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Research material (samples from tree stems) was collected in all regions of Lithuania during 1995–2000. More than 50 research plots in mature Norway spruce forests were selected. Most of these plots (34) represent dry forest sites (*Piceetum vaccinio-myrtillosum* and *Piceetum hepatico-oxalidosum*). More than eight hundred tree-ring series from spruce trees were analysed. Latewood and earlywood widths were measured separately. During the research, two master chronologies (one for each site) were created. Using response function the correlation between tree-ring growth and meteorological factors (monthly precipitation and air temperature) was estimated. Pointer years of spruce radial increment during past sixty years were also estimated.

The following significant pointer years with negative increment were identified: 1941, 1954, 1979, 1980, 1992 and 1993. Characteristic pointer years of positive increment were in 1946, 1961, 1962 and 1974. There are no clear differences in the geographical distribution of pointer years in 1946, 1954, 1962 and 1992. There are only differences in comparison between annual ring, latewood and earlywood increment in these years.

Results of my research on Norway spruce have showed that even in a small territory like Lithuania (slightly bigger than 65 thousands km²), with hills no higher than 300 meters, there are significant differences in widths of tree rings.

Editorial Keywords

latewood width, earlywood, response function analysis, pointer years, *Picea abies*, Lithuania

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