

Assessment of the stem decay of European larch old stands in Lithuania using impulse tomograph Arbotom®

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The European larch (*Larix decidua* Mill.) is considered to be one of the most beautiful coniferous trees planted in Lithuania. The first larch trees were planted in Lithuania at the beginning of the 19th c. Our dendrochronological investigation (Vitas and Žeimavičius 2010) has revealed that the oldest larch growing in Taujėnai Park was planted before 1822 (according to the first ring at the breast height). In spite that larch is one of the most productive tree species Lithuania, insufficient attention was paid to the state of the oldest larch trees until now. During the field-work a lot of trees with stem wounds and cracks were observed. Stem decay is a result of tree injury, usually artificial. During the investigation totally 28 larches (10.5 ± 3.1 trees on average per plot) were with rotten stems, in spite that we avoided to core trees with obvious disturbance signs. Hence, the real number of trees with stem decay is higher. We have used an impulse tomograph Arbotom® to assess the number of rotten larches altogether with a spatial distribution of the decay. The investigations were carried out in four mature larch stands with at least 20 trees in each plot located in forests of central and southern Lithuania: Degsnė, Gražiškiai, Selema, and Višakio Rūda. The research was supported by Research Council of Lithuania (LEK-10021).

References:

- Vitas, A. and Žeimavičius, K. 2010. Regional tree-ring chronology of European larch (*Larix decidua* Mill.) in Lithuania. *Baltic Forestry*, 16 (2): 187-193.