

A millennium – length pine (*Pinus sylvestris* L.) chronology representing the Vilnius Lower Castle constructions

Rūtilė Pukienė

*Vytautas Magnus University and National Museum The Palace of the Grand Dukes of Lithuania,
B.Radvilaite 7/2, LT-01124, Vilnius Lithuania*

During archaeological investigation of the territory of the Vilnius Lower Castle in 2002 -2009 about 3000 pieces of timbers were sampled for dendrochronological analysis. The main tree species of medieval and post-medieval wooden constructions (road pavements, houses, grillage under the palace foundations, etc.) was *Pinus sylvestris* L. More than 500 pine samples have already been analyzed. Dendrochronological series of waterlogged archaeological wood cover the 11th -16th centuries. In addition to waterlogged samples also dry wood samples from historical houses located in the territory of the Castle and in Vilnius old town were collected. These samples represent the 17th – 20th Cs. constructions. Fifty five wooden constructions have already been dated. A millennium length pine chronology ZPMLPSC7 has been constructed using 333 sample series. The chronology covers 1010 – 2009 period. The best replication of the chronology is in the 13 – 14th Cs. The largest sample depth is up to 142 samples. Lower replication is in the 17th – 20th Cs. part. In this period the chronology sample depth fluctuates mostly between 10 and 20. The chronology ZPMLPSC7 shows good agreement with pine chronologies from neighbour countries. The best agreement is with Latvian pine chronologies ($t=9.57$, $t=7.32$).