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**[L] Historical wood from the Vilnius  
Lower Castle excavation**

In 2009 Lithuania will celebrate a millennium anniversary of the first reference of its name in written sources. One of the major items of the celebration program is the reconstruction of the Vilnius Grand Dukes Palace. Construction works stipulate more intensive investigation of the Vilnius Lower Castle territory.

During the long history of constructing, destructing and reconstructing up to 8 m thick cultural layer has been accumulated in the Castle territory. The upper layers represent a period of brick and stone constructions mainly of 15 – 17th and later centuries. In the depth of approximately 4 m the layer rich with remnants of timber constructions (pavements, houses, piles, etc.) of previous centuries starts. In some places the thickness of the layer of successive timber constructions is up to 4 m. With high ground water level there is a good chance for preservation of wood.

In recent years a big collection of wood samples was collected by the Castle Research Center “Lietuvos Pilys” in the excavated territory. More than 300 pieces of timbers were sampled in 2002. For investigation of the historical wood in 2003 a dendrochronological laboratory equipped with the Sheffield tree-ring measurement stage and the program Dendro (Ian Tyers) was founded at the Castle Research Center. In this year I started dendrochronological examination of the collected timbers.

The main tree species used in constructions was *Pinus sylvestris* L. Mature trees were preferred. An average length of tree ring sequences of the measured samples is about 130 years. Some samples have more than 200 rings.

From the already measured timbers a 210 years long chronology has been constructed using 18 relatively dated rampart logs. The chronology is dated to 1300 – 1509. Another

157 years long average series dated to 1396 - 1552 was made from three timbers from under palace basement. Good agreement (t value up to 10) of averaged chronologies and some individual series with the chronology of Riga defensive rampart (Maris Zunde) was found. This indicates the provenance of timbers from the region with a similar dendrochronological signal. Dendrochronological investigation of the historical wood is in progress with expectation to construct a well-replicated pine chronology for the first half of the second millennium.

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**[L] Teak log coffin culture in Northern  
Thailand: dendrochronology and a  
revision of dating theories for teak  
coffins' heads**

The district of Pang Ma Pha in the Mae Hong Son Province in Northern Thailand has many caves that are of great archaeological interest. In certain dry caves, many teak coffins have been found. An interesting feature of these coffins are the carved teak heads at both ends. One type of head can be described as simple – it has no facial features, merely a headlike shape. By contrast, the complex type has animal-like features. Similar coffins have been found at other South-East Asian sites. According to the archaeologists' hypothesis the simple head type predates the complex head type. The cross-dating of simple and complex head types should follow the same pattern. To test this hypothesis, dendrochronological techniques were applied. The objective of this was to compare and examine the growth patterns of teak from various coffins, thereby establishing dating and cross-dating of the coffins. Ban Bo Kri Cave and Ban Rai Rock shelters were the study area. From a large sample of coffins, two cores were collected using an engine increment borer