

BEGINNING OF DENDROCHRONOLOGY OF MEDIEVAL VILNIUS LOWER CASTLE

Rūtilė Pikšrytė - Pukienė

Dendroclimatochronological lab., Vytautas Magnus University, Kaunas, Lithuania

For the first time in written sources Castles of Vilnius, the capital of Lithuania, were mentioned in 1323 in Grand Duke Gediminas' letters and peace treaty with the German Order. Recent excavations have revealed that a fortified settlement on Castle Hill had already existed in the first millennium BC. Discovery of remnants of a stone cathedral from the middle of the 13th century under basements of the present Vilnius Cathedral provided evidence that the place of residence and baptism of first King of united Lithuania Mindaugas was here.

During the two-centuries' war with the German Order in the 13th - 14th Cs Vilnius castles developed into complex fortification system suited in the same time for the Court of Grand Duke of Great Lithuanian Dukedom. Structures of the Lower Castle have evolved later on, changing in a style from Gothic to the Classicism.

The Renaissance style ducal palace and some other buildings of the Lower Castle became ruined during the wars in the 18th c., and with many other historical buildings were demolished in the first half of the 19th c. when Russian fortress was arranged there. Only the Cathedral with the Belfry and some houses of Armory have remained.

In the recent excavations the basements of the ducal palace, defense wall and other buildings were uncovered. Last year two samples from a wooden pavement were dendrochronologically and radiocarbonically analyzed. Both the samples were *Pinus sylvestris* without a bark edge. Because of absence of a local pine chronology from 13th-14th Cs., ring series were compared with Gotland and other Swedish chronologies. One sample showed coincidence with Gotland and Soderkoping chronologies, giving the date of the last ring in 1328 AD. The other sample was dated according to the first and gave date 1379 AD. C^{14} dating of both samples in four radiocarbon laboratories confirmed the dates of the 14th c.

Four new wooden samples from under the basements of a palace and a defense tower are under examination. All of them are *Pinus sylvestris* with remnants of a bark edge. Log from under the defense tower have been cut in a summer time.

Analysis of samples from a wooden fence and poles (14th - 15th Cs) taken some years ago (researcher P.Sturys) have shown that about 250 years long *Pinus sylvestris* chronology could be constructed from them.