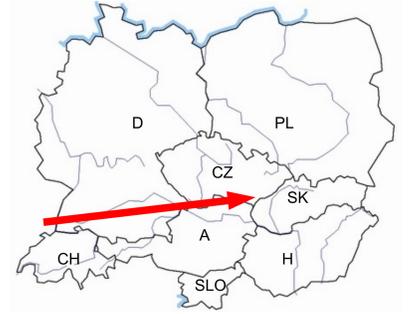


INTRODUCTION

Veselí nad Moravou is situated in the south-eastern part of the Czech Republic in South Moravia. The study site is located on the right bank of the Morava River in its close vicinity. Due to the renovation of the castle in 2008–2010 the archaeological rescue research was performed. During the archaeological research located in the bailey of the castle well preserved wooden objects were found. In total 16 wooden objects were detected within the bailey of the castle. The function of these structures was identified just in three cases. One of them was interpreted as a bakery, the second one as a hayloft and the third one, discussed in this poster as a horse stable.

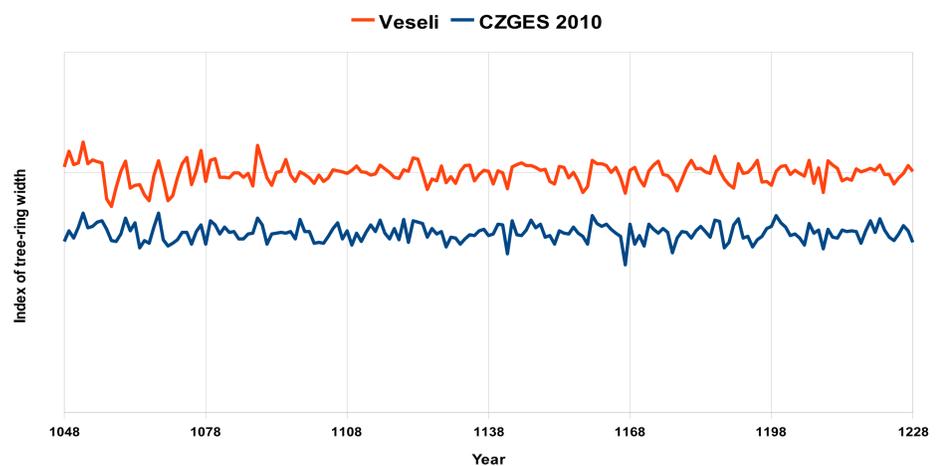


MATERIAL AND METHODS

Samples for dendrochronological analysis of separate stable constructions were taken using a chainsaw. The analysis was performed in correspondence with the standard dendrochronological methodology. Measuring and synchronizing of tree-ring series were carried out using the PAST4 (©Sciencem) application. For the anatomical analysis temporary microscopic preparations were created. They were mounted with distilled water. The microscopic preparations were observed with an optical microscope. The samples were classified on the basis of the differences in the wood microscopic structure according to their genus.

RESULTS

The wooden construction of the horse stable structure was dated using the Czech oak tree-ring chronology CZGES 2010 to the year 1228. Columns, walls and doorframes were made from oak. Wood used for sills was oak and alder. The floor consisted of elm boards. The walls were woven from probably hazel twigs.



Tree-ring chronology	T.test (according to Baillie & Pilcher)	T.test (according to Hollstein)	Gleichläufigkeit [%]	Curve overlapping [years]	Dating
CZGES 2010	9.12	10	70	181	1228

Number of sample	Species	Length	End	Dating
110	elm	51+6ak	1191	after 1202
111	oak	107+2ks	1228	1230-1248
150	oak	46+19ak	1193	after 1217
159	oak	61+31ks	1196	1227-1241
162	oak	62+1ks	1222	1224-1244
205	oak	189+20ak	1188	after 1213

CONCLUSION

The natural durability is probably the main reason why the most samples were identified as oak (*Quercus* sp.). Oak heartwood is one of the most naturally durable woods, even when stored in water. Wood of elm has mechanical properties comparable to oak but it is only slightly resistant to decay. In this case the natural durability was not as important as in the case of exterior use. We can conclude that all wood species used in the horse stable structure had been chosen for their availability in the surrounding floodplain forests. Oak, elm and alder are woody species typical of floodplain forests.

ACKNOWLEDGEMENT

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