Archaeobotanical analysis of Renaissance vault infills from Vladislav Hall, Old Royal Palace, Prague Castle, Czech Republic

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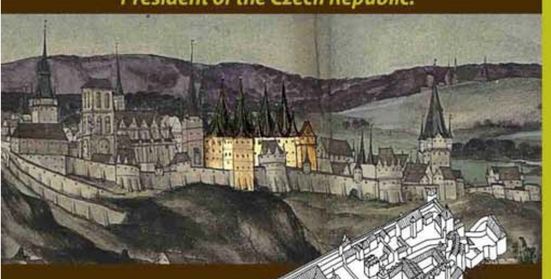
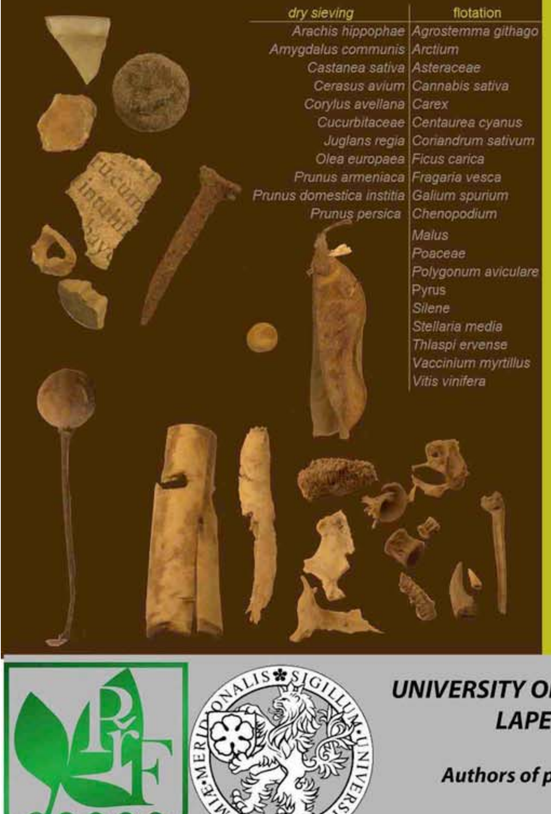
The Prague Castle and Vladislav Hall

The Prague Castle as the residence centre of the Czech kings is one of the most important locations of the Czech Medieval and the Early Modern period. The Vladislav Hall was built upon the impulse of Vladislav Jagellonský in the end of 15th Century. The Hall was used for ceremony opportunities of the royalty and nobility. The royal ceremonies excelled especially during the coronation banquets of the Habsburgs. The Hall also served as a marketplace offering luxury goods, art and book printing production. Today the hall is used for the highest political ceremonies, such as the vote of the President of the Czech Republic.



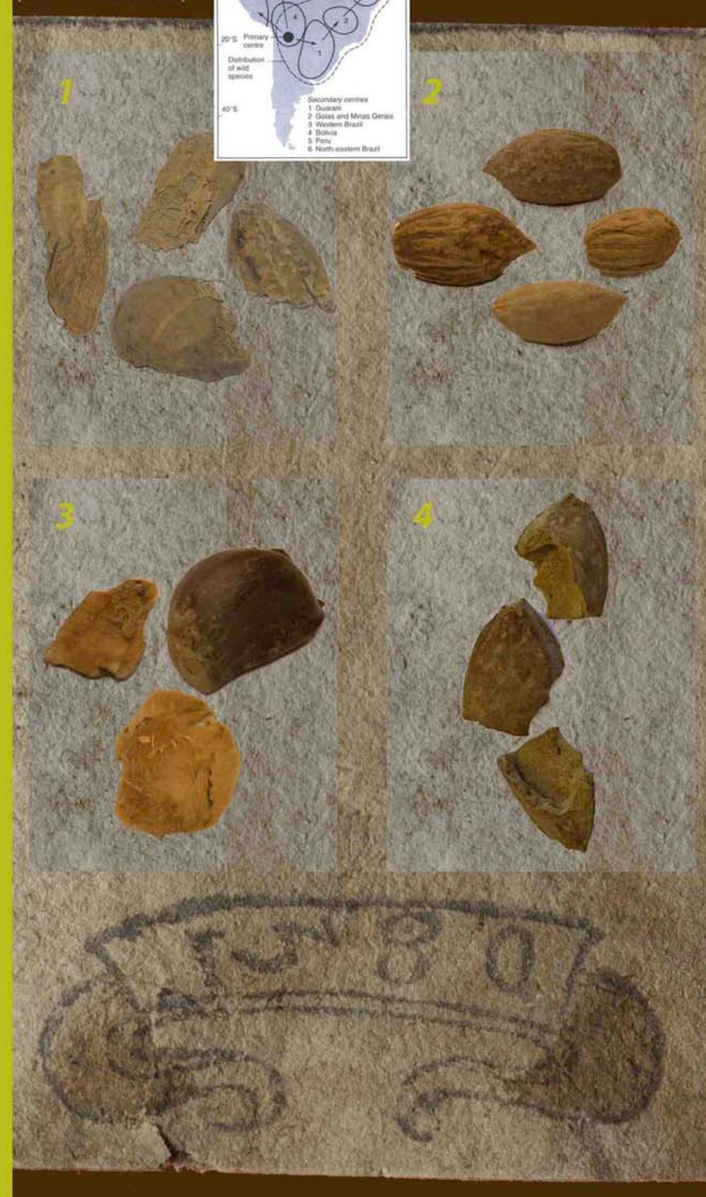
Archaeobotanical finds

The archaeobotanical analysis of the arch fills of the Vladislav Hall is based on two types of samples. The first group of samples, obtained by dry sieving, captured large macro-remains, small animal bones and other animal remains. A very numerous finding group is obtained from the flotation by floating machine type Ankara. The archaeobotanical material contains waste from dinners, celebrations and banquets, which took place in the Vladislav Hall, as well as plant material, which indicates agricultural activities from near or more distant surrounding areas of the Prague Castle.



dry sieving	flotation
Arachis hippophae	Agrostemma githago
Amygdalus communis	Arctium
Castanea sativa	Asteraceae
Cerasus avium	Cannabis sativa
Corylus avellana	Carex
Cucurbitaceae	Centaurea cyanus
Juglans regia	Coriandrum sativum
Olea europaea	Ficus carica
Prunus armeniaca	Fragaria vesca
Prunus domestica institia	Galium spurium
Prunus persica	Chenopodium
	Malus
	Poaceae
	Polygonum aviculare
	Pyrus
	Silene
	Stellaria media
	Thlaspi ervense
	Vaccinium myrtillus
	Vitis vinifera

Fig 1: Centers of origin and diversity (Source: Weiss 2000)



1 Peanut (Arachis hypogaea)

The archaeological record of peanut supports its cultivation between 3000 and 2500 BC in Peruvian desert oases. The cultivated peanut was likely first domesticated in the valleys of the Paraguay and Parana rivers in the Chaco region of South America (Fig 1). The 'Spanish' variety of peanut was almost certainly taken from Brazil to Africa by Portuguese shortly after their contact with Brazil in 1500. The first written account of the crop is found with the Spanish entry into Hispanola in 1502. First published notice about peanut appeared in Oviedo y Valdés (Historia general y natural de las Indias), in 1535. Prague royal court had direct contacts with Spanish court and therefore presence of peanut shells in the Early Modern period layers of the Vladislav Hall is not fully surprising (in England first mention about peanut is in 1640, Theatrum botanicum).

2 Olive (Olea europaea)

Olives are indigenous in the Mediterranean Basin. Archaeobotanical studies can contribute to a better understanding of the origins in time and space of olive domestication and of the diffusion of its cultivation across the Mediterranean. Olive cultivation appeared for the first time since the fourth millennium BC in Palestine and gradually diffused from East to West carried by the Phoenicians, Etruscans, Greeks and Romans. In Central Europe, distribution of olives is limited in Roman Empire frontiers. There is no direct archaeobotanical evidence of Olea europea northern of Limes romanus until the Early Modern period. Olives are recorded in written sources in the Late Medieval period. Finds from Vladislav Hall are therefore extraordinary value.

3 Sweet chestnut (Castanea sativa)

First unambiguous evidences of chestnut cultivation are reported in palynological data of several regions in the Anatolian Peninsula, north-eastern Greece and south-eastern Bulgaria and date back to around 3700 B.P. (2100-2050 cal. B.C.). In the Late Middle period (11th to 16 th Centuries) chestnut became an essentials source of food and timber in Mediterranean and the southern parts of Central Europe. Nevertheless this medieval chestnut golden age decline progressively due to climatic cooling (the Little Ice Age), introduction of alternative crops (maize or potatoes) and the industrial revolution caused higher using of chestnut trees for charcoal production. Nowadays the European chestnut forests are concentrated in just a few countries with a long tradition of chestnut cultivation: France and Italy, Spain, Portugal and Switzerland.

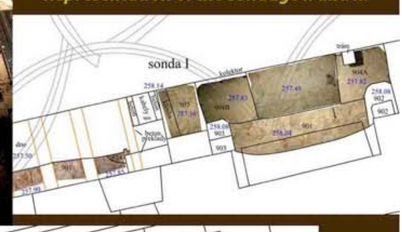
4 Sweet almond (Amygdalus communis)

Amygdalus communis is the one of the early fruit tree domesticants in Old World agriculture. The oldest European archaeological records of almond came from southern Greek – palaeolitic sediments of cave Franchti and from other Mesolithic and Neolithic settlements. The most frequently cultivated is in Mediterranean and Balkan Peninsula where have been domesticated from the spontaneous flora. Significant introduction to Central Europe was in the Middle Ages and in Czech republic is recorded since14th Century.

Archaeology

The archaeological research in the Vladislav Hall took place in a seldom archaeologically mapped environment of the floor and arch fills. The possibility to study in details their composition and stratigraphic relationships of their individual parts were fully utilized. Careful documentation showed stratification linked to various chronological stages of reconstruction and use of the Hall. For the 16th to 18th Century there were distinguished 2-3 layers or strata sections, distinguished amongst others by the chronological status of the contained findings. For the chronological classification of individual collections there can also be used the dendrochronological data from boards and beams supporting the floor. Dating of the parts of collections is also based on the evaluation of the findings of fragments of archival documents, prints and books, partially with a precise date of printing. Most valuable and undisturbed layers were identified in the sondage I. and II.

Representation of the sondage I. and II.

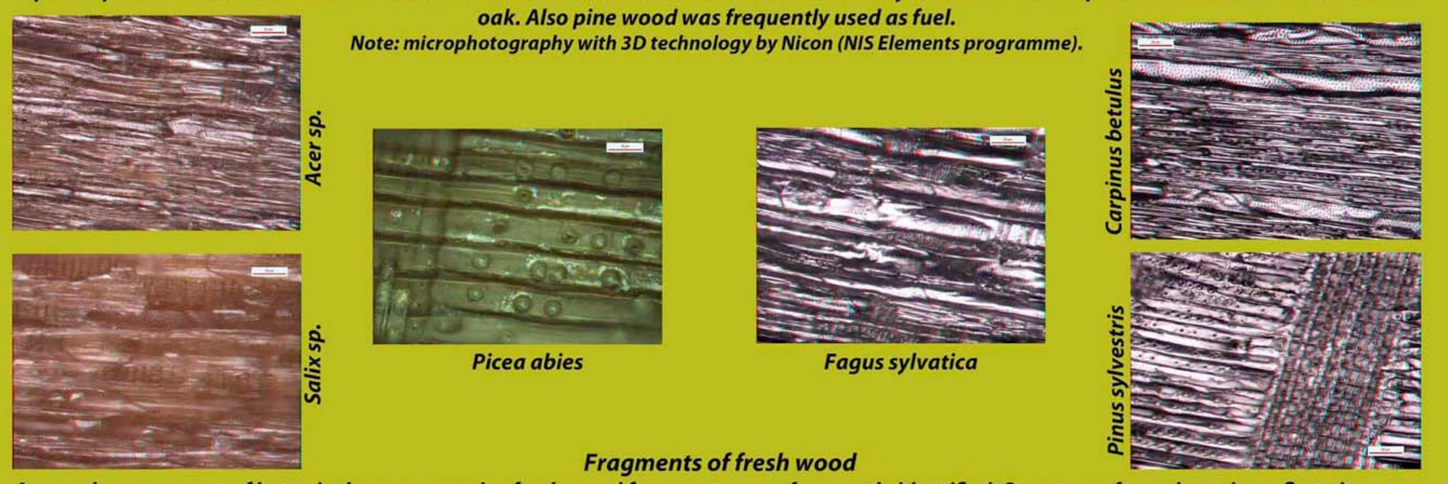


Artefacts founded in the sondage: e.g. wood spoons, piece of manualscripts, combs, playing cards etc.

Fragments of charcoal

Specific part of macro-remains in vault infill is charcoal as a rest of fuel. It consists namely from hard wood species like hornbeam, beech and oak. Also pine wood was frequently used as fuel.

Note: microphotography with 3D technology by Nicon (NIS Elements programme).



Fragments of fresh wood

Among large amount of botanical macro-remains fresh wood fragments were frequently identified. Structure of wood species reflects its use as constructional wood (e.g. common spruce) and handicraft waste (e.g. willow or maple).

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