

# Botanical Macro-Remains of Slavic Settlements from the River Elbe Floodplains in comparison to On-Site and Off-Site Pollen Data

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Sediment samples from several excavations covering early till high Medieval (7<sup>th</sup> - 12<sup>th</sup> c. AD) contexts were analysed for botanical macro-remains within the DFG *Paketantrag* "Die slawische Besiedlung an der unteren Mittel-Elbe". The investigated Slavic rural settlements and forts are situated in the floodplains of river Elbe and its hinterland: Lenzen-Burg, Lenzen 32, and Lenzen-Neuehaus in the federal state of Brandenburg; Meetschow Vorburg, Vietze, Brünkendorf, and Wustrow in Lower Saxony; and Friedrichsruhe in Mecklenburg-Vorpommern. Sediments from pits, hearths/ovens, and cultural layers inside and outside of houses as well as from dumping areas, burnt layers, rampart layers, ditches, wells, etc. were sampled, containing charred, waterlogged and mineralised plant remains. Mixed storage samples of *Panicum miliaceum*, *Secale cereale*, *Avena sativa*, and *Linum usitatissimum* were commonly found. Hulled barley (*Hordeum vulgare*) was another important crop, free-threshing wheat (*Triticum* cf. *aestivum*) was less common. Hulled wheats (*T. dicoccum* and *T. monococcum*) and pulses (*Vicia faba*, *Lens culinaris*, and *Pisum sativum*) as well as foxtail millet (*Setaria italica*) and gold-of-pleasure (*Camelina sativa*) were rarely represented. The identified weeds aided in the reconstruction of past environmental conditions in the crop fields, while grassland taxa displayed the ancient use of wetlands as well as of dry and sandy areas by the Slavs.

From the Slavic fort of Lenzen-Burg, profiles of cultural layers measuring a total depth of 7m were analyzed both for pollen and botanical macro-remains to directly compare the two different botanical records. The resulting pollen diagram shows that prior to the construction of the fort in 950 A.D., and also in the earlier period of the fort settlement until the 1<sup>st</sup> part of the 11<sup>th</sup> c. AD, the surroundings of Lenzen were still largely wooded with *Quercus*, *Fagus*, *Carpinus* and *Pinus*. In the humid lowlands, *Alnus* was frequently growing. Starting with the mid-11<sup>th</sup> c. AD, extended clearing of woodland, increasing agriculture and the spread of heaths and dry grassland are indicated. There are several remarkably early finds of *Fagopyrum* pollen grains in layers from the first part of the 12<sup>th</sup> century, while macro-remains of this crop are still absent. Information on a regional scale is added by an off-site pollen profile from the nearby lake "Rudower See", which displays similar woodland dynamics and land-use in the Slavic period.