

## **The palaeoecological footprint of the great Migration Period (ca. 360-510 CE) in the Greater Poland, Poznań district (Western Poland)**

Palaeoecological data allow us to identify and estimate the intensity of past human activities. Their use is possible through e.g. palynological (pollen and non-pollen palynomorphs), microcharcoal or geochemical analysis and is particularly useful in studies of past human impact on the environment. These information are stored in sediment layers, such as lakes or peatlands, from which cores will be taken for our study. The use of high resolution in these studies, in some cases, allows for a better understanding of the archaeological state of knowledge, especially where archaeological finds are few. Palaeoecological investigations are all the more useful when the chronology of historical periods is poorly documented. One such historical period falling in the late Roman Period is the Migration Period, in Poland dated to c. 360-510 CE.

It was a time characterised by mass migrations in Europe, initiated by the expansion of the steppe tribe of Huns deep into Europe. As a result, many areas were probably abandoned in Central Europe, including Poland, as documented by palynological data from the Polish Lowlands, including Greater Poland. This could enable the regeneration of natural vegetation, which lasted up to several hundred years. The project aims to determine how these events during the period of the Migration Period (c. 360-510 AD) in Greater Poland affected local settlements and how the vegetation responded to these changes. Archaeological finds from various parts of Greater Poland indicate that the area was settled by the Przeworsk culture until the 5th century or even longer during a period of great European transitions. However, recent archaeological data from Giecz allow extending the time of activity of this culture even to the 7th century. Moreover, finds of Slavic origin from other parts of Greater Poland from the 6th-7th centuries, as well as ceramics with intermediate features between the Przeworsk and early Slavic cultures, allow us to assume that these cultures may have been in contact with each other, which may be of great importance for the history of Poland. As a result, instead of a "settlement gap", a specific form of settlement continuation may have occurred. However, there is a lack of well-documented chronologies from this period. This gap may be filled by high-resolution palaeoecological studies. Their use may allow us to determine how humans influenced the forest ecosystem in the past and how land use changed in the vicinity of the sites, i.e. the wetlands located in Pobiedziska (Kazanie site) and Giecz, and thus make our data comparable with the limited archaeological data from this period. The project may shed new light on the 'settlement gap' question, postulated by some researchers, between the Przeworsk and early Slavic cultures in Greater Poland. In addition, the unique circumstances caused by migrations and the probable abandonment of previously used land may provide an excellent opportunity to identify the role of natural forest regeneration, where human activity was negligible, as well as providing information on the role of fire in natural deciduous forests, which so far, due to their absence, is not fully understood. Therefore, high-resolution (sampling every 1 cm) palaeoecological data supported by dense radiocarbon dating (ca. 20 dates per 1000 years) from two sites in the Greater Poland region are essential to provide new data on problems that are so far poorly recognized.