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About the Papaver Centre. But not only...

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Welcome to the first issue of IANSA 2015. Here, we present three general articles and the first series of papers connected with the activity of the Papaver Centre (one of which is a thematic review). This centre was founded in 2013 at the University of South Bohemia in České Budějovice (Czech Republic), where it brings together natural scientists and archaeologists along with scientists from abroad. The activity of this centre is described in detail by myself in a backstory paper in this issue. The articles in this volume are accompanied by one book review. First of all I wish to comment on the significance of the newly published general papers, as well as the articles connected with the Papaver Centre.

Humans and forest, that's the topic of the introductory Papaver Centre paper by Manfred Rösch. The author is a well-known archaeobotanist and palaeoecologist working in southwest Germany. His study deals with long-term changes in forest species composition during the Holocene; these changes were significantly caused by human activity. The basal set of knowledge has been formed by pollen analysis undertaken in Schwarzwald, today one of the most densely-forested landscapes in central Europe. The main attention is focused on silver fir (*Abies alba*). High resolution and radiocarbon-dated pollen profiles from the central cores of small lakes in Nordschwarzwald (northern Black Forest) reflect the history of the landscape, vegetation and human impact during the last 11 millennia. The reasons for a shift from mixed oak forest to dominating *Abies* in the 4th millennium BC are not clear, but it could be connected to changes in the lakes' ecology and chemistry. Later on, changes in tree species composition are evident several times over. To explain these changes is not easy, but the current species composition is definitely the result of strong human impact throughout the Holocene.

Wooden objects, prehistoric trackways of northern Germany, are the topic of Inke Achterberg, Andreas Bauerochse, Thomas Giesecke, Alf Metzler and Hanns Hubert Leuschner, based on the dendrochronology of these

famous wooden constructions. The oldest ones are recorded from the Neolithic; however, they are also known from much younger periods in prehistory. The authors constructed so-called "tree die-off phases" in the mires of this area of northwest Germany. The precise (dendrochronological) data can indicate periods of water-table rise and mire expansion. The study found that the majority of dendrochronological trackway construction dates in the area are contemporaneous to die-off phases of peat-preserved trees.

In another article, Andrea Pizzeghello, Massimo Vidale, Giuseppe Salemi, Vincenzo Tinè and Sergio Di Pilato pose questions about the meaning of a prehistoric female ceramic statue from the Chalkolithic period. They try to understand what constitutes the figurine as a process in accord with the theory that figurines were active subjects of human agency. In order to understand this process, they made a CT scan investigation of the female figurine. The use of this scientific method seems to be an effective tool to trace the original motivation of the figurine makers. Such research within these figurines could stimulate a deeper understanding of "the chronological, spatial and cultural coordinates of the various techniques on record" and "help us to focus new hypotheses on the agencies and social roles in these prehistoric communities".

Nutritive value of emmer wheat (*Triticum dicoccum*) is topic of Michal Hejcman and Pavla Hejcmanová paper. The authors performed an archaeological experiment aimed to compare basal factors affecting emmer nutritive characteristics. They demonstrate differences between old and modern technologies and cereals and suggest for example, that in prehistory no strict borders between arable fields and grasslands probably existed, as many grassland species were also weeds on arable land. Main result is that emmer wheat was a popular crop during prehistory, probably due to its high grain-yield compensation ability, stability of grain production, good competitive ability to cope with weeds and high value of its grain.

Tereza Šálková, Petra Houfková, Jaroslav Jiřík, Lenka Kovačiková, Jan Novák, Martin Pták, Tomáš Bešta, Alžběta Čejková, Eva Myšková (in a Papaver Centre article) consider how much data we can gain from concentrated medieval infill sediment from two wells discovered during a salvage excavation in the historical core of the town of Písek. Although the number of sediment samples from the wells was limited, a suitable set of methods have been applied with sufficient outputs to illustrate the medieval economy in an average town of South Bohemia. The authors have partly managed to reconstruct the environmental conditions of the town and its surroundings, as well as the economical background of the town, waste management, food strategy, animal husbandry and exploitation of natural resources.

The medieval fortification of the Jánský vrch Castle in Javorník (Czech Silesia, Czech Republic) is the topic of the paper by Hana Dehnerová, Jan Martínek, Martin Moník and Pavel Šlézar. The authors used sophisticated field methods for a virtual depiction of a fortification ditch and buildings. Prospecting with 3D laser scanning identified several irregularities on the hill south of the castle. Two parallel lines south of two prominent elevations within the hill represent either an extension of the medieval castle or a siege fortification related to the Hussite siege of Javorník in the spring of 1428.

The review article concerns plant use in the Mesolithic period with special attention to the area of the Czech Republic, a Papaver Centre article written by Michaela Divišová and

Petr Šída. Although study of the Mesolithic period, including plant use and palaeoeconomy, is a traditional topic in Western Atlantic Europe, archaeobotanical data about the Mesolithic period in central Europe are less well known. Some gaps in knowledge are partially filled in this new review, which has collected knowledge in a European context and summarized some new results of Mesolithic studies in the Czech Republic. Michaela Divišová is also the author of the book review of *The Oxford Handbook of the Archaeology and Anthropology of Hunter-Gatherers*.

The backstory was written by a large team from the Papaver Centre, in particular: Jaromír Beneš, Adéla Pokorná, Alexandra Bernardová, Michaela Divišová, Petra Houfková, Ondřej Chvojka, Kateřina Kodýdková, Veronika Komárková, Klára Paclíková, Karel Prach, Michal Preusz, Kamila Lencová, Jan Novák and Tereza Šálková. The paper comments on the three years of effort by an interdisciplinary team consisting of paleoecologists, archaeologists, and vegetation ecologists in order to create an effective space for the study of climatic, cultural as well as landscape changes in vegetation and crops along a gradient from northern Africa across central Europe. The Czech Papaver team has been complemented and supported by known scientists from Italy, Germany, Great Britain, Sweden, Denmark and Japan.

Moreover, the next volumes of the IANSa journal will publish further results of the Papaver Centre's activity. We think the activity is both fruitful and promising.