

Economic and environmental changes during the 4th and 3rd millennia BC: the 25th Jubilee Symposium of the AEA in Bad Buchau, southern Germany

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The Association for Environmental Archaeology can look back on 25 years of bringing together people working in environmental archaeology and related subjects. During this time, more than 400 international members have joined the Association, profiting from its platform of meetings and conferences, its regular newsletter and, more recently, its internet website and, perhaps most important of all, access to its peer-reviewed journal – *Environmental Archaeology*. In a European context, this journal is outstanding because it offers the opportunity to present the results of broad interdisciplinary archaeological research. In doing so it caters for a trend in environmental archaeological research in the course of the last 25 years that is amply illustrated by this volume — namely a movement away from isolated pieces of scientific study towards broadly integrated and interdependent research programmes. The articles in the present volume (and two articles in the forthcoming volume 11:2) are based on lectures and posters presented to the jubilee conference held at Bad Buchau in September 2004. The contributions illustrate a diverse and multidisciplinary approach to studies of the interrelation between, and changes in, the economy and environment during the Neolithic and Bronze Age.

It was a great honour for the Federseemuseum Bad Buchau, the Landesdenkmalamt Baden-Württemberg and the National Museum of Denmark to organise

this jubilee conference in Bad Buchau, attended by 70 participants from 11 European countries. The year 2004 also marked the 25th anniversary of excavation and research in the Federsee. This was initiated by the Landesdenkmalamt Baden-Württemberg in 1979, although the history of archaeological research in the area extends back to 1875. Since then, more than 20 wetland sites have been excavated and, most importantly, these excavations had been accompanied by broad-ranging environmental archaeological studies: palynology and palaeoecology, archaeobotany, archaeozoology, archaeoentomology and sedimentology. Of the impressive number of researchers involved in research into the Federsee, from the 19th century up to the present day, we would like to draw particular attention to three great pioneers: Franz Firbas, Karl Bertsch and Udelgard Körber-Grohne. It should also be mentioned that the first application of dendrochronology, in a European context, was on archaeological material from the Federsee basin by Huber and Holdheide (1942). These groundbreaking interdisciplinary research activities were taken up again in 1979. In addition to new settlement structures, such as the heavily fortified Bronze Age site of 'Siedlung Forscher' (Planck *et al.* 1990), sensational and important archaeological finds have come to light during recent years, for example the finds of 5000-year-old wheels from Alleshäusen and Seekirch (Schlichtherle 2002).

New and important research results concerning the past economy and environment of the area have been produced by a number of environmental archaeologists during recent years, their focus being primarily on Neolithic and Bronze Age material (Landesdenkmalamt 2004). This was the main reason for the conference theme being fixed on the 4th and 3rd millennia BC, a period when many economic and

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1 Reception in the Golden Hall of the Bad Buchau castle (02-09-2004). Environmental Archaeologists from 11 European countries, the mayor of Bad Buchau and the board of the local association for antiquities were attending the celebration. Photo: Klaus Weiss

technical innovations became successfully established over the whole of Europe. This is clearly visible in the archaeozoological data from southern Scandinavia and from the northern Alpine foreland. The research results presented in this volume by Johannsen and Schibler, respectively, agree in their evidence for the utilisation of cattle as draught animals from around 3500 BC onwards. This was a technological innovation that provided the Neolithic farmers with an extra force that could be applied to a range of extended economic activities, such as forest clearance, tilling of the agricultural soil, wheeled transportation of goods and more. Specialisation in the cultivation of specific crops, such as flax — probably used for textile production, can also be demonstrated for the first time (Herbig this volume). From the 4th millennium BC onwards, environmental changes also become visible in many European pollen diagrams. It seems that grazing played a more important role than the cultivation of crops for the first 'farmers' in more northerly regions (Høgestøl *et al.* this volume; Hjelle *et al.* in press). The activities of humans and their domesticated animals caused marked changes in the landscape, for example by way of erosion processes (Reiss *et al.* this volume). New interdisciplinary

research on this subject has also been carried out in eastern Europe (Smith *et al.* in press). There is no doubt that more effort must be invested in the investigation of the potential involvement of climatic factors in economic innovation and landscape change. This field of research was not discussed in as much depth as we would have wished during this conference. But many questions always remain open and this one is so important it may prompt a future conference dealing with climatic changes during the 4th and 3rd millennia BC.

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the arrangement of the marvellous reception in the Golden Hall of Bad Buchau castle (Fig. 1). More than 25 international reviewers fulfilled their tasks with great precision and punctuality. Thanks to their collaboration, and to the discipline of all the contributing authors, it has been possible to have this volume ready for publication just one year after the conference. And last not least our warmest thanks to the President of the Association, David E. Robinson who did the language revision for all the articles and the introduction to this volume.

References

- Hjelle, K. L., Hufthammer, A. K. and Bergsvik, K. A. In press. Hesitating hunters: the introduction of agriculture in western Norway. *Environmental Archaeology* **11**:2.
- Huber, B. and Holdheide, W. 1942. Jahrringchronologische Untersuchungen an Hölzern der bronzezeitlichen Wasserburg Buchau am Federsee. *Berichte der Deutschen Botanischen Gesellschaft* **60**:5, 261–83.
- Landesdenkmalamt Baden-Württemberg (ed.) 2004. *Ökonomischer und Ökologischer Wandel am Vorgeschichtlichen Federsee* (Hemmenhofener Skripte 5). Freiburg: Janus.
- Planck, D. 1990. Einleitung. Siedlungsarchäologische Untersuchungen im Alpenvorland. 5. Kolloquium der Deutschen Forschungsgemeinschaft vom 29.–30. März 1990 in Gaienhofen-Hemmenhofen. *Bericht der Römisch-Germanischen Kommission* **71**, 26–37.
- Schlichtherle, H. 2002. Die jungsteinzeitlichen Radfunde vom Federsee und ihre kulturgeschichtliche Bedeutung. In: Köninger, J., Mainberger, M., Schlichtherle, H., Vosteen, M. (ed.), *Schleife, Schlitten Rad und Wagen* (Hemmenhofener Skripte 3). Freiburg: Janus.
- Smith, D., Gaffney, V., Grossman, D., Howard, A. J., Milošević, A., Ostir, K., Podobnikar, T., Smith, W., Tetlow, E., Tingle, M. and Tinsley, H. In press. Assessing the Later Prehistoric Environmental Archaeology and Landscape Development of the Cetina Valley, Croatia. *Environmental Archaeology* **11**:2.