Book Reviews

PLANT USE AND CROP HUSBANDRY IN AN EARLY NEOLITHIC VILLAGE. VAIHINGEN AN DER ENZ, BADEN-WÜRTTEMBERG BY AMY BOGAARD


Vaihingen an der Enz (south-west Germany, Baden-Württemberg) is one of the best investigated sites of the Early Neolithic Linienbandkeramik Culture (LBK) in central Europe as almost the entire settlement was excavated from 1994 to 2003. It dates from c 5500/5475 - c 5070 BC, and includes different LBK periods with a high density of houses (and associated pits) dating to successive and overlapping settlement phases. It reaches its maximum expansion during the so-called “Flomborn complex”, when the settlement consisted of 40-50 longhouses which spread over an area of c 6 ha.

Preceding the actual archaeobotanical analysis by A Bogaard, which is the main focus of this book, introductory chapters (Chapters 1 and 2 written by the principal archaeological directors of fieldwork R Krause and H C Strien) provide background on the archaeological context. Central to the archaeobotanical analyses and interpretations is the proposition of the existence of five ‘clans’ or lineage groups identified within the settlement during the Flomborn phase, and these groups are based on marked similarities and differences in material culture (ceramic decorative motifs, lithic sources and tool types etc).

Chapter 3 by Amy Bogaard (currently Lecturer of Neolithic and Bronze Age Archaeology at the University of Oxford, UK, and the author of the highly acclaimed book on Neolithic Farming in Central Europe, 2004) presents the results the archaeobotanical analysis. This chapter opens with an introduction on the climate and vegetation history of Europe in the mid-Atlantic period as well as a discussion on local geomorphology and vegetation history which includes characterization of prevailing ecological zones and their potential vegetation. To locate the investigations at Vaihingen within a current research framework, a concise and partly critical summary of issues and hypotheses (eg, intra-site spatial distribution, harvesting methods, crop husbandry and processing, regional variation in crop and weed spectra) based on older archaeobotanical investigations, is given as well. This is quite helpful for the readers, especially those not familiar with the situation during the LBK. Chapter 3 also sets out the specific aims of this study which are clearly defined and numerous. As primarily agricultural societies, the LBK way of life partly based on the cultivation of cereal crops was massively determined by agricultural activities. The research questions posed here relate to classic archaeobotanical topics such as husbandry regimes and plant processing/use. The opportunity offered by the archaeobotanical datasets from Vaihingen means that despite the LBK being one of the best studied material cultures in European prehistory (as hundreds of sites have been already studied from an archaeobotanical perspective) the large-scale excavations of early settlement at Vaihingen (which span a period of around 400 years) has made it the first such site where issues of spatial and chronological variability of the archaeobotanical remains can be studied comprehensively and instructively. With 3700 systematically recovered archaeobotanical samples, the early Neolithic settlement at Vaihingen has provided us with the largest dataset of charred plant remains recovered from any LBK site in central Europe.
Chapter 4 focuses on methodologies such as the excavation sampling strategy, on- and off-site crop processing activities as well as the use of interpretative methods such as multivariate statistical analyses (correspondence and discriminant analyses). A key issue for researchers in this area is the investigation of the presence of weeds in archaeobotanical assemblages and how this relates to functional (background) ecology. The FIBS-method (Functional Interpretation of Botanical Surveys) based on certain physical or behavioural characteristics of species (‘functional attributes’) enables the comparison of archaeobotanical datasets with modern weed flora under known conditions.

Chapter 5 deals with the spectra of crop and wild plants found in Vaihingen, which conform fairly well to contemporary sites. The chronological and spatial distribution of the remains is shown by mapping the distribution of taxa in numerous GIS-based graphics. Slight changes in the crop and wild plant spectra could be observed throughout the occupation of Vaihingen and this is interpreted as being connected with different phases of the LBK which is also reflected in changes in the material culture. The interpretation of the spatially distinct distribution of opium poppy in the southern and eastern parts of the site and the feather grass in the north-western part of the site as being closely related to certain households/household groups or ‘clans’, is, in my opinion, rather tentative and the archaeobotanical interpretation is more or less adjusted on the prevailing archaeological hypothesis. Even if there are preservation biases on the oil-rich poppy seeds, an issue raised by the author, poppy was most probably an important and essential plant for medicinal and ritual purposes within the LBK as a whole and so why it should only be restrictedly used in certain households at Vaihingen is open to debate. It is not easy to gauge exactly how many poppy seeds have been found altogether at Vaihingen as the tables with the original counts are a little bit confusing.

Chapter 6 deals intensively with the important topic of the formation of the assemblages within different features. While harvesting techniques and also taphonomy are discussed, this section is mainly about identifying or classifying signature ‘activity types’ which represent stages in crop processing. Based on the units containing crop and weed content consistent with a single processing stage, statistical and ecological analyses were undertaken in Chapters 7 and 8. In order to identify compositional trends with particular attention to the phased and spatial contexts of the datasets, correspondence analysis was also undertaken. Furthermore these results were also compared to archaeobotanical samples from other excavated LBK sites with the aim of finding any marked regional and ecological trends. Chapter 8 examines the potential arable weed data via an ecological analysis in order to get information on the crop husbandry practices (that is looking at themes of permanence, seasonality, scale, intensity and levels of production). Comparison of the Vaihingen material with modern weed survey data from experimental crop growing is undertaken as well as the examination of species’ functional attributes (FIBS). Samples rich in arable weeds from different sectors of the settlement area show contrasting growing conditions which represent subtle differences in crop husbandry practice (tillage and weeding) as well differences in cultivation areas to soil type and (pH) acidity. This may reveal important contrasts in social practice and/or the social geography of cultivation around the settlement. It also corresponds more convincingly with the reconstruction and interpretation of distinct ‘clan’ groups than, for example, the mapping of opium poppy within the site itself. Moreover, the maintenance of the cultivation of certain plots over multiple generations (which implies tenure and land ‘ownership’) fits very well with the assumption of Bogaard’s previous work which has shown that during the LBK, people cultivated fields on a permanent and/or long-term basis. The chapter ends with two excellent landscape reconstructions of the site during different occupation phases.
The concluding Chapter 9 sums up the analyses undertaken as it attempts to answer to all research questions posed. This well-structured chapter is of great interest as it is a comprehensive representation of LBK agriculture. Finally, a catalogue of the botanical plant remains and a comprehensive bibliography nicely round the book off.

This monograph, therefore, by presenting a comprehensive analyses of the Vaihingen archaeobotanical datasets represents a “state of the art” insight of recent LBK archaeobotanical research and could be considered an up to date standard work of great “scientific value”. Even if the author herself rules out that there are limitations of interpretation imposed by taphonomic factors, in comparison to equivalent studies in waterlogged sediment of lakeshore settlements of the Northern Alpine foreland, such as Bad Buchau Torwiesen II (Maier 2011) or Arbon Bleiche 3 (Jacomet et al, 2004), the investigations in Vaihingen clearly give new unique insights in LBK agriculture. At least the application of a multiple methodology toolbox in this study, which includes multivariate statistics, present-day studies of plant processing and cultivation, functional plant ecology and GIS-based mapping, reinforces the validity of the investigations. The research is well presented, highly competently written and logically structured. But as it thematically covers both extensive space (site/region) and a wide time-frame (400 years) it is very detailed and quite heavy going with technical detail which does not make it an easy read (and so not easy to review as well!). Even current researching archaeobotanists may find it takes time to fully digest every detail. Non-specialists, only interested in the essentials of the investigations, should focus on Chapter 9 where all important points are stringently presented. If this is your area of interest, then I recommend the paper written by the same research team, which focuses only on how early farming practice and plant use articulates with social relationships and which was recently published in Antiquity (Bogaard et al, 2011). Overall this volume highlights the extent to which variability and change in material culture was associated with trends in plant use or cultivation practice, an interaction which requires further investigations in recent and future excavations as this is one of the most important topics concerning plant-human-relationship in early Neolithic Europe.

References


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Review received: October 2013