

Reviews

Climate Change and Human Impact on the Landscape. Studies in palaeoecology and environmental archaeology. Edited by F. M. Chambers. Chapman & Hall, London 1993. 303 pages with an appendix, numerous figures and tables. ISBN 0 412 46200 1.

As the subtitle indicates a bouquet of articles have been collected about nature and the interaction between man and his environment in the past. Dr. F.M. Chambers from the Environmental Research Unit at Keele University in England has skilfully managed to compose a both diverse and colourful book to mark the retirement of Professor A.G. Smith – one of the leading researchers in Holocene palaeoecology. The volume includes invited reviews and research case studies, providing the connecting link with the scientific interests of Professor Smith. Reading the book one has the feeling that his inspiring interests for the past has significantly influenced many colleagues in their interpretation of biological processes and other evidence for human modification of the natural environment.

The twenty six contributors are internationally renowned scientists and the topics discussed have their geographical origin in the British Isles, but papers from overseas or with a global scope are also to be found. Primary results are few and main efforts have been given to presenting reviews and case studies. The geographically restricted case studies are balanced by review articles giving an international status for modern progress in topics covered by the book title. The text is aimed at researchers and experienced students looking for up-to-date knowledge about our past.

The book is divided into four parts with the titles: Precision and Accuracy in Studies of Climatic Change and Human Impact; Climatic Change on the Landscape; Evidence for Human Impact; and Climatic Change and Human Impact: Relationship and Interaction. Each part includes a short introduction by the editor followed by 4-8 articles of normally 10-15 pages each.

Part one. The first article by H.J.B. Birks gives a review of Professor Smith's contribution to vegetational history and palaeoecology. Smith was controversial in some of his opinions. Thus, he suggested that the early Holocene expansion of Hazel pollen may have resulted from mesolithic distur-

bances and its remarkable early abundance represented a "fire climax". Mesolithic people also facilitated the establishment of Alder in mid-Holocene times by widespread destruction of forest cover. Birks personal reflections are included and it is clear to the reader, that the author does not agree with all of Smith's ideas! However Smith's 1970-review of the possible influence of mesolithic and neolithic people on British vegetation remains one of the most stimulating (– and controversial!) articles written about Holocene vegetational history in the British Isles in the last two decades. Also his concepts on inertia and threshold related to post-glacial habitat changes are highly relevant today although presented almost thirty years ago.

F. Oldfield considers in his paper the structures and modes of reasoning that have been prevalent in Quaternary studies over the last few decades. The implications of problem definition and research development are explored and some of their possible strengths and weaknesses are mentioned. The paper gives a philosophical approach to our current research studies, which most often deal with methodology and results. This chapter deserves to be read in the morning, when one is open minded!

J.R. Pilcher discusses the use of radiocarbon dates and how they have been handled over the years. He also shows a modern approach to radiocarbon dating allowing palynology to make its contribution in a world where precise calendar timescales are increasingly important. The fruitful collaboration of tree-ring research and radiocarbon studies have enabled radiocarbon dates to be calibrated into calendar years. A calibration table of radiocarbon ages is given in an appendix to facilitate this processing.

Pilcher claims that the routine radiocarbon dates available from most laboratories have inaccuracies that only allow the calendar date to be specified to the nearest half millennium and attempts to interpret time differences or real ages closer than 500 years by conventional dates are simply not valid (p. 28). He bases his conclusions on results obtained from the international intercalibration studies where wood samples of known age were dated by numerous laboratories. The test dating did not fare well, and the test results show the state of dating quality of the various laboratories. However, they do not discredit the radiocarbon method as claimed by Pilcher (p. 27). If so high-precision dating and wiggle matching

would not be possible. His message to us all is clear: choose your dating laboratory with care!

The tree-ring analysts tell us that there are no major problems with the methodology of oak dendrochronology. Precise calendar dates are obtained on a routine basis in northern Europe and they provide a chronological basis for many archaeological studies, as mentioned by M.G.L. Baillie in his paper: Great Oaks from little Acorns. He demonstrates the interaction that is possible between precise tree-ring dates and historical information, and mentions also the limitations on chronological interpretation, even when exact dates are available.

Part two deals with the climate as reflected in organic deposits. Mires have been used as sources of proxy climatic data for a century or more. Jeff Blackford examines in his chronicle of peat stratigraphy work the climatic division of the post-glacial. He evaluates with authority recent research and demonstrates that methodological and technological advances have led to progressively more accurate results on development of the palaeoclimate. He also suggests a strategy for future studies of climatic change from peat.

An important paper has been written by Richard Bradshaw, who considers the relationship between vegetation and its response to climate. Human activity also played a role in the dynamics of temperate forest types and the relative importance of climatic and human factors have for a long time been the subject of intense debate. Case studies are presented taken from areas with low (North America) as well as with high (Western Europe) human impact on the environment.

J. John Lowe discusses the climate in early and mid-Holocene Scotland. He reviews the problems of using palaeobotanical data to evaluate climatic conditions during these periods, and mentions that changes in climate can be fairly well defined, but the scale of climatic variations is much more difficult to determine.

Finally, John A. Matthews presents his experiences from Norway on age determination of palaeosols excavated from beneath young moraines. He emphasizes in particular the complex nature of soil organic matter and the importance of sample pretreatment.

Part tree is devoted to evidence for human impact and commences with a global review by D. Walker and G. Singh of the first palynological evidence for human disturbances. They illuminate that significant human impact on major investigated regions of the world may pre-date the Holocene. Such broad compilations are rarely seen and may help to understand long-distance interactions in a more comprehensive way.

I.G. Simmon reviews competently the Mesolithic in the British Isles and mentions that evidence for human-induced

vegetational changes is patchy for the early Mesolithic, whereas impact on vegetation is obvious by the end of the period. Forests were clearly not an unbroken blanket and burning was widespread. The contribution of domestic fires to the charcoal rain reminds us that even a low-density population is likely to have used or created open areas. The transition period from a dominantly hunter-gatherer culture to agriculture is illuminated with examples of fine resolution pollen analysis of peat.

The theme of fire and the influence of mesolithic activity on vegetational change is further discussed by Chris Caseldine and Jackie Hatton, based on palaeobotanical evidence from blanket peat in south-west Britain. The results clearly implicate mesolithic communities and their use of the high moorland.

A very useful and clearly presented review of the models of mid-Holocene forest farming for north-west Europe has been compiled by Kevin J. Edwards. The well-known landnam model (Iversen), the leaf-fodder model (Troels-Smith), the expansion-regression model (formalized by Berglund) and the forest-utilization model (Göransson) are presented and critically evaluated. Surely this paper will have the interest of students working in environmental archaeology.

Patricia E.J. Wiltshire and Kevin J. Edwards discuss early farming management in their paper on prehistoric impact on vegetation. Palynological results from a riverine site in central England are presented covering the last 7000 radiocarbon years. The fossil record for cultivation may be the earliest yet found for the British Isles.

Two other case studies from Wales by M.J.C. Walker and from Ireland by Karen Molloy and Michael O'Connell also illustrate the current practice in palaeoecology and environmental archaeology. Both studies deal with human activity, and especially the detailed description of spatial landscape development in westernmost Ireland is impressive.

Part four. The balance between human impact and the effect of climate on our landscapes has been debated over the years and the last four papers in the book give clear lessons to those interested in the relationship and interaction between man, landscape and climate.

Brian Huntley mentions the rapid early Holocene migration and high abundance of Hazel in north-west Europe and presents hypotheses to account for this unique phase in the Quaternary. He suggests that the palaeoenvironment, and especially the climate at that time, also had a unique character favouring especially this species, whereas man played a intermediary role. However, the last word on Hazel has not yet been spoken!

Special attention has been devoted to the study of mires by the papers of Peter D. Moore on the origin of blanket mires of the British Isles, by Keith E. Barber, Lisa Dumayne and Rob

Stoneman on ombrotrophic mires in northern Britain, and by Barry G. Warner on floating bogs in North America.

Forest clearance and modifications of upland hydrology have earlier been suggested to be of importance in the initiation of blanket mires and new evidence from outside the British Isles support this hypothesis. Moore supplements his previous papers on this topic and especially the demonstration of metachronous origin of blanket mires due to relative human impact on the landscape and local topography is of importance.

The paper by Barber *et al.* shows the potential of ombrotrophic mires as a source for reconstructing environmental changes, both natural and cultural. Bogs in the Anglo-Scottish Borders are investigated and they reflect how human impact on the landscape can be connected to well-known historical events during the Roman occupation period. We can expect more interesting results from their investigations!

The final chapter by the editor, F.M. Chambers, draws the themes of the book together and emphasizes developments in techniques and problems not covered by the previous papers. The editor's valuable comments concentrate the subject matter of the book and place it in a late-Quaternary perspective.

The book reflects the interests of Professor A.G. Smith, to whom it is dedicated. Therefore problems relating to early and mid-Holocene vegetational development have been given special attention, whereas information on later prehistory and medieval times is limited. Although the papers cover a wide range of topics, a certain overlap cannot be avoided. Thus, the success of Hazel in early Holocene vegetation has been analyzed by several authors; the fate of Pine, the asynchronous colonization of Alder in different parts of the British Isles and the detection of early farming are other themes commonly mentioned. The editor has sensationally managed to arrange the various contributions in such a way that this overlap is perceived mostly as an advantage of the book, because the same problem is discussed from various angles. Each paper is tightly constructed, but in the scientific content some diversity in the use of radiocarbon dates is obvious, although the editor's notes focus on dating conventions. Having read Pilcher's warning paper on the dating quality of the various radiocarbon laboratories in test dating, it is strange to see how accurate the radiocarbon dates are interpreted by several authors. Expressions like "estimated dates are rounded to the nearest five years" (p. 163) can be found although the age-depth curve is based on only three radiocarbon dates in a profile covering 7000 radiocarbon years! Similarly, it is inappropriate to show calibrated ages (1 range) to an accuracy of a single year (table 16.1). Many scientists have not realized that radiocarbon dates are only working calculations, which have to be calibrated into calendar years before

interpretation. Calibration tables are available, and we have to make use of them, although the calibration results are far more difficult to handle than uncalibrated dates. The book clearly shows that we have to treat our radiocarbon dates more seriously, a point also made in the book by Pilcher.

Another comment concerns the use of cereal or cereal-type pollen as an indicator of crop cultivation (cf. chapter 14, 15, 16, and 19); some wild grass species (e.g. *Glyceria fluitans* and *Agropyron repens*) have pollen of *Hordeum*-type, which cannot be distinguished on the basis of size from cultivated *Hordeum* or *Triticum monococcum*, if only a few pollen grains are found. Accordingly, it is important to identify cereal-type pollen in more detail – which is possible – especially when examining early farming by the way of pollen analysis. These comments do not detract from my positive impression of this valuable book, which is highly recommended to the readers of *Journal of Danish Archaeology*.

Bent Aaby

The Cultural Landscape during 6000 Years in Southern Sweden – the Ystad Project. Edited by B.E. Berglund. 495 pp., 220 figures and maps, 4 plates, 39 tables. Copenhagen: Munksgaard (*Ecological Bulletins* 41, 1991).

Lund University is a melting pot, initiating large multidisciplinary projects and producing equally large books. "Handbook of Holocene Palaeoecology and Palaeohydrology" (editor B. E. Berglund, 869 pages) appeared first, and now we are presented the results of another interdisciplinary research project – The Ystad Project – published in three volumes. One of these "The Cultural Landscape during 6000 Years in Southern Sweden" is a book of almost 600 pages. It is devoted to studies of the interaction of society and landscape in a historical perspective involving more than 20 researchers. Both discipline and enthusiasm have been needed to coordinate this extended six year project, which began in 1982, and to publish the final synthesis while the results are still fresh in the mind. The team of scientists at Lund and their colleagues have achieved their goal successfully.

The reference frame of the project was the Ystad region lying on the fertile till of southern Sweden. It furnished study material for researchers into human geography, palaeoecology, plant ecology, archaeology and history. The interaction between man and environment in the past was studied on a sub-regional scale in the areas of Köpinge, Bjäresjö, Krageholm and Rommele, each representing different examples of landscape development and settlement history.

The book is organised into a small number of main chapters, each divided into a long series of subchapters with the author(s) indicated. The very compartmentalised organisa-

tion hampers continuous reading and an overview may get lost in details. However, it helps the reader to find specific items of interest, and this is probably the way the book will be used by most scientists.

I recommend beginning with the first and last chapters, which present the working ideas of the project and the synthesis of obtained results. The main emphasis, however, is placed on the chapters dealing documentation, with information from the four areas arranged pragmatically according to geography, chronological period and research discipline.

The book is well designed with numerous illustrations including many maps and pollen diagrams, many of which are in colour. Sometimes, however, it is difficult to locate the investigation sites. For example, the map showing the main investigation site in the Bjäresjö area is shown on page 35 (Figure 12) of the chapter – and with a different spelling (Bjärsjöholm) than in the pollen diagram (figure 1, Bjärsjöholm). Basic information should be given at the beginning of the chapter together with a map showing the location of the investigation area within the Ystad region. Similarly, more photographs would facilitate the description of the area concerned; only four pictures illustrate the Ystad region.

The palaeoecological studies are mainly based on deposits from smaller and medium sized lakes and the chief method employed is pollen analysis. Accordingly, the results produced contribute general information from areas of 1-5 km in radius. Studies of small hollow sites or terrestrial soils have not been included in the project.

Farming practice in the Late Mesolithic is a hot question – even after completion of the Ystad project! Pollen indicators of open habitats are seen from the Köpinge area. They may be interpreted as showing minor human influence related to husbandry. However, such openings could also be related to settlements of hunter-gatherers along the coast (p. 110). Neolithic farmers clearly influenced the forest vegetation from 3000 BC onwards (all dates are in uncalibrated radiocarbon years) and openings were created with shifting fields and pastures. Settlement concentration and woodland regeneration occurred about 2600 BC with the expansion of broad-leaved trees. Coppicing with arable cultivation and animal husbandry was found mainly near the coast. Gradual deforestation and settlement expansion was demonstrated in the period 1800-800 BC. The widespread coppicing favoured hazel at the expanse of elm, ash and lime. After minor oscillations in landscape use a large-scale expansion of settlement area took place at the beginning of Late Bronze Age, and permanent fields were present in a landscape dominated by grassland. This distinct change is supposed to be associated with innovation and restructuring of agriculture. The development in the inland areas was dominated by deforestation and an expanding pasture landscape containing wood-pastures. The concentration of settlement around 200 BC in the

coastal areas and some hummocky landscapes of the inland, facilitated the spread of forest vegetation in marginal areas. Especially beech and hornbeam were favoured by this agglomeration of settlements. After AD 700 the infield-outland landscape was definitively consolidated, and the productivity of the permanent fields was maintained by addition of manure. The diversity between infields and outlands facilitated the development of different biological communities and habitats. The biological diversity was great and reached its height in the village landscape of the Middle Ages around AD 1200. The subsequent periods are also thoroughly debated and human geographers and historians in particular, contribute important information.

In the interpretation of landscape development the former concept of expansion-stagnation seems to be substituted by expansion-concentration. It signals that the quantitative description of landscape development based on pollen analysis – which has its roots in the 1970s – has developed into a modern approach in which social processes, cultural ecology, production models and nutrient cycling are more integrated as driving elements in landscape development. This is just one of the many advances resulting from the project.

The palaeoecological investigations also illuminate varying and sometimes opposing trends in landscape development in closely adjacent areas (the Krageholssjö- and Bussjösjö-areas). Similar results have been obtained from Denmark, emphasizing the importance of varying landscape structure on a sub-regional scale. The varying intensity of human impact and exploitation of natural resources in different parts of the Ystad region are also reflected in the vegetational diversity according to rarefaction analysis of pollen counts and in deposition of charcoal particles.

The amount and diversity of the results and information produced by the project deserve acknowledgement, especially in the light of the ample spin-offs – student training, doctoral theses and other scientific publications (a list of project papers is given in the book on pp. 482-487).

The palaeoecological reconstructions are based primarily on investigations of lake deposits, and in regions with carbonate-rich bedrock, like the Ystad region, radiocarbon dates from lake sediments tend to be too old. Therefore dating is based on pollen-stratigraphical correlation to the radiocarbon dated sequence from Ageröds Mosse. Cross correlation may be problematic as Ageröds Mosse is located in a different geomorphological region, almost 50 km from Ystad. It is necessary to exercise caution with regard to zonation and correlation of the various records; new methods for extracting terrestrial material from the lakes for AMS dating are under development.

These remarks do not detract from the fact that this book on the cultural landscape of southern Scania in Sweden is a

milestone of modern research in a wide range of related disciplines. Both students and their teachers can learn from it, and hopefully the book will stimulate the initiation of many comparable projects in the years to come.

Bent Aaby

J.L. Davidson & A.S. Henshall: *The Chambered Cairns of Orkney*. Edinburgh University Press, Edinburgh 1989. 198 pp.

J.L. Davidson and A.S. Henshall: *The Chambered Cairns of Caithness*. Edinburgh University Press, Edinburgh 1991. 177 pp.

Vessels for the Ancestors. Essays on the Neolithic of Britain and Ireland in honour of Audrey Henshall. Edited by Niall Sharples & Alison Sheridan, Edinburgh University Press, Edinburgh 1992. 366 pp.

In 1963 and in 1972 Audrey Henshall published her two corpus volumes on the Scottish megalithic tombs. This was an enormous task considering the quality of documentation, the excellent plan drawings and the large general chapters. With these two huge volumes Scotland became the country with the best published record of megalithic tombs, only to be compared with the work of the Leisners on Spain and Portugal.

But now it has happened again. Together with J.L. Davidson, A. Henshall has commenced a new series of corpus volumes on Scottish megalithic tombs with the volumes on Orkney (1989) and Caithness (1991). The volumes share the high quality with the former ones. They consist of a part covering the different topics related to the megalithic tombs, and a catalogue section dealing thoroughly with each site separately.

One could perhaps ask whether it should be necessary to bring out large corpus volumes on the same matter so relatively shortly after the first ones. But the archaeological material has increased within this short span of time, particularly in Orkney. Here, the number of known megalithic sites have increased from sixty to eighty-one, Quanterness and Isbister have by excavation and publication become key sites, and now the existence of true megalithic art in Orkney is indisputable. For anyone with interest in the Neolithic period, Orkney must be regarded as the true "Mecca"; nowhere, apart from Orkney, do we find such a diversity and quality of data: Neolithic houses almost fully preserved, the many megalithic tombs with well preserved human skeletal remains, and with a large pottery material compared with what is seen elsewhere on the British Isles and Ireland, "closed" local

landscapes yielding possibilities of linking the setting of the tombs with different agricultural potentials, and so forth. Seen in this light, the volumes provides a welcome updating of evidence.

The two present handsome volumes have the advantage that they can be used not only by the specialist, but also by the interested layman or tourist. Unfortunately, the prize will limit this use.

It is indeed a favourable task to review an opus of a quality almost impossible to comment or criticize. Perhaps we are missing discussions of the latest interpretative research on the dynamics and development of the Orcadian Neolithic society – a sort of synthesis, and expression of opinion on works by for instance N. Sharples and C. Richards. The aim of this type of corpus work, however, is to present evidence, not to balance various interpretative models.

Actually, Davidson & Henshall, in a number of cases, go further than just presenting the bare archaeological data. Noteworthy is their critical assessment of recent studies by Renfrew and Chesterman of the human bone material from the megalithic tombs of Orkney. The evidence for excarnation prior to the final interment in the megalithic tombs of Orkney and Scotland is certainly not so unquestionable as suggested by Renfrew, and the two recorded examples from Orkney (Quanterness and Isbister) seem to be the exception rather than the rule. Davidson and Henshall states: "Indeed the variations on the procedures at Quanterness with cists and full length inhumation besides the apparently disorganised "bonespreads" mixed with stones, are a warning that the situation is probably very complex". The pages dealing with the human bone material is even more than such a critical assessment, giving a fine account of the problems of interpreting human skeletal remains. Also the Caithness volume deals with this material, though not so thoroughly as the Orkney volume.

The Scottish achievement is indeed worthy of serving as a model for what should be done in any other European country with megalithic tombs. Particularly in Denmark such a task seems impossible however, simply because of the sheer quantity of material. It is a somehow unrecognized fact that Denmark as a country possesses the highest density of megalithic tombs found anywhere in Europe (around 7500 are known of which around 2500 are preserved; close to 600 known from Scotland), and with by far the largest amounts of finds. While the drawings of the find material from the relatively rich Orkney tombs cover 11 pages in the present volume, the drawings of finds from one single Danish parish (or single tomb) alone would in many cases exceed the size of this volume! This example illustrates the limitations of such corpus works; only in certain countries or regions will it be possible to find the resources necessary. We shall probably never see very many full corpus publications of different ar-

chaeological find categories in a comparable and high standard covering larger parts of Europe. We might perhaps here find a task for cultural policies of the EU??

As mentioned above, the volumes by Davidson & Henshall are corpus publications, only to a certain extent dealing with more general discussions. This lack (which should not be considered as a lack for this kind of publication) is remedied by the book "Vessels for the Ancestors" containing 23 essays on the Neolithic of Britain and Ireland in honour of Audrey Henshall. Even though this book deals with the Neolithic of Britain and Ireland, the focus is on Scotland, thus being an excellent supplement to the volumes by Davidson & Henshall. The essays cover a large number of topics, both related to megalithic tombs as such and other find categories of the Neolithic. Only one, though important aspect, has unfortunately not been adequately focused here, namely the stone-circles.

It will not be possible here to mention all the articles, only to make some few comments, particularly as to papers on the megalithic tombs.

The introduction by A. Sheridan and N. Sharples is much more than just an introduction, giving the reader a very thorough review of the current state of knowledge of the Scottish Neolithic.

The constructional or architectural details of megalithic tombs have often been neglected, although in The British Isles and Ireland there seem to be a somewhat better tradition for research in Neolithic engineering than generally in continental Europe. The stimulating article by J. Barber on this matter is a brilliant example of this tradition, giving a lot of fascinating clues as to the complexity of megalithic tomb construction and the problems of engineering which Neolithic man faced. For instance we learn that the simplicity of corbelling is more apparent than real. The inner line of the corbelling must in order to create a high and substantial construction curve in a true parabolic way. The author also points out that the megalith builders should not be viewed as imminent mathematicians knowing the formula of a parabola; by skilled craftsmanship using a rule-of-thumb it is possible to create a parabolic vertical section of a chamber just by means of a pole, a string, and a weighted piece!

The article by R. Mercer is dealing with the evidence of multi-period-construction of Scottish megalithic tombs. The author suggests that the general accepted development, where smaller round cairns are regarded as being the primary feature, often enlarged by horned long cairns, should be reversed: it is the round cairns which should be considered as being a later addition to the long ones. However, this hypothesis does not seem to be in accordance with the archaeological data from among others J.X.W.P. Corcoran's thorough excavations, and many of the sites which R. Mercer uses are

unexcavated sites actually giving no positive clues to any assessment of sequence. For instance R. Mercer allows himself to draw conclusions as to a constructional sequence from the unexcavated long cairn Stoney Hill in Orkney. I would not allow myself to draw any such conclusions as to chamber sequence from the scattered stones which break through this ruined grass covered cairn.

Even though R. Mercer tells us that cairns like South Yarrow South in Caithness (CAT 55) are associated with earlier and later monuments to make up cumulative monumental complexes he does not exemplify this further. The chamber of this long cairn seems itself to be of multi-period construction; the outer segment of the passage related to the hornwork is not lying on the axis of the inner part of the passage and the chamber, thus suggesting that the horns are a later addition together with this outer part. This observation, however, is not in accordance with Mercers hypothesis. When speaking of monumental complexes it should be noted, that the outer part of the chamber of South Yarrow South points directly to a free standing stone on the ridge on the other side of the valley, while the central line of the nearby standing stone alignments of Hill o' Many Staines points directly at this long cairn. Thus, these monuments around South Yarrow Farm form one of the finest examples of Neolithic landscape architecture with a complex chronological interrelationship.

C. Richards presents a stimulating and unorthodox paper, partly dealing with the symbolic function of megalithic tombs in a structuralistic perspective. He states correctly that the many typological studies of the megalithic tombs seem to hinder the appreciation of the primary architectural function. But of course, when we try to understand their architectural/symbolic function, then to some extent it is a matter of interpretation, and ultimately a matter of personal taste of the individual scientist. However, it is refreshing to read a paper, which consider megalithic tombs not just as typological objects to be ordered, but as true expressions of well structured religiosity.

An article by G.D. Barclay on the Late Neolithic Clava tombs and the ring cairns does not seem to bring very much new, apart from including a couple of Early Neolithic non-megalithic tombs such as Pitnacree into the discussion of the origin of the Clava tombs. However, a tomb such as Pitnacree, seems too distant in time from the Clava cairns, belonging to quite another tradition, to be of any relevance for these.

In the following paper by I. Kinnes, Pitnacree is found in proper company together with all other known non-megalithic mortuary sites of Scotland. The paper contains a brief corpus of the sites, and a welcome survey of their data, since the works by Henshall and Davidson do not deal with non-megalithic tombs. It becomes apparent that also in Scotland we find a well-established tradition for these tombs; they

should not any more be considered as rare exceptions. The paper thus clearly affirm that the megalithic chambered tombs represent only one part of the spectrum of Neolithic mortuary practise. Moreover it becomes clear that even though a round cairn-long cairn succession can be demonstrated at a number of multi-period megalithic tombs, some of the non-megalithic burial structures are covered by early long cairns, thus creating a rather complex situation.

The next paper, by J.G. Scott, is also devoted to non-megalithic tombs, but covers all Britain and Ireland. It thoroughly deals with one of the most intriguing and annoying problems of these structures: What do the axial postholes of the tombs actually represent? Do they reflect tent-shaped mortuary houses or posts pulled up or burned? Scott offers yet another solution: The posts may represent mortuary platforms where the dead bodies were exposed.

The article by G. Eogan describes similarities and differences between Scottish and Irish passage tombs, and some interesting parallels of development of ritual complexes are noted. G. Cooney deals in his paper thoroughly with the skeletal remains from Irish megalithic tombs. A proper survey of the burial practises of Neolithic Ireland has hitherto been missing, and its very welcome to be acquainted with this material as an important aspect of ritual, rather than just being a body of measurable information mostly for use for physical anthropologists. The following paper, by J. Thomas, also gives new clues to understand the significance of rituals, here dealing with aspects of megalithic art of Ireland.

R. Bradley, once again, bring up an elegantly formulated paper providing new insights, here dealing with rock carvings and particularly with the secondary re-use of Scottish cup-marked and ring-and-cupmarked stones in burial context, giving clues to changes of "message" of rock carvings when in differential use: "Symbols that may once have been addressed to the wider world were turned around and directed towards the dead person".

Then follows a number of important artefact studies – welcome surveys of particular classes of objects such as the carved stone balls, axeheads, maceheads, the almost neglected coarse stone artifacts from Orkney, Neolithic pottery from SE-Scotland, and an analyses of the shape of Neolithic pottery of Southern England. Many of these studies can be regarded as fine "classical" studies, for instance the study by A. Sheridan of the stone and flint axeheads from Scotland. A. MacSween presents new and important evidence as to the understanding and interpretation of the grooved ware problem presenting one of the few grooved ware sites in Britain with stratigraphical evidence properly studied. Her analyses seems to reveal that grooved ware (in Orkney) does not emerge out of "nothing", but ought to be considered as a development of local pottery tradition (but probably under influence from elsewhere). Her study also permits her to sug-

gest that the absence of grooved ware in certain Orkney megalithic should be considered as a chronological testimony of tomb use rather than a geographical one.

Finally, the book contains two regional studies, the one by I. Armit dealing with the Hebridean Neolithic being of greatest significance. Here the rather neglected but obviously important settlement material from this area is being thoroughly examined, and its range and variety being appreciated. The paper also contains a survey of the results of the recently excavated site *Eilean Domhnuill* in North Uist, which surely must be regarded as ranking among the major Neolithic sites of Britain. It is situated on a small islet in a loch, and it was formerly thought to be the remains of an Iron Age island broch or dun. The excavations have revealed that the settlement of exclusively Neolithic date consists of a small number of houses defined by a palisade with a carefully stone built revetment, an elaborate entrance, and a wooden (and later) stone built causeway leading to the islet. The houses are wooden or partially stone built structures, creating a complex stratigraphical sequence of eleven phases of three major "episodes". In the latest phase we find two conjoined stone-built houses, the houses from Knap of Howar, Papa Westray, Orkney, yielding the closest parallels. However, as the author points out the location of the two sites are very different; it would be unwise just to regard *Eilean Domhnuill* as a "Skara Brae" of the Hebrides, but to judge it in its own right. The excavation have also yielded a large number of pottery sherds providing a vast material for chronological studies. No doubt that *Eilean Domhnuill* will become a "classical" site in the Neolithic of Northern Europe.

The final paper by N.M. Sharples presents an interesting though rather curious theory on aspects of regionalisation in the Scottish Neolithic. It seems to revivify some of the now abandoned notions of "Secondary Neolithic" and "Mesolithic survival" or adaptations, though clad in more modern phrases. Partly based upon material from Orkney it is argued that the areas with the most prominent burial or ritual sites are those areas where a "mesolithic survival" is to be found, and that the more loose social structures and open minds of a "mesolithic" population would facilitate the creation of large monuments such as Maes Howe and Stennes. In other words it is argued that the resident "Mesolithic survivors" became more "Neolithic" than the Neolithic colonists, because the latter were more stabile and "locked" in their social structure and behaviour. Thus, areas of Scotland with the highest density of the most elaborate Neolithic monuments (such as the Clyde tombs of Argyll, Bute, Islay and Arran, the stone circles of Machrie Moor, the stone circles of Callanish) should be considered as core areas of "Mesolithic survival". When dealing with these matters in this rather controversial way, one should expect to find at least some reflections upon the character of the primary Neolithisation process. – After all, it is

our very assessments and theories as to this process, which result in such a line of arguments as presented here.

However, we do not find any “backbone” of such reflections in this article. Only by reading the phrase “Neolithic colonisation of Britain” do we find a hint of the underlying assumptions as to the nature of the primary Neolithisation, while others could as well have been considered when dealing with these complex problems. Another assumption seems to be, that marine resources were not of any considerable importance to a “true” Neolithic population, and yet another loose assumption is the presumption that the Mesolithic hunter-gatherers had their stronghold on the Orkney Mainland, when we still have no documentation as to the settlement pattern of the possible Mesolithic inhabitants of Orkney.

In *Antiquity*, some years ago, Glyn Daniel expressed the opinion that many articles occurring in *Festschriften* are articles that perhaps could not be printed elsewhere – articles which have been lying more or less rejected for years in the archaeologist’s drawers. But this is certainly not the case for this book made in honour of Audrey Henshall’s achievements. All are publications in their own right providing an excellent up-to-date testimony of the high standard of Neolithic research in Scotland and Britain. It covers a large range of approaches, including both pure artifact studies with catalogues, and a number of interesting and stimulating discursive articles, a few of these of a refreshingly provocative kind providing “fresh flesh” for the “hungry” reviewer.

No doubt, the reader with just these three important books in his hand will gain a comprehensive knowledge of the Neolithic and the megalithic tombs of Scotland, further helped by the introduction in “Vessels for the Ancestors” and the literature lists.

Flemming Kaul

Viggo Nielsen: *Jernalderens Pløjning. Store Vildmose* (Iron Age Ploughing – Store Vildmose). Vendsyssel Historiske Museum, Hjørring 1993. 220 pp. 112 figs. 17 plates. English summary.

We can now welcome Viggo Nielsen’s monograph on the extensive investigations into prehistoric cultivation carried out in 1967-72, the final publication of which has been awaited with lively interest ever since the appearance of the preliminary reports (of which the most recent was in vol. 5 of the present periodical, 1986). The excavation and preparation of the final report has taken place in exemplary collaboration between a number of archaeologists, ethnologists and scientists, and has received considerable technical and specialist support from Vendsyssel Historical Museum in Hjørring. Although the book appears with one author, it is made

quite clear who is responsible for the different sections. The publication is a handsome one, thanks to generous financial support, which is a great advantage especially for the many technically demanding illustrations.

Store Vildmose bog is geologically and botanically an unusual area in southern Vendsyssel, a raised bog covering 60 km². which slowly overgrew a bay of the Limfjord after post-Litorina isostatic readjustment had cut it off and drained it. The introduction is based on Bent Aaby and his colleagues’ recent study of the bog’s developed from raised seabed first to a waterlogged and partially forested wilderness, and then gradually during the Bronze Age to a raised bog, which extended itself gradually northwards and westwards from an originally restricted area in the south, until in the Middle Ages it finally filled the whole plain. The expansion of the bog from ca. 1500 B.C. to ca. 700 A.D. has been successfully illustrated, but after this it continued to expand, as already said.

In recent times, especially after 1921, nature came under pressure from big farming and drainage projects. As the peat subsided, Iron Age burial mounds appeared, and were excavated first by the National Museum, and later mainly by Vendsyssel Historical Museum. It was archaeologists from the latter that first noticed that there were traces of older ploughing under some of the mounds. Trial excavation showed that in the northern margin of the bog, near Grishøjgård Krat, undisturbed ploughing traces could be followed for what was a huge area for archaeologists. Ca. 200 hectares was acquired by the Ministry of Cultural Affairs for research, and “limited” excavations were carried out by Viggo Nielsen. After five years about 4,500 m² had been carefully excavated. This seemed only to be a small part of the original ploughed area, but it was sufficient to give a full idea of prehistoric ploughing both as a whole and in details.

Normally plough marks are difficult to date, but good luck provided two important pieces of evidence. A pit was found containing pottery from the earliest phase of the Pre-Roman Iron Age, which had been ploughed over. A tall, alas now shattered stone was found with abundant sherds of pots in the surrounding hollow, which had been broken against it as a ritual act. Here the author points to Anne Preisler’s (unpublished) excavation results and some other parallels. The pottery was important for dating the entire excavation, for the hollow surrounding the stone was visibly later than the plough marks. The conclusion is: ploughing in the excavated area took place after c. 400 B.C. but before c. 200 B.C.

Traces of arable cultivation have long been known, especially from the Early Iron Age, but usually only in small areas. We know two types of pattern which the implement leaves on the underlying deposit if conditions are favourable. They either make a grid, i.e. are traces of ploughing in different directions, or else they take the form of bunches of parallel

marks following field boundaries. These would be marked by tangible remains (field banks). At Grishøjgård both forms of ploughing were present, and it was for the first time possible to expose entire fields. Within the excavated area there were three complete and parts of ten adjacent plots. The boundaries between them were, as said, indicated by strips of parallel ploughing, which are ca. 1.5 m wide, but surprisingly enough in most cases there was no room for the boundary bank or lynchet. Field boundaries of the latter kinds could only be found in a few places. It was also apparent that the boundaries between the fields were not permanent, but were sometimes moved. These observations are important, for they show that individual fields cannot be judged from the traces that would have been found in primeval heath or seen from the air in present cultivated land. This has made somewhat problematical earlier attempts to arrive at units of measurement or social order from field banks.

The author has made another important discovery about ploughing technology. The criss-cross ploughing proceeds directly towards the field boundaries, where the plough must have been lifted and turned to start the next furrow. The belts with the many marks parallel with the boundaries, must then be a final stage whose purpose was to level out the area where preceding activities had disturbed the surface.

As can be expected the individual furrows have also been carefully and critically examined. Despite the contrast in colour with the underlying pale sand, it was impossible to follow a single ploughing for more than a short distance. The ploughshares were of wood and became rapidly worn, leading to marks of different shapes, sometimes narrow and pointed, sometimes broad and rounded. Experiments have shown that it makes an important difference whether the plough is held vertically or obliquely during work. Despite all the possible sources of error it is the author's opinion that two different types of plough were used. One resembled the one from Døstrup, the other had a more arrow-shaped share, and was a type of ard that is also known from a number of peatbog discoveries.

Only the most important conclusions can be discussed here that were arrived at from the study and are so excellently documented in text and illustration. We may mention the 17 photographic plates, each covering 20 x 20 m, which were compiled from vertical photographs of 5 x 5 m squares and are published at a scale of 1:100.

The author confines himself to what has actually been found and wisely avoids the tempting questions others might have put with so large and new a material as point of departure. The cultivation of these very large, but marginal areas came to an abrupt end after at most 2-3 centuries. It is indeed intimated that the cause could be climatic, but the sources say nothing about underlying social relations and settlement conditions. No contemporary farms or villages have been

found, and nothing can be said of the fate of the many people that were forced out in the Early Pre-Roman Iron Age into the marginal areas, presumably because all the better land was already under cultivation. It is regarded as a positive aspect of the work that it says nothing that cannot be documented.

Nevertheless after the book's central part dealing with the Early Iron Age fields and their cultivation, there follow two large chapters that supplement the subject. First the author gives an account of the remains from later settlement found in the same part of Vildmosen. Here and close by about 600 years later there was place for a collection of burial structures in the form of small sod-built mounds, overlying poor cremation burials and surrounded by a stone kerb. About 85 such mounds are known to have existed. Some were excavated at the end of the last century and later, and a few are now under protection order, but more are destroyed. They lie in groups, some in the bog, where the peat gradually hid them, and some on the higher surrounding ground. They indicate a new colonization, which also was short-lived. There was also a single occupation site with the remains of at least ten large houses, which were excavated in 1978-80 near Stavad (T. Dehn, *Antikvariske Studier* 5, 1982) and were from the same time as the burial mounds. This site lay ca. 2.5 km NW of where the edge of the bog was at the time. It has not been possible to show whether they had cultivated land attached to them.

The author includes an up-to-date catalogue with plans and illustrations, with the emphasis on the latest excavated finds. This section confirms earlier expectations that these and other graves from eastern Vendsyssel were closely related to discoveries in southern Norway. For the subject of the book however it is their relationship to the bog that is of importance. Within its borders they were constructed directly on the thin sandy soil that had been cultivated in the Early Iron Age. Without doubt there had been a 600 year interruption in human activity. Changes in the natural environment must again be the explanation.

The last main chapter in the book deals with another important aspect of prehistoric ard cultivation in Denmark and Schleswig. This is the increasing number of traces clearly shown by the careful excavation of Bronze Age, and to an increasing extent Neolithic, burial structures. Both in Denmark and in neighbouring countries there has been much discussion of their significance. Around 1960 researchers made the two suggestions either that the reason for the ploughing could be purely practical, i.e. to cut sods for use as building material, or that the ploughing was ceremonial and connected with burial ritual. Since then doubt has been growing whether the ploughing and the construction of the barrow really were connected. Most recently Henrik Thrane has argued on the basis of ca. 170 occurrences that virtually

all ard marks of this type came from field cultivation earlier than the mound, but in certain cases ritual ploughing could not be ruled out (JDA 8, 1989). Our author goes a step further, and after examining the entire material concludes that there is no proof of contemporaneity of burial and ploughing at any site known so far, adding that a large and not properly treated body of information relating to ploughing throughout the whole Neolithic and Bronze Age is available and not properly studied. However this material is relevant and important for the book's subject, and could have given a domestic background to the Vildmose investigations. An example is the traces under the large Period V barrow published by Thrane (Lusehøj ved Voldtofte. Fynske Studier XI-II, Odense 1984, 114ff). This shows among other things the reconstruction of an area where three field plots meet (fig. 106). This is the only parallel known by me to the observation at Vildmose that some of the fields lie so close together that there was no space between them for a dividing bank. The author seems not to have made use of this observation. Other discoveries in Denmark of plough marks connected with Early Iron Age field banks or fragments of contemporary fields are similar treated. The publications are indeed mentioned in short accounts of earlier research, but the material is not used for a closer analysis of the central problems of the book; one of them however is mentioned in detail in an earlier report (JDA 5, 1986, 208).

Perhaps the reviewer would have found these more interesting than the author's many references to the descriptions of the classical authors, and his ethnographical knowledge of ploughing under quite different geographical, social and technological conditions than those which the economically pressed people of Vendsyssel had to cope with. This might lead one to enquire whether the remains at Grishøjgård were typical of their time, or whether their marginal situation made them exceptional in detail. The author of the book would have had no difficulty in replying to these objections, and seen in the context of such an important and detailed publication in an area of particular present interest in Danish archaeology, they are only questions of detail. It is uncertain whether there ever again will be the possibility of carrying through so comprehensive and successful a study of the subject. (Translated by David Liversage)

C.J. Becker

Martin Carver (ed.): *The Age of Sutton Hoo: the seventh century in north-western Europe*. Woodbridge 1992. 406pp.

In 1989, a conference was held in York in connexion with the 50th anniversary of the discovery of the rich ship burial at Sutton Hoo. The theme of the conference was the formation of the early kingdoms of north-western Europe, and it had a further goal of influencing and encouraging the new work that has gone on at Sutton Hoo under the direction of Martin Carver since 1983, with excavations in the years 1986-92. With this publication of the conference proceedings, Carver gives a brief, interim summary of the results of the excavations.

With the new excavations, 12 barrows in all have now been investigated. As well as the famous ship grave (mound 1) there is a second ship burial with an inhumation with weapons in a chamber beneath the ship (mound 2); a cremation with weapons in a dug-out boat or wooden tray (mound 3); 5 cremations in bronze vessels (mounds 4, 5, 6, 7 and 18); an inhumation in a chamber grave (mound 14); an inhumation with weapons beside a horse grave (mound 17); and a child's inhumation grave with weapons (mound 20). Several of the barrows, unfortunately, were "excavated" at an early date, probably in the 19th century, though traces of quite rich grave furnishings still survive. Seven mounds have deliberately been left untouched.

Besides the barrow burials, 2 cremations and 2 inhumations with less splendid furnishing were found. There were also a total of 39 quite unusual inhumation graves in two groups, in which three-quarters of the deceased had been decapitated, hanged or abused, were lying with their hands tied behind them or had been thrown prone into the grave. One of them was buried with an ard in a "ploughing" posture; otherwise the burials were without normal grave goods. One group was associated with mound 5, the second surrounded a "natural" feature that is interpreted as the root of a tree. You have to be very determinedly sceptical not to believe that these are examples of human sacrifice, in large numbers and of barbaric character.

According to the provisional datings, the first grave (mound 17) dates to around the middle of the 6th century or a little later, and burial continued for a few generations, with the two ship burials of the early 7th century perhaps being the last.

The barrow burials at Sutton Hoo are thus not just the visible and aristocratic part of a larger and more democratic cemetery: the whole cemetery, with its associated "sacrificial" graves is a thorough manifestation of power. This stands in contrast to the ship burial from Snape, also in Suffolk, which may have been just as richly furnished as several of the Sutton Hoo graves. This was excavated in 1862, and was well recorded by the standards of the time, but unfortunately it had

already been robbed. There were several barrows at the site, and new excavations, that are presented by William Filmer-Sankey, show that they were added to an existing, more common cemetery.

The new excavations have actually provided an opportunity for older finds and problems to be reviewed and re-assessed. The rich ship burial from Sutton Hoo has, indeed, been compared time and again with Scandinavian finds, especially the Central Swedish ship burials at Vendel and Valsgärde, on the basis of both the burial form and specific similarities in the grave goods. It is also, then, of great interest for a Scandinavian to see what we can learn from the new excavations, as well as from the processes of state-formation in Anglo-Saxon England, where indeed there are better historical sources to shed light on the process than with the Scandinavian Migration Period. At the same time, this volume shows how very interested our British colleagues are in the current Scandinavian research on the “Tribe to State” problem. The interest in “the Swedish connexion” persists, but it is clearly modified in the direction of a wider Scandinavian connexion, perhaps indeed towards a Danish connexion above all. This shift is dramatically illustrated by John Hines, who in a footnote faces up to the fact that his discussion of stylistic connexions in the Later Germanic Period may be left out of place by Karen Højlund Nielsen’s current re-assessment of the course of innovation in Scandinavia.

The local context of Sutton Hoo is dealt with by Christopher Scull and John Newman. How and when the Anglo-Saxon settlement actually took place is still, in fact, a lasting problem: as a military invasion in the mid-5th century or as a more peaceful influx of civilian groups over a longer period – perhaps as a mixture of the two. It is also unclear how the post-Roman population of Britain was organized after the Roman army had left, and how far the Anglo-Saxons were able to (or actually did) take over existing social structures. Scull emphasizes that we must never forget that the invaders were no disorganized barbarians: they came from hierarchical societies that were able to control fairly large territories as, for instance, the bog finds show. He argues for an invasion around the middle of the 5th century or a little earlier, and believes that the sparse historical records render the existence of an East Anglian kingdom in the second half of the 6th century probable, though it is not clear how extensive it was or whether it arose from the integration of smaller units, corresponding, for instance, to the later counties of Norfolk and Suffolk.

We thus have to recognize that we cannot draw direct conclusions about Scandinavia from the Anglo-Saxon situation. There was no local development over a long period as in Scandinavia but rather a quite different and acute situation: the invading Germanic peoples met a society in being that they had to take account of and, perhaps, take over; they

could not simply transfer their native social system, nor, as they later did in Iceland, were they free to form a big chiefs’ Utopia.

Anglo-Saxon settlement in East Anglia is distributed, in general terms, on the same pattern as the Romano-British, with the bulk of settlement along the rivers, though actual local continuity is difficult to demonstrate. This is further shown by the settlement-archaeological project in Suffolk which John Newman reports on. There is a very clear falling off of finds, though in fact one that starts as early as the second half of the 4th century, before the invasions. Settlement recovers in the 6th century, and extends again to the inland clays that had been abandoned in the meanwhile. An extensive settlement covering several hectares has been identified at Rendlesham, north of Sutton Hoo, where Bede locates a royal site. By the way, it is good to see that it has proved possible to co-operate profitably with responsible metal-detector enthusiasts in East Anglia too.

Continuity in settlement pattern can, of course, be governed in some measure by the natural environment etc., but it also poses the question of what actually happened to the Romano-British population in the areas which became Anglo-Saxon. Was it completely, or partly, expelled? Did it adopt the artefact-types and burial practices of the newcomers, or is it archaeologically “invisible”, either because it was suppressed and impoverished or because its traces cannot be distinguished from Late Roman finds? The authors offer only cautious answers.

In religion and politics, the Anglo-Saxon kingdoms were in a situation that does not occur in Scandinavia before the Viking Period, with a Frankish kingdom that claimed, with varying degrees of realism, overlordship over parts of England, especially Kent (Ian Wood). Here too, religion and politics went hand in hand, an issue that is discussed by, amongst others, Helen Geake and Jane Stevenson. The Christian mission was largely directed at the social elite, and a king’s acceptance or rejection of Christianity was a direct sign of his position in relation to the Franks. Even in the 7th and 8th centuries Christianity seems to have been weak in the general population, and several Christian kings were killed by the pagans in the 7th century. The very ostentatious pagan burials i.a. at Sutton Hoo, with rich grave goods and with human sacrifices (to which Geake is able to cite further Anglo-Saxon parallels) must thus also be viewed as political statements, with the cultivation of the connexion with pagan Scandinavia being a counter to the Franks. Elsewhere in the book, however, Edward James notes that the situation was really not so simple: Frankish graves can contain rich grave goods quite a long time after the conversion to Christianity and the Kentish social elite seems to have begun to raise burial mounds at the same as it became Christian. This may depend upon a need to mark one’s status in a volatile politi-

cal situation, at a period before the building of stone churches took on this function.

Sam Newton finds an odder expression of "the Scandinavian connexion" in the genealogy of King Ælfwald of East Anglia, which apparently was written around 725. Two of the names of his early (and most likely mythical) ancestors also occur as the names of Danish kings in the poem *Beowulf*, the events of which in fact are situated in Scandinavia and which Newton believes was written in an Anglian kingdom at about the same time as the genealogy. It certainly needs further investigation to show that there is a case here of a definite connexion, but it would certainly be intriguing and significant if Danish kings could have the same value for legitimizing a ruler as Woden and Caesar, who head the genealogy.

Tania M. Dickinson and George Speake provide a provisional report on a burial mound at Asthall in Oxfordshire. The barrow is now 17 m. in diameter and 2.4 m. high but was probably once larger. The centre of the barrow was excavated by a "gentleman amateur" in the 1920's and the information on his excavation is poor. It appears, however, that the barrow covered a primary cremation with a cremation layer up to 15 cm. thick and 6 m. in diameter. There are severely burnt remains of rich grave goods from the first half of the 7th century, including a small silver vessel, at least two bronze vessels, an imported Merovingian pot, pressed bronze foil with animal ornament from a (?) drinking horn, several strap mounts, a gaming die and pieces and horse and cattle bones. Some postholes may have belonged to a structure (a mortuary house?) on the site, and "largish "charred" timber" is mentioned though the information is, as noted, obscure. The large barrows at Uppsala are noted as possible parallels, while both the possibility of a timber structure that was not part of the funeral pyre and the primary cremation layer with severely burnt grave goods also remind me of Grydehøj at Lejre, where impressions of unburnt timber were found on the cremation layer. The calibrated C 14 datings place Grydehøj most probably in the first half of the 7th century (pers. comm. Steen W. Andersen, who is publishing the Lejre graves).

J. D. Richards writes on the use of symbols in connexion with Anglo-Saxon burials. I must confess that I found it difficult to follow him where, for instance, he relates the decoration on cremation urns to the sex, age and status of the deceased. In part, I find it difficult to imagine how so intimate a relationship between people and pottery could have worked in daily life if the urns were taken from the pottery the family owned; it would work better, of course, if the urn were specially made for the funeral. But the whole thesis is further dependent on secure determinations of the sex of the cremated bone, and I would be much more cautious about this than Richards. Comparing frequencies of animal species in graves and settlements also looks decidedly prob-

lematic when one considers the random survival of bone on settlements and how difficult it is even to assess the importance of the various species in the diet.

Far more substantial is Heinrich Härke's discussion of weapon burials which also relates much more convincingly to recognizable social circumstances. Weapons occur in 47% of the early Anglo-Saxon men's graves and 9% of juveniles' graves. Weapons, thus, did not signify that the deceased belonged to a special warrior class but were normal grave goods for all relatively well-off Anglo-Saxon males. The men's graves without weapons are on average poorer in other grave goods too, while weapons also appear with males who were too young, too old or disabled to be able to use them. These, however, often had to be content with a spear, the commonest weapon, while rarer types such as swords and battle-axes seem to have been restricted to active warriors.

In the 5th and 6th centuries, the skeletons in weapon graves clearly are of greater average height than those in men's graves without weapons. On the other hand, marks in the tooth enamel show that those men who were buried with weapons suffered the same incidence of hunger and sickness in childhood as the others. This, then, is no social elite with greater control of the food resources, but the greater height may have an ethnic explanation: the average height of the incoming Anglo-Saxons was certainly 4 cm. more than that of the Romano-British population. There is less variation in height in the weapon graves than in those without weapons, and the latter therefore could contain both poorer Anglo-Saxons and descendants of the earlier population who did not use weapons as grave goods. In the 7th and 8th centuries the difference seems to even out (an incipient assimilation of Anglo-Saxons and Britons?) but the material is rather sparse here: weapon graves appear to lose significance as markers of ethnic or social status.

The situation in Francia is considered in several essays. Guy Halsall discusses social development in Austrasia around the year 600. The historical sources indicate that power and influence in the Merovingian realm in the 6th century depended very much on the king, who could both grant and take away privileges. After about 600, however, an upper class was established, with heritable property and positions of power, to some degree at the king's expense. Correspondingly, grave goods in the 6th century are varied, with many different types, while in the 7th century grave furnishing grows stereotyped. In the 6th century there was a need to display the family's status in burials, certainly for a public gathering from several neighbouring communities, while in the 7th century positions were both more established and could be marked in more durable ways, for instance by building churches and being buried in them.

Edward James deals with the burials of the Frankish kings. Strictly speaking we know only one of these for certain, the

grave of Childeric in Tournai, while both the Arnegunde grave in St. Denis and the two graves in Cologne Cathedral are not certainly royal. Some royal graves may, however, have been found in the 17th and 18th centuries though nothing is preserved from them. The Merovingian kings were keen to build chapels of rest and often decided where they themselves and their closest relatives would be buried, but this did not lead to the same church being used for a long period. This stands in contrast to, for example, Kent, where the kings were buried in Canterbury for 200 years. One reason may be the abundance of the Merovingian royal family, which for one thing led to many, fluctuating divisions of the Merovingian empire, but which on the other hand for centuries was the undisputed royal clan. In Kent, by contrast, new dynasties were constantly being created, and it may have been important for the “usurpers” to demonstrate their adherence to a royal tradition.

Francia and its royal graves are also considered in Lotte Hedeager’s contribution. In connexion with a summary of her model of social development and state-formation processes in Denmark, she uses several maps to compare Scandinavia and Francia as parallel (though possibly opposed) centres of power. In both areas, we see that prestigious artefacts are rare in the central zone – Denmark/Skåne and Central Gaul – but occur in greater numbers in more peripheral areas: Norway, Sweden and western Finland; southern England, Belgium and the Rhineland. This holds for ring-swords, graves with two-edged display swords, Continental finds of brooches of Scandinavian type, and crested helmets in graves. The bracteates are included too, though this map would have been more persuasive if it had only included the examples from graves. The differences are interpreted as those between central areas (Denmark and Francia) in which those with power were well consolidated and more peripheral areas with unstable power relations where it was necessary to mark one’s status and allegiance or independence to/from both central and other local potentates.

It is reasonable to believe that state-formation took place earlier in the fertile and closely connected south of Scandinavia than in Norway and Sweden. I would question, however, the warrior ideology that Hedeager identifies as driving force in this process. Or, more accurately, one gets the impression that she does not distinguish between the ideology of the elite and its real world. The ideal of the heroic legends can be pretty well summed up as something like: “The aim of life is a death in battle, so let us go out to fight and loot something prestigious!”. But no community can live on these terms. On the contrary, the intensity and range of contacts we find this way and that across Europe required fairly well-regulated conditions. As a comparison, I would suppose that most medieval knights actually died of sickness, despite the martial ideals of chivalrous romance. And in his large corpus of

weapon graves, Härke found traces of wounds only on about one in a hundred skeletons.

Despite the importance of plunder and imported prestige goods, I believe that substantial land rights (however in fact they were organized) and a similarly inherited social status were essential prerequisites for any subsequent access to prestigious goods; this is also acknowledged by Hedeager. I also believe that competition for the real central power – the kingship (whatever rights and titles it may have had) – was restricted to a very small circle: in the case of Denmark, perhaps, to a single clan or whatever we ought to term it, pretty well as in the Merovingian realms. It is striking that all Danish kings of the late Viking Period and the Middle Ages apart from Magnus the Good are from one family, which can be said still to be on the throne today. This principle included a considerable flexibility in the recognition of royal bastards and female lines, but there was no member of the *Hvide* family or of any other leading family who even attempted the throne. Similarly when we hear of Danish kings in the period between the 790’s and the 860’s, it is mostly brothers and cousins who compete for power.

Both Hedeager and other scholars before her appear to take the great barrows at Lejre and Jelling as starting points for new dynasties. But neither the Mervingians nor the medieval Danish kings stuck to established burial-churches for considerable periods: a change of the royal burial-place needs not to indicate a new dynasty. We will of course never in any way be able to assert that Queen Margrethe II is a descendant of Chlochilaich, but without going to extremes I believe we should be amenable to the idea that there has been extensive continuity in social development despite all the fluctuations.

The book contains several further contributions. Bjørn Myhre gives a report on the new excavations at Borre, where there seems to have been pre-Viking activity. Margaret Gelling writes on place-names in Suffolk, though regrettably only at a parish level: I would very much have liked to see a detailed study of the names around Sutton Hoo. There are articles on the situation in the Celtic West and in Scotland, and much besides. This is a useful and interesting work, which provokes both reactions and second thoughts! (*Translated by John Hines*)

Morten Axboe