

Review of: Andersen, S. H. (2018). *Vængesø and Holmegaard: Ertebølle Fishers and Hunters on Djursland. (East Jutland Museum Publications 4)*. Aarhus: Aarhus University Press. Hardback, 285 p. ISBN 978 87 7124 886 9

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The sites Vængesø and Holmegaard are located on the former coast of the peninsula of Djursland on the Danish mainland. They contain kitchen middens and traces of habitation and activities, such as fireplaces and flint debitage. The sites mainly date to the Mesolithic Ertebølle culture and the Early Neolithic, thus covering an important period in Danish prehistory, encompassing, among other phenomena, the introduction of agriculture. The sites support earlier conclusions that there was a degree of economic continuity during the introduction of agriculture, that hunting, fishing and gathering also took place in the Neolithic, and that the same sites continued to be in use, one of them until the Late Neolithic.

This book by Søren Henning Andersen is the first extensive publication on these sites in English, after some articles had been published in the preceding decades (e.g. ANDERSEN, 1975). It sums up the accumulated knowledge of field work that was conducted at irregular intervals during several decades. The book presents four excavations and several surface collections and test pits on sites around Vængesø, and one excavation at the site of Holmegaard. The size and duration of the sites in the past varied as much as the archaeologists' excavation techniques and strategies. For example, one site saw a total excavation of the settlement surface and kitchen midden, while another kitchen midden only was examined through three minor sections. As the book is organised in one chapter per site, the length of the chapters varies accordingly, from only five to over hundred pages. The book begins with a chapter about the geology, topography and research history of the Vængesø area. The following four chapters describe the sites Vængesø I, II, III and IV. After a short chapter about other Ertebølle sites on and around Vængesø, one chapter presents the site of Holmegaard, before a final chapter summarizes the results of the excavation and places them into the context of the Ertebølle culture in general.

Human remains from this period are generally scarcely found. The sites of Vængesø and Holmegaard provide both inhumation graves and other human remains such as loose bones. The Vængesø sites represent an unusual type of coast-

al Ertebølle sites. The proportion of marine to terrestrial resources in the surroundings of the site is much higher than at typical coastal sites, as the sites are located at a lagoon. The small terrestrial hinterland gives the sites the same character as island sites, which is reflected in the composition of the artefacts and faunal remains, relying heavily on marine mammal hunting. Remarkable about these sites are also terrace-like features that had been dug into the steep hillside of the shore, most probably for habitation. Similar features have so far only been found in Lietzow-Buddelin (on the island of Rügen, Germany; LAMPE, 2005) and on a site in Northern Jutland (SIMONSEN, 1952). The examples listed here might support the author's conclusion that this type of terrace is a characteristic feature of small, restricted settlements at sites with a sloping occupation surface (p. 36) – although I would prefer to see more examples of terraces before drawing such a firm conclusion. In the future, excavations should focus on such anthropogenic changes of the environment, which can easily be missed.

With its descriptive and very detailed presentation of the sites, this book is a good source for studies on special aspects of the Ertebølle culture. All necessary information, such as excavation plans, fauna lists and numerous artefact drawings, is shown in a consistent and clear way. For example, when presenting the species composition of a shell midden, the author calculates how much meat the shells from the single-species shell heaps might have contained. He concludes that the heaps probably represent one meal each. The author interprets the results of his analyses in a comprehensible way and refrains from drawing conclusions that the data cannot carry. He focuses on aspects such as economy and settlement patterns. Therefore, the conclusion chapter serves as a fine image of how life could have been like in Mesolithic Denmark. Other chapters or sections of chapters, in contrast, are expected to be of interest primarily to experts in the respective fields. Especially the flint assemblages are analysed in great detail and richly illustrated, which, for example, can be of great use for comparative studies of flint technology.

Aarhus University Press has made this book in the usual high quality. Even though the field work took place dispersed over several decades, the plans and artefact drawings are made in a consistent style, so that comparisons between the sites are made easy. A great advantage is the fact that plans, artefacts drawings and photos are placed within the text, so the reader can compare the 'raw data' to the conclusions in the text without tedious page-turning.

I have, based on my own research interests, a few reservations concerning the presentation of the radiocarbon dates. In several cases, important information is missing in the text (such as the uncalibrated age, whether or not the date is reservoir-corrected) – although almost all necessary information is available in tables 7 and 11a. References to the tables are lacking in the text, which makes it difficult to comprehend the radiocarbon dates and thus an important part of the site chronology. For instance, it could have been very helpful to include a table with the radiocarbon dates for each site within the respective chapters. The criticised matters are of course not as obvious for archaeologists as they are for radiocarbon specialists and I realise that a pure criticism would not be very helpful. Therefore, I will use this occasion to give some advice.

- For every date, not only the calibrated date, but also the laboratory code and the uncalibrated radiocarbon age should be given, or at least references to the table which contains this information.
- In samples with a risk of reservoir effects, it should be stated clearly whether the (calibrated or uncalibrated) ages are reservoir-corrected, and how the correction was achieved. For example, on p. 48, the author claims to present “corrective dating analyses”. However, the ages presented here are not corrected at all: the ^{14}C ages (uncalibrated BP) are exactly the same, and the calibrated ages are only rounded and not corrected.
- For calibrated ages, the calibration curve and programme should be given with references, e.g. “The dates have been calibrated using the terrestrial calibration curve IntCal13 (REIMER ET AL. 2013).” instead of “The dates have been calibrated using the most recent calibration curve, as of autumn 2016.”
- Stable carbon isotope ratios are usually presented as $\delta^{13}\text{C}$ values in ‰ (not %). As the $\delta^{13}\text{C}$ values are always measured relative to an international standard, this standard should be mentioned as well, e.g. “ $\delta^{13}\text{C}$ values (in ‰ VPDB)”.
- Contextual information should be given together with the dates. E.g. in the case of Vængesø II or III, the dates could have been arranged in stratigraphic order.

However, my objections concerning the presentation of the radiocarbon dates are only a minor problem and do not affect my generally very good impression of the book. I recommend it to all scholars with an interest in the economy and

settlement pattern of the Ertebølle culture, or with an interest in the details of the introduction of agriculture in Northern Europe.

References

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