

SMAKKERUP HUSE

A LATE MESOLITHIC COASTAL SITE
IN NORTHWEST ZEALAND
DENMARK

*Edited by T. Douglas Price
and Anne Birgitte Gebauer*

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Dedicated to all the project participants

Footprints of the Past in Today's Landscape

FOREWORD

LISBETH PEDERSEN

Director, Kalundborg og Omegns Museum

The Mesolithic settlement at Smakkerup Huse has been known to local amateur archaeologists for decades. In 1984, as newly appointed director of Kalundborg og Omegns Museum [Kalundborg Regional Museum] one of my first field studies – together with Mr. Egon Iversen, an amateur archaeologist – involved a series of test diggings at this Late Mesolithic site in order to establish whether it contained materials of scientific interest (Fig. 1). A number of well-preserved artifacts of bone and antler in the collections of several amateurs seemed to indicate that this might be the case. After shifting a considerable amount of earth with our shovels, we succeeded in finding culture layers that substantiated our presumption. These layers were not immediately endangered, however, so when more pressing emergency situations demanded immediate digging, scientific excavation was postponed for another day. But it did not become another road not taken; the Danish-American Saltbæk Vig Archaeological Project took it up, and it is, therefore, a special



Fig. 1. Smakkerup Huse, 1984. Egon Iversen digging test pits to learn if there were still culture layers from the Late Mesolithic. The flat area in the background is part of the reclaimed section of the Saltbæk Vig. The construction of the embankment for the railway (right) at the beginning of the 1900s led to the discovery of the settlement at Smakkerup Huse. (Photo: L. Pedersen)

pleasure for me to write a few words in connection with the publication of these results of the American expeditionary corp's efforts in the Kalundborg Region.

The Saltbæk Vig Archaeological Project is an investigation into settlement history, attempting to throw light upon issues related to the transition from the Mesolithic to the Neolithic in Southern Scandinavia. The basic concepts of the study were defined by T. Douglas Price and Gitte Gebauer from the University of Wisconsin, Anders Fischer, PhD, and myself from Kalundborg og Omegns Museum. Our co-operation has been going on for more than fifteen years and has resulted in extremely varied and occasionally quite unexpected examples of cultural exchange across the Atlantic (Stafford 1999, Pedersen 1999, Pedersen and Findal 2000). With the Kalundborg region as their bridgehead, a number of American students have become acquainted with Denmark. Likewise, Danish students have developed contacts with American research centers and made lifelong friends. Some have based research theses on analyses of materials from Smakkerup Huse as presented in this publication. All of the participants have had their fingers deep in the layers of sand and silt of the Saltbæk Vig.

The Saltbæk Vig Archaeological Project involved extensive field walking, the testing of numerous sites, and large-scale excavation. Many landowners generously opened their doors, their collections and their fields to the excavators – human as well as mechanical – to delve into the layers at Saltbæk. Throughout the years, the Museum staff, members of the Board, and amateur archeologists gave their hearts and hands, their energy and the fruits of their inventiveness, to the project. They let themselves be carried away every spring when another flock of migratory Americans landed and participated in the exercise of working together across cultural differences (Fig. 2).

I would like to direct my warmest thanks to all those, Americans as well as Danes, who – with their vision, active help and interest – have contributed to the archaeological work. In this manner, the Kalundborg og Omegns Museum has achieved international attention and also, in keeping with a century-old tradition, maintained an interest abroad in the Stone Age finds from the wetlands of Northwest Zealand. More than a century ago, J.S. Mathiassen, a schoolteacher in Mullerup, noticed traces of settlements in the Maglemose [*the Great Bog*], some 20 kilometers south of Saltbæk Vig, suddenly making the North European Stone Age several thousand years older than previously believed. His

Fig. 2. Field survey, Saltbæk Vig, April 1990. A number of amateur archaeologists participated in the field walking around the Saltbæk area. (Photo: A. Fischer)





Fig. 3. Historical map of the area at Smakkerup Huse – The Royal Danish Society of Sciences and Letters; 1771. Digital image processing has been used to mark the settlement at Smakkerup Huse with an asterisk, the former fjord is shown in dark blue, the Bregninge stream with light blue, and meadows with light green. Note the location of the site at the junction of the head of the Saltbæk Vig and the wide, fresh-water valley of the Bregninge Å. (National Survey and Cadstre, Denmark)

discovery attracted great international attention. Specimens from the excavations were sent far afield, including museums in New York City (Mathiassen 1935). At the beginning of the 1900s, the Kalundborg og Omegns Museum also began excavations in the Maglemose. Since then the Museum has on several occasions participated in large-scale studies of Stone Age remains, along the coasts as well as inland in northwest Zealand (Fischer 1999, Pedersen *et al.* 1996).

The layers at the Smakkerup Huse settlement have been dated to the later part of the Mesolithic Ertebølle Culture. The layers were deposited along what was once the shoreline of a funnel-shaped inlet, with the wide opening leading out into the ocean (fig. Foreword 3). The inlet, or vig, was created around 5400 B.C. cal when the sea rose and created an attractive spot for the Stone Age hunters, fishermen, and food-gatherers to settle in the subsequent millennia.

Through a series of interdisciplinary studies, archaeologists, geologists and botanists have by now acquired considerable insight into Stone Age man's life and activities around this inlet. In the present publication they describe a settlement on the coast, located in the border zone between the fresh water at the mouth of the Bregninge Brook and the ocean. From the edge of the site itself, a row of steppingstones formed a path from the dry land through reeds and grass to a landing place for small boats. From here, the West-Zealanders of that time would hunt marine mammals in the ocean, or fish with net and hook in the inlet and, in autumn, put up wicker fish traps – as their descendants still do today – in order to catch fat silver eel. On the wooded moraine ridges sloping down towards the inlet, they would hunt for stag, roe deer, and wild boar – large mammals that provided skin and fur for clothing, bone for tools, and meat for nourishment. Smaller animals were also taken for their fur and feathers. Some of Scandinavia's oldest finds of bones from domesticated oxen help to throw light on the shift away from a culture based upon fishing and hunting to one based on farming.

Excavations at Smakkerup Huse describes a population of fishermen and hunters who were also well acquainted with the surrounding vegetation and who practiced a sort of forestry in order to procure the right materials for their fishing structures. Studies of microscopic samples of vegetable matter reveal how the population – in all likelihood women and children – have gathered vegetables for essential vitamins, minerals, starch and fiber.

Knowledge of plants and their growth, accumulated through generations, must surely have been of fundamental importance around 3900 B.C. when the population of the area embarked on the herding of animals and the cultivation of cereals and became farmers.

Plant remains from Stone Age sites are extremely perishable. Thus, it may often be difficult to determine with any accuracy what part of the Stone Age diet was constituted by vegetable foodstuffs like nuts, seeds, roots, berries, edible bulbs, etc. Traces of these will often be underrepresented when compared to the bones from animals and thus be interpreted as indicators of the greater importance of fishing and hunting. Vegetables may often only be included as items on the Stone Age menu after detailed analyses of systematically collected samples of the sediments from the sites, as it has been done at Smakkerup Huse. Unfortunately, detailed studies of this kind are not always routine practice in connection with Mesolithic excavations in Denmark. They are therefore welcomed as a research method which will hopefully find much wider use in the future in order that we may have more detailed information on the starch, carbohydrates and vitamins that prehistoric humans obtained from vegetable foods. Within this field, it will be worth one's while to look for inspiration in the studies of, say, the ways in which Australian aborigines until quite recently practiced gathering and manipulated their habitat in ways that ensured the availability and abundance of favored food resources (Flood 2001).

The book also shows us personal possessions such as hairpins and ornaments of the Stone Age population. One quite unique item is a decorated stone, which most of all – at least in the view of the present writer – resembles a tortoise. The stone is very strange indeed and, so far, quite extraordinary in a North European context. It may be a child's toy or, perhaps, a mute witness from a people who in all likelihood translated wisdom gained through experience into myth and legends. Surrounded by Nature as they were, the population of that period lived in close contact with their surroundings – and also in a state of dependency on them – so tradition and myth may very well have played a part in the protection of natural resources and insuring harmony between place and people.

The Ertebølle population's possessions and refuse were swiftly encased in the waterlogged layers of silt around the small landing place. We are indebted to these conditions for the preservation to the present day of a number of highly perishable objects of bone, antler, bark, wood, etc. However, and alas, the excavations at Smakkerup Huse have also taught us that one aspect of the natural condition has come under exceptionally heavy pressure within the last few decades. The objects of bone and antler found at Smakkerup Huse by the amateur archaeologists in the 1960s were in a considerably better state of preservation than similar objects found in the excavations in the 1990s. So it seems that an old symbiotic pact between the natural conditions for the preservation of relics of the past and future possibilities for research is being jeopardized.

Saltbæk Vig was chosen for a study in settlement history because – for one thing – it had been diked and partly drained in 1866-67 in order to create more farmland. Together with the silhouettes of windmills and pump stations on the horizon at Vrøj, the dykes at Saltbæk still stand as mementos of reclamation project that failed. Instead, it created the basis for fishponds, abundant bird life, and extensive meadows for grazing cattle – all essential elements in the area's use today as hunting ground, bird sanctuary, and nature reserve.

Today, Saltbæk Vig covers about 29 square kilometers, which makes it Denmark's third largest lake. In a European context, Saltbæk Vig is an important bird protection area – EU Bird Protection Area No 99. It is a registered sanctuary, mainly used by the present owners for fishing and hunting – that is, in close correspondence with the way the Stone Age population used the area. In contrast to this, the surrounding moraine landscape, on the other hand, is an area under intense cultivation, clearly characterized by 6000 years of farming.

Today, therefore, Saltbæk Vig is an amalgam of the original fishing-cum-hunting culture of the Mesolithic and the “newcomer”, agrarian culture. As a consequence, the landscape around the inlet displays many special cultural features reflecting important aspects of that social transformation. Low islets and old littoral ridges in the otherwise flat moorland indicate the old coastline and reflect where the groups of fishermen and hunters lived at the end of the Mesolithic. Afterwards, Neolithic farmers left more monumental traces in the shape of burial mounds: a long barrow and several dolmens are fine examples that can be seen in the woods at Lindebjerg in the hills on the west side of the inlet.

Within the field of Cultural History, the results of the archaeological research at Smakkerup Huse are many-sided. They add to our knowledge of the modes and manners of the Stone Age population, and they contribute to a more precise dating of the introduction of agriculture in Denmark. Moreover, they emphasize the potential that – still – exists for preservation in the Danish wetlands of organic material from prehistoric periods.

It is with great pride that Kalundborg og Omegns Museum has included the best finds from Smakkerup Huse as part of our permanent exhibition. Henceforth, the results of the research will be part of the museum’s presentation and educational programs on the history of the cultural and the environmental development of the area. At the same time, they alert us to threats to conservational conditions in our wetlands.

American institutions funded the research project at Smakkerup Huse and provided most of the personnel; the Danish side provided familiarity with local conditions and a solid operational base for the activities. A number of Danish colleagues have assisted with advice and professional insight, and there have been extensive Danish financial contributions to the publication of the results. My heartfelt thanks go to everyone who, in their various ways, helped to make it possible to carry through the investigations and the publication of the findings.

Kalundborg, April 2002

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Resumé

The archaeological site of Smakkerup Huse is located at the headwaters of a former fjord, or inlet, known as the Saltbæk Vig on the northwest coast of the island of Zealand, Denmark. The site, dating between 5000 and 3800 B.C. (calibrated calendar years), belongs to the later Mesolithic, a period known as the Ertebølle. Excavations at the site were undertaken as part of the Saltbæk Vig Archaeological Project, a regional investigation of the introduction of agriculture into prehistoric southern Scandinavia.

Excavations took place at Smakkerup Huse in 1989 and again in 1995, 1996, and 1997. Some 140 m² were excavated, in places to a depth of more than 2 m. A total of 225 kg of flint and other worked stone and 150 kg of bone and antler, wood, nutshell, and other plant remains were recovered, along with many other interesting artifacts. The deposits at Smakkerup Huse contained Fire cracked rock, charcoal, oyster shells, amber and teeth pendants, a complete rack of antler, pieces of dugout canoes and a bow, numerous pointed wooden stakes, large pieces of bark and fungus, tens of thousands of hazelnut shells and fishbone, a fragment of a fish trap, fishhooks, worked bone and antler tools, a number of potsherds, and more than 350 projectile points. These materials were found in waterlogged deposits along a former coastline.

The site is important for a number of reasons, including the more than 1000-year record of cultural deposits and the preservation of abundant subsistence remains and wooden objects. The site records a series of marine transgressions in this area, from the first introduction of a saltwater environment to the beginning of the Neolithic period. Smakkerup Huse documents some of the oldest domestic cattle in Denmark and a new artifact type, a painted pebble, from the Mesolithic. While the settlement area of the site on land had been eroded, the waterlain deposits adjacent to the site preserved a submerged midden and an *in situ* fishing and boat landing area.

This project has involved the collaboration of a number of experts in a variety of disciplines, including geology, archaeozoology, paleoethnobotany, archaeological chemistry, conservation, and many others. The results of their investigations provide many insights into the prehistoric lives that were lived at Smakkerup Huse.

The report on the site that follows includes some background on the Mesolithic of southern Scandinavia, a history of research, the geology and topography of the site and its environment, the layout and sequence of the excavations, stratigraphy, the finds, dating, interpretation and significance. Among several issues that the study raises are the nature of life in the Mesolithic period and the meaning and causes of the transition from hunting and gathering to farming in human prehistory.