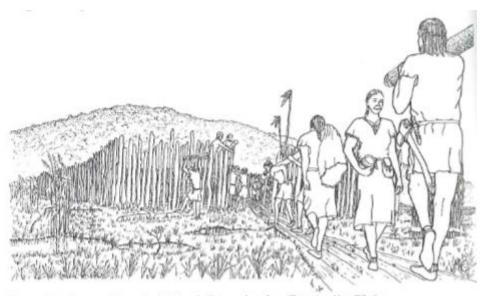
# Compiled report

Ancient monument RAÄ 22:1, Alvastra pile dwelling

Västra Tollstad parish

Östergötland



För att uppföra den stora tvälryggnaden kräedes säkerligen mycket arbete. Illustration: Mats Gilstring

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This is a translation by Jacqueline Taffinder of the compiled report submitted to the National Heritage Board on 12 February 2018 ( Dnr Raä-2018-611, Dnr SHM 3.1.1-267-2018).

# Description (e.g. reasons for excavation, description of excavation area, the scope of the excavation, summary of the results, find categories):

Descriptions are by Hans Browall (everything except the last four paragraphs; extracted from an internal memorandum (Projekthistorik – Project History - written by Hans Browall 2013-10-03 and translated by Jacqueline Taffinder 2018) and Jacqueline Taffinder (last four paragraphs 2018-01-12)

#### Organisation and aims (by Hans Browall 2013)

In 1975 Professor Mats P. Malmer at the Department of Archaeology, University of Stockholm, instigated the resumption of excavations conducted between 1909 and 1930 at the Alvastra pile dwelling. Malmer selected Associate Professor Gunborg O. Janzon and Teaching Assistant Hans Browall, both employed at the Department of Archaeology, to be included in the group formed to perform this task. Work started in the autumn of the same year when Hans Browall made a survey, firtstly of the documentary material in the Antiquarian-Topographical Archives (ATA), compiling it into categories, and secondly a survey of the minutes of parliamentary proceedings regarding the Alvastra pile dwelling. In preparation for a small test excavation to be held the year after, Hans Browall and Andrea Elander undertook a journey to Alvastra in order to map the vegetation and soil conditions of the site.

The formation of a project committee under the chairmanship of Roland Pålsson, Directior of the National Heritage Board (RAÄ), was of great significance for future work. The committee was constituted in 1976 and, apart from the Director of the National Heritage Board, it consisted of Gustaf Trotzig, Carl Cullberg, Hans-Åke Nordström and Lars Barkman, representing the National Heritage Board and the Museum of National Antiquities (RAÄ-SHMM). The County Board of Östergötland was represented by Sven E. Noreen. The Archaeological Research Laboratory of Stockholm University was represented by Birgit Arrhenius, the Department of Osteoarchaeology by Torstein Sjövold and the main Department of Archaeology by Guborg O. Janzon, Hans Browall and Mats P. Malmer, the latter being the project manager (Malmer 1978: 150; 1979:24). The committee met once a year until and including 1980. At first the project had its premises at the Department of Archaeology, University of Stockholm, and later at the premises of RAÄ-SHMM on Taptogatan and then on Sandhamnsgatan in Stockholm.

The research project Alvastra pile dwelling received financial support from the Research Council for the Humanities and Social Sciences (HFR/HSFR; no longer existing) from the budget year of 1976/77 until 1983–84 and in 1986–87. The project account was administered by RAÄ-SHMM. In the project application the goals of the project were formulated in the following way: "To make the finds from the Alvastra pile dwelling accessible for research and study and to use the uniquely multi-facetted assemblage to study, as far as possible, the social, technical and economic function of an agricultural village from the Stone Age." (Malmer 1978:150–151).

For Malmer, to make the finds available for present and future research was a scientific and not just an administrative goal. Today, after all the delays in planned research work, regarding both the excavations of 1909–1930 and those of 1976–1980, the administrative aspect appears to the author to be just as important as the scientific because, from a formal point of view, the excavation is still ongoing. In the meantime documentation and finds are stored at SHM.

#### Natural science experts (by Hans Browall 2013)

In the same way as Otto Frödin had done, Mats P. Malmer made active efforts to engage experts of the natural sciences for consultation in the field and to make contributions to the formulation of research programmes. In this way the pile dwelling project received a scientific/humanistic profile. Among the specialists engaged were Nils-Gustaf Gejvall of the Osteological Department, Stockholm, Professor Björn Berglund, Laboratory of Quatenary Geology, Lund, Professor Ingrid U. Olsson, Department of Physics, Uppsala, Laborator Ann Marie Brusewitz, State Geologist Ernest Magussson and PhD Doctor Sven I. Svantesson, the latter three of the Swedish Geological Survey (Malmer 1978:150–151; Browall 1986:16).

Hans Görannson, assisted by Thomas Persson in the field, was responsible for the paleobotany of the research project. This task included both pollen analysis and the macrofossil analysis of fruits and seeds. Thomas Bartholin was responsible for dendrochronology and wood anatomy. From the beginning Arne Hallström was responsible for osteology, both for the finds of the 1909–1930 and those of the 1976–1980 excavations. Later Malmer asked Ebba During to take charge of the human remains of the new excavations. Birgitta Hulthén was responsible for ceramic technology and comparisons with the clay occurrences in the surroundings of the pile dwelling. Chemical analyses of soil samples were conducted at the Archaeological Research Laboratory under the leadership of Birgit Arrhenius. Retired State Geologist Erik Åhman was in charge of petrography. Jan Mikaelsson and Per Möller at the Laboratory for Quaternary Geology in Lund, were responsible for hydrogeology. Lars-Uno Johansson of the techical department of RAÄ-SHMM was the project conservator, being periodically stationed at Alvastra. Mats P. Malmer, Gunborg O. Janzon, Anders Carlsson, Stefan Bergh and the author worked on the archaeological assemblages. A further 17 archaeologists and 3 assistants participated during longer or shorter periods in fieldwork at Alvastra.

### **Excavation** (by Hans Browall 2013)

When the project started its fieldwork in 1976 this was not the first excavation that had been conducted at the pile dwelling since 1930. After Otto Frödin's death in August 1953 Holger Arbman raised the question of assuming responsibility for the excavations with Mats P. Malmer in September. This was decided definitely in November 1953. During the summer of 1956 Malmer undertook a minor excavation (c. 0,5 m²) in the NE corner of the 1909–1930 trench. The participants were Mats P. Malmer, Brita Malmer and Ernest Magnusson. The goal of the test excavation was to establish the condition of Frödin's trench which had never been refilled and to assess the state of the features in the unexcavated area north of this trench. In addition, the excavation included drilling for pollen analysis in Lake Tåkern, the bog of Dags mosse and the spring-fed mire of Alvastra källmyr. The object of this was to date the pile dwelling and the different phases in the development history

of the wetlands. This work was conducted by Ernest Magnusson at the Department of Quaternay Geology, the University of Lund (Malmer 1956; 1987:4-5: Magnussson 1964).

Fieldwork at the pile dwelling project commenced in the spring of 1976 and was officially terminated in the autumn of 1980. A last supplementary excavation took place in the spring of 1981. All trenches, even Otto Frödin's, were backfilled in 1982. During the fieldwork an area of c. 55 m² was investigated. It was divided into three main trenches along the northern edge of the 1909-1930 trench. In addition, a further 40 m² were excavated, divided into two independant trial trenches WSW of the older trench. In addition, the whole of Frödin's trench was examined in order to recover vertical piles left behind there. In the course of a total of 19 fieldwork seasons an area of c. 1100 m² of the Alvastra pile dwelling has been excavated and documented archaeologically. In the following the various trenches will be referred to by the names given in figure 1 below.

The Eastern (18 m²) and Western (12 m²) trenches were opened in 1976. Mats P. Malmer, with the assistance of Anders Carlsson, Ebba During, Elisabeth Herner and others, was in charge of the Eastern Trench. The trench was placed along the northern edge of Frödin's trench because Malmer wanted to locate and continue investigation of the trial trench he excavated in 1956. He was actually able to identify the trial trench and a plank from the 1930 excavation.

The author (Hans Browall) was responsible for the Western trench, being assisted by Andrea Browall (née Elander), Saskia Enkell and Christian Lindqvist. This trench was located with a view to finding the continuation of the pile row encountered between two log floors in the western area of Frödin's trench (pile row 3 between floor 1 and 2; Browall 2011:88) which seemed to run to the NE on into the unexcavated area. This was successful, thus establishing a link between a feature of the 1909–1930 and the 1976–1980 excavations. In addition, it was found that two piles in the southern area of the Western trench were shown with Z coordinates on Holger Arbman's feature plans, enabling the coordinate system of the 1976–1980 excavations to be connected with that of the 1909-1930 excavations.

Arne Hallström was in charge of the Middle trench (Mellersta schaktet, 14 m²) where he was assisted by Andrea Browall and Monica Wennersten among others. The major part of the post-excavation work has been carried out by Stefan Bergh. The trench was opened in 1977 and was placed between the Eastern and Western trenches as it was at that time planned to excavate the whole area between these trenches.

Gunborg O.Janzon, with the assistance of Stefan Bergh, Elisabeth Klett, Christian Lindqvist and Mats Riddersporre, was in charge of the Trial trench. The trench was opened in 1978, a direct continuation to the north of the Western trench. The aim was to find the northern margin of the pile dwelling in order to make a study of the peripheral features of the site.

Trenches T and U (referred to by letters only; 30 and 10 m<sup>2</sup>) were opened in 1979, being excavated by Stefan Bergh and Magnus Holmqvist. The aim of these trenches was to locate the walkway to the west which Frödin thought he had identified in the 1909 excavation (Frödin 1910a:39).

During the excavation period planning meetings and seminars were held for those participating in the excavation as well as larger meetings with invited specialists. Several excursions to the sights of the neighbourhood and neighbouring counties were held every season. Communal pile dwelling lunches were of great practical and social importance. These were enjoyed every day in Casa Miranda consisting now of three trailers stationed at an angle to each other near the excavation trench. For 10 Swedish crowns per day archaeologists received morning and afternoon coffee and a large and varied lunch cooked by Andrea Browall. This was much appreciated, not least by frequent visiting colleagues and friends, but it the long run it was very stressful for the cook who also had her work as an archaeologist to do.

Both the 1909-1930 and in 1976-1980 archaeological excavations were restricted to the pile dwelling itself. Thus, fieldwork and the collection of archaeological data outside the site was not included in the plans or described goals of the two excavations. The archaeological Stone Age excavations conducted in the Alvastra area at the end of the 1970s and the beginning of the 1980s were scientifically related to the pile dwelling complex, but they were initiated and carried out on the initiative of individual members of the project.

# Post-excavation work (by Hans Browall)

There was not much money for the archaeological processing of the finds and documentation. It was assumed that Janzon, Malmer and the author (Hans Browall) would conduct this work within the framework of their university employment. In the budget funding was reserved for the fieldwork and analyses by specialists. Later in the 1980s it was possible to employ Stefan Bergh, Anders Carlsson and Hans Browall for short periods, their task being the production of manuscripts for excavation reports. The work was primarily conducted in the premises at Sandhamnsgatan until 1987 when Malmer retired. After that project work as such gradually died out, individual researchers assuming responsibility for their own parts of the project. The premises were vacated in 1995 and the assemblages and documentation were moved to SHM.

# Public archaeology (by Hans Browall)

Outreach activities for the general public in the form of guided tours, lectures and exhibitions were organised during the fieldwork periods. A full-scale reconstruction of floor 1 and 2 separated by a pile row in Frödin's trench had been built next to the road near the excavation area by Ödeshög municipality and cultural board. A ramp had also been erected for spectators to stand on during public events. Every other Wednesday (during work time) and every other Saturday lectures on the pile dwelling were held and the excavations were demonstrated. Outside this schedule lectures were also given for booked groups and societies. In addition, an exhibition about the pile dwelling and the work of the project was set up on site, relevant literature being also available for visitors there. The exhibition was housed in a larger trailer made available by the municipality of Ödeshög (Malmer 1979:23-24). The events were greatly appreciated, attracting up to 100 visitors to the lectures and tours.

# International assessment (by Hans Browall)

In 1984 the collaboration committee for archaeology and the natural sciences at HSFR and the Research Council for the Natural Sciences (NFR) conducted an international assessment of environmental history research. The pile dwelling project was one of the eight state-financed projects that had been selected. The aim was to provide the research council with information on the scientific quality of the projects in an international perspective.

An assessment group was appointed consisting of Director of the National Heritage Board Margareta Biörnstad (chairperson), Professor D.R. Harris, London, Professor Mikael Müller-Wille, Kiel, Professor H.T. Waterbolk, Groningen, Assistant Professor Noel Broadbent, Umeå (secretary), Assistant Professor Birgit Arrhenius, Stockholm (secretary). A short report in English following a stipulated structure and a selection of literature was drawn up by those in charge of the projects and forwarded to the assessment group via the collaboration committee. The assessment group also visited the projects according to a fixed programme. The report for the pile dwelling project was written by Mats P. Malmer, Thomas Bartholin, Hans Göransson and Ebba During (Malmer et al 1984). The assessment group visited the project firstly in Lund on 2 April 1984 and then in Stockholm on 6 April 1984. On the basis of this work the pile dwelling project was presented in an international journal by one of the members of the group (Müller-Wille 1984).

The report of the assessment group contained comments, conclusions and recommendations. As far as the pile dwelling project was concerned the group was of the opinion that the site was problematic as far as structure, function, length of use and seasonality was concerned. The group also commented on the fact that only minor articles had thus far been published but noted at the same time that several volumes and Phd dissertations in various areas were ongoing. What is more, the group was of the opinion that priority must now be given to a complete and swift publication of the results of the earlier excavations but that this should not be allowed to delay the publication of volumes on the later excavations. If some of the remaining interpretation problems were to be solved supplementary work in dendrochronology, wood anatomy and paleobotany would be necessary according to the group. However, before further funding was granted the aims and methods for such supplementary investigations should be described in detail (HSFR/NFR 1984).

# Project literature (by Hans Browall)

A total of around 70 publications have so far been produced by project participants or specialists in relation to the project. These publications are listed in the references section of the book mentioned below (Browall 2011), being marked with" project association" (Swedish projektanknytning) in square brackets after the place of publication of the title concerned according to selection by the author (Hans Browall). Further titles may have appeared without this being noted by the present author (Hans Browall). About two-thirds of the titles have appeared since the assessment group wrote their report. Among these there are ten independent monographs of which two are PhD theses (Browall 1986; During 1986). The uniform publication in several volumes which was planned from the beginning never appeared. Neither has an excavation and material publication (report) for the whole of the 1976-1980 excavation been produced yet.

Extracted from: Browall, H., 2011. *Alvastra pålbyggnad. 1909–1930 års utgrävningar*. Kungl. Vitterhets Historie och Antikvitets Akademien (KVHAA), Handlingar, Antikvariska serien 48, Stockholm 2011 (pp. 382–386).

See also: Malmer, M.P., 1978. Forskningsprojektet Alvastra pålbyggnad. Fornvännen 73. Stockholm.

# Further project literature (by Jacqueline Taffinder)

Since the above summary was written by Hans Browall in 2013 another three important publications have appeared.

Browall, H., 2016. *Alvastra pålbyggnad. 1976–1980 års utgrävningar. Västra schaktet.* Kungl. Vitterhets Historie och Antikvitets Akademien (KVHAA), Handlingar, Antikvariska serien 52. Stockholm.

Hinders, N., 2017. Middle Neolithic pottery decorations tools from Alvastra pile dwelling. *Fornvännen* 112, p. 122 ff. Stockholm.

Malmer, M.P. 2016. The Alvastra pile dwelling. Theory and method in the 1976–1980 excavations. I: Archaeology as fact and fiction. MatsP.Malmer's archaeological writing 1948–2002. Edited and commented by Stig Welinder. Kungl Vitterhets Historie och Antikvitets Akademien (KVHAA), Handlingar, Antikvariska serien 50. Stockholm.

#### **Infrastructure project** (by Jacqueline Taffinder)

In 2014 the Swedish History Museum (SHM) in cooperation with the University of Stockholm (SU) was granted funding from the Swedish Foundation for the Humanities and Social Sciences (RJ) for a so-called infrastructure project (IN14-0811:1) with the title: Alvastra pile dwelling: an archaeological resource. Jacqueline Taffinder was the project manager. Stockholm University was represented by Anders Carlsson, Department of Archaeology, SU, and Kerstin Lidén, Archaeological Research Laboratory, SU. Together with Hans Browall, employed as a consultant in the project as required, these representatives of SU form a steering group for the infrastructure project. The group held meetings twice a year during the project period. The following people have been employed by SHM to work in the project: Nathalie Hinders, Sandra Söderlind and Gregory Tanner. The goal of the project is firstly to make the large assemblage from the 1976-1980 excavations digitally accessible by registering it in the database of SHM searchable via the internet. Secondly the documentation from the excavations is to be presented in a digital platform hosted by SHM: s web page. Registration of the assemblage was completed in January 2018 and forms a base for the find list of this compiled report. The digital platform will be launched by December 2019.

**Results** (by Jacqueline Taffinder on the basis of Browall 2011:386-389)

In the excavation of the Western trench two log floors were uncovered. They were separated by a c. 50 cm wide space occupied by a row of tightly spaced piles. There was a fireplace on each floor of which the one in the east was excavated only partially. A total of 43 piles was registered in the trench, measuring between 6 and 220 cm in length and 2 and 20 cm in diameter. The longest pile was driven into the ground after the construction of the floor. It was supported by a stone packing consisting of 13 stones and it seems to have been part of a heavy structure of some kind.

In the Trial trench a compact branch and twig layer was investigated together with a pile row consisting of 14 piles. A further 9 piles were found in the trench.

In the Middle trench two log floors were revealed. They were covered by a well-preserved mat of bark pieces laid criss-cross. In the space between the two floors there was a fireplace and a further fireplace was probably situated under the western edge of the trench. A total of 43 piles was found in the trench.

In the Eastern trench two log floors were investigated. Six fireplaces were documented in the trench. 117 piles were found of which some were placed in a row.

In T trench (one of the New Trial trenches) horizontal logs were encountered. They were laid in an E-W direction. Three piles stood vertically among the logs. These features could be the remains of a walkway but the connection of the logs to the walkway in the western area of Frödin's trench was never established as no new trenches were opened in the area between the two.

In U trench (a second New Trial trench), situated 20 m west of T trench, no horizontal timbers were documented.

Frödin's trench was investigated in search of piles left behind after the 1909-1930 excavations. C. 600 piles were found and samples were taken for dendrochronological and wood anatomical analysis. This resulted in a floating chronology of 42 years (Bartholin 1978a, 1978b, 1980, 1983a, 1983b; see references in Browall 2011 under project literature above.

#### **Find categories** (by Jacqueline Taffinder)

The following find categories were encountered and recovered:

Tools and production debitage of flint: primarily transverse arrowhead, scrapers, bipolar cores, fragments of four-sided ground axes

Tools of stone: primarily double-edged axes, four-sided axes, strike-a-lights, grinding stones, pyrite balls

Potsherds, primarily from funnel-beaker vessels, pitted ware vessels and a ware entitled pile-dwelling ware

Objects of amber, e.g. two fitting fragment of double-edged axe-shaped bead

Objects of bone and antler, e.g. awls, dagger, points, punches, a pottery decoration tool and two fitting fragments of a double-edged axe-shaped bead

Objects of tooth and tusk, e.g. fishing hooks and pendants

Fruits, primarily hazelnuts and apples

Fungi, primarily tinder fungus

Cereal grains and seeds

Objects of wood, primarily piles of various dimensions but also a small dish or mug

Rope of lime bast

Large quantities of unworked stone, both stone used in structures such as hearths or pile supports and stone transported to the pile dwelling for some other reason

Burnt and unburnt bones of animals and humans

Large quantities of samples, e.g. wood samples, soil samples, pollen samples, bark samples and carbon samples

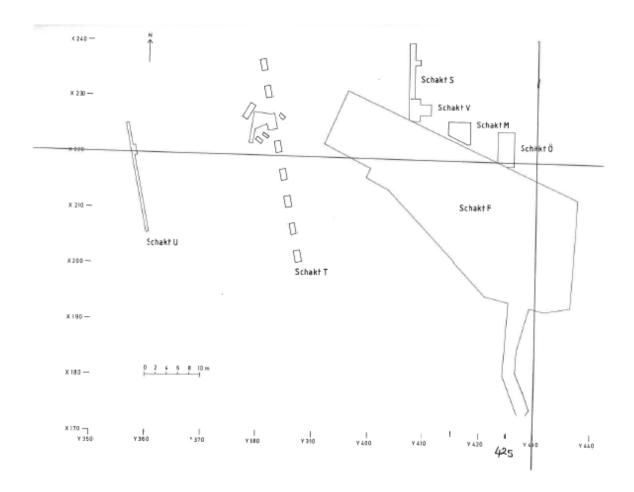


Figure 1. Plan of the 1909-1930 and 1976-1980 excavations. Schakt F = Frödin's trench from the 1909-1930 excavations. Excavation grid is that used in 1976-1980. From: Browall 1986, fig. 378.

#### References

All quoted references are listed in:

Browall, H., 2011. *Alvastra pålbyggnad. 1909–1930 års utgrävningar*. Kungl. Vitterhets Historie och Antikvitets Akademien (KVHAA), Handlingar, Antikvariska serien 48, Stockholm 2011 (pp. 422ff).