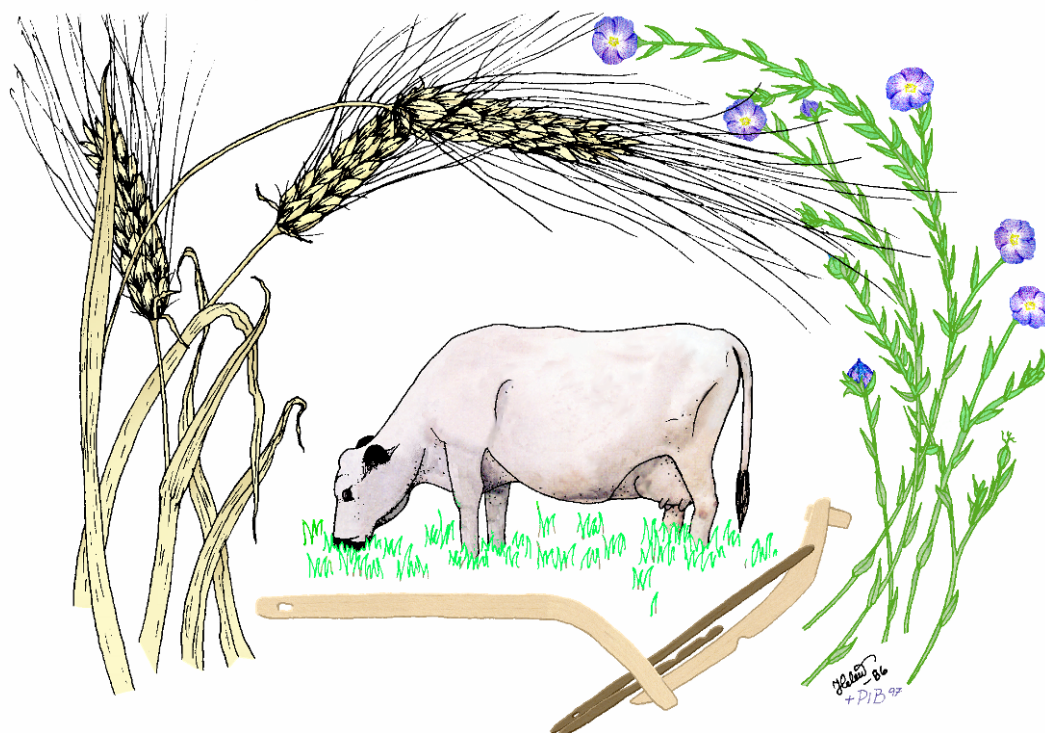


MILJÖARKEOLOGISKA LABORATORIET

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Archaeobotanical analyses of samples from the site of
Tanumshede, L1959:4867, Tanum socken, Tanum
kommun, Bohuslän, Sverige

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INSTITUTIONEN FÖR IDÉ- OCH SAMHÄLLSSTUDIER

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Sample information

Analysis type: Macrofossil analysis of unfloated samples

Number of samples: 6 macrofossil samples

Introduction

Macrofossil samples from the site of Tanumshede, L1959:4867, Tanum socken, Tanum kommun, Bohuslän were sent for analyses to the Environmental Archaeology Laboratory (MAL) at Umeå University.

The samples come from an archaeological site that was investigated in 2020. Samples from the site have been analyzed during the preliminary investigation and investigation stages (Östman et al. 2020; Hristov et al. 2021). The current samples come from different contexts. Two of them are taken from previously studied pit (A6) in the northern part of the investigation area – one from the secondary filling (1:3) and one from the layer where cereals were found (3:3). The main question here is to compare the two samples. Samples from a pit/cooking pit (A51) and a posthole (A61) close to feature A6 were taken to check for remains from cultivation activities and to see if there is any relation between the features.

In the southern part of the investigation area two samples were analysed. A sample from a cultural layer (A19) next to a pit from FU (FU12) that contained grains was taken to trace cultivation activities. Another samples comes from a cultural layer (A17) close to a hearth (FU3) from the Bronze Age found during the preliminary investigations. Its analysis could indicate cultivation and other activities from that period.

The analyses of the samples are done under the framework of the research project Kulturmark.

The sample was sent by Stig Swedberg, Kulturlandskapet.

Materials and Methods

Archaeobotanical analysis

Before the analysis the samples were stored in a drying room (+30°) until the moisture has disappeared. Afterwards they were floated following the standard procedure (Pearsall 2016). Sieves with meshes of 2 mm and 0,5 mm were used. The sample volume before floatation was between 1 and 2 liter and after it – between 20 and 50 ml. The sieved material was sorted and identified under stereomicroscope. The results from the analyses are presented in Table 1. The amount of woody charcoal was estimated as relative proportion of the floated sample volume as follows: x = up to 25%, xx = up to 50%, xxx = up to 75%, xxxx = up to 100%.

The determination of plant species was done using reference literature for seeds (Jacomet 2006; Cappers et al. 2012; Sabato & Peña-Chocarro 2021) as well as the laboratory reference collections. The names of the identified plant taxa are given according to the Nordens flora (Mossberg and Stenberg 2018). Swedish names of the identified plants are included in Table 1. The analysis of the samples was performed by Ivanka Hristova and Sofi Östman.

Results

The results from the analysis are presented in Table 1.

25_0067_0001, Prov 22 (1:3), A6, pit

The sample volume before floatation was 2 litres and after it – 20 ml. The floated sample contained about 25% of charred material, mainly charcoal fragments. The sample contained whole and fragmented grains and about 150 rachis fragments of hulled barley (*Hordeum vulgare* var. *vulgare*). Additionally, 6 awn fragments from Poaceae were selected, which couldn't be identified further but they most likely come from barley. Only single numbers of seeds/fruits of fat-hen (*Chenopodium album*) and starwort (*Stellaria* sp.) were present in the samples.

25_0067_0002, Prov 22 (3:3), A6, pit

The sample volume before floatation was 2 litres and after it – 50 ml. About half of the sample content after floatation consisted of charred material. The sample comprised huge amounts of whole and fragmented grains and rachis fragments of hulled barley (*Hordeum vulgare* var. *vulgare*). Additionally, 18 awn fragments were selected, which most probably come from barley. Small amounts of arable weeds were also found in the samples such as fat-hen (*Chenopodium album*), *Bromus* sp. and chickweed (*Stellaria media*).

25_0067_0003, Prov 104, A17, cultural layer

The sample volume before floatation was 1,5 litres and after floatation it was 50 ml. The sample after floatation consisted almost entirely of charcoal fragments. No other botanical material was found in the sample.

25_0067_0004, Prov 44, A19, cultural layer

The sample volume before floatation was 1 litre and after floatation it was 20 ml. Only about 25% of the sample volume after floatation was presented of charred material, which consisted entirely of charcoal fragments. The rest of the sample was modern vegetative parts and sand.

25_0067_0005, Prov 50, A61, posthole

The sample volume before floatation was 1,5 litres and after floatation it was 50 ml. The sample after floatation consisted almost entirely of charcoal fragments. Apart from charcoal, no other botanical remains were found.

25_0067_0006, Prov 53, A51, pit/cooking pit

The sample volume before floatation was 1 litre and after floatation it was 25 ml. Very few charcoal fragments were registered in the sample. The rest was mainly sand.

Discussion and Conclusions

A total of six archaeobotanical samples were analysed, four of which totally lacking macrofossil remains different from charcoal fragments. The other two samples, both from feature A6 are rich in botanical remains, and more specifically grains and rachis fragments of barley. Comparatively few remains of arable wheat were found in the two samples, most of which of fat-hen (*Chenopodium album*). This shows that some initial processing of the crops has been performed before the deposition but probably the final cleaning was not performed. In the previous studies of the same feature (Östman et al. 2020) much more arable weeds were present in the sample but again fat-hen was the dominant. From the analyses performed we could assume that the studied pit represents some kind of storage facility of hulled barley, where the crops were stored after the initial processing but before the final cleaning. The final cleaning could have been performed right before consumption. Furthermore, this finding gives evidence for the cultivation activities in the study area, where hulled barley was the staple crop.

The amount of charcoal fragments in the samples differs from just few fragments to almost entire floated sample volume represented of charcoal, which could point to diverse burning activities in the archaeological contexts. The most intensive burning was registered in features A 19 (MAL nr 25_0067_0004, Prov 44, cultural layer) and A 61 (25_0067_0005, Prov 50, posthole). Although no macrofossil remains of seeds/fruits were found some of the samples the study of charcoal fragments could contribute to our understanding of the wood vegetation and its use during the study period.

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Appendix

Table 1. Archaeobotanical results from the studied site.

Plant name	MAL number	24_0067_0001	24_0067_0002	24_0067_0003	24_0067_0004	24_0067_0005	24_0067_0006
	Prov nr	P22(1:3)	P22(3:3)	P104	P44	P50	P53
	Anläggning nr	A6	A6	A17	A19	A61	A51
Cultivated plants	Type of remain						
<i>Hordeum vulgare</i> var. <i>vulgare</i> (skalkorn/ hulled barley)	seed/fruit	27	126				
<i>Hordeum vulgare</i> var. <i>vulgare</i> (skalkorn/ hulled barley)	seed/fruit (fragm.)	24	47				
<i>Hordeum vulgare</i> var. <i>vulgare</i> (skalkorn/ hulled barley)	rachis	146	460				
Poaceae (cf. <i>Hordeum</i>)	awn fragments	6	18				
Weeds and ruderals							
<i>Bromus</i> sp.	seed/fruit		4				
<i>Chenopodium album</i> (svinmålla/fat-hen)	seed/fruit	4	17				
<i>Stellaria</i> sp. (stjärnblommor/starwort)	seed/fruit	1					
<i>Stellaria media</i> (våtarv/chickweed)	seed/fruit		1				
charcoal		x	xx	xxxx	x	xxxx	x
Sample volume before floatation (L)		2	2	1,5	1	1,5	1
Sample volume after floatation (ml)		20	50	50	20	50	25



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