Archaeobotanical analysis of samples from the site Tuve kyrka, Tuve 91:1, L1967:8206, Tuve Socken, Västergötland

Kristian Hristov
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Sample information
Analysis type: Macrofossil analysis of unfloated samples.
Number of samples: 8 macrofossil samples.

Introduction
Eight samples from the site Tuve kyrka L1967:8206 were analysed at the Environmental
Archaeological lab, Umeå university. Three of them belong to the Late Bronze Age period of
the site and five to the Early Iron Age.
Late Bronze Age samples come from a posthole, a hearth and a wall ditch. Early Iron Age
samples come from similar structures: a hearth, a posthole, a hearth pit, a cooking pit, and a
spot in the cultural layer.
The aim of the analysis is to reveal the plants used for food preparation, which plants were
important for the site, as well as to give more information about other aspects of household
activities.

The samples were provided by Ulf Ragnesten, Göteborgs stadsmuseum.

Materials and Methods
Before the analysis the samples were stored in a drying room (+30°) until the moisture has
disappeared. Afterwards they were floated using sieve meshes of 2 mm and 0,5 mm. The
samples volume before floatation was between 0,6 and 1,2 liters and after it between 5 to 40
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 = about 100%. Presence of modern seeds in the samples is marked with “x”.
The determination of plant species was done using reference literature for seeds (Cappers et al.
2012) as well as the laboratory reference collections. The names of the identified plants are
given according to the Nordens flora (Mossberg and Stenberg 2018) and the Virtual Flora
(Anderberg and Anderberg, u.d.). Swedish names of the identified plants are included in Table
1.
The analysis of the samples was performed by Kristian Hristov.

Results
Eight samples were analysed for macro remains. The amount of charcoals differs a lot in the
different samples from less than 25% to almost 100%. All samples contained modern vegetative
parts such as stems and roots and in some of them modern seeds were detected. Only four
samples contained archaeobotanical remains (21_0002_1/A12, 21_0002_2/A22, 21_0002_4/A1032, 21_0002_6/A5001). The result from the analysis is presented in Table 1.

Sample 21_0002_0001/ A12, hearth
The sample volume before floatation was 1 litres and after floatation – 40 ml. The amount of charcoals was estimated to less than 25% from the floated sample volume. The rest of the sample was presented by modern vegetative parts such as roots and stems. The only preserved botanical remains were one unidentifiable cereal fragment and few seeds of fat-hen (*Chenopodium album*).

Sample 21_0002_0002/ A22, posthole
The sample volume before floatation was 1,2 litres and after flotation it was 5 ml. The sample comprised entirely charcoals. Only one seeds of fat-hen (*Chenopodium album*) was identified.

Sample 21_0002_0003/ A65:1, wall ditch
The sample volume before floatation was 1,2 litres and after floatation it was 5 ml. The amount of charcoals in the sample was about 75% of the floated sample volume. No other plant remains were preserved in the sample. Some modern seeds were noticed.

Sample 21_0002_0004/ A1032, hearth
The sample volume before floatation was 0,6 litres and after floatation – 20 ml. The amount of charcoals was estimated to about 25% of the floated sample volume. The rest of the floated sample comprised mainly modern stems, roots, and seeds. Most of the modern seeds were identified as fat-hen (*Chenopodium album*). The archaeobotanical remains were presented by two seeds of corn spurrey (*Spergula arvensis*).

Sample 21_0002_0005/ A1043, cultural layer
The sample volume before floatation was 0,8 litres and after flotation – 10 ml. The floated sample consisted almost entirely of charcoals. Few modern roots and seeds were also noticed. The modern seeds were identified as fat-hen (*Chenopodium album*). No plant macro remains were found in the sample.

Sample 21_0002_0006/ A5001, cooking pit
The sample volume before floatation was 0,7 litres and after flotation – 5 ml. The amount of charcoals was almost 100% of the floated sample volume. The only preserved botanical remain was a grain of naked barley (*Hordeum vulgare var nudum*).

Sample 21_0002_0007/ A5032, posthole
The sample volume before floatation was 1,2 litres and after flotation – 10 ml. The charcoals took about half of the floated sample volume. The rest of the sample comprised mainly modern stems, roots, and seeds. Most of the modern seeds were fat-hen (*Chenopodium album*). No archaeobotanical remains were identified in the sample.
Sample 21_0002_0008/ A5036, hearth pit
The sample volume before floatation was 1 litres and after flotation – 20 ml. The floated sample consisted almost entirely of charcoals. Few modern roots and seeds were also noticed. No plant macro remains were registered in the sample. A piece of flint was found in the sample.

Discussion and Conclusions
Some of the samples comprised almost entirely of charcoals, which infers intensive fire or high level of burning activities in those contexts or in their close proximity. The poor preservation of other botanical material does not allow any further conclusions concerning diet; plants used at the site and their variation throughout the studied periods. The single find of naked barley \((Hordeum vulgare var nudum)\) in the cooking pit (A5001) confirms the use of this plant and its probable cultivation but as its amount is very scarce, the interpretation is uncertain. The other plant remains are few seeds of fat-hen \((Chenopodium album\) and corn spurrey \((Spergula arvensis\)). Both of them are common weeds for the region.

References

Figures and tables

Table 1. Archaeobotanical results from the studied sites.

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<tr>
<th>MAL nr</th>
<th>21_0002_0001</th>
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<td>A1043</td>
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<td>VÅGRÄNNA</td>
<td>HARD</td>
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<td>20</td>
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<td>5</td>
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