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ON THE SURFACE – AN EXPERIMENT ON HOW TO DEAL WITH THE REMAINS OF THE COPPER AGE SURFACE LEVEL OF THE CHAM CULTURE SETTLEMENT IN STEYREGG-WINDEGG, AUSTRIA.

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The site - introduction

In Austria information concerning housing structures of the late 4th and early 3rd millennium BC is rather sparse, probably because many architectural structures of the time were not built deeply into the ground.

This is true even for sites with a partially preserved former surface horizon. One such site is the Cham Culture settlement of Steyregg-Windegg (ca. 3000 BC), for which a detailed analysis of the find distribution was carried out as an experiment to gain a deeper understanding of its layout.

Fig. 1. Stone foundations, most likely substructures of cupola ovens.

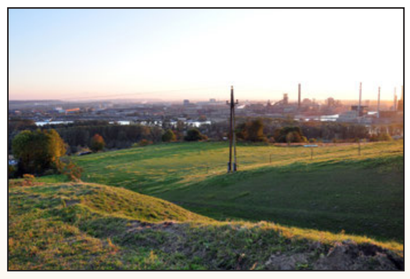


Fig. 3. The Cham Culture site of Steyregg-Windegg.

A Copper Age surface layer?

The Copper Age surface level of Steyregg-Windegg is at least partially preserved. This is evidenced by a general scatter of finds, by stone foundations probably belonging to cupola ovens, and by shallow, rather undefined pits, which seem to be typical for settlements in this state of preservation (e.g. Gohlisch 2005, 22). These pits probably came into being through a combination of animal/human activities and sedimentological effects in the vicinity of the settlement.

A catastrophic event?

A high proportion of unbroken axe-heads (≥ 90 %) and concentrations of relatively well preserved pottery point towards a catastrophic event resulting in a deposition of finds within the surface layer. The uncertainty, to what extent these finds were left in their primary position, affects the entire analysis. There are indications that some material was moved, maybe as part of a cleanup/rebuilding-operation. Especially the interpretation of a knife with a charred handle found inside a posthole remains unclear.

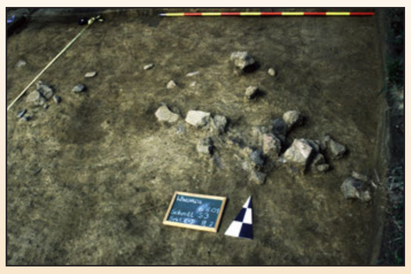


Fig. 2. Shallow pits, probably not intentionally created, sometimes levelled with rubble stone.

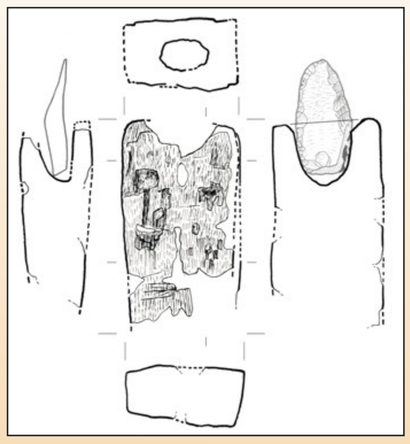
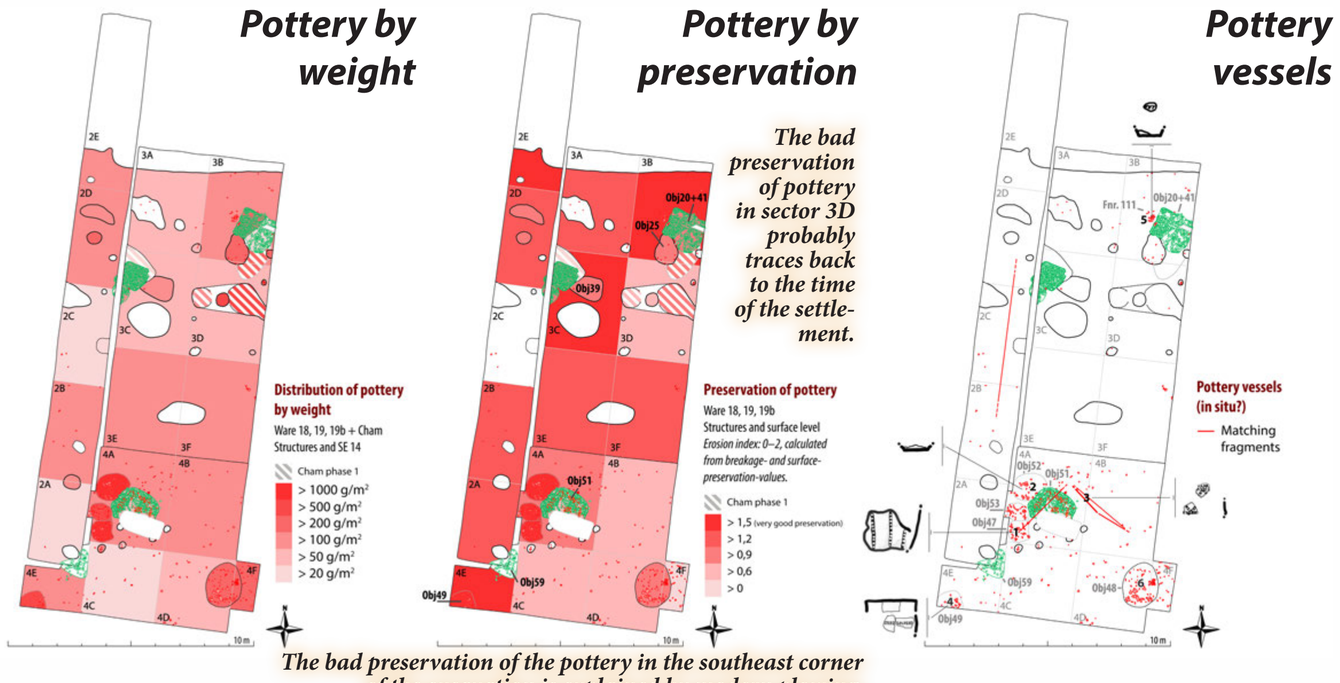


Fig. 4. Hornstone knife with remains of a charred wooden handle.

Find distribution maps

Fig. 5. Selected find distribution maps of the Copper Age settlement.



Evaluation

Find distribution maps were used as a checking factor to test a site reconstruction hypothesis within this case study concerning a Copper Age settlement. The state of preservation of the pottery fragments within the old surface level proved to be of special value for this work.

It would seem reasonable to use a similar approach on other prehistoric sites with a preserved surface level. A strict allocation of the finds to a detailed sector grid (1m²) and an incorporated wet-sieving-strategy would be advisable for a conclusive outcome.

To get a plausible overall picture, the resulting data stream has to be pooled with other sources of information, stemming e.g. from stratigraphical analyses, soil chemistry, daub studies, experimental archaeology, etc.

Data acquisition

The compilation of the raw data for the distribution maps was simplified with semi-automatic statistical calculations. The type, weight, preservation and dating of pottery is specified in diagrams, which correspond to flexibly grouped entries in the finds database.

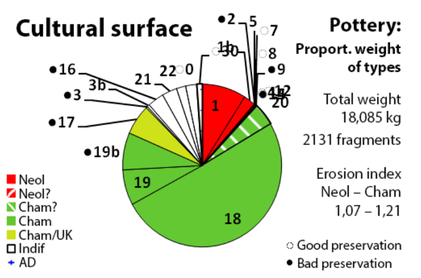


Fig. 6. Semi-automatic created diagrams detailing type, weight, preservation and dating of pottery for all layers and find contexts.

Erosion index

- *A numerical statement regarding the state of preservation of pottery.*
- *Calculated from weight, breakage- and fracture surface preservation-values (Maurer 2013, 154).*

A filtered record

The substance of the Steyregg-Windegg distribution maps is affected by many different processes. The degree of preservation of the surface level, the not too extensive chronostratigraphical depth of the site and the spatial resolution and accuracy of the excavation prove to have a particularly high impact unto the diagnostic quality of the maps.

Selected filters and problems

- *Difficult soil conditions on site and poor feature visibility.*
- *Multiphase site (Neolithic, Copper Age, Urnfield culture). Older, displaced material in stratigraphically younger layers.*
- *Chronological depth of the Cham culture settlement (probably several years) reduced onto a single surface layer. The chronological relationship of many finds and features is speculative guesswork.*
- *A catastrophic deposition event is indicated, but the finds are not undisturbed (uncertainty concerning use vs. abandonment).*
- *Method not planned before definition of the excavation strategy (coarse sector-divisions, no systematic wet sieving - number of small finds influenced by external parameters like personal experience and dilligence, weather conditions, etc).*
- *Sample size (dimension of the excavation, number of artefacts).*
- *Post-excavation workflow (restauration, data preparation, analysis, interpretation) and presentation.*

Interpretation

The distribution maps show an occurrence of eroded (trampled?) pottery and a number of unbroken stone tools in sector 3D. This could signal the existence of an activity zone in the front area of a building. Sharp-edged pieces of chipped stone in sectors 3A and 3F could be seen as out-of-house waste.

The fireplace-foundations and the pottery concentrations are most likely positioned inside a building and in alignment to its walls. On this basis, two houses can be reconstructed next to each other in the northern part of the excavated area. This picture is coherent with the interpretation of the distribution maps.

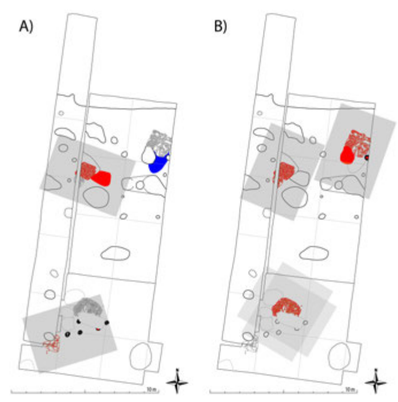


Fig. 7. One of many possible scenarios of intra-site development (two-phased).

The remains of the southern area – which is damaged by modern agriculture and is probably polyphase – are less easy to comprehend and would fit into many different scenarios of intra-site settlement dynamics. Generally speaking, the settlement doesn't look very strictly structured and the size of the houses can't be reliably estimated.

References

Gohlisch, T.H. (2005). Die Grabungsbefunde und die Keramik der endneolithischen Siedlung von Dietfurt a. d. Altmühl, Lkr. Neumarkt i. d. OPf. Archäologie am Main-Donau-Kanal 17. Rahden/Westf.: Leidorf.

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