

**Name of master thesis:** Phytolith analysis at the Neolithic tell Vrbjanska Čuka in Pelagonia (North Macedonia)

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Master thesis of K. Budilová is divided into five main chapters, followed by comprehensive References and Appendices. The work brings first results of phytolith analysis in North Macedonia. The main objectives of the work include: 1) To present new phytolith data from Neolithic site of Vrbjanska Čuka and investigate site-formation processes; 2) to provide data for plant management and to discover differences in spatial organization of activities related to food management; 3) to provide information on the environment around the settlement.

In the first chapter, in addition to presenting the main objectives, the author summarized the archaeological background and environmental settings of the site. The study of phytoliths together with the study of starch grains and pollen provides important information that cannot be replaced by other sources. Fortunately, in recent decades they have become part of archaeological research more often. The author summarized a lot of works from the given geographical area as well as from the chronological period of the Neolithic (and previous periods). Archaeologically, this is a very interesting area, where the first domestication attributes are recorded since the end of the seventh millennium BC. The location itself, a settlement mound with 1.5 m of the Neolithic stratigraphy, is very promising for the study of the given period. The settlement consists of rectangular houses of wattle and daub construction, surrounded by a ditch. Macrobotanical analyses to date have yielded information on many (quite common) cultivated and wild plants, information is available on domesticated and wild animals, including consumed river mussels. Analyses of pottery sherds for lipid analysis supplemented information on food preparation.

According to the information in the second chapter, summarizing materials and methods, the main subject of the work is a total of ten soil samples, taken in 2016-2018 from several different contexts around the site. This includes several daub samples, pit infill, and deposition of the grinding stones. Daub samples come from architectural remains and from a kiln. The author described plant reference collection, sample preparation process, and methods of analysis

(including SW for charts and statistical analysis). The third chapter is devoted to Results. The results of comparisons on graphs of various types were explained step by step.

In the chapter dedicated to the discussion of the results, the partial findings are analyzed step by step. For example, the place of cereal processing could not be located more precisely based on the analysis of phytoliths. The low amount of cereal residues around the grinding stones was also somewhat surprising. The concentration of specific morphotypes associated with fuel and other household waste, as well as storage of twigs as fodder, is interesting. The finding of exploitation of wild grasses is important. The phytolith analysis contribution to the study of architectural techniques is also innovative. Regarding the surrounding natural environment, the findings about open and dry environments in the Neolithic are important.

### **Conclusion:**

For summary, the author gradually deals with all the questions outlined in the introduction. In her work, the author always works with problems that could limit the interpretation potential of partial findings. It also compares the results with other assemblages from neighboring countries. The methodology used is clearly defined and applicable for further research, not only at the location itself.

The work fulfills all the requirements of a master's thesis and I can recommend it for defense without any problems.

Proposal for final mark: excellent

Jaroslav Řídký, in Prague 28 December 2022