

ARCHAEOLOGICAL MICROMORPHOLOGY AT THE LATE NEOLITHIC SITE GORJANI



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INTRODUCTION

Prehistoric settlements, especially when dealing with multilayer sites, make complex microstratigraphic sequences that have been formed from different processes and diverse materials. Particularly suitable method for studying and interpreting archaeological layers of complex origin is soil and sediments micromorphology.

THE SITE

The Late Neolithic Sopot culture site of Kremenjača is located 1 km to the east of the village of Gorjani in Eastern Croatia. The geomagnetic survey revealed a settlement with a complex system of circular ditches covering an area of at least 20 ha.

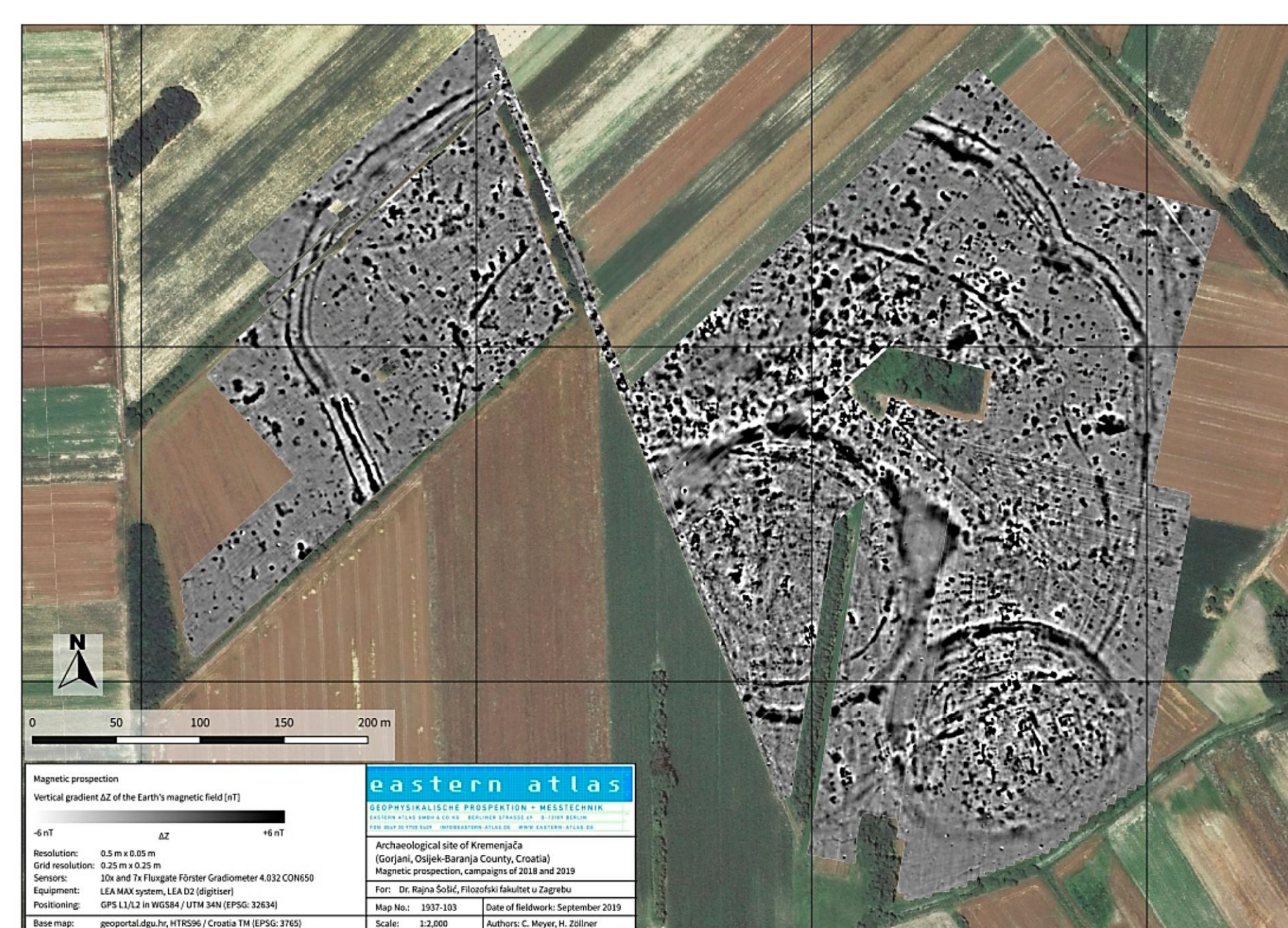


Fig. 1. Results of the geomagnetic survey of the site Gorjani-Kremenjača (Kalafatić, Klindžić, Šiljeg, 2020).

METHODS

Seven undisturbed and oriented samples were collected for preliminary analysis in 2019. Thin sections were analysed with a petrographic microscope in plane-polarized light (PPL) and cross-polarized light (XPL).



Fig. 2. Location of the samples GOR19/5/52-135, GOR19/2/52+SU underlying SU 52, GOR19/4/126.

RESULTS

Four soil samples were collected in sequence in the feature that was originally marked in the field as a possible pit filling, but subsequent micromorphological analysis showed varying degrees of natural soil development on loess.



Fig. 3. Location of the sequence of samples GOR19/1/39, GOR19/6/39.2, GOR19/7/39.3 i GOR19/39-119 in the trench profile (SU 39).

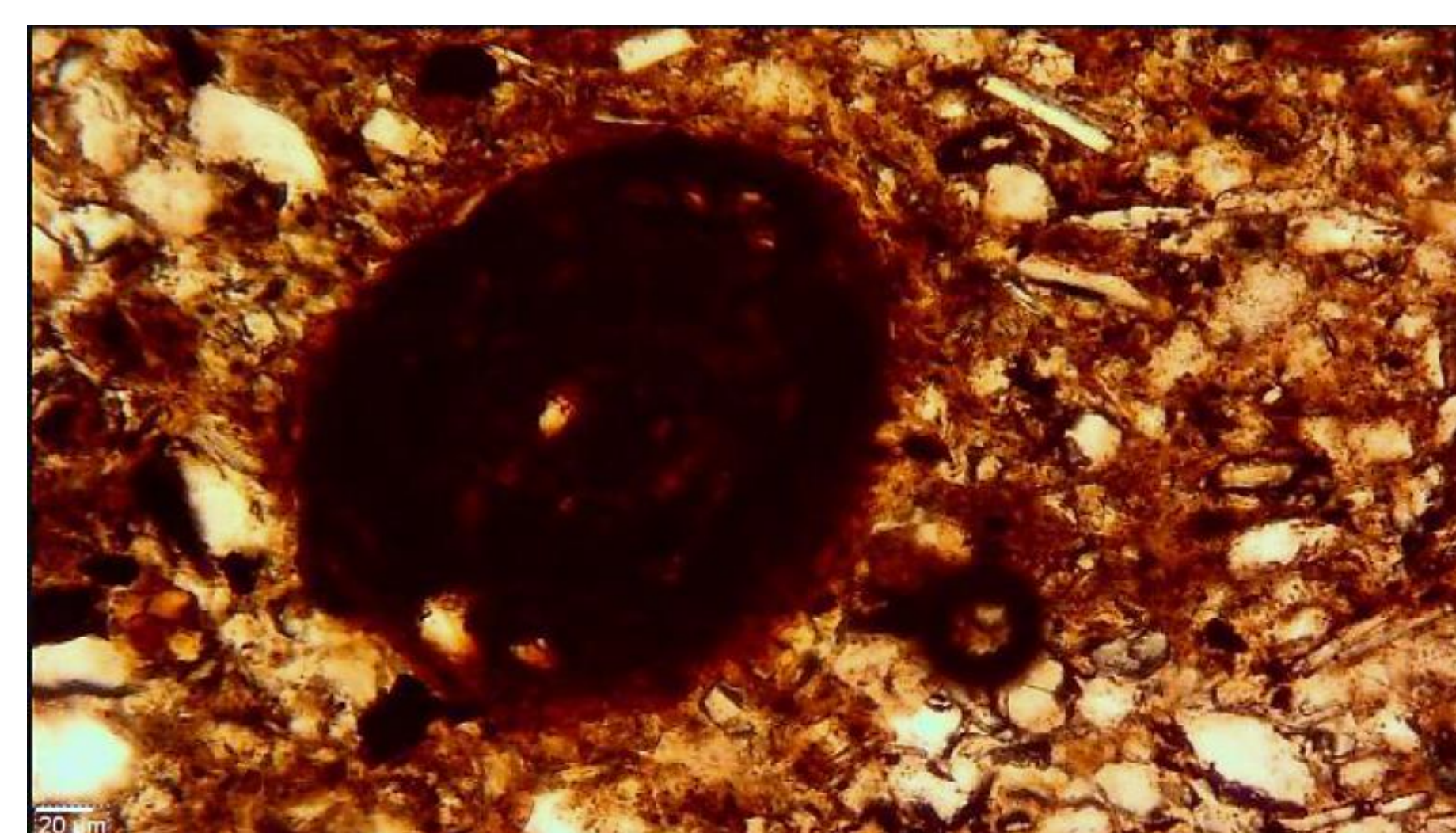


Fig. 4. Fe nodule in loess-like sediment, PPL (SU 39).

Three of the samples indicate anthropogenic input in sediments. Anthropogenic activities are indicated by the presence of ash, phytoliths, organic matter, bones, phosphates and fabric characteristics.

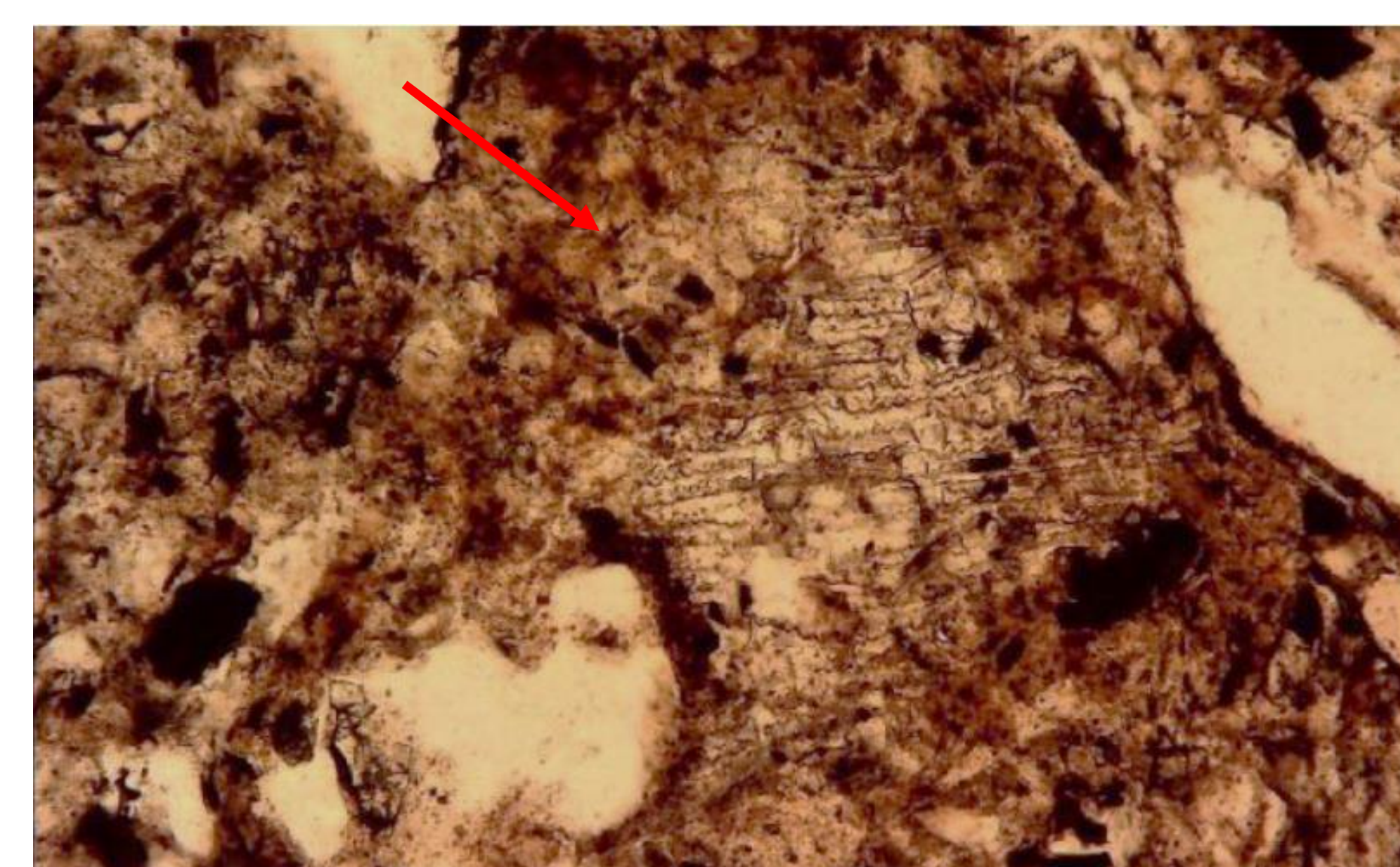


Fig. 5. Silica skeleton of a wheat (*Triticum* sp.) husk, PPL (SU 126).

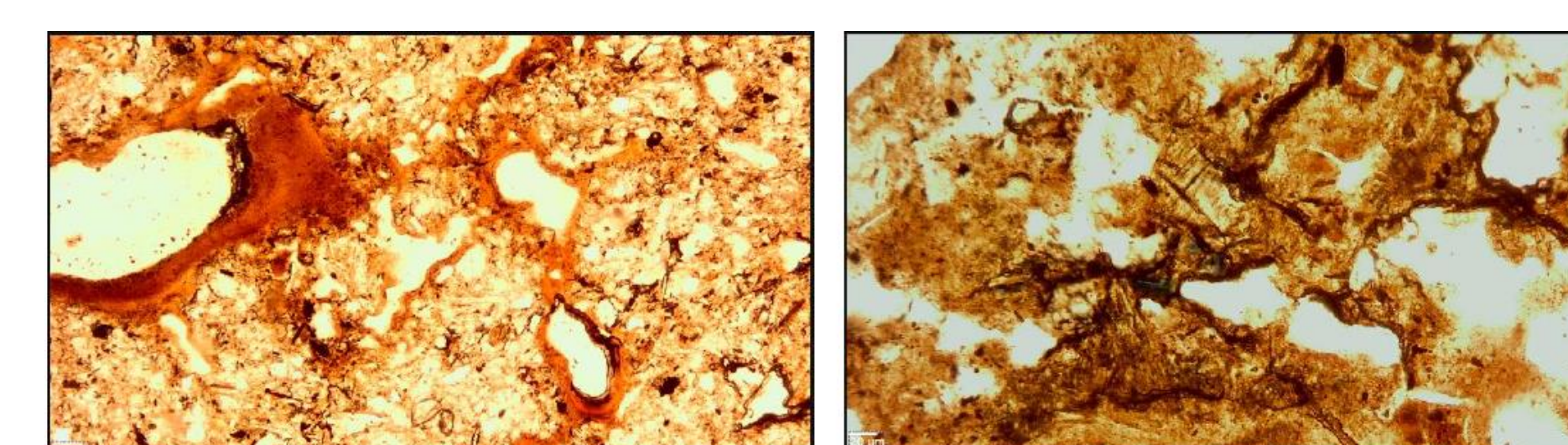


Fig. 6. a) Clay coatings, PPL; b) vivianite, PPL (SU 126).

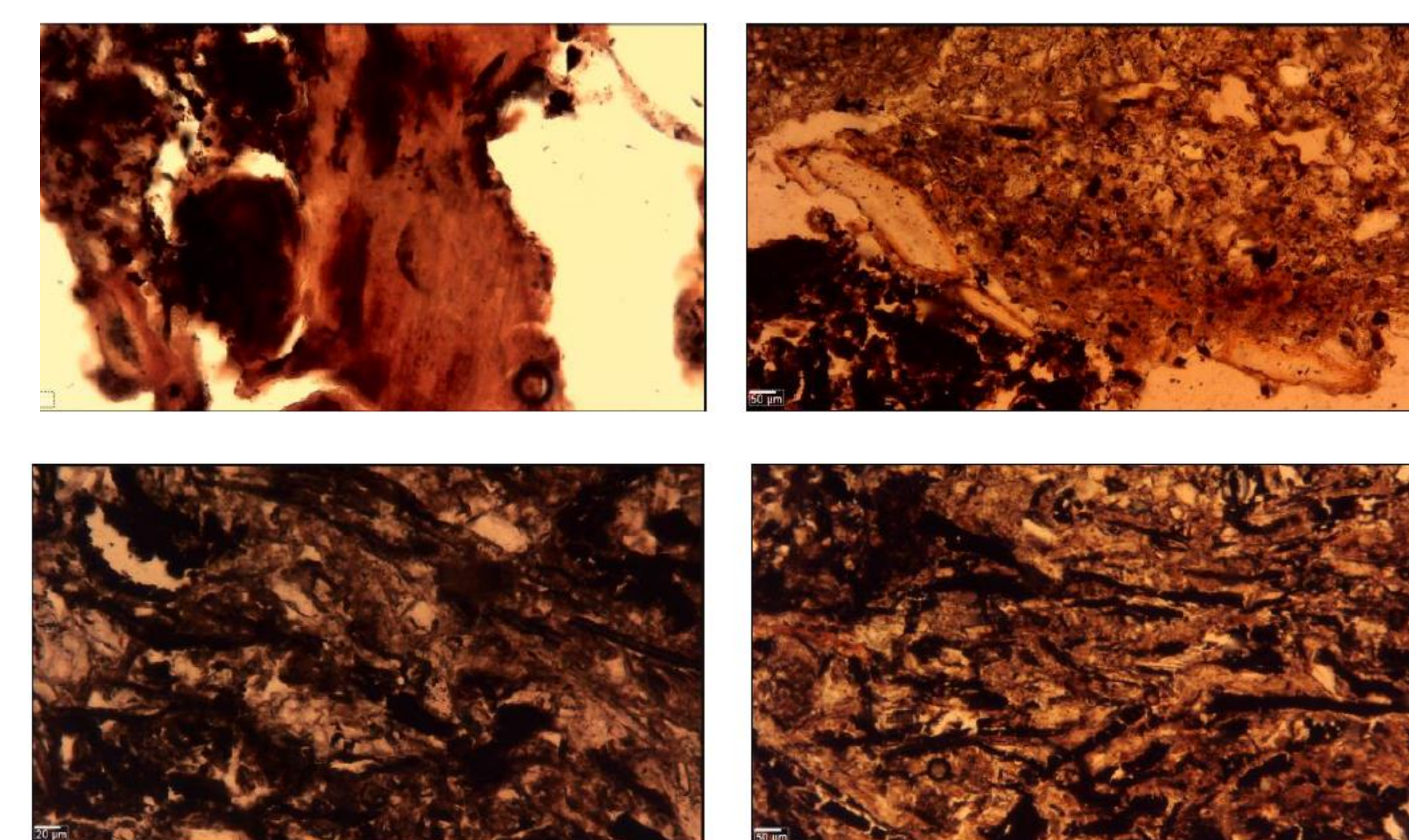


Fig. 7. a, b) Altered bone fragments, PPL; c, d) organic matter parallel to the surface; PPL (SU 135).

CONCLUSION

Sediment and soil micromorphology proved to be useful in elucidating site formation processes. Four soil samples showed natural soil pedogenesis. Three samples indicate anthropogenic sediments connected to settlement activities, both inside houses and in open areas.

REFERENCE Kalafatić, H.; Klindžić, R.Š.; Šiljeg, B. Being Enclosed as a Lifestyle: Complex Neolithic Settlements of Eastern Croatia Re-Evaluated through Aerial and Magnetic Survey. *Geosciences* 2020, 10, 384. <https://doi.org/10.3390/geosciences10100384>