

Economic Landscapes of Roman Istria (ELRI)

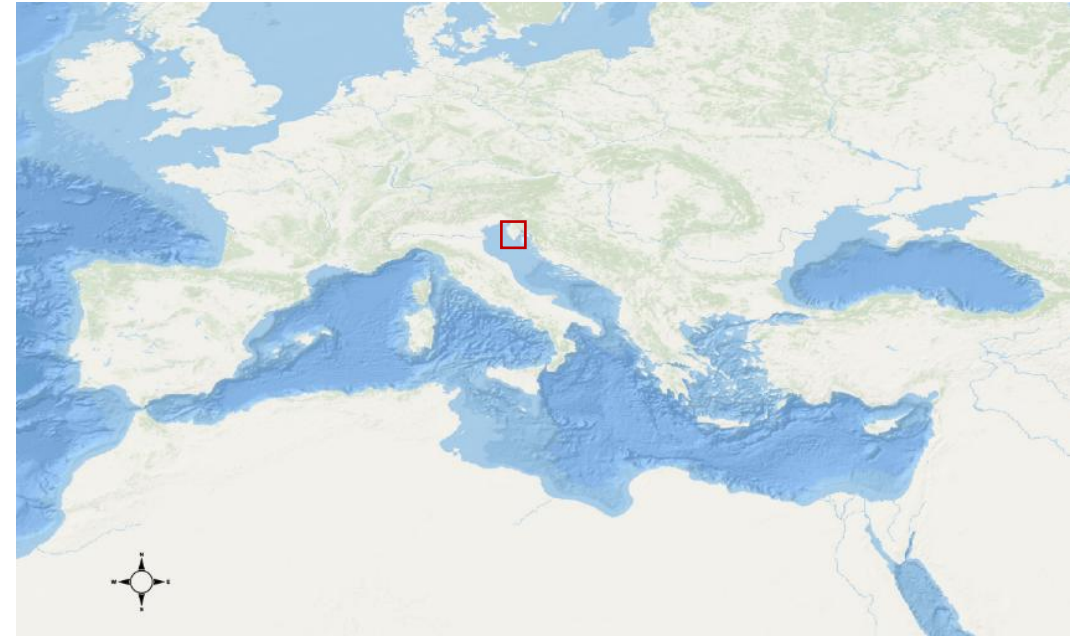
- Davor Bulić, Juraj Dobrila University of Pula (Croatia)
- C. M. Rice, Joukowsky Institute for Archaeology and Ancient History, Brown University (USA)
- Andrew McLean, Barcelona Supercomputing Centre (Spain)

&

- Robert Matijašić - Juraj Dobrila University in Pula (Croatia) (Emeritus) – Project Advisor
- Katarina Gerometta - Juraj Dobrila University in Pula (Croatia) - Landscape and Environment
- Fabian Welc - Cardinal Stefan Wyzinski University in Warsaw, Institute of Archaeology (Poland) – Geophysical Survey
- Ana Konestra – Institute of Archaeology, Zagreb (Croatia) – Ceramics
- Dolores Matika – Archaeobotany

&

- Roman Landscape and settlement dynamics of the Istrian colonial territories project (RoLand), Croatian Science Foundation, PI: Davor Bulić



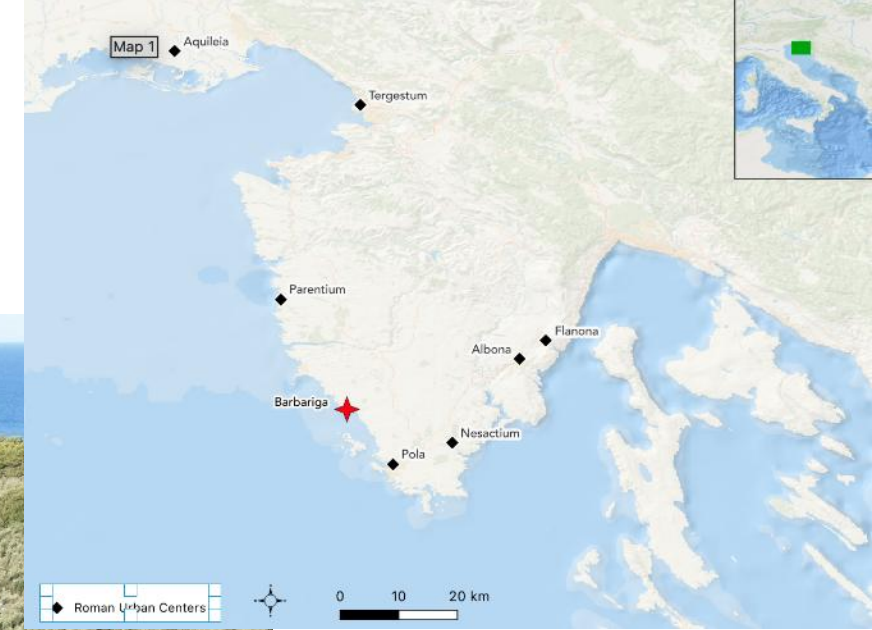
Juraj Dobrila University of Pula



JOUKOWSKY INSTITUTE
FOR ARCHAEOLOGY AND THE ANCIENT WORLD



Barbariga



Rome and Istria

181 BC

Aquileia Founded

178 - 177 BC

Rome / Histrian Wars

177 BC

Istrian Peninsula
conquered by Rome

54 BC

Colonia Iulia Tergeste

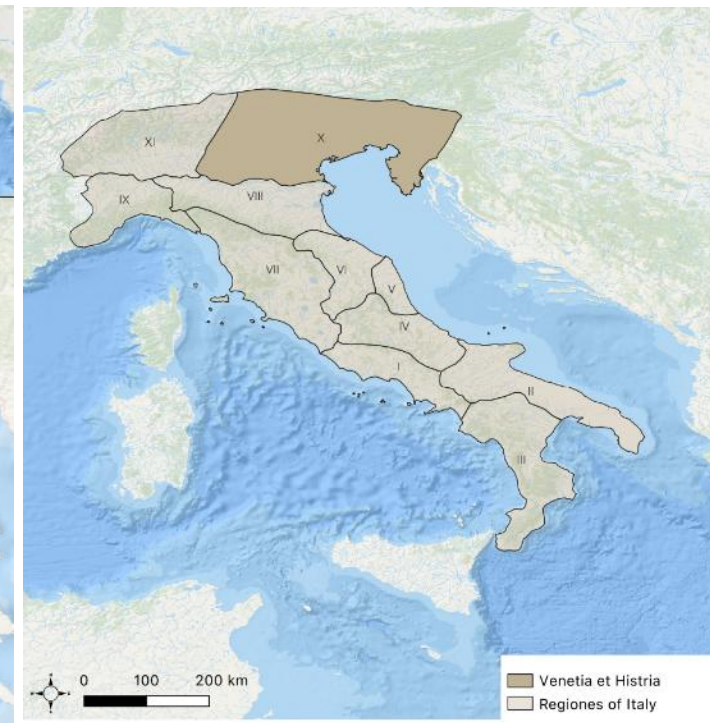
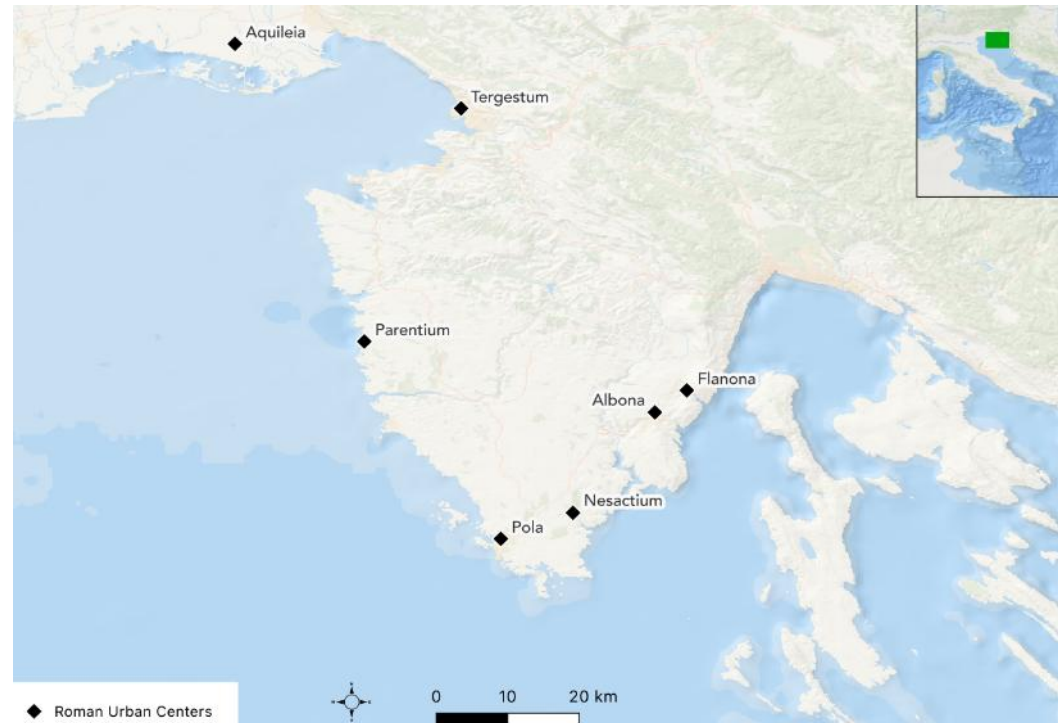
45 BC

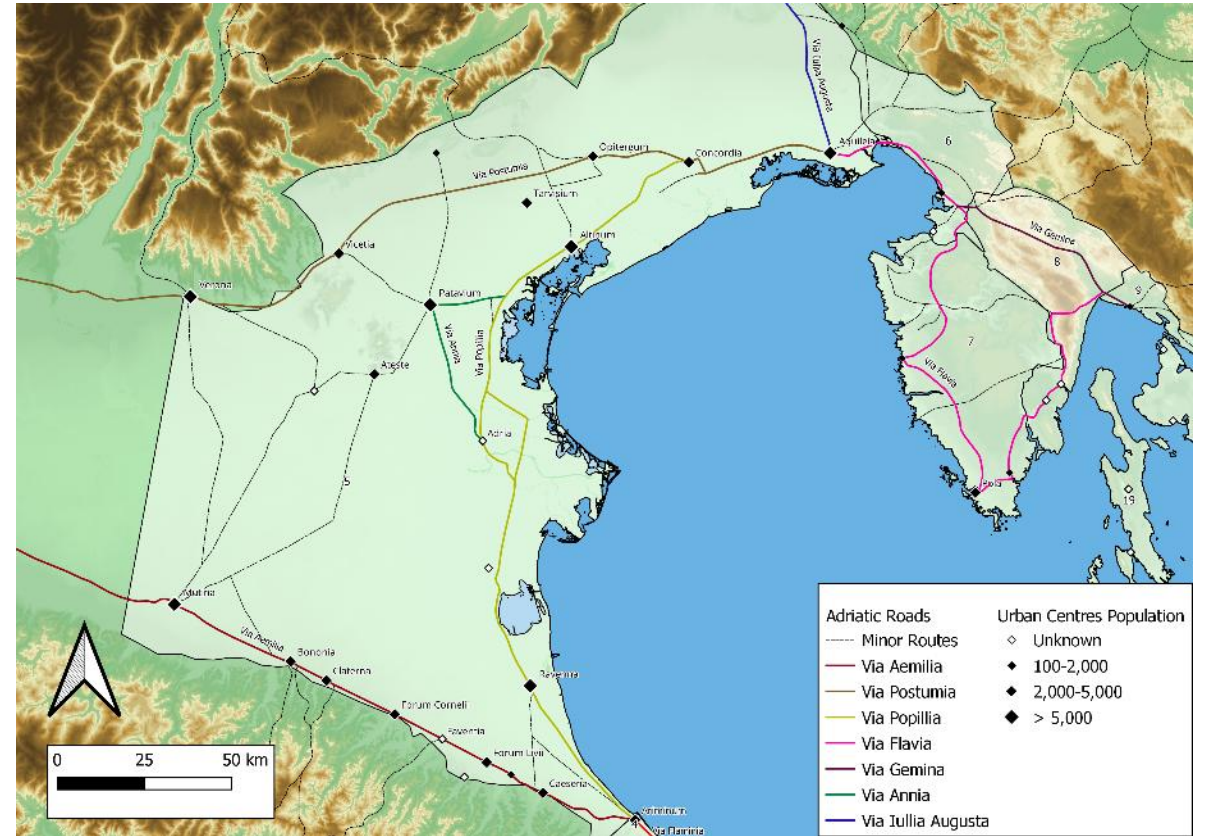
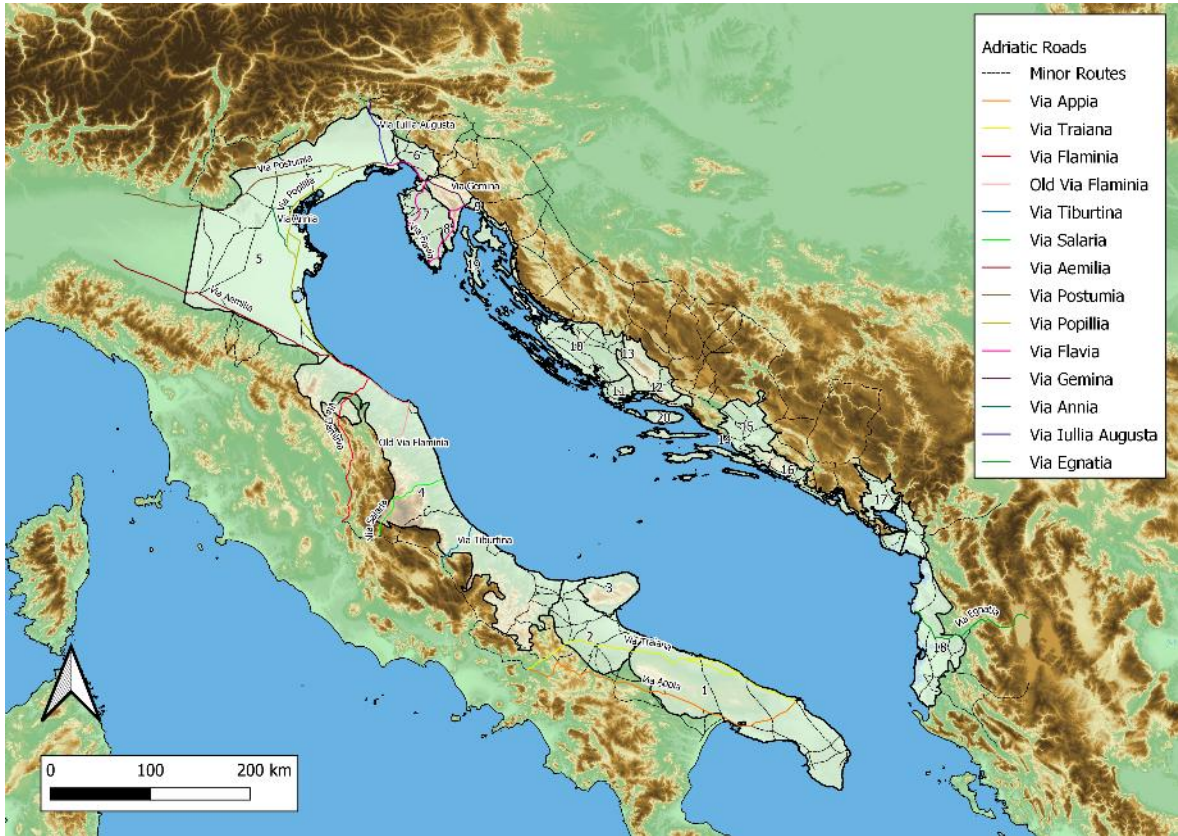
Colonia Iulia Parentium

Colonia Iulia Pola

45 BC

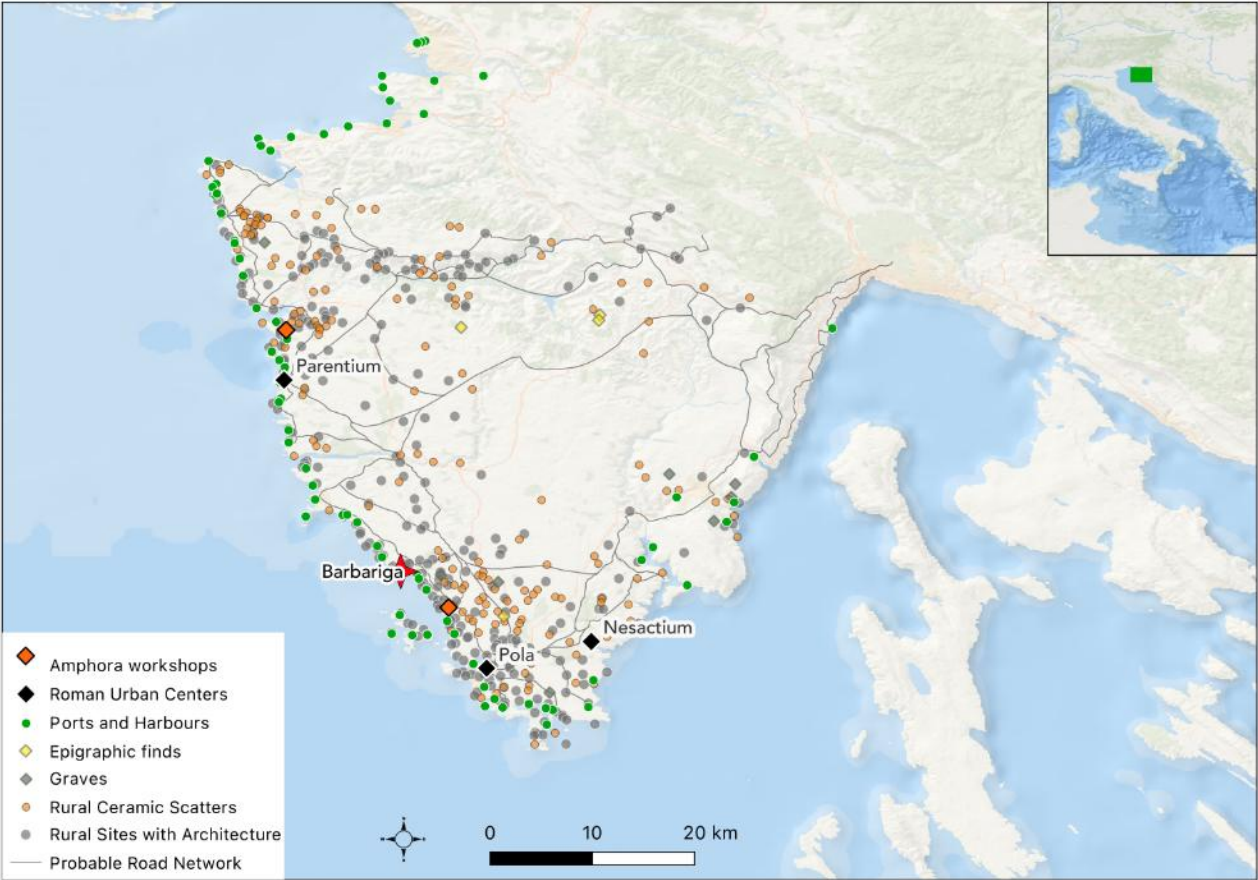
Incorporated into *Regio X*,
Venetia et Histria



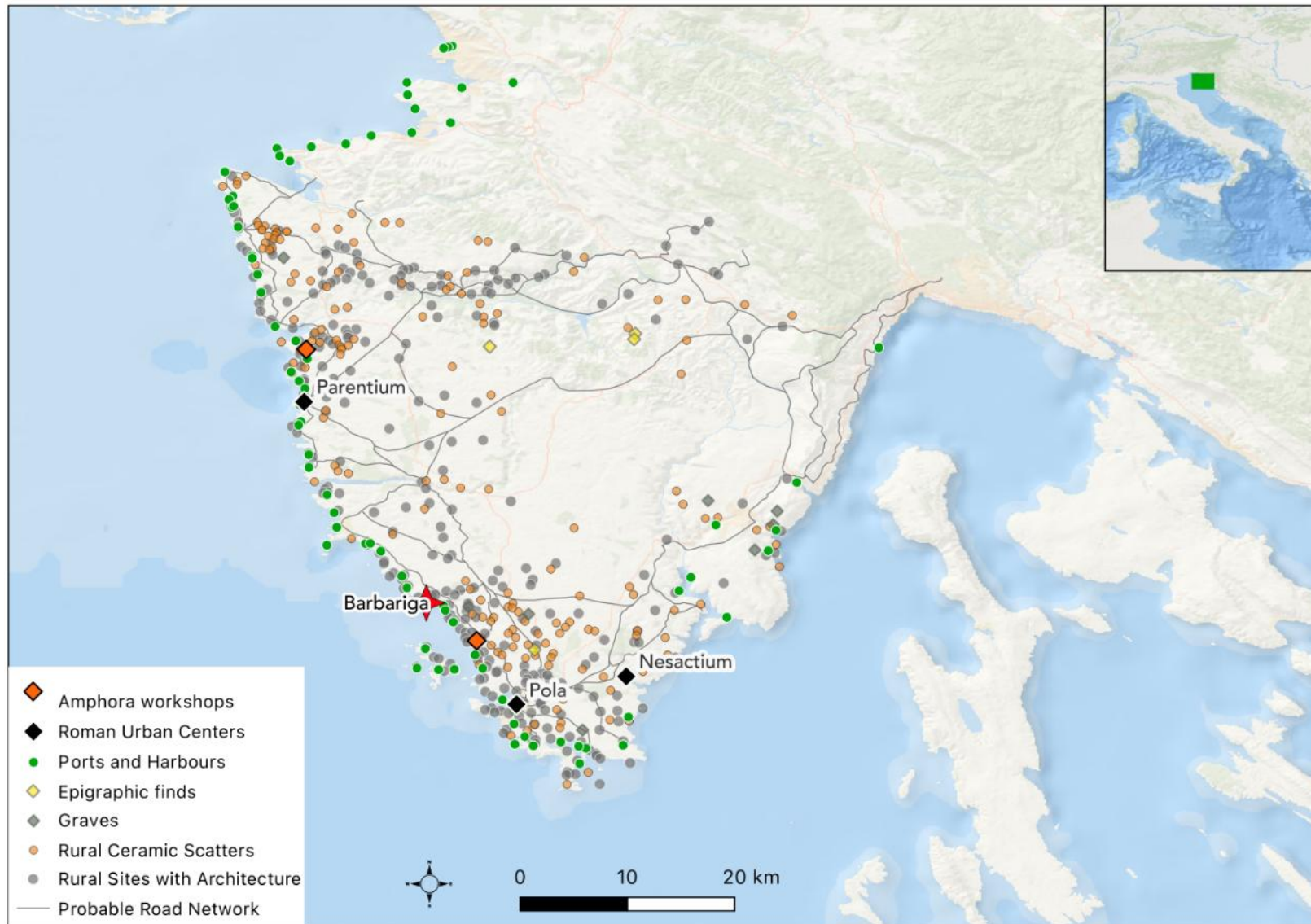


McLean, A. (2022). "A Connecting Sea? Modelling Economic Cohesion in the Roman Adriatic", PhD, University of Edinburgh, Figure 5.1: Road network of the Adriatic; Figure 5.12: The road network of the Northern Adriatic.

Colonia Iulia Pola (modern Pula)

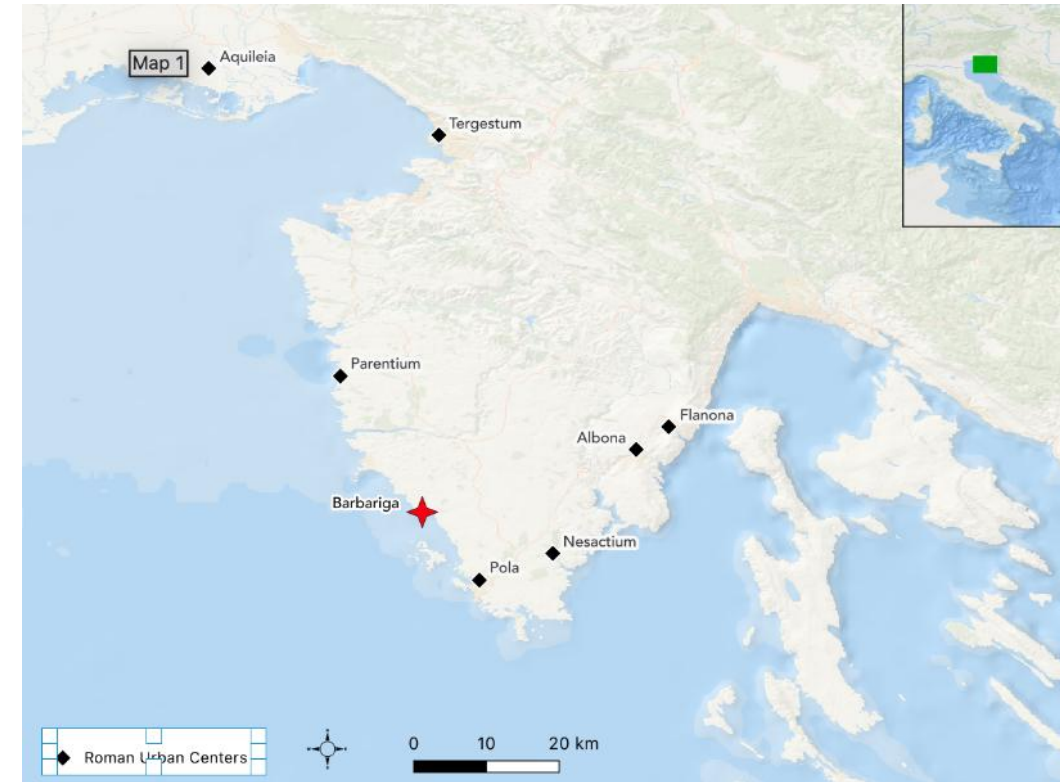


Roman Istria

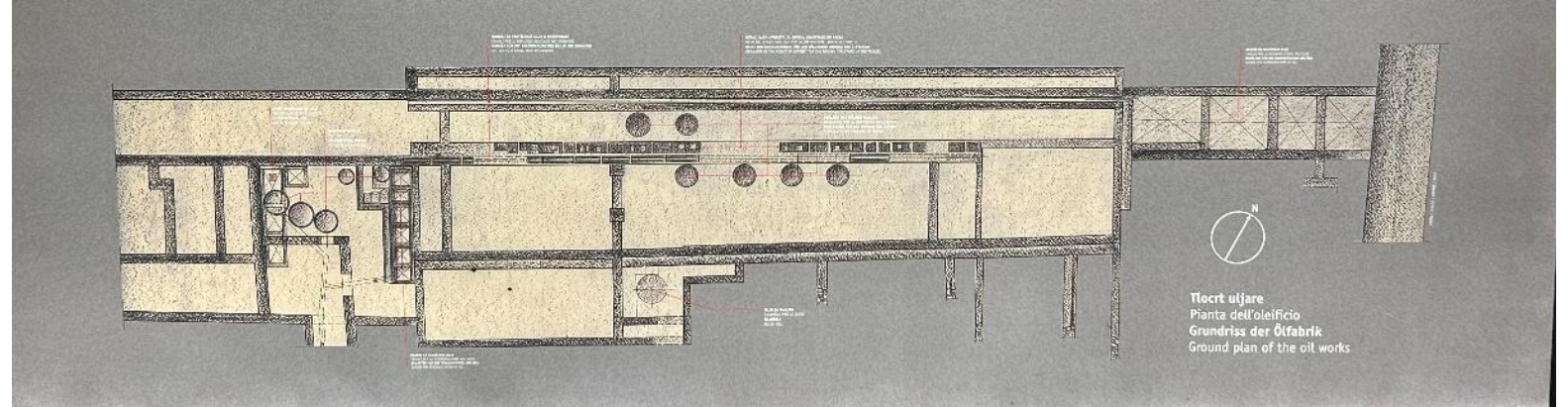


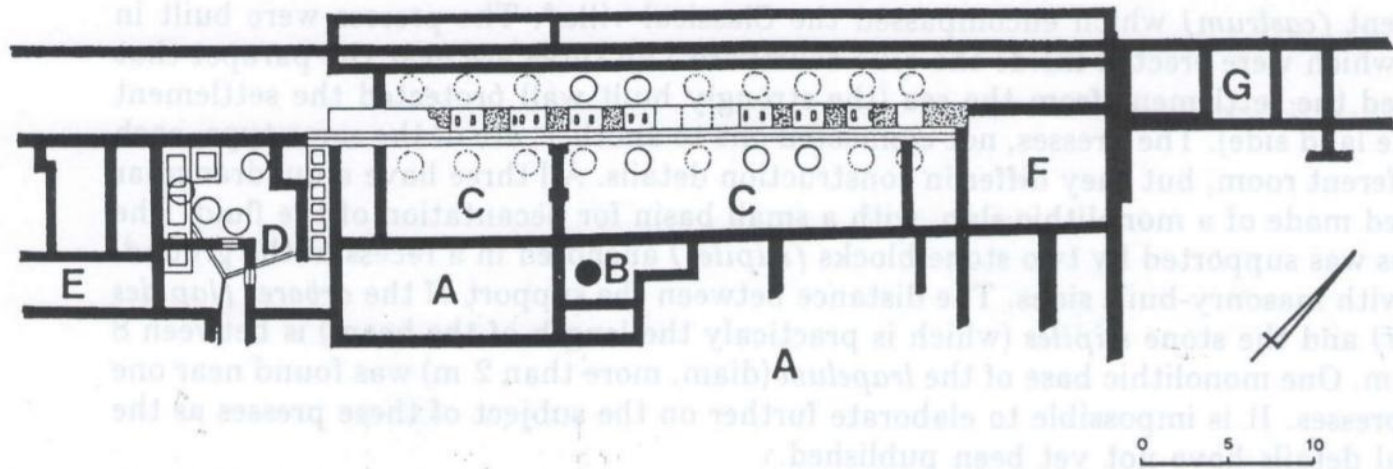
- Bulić, D. (2014). Rimska ruralna arhitektura Istre u kontekstu ekonomske i socijalne povijesti, University of Zadar, PhD dissertation.
- Bulić, D. and Matijašić, R. (2014). 'L'architettura rurale romana dell'agro Polese in luce delle indagini recenti', *Studia Universitatis Hereditatis* 1-2: 119-135.
- Matijašić, R. (1998). "Gospodarstvo antičke Istre. Arheološki ostaci kao izvori za poznavanje društveno-gospodarskih odnosa u Istri u antici (I. st.pr. Kr. - III st. posl. Kr.)." *Povijest Istre*, IV. Pula: ZN 'Žakan Juri'
- McLean, A. and Rubio-Campillo, X. (2022). 'Beyond Least Cost Paths: Circuit theory, maritime mobility and patterns of urbanism in the Roman Adriatic', *Journal of Archaeological Science* 138.
- McLean, A. and Šprem, K. (forthcoming), "Modelling Mobility and the Road Network and Urban-Rural Divide of Roman Istria: A Comparison of Least Cost Paths, Cost Corridors and Circuit Theory"

Barbariga



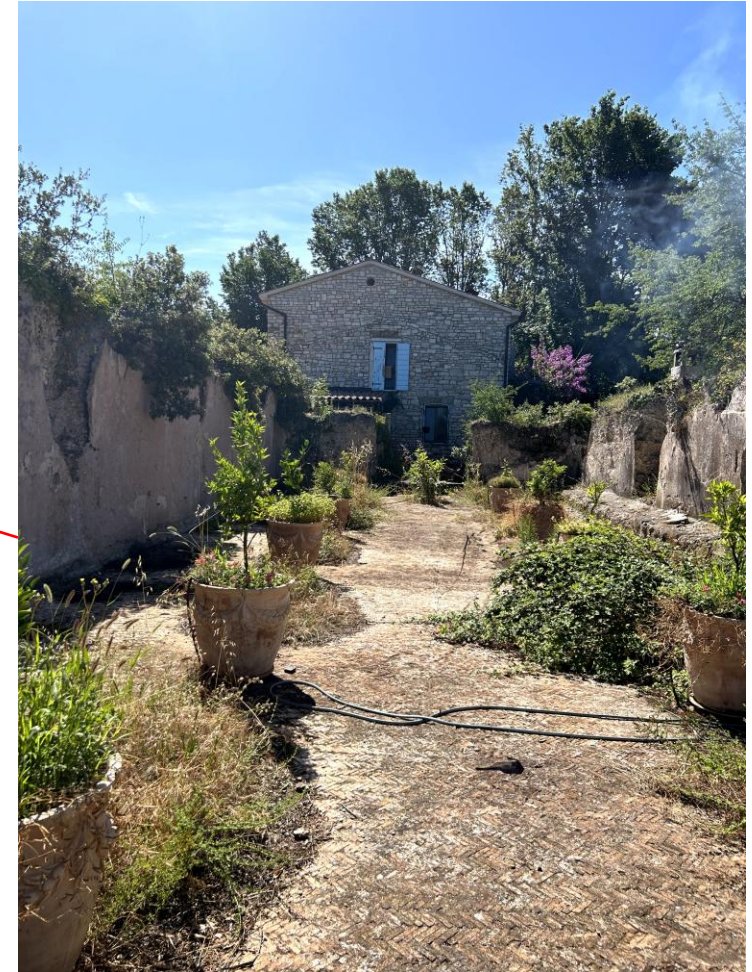
Initial Exploration of the Barbariga Oil Mill: Štefan Mlakar, 1953





Matijašić, R. (1982). 'Roman Rural Architecture in the Territory of Colonia Iulia Pola', *American Journal of Archaeology* 86/1: 53-64.

Barbariga



Barbariga



Maritime Villa, Barbariga

Sommerwohnhaus.

Querschnitt I-I.



Ansicht des Mitteltractes.



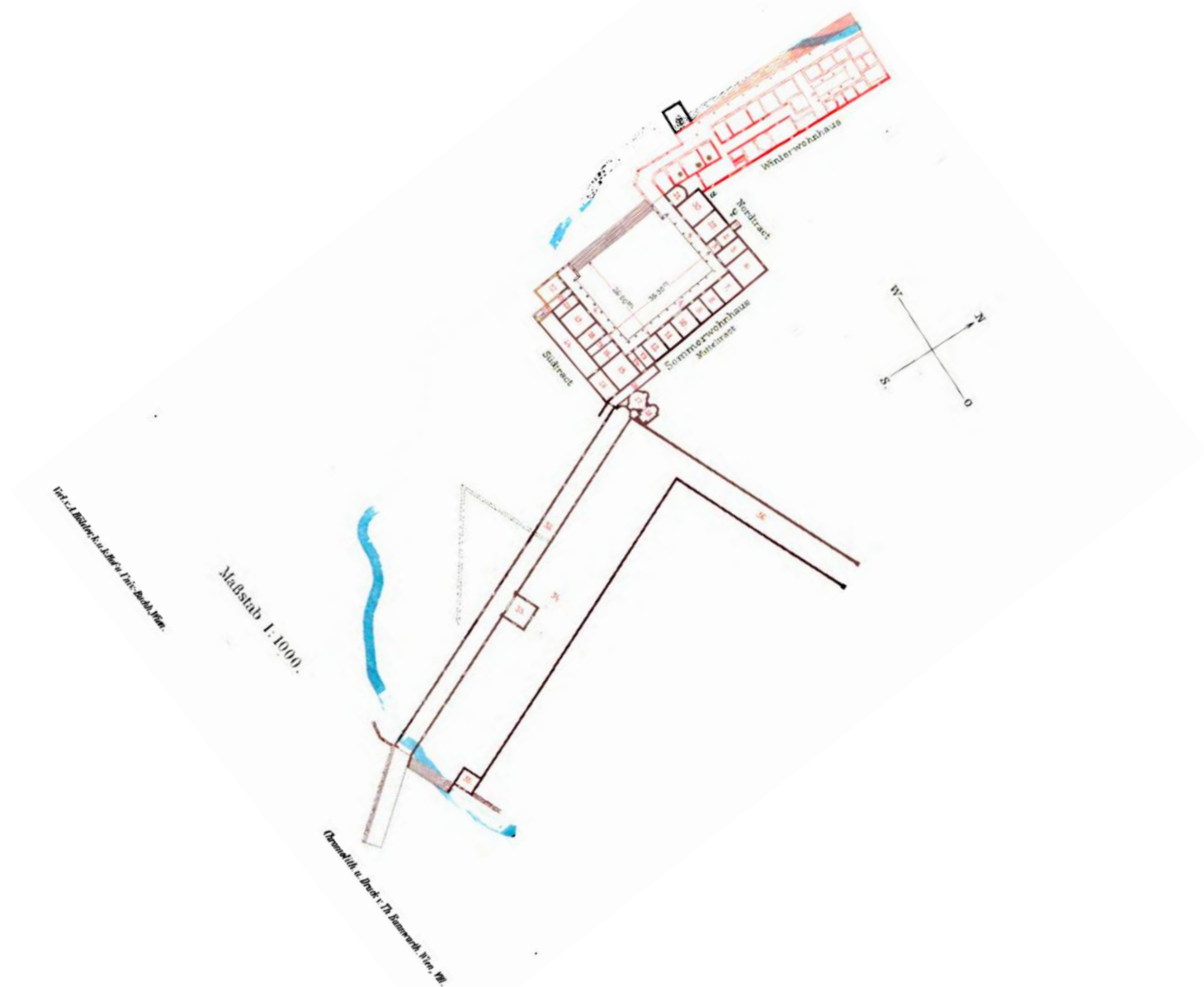
Querschnitt II-II.



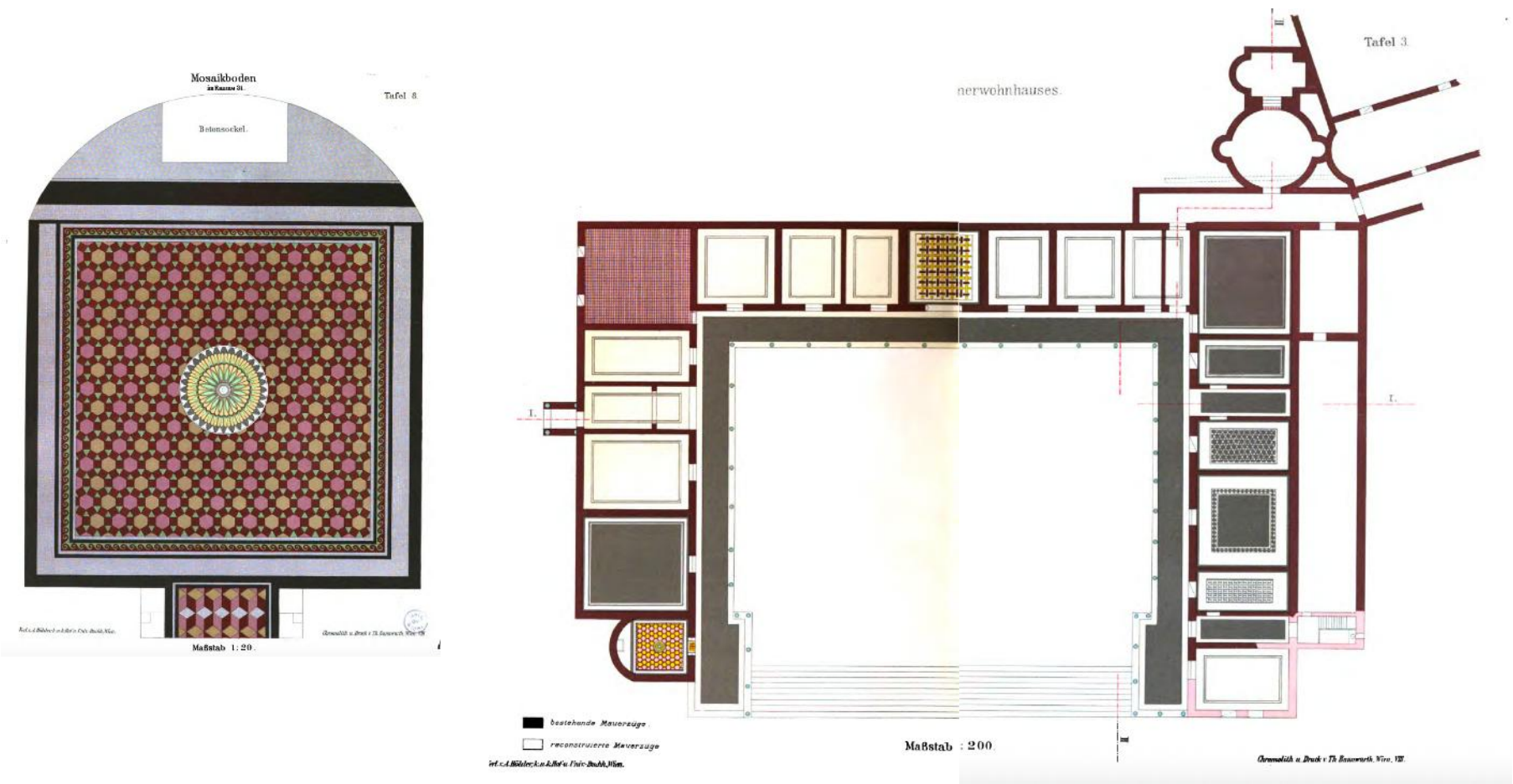
Ansicht des Nordtractes.



Maßstab 1:400.



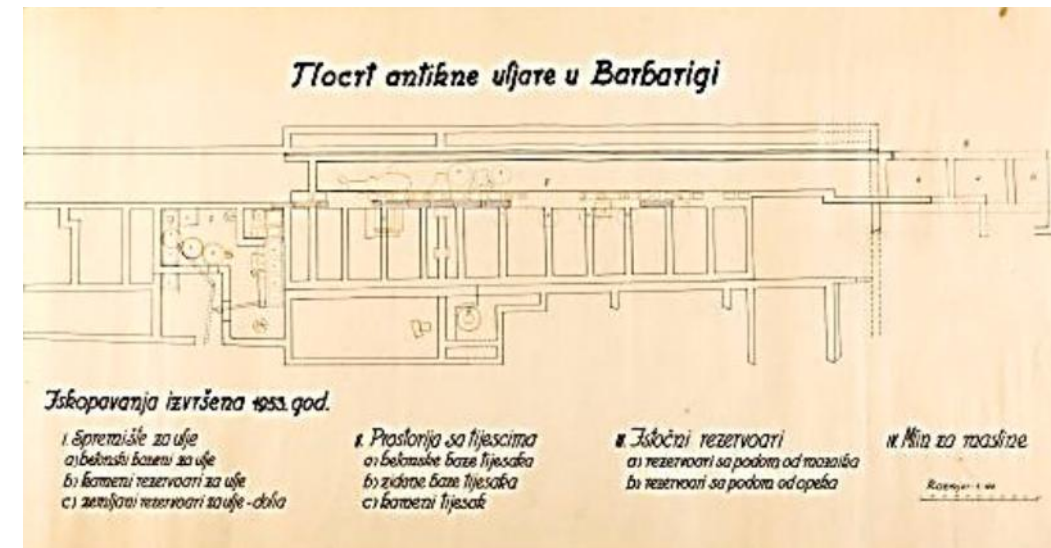
Maritime Villa, Barbariga



Schwalb, H. (1902). ‘Römische Villa bei Pola’, *Kaiserliche Akademie der Wissenschaften, Schriften der Balkankommission, Antiquarische Abteilung* 2: 1–52.

Initial Exploration: Štefan Mlakar, 1953 to 1956

- 15 site photos
- 5 brief reports from 1953 (August to September)
- Additional paragraphs in reports from 1954-1956
- 2 photos of original museum display



Initial Exploration: Štefan Mlakar, 1953 to 1956

August 1953:

- Remains of an oil mill had been identified and would be examined to determine if the land can be cultivated.
- Previously, the cultural and historical value of the small church at the site of the Roman oil mill was assessed, a report was compiled, and a decision was made to demolish the church.

September 1953:

- An area of 60 x 20 meters was excavated, along with a "cellar" for settling and collecting oil.

October 1953

- The works were carried out throughout September, and they are mostly completed. Excavations of the "eastern basins" are underway, into which a channel running along the entire northern side of the oil mill building is poured and descends naturally towards the "east." In addition to excavating these basins, temporary protection of the excavated structures is also being implemented.
- On September 28th, the demolition of the small church in the oil mill courtyard began, and it will be finished in a few days.

November 1953

- After the excavation work was completed and the ground was leveled, temporary protection of the excavated site was undertaken. The eastern basins were secured with a dry-stone wall.

December 1953

- The excavation and protection work in Barbariga is mostly completed, but the remaining protective wall has not been finished due to a lack of manpower.

January 1954

- During December, the excavated findings from Barbariga were transferred to the Archaeological Museum in Pula, where they will undergo laboratory processing. Later, they will be transferred to the island (Brijuni) and exhibited there.

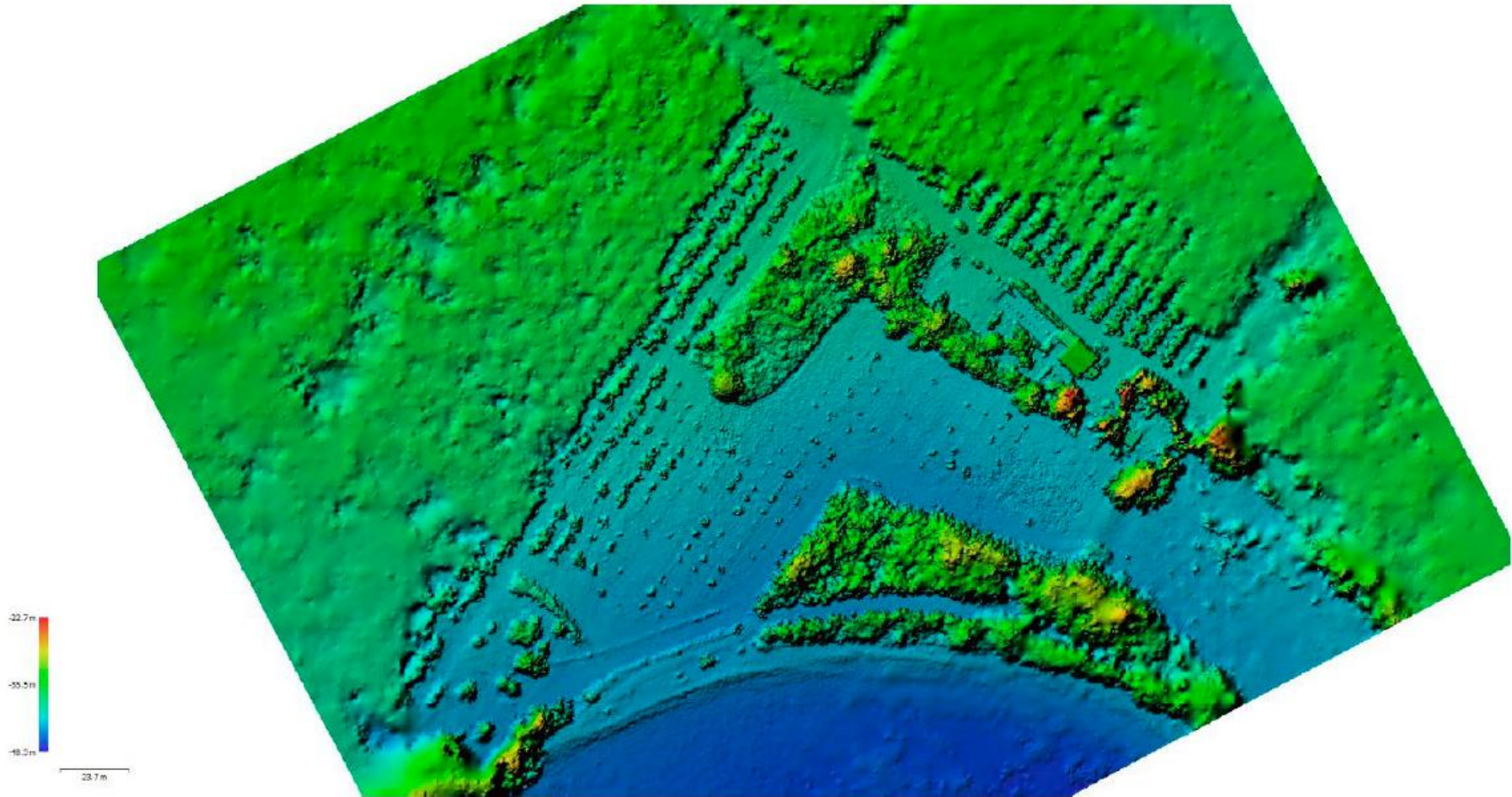
Initial Non-Invasive Survey at Barbariga

Prof. Fabian Welc, Cardinal Stefan Wyszyński University, Warsaw

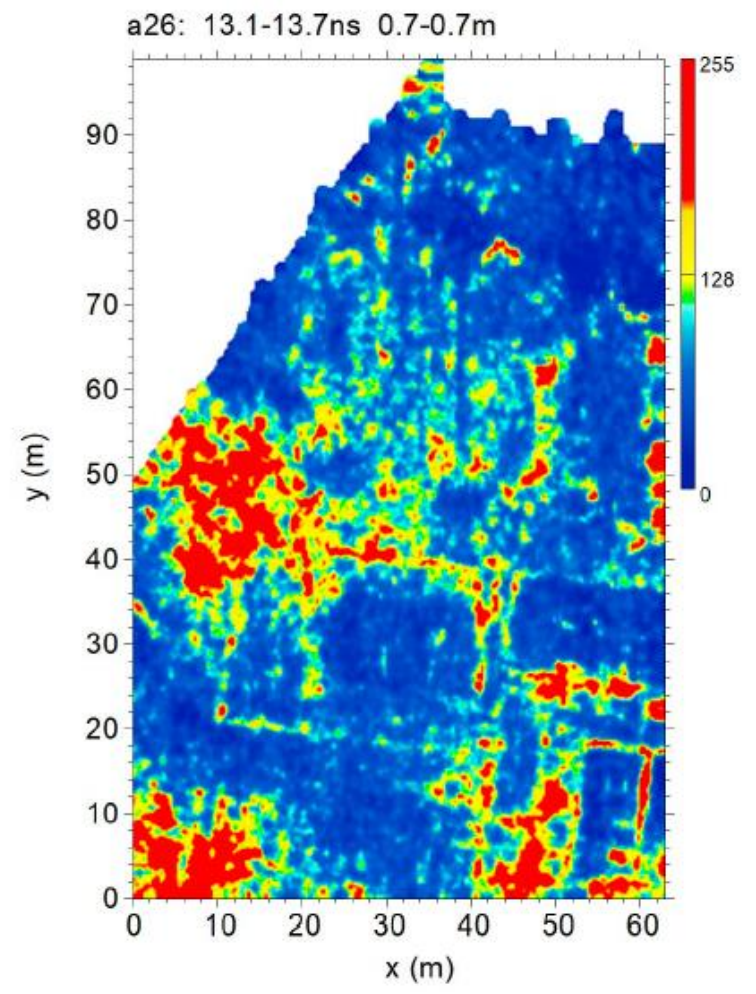
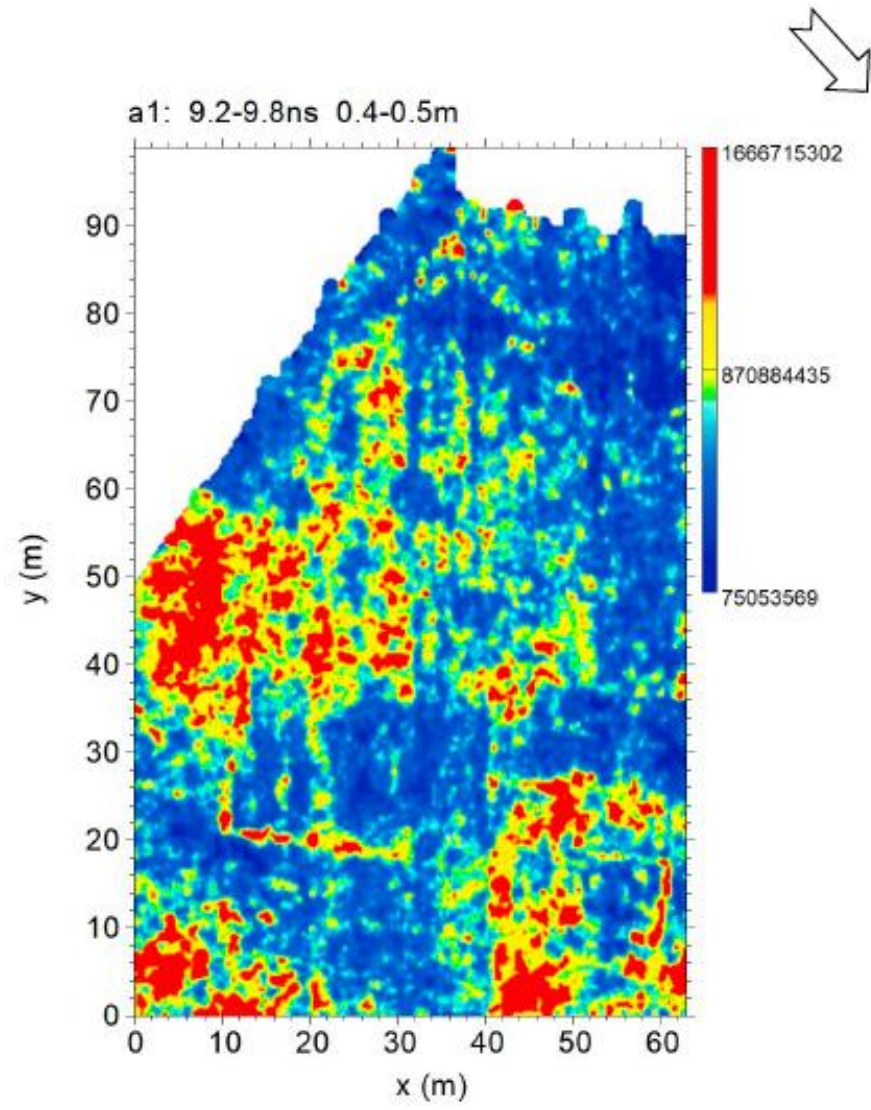


- GPR profiling.
- Select magnetometry profiling
- Photogrammetric documentation of the site by drone.
- Creation of a DEM model of the site based on the photogrammetry.
- Geodetic measurements with RTK/GPS station.

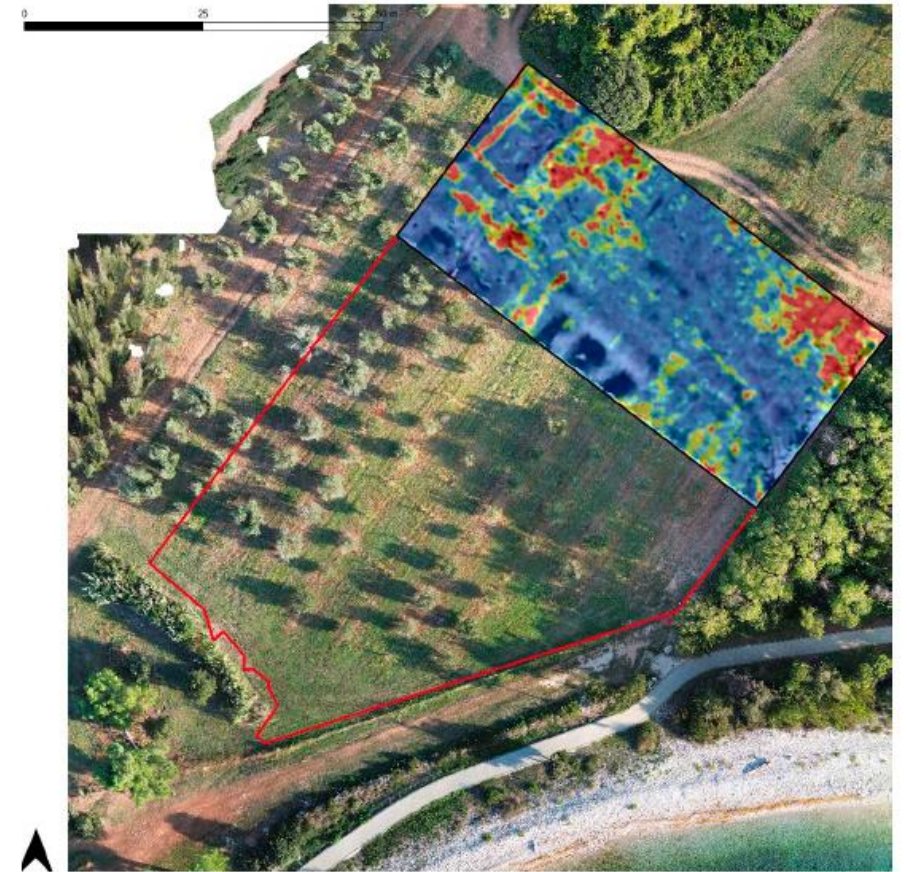
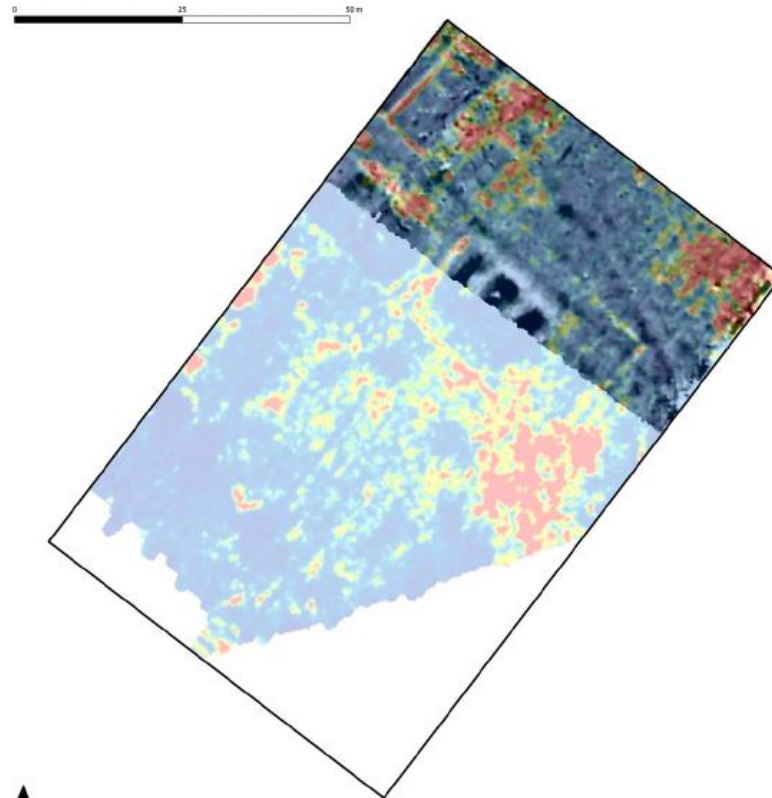
Drone Generated DEM



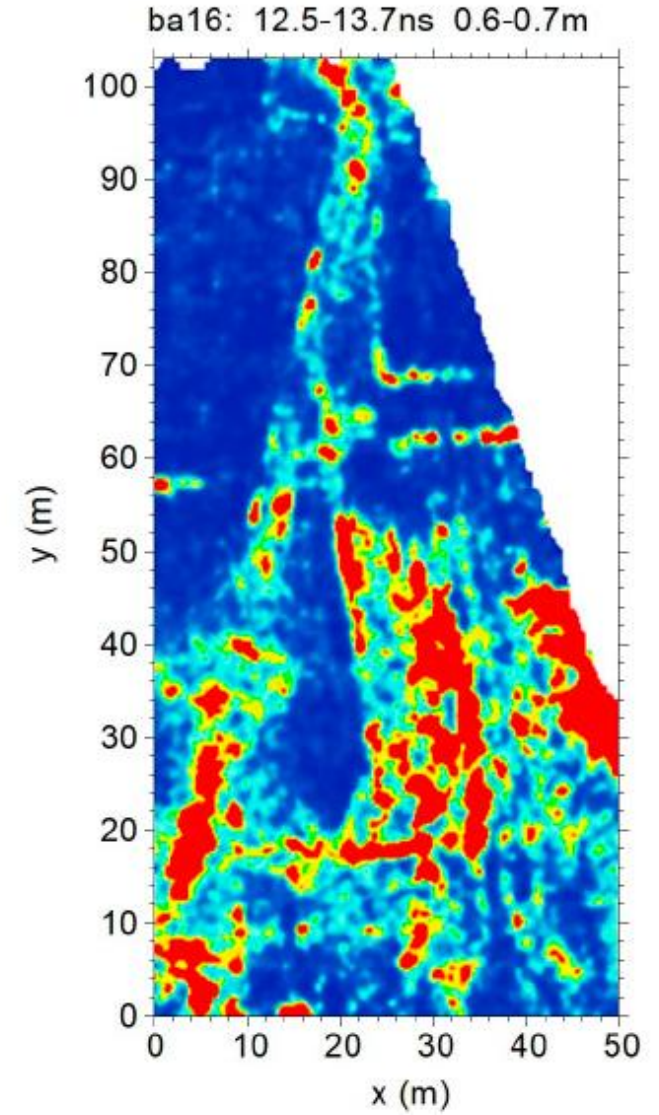
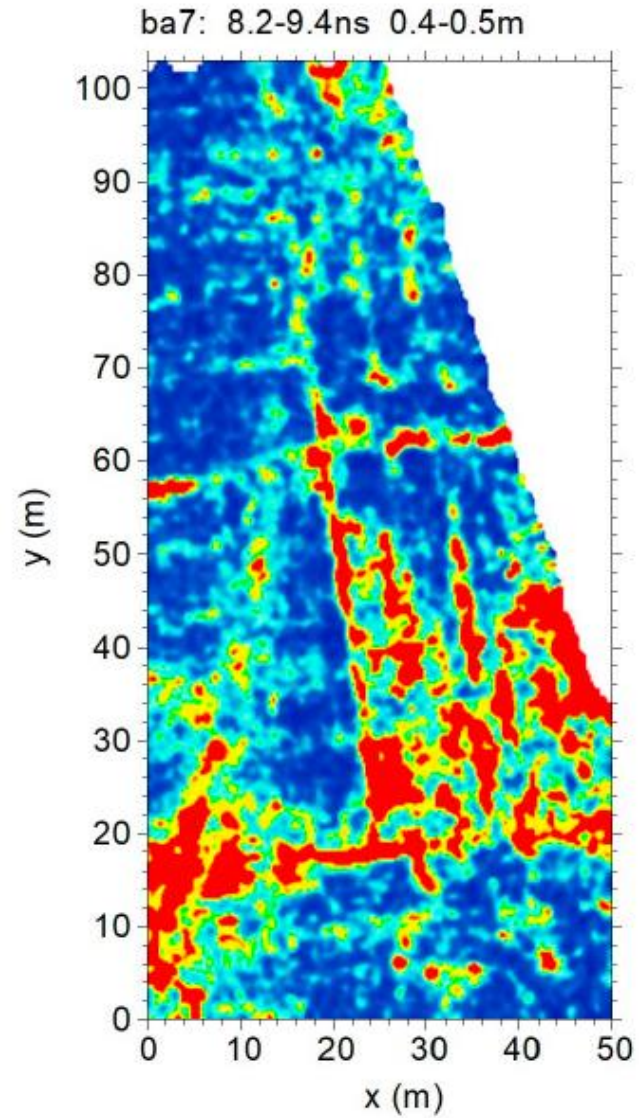
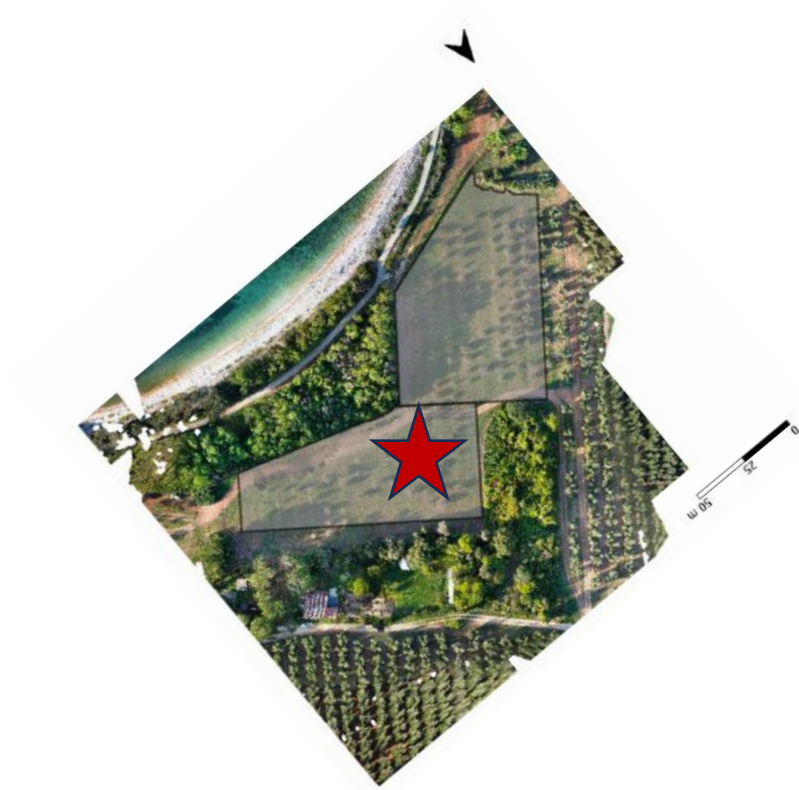
Ground Penetrating Radar (GPR): Field A



Magnetometry and Combined Results



Ground Penetrating Radar (GPR): Field B

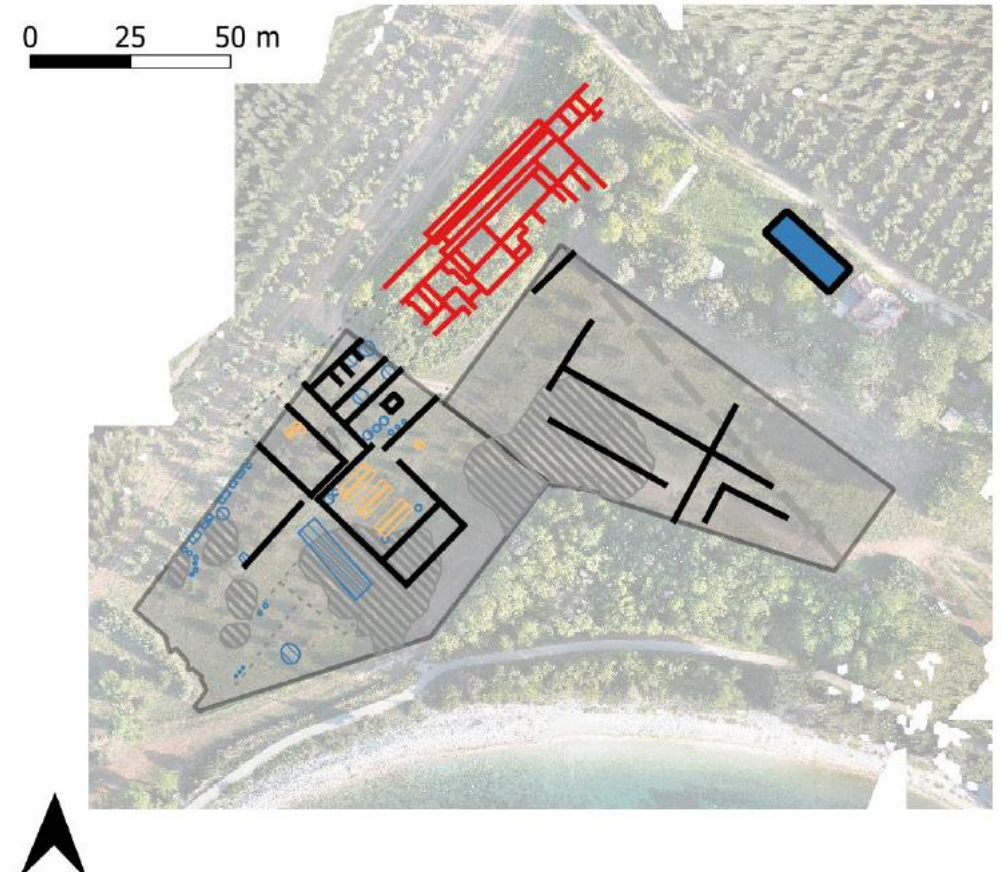
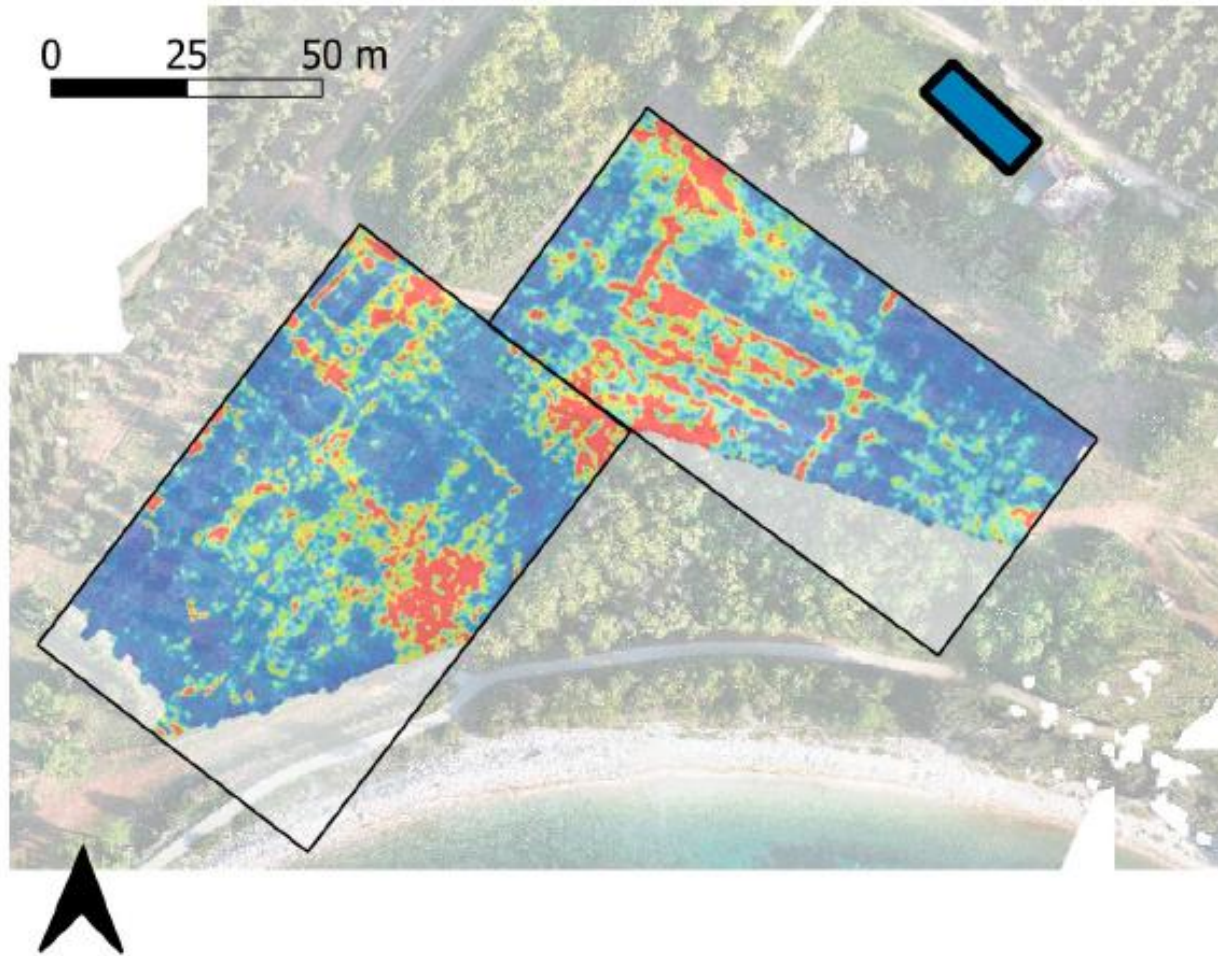


Interpretation

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Geo Archeo
Service Fabian Welc

- CISTERN
- OLD EXCAVATIONS
- ▨ INTERPRETATION - FEATURES DETECTED BY MAGNETOMETRY
- ▨ INTERPRETATION - AREAS OF DESTRUCTION
- INTERPRETATION - DETECTED WALLS
- INTERPRETATION - OLD ROAD
- INTERPRETATION - DETECTED POSSIBLE WALLS
- ▨ INTERPRETATION - DETECTED ARCHEO STRUCTURES



- 1950s Explorations
- - Possible Walls
- Detected Walls
- ▨ Features detected by magnetometry
- Linear features detected by magnetometry
- ▨ Detected archaeological structures
- Cistern
- ◆ Residential Villa
- Surveyed Areas



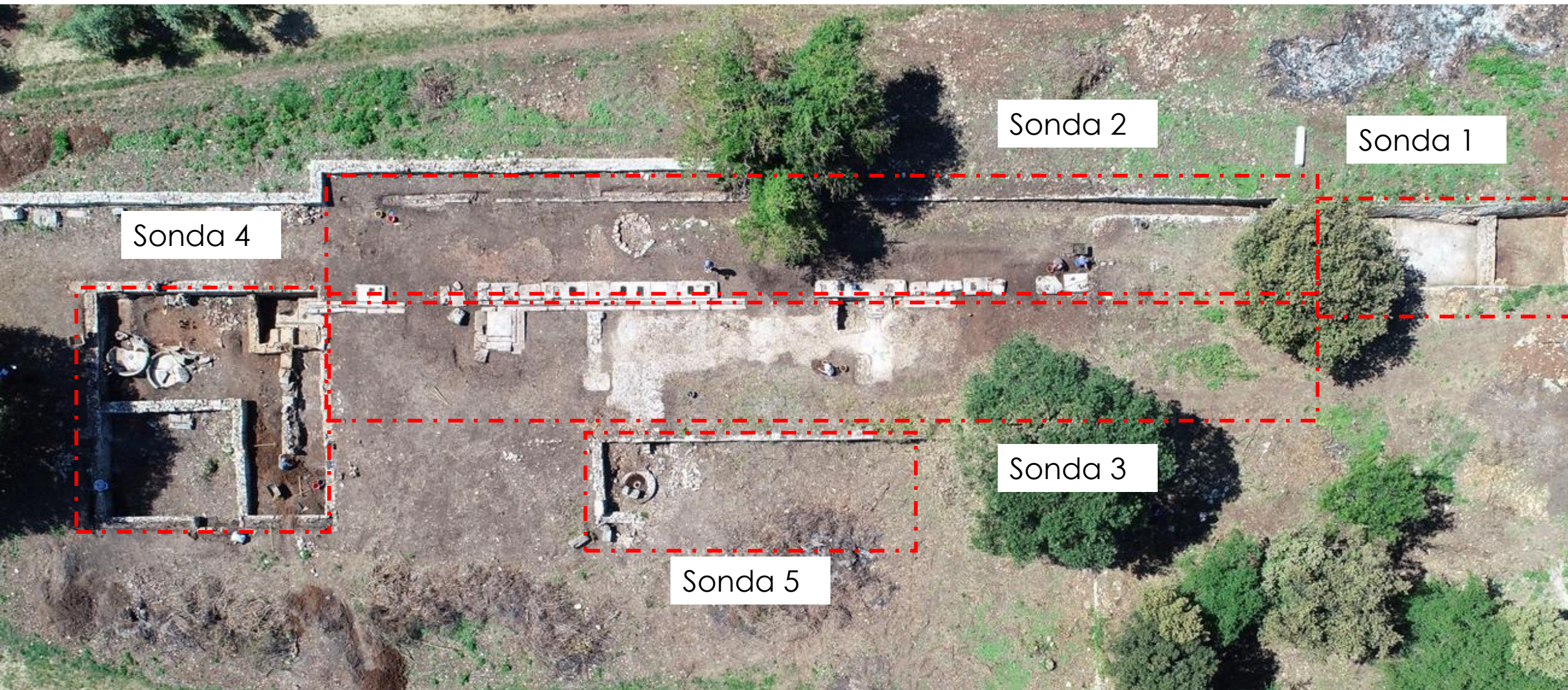


Pre-Season
Drone Shot



Final Drone
Shot, Season I





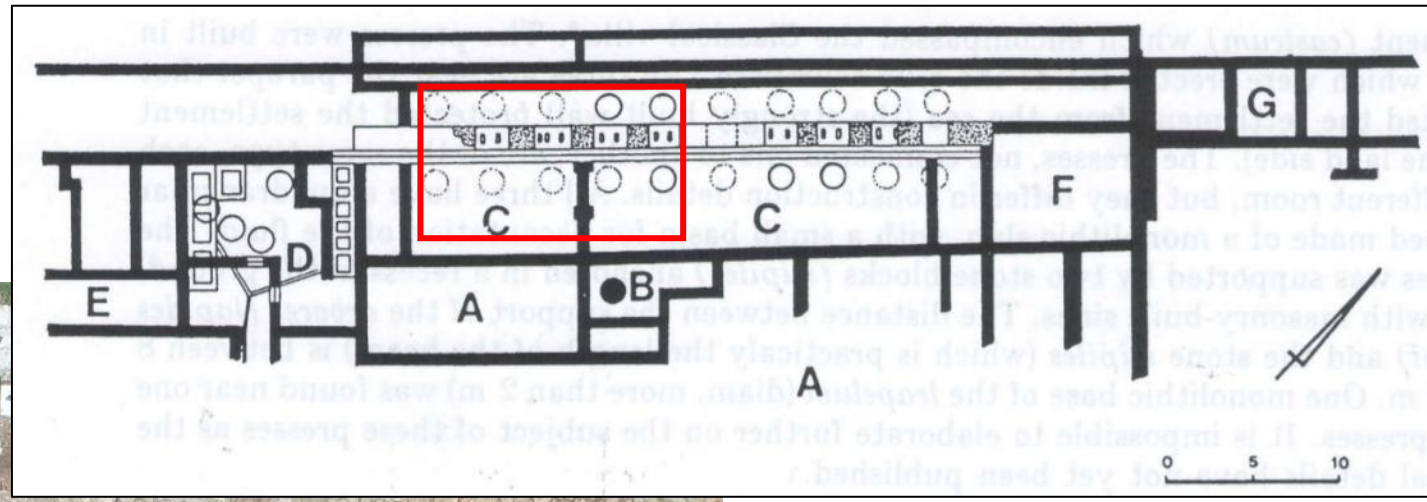
Sonda 1



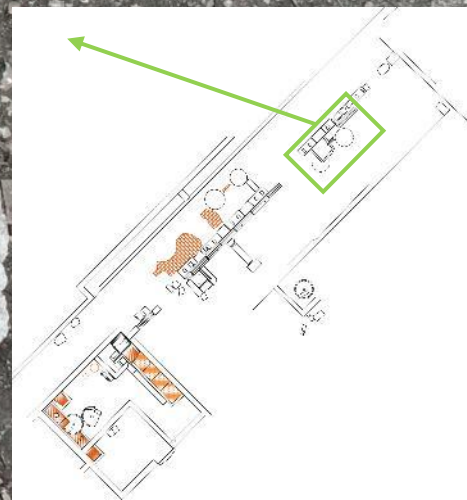
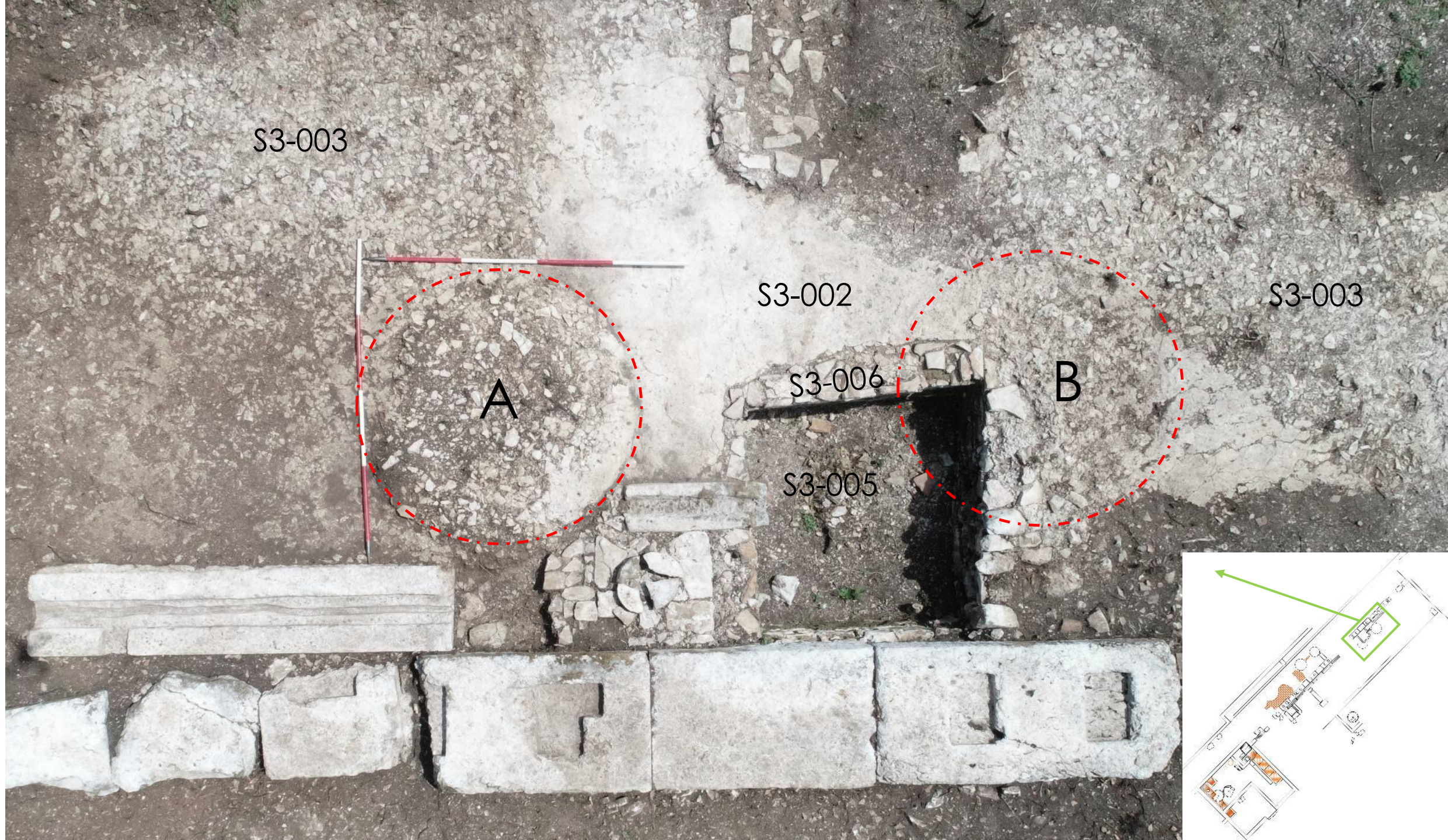
Sonda 2 and Sonda 3



Sonda 2



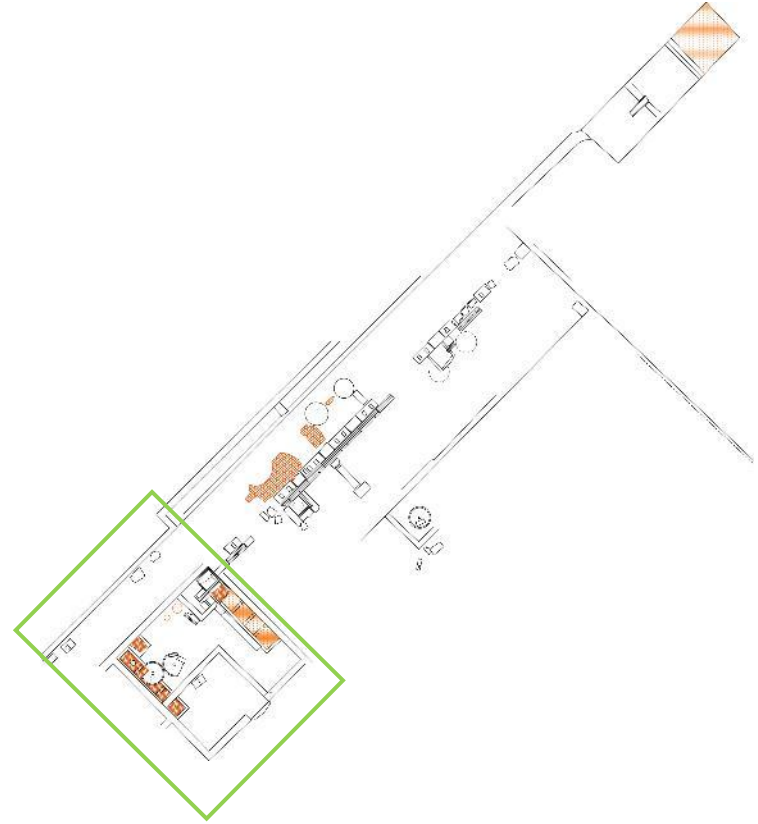




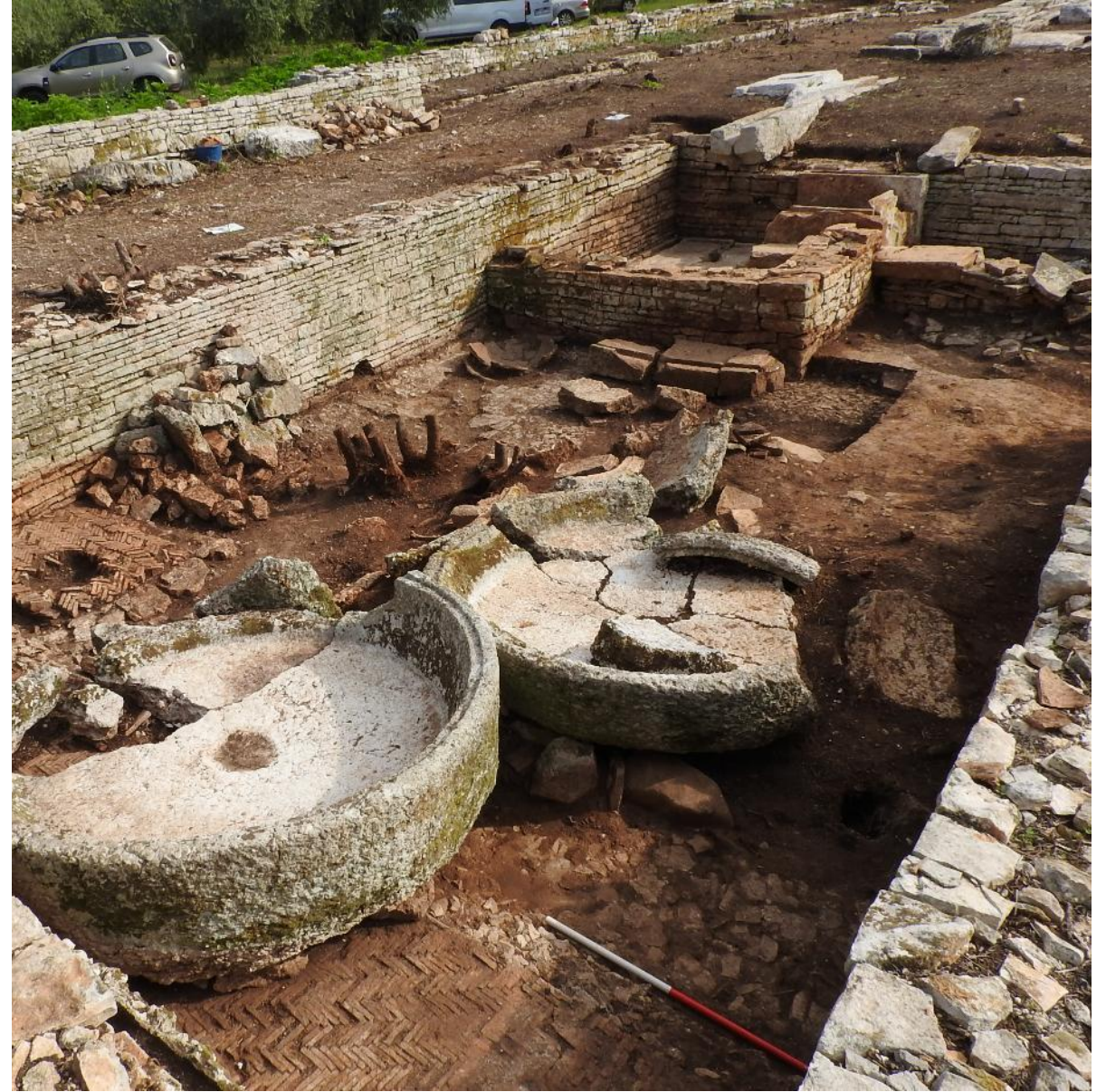




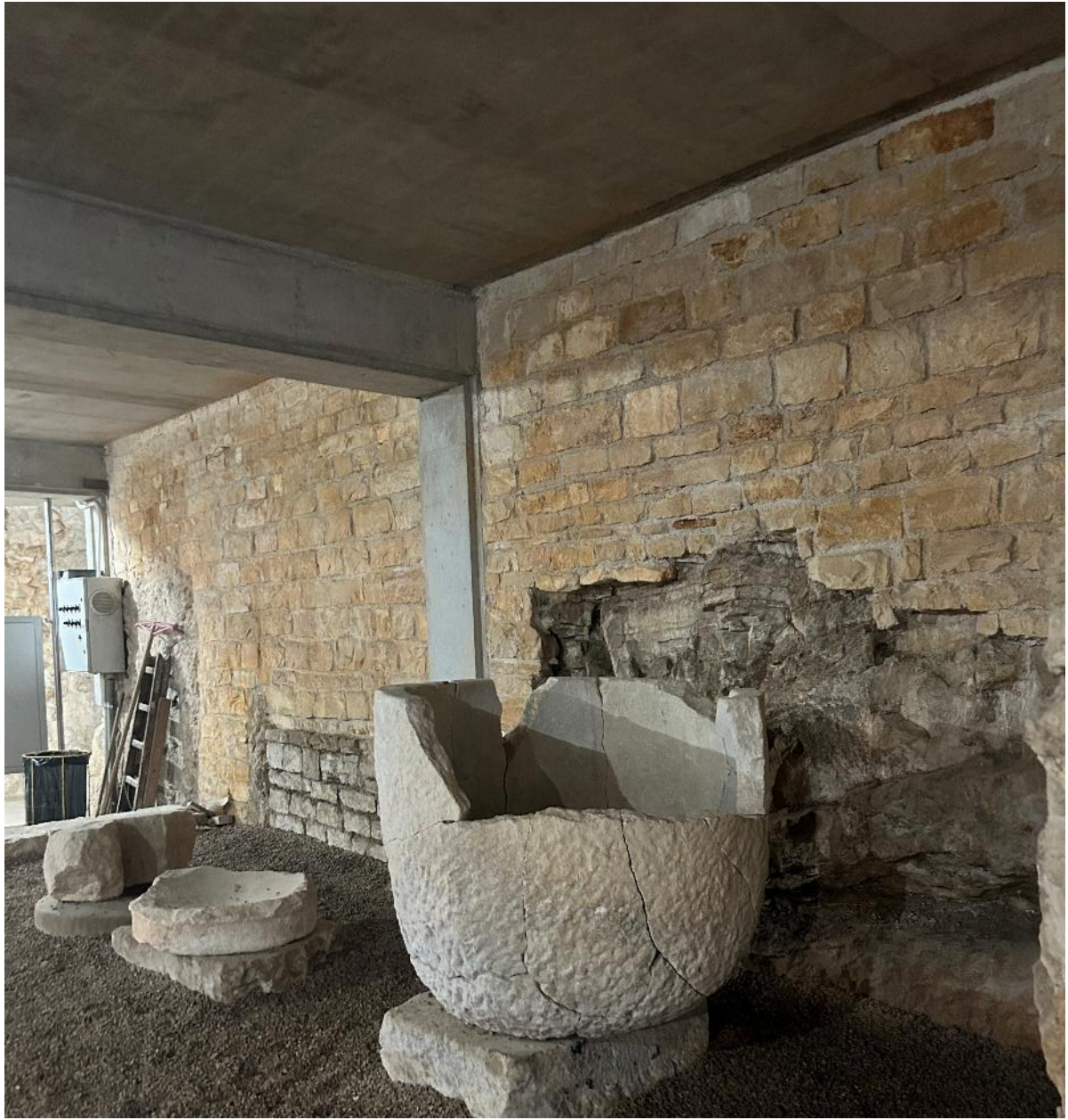
Sonda 4











Sonda 5



In the matter of this blessing also [the olive] Italy has won the highest rank of all the world...The remainder of the competition is maintained between the territory of Istria and that of Baetica on equal terms, while for the rest the provinces have an approximately equal rank... Pliny, *Natural History*, 15.3.8.



Season 2!

- 1950s Explorations
- - Possible Walls
- Detected Walls
- ▨ Features detected by magnetometry
- Linear features detected by magnetometry
- ▨ Detected archaeological structures
- Cistern
- ◆ Residential Villa
- Surveyed Areas



Acknowledgements

- Team

- Katarina Šprem
- Anna Soifer
- Dan Reeve-Brook
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- Terra Eno Olea d.o.o.







Late Roman Oil Collection Basin

Repurposed Stone Millstones



Bases for upright wooden press beams



Circular Millstone Bases

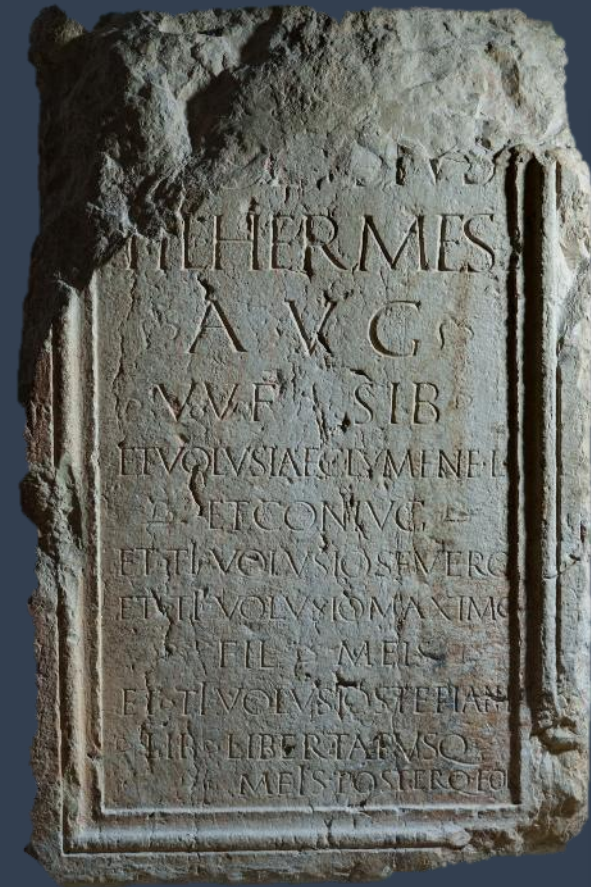


Millstone Base and Grinding Stone



Square press bed

Funerary Altar of Tiberius Volusius Hermes, Parentium (Poreč)



[Ti(berius) V]olusius
[Ti(beri)] l(ibertus) Hermes
Aug(ustalis)
v(i)v(us) f(ecit) sib(i)
et Volusiae Clymene l(ibertae)
et coniug(i)
et Ti(berio) Volusio Severo
et Ti(berio) Volusio Maximo
fil(iis) meis
et Ti(berio) Volusio Stephan(o)
l(iberto)
lib(ertis) libertabus(que)
meis poster(is)q(ue) eor(um)



Poreč/Parenzo, Zavičajni muzej Poreštine/Museo del territorio parentino, inv. ZMP-4354; Atti Soc. Istr.,
1, 1949, 241 (M. Mirabella Roberti) - AE 1954, 52; ILJug 1963, 436 - AE 1966, 147.