

## Senigallia Urban Archaeological Project: New strategies of research and urban planning

Giuseppe LEPORE | Michele SILANI

Department of History and Culture, Section of Archaeology, University of Bologna

**Abstract:** Sena Gallica was the first Roman colony established on the Adriatic Sea at the beginning of the 3rd century B.C., as bridgehead for the Romanization of the northern Marche region, in central Italy. As important from the historical point of view, archaeology of Senigallia is still completely unedited. After a period characterized by occasional findings during the 19th century, the first scientific archaeological works date back to the end of the 20th century. Since 2010 a new season of research has been started: the Senigallia Urban Archaeological Project, by an agreement between Municipality, University of Bologna and Soprintendenza per i Beni Archeologici, has the main goal of the discovery of the city understanding its historical evolution, through a GIS based systematization of old and new data. New research has initiated systematic surveys of the cellars and geophysical mapping of the historical centre. Activities frequently followed by preventive or salvage digs during works in progress, in which the new documentation techniques (photogrammetry, GPS, mobile GIS) allowed to reduce timeworks, embracing the needs of building. The new course sparked a fruitful relationship with both Public Institution and Private subjects, encouraging a multidisciplinary research which involves experts from different disciplines. In this mechanism archaeology is designed as an integral part of the urban planning process, through activities of prevention and control. In just two years this strategy allowed us to obtain two main results: 1) one operative, encouraging the formulation of an agreement with the Municipality, which includes the continuous involvement of archaeologists; 2) the other scientific, providing novel archaeological interpretations, thanks to new important data about pre-Roman phase, programmatic planning of the Roman colony, Republican housing, urban walls, sanctuaries and Middle Ages phases. A diachronic research based on a holistic approach to the city and finalized to the reconstruction of the 6 main phases of its history.

**Keywords:** Urban Archaeology, Romanization, Roman colony, Preventive Archaeology, Geophysical Surveys.

### The archaeological background

The city of Senigallia is located in central Italy, in the Marche region. It's facing on the Adriatic Sea, at the mouth of the Misa River.

The physical geography of this territory is characterized by the presence of fluvial valleys perpendicular to the Apennines and has always influenced the road system and the human settlement.

The same town of Senigallia was founded on the sea, on an alluvial plateau at the end of the Misa River's valley, which has always constituted a preferential traffic route linking the sea and the inland and favouring the contact with Rome. In fact, later, this route became a diverticulum of the via Flaminia (Fig. 1).

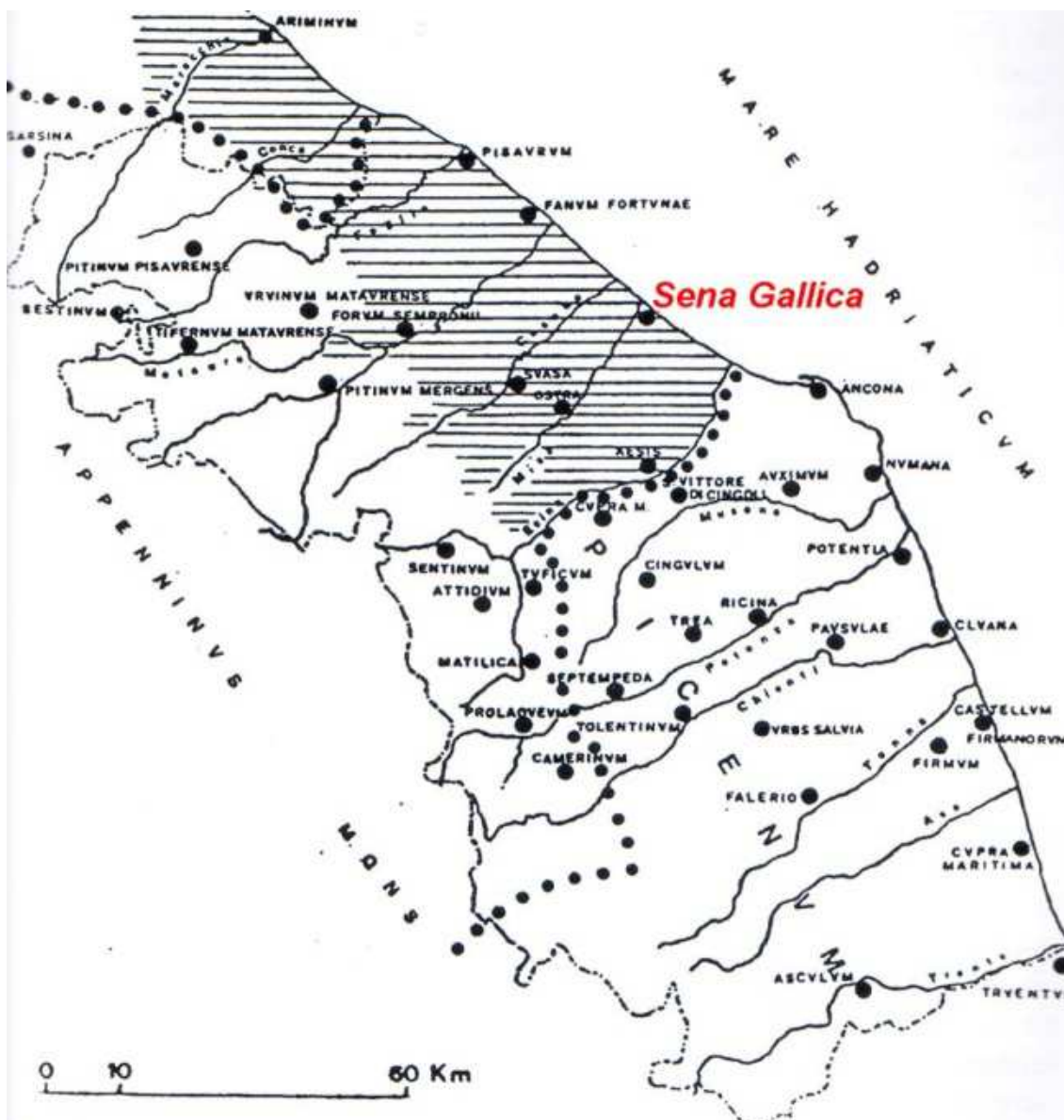


Fig. 1 – Sena Gallica in the roman VI region, Ager Gallicus (PACI 2002).

From an historical point of view Senigallia is very famous. In fact, it was the first roman colony founded on the Adriatic Sea, at the beginning of the 3th century B.C., during the military expansion toward the north Italy, finalized to the conquest of the Gallia Cisalpina (the modern Pianura Padana). The written sources, in particular Livio and Polibio, allow to date its foundation between the years 290 and 284 B.C.

In spite of the extraordinary historical importance of this city, we don't have many archaeological witnesses of its farthest past. The most part of the monumental evidence survived concerns the Renaissance and the modern times.

Occasional findings emerged during urban works at the beginning of the Twentieth century, among which a votive ceramic head of the middle Republican age stands out for particular relevance (Fig. 2, a). Other discoveries occurred over the second half of the last century during occasional works, which were carried out in a non systematic way but according to the usual practice for this period (Fig. 2, b). In this occasion, some blocks of sandstone with frieze and inscription, probably belonging to funerary monuments (Fig. 2, c), a few

remains of columns' piers and capitals of Corinthian-italic order dated to the middle Republican age (Fig. 2d) were found.

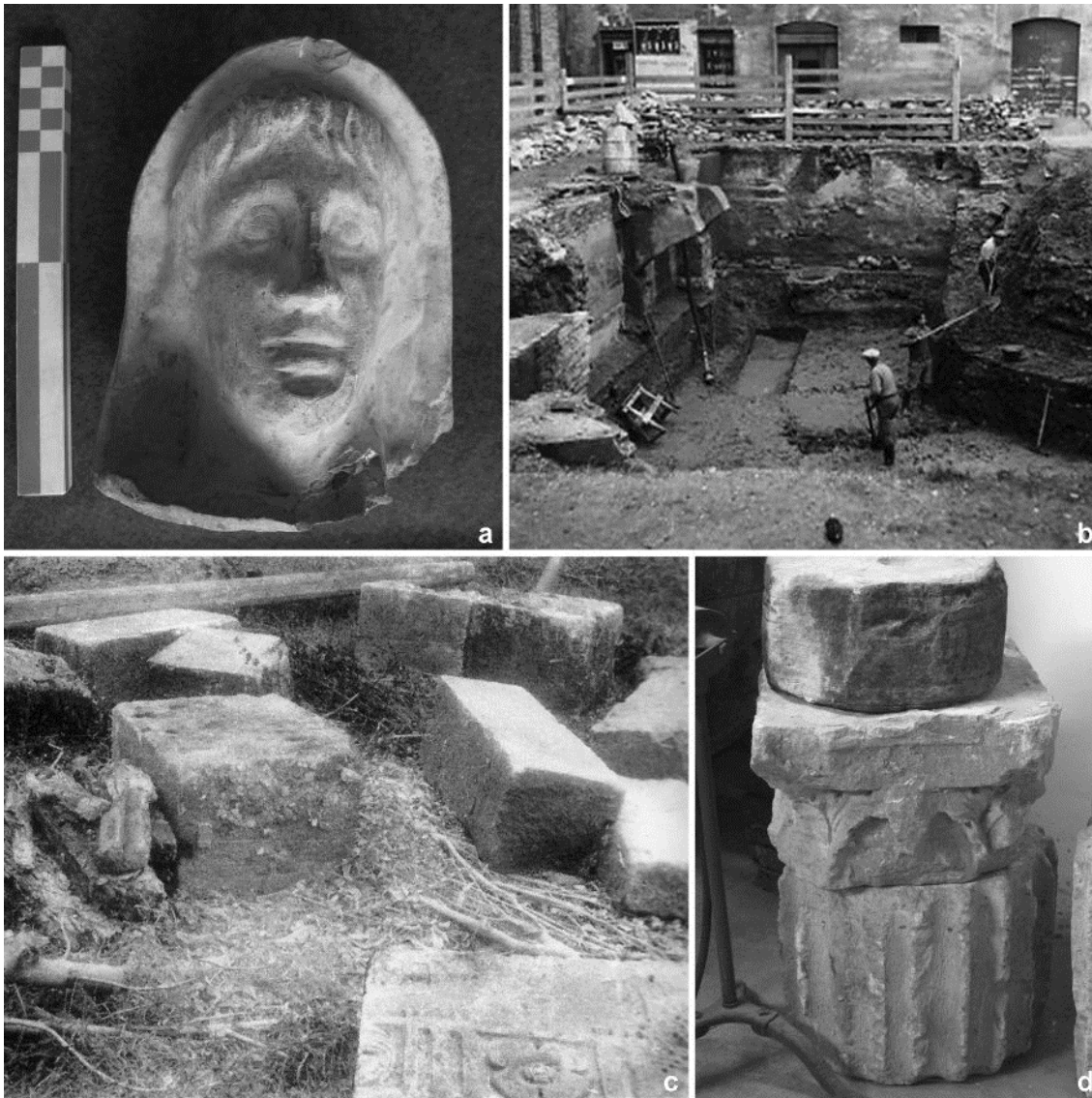


Fig. 2 – Occasional findings emerged during urban works over the Twentieth century.

Only at the end of the Twentieth century, a large excavation under the modern theatre “La Fenice” has brought to the light a big sector of the roman town, articulated around a main paved cross-street. A domus and other buildings, dated between the 1st century BC and the 1st century AD, look on these roads (SALVINI 2003).

### The Senigallia Urban Archaeological Project

In order to study this important context, in 2010 the Senigallia Urban Archaeological Project was born, thanks to an agreement between the Section of Archaeology of the Department of History and Culture of the University of Bologna, the Soprintendenza per i Beni Archeologici delle Marche and the Municipality of Senigallia. The project is finalized to the study of the urban archaeology of this town, through modern



technologies and, in case of public works, having recourse to the methods of the “preventive archaeology” (Archeologia Preventiva 2010).

The first step of the project involved a systematic survey of the cellars existing in the modern buildings of the historical centre, with the aim to get a preliminary evaluation of the buried deposit and of that destroyed (Fig. 3). This work aided a first knowledge of the archaeological deposit of Senigallia. In fact, it indicated us that the construction of the cellars was involved the destruction of the medieval and Renaissance levels. Thus, presence of cellars means absence of archaeological witnesses of Middle and Modern Ages.

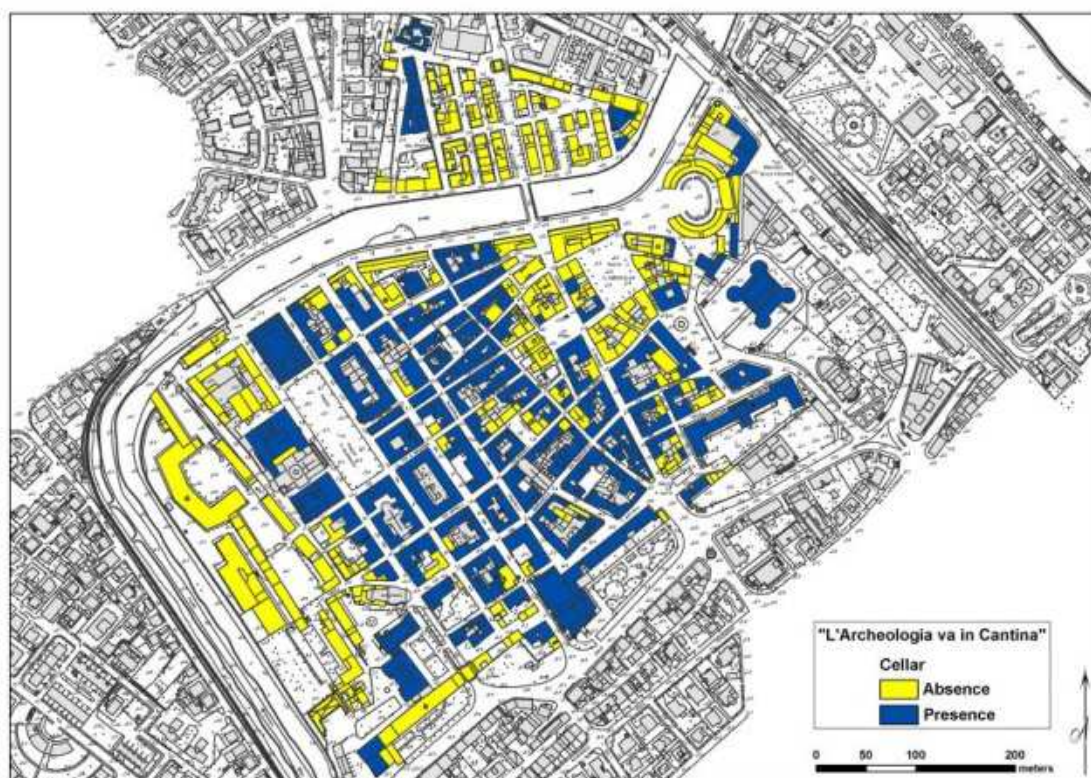


Fig. 3 – Systematic survey of the cellars existing in the modern buildings of the historical centre.

The surveys in the cellars have been followed by the geophysical explorations of many areas and in particular the GPR mapping of the historic centre has been started, with the aim to fully complete it over the project's course. The geophysical prospections are interesting also the interior of the cellars, where we can benefit from an authentic window on the roman layers, taking advantage of the removal of the subsequent and later levels (Fig. 4).

The acquired data are in work in progress, but in general they are very encouraging, providing both important information on the buried archaeological record and positive methodological implications. In fact, we are trying to test and integrate all the geophysical systems applicable to urban area, from the GPR to the resistivity system, also experimenting in some cases the use of the geomagnetic and the electro-magnetic systems (Fig. 5).



Fig. 4 – GPR (Ground Penetrating Radar) survey in the historical centre.

The research strategy adopted by the project is based on the integration of different information sources and it's favoured by the data management into a GIS system, the development of which runs parallel to the progress of the research. This method permits to connect to the archaeological knowledge, geological and geomorphological data and also the evidence derivable from the historical cartography. The GIS platform has been designed in collaboration with the Office of the Municipality of Senigallia responsible for the urban development, which can use it to better guide its planning activities.

This interdisciplinary project includes the partnership of the University of Urbino for the geological and geomorphological aspects of the research. In our case, the geological study is finalized to reconstruct the evolution of the quaternary deposits on which the paleosurface of the Roman Age developed (DE DONATIS et alii 2012). The aim is the reproduction of the paleosoil on which the roman colonists walked. Also the geological and geomorphological data have been elaborated by means of specific software for the three-dimensional modelling of the subsoil.





Fig. 5 – Integration of different geophysical systems applied to the urban area.

### **“Preventive Archaeology” within the Senigallia Urban Archaeological Project**

Over the first two years of the Senigallia Urban Archaeological Project, three main operations of preventive archaeology have been accomplished. In all these cases, the operations were contemplated within the urban planning of the Municipality, involving a preliminary phase of geophysical investigation and, consequently, the excavation. The interventions ended with a variation of the original building projects, reserving a particular new attention to the enhancement of the discovered archaeological evidence.

The first case study concerns a building of the eighteenth century placed in the historic centre of Senigallia, on via Cavallotti (LEPORE et alii 2012b). During works of renovation of the building, a GPR survey into the cellars was realized. The obtained radar-maps revealed the presence of buried structures and of a complex stratification, encouraging a close examination of the context through the excavation (Fig. 6).

The archaeological dig allowed us to recognize three main periods attested by the stratigraphy:

- the first one, which we can date back to the pre-roman age, between the 5th and 4th century BC;
- the second, dated back to the Republican roman age, between the beginning of the 3rd century and the half of the 2nd century BC;
- and a third period, which goes from the end of the 2nd century BC to the Augustan Age.

With any doubt, the most important discovery concerns the remains of a housing building (Fig. 7), which was certainly built with perishable materials, at least for the elevation walls, and dated back to the pre-roman time. Inside, a residential area was paved in fluvial pebbles and its excavation has returned a large amount of frequentation's evidence, as sherds of ceramics, traces of food and remains of millstones. On the basis of the data acquired up to now, the building seems to have a sub-rectangular shape, measuring 9 per 5 meters (Fig. 8). We believe that this house represents the first indigenous human settlement, which came before the Roman conquest, maybe of Picenum origin. This important discovery has aided to increase a deep sensibility to the area, and a new program finalized to its conservation and enhancement has just been started, modifying the renovation's project of the modern building.

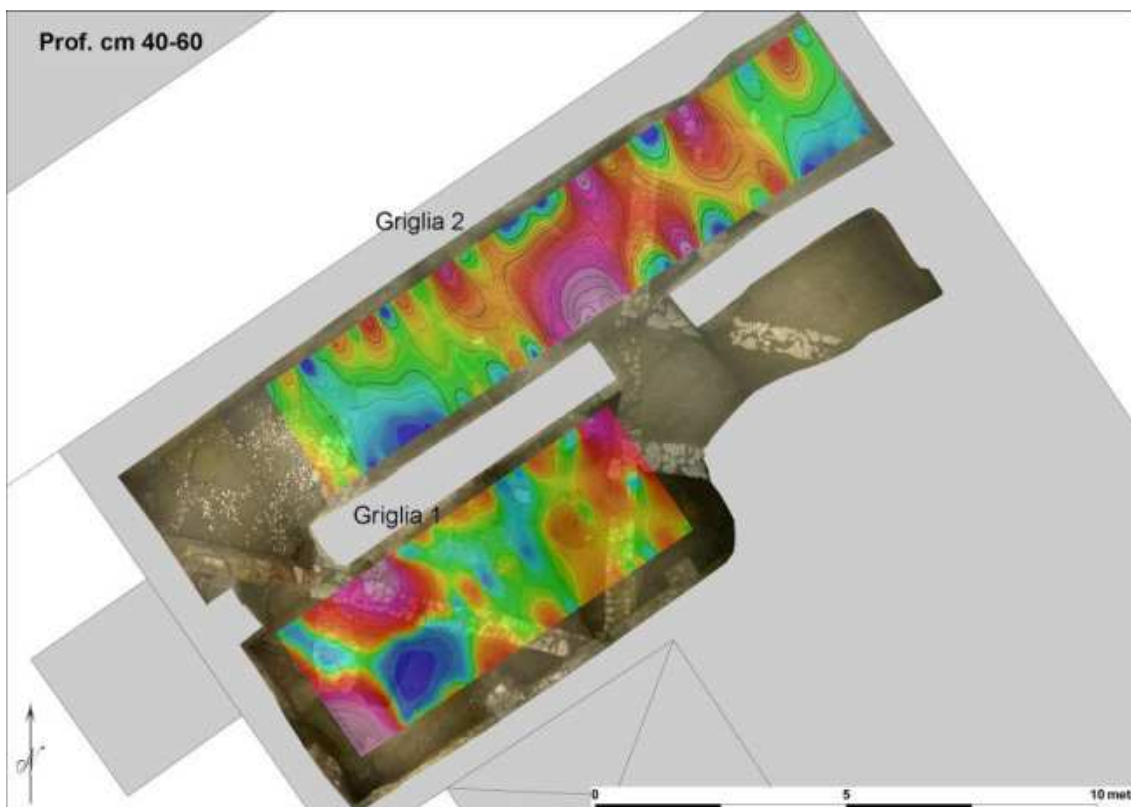


Fig. 6 – Senigallia, Via Cavallotti: the results of the GPR survey overlapped to the excavated structures.

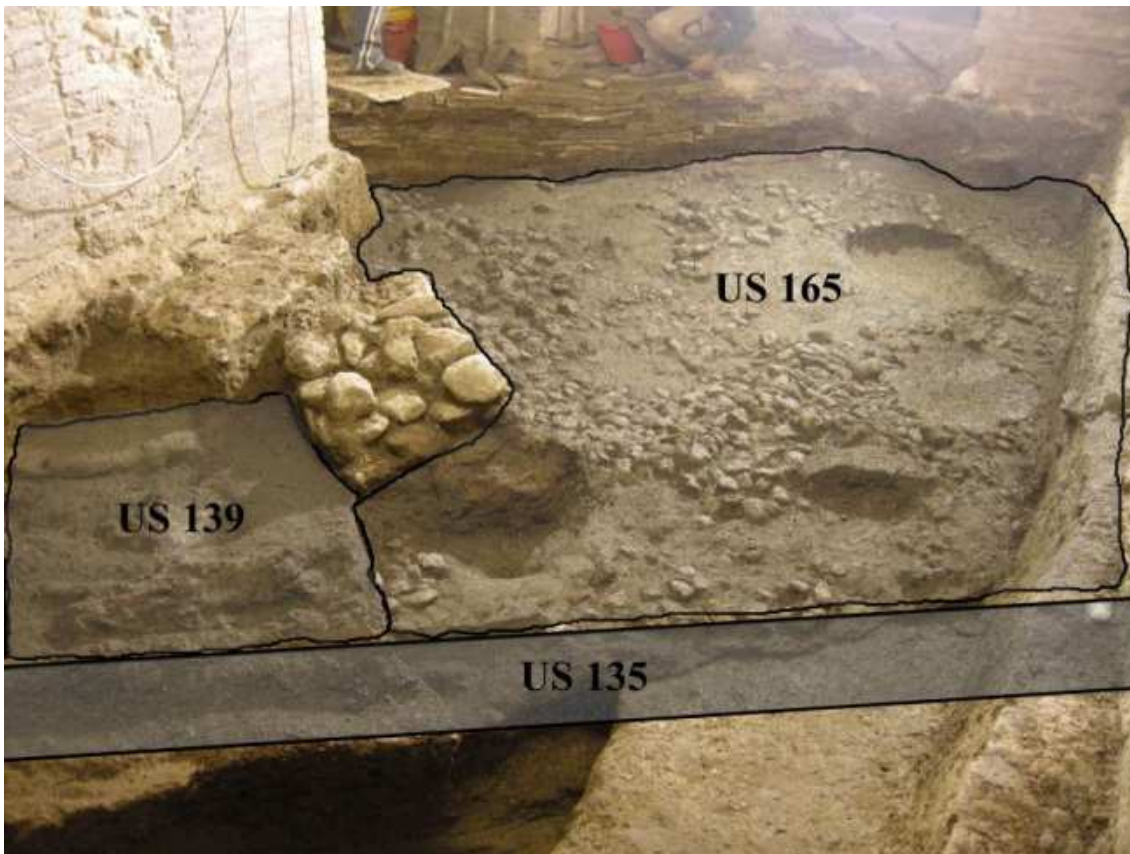


Fig. 7 – Senigallia, Via Cavallotti: the remains of the pre-roman structures.

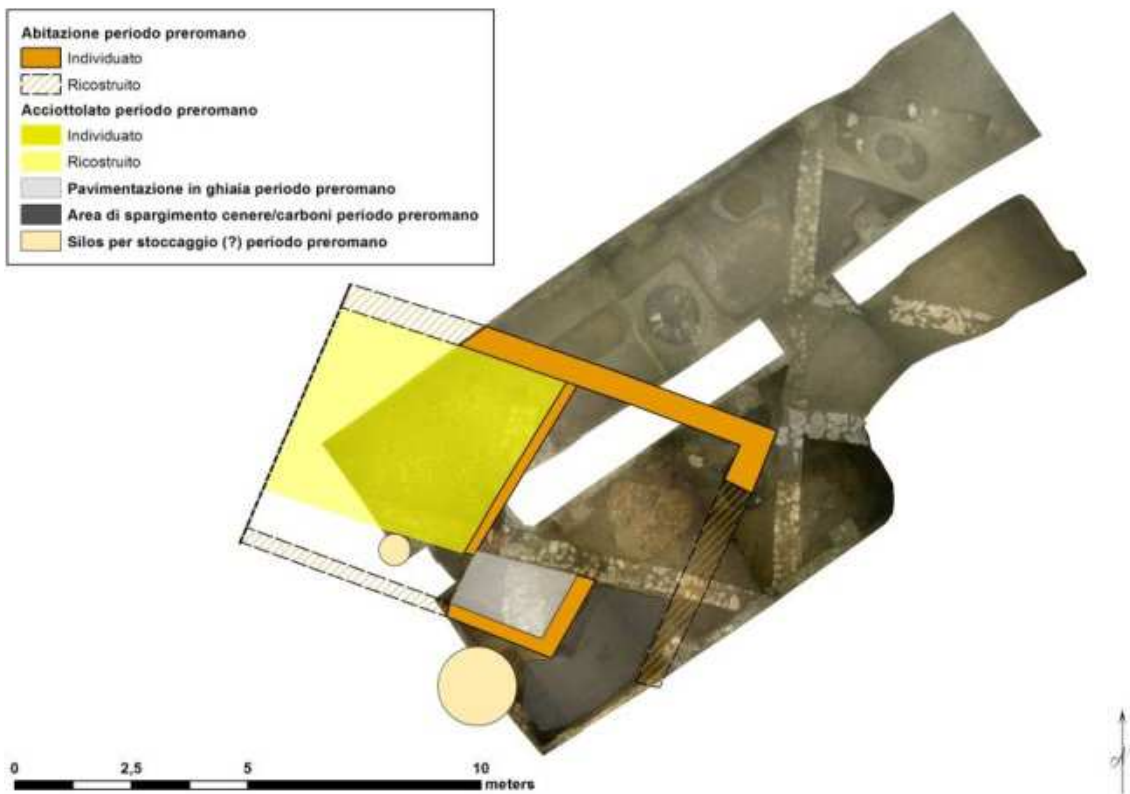


Fig. 8 – Senigallia, Via Cavallotti: the pre-roman housing building.



The second intervention of “preventive archaeology” realized within the Senigallia Urban Archaeological Project has been carried out along the modern via Baroccio, in an area immediately outside of the historical centre (LEPORE et alii 2012a). Also in this case the archaeological exploration occurred in relation to a new edification project of a sector occupied by a modern building (an ex-gym) bound to demolition. As custom, the research strategy has contemplated a preliminary GPR survey, which interested all the rooms of the ex-gym. The conditionings due to the presence of walls that divided the interior of the building imposed to adopt a strategy of data acquisition in according to the internal articulation of the spaces.

The following excavation has confirmed the geophysical results, allowing to bring at light an extraordinary and complex stratigraphic sequence, which goes from the beginning of the 3rd century BC to the Eighteenth century. In fact, the archaeological evidence shows us that at the beginning, dated back to the early 3rd century BC, this area was used as a sanctuary, which was located within a natural landscape with a wide presence of water, at the confluence of the Misa River and the Penna torrent. The worship was organized around a simple, small temple, an *oikos*, with the depositions of votive objects outside and inside to the sacred building (Fig. 9).



Fig. 9 – Senigallia, Via Baroccio: the roman small temple (*oikos*) with deposition of votive objects.

In the west part of the excavated area a large ditch has been found, 12.5 meters long and 2.60 meters wide, the filling of which was composed by big sherds of yellow sandstone into a matrix of clayey soil: this is the evidence of the urban walls, which were never testified before.

The northern section clearly shows the traces of two subsequent ramparts, probably realized during the development of the walls and, later, in relation to their defence. In the section evidence of several floods, occurred during the 15th and 16th centuries, have also been seen, aiding us to understand the accumulation of materials and the rise of the soil until the present height (Fig. 10).

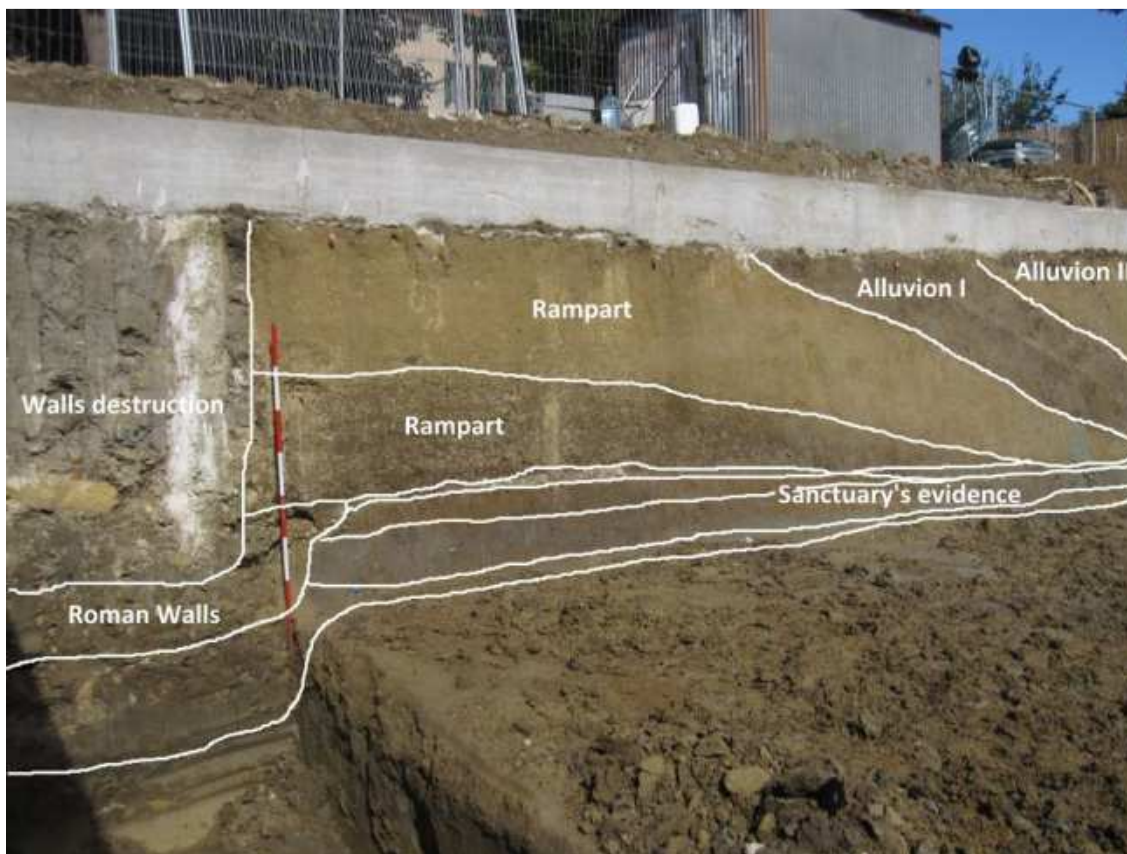


Fig. 10 – Senigallia, Via Baroccio: the northern section.

The operation carried out in via Baroccio has a particular relevance also from a procedural point of view. In fact, the necessities to avoid the problems connected with the wide presence of ground water and, above all, with the development of the modern town, have lead to a particular solution, which takes into account all these aspects but prioritising the conservation and enhancement of the archaeological remains. In order to find a good compromise between protection of the discoveries and concerns of the building company, the adopted method has contemplated the movement of the structures and their subsequent relocation within the underground locals designed to parking, respecting the original position but at an inferior height. The structures were protected with an innovative system of harness, specifically realized and applied for the first time at Senigallia (Fig. 11).



Fig. 11 – Senigallia, Via Baroccio: conservation measures of the archaeological structures.

This resolution has prevented the interruption of the building's planning and, at the same time, has favoured the conservation of the archaeological heritage, moving it away from the groundwater, as well as its public fruition. In fact, despite the new construction will be a private residential complex, the new project will provide a part in charge of museum, with a public entrance for the tour visit.

The latest intervention carried out within the new project concerns a key point in the historic centre, along via Gherardi. Once again, the GPR survey allowed to detect with great detail the consistence and depth of the archaeological deposit, furnishing a correct guide for the following dig. The importance of this investigated area within the urban texture is also testified by the historical cartography and sources. In fact, the building where we worked is located in the sector of the town which from 1448 became part of the so-called "città malatestiana", restored by Sigismondo Malatesta, lord of Rimini (Fig. 12).





Fig. 12 – Senigallia, Via Gherardi: location of the excavation (black dot) related to the reconstruction of the medieval town.

The archaeological explorations confirmed the importance and centrality of the site for the knowledge of Senigallia during the Middle Age, allowing to recover a sequence of human settlements evidence which goes from the Roman to the Modern age, even if with some phases of abandonment and of building's regression (Fig. 13).

In particular, we identified three main periods: a first one dated back to the Republic-Roman age, a second dated back from the Late Antiquity to the 13th century and a third period which goes between the 15th to the end of the 16th century. The excavation allowed us to verify that the medieval structures used walls and floors of the roman phase as their foundations, showing the continuity of use of the same levels during the centuries. Only with the 15th century the succeeding floods will improve the soil level, as indicated before with the example of via Baroccio.

Also in this case, as a consequence of the preventive operation, a variation of the original planning has been done, in order to both to conserve the archaeological findings and to complete the renovations works of the modern building.

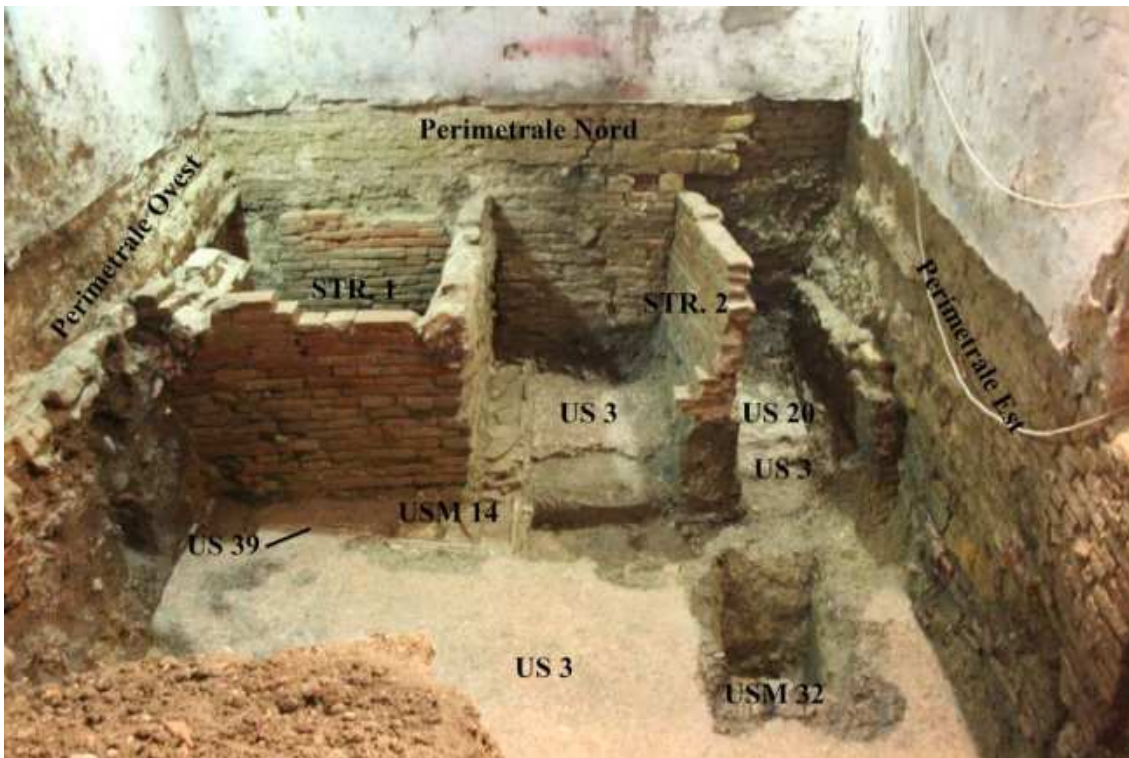


Fig. 13 – Senigallia, via Gherardi: the sequence of structures, which goes from the Roman to the Modern age.

## Conclusions

As indicated above, over the last two years of the Senigallia Urban Archaeological Project a new research of urban archaeology in Senigallia started.

The previous studies had localized the roman town nearby to the coastline. Our last research shows instead that it was founded more inland and with every probability at the confluence of the Misa River with the Penna torrent.

The detection of a sector of the urban walls has allowed us to suggest a new proposal of their route and getting to define with more precision the urban extension of the roman colony, which probably included an area of at least 18 hectares (Fig. 14).

The new research has brought us to a new hypothesis of reconstruction of the urban texture, which we have developed on the basis of the integration of old and new data, starting from the findings under the Theatre La Fenice and adding to these the last discoveries.

According to the new studies, the city blocks of the roman colony could be squares of 70 per 70 meters. At the confluence of the rivers a sanctuary of the first roman colonists was founded (Fig. 15).





Fig. 14 – A new hypothesis of the extension of the roman colony of *Sena Gallica*.



Fig. 15 – A new hypothesis of the urban texture of the roman colony of *Sena Gallica*.



We are aware that there is a lot of work still to do and our intention is to dedicate the next steps of the project will be dedicated to the following points:

- a more precise definition of the urban road system;
- the detection and localization of the roman Forum and of the main public buildings;
- the detection and definition of the port, which it could have had a great importance during the centuries, representing the main reason for the surviving of the city during the centuries, up to now.

## References

AA.VV (2010). Archeologia Preventiva. Manuale per gli operatori. Salerno.

De Donatis M., Lepore G, Susini S., Silani M., Boschi F., Savelli D., (2012). "Sistemi Informativi Geografici e Modellazione Tridimensionale per la Geo-Archeologia a Senigallia: nuove scoperte e nuove ipotesi", in Rend. On Line Soc. Geol. It., 19: 16-19.

Lepore G., (2012), "Il santuario dei primi coloni di Sena Gallica?", in Picus, XXXII: 77-106.

Lepore G., Belfiori F., Boschi F., Casci Ceccacci T., Silani M., (2012), "Nuovi dati sull'origine di Sena Gallica", in Ocnus 20: 155-180.

Lepore G., Ciuccarelli M.R., Assenti G., Belfiori F., Boschi F., Carra M.L., Casci Ceccacci T., De Donatis M., Maini E., Savelli D., Ravaioli E., Silani M., Visani F., (2012), "Progetto "Archeologia Urbana a Senigallia" I: le ricerche di Via Cavallotti", in Fasti On Line Documents & Research 12: 1-19.

Paci G., (2002), "Conseguenze storico-politiche della battaglia di Sentino per i popoli a nord del fiume Esino", in Poli D. (ed.), "La battaglia di Sentino. Scontro fra nazioni e incontro in una nazione", Roma: 81-93.

Salvini M., (2003), Area archeologica e Museo La Fenice. Guida, Senigallia.

## Imprint:

Proceedings of the 17th International Conference on Cultural Heritage and New Technologies 2012 (CHNT 17, 2012)

Vienna 2013

<http://www.chnt.at/proceedings-chnt-17/>

ISBN 978-3-200-03281-1

Editor/Publisher: Museen der Stadt Wien – Stadtarchäologie

Editorial Team: Wolfgang Börner, Susanne Uhlirz

The editor's office is not responsible for the linguistic correctness of the manuscripts.

Authors are responsible for the contents and copyrights of the illustrations/photographs...