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Humanities: approaches, contamination and perspectives

Conference proceedings, Verona 17-18th October 2019

a cura di

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DECODING HUMANITIES: AMBIVALENCE

Introduction

The academic disciplines falling under the definition of Humanities are the product of a long historical reflection on both method and subject of studies. Over time, scholars have renewed the interest for new factual and control-factual insights on separate fields of research, which has resulted in an impetus for deeper understanding, controversial methodological debates, and enriching discoveries. The current research within the Humanities has therefore developed in various and autonomous fields of study, which are nevertheless organized around interconnected bunch of research. As a matter of fact, specific research agendas can often lead researchers to interdisciplinary considerations, which cover different domains of knowledge. On the basis of this awareness, the international conference Humanities in the Third Millennium: approaches, contaminations, and perspectives aims to be an opportunity for reflection and discussion on the current challenges of the Humanities among young scholars and researchers.

The different research approaches adopted within the fields of Humanities share the effort of exploring the human potential which can be expressed in various forms, ranging from the comprehension of manuscripts and trans-media to the critical evaluation of ancient authors; from the study of foreign languages and literatures to the investigation of psycho-behavioural phenomena; from the development of new challenging methods to explore human history to arts and archaeological studies.

Nowadays, the Humanities are experiencing a challenging condition, as in the global marketplace of higher education, the disciplines

falling under this umbrella term are increasingly threatened by decreased funding. According to a report in Research Trends magazine, by Gali Halevu and Judit Bar-Ilan, international humanities funding has been in constant decline since 2009. In the United States, for instance, the financing for humanities research in 2011 was less than half of one percent of the amount dedicated to science and engineering research and development. Furthermore, in countries such as Japan, Australia, Italy and France a relative decline of about 25 percent of humanities degrees has been reported over the past few years (from Ella Delany, The New York Times 2013). Within this challenging academic framework, the international conference Humanities is the Third Millennium aims to provide young researchers with the opportunity to present their own work by encouraging interdisciplinary and transversal discussion which can lead to the evaluation of new approaches to conduct critical research in the fields of humanities.

At the beginning of 2019, the aim to create an opportunity for discussion for young PhD students of humanities disciplines has led to the organization of this conference. Under the supervision of the Doctoral School of Arts and Humanities of the University of Verona, we have assiduously worked as organizing committee to create an open, vibrant and stimulating floor for interdisciplinary discussions. This effort has resulted in the two-day international conference titled Humanities in the Third Millennium: approaches, contaminations, and perspectives: more than 30 speakers specialized in large number of disciplines have presented their work in front of a heterogeneous audience of students and researchers, providing important insights and food for thought on different subjects. Moments of discussion were organized in four broad thematic areas, which we believed to represent some of the cornerstones of the scientific research conducted in the fields of Humanities, namely: theoretical framework and methodology in human science; fragments and layers, hybridization and ambivalence. A call for papers organized in macro-thematic areas gave us the opportunity to encourage young PhD students to go beyond the traditional limits of their fields of research, and reflect on the interdisciplinarity and great potential of the humanities disciplines. The challenge has been enthusiastically accepted by many PhD students working in different fields of research:

arts, archaeology, philology, literature, performance studies, foreign literatures, languages, linguistics, education, philosophy and psychology. Two young researchers, Daniele Panizza and Caterina Previato, shared their experience with the audience of students and fellow researchers. This fruitful gathering of researchers coming from universities across different countries has led to the publication of the present volume, with the aim of leaving a trail of the experience lived in Verona on the 17th and 18th of October 2019.

The publication of these proceedings would not have been possible without the help and the suggestions of the Scientific Board of the conference: Professor Andrea Rodighiero, Professor Manuela Lavelli, Professor Attilio Mastrocinque, Professor Stefan Rabanus, and Professor Paolo Pellegrini. We also would like to thank our colleague Elia Marrucci as part of the Organizing Committee. A special expression of thanks is due to the reviewers who have kindly decided to take part at the blind peer-review process which have undergone the articles presented in this volume. We would also like to thank Mrs Catia Cordioli for her invaluable help throughout all the organizational steps of both the conference and the publication process and Mr Andrea Dilemmi who helped us with the design and layout of these proceedings. Lastly, particular thanks go to the all the authors and all the researchers who have attended the conference, who have made all this possible.

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The castrum of Zagonara. An archaeobotanical approach to the study of a medieval castle's human-environment dynamics

by Celeste Fiorotto, Marialetizia Carra, and Marco Cavalazzi

Abstract: The paper aims to show the results of the archaeobotanical analysis of some of the samples collected during the 2017/2018 excavation campaigns of the castrum of Zagonara (13th-15th centuries, Ravenna, Italy), and to highlight the importance of synthesizing information from different methodological approaches in order to better understand the human-environment dynamics characterising a rural territory. To date, the excavation campaigns (2017-ongoing) have already uncovered the presence of several buried archaeological structures (i.e. a church, dated to the 11th century, with its own cemetery, several functional areas, such as hearths and trash dumps, and part of the ancient ditch surrounding the castle). From these layers, several archaeobotanical samples have been collected, floated and sieved. The study of these samples has shed light on the human-environment relationship regarding this specific site, the vegetative potentialities of the territory and the dynamics of exploitation of plants by the community. Cereals are in general well represented in the samples, followed by Apiaceae and several genera of nuisance weeds typical of wet environments.

Keywords: archaeobotany, carpology, Late Middle Ages, castle, Ravenna, landscape

Introduction – Historical and archaeological background[1]

The archaeological investigations on the site of the castrum of Zagonara were promoted by the Bassa Romandiola Project, now the Ravenna

Landscape project (RA.LA. project) (Cavalazzi et al., 2018), with an artifact survey in 2009, while excavation activity started in 2017[2]. The RA. LA. project is a landscape archaeology project carried out by the University of Bologna, which, to date, has not only already discovered dozens of new sites, but has also brought to light the archaeological evidence of a rural settlement, totally unknown before, dated to the Early and High Middle Ages. Research results show a territory characterized by a considerable vitality and dynamism from Late Antiquity, resulting, during the High Middle Age, in the proliferation of rural settlements, mainly scattered but also nucleated, with an apex in the 11th century (Cavalazzi et al., 2018; Cavalazzi 2012). Between the end of the 12th and the beginning of the 13th centuries, all these newly discovered settlements seemed to undergo a gradual process of abandonment (with a few exceptions, such as the site of Zagonara) and reorganization, mainly due to the economic and political influence of the main territorial powers of the time (municipalities, comites dynasties and bishops) (Pinto, Cortonesi, Gelichi 2012, pp. 398-399). From the 13th century, nucleated settlements appear to be the main choice in terms of spatial distribution in the study area, both with the aggregation of previously scattered settlements and the establishment ex novo of borghi nuovi and borghi franchi (Comba, Settia 1993; Comba, Panero, Pinto 2002; Friedman, Pirillo 2004; Galetti, Pirillo 2011; Panero, Pinto, Pirillo 2017 pp. 17-43).

For what concerns the period between the 10th and the 13th centuries, the integration of the written sources with a landscape ecological approach[3] has revealed a territory widely cultivated by a heterogeneous agricultural economy, with crops intermixed with forests (silvo-pastoral farming) and wetlands, mainly exploited for fishing and hunting activities (Fiorotto 2018).

The castrum of Zagonara (Ravenna, Italy) is mentioned for the first time in 1217, when, according to a chronicler, the city of Faenza started building fortified settlements to consolidate its presence in the territory[4]. It was then later destroyed in the 15th century during a battle, the so-called "Battle of Zagonara", fought on the 28th of July, 1424, between the armies of the Republic of Florence and that of Filippo Maria Visconti, Duke of Milan (Mascanzoni 2004). The toponym is more ancient and connected to the presence in the area of a fundus called

Iacunati, first mentioned in the written sources in 950 CE (Fantuzzi 1801-1804, I, pp. 128-129). From the early 11th century, in the same area, a church was built and entitled to S. Andrea of Zagonara («ecclesiae S. Andree de Zagonaria») (Gaddoni, Zaccherini 1912, II, 771, year 1047, p. 371).

Several buried archaeological structures have already been uncovered: a church, dated to the 11th century, with its own cemetery (area 1000); several functional areas, such as hearths and trash dumps (area 3000, 13th – 15th ca); part of the ancient ditch surrounding the castle (area 4000, 13th – 15th ca); a probable residential area (area 5000 13th – 15th ca); and structures probably dating before the 11th century – earlier than the church (area 6000).

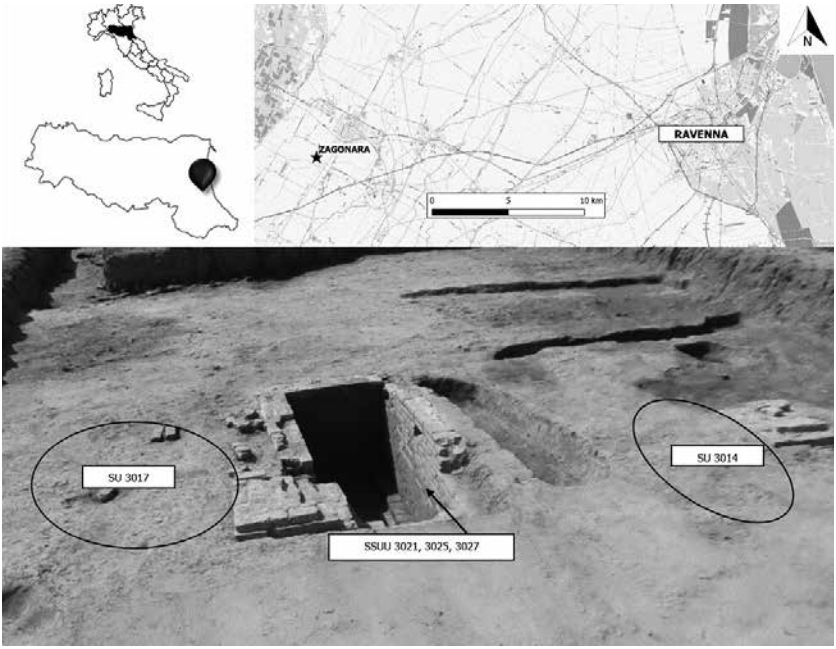

Fig. 1. Location of the site and stratigraphic units studied in the paper. SSUU 3021, 3025, 3027 (area 3000) belong to the tank in the center of the picture; SSUU 3014 and 3017 are the fires at the two sides of the structure.

The carpological analyses carried out on the samples of the area 3000 will be shown in the following paragraphs.

The archaeobotanical analysis[5]

Methodology. Archaeological flotation is a laboratory technique used to recover tiny artifacts, mainly plant remains and charcoals, by placing dried soil into water or on a screen of mesh wire cloth and pouring water on top. The light materials (light fraction) float up, leaving the heavy materials (stones, microliths, pottery) on the bottom.

For this research, the bucket method was applied. The soil samples collected were all of the same weight, around 10 lt., in order to maintain a standardized statistical approach. The samples were then processed at the Department of History, Culture and Civilization at the Ravenna Campus, University of Bologna. The second step of the analysis involved the sorting and counting of the palaeobotanic material, consisting in seeds, charcoals and animal bones, using a stereoscopic microscope, several atlases of seeds and fruits and reference collections; the heavy fraction that remained from the flotation was then sifted in order to collect pottery material.

By now, only the study of the carpological material has been completed, while the charcoal samples are still being investigated.

Carpological samples. All the carpological samples[6] come from the area 3000, a "productive area". SU 3021, 3025, 3027 are the filling layers of a tank made of bricks, whose purpose is still unclear, while SSUU 3014 and 3017 are two hearts closely connected to the tank and near two pillar bases (see fig. 1).

The carpological material coming from the tank was mainly mineralized. Mineralization is a natural process in which the minerals of the decaying organic matter (seeds, wood, bones, etc) are completely replaced by the minerals and phosphates of the deposit in which the organic matter is buried. The phosphate ions could come from a variety of sources including faunal remains, food residues, and excrement (Murphy 2014).

SU 3021 (see Table 1). This stratigraphic unit was at the top of the tank, just above the layers of the collapsed ceiling, made of roof tiles, and the collapsed side of the tank, which must have been higher in its original form. So, it is possible that its carpological signal could refer to the abandonment phase of the castle or to the spoliation activity. It is the layer of the tank with the richest carpological composition (tot. 364). Here, the most represented family is Apiaceae (57%), but due to the bad state of preservation of the carpological assemblage, in most cases it was impossible to determine the species, sometimes even the genus itself. Several remains of *Vitis vinifera L.* (11%; 31) are also present, along with some Poaceae genera (6%), such as *Triticum aestivum* (7) and *monococcum* (3), but also very few fragments of *Setaria sp.* (3) and *Panicum sp.* (3). The remaining samples are mainly composed of weeds families (Asteraceae 0,3%; Brassicaceae 1,7%; Chenopodiaceae 1,1 %; Caryophyllaceae 0,3%; Lamiaceae 0,3%; Solanaceae 1,1%; Urticaceae 0,3%), shrubs families (Caprifoliaceae 2,6%; Moraceae 4,4%; Rosaceae 2,2%) and pulses, represented by some fragments of *Lens culinaris* Medik. (5) and only two seeds of *Trifolium sp*.

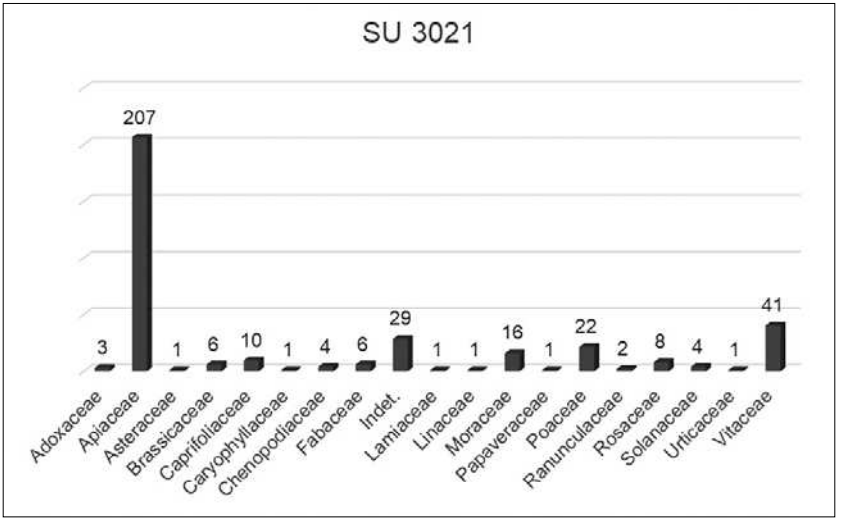

Table 1. SU 3021 total count of each family.

SU 3025 and 2027. SU 3025 was the layer just below the collapsing deposit (SU 3021), characterized by a concentration of semi-entire vessels in maiolica arcaica, zaffera a rilievo, common ware, and graffita arcaica. The findings allow to hypothesise a chronology between the end of 14th to 15th centuries.

SU 2027 constituted the bottom layer inside the tank, full of small animal bones, mainly chickens and game, extremely poor in carpological remains and pottery. Further C14 dating could be decisive in assessing an absolute chronology for the ancient activity of the tank.

Amongst the poor carpological assemblages of SSUU 3025 (tot. 9) and 3027 (tot. 3) we still find some Apiaceae genera, most of them undetermined and *Coriandrum sp*. in SU 3025 (1 composited fruit; 1 fragment). Poaceae are still present in small quantities, especially *Triticum aestivum* (3 in SU 3025) and *Bromus sp.* (1 in SU 3025; 1 in SU 3027). Lastly, just one seed of *Rumex sp.* was collected from the sample (SU 3025).

SSUU 3014 and 3017 (see Table 2 and 3). These two stratigraphic units were interpreted as fireplaces given the high amount of charcoals in the soil and the total predominance of charred botanical material collected in the samples. Both carpological assemblages show the predominance of the family of the Poaceae, both in cereals and other wild grasses.

SU 3014 (tot. 1263): T*riticum aestivum* is found at a high percentage (20,8%), followed by *monococcum* (9,2%) and *dicoccum* (8,1%). Cerealia, a label used to address all those caryopses which genera were unclear or impossible to determine, comprises 18% of the whole sample. Other families are poorly present, except for *Torilis sp*. (3,6%), *Chenopodium sp*. (5,5%), *Malva sp.* (1,1%) and *Rumex sp.* (1,2%).

SU 3017 (tot. 3682): among the cereals, the most frequent species is *Triticum aestivum/durum* (35,1%), but *Triticum monococcum* (0,54%) and *dicoccum* (0,62%) are present as well. Barley is also present at very low percentages (0,6%).

Wild grasses are well represented by Lolium (17%), followed by Bromus (1,5%). The sample composition is extremely miscellaneous, among which the most represented genera are *Chenopodium album L.* (13,8%), *Torilis sp.* (4,7%), *Carex sp.* (1,9%), *Rumex sp.* (2,8%), *Ranunculus sp*. (1,2%) and *Malva sp.* (3,6%). For the pulses family, a

small amount of several species of *Vicia sp.* (0,5%) and *Medicago sp.* (0,7%) were identified.

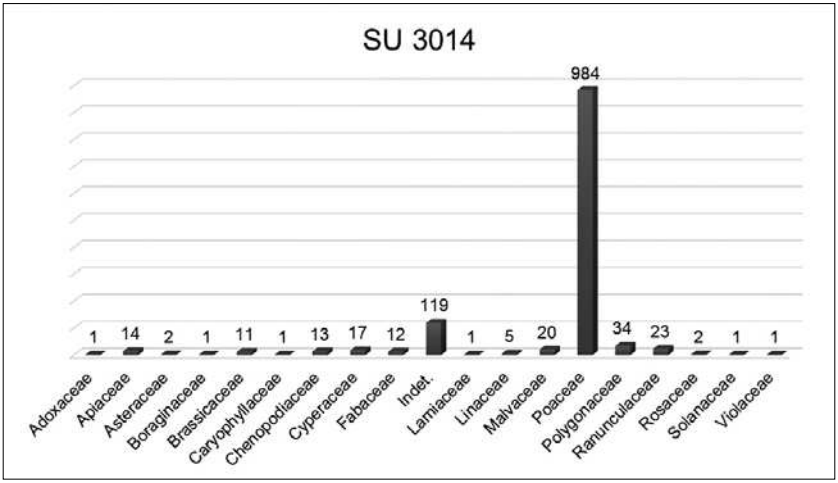

Table 2. SU 3014 total count of each family.

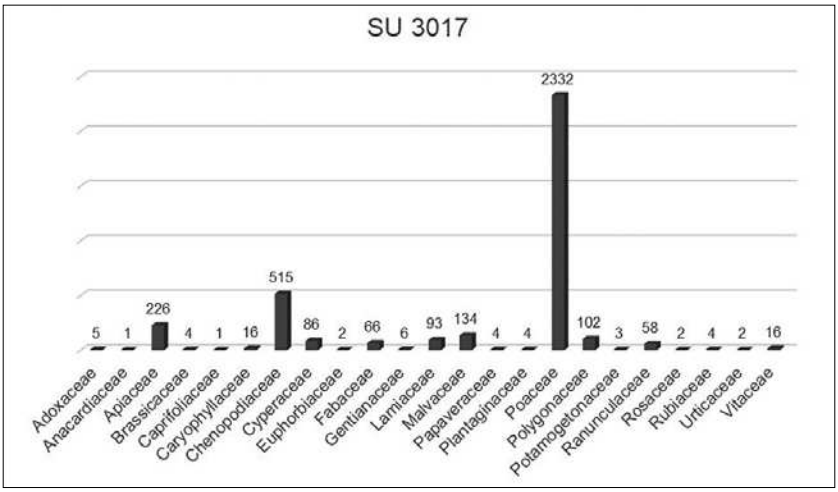

Table 3. SU 3017 total count of each family.

Discussion

The purpose of the brick tank is still under discussion. One of the hypotheses proposes that the water table, which should have been higher in that area in the past, could rise and fill the tank. Another possibility is that the tank was a sort of dump and the sandy bottom was meant for draining the sewage.

The structure could have been both: a water tank during the life of the castrum (13th-15th), and a dump during the abandonment phase (15th), mainly used as a sort of "compost bin", also considering the amount of mineralized remains found inside. In any case, given the proximity with two fireplaces (SSUU 3014 and 3017), it is plausible to think of the area as a part of the castle connected to butchery activities and/or cooking and food processing activities.

In SSUU 3021, 3025, 3027 the most represented family is Apiaceae, distributed over the sub-tropical, sub-temperate and temperate regions. The "Parsley Family" includes some edible plants with economic value, such as carrot and parsnip, plus more aromatic spices, such as anise, celery, coriander, cumin, fennel and parsley. They could indicate also the existence of vegetable gardens nearby, connected to the presence of a scattered or semi-nucleated settlement insisting on the area during the post-destruction phase (post 1424).

UUSS 3014 and 3017 show the predominance of the Poaceae family, both in cereals and other wild grasses. Among the cereals the most frequent species are Bread wheat (*T. aestivum/durum*), followed by Einkorn (*T. monococcum*) and Emmer (*T. dicoccum*). All the grains are charred, proving that the fires should have been mainly devoted to toasting/roasting activities, in order to free the hulled grains from the husks (*Hordeum sp.*, *T. monococcum* and *dicoccum*)[7]. The presence of all the three main types of wheat could lead to some hypotheses on the agricultural management of the surrounding fields. Bread wheat is the first to be ready for harvesting, in late May-June; then Einkorn, usually threshed around mid-July, early August; finally, Emmer, generally harvested around the month of August. *T. monococcum* and *dicoccum* could also have been used as forage, but the amount of grains sorted from the samples, together with the most common

bread wheat for baking activities and soups, could also suggest human consumption.

The wild grasses' taxa, such as *Lolium sp.* (ryegrass) and *Bromus sp.* (brome/chess grass), are usually referred to as fodder grasses, suggesting the existence of a stable nearby or, as is more probable, the area itself could have been a quite big structure used for housing cattle.

Fabaceae (pulses family) is mainly represented by *Vicia sp.* and several different fodder species, such as *Medicago* and *Trifolium*. Pulses are known for their self-fertilizing properties, leaving nutrients in the soils for the successive crops. The presence of them among the carpological assemblage could be the indication of crop rotation, or at least of some organization of the field management.

Among the plants used for human consumption, the pseudo-cereal *Chenopodium sp.* (goosefoot) could also be listed as one of them (613 fruits counted in total). It is a common, fast growing weed and is also a well-known food plant - gathered or cultivated - suitable for alluvial soil, easily processed (fruits were made into flour, but also the leaves and the young trunks were eaten as well) and also used as a thickener for soup or stew.

One interesting result of the study is the presence of a fair amount of *Malva sp.* seeds (148), especially in SSUU 3014 and 3017. It is a common nuisance weed, but it is also known for its medicinal properties. The problem here is the lack of the seed coat, which would have permitted the officinalis and sylvestris species to be distinguished from each other. Nonetheless, other officinal plants have been identified in the assemblages, such as *Alchemilla sp.*, *Stellaria sp.* (chickweed), *Galega officinalis L.* (goat's rue) and *Nasturtium officinale R. Br.* (watercress), which somewhat supports the hypothesis of the presence of a medicinal garden near the area.

Finally, the nuisance weeds (*Rumex sp.*, *Carex sp.*, *Persicaria sp.*, *Lotus sp.*, *Ranunculus sp.*) are mainly typical of wet environments, probably originating from the nearby ditch surrounding the castle, but also from the scattered marshland areas that could have been common in the territory around the site of the castrum.

Conclusion

In the late Middle Ages (14th-15th), the human-environment relationship in the site of the castrum of Zagonara is mainly shown by the strong anthropic presence on the territory, in which the castle would have been the nodal point for the agricultural and farming activities of the area. While the archaeobotanical remains depict the landscape around the site as a mosaic of cultivated fields divided by canals, meadows and vegetable gardens, they have also shed some light on the "post-destruction" life of the castle (15th)[8].

The high amount of carpological remains collected from abandonment phases (see SU 3021) could be evidence of continuity in the occupation of the area, probably with different settlement patterns than those that existed previously.

Further analyses on anthracological and pollen samples will surely shed light on the wood management system around the castle and the woodland composition of the surroundings.

Notes

1. The territory of the Bassa Romagna, in which the site of Zagonara is located, has a long history of archaeological and historical studies, but in order to have a general framework of this region during the Middle Ages see Pasquali 1984, Rabotti 1993, Mascanzoni 2005, Augenti et al. 2010. For a geomorphological overview of the area see Franceschelli and Marabini 2007, Abballe same volume.

2. Excavation concession DG-ABAP_SERV II_UO1|10/05/2019|0013264-P|, Soprintendenza Archeologia, Belle Arti e Paesaggio per le province di Ravenna, Forlì-Cesena e Rimini.

3. According to Landscape Ecology theory, there are two main elements characterizing a landscape: a matrix, one of the main landscape elements, the most extensive and connected, which plays a dominant role in the functioning of the landscape (e. g. a large cultivated area with small disturbance patches of trees); a patch, or landscape unit, usually defined as an area with relatively homogeneous environmental conditions (e. g. the portion of a forest characterized by a specific tree species). Nowadays, collaboration between ecologists and archaeologists is extremely necessary. First of all, archaeologists can provide ecologists with a long-term view of human land use; secondly, ecologists can provide information on the structure and function of an ecosystem, making it possible to advance reliable hypotheses on real-world complexities of socioecological systems. (Forman and Godron 1986, 83-187; Scharf 2014).

4. «Anno Domini MCCXVII, sub dominio et potestaria domini Thalamacii magni et honorabilis Cremonensis, viri prudentis ac sapientis, volentes siquidem Faventini [...] Fecerunt preterea munitiones frequentes in locis idoneis et necessariis ad resistendum predonibus bannitis diurnis atque nocturnis. Munierunt itaque subtus stratam: Solarolum, Guiliarinum, Zagonatum, Sanctam Agatham […]». MAGISTER TOLOSANUS, pp. 130-132.

5. For a general introduction about up-to-date summary of archaeobotany field recovery techniques, laboratory sorting, analysis and quantification methods see Fritz 2005.

6. The atlases used for the identification are: Beijerinck 1976; Berggren 1981; Schoch, Pawlik, Schweingruber 1988; Jacquat 1988; Anderberg 1994; Cappers, Bekker, Jans 2012; Cappers and Bekker 2013; the online versione of the Digital Plant Atlas http://dpa.web.rug.nl/.

7. In naked wheat the glumes are fragile and the rachis tough. On threshing the chaff breaks up, releasing the grains; in hulled wheat the grains are tightly enclosed within tough husks, the hull, and require more processing phases, like roasting and beating.

8. For the geoarchaeological background of the area around the site see Abballe (same volume). The archaeozoological remains have been studied by Laura Nalin in her Master thesis, showing that the domestic faunal assemblage was characterized by the prevalence of poultry, cattle and sheep/goat, while cats and dogs were less common. The importance of the agricultural activity in the area could be attested not only by the signs of wear observed on one bovine heel bone, but also by some evidence of bone tool manufacturing activities (Nalin 2020-2021).

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