



ZBORNIK INSTITUTA ZA
ARHEOLOGIJU

SERTA INSTITUTI
ARCHAEOLOGICI

KNJIGA
VOLUME 13

FORTIFICATIONS, DEFENCE SYSTEMS, STRUCTURES AND FEATURES IN THE PAST

FORTIFIKACIJE, OBRAMBENI SUSTAVI I STRUKTURE U PROŠLOSTI



Zagreb, 2019.

FORTIFICATIONS, DEFENCE SYSTEMS, STRUCTURES AND FEATURES IN THE PAST

Proceedings of the 4th International Scientific Conference on Mediaeval Archaeology of the Institute of Archaeology
Zagreb, 7th – 9th June 2017

Zagreb, 2019

ZBORNIK INSTITUTA ZA ARHEOLOGIJU
SERTA INSTITUTI ARCHAEOLOGICI
KNJIGA / VOLUME 13

PUBLISHER

Institut za arheologiju / Institute of Archaeology
Zagreb, Croatia

EDITORS-IN-CHIEF AND MANAGING EDITORS

Tatjana Tkalčec
Tajana Sekelj Ivančan
Siniša Krznar
Juraj Belaj

REVIEWERS

Krešimir Filipić
Miklós Takács

EDITORIAL BOARD

Vesna Bikić (Belgrade), István Feld (Budapest), Marija Karbić (Slavonski Brod), Jana Maříková-Kubková (Prague),
Katarina Katja Predovnik (Ljubljana), Adrian Andrei Rusu (Cluj-Napoca), Jasna Turkalj (Zagreb)

TRANSLATIONS AND TEXT EDITING

Signed below the text or translated/edited by the authors

PROOFREADING

Tatjana Tkalčec
Tajana Sekelj Ivančan
Siniša Krznar
Juraj Belaj

DESIGN AND LAYOUT

Hrvoje Jambreč

PRINTED BY

Tiskara Zelina d.d., Sv. I. Zelina

CIRCULATION

150

COVER PHOTO

Medvedgrad Castle, photo by Tomislav Veić

Financially supported by the Ministry of Science and Education of the Republic of Croatia

©Institut za arheologiju u Zagrebu. Sva prava pridržana

©Institute of Archaeology Zagreb. All rights reserved.

CIP zapis dostupan u računalnom katalogu Nacionalne i sveučilišne knjižnice u Zagrebu pod brojem
001023447

A CIP catalogue record for this book is available in the Online Catalogue of the National and University
Library in Zagreb as 001023447

ISBN 978-953-6064-47-2

FOREWORD	5
Josef Hložek, Petr Menšík, Milan Procházka CONTINUITY AND DISCONTINUITY OF HILL-TOP SETTLEMENTS IN SOUTHERN BOHEMIA	7
Snježana Karavanić, Daria Ložnjak Dizdar TRACES OF DEFENCE STRUCTURES ON DUBOVAC HILL IN THE LATE BRONZE AGE COMMUNICATION NETWORK ON THE SOUTHWESTERN EDGE OF THE PANNONIAN PLAIN	25
Barbara Horn, Branko Mušič, Matija Črešnar INNOVATIVE APPROACHES FOR UNDERSTANDING EARLY IRON AGE FORTIFICATIONS. EMPHASIS ON 2D SUBSURFACE MODELS IN THE LIGHT OF ELECTRICAL RESISTIVITY TOMOGRAPHY	45
Roman Křivánek FORTIFIED SITES IN BOHEMIAN ARCHAEOLOGY FROM THE VIEW OF APPLICATION OF NON-DESTRUCTIVE GEOPHYSICAL METHODS	55
Marija Buzov FORTIFICATIONS AND DEFENCE SYSTEMS IN MONTENEGRO	63
Marija D. Marić LATE ROMAN FORTIFICATIONS OF THE EASTERN PART OF THE <i>METALLA DARDANICA</i> IMPERIAL DOMAIN	75
Ana Azinović Bebek, Petar Sekulić LATE ANTIQUITY HILLTOP FORTRESS CRKVIŠĆE BUKOVLJE	91
Vladimir Sokol KUZELIN – LATE ANTIQUE CASTRUM NEAR ZAGREB	101
Perica Špehar REOCCUPATION OF THE LATE ANTIQUE FORTIFICATIONS ON THE CENTRAL BALKANS DURING THE EARLY MIDDLE AGES	113

Umberto Moscatelli DEFENSIVE SYSTEMS AND STRUCTURES IN CENTRAL EASTERN ITALY IN EARLY MIDDLE AGES: A PRELIMINARY APPROACH BASED ON DOCUMENTARY SOURCES	125
Gabriel Fusek, Michal Holeščák HILLFORT IN DIVINKA IN NW SLOVAKIA	137
Drahomíra Frolíková–Kaliszová THE TRANSVERSE FORTIFICATION OF THE PRAGUE CASTLE FROM THE 9 TH –11 TH CENTURY	147
Dejan Radičević FORTIFICATIONS ON THE BYZANTINE-HUNGARIAN DANUBE BORDER IN THE 11 TH AND 12 TH CENTURIES	157
Mária Wolf DATEN ÜBER DEN BURGENBAU DES 11.–13. JAHRHUNDERTS IN NORD-OST UNGARN	173
Krešimir Regan THE FORTIFICATIONS OF KNIN	187
Vladimir Peter Goss SOME MODELS OF EARLY POST-MIGRATION FORTIFICATIONS IN PANNONIAN CROATIA. VERY PRELIMINARY CONSIDERATIONS	201
Josip Višnjić TURNINA (TORRE DI BORASO) - CAROLINGIAN PERIOD FORTRESS AND HIGH MEDIEVAL KEEP	209
Andrej Janeš A PHANTOM MENACE DID THE MONGOL INVASION REALLY INFLUENCE STONE CASTLE BUILDING IN MEDIEVAL SLAVONIA?	225
Stephen Pow HUNGARY'S CASTLE DEFENSE STRATEGY IN THE AFTERMATH OF THE MONGOL INVASION (1241–1242)	239
Erdal Eser A 13 TH CENTURY ANATOLIAN DEFENSE STRUCTURE DIVRIĞI CASTLE	251

Stefano Cecamore FORTIFIED VILLAGES IN THE CENTRAL APENNINES ORIGIN AND DEVELOPMENT OF DEFENSIVE STRUCTURES ALONG THE BOUNDARY LINE WITH THE PAPAL STATES	265
Claudio Mazzanti THE REDISCOVER OF A ITALIAN FORTIFICATION: THE CANTELMOS CASTLE IN BUSSI SUL TIRINO	277
Laura Biasin FORTIFIED SETTLEMENTS IN FRIULI THE SELF-DEFENCE IN RURAL SETTINGS	291
Željko Peković, Kristina Babić DEFENSIVE SYSTEMS OF THE PILE GATES IN DUBROVNIK	299
Zorislav Horvat DEFENSIVE BUILDING (ARCHITECTURAL) ELEMENTS OF MEDIEVAL CASTLES IN CONTINENTAL CROATIA: ARROW SLITS, GUN LOOPS, CRENELLATIONS AND BATTLEMENTS	315
Tatjana Tkalčec EARTHWORK ELEMENTS OF DEFENSIVE SYSTEMS OF SMALL STRONGHOLDS IN THE KINGDOM OF SLAVONIA	333
Silvija Pisk THE GARIĆ CASTLE AND HONOR BANATUS	343
Boris Yanishevskiy THE ROAD FROM MOSCOW TO SMOLENSK THROUGH THE PROTVA RIVER AND THE UGRA RIVER: ORIGIN AND DEVELOPMENT	353
Piotr Lasek CASTLES IN CENTRAL, SOUTHERN, AND EASTERN MAZOVIA IN THE FIFTEENTH AND THE SIXTEENTH CENTURY. THE FEATURES OF DEFENCE	359
Milan Procházka AN OUTLINE OF TRANSFORMATION OF LATE MEDIEVAL FORTIFIED COMPLEXES ON THE BORDER OF WESTERN BOSNIA AND CROATIA	371

Duško Čikara SINGLE-SPACE MANOR HOUSES IN THE CONTEXT OF DEFENSE AND POSSIBLE GENESIS OF THE POST-MEDIEVAL NOBILITY COUNTRYSIDE ARCHITECTURE IN NW CROATIA	381
Ivana Škiljan VELIKI TABOR – FROM LATE MEDIEVAL FORTRESS TO RENAISSANCE CASTLE	393
Andrej Žmegač THE LONG TERM – THE EXAMPLE OF DALMATIAN VENETIAN FORTRESSES	411
Maria Felicia Mennella COLLECTIONS AND DRAWINGS: THE RENAISSANCE OF VENETIAN FORTIFICATIONS IN THE “STATO DA TERA AND STATO DA MAR”	419
Federico Bulfone Gransinigh EVOLUTION OF BORDER FORTIFICATIONS. FROM THE SIEGE ARCHITECTURE TO THE MODERN ONE THROUGHOUT THE SERENISSIMA AND THE EMPIRE (XVI–XVII CENTURY)	429
Uroš Košir DEFENDING THE EMPIRE: AUSTRO-HUNGARIAN GREAT WAR DEFENCE SYSTEMS IN SLOVENIA	439
David Štrmelj, Dejan Filipčič ADAPTATIONS OF THE RENAISSANCE CITY WALLS OF ZADAR INTO AIR RAID SHELTERS DURING THE ITALIAN REIGN	453

FOREWORD

This edition brings the conference papers from the 4th International Conference on Mediaeval Archaeology organised by the Institute of Archaeology in Zagreb in 2017. It is a result of efforts of the medievalists of the Institute of Archaeology to establish continued international gathering of the academic community in Zagreb in order to discuss current archaeological topics on mediaeval archeology. Each year the topic of the conference covers the specific issues of mediaeval archeology, and the conference proceedings are published in the edition *Zbornik Instituta za arheologiju / Serta Instituti Archaeologici* (ZIA). Proceedings of the 1st Conference *Groblja i pogrebni običaji u srednjem i ranom novom vijeku na prostoru sjeverne Hrvatske (Cemeteries and funeral customs in mediaeval and early modern period in the northern Croatia)*, held in 2014, have been published in ZIA, Vol. 4 in 2016. Proceedings of the 2nd Conference *Srednjovjekovna naselja u svjetlu arheoloških izvora (Mediaeval settlements in the light of archaeological sources)*, held in 2015, have been published in ZIA, Vol. 6 in 2017, and Proceedings of the 3rd Conference *Sacralization of Landscapes and sacred places*, held in 2017, have been published in ZIA, Vol. 10 in 2018.

The 4th International Scientific Conference on Mediaeval Archaeology **Fortifications, defence systems, structures and features in the past**, organized by the **Institute of Archaeology** in cooperation with **the Croatian Institute of History**, took place from the 7th till the 9th of June 2017 in Zagreb. Our wish was to encourage the researchers to present, through this topic, their knowledge on technical solutions of certain defensive elements of different fortifications, different manifestations and changes in the organization of defensive structures and systems over time, with regard to the causes of those changes and identification of possible patterns of defence systems, structures and features in a certain area, region or in a certain archaeological or historical period.

Although based on knowledge yielded mostly by the archaeological research, the topics of the Conference exceeded the basic framework of the archaeological discipline, and the it has been conceived as a multidisciplinary encounter of different ideas, approaches, methods, results and interpretations. Furthermore, the topics of the Conference have been open to wider archaeological and historical periods, not only the Middle Ages. We were interested in how different developmental processes took place before the Middle Ages (Prehistory, Roman Period), which inevitably affected the human life in the Middle Ages, and how different phenomena of the Mediaeval Time influenced the human life in the Modern Period as well.

The Conference has gathered large number of experts and professionals from different countries, who have presented their research, discussed the topic and exchanged their knowledge. As many as 107 participants took part in the conference, coming from Croatia, Hungary, Czech Republic, Italy, Slovenia, Serbia, Romania, Bosnia and Herzegovina, Poland, Russia, Slovakia, Turkey, Denmark, Germany, Macedonia and Austria. All in all, they contributed a total of 74 presentations by lectures and 14 posters. Within the Conference programme museum exhibition *Mediaeval Fortification Architecture* by the authors Ratko Ivanušec and Zorislav Horvat was opened at the Archaeological Museum in Zagreb, while at the Croatian Institute of History the photo-exhibition by Darko Antolković entitled *Encounters with Fortifications* has been presented. Conference participants have jointly visited the permanent exhibition of the Zagreb City Museum, and an expert excursion to Medvedgrad Castle has also been organized.

Since the aim of the scientific conference was to perceive the given topic in an interdisciplinary and multidisciplinary manner, we are pleased that in this book, besides the papers dealing with mediaeval fortifications, we have the opportunity to publish papers that study the defence systems in the preceding and following periods (Prehistory, Antiquity, Modern Period) and that archaeological studies are complemented by the studies of historians, art historians and architects as well.

Here we publish 37 reviewed presentations which were adapted into papers by their authors. By publishing the Proceedings in English, we have tried to provide to the authors the widest visibility in the international scientific community.

I would like to thank once again all the participants of the Conference for excellent cooperation, as well as to the institutions and individuals that helped make it a great success. I also thank the colleagues from the Institute of Archaeology for their help in the organization of the conference and the publication of these proceedings. We are also grateful to the Croatian Institute of History for their support in the organization of the Conference, as well as to the Archaeological Museum in Zagreb and the Zagreb City Museum for the accompanying programmes of the Conference. Acknowledgements go also to the reviewers and the members of the Editorial board of the volume. The publication of the proceedings would not be possible without the financial support of the Croatian Ministry of Science and Education.

We sincerely hope that the conference papers gathered in this publication are going to inspire archaeologists and colleagues from various scientific disciplines in their further research of the fortifications and different defence systems, structures and features dating from the Middle Ages as well as from other archaeological and historical periods.

Tatjana Tkalčec

DEFENSIVE SYSTEMS AND STRUCTURES IN CENTRAL EASTERN ITALY IN EARLY MIDDLE AGES: A PRELIMINARY APPROACH BASED ON DOCUMENTARY SOURCES

The theme of the development of systems and defensive structures in Early Middle Ages and Middle Ages has never been appreciated by archaeologists in this side of Italy. Some recent scientific contributions pay more attention on history or on the walls building techniques. However, even if the lack of archaeological excavation makes it difficult the approach to this topic, a comparative analysis of documentary sources and material evidences in fortified contexts paves the way to some interesting remarks. The written sources of early Middle Ages provide a discontinuous patchwork mostly related to the events that accompanied the growth of ecclesiastical power (Abbeys and Roman Church). Sometimes we have only the factual reference to some fortification event, like in the case of the monks of the Farfa Abbey, when they fecerunt castellum to defend themselves against Saracen attacks. Sometimes, on the contrary, we find specific references to the building material of the fortification.

The archaeological sources consist of earthworks or remains of castle (more or less ruined...), usually reflecting building projects dating back to the Late Middle Ages, but often put in the same places where the oldest defences had been raised. Based on those data, the author seeks to identify the tendencies in the topographical choices of the earliest fortifications, as well as in the technical solutions chosen.

Key words: medieval archaeology, early middle ages, Marche, medieval settlement, encastellation

INTRODUCTION

The context concerned in this paper is the inland of southern part of Le Marche, a mountain area affected by the activities of the R.I.M.E.M. Project (Ricerche sugli Insediamenti Medievali nell'Entroterra delle Marche - Research on Medieval Settlements in the inland of the Marche Region) (Fig. 1).

This area is characterized by a significant number of castles, spread since the 9th–10th centuries, as shown in documentary sources, but in the Late Middle Ages most of them were rebuilt on the earliest fortifications or renovated, often during the Seigniori of the Da Varano family, Lords of Camerino (Bernacchia 2002; Antongirolami 2005) (Fig. 2).

The presence of newer buildings in the same locations of previous fortifications is a major problem in this Region, because of the lack of archaeological background. In fact, most archaeologists working here have paid and pay their attention to the Roman or pre-Roman Archaeology¹; the interest in medieval archaeology is a quite recent phenomenon, mainly thanks to the systematic research work of the Macerata and Urbino Universities (Gnesi et al. 2007; Moscatelli 2014; Moscatelli 2015; Sacco 2016). However, the development of defence systems in the Early Middle Ages and high Middle Ages has never been dealt with, apart from some non-scientific publications. Recent papers regard broader historical issues (Bernacchia 2002; Antongirolami 2005; Virgili 2014) or focus on local contexts or on building techniques (Ermeti-Sacco 2007; D'Ulizia 2008; Antongirolami, D'Ulizia 2015; Antongirolami et al. 2015).

1 Actually, at present there are only two groups who have been operating for the last few years: the team of Anna Lia Ermeti And Daniele Sacco (Urbino University), in the northern area of the Marche Region, and the R.I.M.E.M. team, for the past ten years engaged in archaeological surveys. Despite the shortage of diagnostic pottery, the surface artefacts are the only way to start building a general frame of the rural settlement, but obviously they are useless for the issue dealt with here.

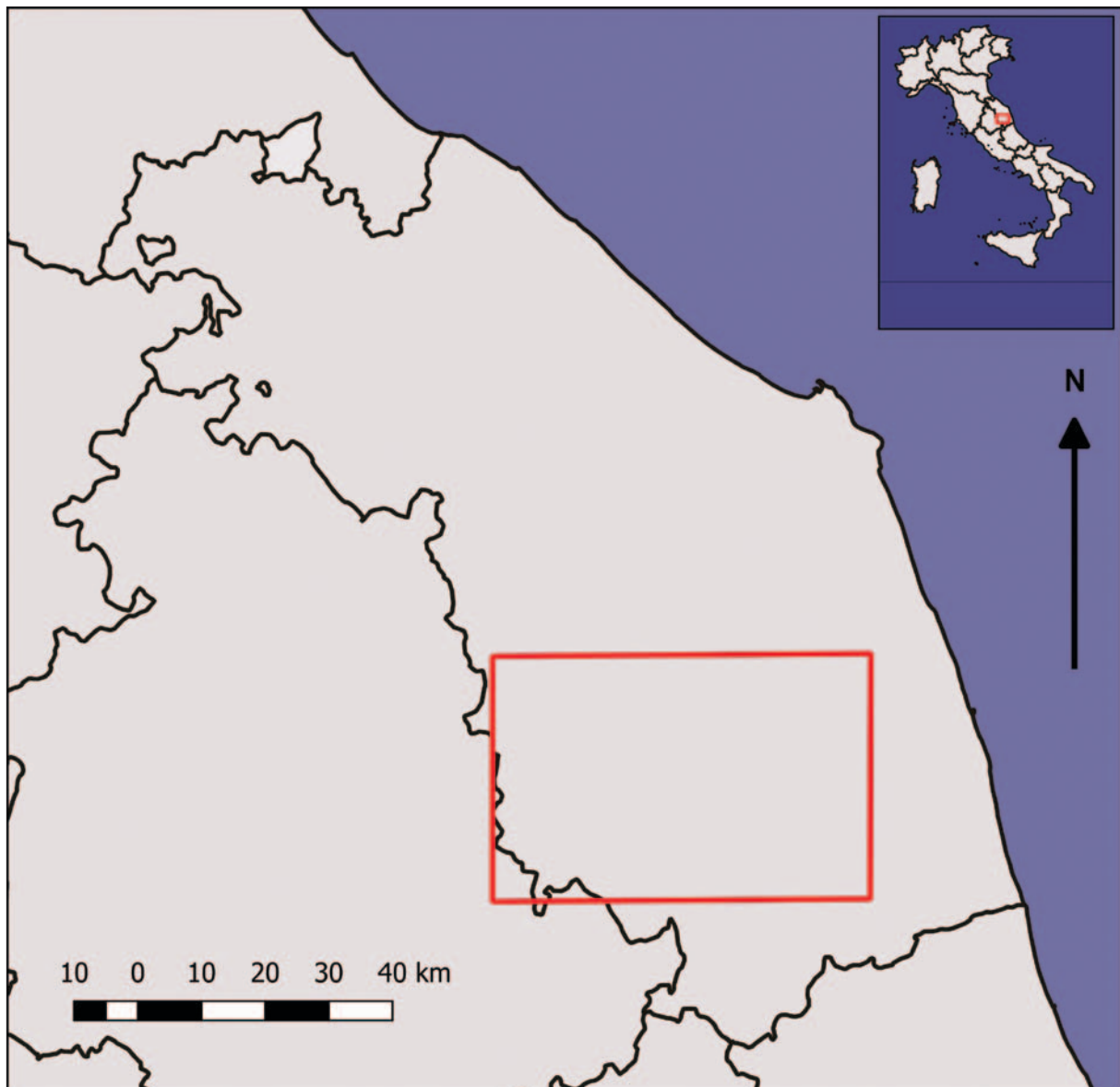


Fig. 1 Position of the area concerned in this paper

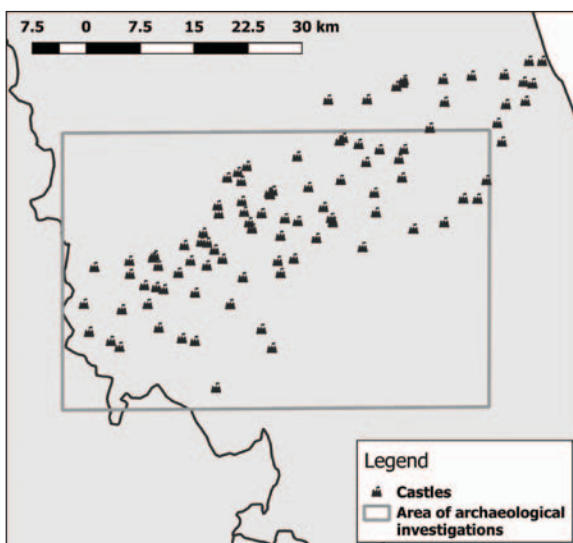


Fig. 2 Map of the castles in the Chianti Valley according to Antongirolami 2005 (modified by: U. Moscatelli)

My comments will be based on the period from the end of the 9th to the 11th century but, in simple terms, at present time all we know about this period arise from documentary sources only, which are mainly:

- the texts from the Farfa Archives (*Regestum Farfense*, *Chronicon Farfensis*, *Liber Largitorius*), the abbey that enlarged its power and territories during the early Middle Ages (Giorgi, Balzani, 1879–1914; Balzani 1903; Zucchetti 1913–1932);
- the *Chronicon Casauriense* (in: Muratori 1726);
- the *Liber Iurium* of the episcopate and of the town of Fermo, the most important town in this area in the early, high and late Middle Ages (Avarucci et al. 1996).

These sources provide us an important framework which is, however, partial and discontinuous. Written documents represent

a major resource because they draw a significant outline, but it is essential to take their limits into account.

First of all, they are the result of an occasional selection with regard to the way they were produced and to the vicissitudes that have caused their loss or their survival until nowadays. Moreover, most documents do not contain any foundation deeds, but references to castles that already existed; therefore in the majority of cases it is impossible to assess when a castle was built. In addition to this, as several scholars have properly underlined, the term “castle” was given to manors created by local lords to affirm their lordship (Farinelli 2007: 123), and not simply to settlements equipped with more or less complex fortifications, like for example the *curtis* itself or the seigniorial residences of the emerging aristocracies (Farinelli 2007: 104; Virgili 2014: 61). Nonetheless documentary sources are not useful to shed light on this subject, apart from some occasional hints; this could be the case of an *Isula qui fuit de Treseo*, mentioned in 1066 as a place, not as a castle, but equipped with *ripe et carbonarie et cum introitu et exitu suo* (Tab. 1).

Finally, the early medieval texts are sparing with details relating to material structures of castles: as a matter of fact, the information they provide is usually repetitive and insidious, because of lexical vagueness.

In those circumstances, this paper represents a contribution to the research on early middle ages, with specific reference to the period in which the aristocratic classes and other powers started to built castles at the end of a protracted process of reorganization of the landed property.

THE FORMATION OF THE CASTLES FROM THE PERSPECTIVE OF THE DOCUMENTARY SOURCES

The castles with the oldest written records are a district called *ministerium de Castello* (in 897), and Santa Vittoria in Matenano (end of the 9th century; on the ministeria see: Fumagalli 1994: 19–21; Pacini 2000: 28–29, 137–157).

The first one is generally identified with a place named Case Corvello, but the identification proposed is doubtful, because there are no visible remains at all.

The castle of S. Vittoria in Matenano is almost contemporary. It is nowadays a small town between the valleys of Tenna and Aso rivers, near to which was the monastery of S. Ippolito, the oldest property of Farfa, mentioned by the Lombard King Desiderio in a diploma going back to the year 762, where the king himself confirmed to the abbot Alano some goods given in two previous *chartulae* (*Reg. Farf.*, II: 55; Galiè 1987; Crocetti 1996; Pacini 2000: 351–352). In subsequent years, Farfa increased its possessions, but in the last ten years of the 9th century the Abbey was attacked by the Saracens; in 898 the monks escaped, divided in three different groups; the main one, led by Abbot Petrus, reached the *Picenum* and retreated in S. Ippolito Monastery (on the Abbey: Leggio 2008). Shortly after, however, the Saracen threat re-emerged, so that the Abbot decided to encastellate a hill called *Mons Matenanus* (today S. Vittoria in Matenano). The events are narrated in the *Destructio Monasterii Farfensis*:

Prelibatus vero abbas, ut prefati sumus, ad comitatum Firmanum veniens, in monasterio sancti Hippoliti et sancti Iohannis, quod dicitur in Silva, cepit habitare cum fratribus quos secum de Sabinis duxerat et quos ibi invenerat, lugens ac dolens de sui monasterii desolatione. His ita peractis, ceperunt prelibati Sarraceni infra terminos comitatus Firmani ad depredandum introire. Qua de causa predictus abbas in timorem iterum versus, coadunatis monacis et militibus, fecerunt castellum in Matenano monte (Destructio: 32).

This is clearly a very important passage, because only rarely written record mention the founding period / year of a castle expressly. Furthermore, the words of the *Destructio* suggest the trends followed in order to choose a place suitable for a castle: *Mons Matenanus* is a steep sandstone peak which could easily be fortified, close enough to the Monastery. Finally, the rapidity with which the monks from Farfa seem to have reacted to the Saracens threat suggests that timber structures were used, even though the passage from the *Destructio* does not provide any detail on the subject (on earthworks and timber structures in Italy see: Settia et al. 2013).

Unfortunately, although *Ministerium de Castello* and *Mons Matenanus* allow us to establish that the introduction of castles started from the end of the 9th century, there are very few texts dating back to the 10th century, consequently we cannot follow the process of encastellation in its development.

On the other hand, some documents illustrate the general features of the landscape rather effectively. In particular, a document dated 977 gives us a window on the landed property along the upper valleys of Tenna and Aso rivers. This is a complex transaction through which the Bishop of Firmum grants a considerable amount of lands to *Mainardo comes filius quondam Siffredi* and grandson of another Mainardus, who probably lived between the end of the 9th and the beginning

Year	n.	Definition	Name	Area	Access?	Ripa	Carbonaria	Clusimen	Gate	Gate	Murus	Turris
1022	27	castellum	de Posulano	Macerata								<i>cum turre</i>
1028	75	castellum	<i>De Saltariccia</i>	Lapedona			carvonaria		introitu	introitu	mura	
1034	54	castellum	<i>de Stablo</i>						introitu	exitu		
1034	54	castellum	<i>de Monticelli</i>									<i>cum turre</i>
1035	25	castellum	<i>de Monticelli</i>	S. Elpidio a M.					introitu	exitu		
1054	36	castellum	<i>de Petra</i>	Civitanova			carvonarie	clusimine	introitu	exitu		
1054	328	<i>poium</i>	<i>de Monte Granario</i>	Montegranaro			carvonari					
1055	85	<i>podium</i>	?									<i>cum turre</i>
1055	93	castellum	<i>de Cabiano</i>	Montecosaro			carvonarie		introitu	exortu		
1055	357	castellum	<i>de Popetiano</i>	Macerata	<i>portis</i>		carbonariis					
1060	47	<i>poium vel castellum</i>	<i>quod vocatur Monte Guarmini</i>	Rocca Monte Varmine		ripe	carvonarie		introitu	exitu		
1061	39	<i>poium vel castellum</i>	<i>qui vocatur Treveniano</i>	Montottone		ripe	carvonarie		introitu	exitu		
1062	20	castellum	<i>de Laccio</i>		<i>portis</i>		carvonarie	clusimine	introitu	exitu		
1062	20	castellum	<i>de Cirroli</i>									
1062	20	castellum	<i>de Loro</i>		<i>portis</i>		carvonarie	clusimine	introitu	exitu		
1062	20	castellum	<i>Palme</i>		<i>portis</i>		carvonarie	clusimine	introitu	exitu		
1062	74	castellum	<i>de S. Helpidio</i>		<i>portis</i>		carvonarie	clusimine	introitu	exitu		
1062	74	castellum	<i>qui vocatur Gruca</i>		<i>porta</i>		carvonaria	clusimine	introitu	exitu		
1063	52	<i>turre</i>	<i>de Tronto</i>		<i>portes</i>		carvonarie	clusimine	introitu	exitu		
1063	52	castellum	<i>M.S. Martini</i>		<i>portes</i>		carvonarie	clusimine				
1063	52	<i>poium</i>	<i>Iguani</i>						Introitu	exitu		
1063	103	castellum	<i>Colle Celeri</i>	?		ripe	carbonarie		introita	exorta		
1063	103	castellum	<i>qui vocatur Montone</i>	Ripatransone		ripe	carbonarie		introita	exorta		
1063	103	castellum	<i>qui vocatur Mor-teto</i>	Ripatransone		ripe	carbonarie		introita	exorta		
1063	103	castellum	<i>qui vocatur Monte Bovario</i>	Ripatransone		ripe	carbonarie		introita	exorta		
1063	103	castellum	<i>qui vocatur Sancta Cruce</i>	?		ripe	carbonarie		introita	exorta		
1063	103	castellum	<i>qui vocatur Cam-porum</i>	Carassai		ripe	carbonarie		introita	exorta		

Year	n.	Definition	Name	Area	Access?	Ripa	Carbonaria	Clusimen	Gate	Gate	Murus	Turris
1063	103	<i>castellum</i>	<i>qui vocatur Mar-celliano</i>	Carassai		ripe	carbonarie		introita	exoita		
1063	103	<i>castellum</i>	<i>qui vocatur Casale</i>	S. Claudio Ch.		ripe	carbonarie		introitu	exitu		
1065	73	<i>castellum</i>	<i>de lu Monte</i>	?	<i>porta</i>		carvonarie	clusimine	introitu	exitu		
1066	95	<i>castellum</i>	<i>de Paterno</i>	Ripatransone		ripe	carbonarie		introitu	exitu		
1066	95	?	<i>Isula</i>	S. Claudio Ch.		ripe	carbonarie		introitu	exitu		
1070	32	<i>castellum</i>	<i>de filiis quondam Bonezone</i>	Montolmo			carvonarie		introitu	exitu	muro	
1079	19	<i>castellum</i>	<i>S. Helpidii</i>	S. Elpidio a M.	<i>porta</i>		carvonaria	clusimine	introitu	exitu		
1083	38	<i>castellum</i>	<i>de Corlliano</i>	Potenza Pic.	<i>portis</i>		carvonarie	clusimine	introitu	exitu		
1083	227	<i>castellum</i>	<i>Ilce</i>	Macerata	<i>porte</i>		carvonarie	clusimine				
1083	227	<i>castellum</i>	<i>Pretezioli</i>	Civitanova	<i>porta</i>		carvonaria		introitu	exitu		
1095	92	<i>castellum</i>	<i>de Tusiano</i>		<i>portes</i>		carvonarie	clusimine	introitu	soitu		
1095	92	<i>castellum</i>	<i>de Frasso</i>		<i>portes</i>		carvonarie	clusimine	introitu	soitu		
1095	92	<i>castellum</i>	<i>qui vocatur Monte</i>					clusimine	introitu	soitu		
1097	28	<i>castellum</i>	<i>qui vocatur Illice</i>	Macerata		ripa	carbonarie		introitu	exitu		
1099	61	<i>castellum</i>	<i>qui vocatur Ro-fiano</i>	Ripatransone		ripe	carvonarie		introitu	exitu		
1100	88	<i>castellum</i>	<i>de filiis quondam Teuzoni</i>		<i>porta</i>		carvonaria	clusimine				
1121	219	<i>mons</i>	<i>qui vocatur Tisiano</i>	?		ripe	carvonarie		introito	exitu		

Tab. 1 List of defensive structures according to the *Liber lurium*

of the 10th century. *Mainardus* the elder was probably a *miles* (maybe from a Frankish family), like the *milites* to which refers the above-mentioned passage of the *Destructio*, thus a member of an aristocratic class (Moscatelli, Ravaschieri 2016; on the aristocracies on this region: Archetti Giampaolini 1987; Saracco Previdi 2006).

In the document the terms *fundus, curtis, res/terra* prevail, while no castles are mentioned. Nonetheless this absence is not especially significant considering the purpose of the transaction that concerned real estates. This should bring us to the settlement patterns before encastellation and to the meaning of *fundus, casalis, casa, terra, villa*, focus of a wider research programme that I can't discuss here; anyway, this is the general framework in which a process of landed property reorganization started, the final stage of which was the castle (on this topic: Castagnetti 1980; Saracco Previdi 1985; Migliario 1992; Farinelli 2000; Pasquali 2002; Francovich, Hodges 2003: 103–104; Francovich 2004; Farinelli 2007: 100; Di Muro 2008; Di Muro 2012; Farinelli, Pocetti 2012; Loré 2012; Volpe et al. 2012; Ficco 2015; Moscatelli, Ravaschieri 2016).

THE MATERIAL STRUCTURES OF CASTLES: VERY FEW ARCHAEOLOGY EXPLORATIONS AND TEXT

Some useful indications about the material structures of the firsts castles are provided by the documents related to the 11th century; one the main sources for the southern part of Le Marche is the *Liber lurium*, a collection of documents from 977 to 1266, related to the episcopate and to the town of Fermo (Avarucci et al. 1996).

Even though the papers within *Liber lurium* have already been analyzed in recent works together with some other relevant documents concerning the remaining areas of the Marche region (e.g.: Bernacchia 2002; 2006; Antongirolami 2005; Virgili 2014), it is however possible to enhance some details which probably have been underestimated so far.

Therefore, *Liber lurium* contains references to about 200 castles; nearly a third of them are mentioned in the period taken into examination. Nevertheless, not all documents contain information related to the fortification system; useful cases are consequently reduced to 44.

A first basic question concerns the technical terms used in documents to indicate fortified structures: *castellum, castrum, podium (poium), castellare, mons* (a single case). Since essential data is missing at the time being, I am not going to go over the aspects related to the development of such terms here, which are clearly used as synonyms sometimes. As a matter of fact, it is not evident whether the differences in terms hide a typological or lexical evolution. As for *castrum* and *castellum*, even recently, Aldo Settia has underlined the ambiguity with which both words are used in documentary sources (Settia 2017: 9–12).

Another case is related to *podium (dossum* in northern Italy), a word that, according to Aldo Settia, would indicate a non-rocky hill suitable for the construction of a castle (Settia 1984: 193). According to Roberto Bernacchia, *podium* could be “linked to a primitive phase of an encastellation which has not always been overcome” (Bernacchia 2002–2003: 152–154), but it is a theory only.

The relationship between *podium* and *castellare* is not very clear; some documents provide descriptions like these:

- *medietatem de ipso castellare de Ripa [...] cum medietate de ipsa turre, et cum pertinentia suprascripti podii (Reg. Farf., IV, n. 739, year 1039);*

- *cum ripe et carbonarie ... et uno poio qui fuit castellare (Avarucci et al. 1996: 1, n. 95, year 1066).*

Castellare and *podium* seem therefore to be used as synonyms; moreover, in the second case it is possible to recognize a lexical switch from *castellare* to *podium*. On the other hand, in later documents, *castellare* appears as a synonym of *castellum*.

As for the words used to indicate material structures, the most frequent terms are *porta, ripa, carbonaria* (or *carbonaria*), *clusimen, introitus, exitus*. Only rarely is *turris* used (3 cases out of 44) together with references to masonry (1 case). The Fig. 3 summarizes the data percentage of the single terms or combination of terms.

Finally, expressions like *cum omni hedificio, cum omnia edificia* are barely relevant because they are too general and references to churches do not provide any contribution to the subject of this conference (Bernacchia 2002–2003; Settia 1984).

A quite debated matter is linked to the meaning of *carbonaria (carbonaria)*, a word which occurs in 35 cases out of 44 and that sometimes we find in the following centuries.

Aldo Settia considers this term perfectly equivalent to *spaldum/spoldum* of northern Italy; it was first used to indicate an embankment facing a fortification work (an *agger*) and later, during the 12th century, “the space between the moat and

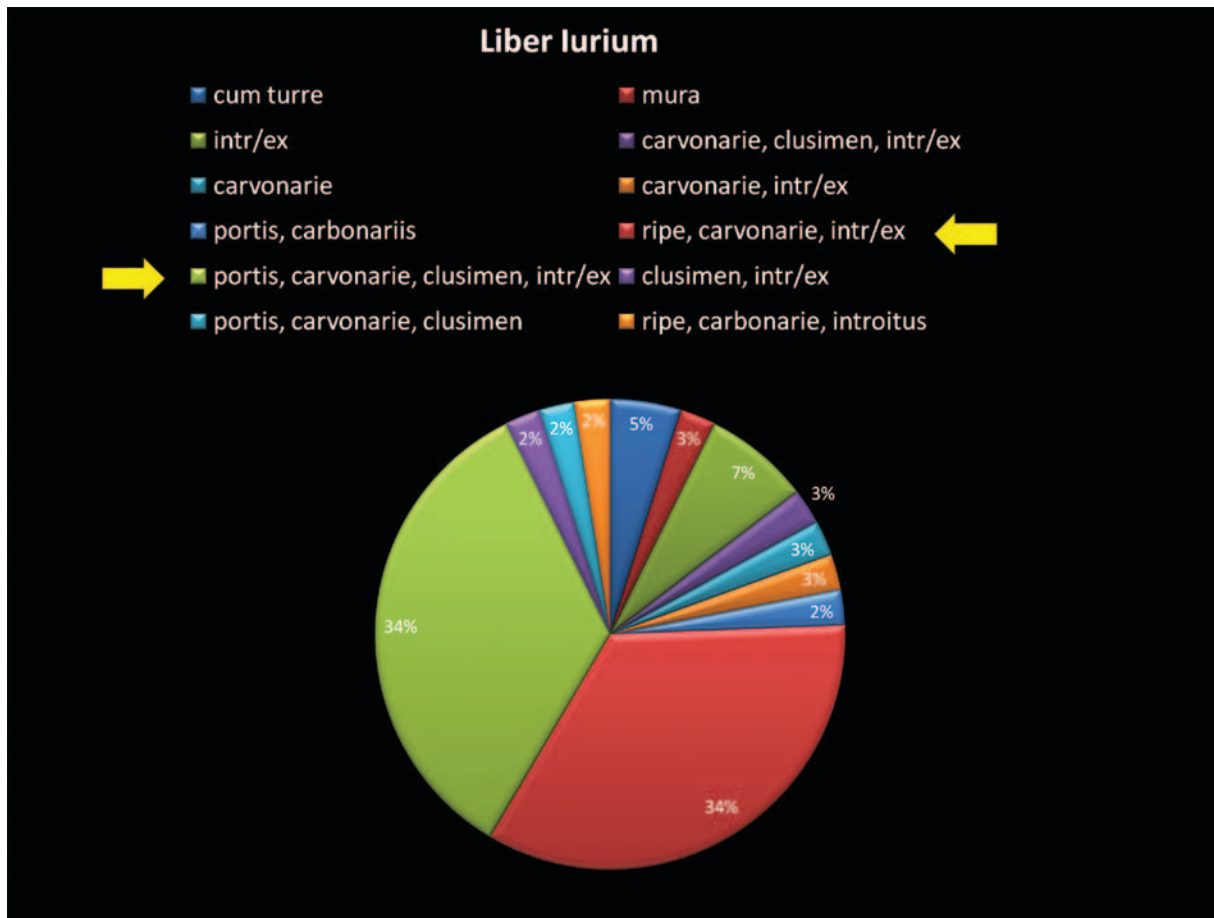


Fig. 3 The material structures of the castles in the *Liber lurium*

the wall, within which houses and other buildings can be found" (Settia 1984: 203; Antongirolami 2005). Nevertheless, not all scholars agree on this question: some of them believe that it is the moat (Settia 1984: 240, n. 133), some others assume that moat was the original significance, before the word indicated the area close to the moat or included between the moat and the walls (Francovich 1973: 56). Such an interpretation would correspond to the indications contained in the *Glossario dello Stato della Chiesa*² (Sella 1944: 124, s.v. *carbonaria*) and would explain the absence of any references to moats (*fossis, fosaris, fossa, fosato, foveis*), which appear north of the area examined starting from the 10th century (Bernacchia 2002–2003). It is possible that *carvonaria* was used to indicate, at least in the older documents, the complex moat-agger, as suggested by Roberto Bernacchia (Bernacchia 2002–2003: 152–154 s.). Despite the ambiguity of medieval documents, this hypothesis could be supported by the frequent association (16 cases out of 44) of *carvonaria* with *porta/portes*, that has been underestimated in the previous studies (Bernacchia 2002; 2002–2003; Antongirolami 2005: 342).

As for the other terms and their combination, in 12 cases out of 16, *porta/portes* appears together with *introitus/exitus*, often in turn associated with *clusimen*. Therefore I suggest that *porta/portes* is indicating the access to the moat-agger system, and that the term *introitus/exitus* refers to the gates located in the inner fence.

This latter probably corresponds to *clusimen*, a word that is mentioned frequently (16 cases out of 44) (Bernacchia 2002–2003: 152–154; Antongirolami 2005: 342; Moscatelli 2006: 193–194; Virgili 2014). *Clusimen* is comparable to *tonimen*, well-known in northern Italy and in Tuscany (Settia 1984: 198–204; 214–218; Augenti 2000: 47), whereas in Lazio *redimen* appears, even if in later documents (Del Lungo 2004: 24–25).

The main question is: how was the *clusimen* made? In this period and in this area, mentions of masonry structures are rare: only 2 cases out of 44 (in 1028 and in 1070). Explicit information occurs in the following centuries, such as for example, in a document dated 1199, where *Presbiter*, bishop of *Firmum*, states that the *palatium castris Montis Sancti [...] debet esse bene copertum et suffrenatum arena et calcina et terra* (Avarucci et al. 1996: 11). Moreover, the use of *clusimen* seems not go

² *Fossatum idest carbonaria*, with reference to some documents of the *Regestum Farfense*.

beyond the 11th century; as a matter of fact, the latest mention of *clusimen* dates back to 1100. Therefore, since systematic excavations are lacking, there are reasonable grounds to believe that *clusimen* could indicate a timber palisade (on this topic see: Settia et al. 2013).

As regards to the patterns of defensive structures, in 15 cases out of 16 *clusimen* appears together with *carbonaria*. In 13 cases out of 16 the castles are equipped with *porta*, *carvonaria*, *clusimen*, *introitus* and *exitus*, then with a defence system consisting of an external line made up of earthworks (moat and rampart), provided with its own access, and of a timber inner fence with its doors.

A final consideration concerns the term *ripa* (escarpment), appearing in 15 cases out of 44, always together with *carbonaria*, *introitus*, *exitus* and **never** together with *clusimen* or with any other terms referring to an enclosure.

As mentioned above, any comparative analysis between archaeological and documentary source is impractical at present. However, as for the size of three castles, we may perhaps to draw some useful remarks.

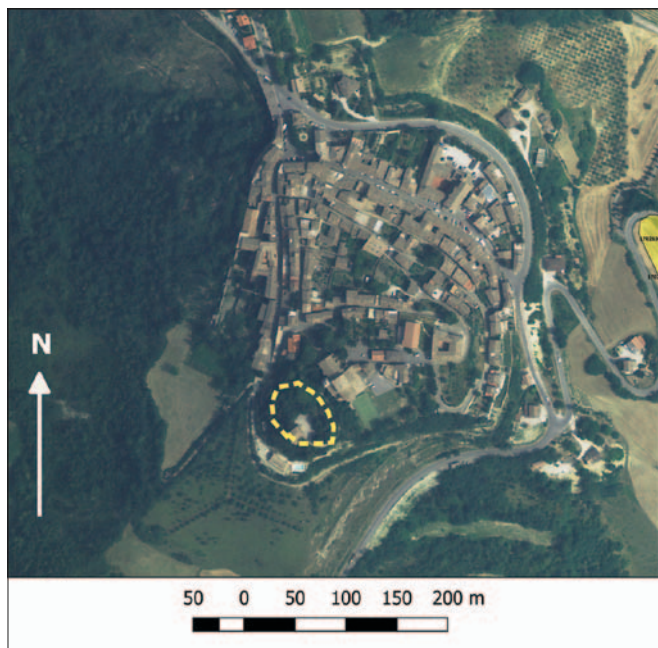


Fig. 4 The original area of the Matenano castle (yellow dotted line) (orthophoto by the National Geportal of the Italian Ministry of Environment and Protection of Land and Sea, modification by: U. Moscatelli)

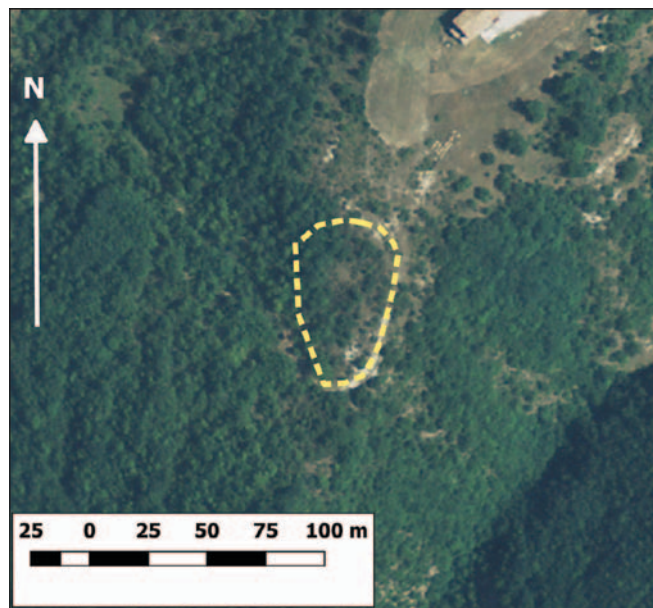


Fig. 5 The area of the *curtis* in Castello castle (yellow dotted line) (orthophoto by the National Geportal of the Italian Ministry of Environment and Protection of Land and Sea, modification by: U. Moscatelli)

At Santa Vittoria in Matenano the original area of the castle is recognizable on the top of the hill (the *mons Matenanus*), characterized by a little peak with a surface area of about 0,23 hectares (Fig. 4). At present the Church of S. Vittoria is only visible, while the remains of a monastery were still present in 18th century (Crocetti 1997: fig. 8).

A comparison is possible with the settlements of Castello and Croce, where the medieval documents in the 10th century mention the *curtes de Castello* and *in Cruce*. The first one, according to the written sources, seems to have been abandoned soon. Therefore the traces clearly recognizable in aerial photos probably refer to the first plant of the castle. They show a nearby triangular area, corresponding to some poor building remains recorded during an archaeological survey, with a surface area of 0,25 hectares (Fig. 5). This area is delimited northward by a moat separating the castle from the hill ridge (Fig. 6, 7).

In the settlement of Croce the core of the castle is a small hilltop with a surface area of 0,15 hectares, surrounded by a late medieval defensive wall (Fig. 8).

CONCLUSION

At the present, in the area taken into examination, the exegesis of the written texts plays a prevailing role in the research on the formation of the castles and their development. The medieval papers tell us the names of the founders of the castles and/or of their holders and shed light on the politic and economic dynamics acting in the landscape changes.



Fig. 6 The moat of the *curtis* in Castello castle (photo by: U. Moscatelli)

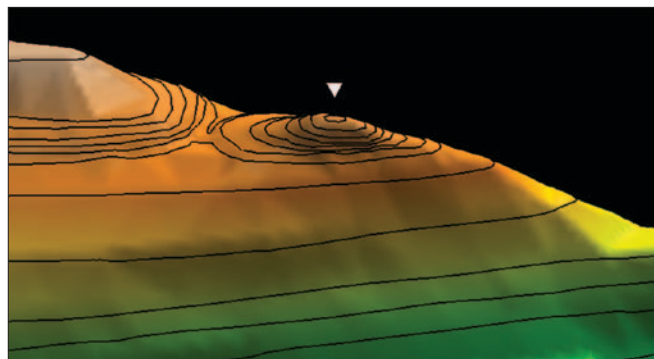


Fig. 7 3d model of the *curtis* in Castello castle (white triangle; view from W) (made by U. Moscatelli)

But, in the absence of archaeological investigation, those texts are quite difficult to interpret because their lexicon is not infrequently ambiguous; furthermore, it is unclear whether the notaries authenticating transactions followed a common standard of technical terms.

Apart from these difficulties, the documents of the *Liber Iurium* (Tab. 1) and the results of research carried out in other contexts seem confirm the idea that there existed a common model, consisting of an inner fence enclosed by an external earthworks ring.

However, a controversial point is represented by the apparent absence of stone walls made with hard concrete, as they are very rarely mentioned in the texts. This should be in opposition to the well-known tendencies in Italy (Franco-vich, Hodges 2003: 99–102).



Fig. 8 The probably original area of the Croce castle (yellow dotted line) (orthophoto by the National Geportal of the Italian Ministry of Environment and Protection of Land and Sea, modification by: U. Moscatelli)

BIBLIOGRAPHY

- Antongirolami, V. 2005, Materiali per la storia dell'incastellamento nelle Marche meridionali. La valle del Chienti, *Archeologia Medievale*, Vol. 32, 333–363.
- Antongirolami, V., D'Ulizia, A. 2015, Classificazione delle forme insediative di età medievale nell'alta val di Chienti: le tipologie edilizie, in: *Archeologia delle aree montane europee: metodi, problemi e casi di studio*, special issue of *Il Capitale Culturale*, 12 (2015), Moscatelli, U., Stagno, A.M. (eds.), <http://riviste.unimc.it/index.php/cap-cult/issue/view/54/showToc> (10 December 2017), 345–383.
- Antongirolami, V., D'Ulizia, A., Moscatelli, U. 2015, *Il Coenobium Sancti Benedicti de Crypta Saxi Latronis: note di archeologia dell'architettura*, in: Atti del XLIX Convegno di Studi Maceratesi, Centro di Studi Storici Maceratesi, Macerata, 79–105.
- Archetti Giampaolini, E. 1987, *Aristocrazia e chiese nella marca del Centro-Nord tra IX e XI secolo*, Viella, Roma.
- Augenti, A. 2000, Dai castra tardo antichi ai castelli del secolo X: il caso della Toscana, in: *Castelli. Storia e archeologia del potere nella Toscana medievale*, I, Francovich, R., Ginatempo, M. (eds.), All'Insegna del Giglio, Firenze, 47–48.
- Avarucci, G., Pacini, D., Paoli, U. E. 1996, *Liber Iurium dell'Episcopato e della città di Fermo (977–1266)*, Deputazione di Storia Patria per le Marche – Fondazione Cassa di Risparmio di Fermo, Ancona.
- Balzani, U. (ed.), 1903, *Il Cronicon Farfense di Gregorio di Catino, I-II, Fonti per la storia d'Italia*, 33–34, Forzani e C. tipografi del Senato, Roma.
- Bernacchia, R. 2002, *Incastellamento e distretti rurali nella Marca Anconitana (secoli X–XII)*, CISAM, Spoleto.
- Bernacchia, R. 2002–2003, Sulla struttura materiale del castrum marchigiano nei secoli X–XIV, *Castella Marchiae*, Vol. 6/7, 150–165.
- Bernacchia, R. 2006, Santa Vittoria in Matenano e l'incastellamento nella Marca Fermana del X secolo, in: *Farfa abbazia imperiale, Atti del Convegno Internazionale, Farfa - Santa Vittoria in Matenano, 25–29th august 2003*, Dondarini, R. (ed.), Il Segno dei Gabrielli editori, San Pietro in Cariano, 339–356.
- Castagnetti, A. 1980. Continuità e discontinuità nella terminologia e nella realtà organizzativa agraria: “fundus” e “casale” nei documenti ravennati altomedievali, in: *Medioevo rurale. Sulle tracce della civiltà contadina*, Fumagalli, V., Rossetti, G. (eds.), Il Mulino, Bologna, 201–219.
- Crocetti, G. 1996, I monasteri farfensi del Matenano. S. Giovanni in Selva, S. Ippolito (ai monti), S. Vittoria in Matenano, I, *Quaderni dell'Archivio Storico Arcivescovile*, Vol. 22, 27–43.
- Crocetti, G. 1997, I monasteri farfensi del Matenano. S. Giovanni in Selva, S. Ippolito (ai monti), S. Vittoria in Matenano, II, *Quaderni dell'Archivio Storico Arcivescovile*, Vol. 23, 81–113.
- Chron. Farf.*, in: Balzani 1903
- Del Lungo, S. 2004, Ricognizioni topografiche ed archeologiche nella Campagna Romana, *Archeologia Medievale*, Vol. 31, 21–51.
- Destructio*, in: *Chron. Farf. I* (see: Balzani 1903)
- D'Ulizia, A. 2008, Archeologia dell'architettura nelle Marche meridionali. Le strutture fortificate nella valle del Chienti tra XIII e XV secolo, in: *Archeologia dell'architettura*, Vol. 13, 47–75.
- Di Muro, A. 2008, Curtis, territorio ed economia nel Mezzogiorno meridionale longobardo (secoli VIII–IX), *Quaderni Friulani di Archeologia*, Vol. 18, 111–138.
- Di Muro, A. 2012. Dinamiche insediative nel Mezzogiorno longobardo altomedievale (secc. VI–VII). Una traccia, in: *Studi sul Mezzogiorno Longobardo. Insediamento e trasformazione del paesaggio tra i secoli VI e X*, La Manna, F. (ed.), Itinera, Olevano sul Tusciano, 185–214.
- Ermeti, A., Sacco, D. (eds.), 2007, *Archeologia del paesaggio nel territorio di Casteldelci, Montefeltro: atlante dei siti medievali dell'alta e media vallata del torrente Senatello: indagini 2005–2007*, Stafoggia, Pesaro.
- Farinelli, R. 2000, I castelli nei territori diocesani di Populonia-Massa e Roselle-Grosseto (secc. X–XIV), in: *Castelli. Storia e archeologia del potere nella Toscana medievale*, I, Francovich, R., Ginatempo, M. (eds.), All'Insegna del Giglio, Firenze, 141–203.
- Farinelli, R. 2007, *I castelli nella Toscana delle “città deboli”. Dinamiche del popolamento e del potere rurale nella Toscana meridionale (secoli VII–XIV)*, All'Insegna del Giglio, Firenze.
- Farinelli, R., Pocetti, L. 2012, L'insediamento sparso nella Toscana dei secoli VIII–IX. Il contributo delle fonti scritte alla luce dei modelli archeologici, in: *VI Congresso Nazionale di archeologia medievale. L'Aquila, 12–15 settembre 2012*, Redi, F., Forgiome, A. (eds.), All'Insegna del Giglio, Firenze, 112–115.
- Ficco, V. 2015, La valle del Carapelle in età altomedievale: dati archeologici e fonti documentarie, in: *Storia e Archeologia Globale 1*, Volpe, G. (ed.), Edipuglia, Bari, 43–54.
- Francovich, R., 1973, *Geografia storica delle sedi umane. I castelli del contado fiorentino nei secoli XII e XIII*, Edizioni CLUSF, Firenze.
- Francovich, R. 2004, Villaggi dell'altomedioevo: invisibilità sociale e labilità archeologica, in: Valenti, M., *L'insediamento altomedievale nelle campagne toscane. Paesaggi, popolamento e villaggi tra VI e X secolo*, All'Insegna del Giglio, Firenze, IX–XXII.
- Francovich, R., Hodges, R. 2003, *Villa to Village. The transformation of the Roman Countryside in Italy, c. 400–1000*, Duckworth, London.
- Fumagalli, V. 1994, Per i venticinque anni di attività del Centro di Studi Storici Maceratesi, in: *Per i venticinque anni di attività del Centro di Studi Storici Maceratesi. Relazioni svolte nella sala consiliare dell'Amministrazione*, Centro di Studi Storici Maceratesi, Macerata, 17–26.
- Giorgi, I., Balzani, U. (eds.), 1879–1914, *Il Regesto di Farfa di Gregorio di Catino*, I–V, Società Romana di Storia Patria, Roma.
- Gnesi, D., Minguzzi, S., Moscatelli, U., Virgili, S. 2007, Ricerche sugli insediamenti medievali nell'entroterra marchigiano, *Archeologia Medievale*, Vol. 34, 113–140.
- Leggio, T. 2008, Aspetti della presenza farfense nelle Marche tra VIII e XII secolo, in: *Il monachesimo nelle Marche, Atti del XLII Convegno di Studi Maceratesi*,

- Abbadia di Fiastra, 18–19 novembre 2006*, Centro di Studi Storici Maceratesi, Macerata, 245–284.
- Loré, V. 2012, I villaggi nell'Italia meridionale (secoli IX–XI) problemi di definizione, in: *Paesaggi, comunità, villaggi medievali*, Galetti, P. (ed.), CISAM, Spoleto, 535–546.
- Migliario, E. 1992, Terminologia o organizzazione agraria tra tardo antico e alto medioevo: ancora su fundus e casalis/casale, *Athenaeum*, Vol. 80, no. 2, 371–384.
- Moscattelli, U. 2006, Primo contributo della fotografia aerea all'individuazione delle strutture materiali del castello di Monte Franco di Pollenza, *Archeologia Aerea*, Vol. 2, 187–196.
- Moscattelli, U. 2014, Transizioni. Aspetti delle campagne dell'entroterra maceratese tra tardoantico e altomedioevo, in: *Atti del IV Convegno Internazionale di Studi Veleiati, Veleia-Lugagnano Val d'Arda, 20–21 settembre 2013*, Dall'Aglio, P. L., Franceschelli C., Maganzani L. (eds.), Ante Quem, Bologna, 379–305.
- Moscattelli, U. 2015, Progetto R.I.M.E.M.: problematiche (e dati) delle ricognizioni nelle aree interne delle Marche, in Moscattelli, Stagno 2015, *Il capitale culturale*, Vol. 12, <http://riviste.unimc.it/index.php/cap-cult/article/view/1306/943> (30 December 2017), 183–221.
- Moscattelli, U., Ravaschieri, E. 2016, Progetto RU.VI. (Ruffino e Vitale): l'abbazia dei SS. Ruffino e Vitale nel contesto storico e topografico dell'alta Val di Tenna, *SIRIS*, Vol. 16, 241–261.
- Muratori, L. A. 1726, *Rerum Italicarum Scriptores*, Mediolani.
- Pacini, D. 2000, *Per la storia medievale di Fermo e del suo territorio (secoli VI–XIII)*, Andrea Livi Editore, Fermo.
- Pasquali, G. 2002, L'azienda curtense e l'economia rurale dei secoli VI–XI, in: *Uomini a campagne nell'Italia medievale*, Cortonesi, A., Pasquali, G., Piccini, G. (eds.), Laterza, Bari, 5–71.
- Reg. Farf., in: Giorgi, Balzani: 1879–1914
- Sacco, D. 2016, Sulle dinamiche del popolamento tra IV e XI secolo in area medio-adriatica (Romagna meridionale, Marche settentrionali). Le concordanze toscane, *Archeologia Medievale*, Vol. 43, 337–362.
- Saracco Previdi, E. 1985, Articolazione fondiaria e distribuzione insediativa nei secoli VIII–XII, in: *Per una ricostruzione degli insediamenti medievali nell'entroterra della Marchia*, Saracco Previdi E. (ed.), Università di Macerata, Macerata, 7–40.
- Saracco Previdi, E. 2006, Gruppi parentali dominanti e consorterie di possessori in età longobarda (sec. VI–VIII), in: *Tardo antico e alto medioevo tra l'Esino e il Tronto, Atti del XL Convegno di Studi Maceratesi, Abbadia di Fiastra, 20–21 novembre 2004*, 55–75.
- Sella, P. 1944, *Glossario latino italiano. Stato della Chiesa, Veneto, Abruzzi*, Biblioteca Apostolica Vaticana, Città del Vaticano.
- Settia, A. A. 1984, *Castelli e villaggi nell'Italia padana. Popolamento, potere e sicurezza fra IX e XIII secolo*, Liguori Editore, Napoli.
- Settia, A. A. 2017, *Castelli medievali*, Bologna, Il Mulino.
- Settia, A. A., Marasco, L., Saggiaro, F. (eds.), 2013, Fortificazioni di terra in Italia. Motte, tumuli, tumbe, recinti, *Archeologia Medievale*, Vol. 40, 9–187.
- Zucchetti, G. (ed.), 1913–1932, *Liber Largitorius vel notarius monasterii Pharphensis*, I, II, Loescher–P. Maglione, Roma.
- Virgili, S. 2014, *Insediamenti civili e religiosi nella media e alta valle del Potenza (MC)*, All'Insegna del Giglio, Firenze.
- Volpe, G., Turchiano, M., De Venuto, G., Goffredo, R. 2012, L'insediamento altomedievale di Faragola. Dinamiche insediative, assetti economici e cultura materiale tra VII e IX secolo, in: *La trasformazione del mondo romano e le grandi migrazioni. Nuovi popoli dall'Europa settentrionale e centro-orientale alle coste del Mediterraneo. Atti del Convegno internazionale di studi, Cimitile – Santa Maria Capua Vetere, 16–17 giugno 2011*, Ebanista, C., Rotili, M. (eds.), Tavolario Edizioni, Cimitile, 239–263.