FASTI ONLINE DOCUMENTS & RESEARCH

The Journal of Fasti Online (ISSN 1828-3179) ● Published by the Associazione Internazionale di Archeologia Classica ● Piazza San Marco, 49 – I-00186 Roma ● Tel. / Fax: ++39.06.67.98.798 ● http://www.aiac.org; http://www.fastionline.org

Ad Novas-Cesenatico

From Roman Road to Late Antique Wooden Structures. An Interim Report on the Evaluation Test Pits and Excavation at Cà Bufalini, 2006

Denis Sami – Elena Baldi – Anna Booth – Tania Chinni – Luana Toniolo

This paper presents the preliminary data from excavations undertaken at Cà Bufalini in Cesenatico in April 2006. This was the pilot fieldwork from which developed the Ad Novas-Cesenatico Project 2008-13 organised by Denis Sami and Neil Christie from the University of Leicester. During the 2006 season four test trenches were opened. This paper outlines the evidence retrieved both of late antique (fifth - sixth century AD) wooden structures as well as of a substantial paved Roman road. Potentially, the Cà Bufalini site may relate to the likely statio *of* Ad Novas *depicted on the Tabula Peutingeriana.*

Introduction

In 1969, geological sondages in open farmland at Cà Bufalini, Cesenatico (Cesena province, Emilia Romagna) recovered a fourth-century AD North African amphora Keay IV – reused as the container for an inhu-mation burial – together with several shards of 'Roman' pottery[1]. Analysis of air photographs for the area mean-while recognised the line of an ancient NW-SE oriented road crossing the fields here which was presumed to denote a highway connecting the cities of Rimini and Ravenna (fig. 1)[2]. The Cà Bufalini site saw no follow-up investigation and its presence was simply registered along with other scattered finds found in agricultural work in the area, including, for example, marble work, and occasional coins (REF)[3].

However, there is scope to view both road and finds in a more productive way and in fact to elevate the importance of the location. In particular, the Tabula Peutingeriana records a settlement named *Ad Novas* depicted immediately north of

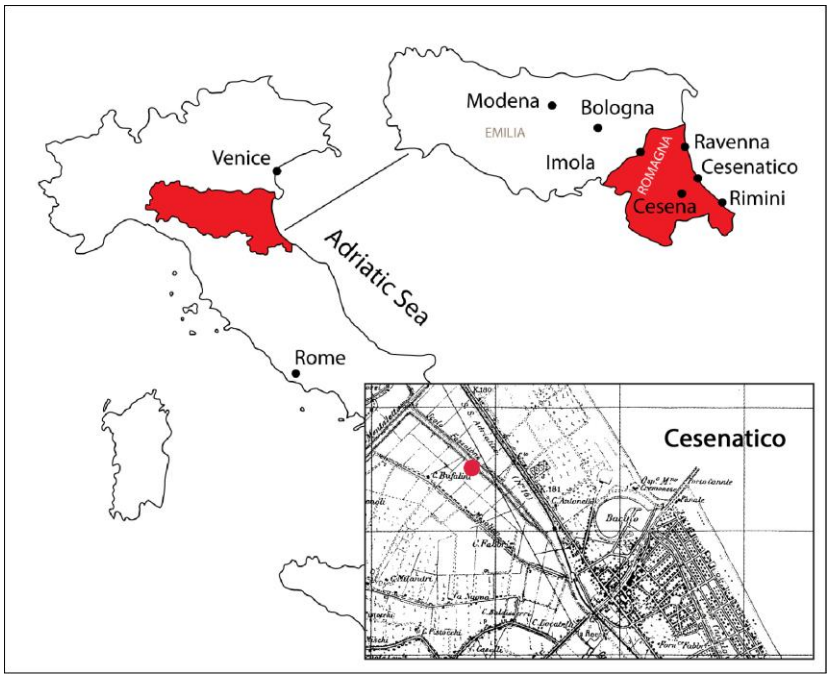


Fig. 1. Cesentico and the main urban centre of the Romagnole coast.

[1] VEGGIANI, RONCUZZI 1969: 3-24.
[2] VEGGIANI, RONCUZZI 1969: 3-24.
[3] FARFANETI 2000: 51-55.

Fig. 2. Ad Novas *in the* Tabula Peutingeriana.

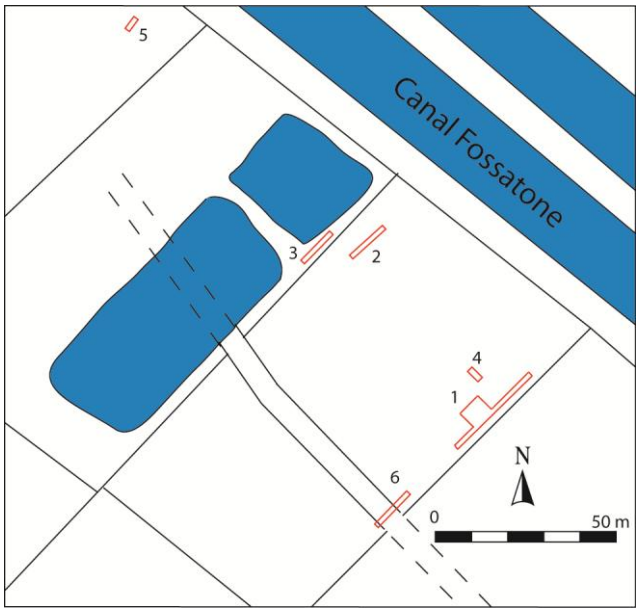


Fig. 3. Position of the Trenches.

the Rubion River and south of *Sapis* (modern Lido di Savio), whose location roughly matches the (southern) area of modern Cesenatico (fig. 2)[4]. While scholars have generally accepted an identification of *Ad Novas* with the area of medieval and modern Cesenatico, the precise position of the *statio* is disputed. On the basis of Roman centuriation evidence and the orientation of ancient roads such as those fossilised in the Via del Confine/Via San Pellegrino, its location had been placed in the area of the modern district of Sala, and potentially at the site of Cà Turchi and Ponte Rosso[5].

In terms of textual sources the Tabula Peutingeriana does not indicate if *Ad Novas* was a *mansio*, *statio* or *mutatio*. Its persistence as a site is attested by reference in the ninth-century *Liber pontificalis ecclesiae ravennatis* by Agnellus, who states that in AD 568-69 Petrus, Bishop of Ravenna, when returning from Rome, was welcomed by citizens of Classe in *Ad Novas*[6]. If it refers to this same place, its selection for a welcoming party is peculiar, but might be explained if perhaps the bishop was here to alight on a boat to be ferried back to his city, either by sea or even by canal. This maritime and communications link seemingly still played a role in AD 711-13, when the rebel George ordered the citizen body of nearby Cervia to watch and defend the centre of *Nova*[7]. Finally, in AD 810-14 Martinus, Bishop of Ravenna, en route to Rome, stayed for fifteen days at the Pieve of Santo Stefano near *Ad Novas*; however, the site was then described as *civitas dirupta* – an abandoned town or community[8].

In effect, the documentary evidence points to an intriguing, now lost site that saw important traffic from Ravenna across the late Roman and Byzantine periods. In April 2006, after re-evaluating the data from the excavation of 1969 in light of these textual sources, a pilot project involving the opening of six test pits commenced (fig. 3). The campaign had four main targets: 1) to define better the chronological parameters of the site; 2) to evaluate the potential of the deposit in terms of range and quality of finds; 3) to gain an indication of the extent of the site; and 4) to explore the quality of preservation of the roadway. The pilot work was also informed and accompanied by assessment of material in the ploughsoil of the presumed site and its environs: this showed finds of brick/tile, ceramics, marble and some metal and glassware across the whole of the field, but with a more extensive scatter in the eastern half of the field (coinciding with the area east of the road – see below). Ultimately the pilot season was designed to prepare the ground for a more intensive and larger scale

[4] FARFANETI 2000: 30.
[5] FARFANETI 2000: 65-70.
[6] AGN. *Lib Pont. Rav*., c. 93. However, the translation by M. DELIYANNIS of this part is incorrect. The author translates *Nonam* as "ninth mile", but *Nonam* is the accusative of *Nona* (derived from *Ad Novas*). *'Kal. Octubris, et reversus in pace, cum nimia alacritate cives Ravennates eum susceperunt; Classis vero occurrit ei obviam ad Nonam. Liber pontificalis bischofsbuch* I-II, translated by C. NAUERTH, Freiburg 1996: *De Sancto Petro Seniori*: XXVIII, 93, 10-13.
[7] AGN. *Lib. Pont. Rav.*, c. 140.
[8] AGN. *Lib. Pont. Rav*., c. 169. Finally, *emphyteusis* rights issued by bishops of Cervia to the monastery of Sant'Apollinare Nuovo in Ravenna in the years 1068 and 1204 and papal privileges granted to the Church of Cervia in 1187 and 1244 mention a *tenimentum cum portu et aliis sui pertinentiis* belonging to the Pieve of San Tommaso, a church most likely located in the vicinity of Cà Bufalini: see ABATI, RIVA 2003 and 2007.

operation to explore if the Ca Bufalini site can be identified with the lost Ad Novas and can clarify the nature of this Roman and late antique settlement.

Denis Sami

Trench 1: The Late Antique Wooden Structures and the Building

A 2 x 1 m test pit was opened on the south-eastern side of the field, but was soon expanded to cover an area of 7 x 6 m (Trench 1) after subsoil discovery of a high concentration of fragmented tiles and bricks indicated possible wall remains. Modern ploughing had, however, caused damaged to these upper underlying deposits, which were generally dark clay-sandy deposits, rich in finds. The top sandy context was recorded in all the test pits and represents the last archaeological phase of site activity before a subsequent sedimentation of thick alluvium. Removal of the alluvial deposit – suggestive perhaps of a potential short but strong episode of flooding – revealed partial traces of two buildings.

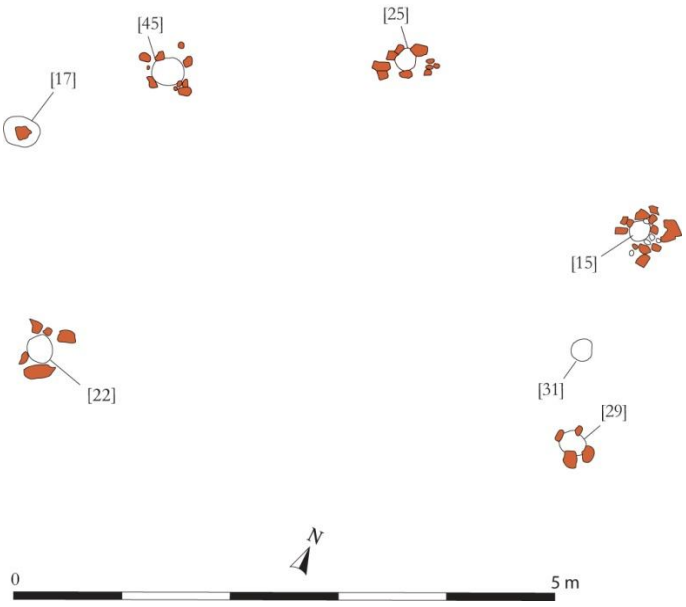
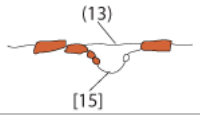
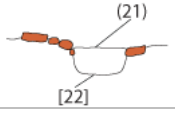
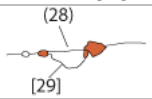
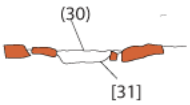
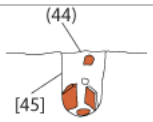


Fig. 4. Wooden Structure 1.

Post hole cut	Section	Shape	Diameter	Deep	Notes
15		circular	24	18	
17		circular	32	18	Possible wedges
22		circular	24	18	
25		circular	28	18	
29		circular	24	12	Badly damaged by modern truncation
31		circular	32	10	
45		circular	18	40	Very deep with wedges on the base

Tab. 1. Summary of post-holes from Wooden Structure 1.

Of the later building (Wooden Structure 1 – see fig. 4), only shallow circular post-holes arranged on a sub-rectangular perimeter remained, these suggesting a building of c. 5.0 x 3.50 m**,** on a N-S orientation. No signs of the entrance, internal partitions or hearth were traced. Post-holes (Table 1) were cut partially respecting the perimeter of a previous stone-footed wooden structure, although some posts cut into the foundation. Other post-holes cut a sandy-clay and grey deposit rich in ceramic and glass fragments.

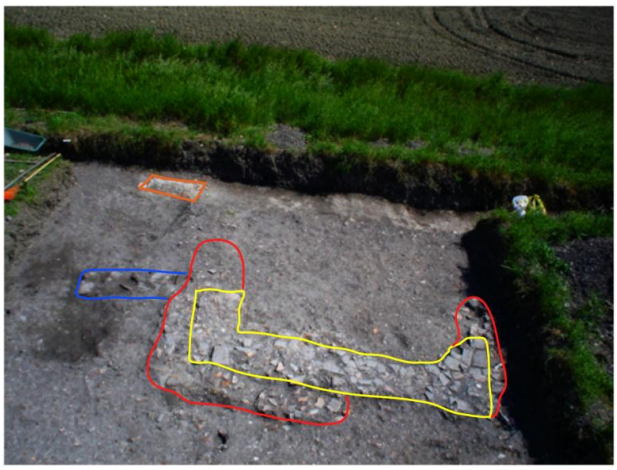


Fig. 5. The highlighted remains of Wooden Structure 2.

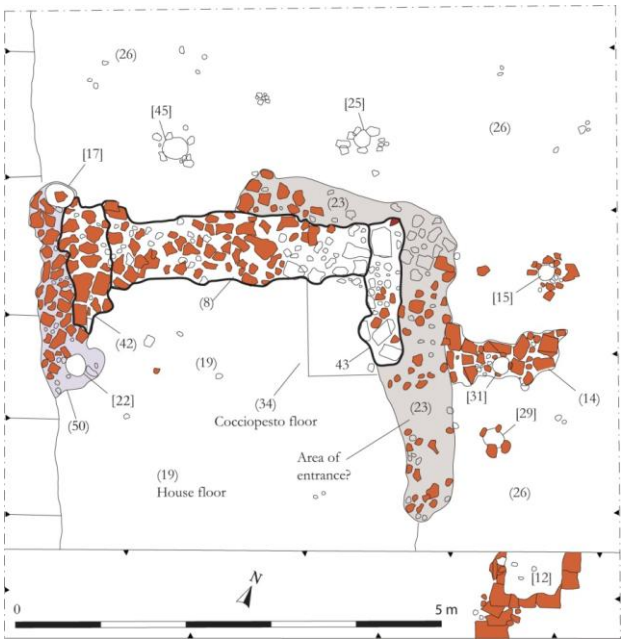


Fig. 6. Plan of Wooden Structure 2 and post-holes of Wooden Structure 1.Phases 4-6.

What could be traced of the preceding Wooden Structure 2 (figg. 5-6) indicated a more regular plan and a construction in a different technique: oriented NW-SE, its foundations comprised fragmented tiles and earth. Its internal width was c 2.5 m but its length could not be determined due to truncation. Given the lack of evident post-holes, the walls of Wooden Structure 2 were likely laid on horizontal beams set on the tile foundations. The structure was reinforced at some point between the late fifth and the early sixth centuries, with later additions made to the base-foundations; there may also have been some sort of porch-entrance added.

The clayey inner floor of Wooden Structure 2 was c. 4-5 cm thick, but plough-scarred. While no signs of a hearth or internal partitions were recorded, disturbed finds included pottery plus 16 coins, spanning the first to mid-fifth century AD. Coins also came from the external sandy-clay layer, and included well-preserved issues of Severus Alexander, Philip II and Constantine I.

Structure	Type	Dimension	Surface	Notes
1	A I, posthole on earth	4.40 m width x 2.60 m long	11.44 mq min.	
2	A V, base of stones	2.50 m width x 4.20 m long	10.50 mq min.	

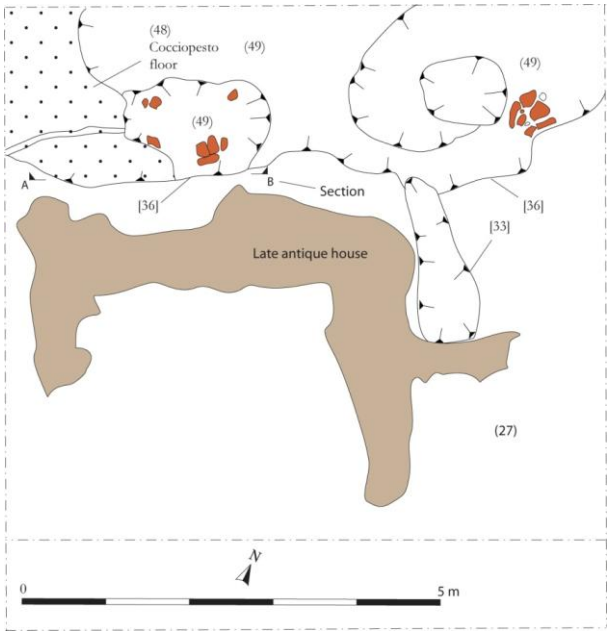


Fig. 7. Plan of Phase 3.The site's spoliation.

When context **26** was removed large pits [**36**] and [**33**] cutting (**27**) were uncovered (fig. 7). Trench [**33**] is a long and narrow pit with sloping sides and a concave base. From this small trench no material was collected. Since [**33**] follows the direction of the foundation of Wooden Structure 2, this ditch may have been in some ways functional to this building. Cut [**36**] is very large and deep, reaching the natural soil and cutting all the encountered layers underneath (**26**). It was most probably a large trench dug for robbing material from a former construction or a midden pit – this may explain why the trench is so deep, irregular and destructive.

Cut [**36**] was filled by a clay-sandy deposit rich in finds. Ceramics and glasses from this context are mainly from the late fourth to mid-sixth century – particularly coarse cooking wares. A *terminus post quem* for this deposit is offered by a coin of Valentinian III dating to AD 430-437.

Trench [**36**] cuts (**27**) a flat sandy layer contemporary to cocciopesto floor (**34**) (fig. 9) uncovered in the small sondage opened within Wooden Structure 2 (fig. 8). Contexts (**27**) and (**34**) belong to the same phase of the pillar base (**12**) uncovered in the South-Eastern corner of the

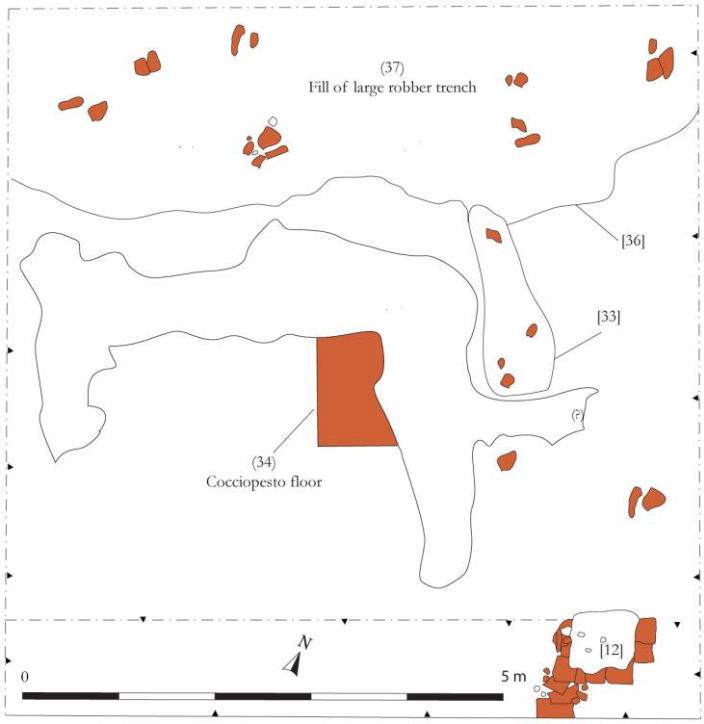


Fig. 8. Plan of Phase 2.

Fig. 9. The cocciopesto floor (34).

Fig. 10. Floor (48).

trench. Trench [**36**] also cut a series of cocciopesto floors that were not excavated: (**34**=**35**), its preparation (**38**), and cocciopesto floors(**46**) and (**48**). A big chunk of floor (**48**) (fig. 10) was still *in situ*, it was a thick floor made of mortar mixed with mashed ceramic; this floor was crossed by a narrow 5-6 cm cutting, perhaps for hosting for a water-pipe?

Phase	Context	Interpretation	Chronology
7	Plough soil	Very thick sediment deposit.	Post-mid-7th century
6	(3)	Wooden structure 1 is built. The site is reduced to an impoverished settlement, but some activity may still persist.	Mid-6th to early 7th centuries?
5	(51, 23), (53), [22,17], [31], [45,25, 15, 29], (19)	Wooden structure 2 is reinforced, a new roof was built	6th century
4	(42, 8, 43), (19), (34), [33]	Wooden structure 2 is built	Second half of the 5th-early 6th century.
3	(37), [36]	The last building is pulled down and robbed	Mid-to second half of the 5th century
2	(34), (35), (38) (12) and (27)	The last building is erected	Late 4th to early 5th century
1	(46), (48), (38)	The early building is erected and restored and later the floor is raise (46)	1st to 2nd century

Tab. 3. Summary of the phases documented in Trench 1.

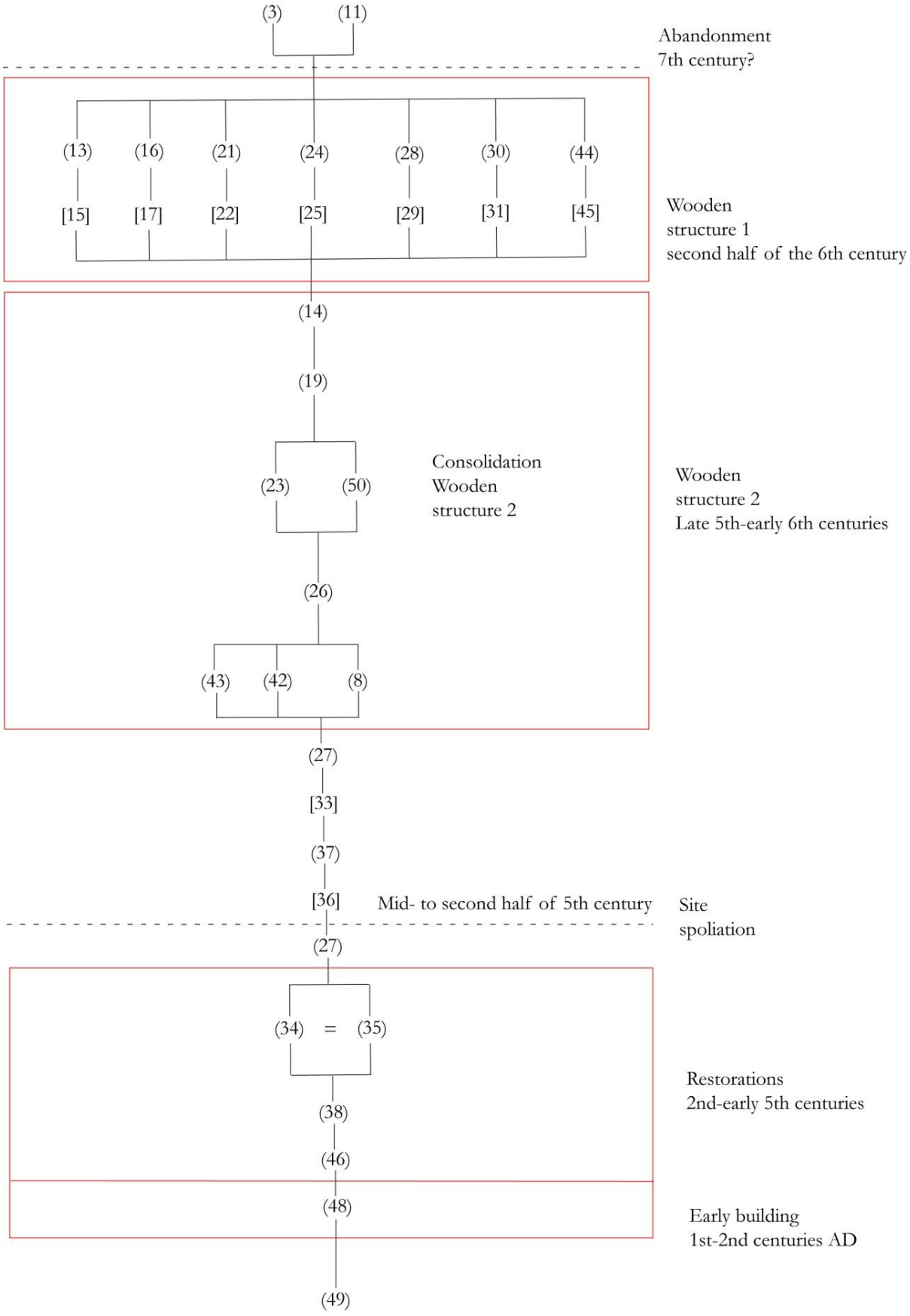


Fig. 11. Trench 1. Stratigraphical sequence.

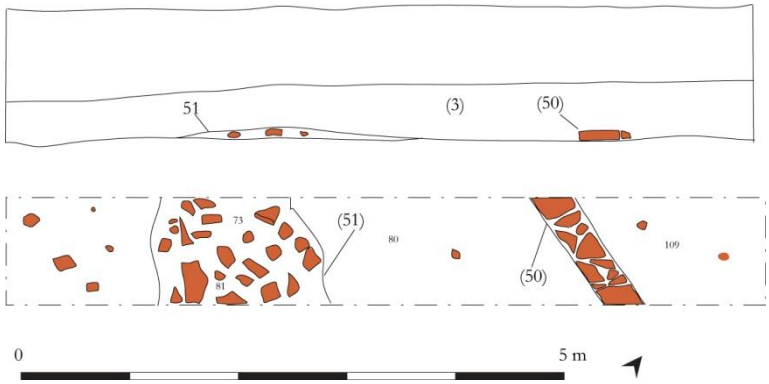


Fig. 12. Plan of Trench 3.

The Evaluation Test Pits

Trench 2
This trench, 8 x 1m, opened in the north-eastern area of the field, but besides a subsoil context, no other features were encountered and due to the instability of the trench sides, excavation terminated at a depth of 0.8m.

Trench 3 (fig.12)
A trench of 7 x 1 m was opened in the north-eastern area of the field. Beneath the deep context 3 layer, at a depth of circa 1 m, a narrow, 0.3m wide wall was uncovered, oriented E-W and built using fragmented tiles and *manubriati* bricks bonded with clay and mortar. In the southern part of the trench a rich deposit of fragmented tiles was documented. The low water table here prevented further investigation.

Fig. 13. Structure (51).

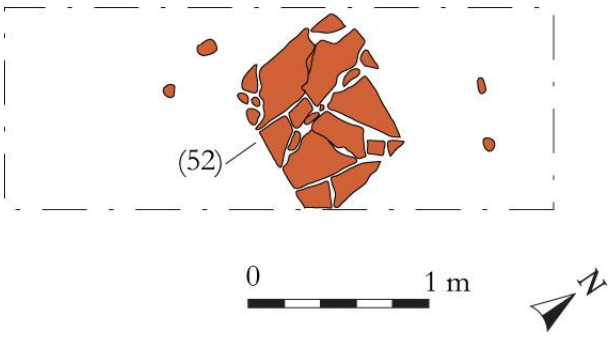


Fig. 14. Plan of stone structure (52).

Trench 4 (figg. 13-14)
In this 2 x 1 m test-pit, opened next to Trench 1, a seemingly isolated quadrangular base built of fragmented tiles was exposed beneath context (**3**). Potentially, the base may be related to Wooden Building 2.

Trench 5
Trench 5 (2 x 1 m) was dug in the north-eastern area of the property to evaluate the potential extent of the site. Beneath the plough soil lay a very dark and organic context was found, made up chiefly of remains of reeds (*Phragmites australis*) still common on the site; no bottom to this deposit was identified, even though excavation and auguring extended to over 2 m. The rich clay context contributed to the good preservation of the organic component.

Trench 6: The glareata *road* (fig. 15)
A larger trench of 10 x 1 m was opened to coincide with the line of road identified in the air photographs – but with tis course also evident as extensive ploughed out brick and cobble rubble in the field itself, extending in a NW-SE direction for at least 50 m. Below circa 40 cm of agricultural soil a well preserved road surface was unearthed, of c. 6 m width, strongly constructed with cobblestones and flanked by narrow trenches. A possible posthole

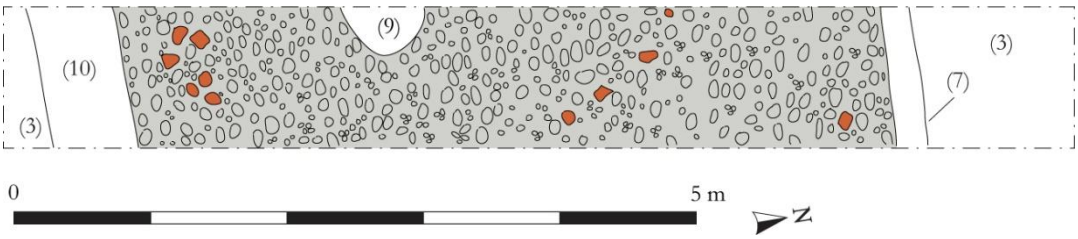


Fig. 15. Plan of the uncovered segment of the glareata *road.*

Fig. 16. Test pit 6 and the road.

Fig. 17. The wall beneath the road.

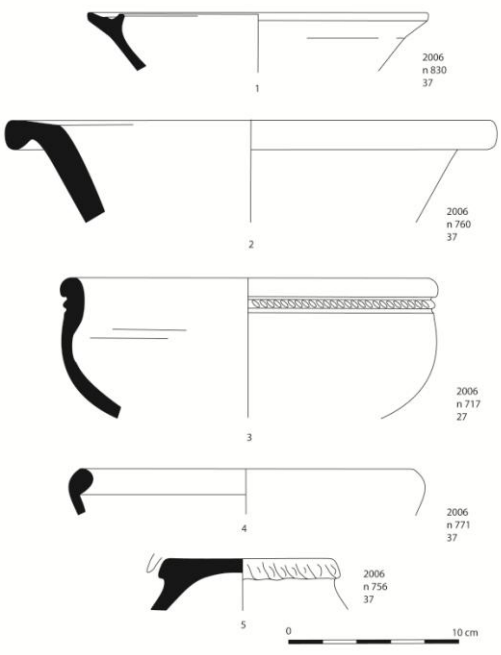


Fig. 18. Cooking ware. 1) Knossos-frying pans type 2; 2) Bowl type Uzita; 3) Cooking pot; 4) casserole with inward rim; 5) Catino-coperchio.

(unexcavated) was sited almost in the centre of the road; alternatively this was a hole caused by the loss of cobbles.

A sounding made on the edge of the road aimed to analyse in section the construction technique of the road and collecting further information about activity prior to its construction.

The road surface appeared to be laid on a solid, thick deposit of fine gravel arranged on top of the clayish natural soil. Surprisingly, at a depth of circa 1 m, part of a wall was identified (fig. 17), very similar to that documented in Trench 4, suggesting a pre-road building. Unfortunately, a high water table and the instability of the sections prevented further research.

Denis Sami

The Ceramic Assemblage

Deposit (**37**) contained the largest ceramic assemblage. Residual finds within this deposit were limited and it therefore offers scope considering the ceramic collection in the later phase of the presumed settlement. A full 65% of the assemblage comprises coarse ware, especially casseroles with inward rim and flat-based vessels with out-turned rim (*ollae*). Such casseroles show few morphological variations and were produced between the fifth and sixth centuries by centres located in the Po Valley (fig. 18.4). Both vessel forms represent the most common cook wares of the fifth and first half of the sixth century in the region and are documented

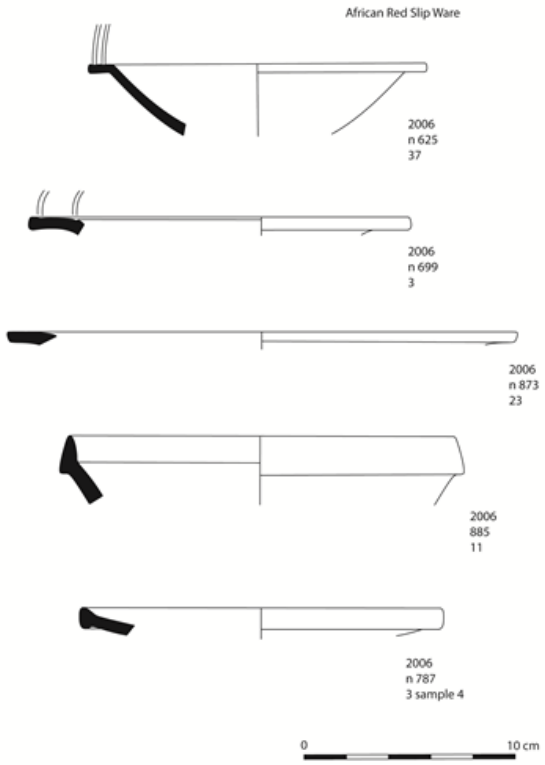


Fig. 19. ARS, From top: H. 58B; H. 59; H 59; H 61B 2; H. 61B 3.

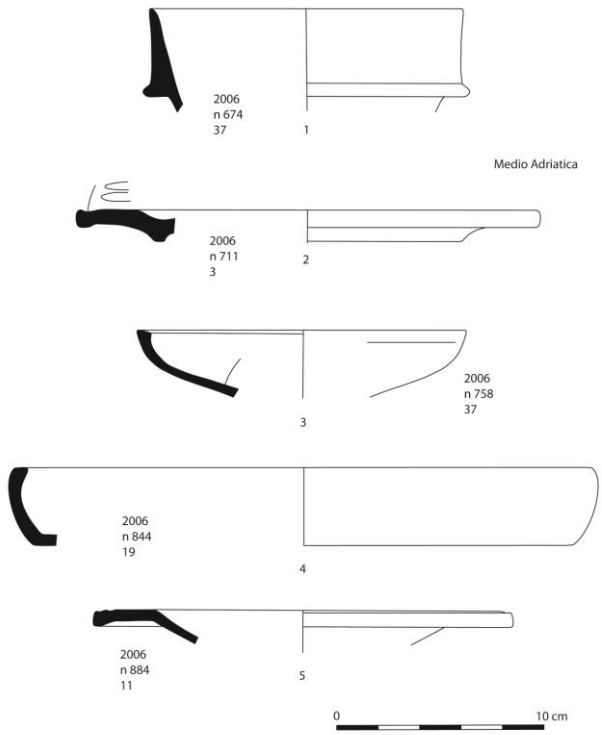


Fig. 20. SMA. 1) Conspectus *34; 2) Brec. 12; 3) Brec. 6/7; 4) Brec. 19/22; 5) Brec. 10/17.*

in high quantities at Classe, Rimini and the area of Modena[9].

The *catino-coperchio* (*clibanus*) decorated with "finger-prints" (fig. 18.5) completes the traditional Romagnole late antique set of cooking wares. The appearance of these *catino-coperchi* seemingly relate to changes in the preparation of food in Late Roman period[10].

Imports are apparent through residual fragments of African Red Slip Ware (ARS) of C and A/D productions (fig. 19). Production C is represented in a fragment of a late fourth century bowl of Hayes 50B, and production A/D by a plate of Hayes 58 dating to the second half of the fourth century. Two fragments of fifth century Hayes 61/B complete the ARS assemblage.

The only amphorae recorded are a fragment of Spatheion I with thickened rim dating to the first half of the fifth century, a first century Dressel 2-4 and a sherd of a first to second century Amphora Forlimpopoli.

A residual fragment of a third century Aegean Knossos Type 2 frying pan (fig. 18.1) also came from context (**37**); this is a cooking ware well known in coastal sites of Italy, Istria as well as other Adriatic contexts[11].

Also residual are the several fragments of *Sigillata Medio Adriatica* (SMA) decorated with painted lines on the base or stamps on the rim[12]. The SMA from Cà Bufalini are the widespread third/fourth century bowl Brecciaroli Taborelli 6/7 (fig. 20.3), and the plate Brecciaroli Taborelli 19/22 (fig. 20.4) common in Romagna and Marche[13]. The plate Brecciaroli Taborelli 10/17 (fig. 20.5) generally has a decorated rim with vegetal or zoomorphic animal motifs, but the fragments from Cà Bufalini have no decoration. A sherd belonging to the large plate Brecciaroli Taborelli 12 (fig. 20.2) has a rim decorated with globular motifs that recall models from metal ware.

The assemblage collected from (**27**) contains only a few fragments difficult to identify and most likely residual. These include a cooking pot (fig. 18.3) with a rim decorated with two ruts and a notched rim belonging to a widespread form of cooking ware found in Romagna and North Italy generally between the first and second centuries to the early fifth century AD. The Cà Bufalini example seems to be a late production of the late fourth to

[9] CORTI, LOSCHI GHITTONI 2007. For Classe see CAVALAZZI, FABBRI 2010, fig. 1, 4, 11; Rimini: NEGRELLI 2008, fig. 61, 125; Faenza: GUARNIERI, MONTEVECCHI, NEGRELLI 2004, fig. 5, 11.
[10] REYNOLDS 2004: 235 with references.
[11] ISTENIČ, SCHNEIDER 2000: 341-48. Trieste *domus* of Piazza Barbacan: see MASELLI SCOTTI, DEGRASSI, MIAN, 2002: 110-12, also ŽERJAL 2008: 131-40. Aquileia: MANDRUZZATO, TIUSSI, DEGRASSI 2000: 359-64.
[12] See discussion in BRECCIAROLI TABORELLI 1978; TORTORELLA 1996; FONTANA 1998; MAZZEO SARACINO 2000.
[13] STOPPIONI 2008: 735.

early fifth century. Finally, we can note a bowl (fig. 18.2) similar to the late fourth century African Uzita 2, but possibly a fifth century production from Campania or Lazio.

Luana Toniolo

Context	ID	Production	Reference	Chronology
37	643	Amphora	Spatheion 1	First half of 5th century AD
37	758	Sigillata Medio Adriatica	BrecciaroliTaborelli 6/7=Maioli 5 e 7	Commonly third century AD, but found in Faenza in contexts of 4th and 5th centuries
37	756	Coarse ware (catino-coperchio a ditate)	Negrelli 2007, fig. 11, 8.	5th to early 6th centuries AD
37	627	ARS C	Hayes 50B	Late 4th-early 5th centuries AD
37	625	ARS A/D	Hayes 58B	Second half 4thcentury AD
37	760	Coarse ware(basin)	Similar to north African 4th century ADUzita 2. Similar production comes from Campania and Lazio in contexts of the 5th AD	5thcentury AD
37	771	Cooking ware	Casserole with inward rim	5th to first half of the 6th AD (Classe: Cavalazzi, Fabbri 2010, fig. 1, 4; Rimini: Negrelli 2008, fig. 61, 125)
37	799	Globular *olla*	Similar ollae have been found in contexts of 4th-7th centuries (cfr. Milano, Brescia; Gugliemetti*et al.* 1991, tipo 12, 220). InClasse in contexts of late 5th-first half of 6th (Cavalazzi, Fabbri 2010, fig. 4, 11). In Faenza in contexts of mid 5th (Guarnieri, Montevecchi, Negrelli 2010, fig. 5, 11).	Late 4th to early 6th centuries AD
37	830	Cooking ware	Knossos-frying pans type 2	3rdcentury AD
37	641	Amphora	Adriatic Dressel 2-4	1st AD
37	651	Amphora	TypeForlimpopoli	1st to early 2ndcenturies AD
27	717	Cooking ware	Grossetti, Bolzoni, Miari 2010, fig. 7, 5 (Piacenza)	Late 4th to early 5th centuries AD
23	863	Ceramiche a rivestimentorosso	Bowl similar to Negrelli 2007, fig. 2.8	5th to early 6thcenturies AD
23	873	ARS D	Hayes 59 (fragment poorly preserved)	Late 4th- first half of 5th AD
19	844	Sigillata Medio Adriatica	BrecciaroliTaborelli 19/22	3rd-4thcenturies AD
19	842	Amphora	Late Rhodian amphora	1st century AD
11	885	ARS D	Hayes 61B 2	First half of 5thcentury AD
11	884	Sigillata Medio Adriatica	Brecciaroli Taborelli 10/17, Maioli 15; Gamberini, Mazzeo Saracino 2003, fig. 2, 1-2.	4th-5thcenturiesAD
3	671	Amphora	Keay 59	Late 4th- first half of 5thcenturies AD
3	699	ARS D	Hayes 59	Late 4th- first half of 5thcenturies AD
3	674	Terra Sigillata	Conspectus 34	1st-2ndcenturies AD
3	711	Sigillata Medio Adriatica	BrecciaroliTaborelli 12, Maioli 12	First half of 4thcentury AD
3 (trench 4)	787	ARS D	Hayes 61B 3	Mid to secondhalf of 5thcentury AD

Glass

The glass assemblage collected during the 2006 excavation amounts to 60 fragments and reflects the most common late antique productions documented in the Po Valley. The assemblage, which has a high degree of fragmentation, has items in pale bluish, green or colourless tones and none of particularly high quality.

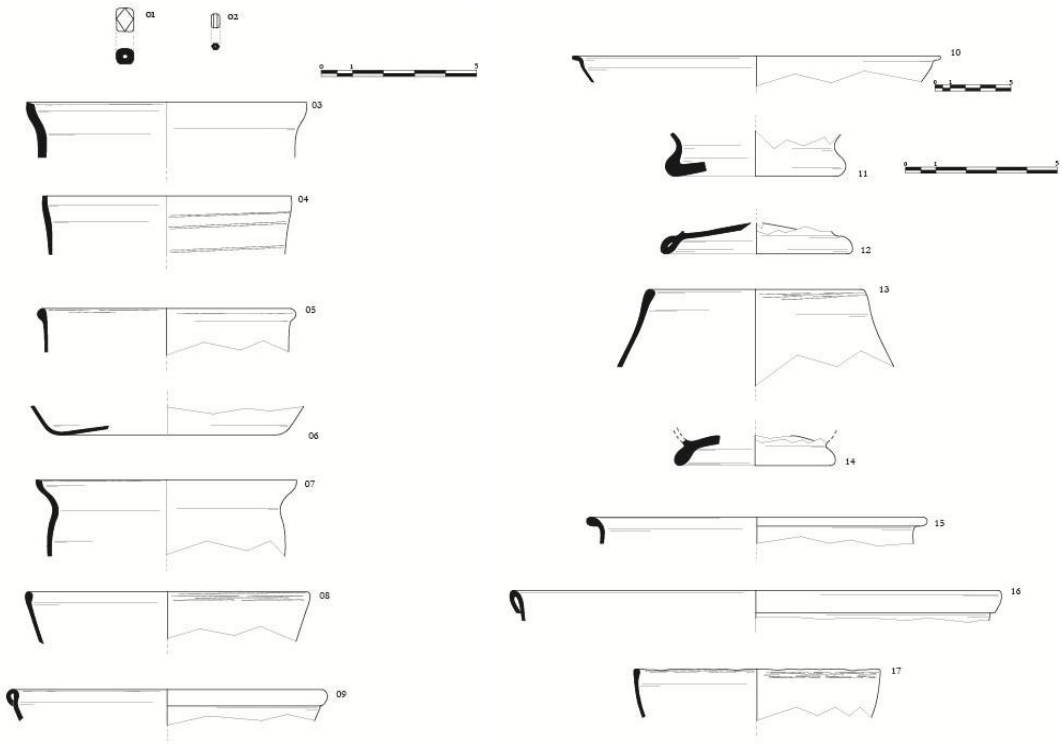


Fig. 19. From the top: context (03) - glass beads (nn. 01, 02), beakers Is. 96 (nn. 03, 04), beakers Is. 106 (n. 05), bowl Is. 116/117 (n. 06); context (26) – beaker Is. 96 (n. 07), goblet Foy forme 23a (n. 08), lamp Is. 134 (n. 09).

Fig. 20. From the top: context (26) – bowl Foy forme 10c (n. 10), beaker Foy forme 13d (n. 11), beaker Is. 109 (n. 12); context (27) – beaker Is. 106 (n. 13), beaker Is. 109 (n.14); context (37) – bowl Dussart BI.72 (n. 15), bowl Dussart BI.4213a1 (n. 16), lamp Dussart BVI.112 (n. 17).

Fig. 21. Glass bracelet with "D" section.

Fig. 22. Double perforated bead (type "trilobitenperlen").

Fig. 23. Game counter or decorating furniture.

Fragments of a beaker with a cracked-off rim similar to Isings 96 and a base of an Isings 116/117 bowl were collected from context (**3**). Both were produced from the fourth to the fifth centuries and are widely documented in late antique contexts[14]. A fragment of beaker with an in-turned rim similar to Isings 106[15] and two glass beads were collected, one blue in colour of polygonal shape (fig. 19, 01)[16] and a second green hexagonal in section. This last bead has a parallel with beads exhibited at the Musée Départimental Arles Antique found in a late antique context[17]. Personal decorations are documented through a fragment of an opaque dark blue bracelet with D section (fig. 21)[18].

Context (**26**) contained some Isings 96 beakers, together with part of the rounded base of a variant of a Isings 109 beaker and a rim of a large green bowl similar to Foy Form 10c, n. 56, both dated to the fifth century[19] (fig. 20). In addition an Isings 134 beaker/lamp with out-turned rim was documented[20], a type of lamp particularly common in the Mediterranean in contexts spanning the fourth to eighth centuries[21]. A fragmented double perforated dark black bead was also collected (fig. 22): this bead is moulded to represent a mask and comparisons can be

[14] The Cà Bufalini fragment is very similar to FOY 1995: 222, type 3, fig. 4.13. The bowl resembles FOY 2003: 73, VRR 291.
[15] Parallels are with STERNINI 1995: 276, fig. 8 n. 63.
[16] CASAGRANDE 2003: 201-04, n. 328 (Carpane – necropolis – from the second half of the fourth century).
[17] FOY 2010: 490-91, n. 1031.
[18] FOY 2010: 492-95, n. 1042-44; LAUWERS *et al.* 2010, fig. 2, n. 1; GEBHARD 1989. A second fragment was found in the plough soil.
[19] For the beaker Is. 109 see FOY 2010: 432-33, n. 841. For the large bowl see FOY 1995: 225, form 10c, n. 56.
[20] ISINGS 1957: 162, form 134; DUSSART 1998: 254, fig. 14, BVI.1221, n. 22.
[21] UBOLDI 1995: 104-08 (type I.1).

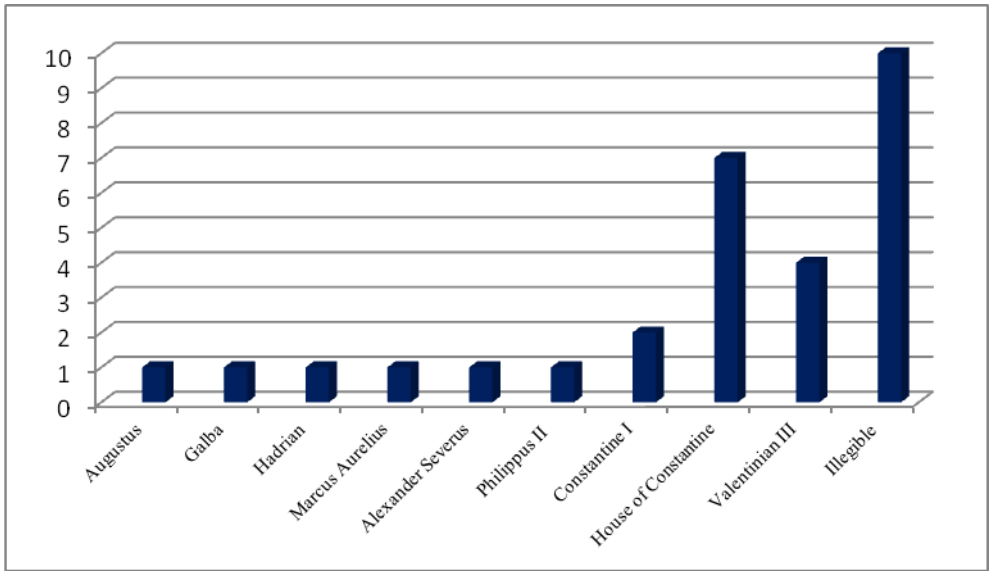
made with beads from a third century AD context in Cesena[22]. A dark blue counter (fig. 23) should be an object used for board games but examples are known for decorating furniture or caskets[23]. A small fragment of the rounded and slightly in-turned rim of a Foy 23a goblet that was probably used as a lamp completed the collection of glass from context (26)[24].

Context (27) featured a fifth century rim of an Isings 106 vessel, similar to the beaker published by Sternini from the *tabernae* excavations in Rome[25]; a fifth to early seventh century rim of a BI.72 bowl[26]; a fifth century Dussart BI.4213a1 bowl[27] with out-turned rim; two fragments of lamps with thickened rims, one similar to Dussart BVI.112[28]; and five beaker bases, one similar to Isings 109[29] and four typical fourth to fifth century beakers with flat bases[30].

Tania Chinni

Coins

A total of 29 coins were recovered, ten of which are illegible and cannot be dated precisely, while the remaining specimens have a chronological range spanning the emperor Augustus (with uncertain dating between 24 BC to AD 14) to Valentinian III (425-55). The coins were collected only from four contexts: five from subsoil/abandonment context (3), sixteen from the disturbed floor of Wooden Structure 2, six from context (26) and two from trench spoil/backfill (37).



Tab. 4. Quantity of coins per emission.

Context 3

The three legible coins from context 3 can be dated according to their size and weight to the fourth century and to the House of Constantine. A*VOT XX* issue of 320-321 can be ascribed to Constantine I. The poor preservation of this coin prevents identification of its mint. Two coins with the *FEL TEMP REPARATIO (FTR)* reverse type, representing the Emperor spearing a falling horseman, can be identified as minted under Constantine's sons between 348 and 361. Again, however, the mint cannot be identified. The two specimens differ in size and weight from each other 3.42 g and 1.62 g. Such fluctuation in weight is in fact typical of this issue and is

[22] HAEVERNICK 1981: Abb. 1 (with horizontal ribbing) and Abb. 2 (with Theatrical masks); Necropoli ex Zuccherificio.
[23] FOY 2010: 458-61; RÜTTI 1988, n. 2000-01, tav. 27; FREMERSDORF 1958a, tav. 126.
[24] FOY 1995: 233, form 23a, fig. 15.179.
[25] STERNINI 1995: 276, fig. 8.63.
[26] DUSSART 1998: 249, BI.72, tav. 9, n.17.
[27] *Ibid.*: 246, BI. 4213a1, tav. 6 nn. 12-14.
[28] *Ibid*.: 254, BVI.112, tav.14, n. 7.
[29] See comparison with ISING 109, published by STERNINI 1995: 285, tav. 17, n. 18. Also CONTI 2012: 48, fig. 2, n. 6.
[30] FOY, BONIFAY 1984: 292, fig. 1, n. 6; STERNINI 1989: 46, fig. 11, n. 69; FOY 1995: 227, form 13, fig. 9, n. 81. Also CORTI 2012: 48, fig. 2, n. 7.

documented at Classe (Ravenna) and Salto del Lupo (Ferrara)[31]. Two poorly preserved, illegible coins can be dated on the basis of their weight and size respectively to the fourth and to the fifth centuries.

Context 19

Floor (**19**), also plough-scarred. was the richest in coins with 16 finds spanning the first to fifth centuries. Three extremely worn and illegible *Asses* were collected, one most likely of Galba, a second of Hadrian (501, 508) and a third (502) probably of Marcus Aurelius of c. AD179 and depicting Minerva on the reverse[32]. Eight coins can be assigned to the House of Constantine. Of these, the earliest is a *PROVIDENTIA AVGG* (511) issue, particularly common in Classe and representing a *castrum* with two towers and a star that was minted in Siscia between 324-330[33]. Dating to between 330 and 335 is a poorly preserved coin, whose reverse has the inscription *VRBS ROMA* (510) and depicts the she-wolf and the suckling twins. Three further FTR coins (504, 506 and maybe 505) (fig. 24) were documented but in each case the mints could not be identified.

Three coins can be dated to the reign of Valentinian III (502, 507, 512) (fig. 25). These are *VICTORIA AVGG* representing a standing Victory dragging a captive, minted between 430 and 437. Closely comparable coins are documented in Classe[34].

While the remaining five coins were illegible, their weights and diameters point to four being of the fourth century (498, 499, 500, 503) and one (509) of the fifth.

Fig. 24. Coin 504 (1:1).

Fig. 25. Coin 512 (1:1).

Context 26

Six coins were collected from this context. The weights and diameters of two coins (513, 515) allow them to be assigned to the fourth century. A third coin (514) may be a *VOTA* issued by Constantine I. While the mint mark can be read, the letters indicate no known centre. An illegible coin (516) is most probably an issue of Augustus. Finally one coin (518) was issued under Severus Alexander and a second under Philip II (517). Two Rome-minted *sestertii* were recovered, one of which displays on its reverse the standing figure of a naked Mars looking right and holding a spear and a trophy; this coin most likely was struck around AD 228.

A coin with the reverse inscription *PRINCIPI IVVENT* issued under Philip II shows the Emperor standing on the left holding a globe and spear. This coin can be dated to the period AD 244-47. Coins 517 and 518 (figg. 26, 27) have lower weights respect the standard weight. This may be due to their long time in circulation or else to oxidation[35]. Coins of Alexander and Philip II have been also documented in Classe, in Cervia, as well as in the surrounding countryside[36].

Fig. 26. Coin n. 518 (1:1).

Fig. 27. Coin n. 517 (1:1).

Context 37

The two coins found in context (**37**) were issued under Valentinian III; they display the reverse inscription *VICTORIA AVGG* and were most likely issued between 430 and 437.

Elena Baldi

[31] For Classe see BALDI 2013. Salto del Lupo: ERCOLANI 1986.
[32] CATALLI 2003: 62.
[33] *RIC* VII: 49, note 5; *LRBC*: 19; CALLU, GARNIER 1987: 109; BALDI 2013.
[34] BALDI 2013.
[35] CATALINI 2003: 173-75; DE MARTINO1979: 365.
[36] BALDI 2013. ERCOLANI 2008.

Small Finds

The majority of small finds from the excavation have practical domestic and/or industrial functions. The numbers of dress accessories are low and limited in nature and there are no objects with a clear ritual or religious function. Dress accessories are limited to a single, highly corroded iron buckle and a bead and two bracelet fragments made from a very dark blue, almost black glass (see above, Glass). That the only ornamental objects should all be manufactured in glass rather than metal may be of some significance.

Two lead weights, one small and cylindrical, the other large and spheroidal suggest trade activities being carried out on the site. Security equipment is also in evidence comprising both a copper alloy key and the pin from a tumbler lock. A tool for weaving may indicate that some cloth-working was being carried out, perhaps just on a domestic scale. Alternatively the tool may have been used for mending fishing nets.

Dress Accessories

FN: 694, Context: 4 (Tab. 2, n 1)
Buckle
A highly corroded iron buckle, of very simple, D-shaped form with a curved/distorted pin still attached.
Length: 42.9mm, width: 41.5mm, thickness: 19.7mm, weight: 3.82g.

Fig. 28.

Security Equipment

FN: 662, Context: 26 (Tab. 2 n 2)
Key
Copper-alloy ring key.
Length: 49.8mm, width: 31.0mm, thickness: 9.4mm, weight: 17.36g.

FN: 708. Context: 3 (Tab. 2, n 3)
Lock pin
An incomplete copper-alloy lock bolt. Sub-rectangular in form with two rectangular openings, one of which is filled with copper alloy corrosion. The bar at the opposite end is recessed and to one side a small strip of metal protrudes. This is damaged and would probably have been longer originally. Lock pins such as this one were a component of tumbler locks, which required T- or L-shaped lift keys to open them.
Length: 42.5mm, width: 13.3 mm, thickness: 9.2mm, weight 12.52g.

Fig. 29.

Weights

FN: 655, Context: 2017
Weight
A complete small cylindrical lead weight.
Diameter: 12.0mm, thickness: 8.3mm, weight: 6.48g

FN: 659, Context: 2017 Tab. 2, n 4
Weight
A large and complete spheroidal weight. Since the Late Roman and Byzantine pound (*libra*) was 328.9 g, so this weight is slightly more than 1/4 of a *libra*. Such spheroidal weights are dated in the West from the second to the sixth century AD[37].
Diameter: 29.7mm, thickness: 11.6mm, weight: 85.89g

Fig. 30.

Other finds

FN: 704, Context: 26 (Tab. 2, n 5)
Copper-alloy nail fastener

[37] ENTWISTLE 2008: 38-46.

A.J. Parker in *Ancient Shipwrecks of the Mediterranean and the Roman Provinces* notes that copper nails are more frequently found in shipwrecks dating between the sixth century BC and the fifth century AD. After this period it seems that iron nails were more common in shipwrecks[38].
Length: 94.2 mm, width: 17.0 mm, weight: 19.33 g

Fig. 31.

Fig. 32.

FN: 737, Context: Plough soil (Tab. 2, n 6)
Weaving hook
An incomplete copper-alloy socketed bronze weaving hook. It consists of sheet metal rolled into a tight cone with the pointed end bent to form a hook. It is heavily corroded with some damage. A similar example has been recorded from the Roman fort at Ellingen, in modern Germany[39] and identified as a possible medical instrument however, P. Allison has concluded, with Ralph Jackson (British Museum), that such objects were used in the cloth working process[40].
Length: 22.8 mm, width: 8.5 mm, thickness: 4.8 mm, weight: 0.69 g

FN: 874, Context: 3 (Tab. 2, n 7)
Hatchet-head
An iron hatchet-head found in the machining of the trenches. In fair condition, one face has remains of straw embodied in the oxidation, suggesting long exposure in a collapsed thatched roof. This versatile working tool has a sub-rectangular blade with a triangular section and a rectangular shaft-eye. This example differs in shape from common Roman axes and it may be post-Roman in date[41].
Length: 165 mm, cutting edge: 83.5 mm; height min.: 32 mm; width max.: 30 mm, hole: 18 x 35 mm

Fig. 33.

FN: 735, Context: Plough soil (Tab. 2, n 8)
Copper alloy ring
This ring was probably a strap junction. It shows heavy signs of functional wear on the two extremes of the ring.
Width: 25.9 mm, thickness: 4.4 mm, weight: 4.79 g

Fig. 34.

Fig. 35.

Building decorative material

FN: 693, Context: 4 (Tab. 2, n 9)
Building material, Pavonazzetto marble
Pavonazzetto marble was quarried in Phrygia, Turkey, and reached its peak in exportation to Italy between the first and the mid-third century AD. Although this quality marble continued to be traded until the fourth century it became by then extremely expensive[42]. This fragment indicates a building on site that featured high quality decoration, probably veneer.

Anna Booth

[38] MCCARTHY 2005: 44-48; PARKER 1992: 27.
[39] ZANIER 1992, cat. No. B150.
[40] ALLISON 2013: 244.
[41] Similar woodworking tools are in GOODMAN 1964: 23 fig. 11.b; MANNING 1985: 14 fig.3, also ULRICH 2007: 22-26. An iron axe with a rectangular shaft-eye has been found in North Lincolnshire and dated between AD 410 to 1066 - see Portable Antiquities Scheme NLM6514.
[42] PENSABENE 2011.

Discussion

The Wooden Structures

Current knowledge of late antique residential architecture in Romagna centres mainly on urban contexts such as Ravenna, Classe, Rimini and Faenza, but with only limited understanding of the contemporary regional rural landscape[43]. The wooden structures identified at Cà Bufalini therefore offer valuable new data for expanding our knowledge here.

It should first be noted that because of poor preservation we do not know exactly how the wooden structures of Cesenatico were used. Were they storage sheds, livestock barns or dwellings? Some points about floor (**19**) may help in shedding light on the use of Structure 2. Firstly, there is a striking discrepancy between the number of coins collected from this (plough-affected) floor and the scanty number of ceramics and other finds. Indeed, the context comprised 50% of the entire coin assemblage for 2006; however, the coin collection is not consistent and contains early to late imperial issues, although 13 of the 16 coins belong to the fourth and early fifth centuries. Might we view this coin assemblage as part of a dispersed small hoard? And was Structure 2 perceived as a safe place? The absence of other finds is noticeable and points to this as a clean and well maintained space that may have been a residential home.

In terms of construction technique, the wooden buildings of Cesenatico fit well with wider European late antique and early medieval contexts[44]. Wooden structure 1 was a simple construction with planked or wattle walls supported by posts directly embedded into the soil and a timber roof truss. In Emilia Romagna a similar construction documented in Via Bacchini in Fidenza, although this building was bigger and more regular in plan – and set in a context dating between the sixth and tenth centuries[45]. Structure 1, for its stratigraphical position, is likely sixth century in date.

Structure 2 resembles the late sixth and early seventh century houses excavated at the Byzantine *castrum* of Sant'Antonino di Perti in Liguria. The stone foundations served as a base for horizontal beams supporting plank and wattle-walls and a thatched roof. Structure 2 at Ca Bufalini differs, however, in the likely provision of a porch. Despite the fact that this type of building is common in North Italy it has not yet been documented in Romagna[46]. Considering the ceramic, glass and coin assemblage, Wooden Structure 2 can be dated to a period spanning the second half of the fifth century to the early sixth.

Conclusion

Because of the limited information collected in 2006 it is premature to draw a comprehensive model for the settlement at Cà Bufalini. The research presented here, however, offers important new data for the reassessment of various key topics of local archaeology and in particular the origin of *Ad Novas* and the interregional viability on the coast of Romagna.

The old idea that *Ad Novas* lay in the area of Sala – where important early Roman sites were certainly present – is based on weak research and assumptions that are not corroborated by any systematic excavation or field walking. Our new excavations can help to build an alternative, more reliable identification.

The distribution of ceramics at Cà Bufalini covers circa 14.800 m^2 and suggests a settlement of a reasonable size. Furthermore, the quantity, quality and chronological range of the ceramics, spanning the first to the sixth century AD, signify a long occupation of the site. The discovery of the wide *glareata* road across the site meanwhile indicates that the settlement lay on an important highway and exploited trade along this. A further element to this landscape may be the nearby N-S running canal Fossatone, whose roots may well be Roman; potentially, therefore, the site of Cà Bufalini forms a notable point in this network of land and water ways communications. Combined, these elements lead us to suggest that the site of Cà Bufalini was the Imperial and late antique centre of *Ad Novas*.

The excavated *glareata* road also adds new information to the ongoing debate concerning the road system in this part of Romagna. Its size and construction techniques point to a notable level of planning and investment for what must been a key coastal highway. Via Del Confine and via San Pellegrino were certainly parts of a former interregional road system – most probably the *Via Popilia Annia* built in the second half of the second century BC. Later, and we do not know why, this former road was moved to the coast, probably at the same time of the foundation of the settlement of Cà Bufalini. The transfer of the capital of the Empire to Ravenna in AD 402 may

[43] CATARSI DALL'AGLIO 1994; an overview of late antique residential architecture is in BROGIOLO, GELICHI 1998: 103-54.
[44] Wooden structure 1 is the type AI of the FRONZA, VALENTI classification, while structure 2 is AV – see FRONZA, VALENTI 1996: 164.
[45] CATARSI DALL'AGLIO 1994: 152-54.
[46] CAGNANA 2001. Similar houses were excavated at the Roman site of Pontenure near Piacenza dating at the late fifth to early sixth centuries, but have not yet been published: see CORNELIO, MEZZADRI, STEVANI 2008.

have had an important impact on the economy of *Ad Novas*. A great part of the finds collected were most likely redistributed from the great market of Ravenna and arrived at *Ad Novas* via the canal or the road.

The floruit of *Ad Novas*, however, seems to have ended in the second half of the fifth century. No signs of violence are yet documented on the site and data suggest an intentional and well-planned dismantling of the buildings. Was this abandonment motivated by economic reasons? Perhaps it was due to a general reorganisation of the local market? Or was this desertion connected to the decline of the *cursus publicus*? At present we cannot answer such questions and only future research will add detail to the discussion. Nonetheless, the wooden structures identified imply that, despite the wider dismantling of the site, some community may have continued to occupy part of the site, probably until the late sixth century.

Denis Sami

Acknowledgements

The 2006 excavations were funded by the Museo della Marineria of Cesenatico and supported by the Assessore alla cultura Bruno Ballerin and the museum curator Davide Gnola. We wish to thank Dr Maria Grazia Maioli ispettrice of the Soprintendenza Archeologica at the time of the excavation, as well as Dr Monica Miari and the current ispettrice Dr Annalisa Pozzi. Dr Neil Christie has been involved in the project since 2008 and has given invaluable support in its organization and running.

Denis Sami
University of Leicester
denisami@hotmail.co

Elena Baldi
Università di Bologna
ebaldi65@gmail.com

Anna Booth
University of Leicester
annabooth84@hotmail.com

Tania Chinni
Università di Bologna
tania.chinni2@unibo.it

Luana Toniolo
Università di Venezia
luana.toniolo@libero.it

BIBLIOGRAPHY

AGNELLUS OF RAVENNA, *The Book of Pontiffs of the Church of Ravenna*, trans. by D. M. DELIYANNIS, Washington DC 2004.

AGNELLUS OF RAVENNA, *Liber pontificalis bischofsbuch* I-II, trans. by C. NAUERTH, Freiburg 1996.

ALLISON P.M. 2013, *People and Spaces in Roman Military Bases*. Cambridge University Press, Cambridge.

AUGENTI A., CIRELLI E. and MARINO D., 2009, 'Case e magazzini a Classe tra VII e VIII secolo: Nuovi dati dal quartiere portuale (scavi 2002-2005)', in F. PASQUALE and G. VOLPE (eds), *Atti del V Congresso Nazionale di Archeologia Medievale (Foggia-Manfredonia 30 settembre-3 ottobre 2009)*, Florence: 138-44.

BALDI E., 2013, *La documentazione monetale come fonte per la storia di Classe (Ravenna). Gli scavi condotti nell'area portuale (anni 2001-2005) e nell'area della basilica di San Severo (anni 2006-2010)*, PhD thesis, University of Bologna.

BALLERIN B., 1997, 'Rocca, torre e fortino del Ceseantico', *Romagna arte e storia* IL: 5-26.

BRECCIAROLI TABORELLI L., 1978, 'Contributo alla classificazione di una terra sigillata chiara italica', *Rivista di Studi Marchigian*i 1: 1-38.

CAGNANA A., 2001, 'Le "case di legno" di S. Antonino: Confronti e ipotesi di restituzione degli alzati', in T. MANNONI and G. MURIALDO (eds), *S. Antonino. Un insediamento fortificto nella Liguria bizantina*, Bordighera: 197-202.

CARILE A., COSENTINO S., 2004, *Storia della marineria bizantina*, Bologna.

CORNELIO CASSAI C., MEZZADRI C. and STEVANI A., 2008, 'Il sito romano di Pontenure: brevi note preliminari', in R. VALLONI, M. BERNABO' BREA (eds), *Archeologia ad alta velocità in Emilia: indagini geologiche e archeologiche lungo il tracciato. Atti del convegno (Parma 9 giugno 2003)*, Florence 147-162.

CALLU J.P., GARNIER J.P., 1977, 'Minimi Constantiniens trouvés à Reims. Researches sur les imitations à prototypes des années 330 à 348', *Quaderni Ticinesi di Numismatica e Antichità Classiche* VI: 281-315.

CATALLI F., 2003, *Numismatica Greca e Romana*, Rome.

CASAGRANDE C., 2003, 'Museo Civico "G. Zannato" di Montecchio Maggiore (VI)', in F. CESELIN, C. CASAGRANDE (eds), *Vetri antichi delle province di Belluno, Treviso e Vicenza*, *Corpus delle collezioni archeologiche del vetro nel Veneto*, *7*, Venice: 201-04.

CATARSI DALL'AGLIO M., 1994, 'Edilizia residenziale tra tardoantico e alto medioevo. L'esempio dell'Emilia occidentale', in G.P. BROGIOLO (ed.), *Edilizia residenziale tra V e VIII secolo. 4 Seminario sul tardoantico e l'altomedioevo in Italiacentro-settentrionale*. Monte Barro (Galbiate-Lecco, 2-4 settembre 1993), *Documenti diArcheologia, 4*, Mantua: 149-56.

CAVALAZZI M., FABBRI, E., 2010, 'Cooking ware from the excavations of a 5th-7th century context in Classe (Ravenna, Italy)',in S. MENCHELLI, S. SANTORO, M. PASQUINUCCI, G. GUIDUCCI (eds), *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean*, Oxford: 623-33.

CIRELLI E., 2008, *Ravenna: archeologia di una città*, Florence.

CONTI C., 2012, 'I vetri di Salto del Lupo e Santa Maria in Padovetere (Comacchio, Ferrara). Note sulla circolazione tra tardo Antico e alto Medioevo nell'antico delta padano', in A. LARESE, F. SEGUSO(eds), *Il vetro nel Medioevo tra Bisanzio l'Islam e l'Europa (VI-XIII secolo). Aggiornamenti scavi e ricerche sul vetro. Atti delle XII Giornate Nazionali di Studio (Venezia 19-21 ottobre 2007)*, Comitato Nazionale Italiano Association Internationale pour l'Histoire du Verre (AIHV), Venice: 41-49.

CORTI C., LOSCHI GHITTONI A.G., 2007, 'Produzioni di ceramiche ad impasto grezzo nelle aree del medio e basso corso del Po tra tardoanticola bassa pianura modenesee l'antico delta padano', in M. BONIFAY, J.-C.TRÉGLIA (eds), *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archeology and Archeometry*, Oxford: 511-23.

DE MARTINO R., 1979, *Storia economica di Roma antica,* Florence.

DUSSART O., 1998, *Le verre en Jordanie et en Syrie du Sud*, Institute français d'archéologie du Proche-Orient, Beirut.

MARTINO ENTWISTLEE C., 2008, 'Late Roman and Byzantine Weighing Equipment', in E. JEFFREY, J. HALDON, R. CORMA (eds),*The Oxford Handbook of Byzantine Studies*, Oxford: 38-46.

ERCOLANI COCCHI E.,1986, '*Il "Tesoretto" monetale di Salto del Lupo',* in *La civiltà comacchiese e pomposiana dalle origini preistoriche al tardo Medioevo*, Ferrara: 211-25.

ERCOLANI COCCHI E., 2006, 'La moneta racconta la storia del Decimano', in M. FICARA, V. MANZELLI (eds), *Orme nei campi. Archeologia a sud di Ravenna. Atti della giornata di studi sui recenti rinvenimenti archeologici nel territorio Decimano (San Pietro in Campiano, Ravenna, 2 aprile 2006)*, Florence 51-69.

FARFANETI B., 2000, *Cesenatico romana. Archeologia e territorio*, Ravenna.

FASOLI G., 1978, 'Navigazione fluviale. Porti e navi sul Po', in *La navigazione mediterranea nell'alto medioevo, Settimane di studio del Centro italiano di studi sull'alto medioevo* XXV, Spoleto: 565-620.

FREMERSDORF F. 1958a, *Das naturfarben Glas in Köln* (Die Denkmäler des Römischen Köln, Band IV), Köln.

FOY D., 2010, *Les verres antiques d'Arles*, *la collection du Musée Départimental Arles Antique*, Paris.

FOY D., PICON M. VICHY M. AND THIRION-MERLE V., 2003, 'Caractérisation des verres de la fin de l'Antiquité en Méditerranée occidentale: l'émergence de nouveaux courants commerciaux', in FOY, D. and NENNA, M.-D. (eds*), Echanges et commerce du verre dans le monde antique, Actes du colloque de Association Française pour l'Archéologie du Verre (Aix-en-Provence et Marseille, 7-9 juin 2001)*, Montagnac: 41-85.

FOY D., 1995, 'Le verre de la fin du IVe au VIIIe siècle an France méditerranéenne: premier essai de typo-chronologie', in D. FOY (ed.), *Le verre de l'Antiquité tardive et du haut Moyen Âge. Typologie – chronologie – diffusion* (Guiry-en-Vexin 1993), Guiry-en-Vexin: 187-242.

FOY D. AND BONIFAY M., 1984, 'Eléments d'évolution des verreries de l'Antiquité tardive à Marseille d'après les fouilles de La Bourse (1980)', *Revue archéologique de Narbonnaise*, 17: 289-308.

FONTANA S., 1998, 'Le "imitazioni" della sigillata africana e le ceramiche da mensa italiche tardo-antiche*'*, in L. SAGUÌ (ed.), *Ceramica in Italia: VI e VII secolo, Atti del Convegno in onore di J. W. Hayes (Roma 1995)*, Florence: 83-100.

FRONZA V., VALENTI M., 1996, 'Un archivio per l'edilizia in materiale deperibile nell'altomedioevo', in M. VALENTI, (ed.), *Poggio Imperiale a Poggibonsi (Siena). Dal villaggio di capanne al castello di pietra. I. Diagnostica archeologica e campagne di scavo 1991-1994,* Florence: 159-218.

GEBHARD R., 1989, 'Pour une nouvelle typologie des bracelets celtiques en verre', in M. FEUGERE (ed.), *Le Verre préromain en Europe occidentale*, Montagnac: 73-83.

GELICHI S., 1994, 'L'edilizia residenziale in Romagna tra il V e VIII secolo', in G.P. BROGIOLO (ed.), *Edilizia residenziale tra V e VIII secolo. 4 Seminario sul tardoantico e l'altomedioevo in Italia centro-settentrionale*. Monte Barro (Galbiate-Lecco, 2-4 settembre 1993), *Documenti di Archeologia 4*, Mantua: 157-67.

GIORGETTI D., 1982, 'Cesenatico: note di antichità', in G. SUSINI (ed.), *Storia di Cesena, I, L'evo antico*, Rimini: 221-30.

GOODMAN W.L., 1964, *The History of Woodworking Tools*, London.

GUARNIERI C., MONTEVECCHI G., NEGRELLI C., 2004, 'Ceramiche tardoantiche a Faenza: la sequenza dallo scavo di Palazzo Grecchi', in G. PANTÒ(ed.), *Produzione e circolazione dei materiali ceramici in Italia settentrionale tra VI e X secolo. Atti del II Incontro di Studio Cer.am.Is sulle ceramiche tardoantiche ed altomedievali*, Mantua: 193-216.

HAEVERNICK T.E., 1981,'Trilobitenperlen', in T.E. HAEVERNICK (eds), *Beiträge zur Glasforschung. Die wichtigsten Aufsätzevon 1938 bis 1981*, Mainz: 265-76.

ISIGS C., 1957, *Roman glass from dated finds*, Groningen.

ISTENIČ J., ANDSCHNEIDER G., 2000, 'Aegean Cooking ware in the eastern Adriatic', *Rei Cretariae Romanae Fautorum Acta,* 36: 341-48.

LAUWERS V., DEGRYSE P., WAELKENS M., 2010, 'Middle Byzantine (10th - 13th century AD) glass bracelets at Sagalossos (SW Turkey)', in J. DRAUSCHKE, D. KELLER (eds), *Glass in Byzantium - Production, Usage, Analyses*, *Verlag des Römisch-Germanischen Zentralmuseums*, Mainz: 145-52.

MCCARTHY M., 2005, *Ship's fastening: from sewn boat to steamship*, College Station.

MANDRUZZATO L., TIUSSI C., DEGRASSI V., 2000, 'Appunti sull*'instrumentum* d'importazione greca ed orientale ad Aquileia*', Rei Cretariae Romanae Fautorum Acta* 36: 359-64.

MANNING W.H., 1985, *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum*, London.

MASELLI SCOTTI F., DEGRASSI V., MIAN G., 2002, 'Gli scarichi della *domus* di Piazza Barbacan a Trieste: un contesto di II-inizi III secolo d. C.', *Atti e memorie della Società istriana di archeologia storia e patria* 51: 19-105.

MAZZEO SARACINO L., 2000, 'Lo studio delle terre sigillate padane: problemi e prospettive', in G.P. BROGIOLO, G. OLCESE (eds), *Produzione ceramica in area padana tra il II sec. a.C. e il VII sec. d.C.: nuovi dati e prospettive di ricerca. Convegno internazionale Desenzano del Garda, 8-10 aprile 1999*, Mantua: 41-45.

NEGRELLI C., 2008, *Rimini capitale. Strutture insediative, economia e società tra V e VIII secolo,* Florence.

OLESON J.P., FITZGERALD M.A., SHERWOOD A.N., SIDEBOTHAM S.E., 1994, *The Harbours of Cesarea Maritima. Volume II: The Finds and the Ship*. *BAR Intenational Series* 594, Oxford.

PENSABENE P., 2010, 'Cave di marmo bianco e pavonazzetto in Frigia. Sulla produzione e sui dati epigrafici', *Marmora*, 6: 71-134.

REYNOLDS P., 2004, 'The Roman Pottery', in R. HODGES, W. BOWDEN, AND K. LAKO (eds), *Byzantine Butrint: Excavations and Surveys 1994-99*, Oxford: 225-69.

RIC I = *The Roman Imperial Coinage, vol. I, From 31 BC to AD 69*, ed. by C.H.V. SUTHERLAND, London 1984.

RIC II = *The Roman Imperial Coinage, vol. II, Vespasian to Hadrian*, ed. by H. MATTINGLY, E.A. SYDENHAM, London 1926.

RIC II.1 = *The Roman Imperial Coinage*, *Volume II – Part 1. Second fully revised edition. From AD 69-96, Vespasian to Domitian*, ed. by I.A. CARRIDICE AND T.V. BUTTREY, London 2007.

RIC III = *The Roman Imperial Coinage, vol. III, Antoninus Pius to Commodus*, ed. by H. MATTINGLY AND E.A. SYDENHAM, London 1930.

RIC IV.II = *The Roman Imperial Coinage, vol. IV part II, Macrinus to Pupienus*, ed. by H. MATTINGLY AND E.A. SYDENHAM, London 1938.

RIC IV.III = *The Roman Imperial Coinage, vol. IV part III, Gordian III – Uranius Antoninus*, ed. by H. MATTINGLY, E.A. SYDENHAM and C.H.V. SUTHERLAND, London 1949.

RIC VII = *The Roman Imperial Coinage vol. VII, Constantine and Licinius (A.D. 313-337)*, ed. by P.M. BRUUN, London 1966.

RIC VIII = *The Roman Imperial Coinage vol. VIII, The family of Constantine I, A.D. 337-364*, ed. by J.P.C. KENT, London 1981.

RIC X = *The Roman Imperial Coinage vol. X, The divided empire and the fall of the western parts, A.D. 395-491*, ed. by J.P.C. KENT, London 1994.

RÜTTI B., 1988, *Vitudurum IV: Die Gläser*,*Bericht der Züricher Denkmalpflege, Monographien 5, Beriträge zum römischen Oberwinterthur – Vitudum* 4, Zürich.

SAMI D., 2011, 'Archeologia a Cesenatico. Lo stato delle ricerche e prospettive per il futuro', *Studi Romagnoli* LXI: 11-35.

STERNINI M., 'Il vetro in Italia tra V e IX secolo', D. FOY (ed.), *Le verre de l'Antiquité tardive et du haut Moyen Âge. Typologie – chronologie – diffusion* (Guiry-en-Vexin 1993), Guiry-en-Vexin: 243-89.

STERNINI M., 1989, *Una manifattura vetraria di V secolo a Roma*, Florence.

STOPPIONI M.L., 2008, 'La sigillata tarda di Sarsina', in A. DONATI (ed.), *Storia di Sarsina I, L'età antica*, Cesena: 713-45.

TASSINARI C., 2006, 'La via Popilia', in L. DALL'AGLIO, I. DI COCCO (eds), *La linea e la rete. Formazione storica del sistema stradale in Emilia-Romagna*, Milan: 202-12.

TORTORELLA S., 1996, 'Considerazioni sulla sigillata tarda dell'Italia centro-settentrionale', in *Studi Miscellanei* 30: 323-35.

UBOLDI M., 1995, 'Diffusione delle lampade vitree in età tardo antica e altomedievale e spunti per una tipologia', *Archeologia Medievale:* 93-145.

ULRICH RB., 2007, *Roman Woodworking*, New Haven (CT).

VEGGIANI A., RONCUZZI A., 1969, 'Ricerche geomorfologiche per la localizzazione degli antichi insediamenti umani nel territorio di Cesenatico', *Studi Romagnoli*, XX: 3-24.

ZAINER W., 1992,*Das Römische Kastell Ellingen.* Römisch germanisch Commission, Limesforschung Band 23. Philip von Zabern, Mainz am Rhein.

ŽERJAL T., 2008, 'Eastern imports in the ager tergestinus',*Rei Cretariae Romanae Fautores Acta* XL: 131-40.