AMERICAN JOURNAL OF NUMISMATICS

35

Second Series, continuing
The American Numismatic Society Museum Notes

THE AMERICAN NUMISMATIC SOCIETY
NEW YORK
2023

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ISSN 1053-8356

ISBN (United States) 978-0-89722-396-6
ISBN (rest of world) 978-0-89722-415-4
ISBN (ebook) 978-0-89722-416-1

DOI: 10.1484/J.AJN.5.136673

Printed in the EU on acid-free paper
Distributed by Brepols Publishers
for the American Numismatic Society

CONTENTS

Editorial Committee v

John L. Tatman. Cretan Overstrikes: Gortyna, Phalasarna, and Polyrrhenia: Drachms Overstruck on Kyrenaika Coins 1

Anna Accettola. New Owls: A Die Study of Sabaean Imitations of Athenian "New Style" Owls 33

Lee-Ad Gottlieb. A Talmudic Reference to the Coinage of Pescennius Niger 107

Mattia Francesco Antonio Cantatore and Domenico Luciano Moretti. The Numismatic Finds from the Churchyard of San Petronio in Bologna 115

Nevyan Mitev. An *Akçe* of Jem Sultan from the Depository of the Park-Museum of Military Friendship 1444 147

Roger W. Burdette. Circulation of Foreign Gold and Silver Coins in the United States, 1826 155

Maxwell A. Kalman. The Coinage of the Islamic State in Iraq and Syria: A Guide and Catalogue of the Circulating Coins of the Islamic State, 2016–2017 173

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AJN Second Series 35 (2023) pp. 115–145
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The Numismatic Finds from the Churchyard of San Petronio in Bologna

3 Plates

Mattia Francesco Antonio Cantatore*
Domenico Luciano Moretti**

In 1985, under the direction of the Soprintendenza Archeologica dell'Emilia-Romagna, an archaeological excavation was carried out in the churchyard of the basilica of San Petronio in Bologna. The archaeological work brought to light the life stages of a central part of the city revolutionized starting from the thirteenth century with the gutting of an urban district to make room for public buildings, the square and, from 1390, the basilica. The excavation was published in short reports in the 1980s, but the numismatic material was not included in the publications. This consists of thirty-four coins and two medals, and here we offer a descriptive overview and contextualization at both urban and regional levels.

Introduction (M.F.A.C., D.L.M.)

This study aims to publish, in context, the numismatic materials from an excavation carried out in 1985 under the direction of the then Soprintendenza Archeologica dell'Emilia Romagna, today the Soprintendenza Archeologia, Belle Arti e Paesaggio per la città metropolitana di Bologna e le provincie di Modena, Reggio Emilia e Ferrara (SABAP-BO), in the churchyard of the basilica of San Petronio in Bologna, therefore in the heart of one of the most important cities in the

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Figure 1. Map of Bologna showing the sites mentioned in the text: 1) San Petronio; 2) San Domenico; 3) San Procolo; 4) Jewish cemetery.

region (Fig. 1). This study further aims to interpret this information with regard to monetary circulation in the Bologna area and Emilia-Romagna, a topic that has not been investigated so far for this geographical area in this time period.

Excavations in the churchyard: a brief overview (M.F.A.C.)

Below we provide information on the archaeological investigations and their interpretation, taken from some contributions published in the years immediately following the excavations (Gelichi 1985; Gelichi et al. 1986a; Gelichi et al. 1986b; Gelichi et al. 1987; Gelichi and Nepoti 1986). Unfortunately, searches for more information in the archives of the SABAP-BO had negative results: the documentation kept there is very sparse and does not provide additional information to what has been published.[1]

In 1985 the Soprintendenza per i Beni Ambientali ed Architettonici

1. The published contributions suggest that the archaeologists produced more documentation during the excavation. Today little remains of it in the archives of the SABAP-BO.

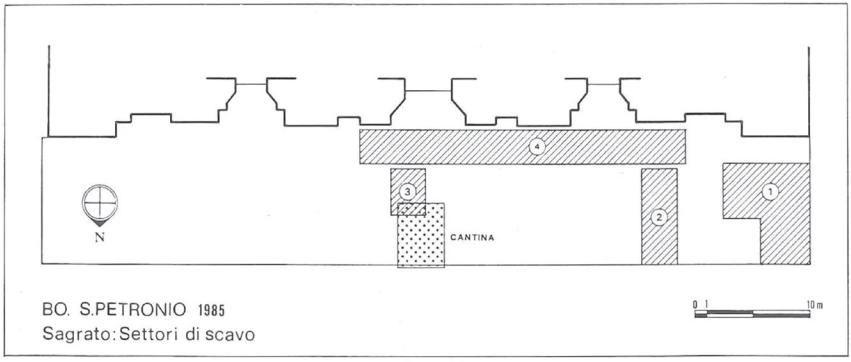

Figure 2. Bologna, churchyard of San Petronio: map showing the locations of the excavation sectors in relation to the church (from Gelichi et al. 1986a).

dell'Emilia-Romagna began restoration of the churchyard of the basilica of San Petronio in Bologna. Following the excavation of two trenches (Sectors 1 and 2), which revealed a conspicuous archaeological deposit, the work also involved the Soprintendenza Archeologica. The latter's intervention consisted of recording the sections of the two trenches already opened, enlarging Sector 1, and opening two more (Sectors 3 and 4) (fig. 2).

These investigations brought to light a complex support structure for the access stairway to San Petronio. It consisted of a series of archways oriented east–west on which the churchyard and the steps inclined towards the Piazza Maggiore.

Sector 1

The vaults were built on loose fill composed of mostly waste material deriving from the building of San Petronio. The ceramic, glass, and metal artifacts found indicated a date in the fifteenth century.

Underneath this deposit, some structures came to light that can be connected to the construction phase of the basilica. Differing from these, in the accuracy of its execution, was a brick-paved basin with plastered walls, from which a channel led into a square well closed by a small vault. This reused a large wall from an earlier period as the north wall (fig. 3).

Remains of a well-built wall with a northwest–southeast orientation, came to light under the precarious structures used during construction of the basilica; its foundations had been partly destroyed, perhaps to facilitate demolition of buildings prior to the construction of the basilica.

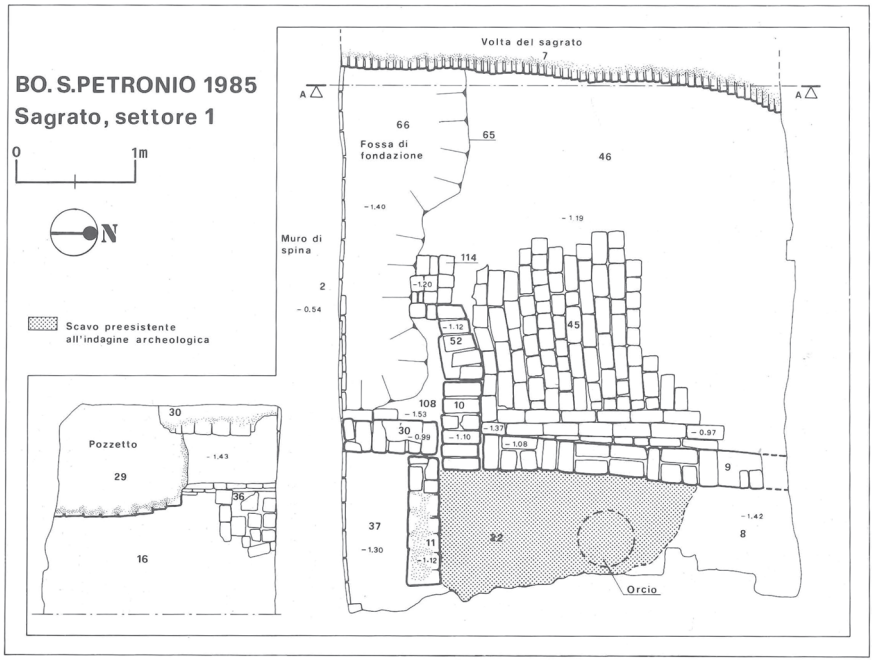

Figure 3. Bologna, churchyard of San Petronio: excavation plan of Sector 1 (from Gelichi et al. 1986a).

Sector 2

The fill against which the vaults were built consisted of layers of residual materials and rubble deriving from the construction of San Petronio. This deposit lay on a trodden surface. Below that there was a series of activity surfaces with charcoal pieces and ashes. These layers yielded scant materials, including minute fragments of *maiolica arcaica* and cooking pottery. Two pillar bases were identified in connection with one of these activity surfaces, suggesting the presence of a porch.

All the elements indicated that the area must have been open-air, perhaps near the medieval road found under the basilica during the excavations in 1976 (Nepoti 1987).

Sector 3

This sector offered an almost intact example of late medieval architecture: the remains of a cellar of a building that existed before the construction of San Petronio, partially filled with rubble and waste.

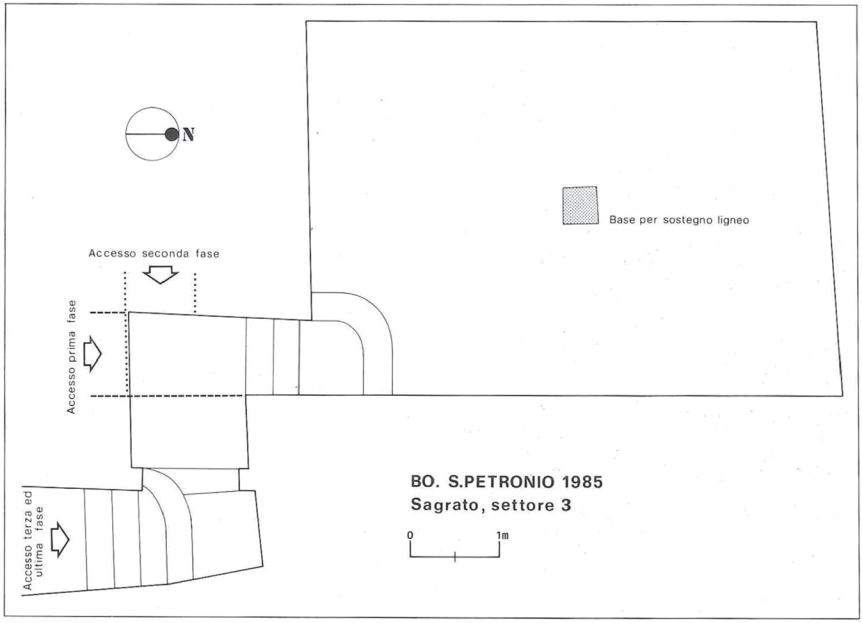

Figure 4. Bologna, churchyard of San Petronio: schematic plan of Sector 3 (from Gelichi et al. 1986a).

Access to the cellar, measuring 4.16 × 5.80 m, was provided by a three-flight staircase built in brick, sandstone slabs, and salvaged trachyte road-paving stones. The perimeter walls were made of new bricks, originally covered with smooth plaster.

On the east and north walls, there were four niches, probably for lamps, while on all the walls there were holes of various sizes for supporting wooden beams. Bricks arranged in a herringbone pattern paved the cellar: in the center, where there was a depression in the floor, there was a selenite cube resting on a plinth of bricks (42 × 40 cm), to serve as the base for a (probably wooden) pillar.

The original house dated to the twelfth or thirteenth century, but the room was the subject of a series of renovations of which the south wall, the staircase with several flights, and the central base were examples (fig. 4). This building was abandoned and destroyed at the end of the fourteenth century with the construction of the churchyard. The archaeological findings confirm this dating, even if some restorations to the archways and walls seem to date to the Renaissance.

Sector 4

This sector, parallel to the façade, consisted of a large vaulted room, found mainly hollow and formerly perhaps filled with rubble and waste, like the entire

churchyard. After the fifteenth century, the room was emptied, rebuilt, and used for secondary burial of human remains, probably exhumed from internal tombs and deposited through openings in the vaults.

Some preliminary data and the materials found along with the osteological remains suggest a date in the second half of the seventeenth century, a chronology also confirmed by a commemorative medal of Pope Innocent XI.

Numerous finds, especially pottery, came to light during the archaeological investigation. Most of them, attributable to the early fifteenth century, provide archaeological confirmation of the dating of the churchyard. Manufacturing waste of glazed ceramics was of particular interest: *maiolica arcaica* and *graffita arcaica*. There were also finds in glass, metal (including coins), and bone, especially dice, of which an abundant series, along with manufacturing waste, had been found in the excavations of 1976 (Nepoti 1987).

The archaeological data agree with the written sources. These indicate the Commune of Bologna bought the district that stood in the designated area and had it demolished in a short time to implement the project, already running at the beginning of the thirteenth century, for the construction of the Palazzo Comunale (Bergonzoni 1984), Piazza Maggiore, and San Petronio, the last of which started in 1390. Although the basilica was opened for worship quite early (Fanti 1980), the works must have lasted for several years, at least until the second decade of the fifteenth century and, in some respects, continued subsequently.

Discussion of the Coin Finds (M.F.A.C.)

The conservation of the numismatic material is not excellent. A complete reading of at least twenty-one coins is precluded by their fragmented or corroded state, showing pitted surfaces, broken edges, and irregular holes (see Catalogue, nos. 3–5, 8–9, 11, 13, 16–17, 19, 23, 25–34). Burial in the ground has also caused deterioration of the medal (no. 35). Although this state of affairs prevents a full assessment, we find signs of wear on various pieces (nos. 1–2, 7, 13, 15, 21, 23–24, 26–27, 30).

The Soprintendenza carried out this excavation when stratigraphic archeology in Italy was still beginning, especially for emergency interventions. Thus, the investigations in the churchyard of San Petronio produced insufficient documentation to fully understand the stratigraphic positions of the numismatic finds. The location and the pottery fragments (Gelichi et al. 1986a; Gelichi et al. 1986b; Gelichi et al. 1987) help contextualize the finds.

According to the tags attached to their storage bags, we know that twelve coins come from Sector 1 (nos. 1–3, 7–8, 24–25, 27–28, 30–31, 34), one medal

from Sector 2 (no. 35), twenty-two coins from Sector 3 (nos. 4–6, 9–23, 26, 29, 32–33), and another medal from Sector 4. We believe that this varied distribution of the finds has to do with the intervention methods as well as the deposits encountered. In 1985, the archaeologists could excavate only Sector 3 completely stratigraphically, and Sector 1 partially. Sector 4 revealed an area emptied during the Renaissance and then filled with bones, among which there was a medal—now unfortunately lost—of Pope Innocent XI.

The first element of interest is the difference between the numismatic finds in Sectors 1 and 3. Of the twelve coins that come from the former, as many as three are unreadable, while five are in poor condition. The ones that can be dated with some precision fall between the beginning and the middle of the fourteenth century. Furthermore, a majority of coins from this sector are of non-Bolognese origin: three *denari* from Bologna, two from Ancona, two from Parma, one *quattrino* from Siena, and a counterfeit Venetian *grosso matapan*. Although all the coins have a stratigraphic unit (SU) of origin, we do not know the arrangement of these units into phases, and it is impossible to reconstruct this due to a lack of information.[2] Therefore, it is not simple to propose a chronological overview of the deposits.

In Sector 3, on the other hand, twenty-two coins were found, almost 65 percent of the total amount. Of these, three are illegible, one is from Como, one from Ravenna, while the remaining seventeen are from Bologna. It is interesting to note that twenty out of twenty-two coins come from SU 522 (nos. 5–6, 9–23, 26, 29, 33), and among these are two *grossi* from Bologna (nos. 21–22). There is also a chronological uniformity among them. As the graph below shows, we date most of these coins between the last quarter of the fourteenth century and the beginning of the fifteenth (fig. 5). Based on these data, we suppose that the twelve *denari* minted between 1374 and 1404 (nos. 9–20) probably formed an intentional group of the exact value of a *grosso* of Bologna. Their loss probably has to be dated to the fourteenth century. Probably, the two *grossi* were also part of this, although both differ chronologically from the rest of the coins.

Likely the thirteenth-century *grosso* of Bologna (no. 21) was still in use over a century and a half after its issue, given its worn condition, and we know from other finds that these coins continued to be hoarded for a long time.[3] On the other hand, more questions arise about the *grosso* of Bologna dated to the second decade of the fourteenth century (no. 22): this is in good condition and not

2. Sauro Gelichi identified at least three different phases of the excavation between the fourteenth and fifteenth centuries.

3. See, for example, Via Luca Longhi hoard in Ravenna (Morelli 1997).

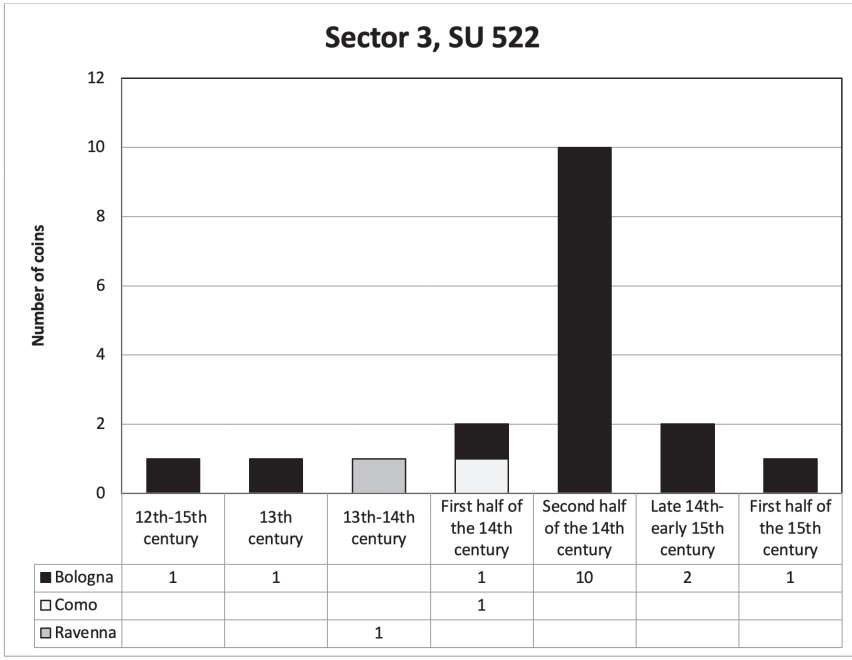

Figure 5. Chronology of issue of the coins found in Sector 3, SU 522, of the excavation of the churchyard of San Petronio, subdivided based on the mint they came from.

worn. However, we should consider that SU 522 has generally yielded archaeological finds (especially ceramics) dating to the last quarter of the fourteenth century (Gelichi et al. 1987). Therefore, the *grosso* in question could either be considered intrusive material—thus after the formation of the layer and linked to post-deposition phenomena—or could be dated slightly before the chronology proposed by Michele Chimienti (Chimienti 2009), i.e., at the beginning rather than the second decade of the fifteenth century. If this were to be the case, we would have a small monetary complex made up of two *grossi* and twelve *denari* from Bologna, for a total value of three *grossi* or thirty-six *denari*, equal to the daily wage of a laborer in Bologna during the last quarter of the fourteenth century (Erioli 2014).

It is difficult to determine whether the other coins found in the stratum were part of the same monetary complex or were distinct single finds. The evident wear of the coins of Como and Ravenna, unlike the Bolognese ones of 1306, suggests their long circulation. Even admitting these were still circulating at the beginning of the fifteenth century, we are doubtful that they can be considered part of the coin group, especially the coins of Como, which are based on the im-

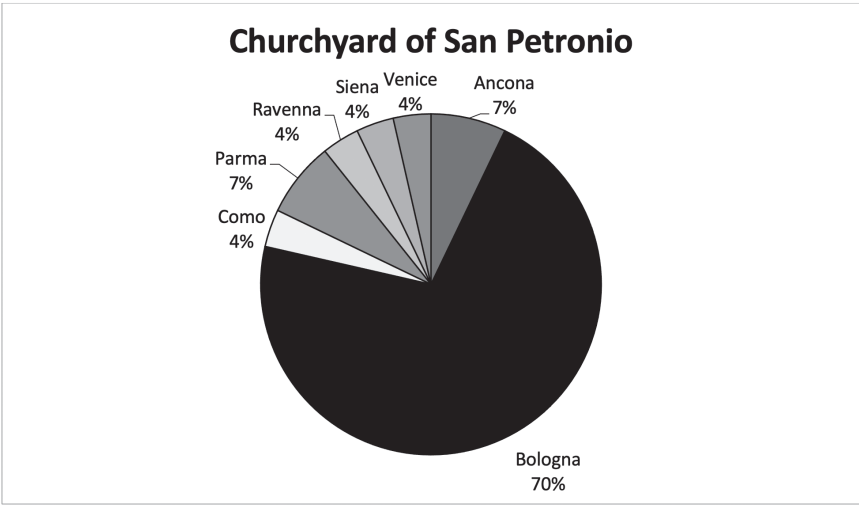

Figure 6. Churchyard of San Petronio: percentage of coins by mint of origin (illegible pieces are excluded from the calculation).

perial standard and not the Emilian one like the others. On the other hand, we cannot say much about the two denari from SU 505 because both are in a poor state of preservation and one is illegible.

After examining the coins about the discovery area and the stratigraphy, we can propose an overall analysis. The available data suggest that the coins found in Sectors 1 and 3 were in circulation between the second half of the fourteenth century and the beginning of the fifteenth. It would not change the examination, even admitting the existence of a small money group among the coins found in Sector 3. Probably, someone stored these coins in their pocket rather than hoarded them. Therefore, excluding the illegible pieces and considering that the monetary finds were circulating during the same period, we have that 70 percent of them were issued in Bologna, while all other mints had between 4 and 7 percent (fig. 6).

It is interesting to compare these data with those deriving from other finds in the city of Bologna. At present, there are three publications featuring medieval coins found in the city:[4] one about San Domenico (Canali 1987), one about the ark of San Procolo (Cantatore et al. 2021), and one about the Jewish cemetery

4. Sergio Nepoti mentions the discovery of Venetian coins of the late tenth or early eleventh century in the excavation inside San Petronio, but both the uniqueness of the data and chronology do not make the information useful for this discussion (Nepoti 1987).

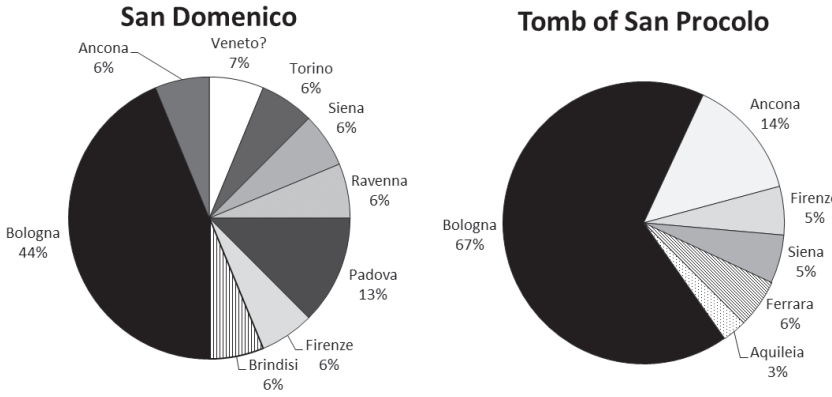

Figure 7. Comparison of the percentages of coins per mint from two Bolognese sites: excavation of San Domenico (data from Canali 1987) and ark of San Procolo (data from Cantatore et al. 2021).

(Moretti et al. 2019). The last-mentioned yielded only three coins dating to the late Middle Ages, two denari from Bologna and one from Ancona, which were in circulation in the fourteenth century. These two mints were also among those found at San Petronio. The other two sites yielded more coins than the Jewish cemetery, and their chronology is almost contemporary to that of San Petronio.

As the graphs (fig. 7) show, the most attested issues in Bologna are those of the city's own mint, which in two cases reach a figure of around 70 percent and in one around 45 percent. The coins of Ravenna and Ancona are similar and had the same value: considering their incidence together, we obtain a presence between 11 and 14 percent in all three sites. Similar consistency occurs for the coins of Siena, which are between 4 and 6 percent. However, the issues of Florence, which were not found during the excavation of San Petronio, were present among the finds from both San Domenico and San Procolo, in similar percentages between 5 and 6 percent. Finally, issues from the Veneto/Friuli area also appear in all three sites, albeit in different proportions. At San Petronio, only one false *grosso matapan* is attested.

The information on other mints and monetary areas is variable; based on the data available today, it could indicate minor circulation or be traced to foreign travelers, since San Domenico and San Procolo were pilgrimage sites.

Finally, we write about the two medals found during the archaeological investigations. Unfortunately, one of the two is lost. According to excavation reports, it came from Sector 4 and bore the name of Innocent XI: the archaeologists dated

it to the seventeenth century. The find is quite unusual because, on October 27, 1691, a decree of the Holy Office prohibited the medals of Pope Innocent XI with a jewelry mount (*appiccagnolo*) and, in general, all those showing the effigy of a pope not yet beatified (Gallamini 1977). The second medal (no. 35), on the other hand, was found in Sector 2, the only one investigated through non-stratigraphic excavation, making it difficult to contextualize it archaeologically. Unfortunately, the state of conservation is not optimal, which prevents the reading of any legends but allows identification of the representations on the obverse and on the reverse, which refer to jubilee images common during the seventeenth and eighteenth centuries: the holy door and the holy staircase (Gallamini 1977, 1989, 1990, 1991).

The chronological difference between the coins and medals found is a point of discussion. Numismatic finds after the fifteenth century are otherwise absent. It cannot be due to a lack of frequentation of the area. The explanation could derive from the fact that the medieval strata remained covered by the supporting structures of the churchyard of San Petronio and thus were not much affected by subsequent works. Also, since the fifteenth century, the floor level has remained substantially the same and has undergone numerous renovations, thus precluding the formation of archaeological deposits, except for the burials. In fact, the medals were probably placed together with the bodies interred under the churchyard during the modern era.

Monetary Circulation in Bologna and Romagna in the Late Middle Ages (D.L.M.)

In the late Middle Ages in northern Italy, people used coins for their daily payments. Thanks to this, we find a lot of coins of low value in archaeological excavations.

Regarding the denominations found in the churchyard of San Petronio, we can observe the presence of only two *bolognini grossi*, which, although they belong to issues of very different dates, probably circulated simultaneously. In addition, there is one *grosso matapan* that is counterfeit, made of copper alloy and not silver.

Otherwise, excluding the unclassified ones, most (twenty-four) of the coins found are *piccoli*, minted between the twelfth and fifteenth centuries. Eighteen are from Bologna, two from Ancona, two from Parma, one from Ravenna, and one from Como. Finally, there is a *quattrino* from Siena (fig. 8).

We can divide these coins into three distinct groups based on the currency standard to which they belong: Bolognese or Emilian/Adriatic (Ancona, Bolo-

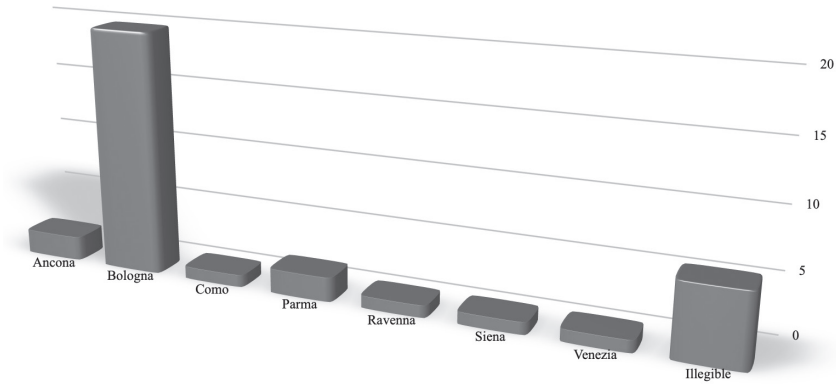

Figure 8. Coins found in the churchyard of San Petronio by mint.

gna, and Ravenna), Milanese or imperial (Como and Parma), and Tuscan (Siena). Finally, the false *grosso matapan* would be within the Veronese/Venetian coin standard.

The main currency found is the *bolognino piccolo* (small *bolognino*): the coin minted by the Commune of Bologna starting from 1191, when Henry VI granted the city the right of coinage (Archivio di Stato di Bologna, Comune, Registro Nuovo, c. 14). Before this date in Bologna and its countryside, as both written and material sources show us, coins from Milan and Pavia (ninth and tenth centuries) circulated, later replaced by those of Verona and Venice (eleventh century) and finally by coins of Lucca and the imperial ones of Milan (twelfth century).

Bologna chose to mint its own *denari* with a value equal to one-third of the imperial *denaro*. Thus, Bologna adapted to nearby Ferrara, which was already minting coins, and maintained convenient interchangeability with the imperial, widely used as a standard of reference. On February 1, 1205, representatives of the Communes of Bologna and Ferrara swore to align the intrinsic value of their coins (Archivio di Stato di Bologna, Comune, Registro Nuovo, c. 129), while on September 9, 1209, representatives of Ferrara and Bologna agreed to standardize their currency with Parma's (Salvioni 1895). In 1233, the bishop of Reggio Emilia (Malaguzzi Valeri 1894, 116) ordered the minting of coins "ad modum monete Bononie vel Parme vel Ferrarie". In 1236 Reggio Emilia also began to produce a grosso with a value of 12 *denari* (Sorbelli 1906–40) to adapt to the coining of *grossi* already issued in Venice and to changing market demands. The *grosso* minted in Bologna, aligned with that of Reggio Emilia, which was already

in circulation, had a silver content devalued by 40% to its own money (Chimienti 2005).

From this time, Bologna's monetary zone expanded to include Ravenna, Ancona, and part of the Marche. In 1249, after the victory of the Bolognese in the battle of Fossalta (1249), a phase of political and territorial expansion began for Bologna, mainly directed toward Romagna. Podestàs from Bologna were sent to the various communes of Romagna and imposed their currency. In 1256 Forlì was obliged to use only the currency of Bologna in contracts (Archivio di Stato di Bologna, Comune, Registro Grosso, c.124), and the same happened the following year in Faenza (Mittarelli 1771). In the statutes of 1258, podestàs had the tasks of having coins minted and ensuring the imposition of Bolognese coinage in all the cities of Romagna, up to Cesena and Ravenna (Frati 1877).

The events described seem to explain why Bolognese currency is prevalent in all the archeological excavations of this period in Romagna. In fact, in addition to the finds in the center of Bologna mentioned above, we can observe similar percentages in other sites. In Castel San Pietro (Chimienti 2001), 61% of the coins found are on the Emilian/Adriatic coin standard (thirteen coins of Bologna, three of Ferrara, three of Parma, one of Ravenna and one of Reggio Emilia); in the castle of Zagonara (Cavalazzi and Moretti 2023), 60%; in the castle of Lugo (Sogliani 1991), 91%. In Emilian territory in the province of Modena, we have the same monetary dynamics. In the excavation of Formigine (Baldassarri 2013), 66% of the coins are from Bologna, and 16.5% are from Parma and Ferrara (fig. 9).

The coinage of Parma was aligned with that of Bologna. Already from 1207, the mint of Parma almost certainly issued money—as demonstrated by documentary mention of *parmexanis* (Affò 1788)—worth one-third of the imperial coinage, just like the *denari* from Bologna and Ferrara. Parma, however, had been aligned with the monetary system of Pavia first and then the imperial or Milanese system, so much that in 1254 the delegates of the city signed a monetary agreement with those of Bergamo, Piacenza, Pavia, Cremona, Tortona, and Brescia to mint money on the same intrinsic standard (Bazzini 2006c). With the pact of 1254 Parma began minting *grossi* with a value of 24 imperial *denari*, imperial *denari*, *denari mezzani* (half an imperial *denaro*), and exceptionally *denari parvi* with a value of one-third of the imperial *denaro*. These, coined through almost the entire fourteenth century, were useful in making Parma's issues a link between the imperial/Milanese standard and the Emilian (Cantatore and Marchesi 2020).

Since the coins of Parma found in the excavations in the churchyard of San

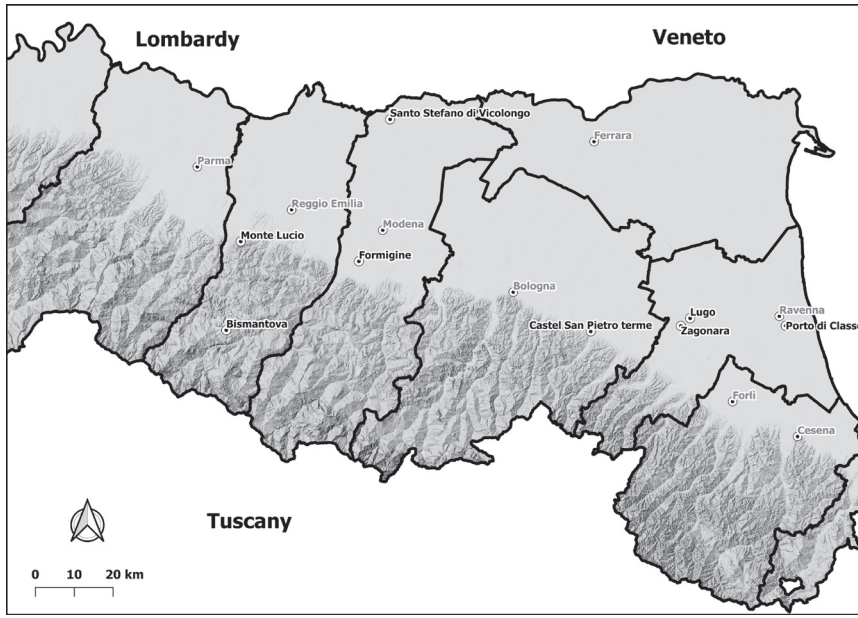

Figure 9. Map of Emilia-Romagna showing the sites mentioned in the text.

Petronio are *denari mezzani*, they could circulate together with Bolognese emissions while maintaining a fixed exchange ratio. Parma's coins have been found in various excavations in the Bolognese and Reggian areas, though never in large quantity. Three were found in the excavation in Piazza XX Settembre in Castel San Pietro (Chimienti 2001), one in the excavation of the medieval settlement of Santo Stefano in Novi di Modena (Chimienti and Pettazzoni 2018), one in Bismantova castle (Mancassola et al. 2014), and five in the castle of Monte Lucio (Cantatore and Marchesi 2020). Further confirmation of the circulation together of money from Parma, Bologna, and Ferrara comes from the hoard found in the excavation of Formigine (Baldassarri 2013).

Regarding the presence of Anconitan *denari*, thanks to the most recent studies, we can hypothesize that these were minted on the Emilian coin standard to allow interchangeability with the Bologna coinage. In almost all excavations in the region, we have some denari from Ancona and Ravenna. The mints of these cities kept their coins aligned with those of Bologna. They devalued their currency only with the birth of the *grosso agontano*, created on the standard of the *bolognino grosso*. Therefore, the *grosso agontano* was equivalent to two Bolognese soldi and was a perfect multiple to circulate in the Bolognese territory.

A separate discussion should be made of the *quattrino* of Siena, which, al-

though part of another monetary system, was widespread at the end of the fourteenth century throughout Romagna and Bologna, as demonstrated by finds in various places in the region: in the ark of San Procolo in Bologna (Cantatore et al. 2019), in Zagonara castle (Cavalazzi and Moretti 2023), in Lugo castle (Sogliani 1991), and in the port area of Classe (Baldi 2013).

The Tuscan *quattrino* had the value of four *denari* of the same account system. It was worth only two *denari* of the Emilian coin standard since the Tuscan *denaro* had half the silver content of the Bolognese. From 1406, Bologna began to mint its own quattrini to cope with the influx of foreign currency into the city. Therefore, we can hypothesize that the Sienese coin found in San Petronio circulated and was lost around the end of the fourteenth or the beginning of the fifteenth century.

The presence of a coin of Como in the name of Azzo Visconti, even if it is not part of the Bolognese monetary zone, should not surprise us. In 1402, the podestà of Bologna issued a proclamation ordering acceptance of all the silver coins of the Visconti (Chimienti and Moretti 2019). The following year, with a new decree, he prohibited refusal of Visconti billon coins in the city and throughout the countryside (Chimienti and Moretti 2019). In written documents, the imperial *denaro* introduced by Frederick I Barbarossa in 1164 appeared in Bolognese payments starting from 1185 (CSB 1909–1987), but only a few times. Coins of Como are rare in contexts in Emilia-Romagna. There is one from the excavations of the Ex Cinema Bios in Castel San Pietro (Chimienti 2003), a *grosso* of the value of 4 *denari* coined between 1239 and 1249, and two *denari* from the castle of Monte Lucio (Cantatore and Marchesi 2020).

The *grosso matapan* deserves a separate discussion. Although counterfeit, it would represent another monetary system: the Veronese or Venetian coin standard.

The first distinction between Lombard and Venetian currency in the Bolognese documents is from 1057 (CSB 1909–1987), while the Veronese coinage (aligned at that time with the Venetian) appears in Bologna in 1065 (CSB 1909–1987). This demonstrates its diffusion through mercantile communication routes, which coming down from the Adige valley in the north led south towards the Apennines. In 1262 Andrea Zeno, a Venetian, became podestà of Bologna, and in 1264 he appointed his fellow citizen, Guido Heganus, as mint master. In 1266 we find in the Libro dei Giustiziati (Salvioni 1895) the name of Egani, burned at the stake for having manufactured *falsam monetam*. This information, and the numerous notices issued to alert the population about fake coins in circulation (Chimienti and Moretti 2019), show how counterfeit coins were part of the circulation and a big problem for civic institutions.

Moreover, the presence of counterfeit Venetian coinage in Bologna is proved by other events, such as the so-called *Scandalo di Rascia* (Milani 2018). Between July 10 and 16, 1305, the podestà Guido Novello Paltanieri, by authorization of the Consiglio del Popolo, launched an inquiry into a rumored influx of inferior coins into Bologna. The kingdom of Serbia, centered in Raška ("Rascia" in Italian), issued *dinars* resembling the Venetian *grosso*, but with a lower precious-metal content (Lane and Mueller 1985, 264), which flooded Bologna. The coin found in San Petronio, however, might have been an outright counterfeit in copper. A register from the court of the podestà (Archivio di Stato di Bologna, Comune, Curia del Podestà, *Libri inquisitionum*, b. 64, reg. 3) refers to "monetam raxensem mancham vel falsam" (Milani 2018), demonstrating that the issue was not limited to Serbian *dinars* alone but extended also to counterfeit coins. The coin found at San Petronio might indeed be one of the false coins that led to the inquiry and that greatly harmed Bologna's economy. It must be pointed out, though, that we do not know whether "vel falsam" refers to copper coins or to silver coins of lower fineness, such as Serbia's.

It is necessary to rely on archaeological data to reconstruct the circulation area of the bolognino and its aligned coins because medieval documents recorded prices using the local names of money rather than a common currency (Saccocci 1999). In the first half of the fourteenth century, the *bolognino* and the coins of Ravenna and Ancona became the main currency in Marche and Umbria. Therefore, the coins found in the excavation of the churchyard of San Petronio give us further confirmation of the circulation of Bolognese coinage.

Conclusions (M.F.A.C., D.L.M.)

The data from the archaeological investigations carried out in 1985 in the churchyard of the basilica of San Petronio in Bologna add elements to the understanding of urban evolution and of the materials used in the different historical periods. The excavations brought to light complex stratigraphic sequences that have made it possible to reconstruct a cross-section of the medieval city of Bologna.

Despite all the difficulties associated with the failure to find detailed excavation documentation, it was possible to contextualize the numismatic finds. The archaeological data and the analysis of the numismatic material (period of minting and state of wear) have allowed us to understand that the coins found were probably in circulation between the second half of the fourteenth century and the beginning of the fifteenth. The chronological homogeneity of a small group of Bolognese coins, their origin from the same stratigraphic unit, and the presence of two *bolognini grossi* also allow us to hypothesize the existence, among

the finds, of a group of associated coins corresponding to the daily wages of a laborer, perhaps deriving from the lost purse of some inhabitant of the city.

In our examination of the city's monetary circulation, the data confirm what the written sources already show: in the fourteenth to fifteenth century, the emissions of Bologna were the most abundant in the city, and in combination with them, typically around 15%, there were the equivalent coins of Ancona and Ravenna. In addition to these, we find Florentine and Sienese *quattrini* on the Tuscan standard, used as doubles of the *bolognino piccolo*. Venetian emissions also seem to have had a function, although not easy to understand: the sources mention them frequently, especially starting from the fourteenth century, but they are only sporadically present among the finds, and in the specific case of the churchyard of San Petronio, they are represented only by a counterfeit Venetian *grosso matapan*. For the rest, there are occasional finds of coinages not part of the area of the Emilian coin standard. The data in our possession are too small to formulate definitive interpretations. These are sporadic finds of coins on the imperial standard or even from southern Italy, for which we can't exclude the possibility that they were lost during pilgrimage trips by people from the areas where these currencies originated. All published cases relate to places of worship well known beyond the region.

CATALOGUE (M.F.A.C., D.L.M.)[5]

Ancona

1. Sector 1, Stratigraphic Unit 14
   Billon *denaro*, autonomous coinage, 1320–1330, Ancona; 0.53 g, 16 mm, 83°
   Obverse: +[•]DE•ANCONA[•]; cross, cabled border
   Reverse: + •PP•S[•]QVI•RI•A•; V‖C•S‖, cabled border
   Reference: Villoresi (2020), p. 21 no. 7var.
2. Sector 1, Stratigraphic Unit 55
   Billon *denaro*, autonomous coinage, 1320–1330, Ancona; 0.39 g, 16 mm, 50°
   Obverse: + •DE•ANCONA•; cross, cabled border
   Reverse: + •PP•[S]•QVI•RIA•; V‖C•S‖, cabled border
   Reference: *CNI* XIII, p. 9 no. 74; Villoresi (2020), p. 21 no. 7

5. The images of the coins are published here by permission of the Italian Ministry of Culture–SABAP-BO; reproduction prohibited for profit, including indirect.

Note: In this catalogue we have preferred to follow the convention of defining the obverse of the coin as the side that names its issuing authority.

Bologna

3. Sector 1, Stratigraphic Unit 15
   Billon *denaro* (*bolognino piccolo*), Commune of Bologna in the name of Henry VI (1191–1334), Bologna; 0.36 g, 15 mm, 166°
   Obverse: […]O•N[…]; A between four pellets, cabled borders
   Reverse: + ENR[ICI]IS; I•P•R•T around pellet, cabled border
   Reference: *CNI* X, pp. 1–2 nos. 1, 4, 7; Chimienti (2009), pp. 91–109 nos. 1-2, 7–8, 54; Varesi (1998), p. 9 no. 2; Di Virgilio (2013a), pp. 8-11 nos. 2–5, pp. 13–16 nos. 7–10
4. Sector 3, Stratigraphic Unit 505
   Billon *denaro* (*bolognino piccolo*), Commune of Bologna in the name of Henry VI (1191–1334), Bologna; 0.45 g, 15 mm, 222°
   Obverse: […]O[…]O[…]N[…]; A between four pellets, cabled border
   Reverse: […]C[…]I[…]; I[•P•]R[•T•], cabled border
   Reference: *CNI* X, pp. 1–2 nos. 1–8; Chimienti (2009), pp. 91–109 nos. 1–11, 54: Varesi (1998), p. 9, no. 2; Di Virgilio (2013a), pp. 7–16 nos. 1–10
5. Sector 3, Stratigraphic unit 522
   Billon *denaro*, Bologna (1191–1406)?; 0.45 g, 14 mm, ?°
   Obverse: […]O[…]; A between four pellets, cabled border
   Reverse: Unreadable; unreadable, cabled border
   Reference: *CNI* X, pp. 1–2 nos. 1–8, p. 8 nos. 1–4, p. 10 nos. 2–7, p. 15 nos. 44–49; Chimienti (2009), pp. 91–123 nos. 1–11, 54, 58, 61–62, 79–81; Varesi (1998), p. 9 no. 2; Di Virgilio (2013a), pp. 7–16 nos. 1–10
6. Sector 3, Stratgraphic Unit 522
   Billon *denaro* (*bolognino piccolo*), Bologna Commune in the name of Henry VI (probably 1306), Bologna; 0.44 g, 15 mm, 96°
   Obverse: +[…]BO•NO•NI ⁎; A between four pellets, cabled border
   Reverse: + ENRICIIS; I•P•R•T• around a cross, cabled border
   Reference: Chimienti (2009), p. 93 no. 9; Varesi (1998), p. 9 no. 2; Di Virgilio (2013a), pp. 14–16 nos. 8–10
7. Sector 1, Stratigraphic Unit 14
   Billon *denaro* (*bolognino piccolo*), Bologna Commune in the name of Henry VI (probably 1306), Bologna; 0.45 g, 14 mm, 155°
   Obverse: + ⁎ BO•NO•N[I…]; A between four pellets, cabled border
   Reverse: [+ ENR]I[CII]S; I•P•R•T around a pellet, cabled border
   Reference: *CNI* X, p. 2 no. 7; Chimienti (2009), p. 93 no. 8; Varesi (1998),

p. 9 no. 2; Di Virgilio (2013a), pp. 14–16 nos. 8–10

8. Sectors 1–2, Stratigraphic Unit 81
   Billon *denaro* (*bolognino piccolo*), Bologna Commune in the name of Henry VI (probably 1306), Bologna; 0.41 g, 15 mm, 110°
   Obverse: + ✦ BO•NO•[NI] ✦; A between four pellets, cabled border
   Reverse: + E[NRI]CIIS; I•P•R•T around a pellet, cabled border
   Reference: *CNI* X, p. 2 no. 7; Chimienti (2009), p. 93 no. 8; Varesi (1998), p. 9 no. 2; Di Virgilio (2013a), pp. 14–16 nos. 8–10
9. Sector 3, Stratigraphic Unit 522
   Billon *denaro* (*picciolo*), Pope Gregory XI (1370–1378?), Bologna; 0.30 g, 14 mm, 138°
   Obverse: + GRE•GO•R[IVS]; P‖A•A‖P, cabled border
   Reverse: unreadable; A between four pellets
   Reference: *CNI* X, p. 10 nos. 2-3, 6var.; Chimienti (2009), p. 114 nos. 61–62var; Di Virgilio (2013a), pp. 94–100 nos. 88–94
10. Sector 3, Stratigraphic Unit 522
    Billon *denaro* (*picciolo*), Gregory XI (1374), Bologna; 0.39 g, 16 mm, 176°
    Obverse: + GRE•GO•RIVS; P‖A•A‖P, cabled border
    Reverse: + * BO•NO•NI * ; A between four pellets, cabled border
    Reference: *CNI* X, p. 10 no. 3; Chimienti (2009), p. 114 no. 61; Di Virgilio (2013a), pp. 94–100 nos. 88–94
11. Sector 3, Stratigraphic Unit 522
    Billon *denaro* (*picciolo*), Pope Gregory XI (1374), Bologna; 0.30 g, 14 mm, 260°
    Obverse: + GR[E•G]O•RIVS; P‖A•A‖P, cabled border
    Reverse: + * B[O]•NO•NI * ; A between four pellets, cabled border
    Reference: *CNI* X, p. 10 no. 3; Chimienti (2009), p. 114 no. 61; Di Virgilio (2013a), pp. 94–100 nos. 88–94
12. Sector 3, Stratigraphic Unit 522
    Billon *denaro* (*picciolo*), Pope Gregory XI (1374), Bologna; 0.34 g, 14 mm, 70°
    Obverse: + GREGORIVS; P‖A•A‖P, cabled border
    Reverse: + * BO•NO•NI * ; A between four pellets, cabled border
    Reference: *CNI* X, p. 10 no. 4; Chimienti (2009), p. 114 no. 62; Di Virgilio (2013a), pp. 94–100 nos. 88–94
13. Sector 3, Stratigraphic Unit 522
    Billon *denaro* (*picciolo*), Pope Gregory XI (1374), Bologna; 0.33 g, 16 mm, 148°

Obverse: + GRE•[G]O[…]VS; P‖A•A‖[P], cabled border
Reverse: [+] * BO•NO[•NI *]; A between four pellets, cabled border
Reference: *CNI* X, p. 10 nos. 2–3, 5; Chimienti (2009), p. 114 no. 61; Di Virgilio (2013a), pp. 94–100 nos. 88–94

14. Sector 3, Stratigraphic Unit 522
Billon *denaro* (*picciolo*), Pope Gregory XI (1374), Bologna; 0.34 g, 15 mm, 17°
Obverse: + GRE•GO•RIVS; P‖A•A‖P, cabled border
Reverse: + * BO•NO•NI * ; A between four pellets, cabled border
Reference: *CNI* X, p. 10 no. 3; Chimienti (2009), p. 114 no. 61; Di Virgilio (2013a), pp. 94–100 nos. 88–94

15. Sector 3, Stratigraphic Unit 522
Billon *denaro* (*picciolo*), Pope Gregory XI (1374), Bologna; 0.42 g, 14 mm, 27°
Obverse: + GREGORI[VS]; P‖A•A‖P, cabled border
Reverse: [+ * BO•]NO•NI * ; A between four pellets, cabled border
Reference: *CNI* X, p. 10 no. 4; Chimienti (2009), p. 114 no. 62; Di Virgilio (2013a), pp. 94–100 nos. 88–94

16. Sector 3, Stratigraphic Unit 522
Billon *denaro* (*picciolo*), autonomous coinage (c. 1380–1400), Bologna; 0.34 g, 14 mm, 304°
Obverse: + ✿BO✿NO✿NI✿; A between four pellets, cabled border
Reverse: [+]M[A]TER•[STVDI]; O[R]V[M] around pellet, cabled border
Reference: *CNI* X, p. 15 no. 47; Chimienti (2009), p. 123 no. 80; Varesi (1998), p. 11 no. 11; Di Virgilio (2013a), pp. 120–124 nos. 114–118

17. Sector 3, Stratigraphic Unit 522
Billon *denaro* (*picciolo*), autonomous coinage (c. 1380–1400), Bologna; 0.17 g, 14 mm, 162°
Obverse: + ✿BO[✿NO✿NI]✿; A between four pellets, cabled border
Reverse: [+]MATER•[STVDI]; ORVM around pellet, cabled border
Reference: *CNI* X, p. 15 no. 47; Chimienti (2009), p. 123 no. 80; Varesi (1998), p. 11 no. 11; Di Virgilio (2013a), pp. 120–124 nos. 114–118

18. Sector 3, Stratigraphic Unit 522
Billon *denaro* (*picciolo*), autonomous coinage (c. 1380–1400), Bologna; 0.40 g, 14 mm, 0°
Obverse: +[✿]BO[✿]NO✿NI✿; A between four pellets, cabled border
Reverse: + MATER•STVD[I]; ORVM around pellet, cabled border
Reference: *CNI* X, p. 15 no. 47; Chimienti (2009), p. 123 no. 80; Varesi (1998), p. 11 no. 11; Di Virgilio (2013a), pp. 120–124 nos. 114–118

19. Sector 3, Stratigraphic Unit 522
    Billon *denaro* (*picciolo*), autonomous coinage (1398–1404), Bologna; 0.22 g, 14 mm, 55°
    Obverse: + ◦BO◦NO◦NI◦; A between four annulets, cabled border
    Reverse: + MATER◦S[TV]DI; ORVM around pellet, cabled border
    Reference: *CNI* X, p. 15 no. 42; Chimienti (2009), p. 124 no. 83 var.; Varesi (1998), p. 11 no. 11; Di Virgilio (2013a), pp. 126–127 nos. 120–121, p. 129 no. 123
20. Sector 3, Stratigraphic Unit 522
    Billon *denaro* (*picciolo*), autonomous coinage (1398–1404), Bologna; 0.29 g, 14 mm, 165°
    Obverse: + ◦BO◦NO◦NI◦; A between four annulets, cabled border
    Reverse: + MATER◦STVDI; ORVM around a pellet, cabled border
    Reference: *CNI* X, p. 15, no. 42; Chimienti (2009), p. 124, no. 83 var.; Varesi (1998), p. 11 no. 11; Di Virgilio (2013a), pp. 126–127 nos. 120–121, p. 129 no. 123
21. Sector 3, Stratigraphic Unit 522
    Silver *grosso* (*bolognino grosso*), Commune of Bologna in the name of Henry VI (1236–c. 1260), Bologna; 1.25 g, 19 mm, 158°
    Obverse: + BO•NO•NI•; A between four pellets, cabled border
    Reverse: + ENRICIIS; I•P•R•T• around pellet, cabled border
    Reference: *CNI* X, p. 2 no. 9; Chimienti (2009), p. 94 no. 13; Varesi (1998), p. 9 no. 1; Di Virgilio (2013a), pp. 17–21 nos. 11–15
22. Sector 3, Stratigraphic Unit 522
    Silver *grosso* (*bolognino grosso*), autonomous coinage (c. 1410–1420), Bologna; 1.23 g, 18 mm, 80°
    Obverse: + ✦ BO◦NO◦NI ✦; A between four annulets, cabled border
    Reverse: + MATER◦STVDI; ORVM around annulet, cabled border
    Reference: *CNI* X, p. 14 no. 34; Chimienti (2009), p. 122 no. 77; Di Virgilio (2013b), pp. 36–37 nos. 155–156

Como

23. Sector 3, Stratigraphic Unit 522
    Billon *denaro*, Azzone Visconti of Milan, Lord of Como (1335–1339), Como; 0.36 g, 16 mm, 210°
    Obverse: [•]✿[•]ǁ[A]ZO‖•VICE•ǁ•COMSǁ[•]✿[•]
    Reverse: +✿C[VMANV]S✿; cross fleury
    Reference: *CNI* IV, p. 185 no. 13; MEC 12, p. 917 no. 460

Parma

24. Sector 1, Stratigraphic Unit 14
    Billon *denaro mezzano* (*torellino*), autonomous coinage (1318–1319?), Parma; 0.27 g, 16 mm, 344°
    Obverse: + •P•A•R•M•A•; cross, cabled border
    Reverse: + [IM]PERATOR (OR ligatured), bull passant left, cabled border
    Reference: *CNI* IX, p. 402 no. 13; Bazzini (2006a), p. 269 no. 199; Varesi (1998), p. 196 no. 905.
25. Sector 1, Stratigraphic Unit 48
    Billon *denaro mezzano* (*torellino*), Simone, Guido, and Azzo da Correggio lords (1341–1344?), Parma; 0.15 g, ? mm, ?°
    Obverse: […]R•M•E[…]; cross, cabled border
    Reverse: Unreadable
    Reference: *CNI* IX, p. 402 nos. 15–18; Bazzini (2006b), p. 272 no. 207; Varesi (1998), p. 198 no. 916.

Ravenna

26. Sector 3, Stratigraphic Unit 522
    Billon *denaro*, anonymous bishops (13th–14th century), Ravenna; 0.22 g, 15 mm, 62°
    Obverse: + ARC[IEPI]S[C]O; P‖V•S‖
    Reverse: + DE RA[VEN]A; cross with trefoil in second and third quarter
    Reference: *CNI* X, p. 683 nos. 8-9; Varesi (1998), p. 276 no. 1251.

Siena

27. Sector 1, Stratigraphic Unit 92
    Billon *quattrino*, Republic of Siena (1351–1390), Siena; 0.97 g, 18 mm, 324°
    Obverse: […]VS⁘; S fleury, beaded border
    Reverse:+ ⁘AL[…]EDO⁘; cross, beaded border
    Reference: *CNI* XI, pp. 362–363 nos. 122–125, 130; Toderi (1992), nos. 18–21; Montagano (2007), pp. 234–237, nos. 501–504, 506–507.

Venice?

28. Sector 1, Stratigraphic Unit 94
    Copper counterfeit *grosso matapan* of Venice, 1.77 g, 20 mm, ?°
    Obverse: Unreadable; human figure on the left passing banner-staff to human figure on the right

Reverse: Unreadable
Reference: Keber (2018), pp. 28, 5, 75, 80, 111–112, 169, 183.

Illegible

29. Sector 3, Stratigraphic Unit 522
Billon coin; 0.72 g, 19 mm, ?°
Obverse: Unreadable
Reverse: Unreadable
30. Sector 1, Stratigraphic Unit 81
Billon coin; 0.58 g, 16 mm, ?°
Obverse: […]MI[…]; unreadable
Reverse: Unreadable
31. Sector 1, Stratigraphic Unit 104
Billon coin; 0.65 g, 16 mm, ?°
Obverse: Unreadable
Reverse: Unreadable; […]S[…]
32. Sector 3, Stratigraphic Unit 505
Billon coin fragment; 0.33 g, 16 mm, ?°
Obverse: Unreadable
Reverse: Unreadable; […]V[…]
33. Sector 3, Stratigraphic Unit 522
Billon coin fragment; 0.31 g, ? mm, ?°
Obverse: Unreadable
Reverse: Unreadable
34. Sector 1, Stratigraphic Unit 15
Copper coin fragment?; 0.41 g, ? mm, ?°
Obverse: Unreadable
Reverse: Unreadable

Medal

35. Sector 2
Brass jubilee medal with a suspension loop turned at 90 degrees extending from the edge (17th–18th century), Rome; 16 mm
Obverse: The Holy Door; unreadable legend
Reverse: The Holy Stairs; unreadable legend
Reference: Corrain and Zampini (1973), pp. 14–64 nos. 9, 123, 150, 223; Pfiffer (1984), p. 54 no. II.2.12b; Coletti et al. (1990), p. 511 no. 2; Gallamini (1990), p. 63 nos. 46–47; Abela (2005), p. 45 no. 2; Candussio and

Rossi (2005), pp. 150–151 nos. 499–504; Ciampoltrini and Manfredini (2007), p. 72; Bianchini and Ciampoltrini (2011), p. 31 no. 30

ACKNOWLEDGMENTS

The authors sincerely thank Dr. Michele Chimienti, who informed us of this unpublished discovery and for providing the coordinates for us to be able to request permission for study and publication from SABAP-BO. We also thank the latter for its willingness to provide the data and allow its publication.

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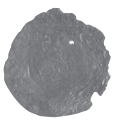

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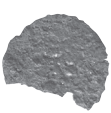

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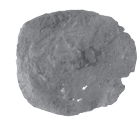

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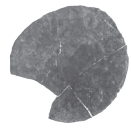

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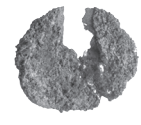

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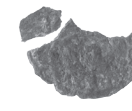

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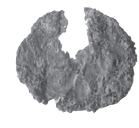

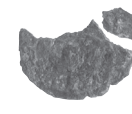

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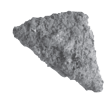

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