The Circulation and Use of Coins
in the Latin Kingdom of Jerusalem 1099-1291 CE

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By
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This work was carried out under the supervision of

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The studies below are the results of two decades patiently studying coins excavated and found in the heartland of the Crusader kingdom of Jerusalem. Also in my case John Donne’s (1572-1631) observation ‘No man is an island’ applies, and I owe a considerable number of persons and institutions my heartfelt thanks for their help and support.

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Chapter 1. Introduction

The British historian M.M. Postan noted dryly in the 1952 edition of the *Cambridge Economic History of Europe* (reprinted in 1987) that ‘an economic history of the Crusades has not yet been written’. At present, more than a century of intensive research into Crusader history such an undertaking has yet to be accomplished: a serious discussion about the characteristics and role of the economy in the kingdom of Jerusalem, let alone about such mundane subjects like prices, money circulation and supply are still entirely absent from the general discourse on the Crusades and Frankish settlement in the East.

This is certainly true with regard to one of its most central components, the role, use and circulation of the coinage used in the Latin kingdom of Jerusalem.

Much of what is related to money and coins remains absent from the general research discourse on the Crusades and the Frankish settlement in the East. This seems to reflect a wider historiographical trend amongst both historians and researchers from other disciplines such as archaeologists, who prefer to treat coins as one-dimensional objects and not as multi-facetted historical documents that can be exploited to reach wider historical conclusions.¹

The research below constitutes a first step in an attempt to re-integrate the study of coins within a larger historical-archaeological framework of studying the Jerusalem Kingdom's economy and history. As such it does not stand alone but joins a

¹ In most cases coins are merely used as dating devices or artistic objects while the wealth of intrinsic (iconography, inscriptions, economic value) and contextual (site context, distribution patterns, showing the interacting between different groups or peoples, within territories over a certain time) information remains unused. On the general need to re-integrate the study of coins in the archaeological and historical discourse, particular within the framework of ‘historical archaeology’ see Kemmers and Myrberg (2011:87 -108).
growing number of studies on the kingdom which try to marry the more 'orthodox' study of documents with new sources of information from a variety of disciplines, in particular archaeology.  

The study below divides in two main sections. The first section consists of two parts: the first I have named ‘A Crusader History without Money’ and it reviews in detail the historiography and nature of Crusader coinage research up to the present and in particular its presence or rather its absence within those studies dedicated to the history of the Crusader kingdom (chapter 2).

The second part ‘towards a new monetary history of the kingdom: using excavation and provenance finds’ explains the methodology and research aims of the current research vis-à-vis previous ones (chapter 3). This chapter includes methodological remarks (3.1) a presentation of the data-base (3.2), a section on ARC/GIS mapping and maps showing the spatial distribution of coins within the kingdom, classified according to different types of settlements (3.3). An accompanying list of sites where coins were found, noting the different types of coins (3.4). And finally a presentation of the research aims and questions of the study (3.5).


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2 A pioneer of such studies is B.Z. Kedar whose researches combine exacting study of documents with innovative forays into different disciplines such as study of medieval mortars (1975), aerial photography (2000), geology and landscape surveys (1992) and archaeology (1997). Particular important are also Denys Pringle's works, among them his monograph of the Red Tower (1986), his survey of Crusader churches (1992-2007) and secular buildings (1997). Among the most important scholars of this approach are now two of Kedar’s students: Ronni Ellenblum's surveys of rural settlement (1998), military fortifications (2007) and lately an historical-climate study of the 11th century Middle East (2012); and Adrian Boas' researches on Crusader Archaeology (1999), Crusader Jerusalem (2001), the military Orders (2006) and domestic architecture and daily life (2010). These three Israeli scholars have founded what could be considered a new school of Crusader period studies whose members use new geographical, archaeological information and material culture in combination with written sources (Stern 2007, Raphael 2010, Barbé 2010; Yehuda 2010, Khamissy 2012, Lewis 2013.
The second major section, the heart of this present study (Chapters 4-8), consists of five case studies, firmly anchored in material from our data-base (see 3.5).

Three of the five chapters consist of materials previously published as articles:

**Chapter 6 (Case study 3)**


**Chapter 7 (Case study 4)**


**Chapter 8 (Case study 5)**

The remaining two chapters (Case studies 1 and 2) will be published as follows:

**Chapter 4**


**Chapter 5**

Chapter 2. A 'Crusader History without Money’?
Notes on the Current State of Research

As I already mentioned, there exists no monograph dedicated to the monetary history of the kingdom of Jerusalem. Those that wish to immerse themselves in the subject need to piece together information from a wide variety and diverse assortment of books, articles and studies dealing the Kingdom's history. The task is particular daunting since the material is not only scattered in a large number of researches but also embedded in studies from very different disciplines. To make things more transparent for the reader I have grouped them in five categories of studies, each one surveyed more in detail below: 1) Numismatic studies related to the Kingdom of Jerusalem and the Latin East 2) Works on the monetary history of the surrounding Muslim states, 3) Historical studies of the Frankish Kingdom, both general and specialized 4) Studies related to the medieval economy; 5) Studies related to the archaeology and the material culture of the kingdom.

2.1 Numismatic researches of the Jerusalem Kingdom and the Latin East.

Most of the numismatic studies related to the Frankish Kingdom were, until quite recently, works devoted to the classification and typology of Crusader coinage, the coinages specifically produced in Frankish mints in the Latin East. In contrast, a firsthand knowledge of the coinage that actually circulated within the kingdom is lacking, certainly one based on systematically collected provenance/ archaeological finds. Also, practically no work has been done on parallel circulation of ‘non-official Crusader’ coin types. In particular, the tendency to separate and isolate ‘Crusader’ gold and billon money and ignore the possibility of the use of Muslim-type monies by
the kingdom's population, has in general created a distorted picture of the use of coinage circulating in the kingdom.

The first systematic works into ‘Crusader money’ were those of nineteenth century French scholars like De Saulcy and Schlumberger published between 1847 and 1878. In particular Schlumberger's work, with its supplement published in 1882, was until quite recently considered the 'Bible' of Crusader period numismatics. It is an almost complete record of all the basic types of coins minted in the Latin States set within the context of a skeletal historical narrative.\(^1\) Despite its nineteenth century comprehensiveness, it was clearly biased towards a description of 'Crusader' coin types, illustrating the participation and presence of illustrious (French) Crusader dynasties and personalities.

Successive studies during the 1930’s were based on the research of single hoards or type classification.\(^2\) These were more 'technical' sophisticated works allowing for a more scientific based comparison of types and varieties and their chronological sequencing and dating. However also these basically continued the emphasis on 'Crusader' money in the study of coinage circulating in the Frankish Kingdom.

Between the 1950s and early 1980s a steady flow of some forty, mostly short descriptive articles appeared on 'Crusader' coinage, scattered in a number of numismatic journals. Some of these described new types. A more important group of articles authored by Michael Metcalf, based in many cases on material from commerce, minutely documented hoards and groups of coins including European ones, associated with the Crusades and settlement in the Latin kingdom. These –

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1 Metcalf (1993: 142).
among them a substantial number of hoards – were the first numismatically sound building blocks from which the earliest picture of the coinage circulating in the kingdom were assembled and which was published by Metcalf in his Coinage of the Latin East (see below) in 1983.  

Parallel, the recognition that the study of coins could be of major importance in studying the history of the Crusades and Latin settlement in the East found its expression in the 'Fourth Oxford Symposium on Coinage and Monetary History' organized in 1979. It marked the first serious attempt ‘to cross the lines’ and study the use of coinage in the Frankish East as part of the economic history of the region. This attempt was further galvanized by the co-option of two large articles on Crusader period coinage in the last volume of Setton’s ‘Pennsylvania History’, the standard work of Crusader history — albeit, still in the form of completely 'segregated' numismatic studies. In the same spirit, a small auxiliary essay on the coins of the Kingdom of Jerusalem was included in a volume edited by Joshua Prawer dedicated to the history of Crusader Jerusalem. 

At present the commanding work in the field of Crusader money is Metcalf’s Coinage of the Latin East, originally published in 1983 and substantially re-edited in an enlarged version in 1995. It contains references to the most important articles written on Crusader numismatics and coinage of the kingdom till the early 1990s. It also includes important new insights on the circulation of European coin imports during the First and Third Crusades. However, its main emphasis remains firmly

3 See in particular Metcalf's articles appearing in Hamburger Beiträge zur Numismatik (1968/1969; 1975) but also in the ANSMN (1975) and NC from 1961 onwards.
focused on coin types *minted in* the Latin East. It is, as the author points out, using the latest in numismatic methodologies like hoard-evidence, style-analysis, and die-link studies, first and foremost a modern sylloge catalogue of the ‘Crusader’ coins types (types ordered according to mints/geographical origins) using the Oxford University collection. Metcalf though clearly recognized that a true monetary history of the Latin East could only be constructed empirically from the ‘bottom up’ by collecting ‘hard’ hoard evidence and site-finds, particular from excavations and not just collections.\(^7\)

To this, Metcalf made a priceless contribution by appending a ‘checklist of hoards’ a detailed and systematic description of all Crusader period hoards, including important details about their provenance – a vital research tool for scholars still today.

Since 1995 the further publication of hoard material and single finds has further enlarged our knowledge of the coinage of the kingdom.\(^8\) Unfortunately, many of the hoards and finds often still originate with antiquity coin dealers and thus have only a general provenance (‘from the Near East, ‘Mainland hoard’). In rarer instances, a more exact but still approximate location could be designated (‘from a drainage pipe in Jaffa, ‘discovered south-east of Bethlehem’). Of particular importance therefore was the long awaited publication of the excavated coin finds of Atlit/Athlith castle excavated by C.N Johns in the 1930s by Metcalf, Berman and Kool in 1999.\(^9\) The detailed publication and interpretation of more than 220 excavated Crusader and contemporary Muslim coins found mostly in the faubourg/township of Atlit Castle made it instantly one of the major sites and references for the study of the monetary history of the mainland Crusader States in the 13th century.

\(^7\) Metcalf (1995:viii).


\(^9\) Metcalf, Kool and Berman (1999: 89-164).
More recently Metcalf reviewed the major methodological questions related to the study of the kingdom’s coin currency, and justly remarked that any future model of coins circulating in the Frankish Kingdom must be built on the premises that coins from Frankish mints only constituted a small percentage of the money circulating in the Latin territory.\textsuperscript{10}

A particular fertile field of Crusader period numismatics is the study of billon money minted in Europe but found in settlements in the Latin East. Traditionally the study of this material was associated with the earliest moneys the Crusaders ‘took with them’ on the First Crusades.\textsuperscript{11} Evidence for these were based on isolated references in First Crusade chronicles and hoards thought to have originated ‘en route’ to the Holy Land containing European billon. Hoard material from mainland sites in the Latin East have shown that these coinages apparently continued to arrive and circulate in the Crusader kingdom and northern principalities. The main summary for this still remains article published by Stahl in 1986 and Metcalf’s chapters on European coinage in his Oxford sylloge and is mostly based on material from collections and hoards.\textsuperscript{12} The majority of these monies consist of French Feudal coinages and north Italian Lucchese denarii, though smaller groups of English pennies and Iberian \textit{denarii} were also present.\textsuperscript{13} Important groups of German coins associated with the Second and Third Crusade were discovered in Asia-Minor, among them a very large assemblage associated with the German emperor Frederick Barbarossa but these are virtually non-existent in the kingdom's territory.\textsuperscript{14} Studies have also noted

\textsuperscript{10} Metcalf (1997:189-198); Metcalf (2008: 175-188).
\textsuperscript{11} Porteous (1989: 354-420).
\textsuperscript{13} The Lucchese denarii in particular were the object of two articles which established their connection to the First Crusades. See Matzke (1993:36 -44; 1994: 13 – 19).
the importance of such 'Eastern' finds of European coinage for establishing a more exact relative/absolute chronology of these coins "back home.\textsuperscript{15} However, except for their presence in hoards, till today no detailed study based on provenanced finds exists which documents their circulation within the territory of the Jerusalem kingdom.

One subject with potential important implications for the nature of the Frankish coin usage is the minting of Muslim gold and silver imitations by the Latin kings. The existence of gold \textit{dinar} and silver \textit{dirham} imitations was already noted in the 19th century.\textsuperscript{16} The typological\textsuperscript{17} and metrological aspects\textsuperscript{18} of these gold bezants was and is a popular subject, and has been extensively studied and well summarized.\textsuperscript{19} Useful comparisons were drawn with Byzantine gold money\textsuperscript{20} and imitation monies in Spain and Norman Sicily.\textsuperscript{21} Metcalf presented important new documentary evidence for their simultaneous minting in Jerusalem and Acre in the 12th century as well as new hoard showing the continuous use of the Jerusalem kingdom’s gold coins in the principality of Antioch.\textsuperscript{22}

Since the 1940s we also know that the Latin kings of Jerusalem minted at least from the mid-12\textsuperscript{th} century cut gold fragments with Latin legends. Apparently these were never minted as coins and manifold theories have been put forward as to why these were minted.\textsuperscript{23} Recent finds of cut silver and gold fragments – including those from

\begin{footnotesize}
\textsuperscript{16} Lavoix (1877); Schlumberger (1878:130 – 143); Blanchard (1880).
\textsuperscript{19} Metcalf (1994: 9 – 19; Metcalf 1995: 43 -51;98 -106)
\textsuperscript{20} Bompaire (1998:35 -51).
\textsuperscript{22} Metcalf (2000: 203-218).
\end{footnotesize}
the previous Fatimid period – in archaeological contexts allow us to better understand their genesis, circulation and use within the kingdom.  

Generally speaking, in comparison to billon money, finds of imitation besants, Frankish cut gold pieces and silver drachmas remain rare, in particular from provenance excavation and site finds: to date our database contains some 26 finds, of which c.11 can be described as hoards, the rest consisting of single finds. Comparisons of such ‘Crusader’ gold finds and an integrative study with the far more numerous hoards and sites finds of dinar from the Fatimid period, some 17 hoards and more than 44 single finds – also a subject hardly studied – will allow us to present crucial new information on the local monetary economy prior to the establishment of the Latin Kingdom and in what manner it interconnected (continued/discontinued) with the one of the Frankish kingdom. In this respect the recent find of a rare, large gold hoard of Fatimid coins discovered a in late 13th century Crusader context (Arsur/Arsuf castle) will be of crucial importance.  

This, together with other smaller finds of gold coinages from Crusader archaeological contexts will allow us to take a fresh look at the documentary evidence accumulated since the 19th century on such gold coinages, and complete our understanding of the use of precious metal coinage in the kingdom’s economy and the role of imitation moneys produced by the Frankish Kings.


25 The hoard is is to be published in the near future in a study by the author in collaboration with O. Tal, Archaeology Department of Tel Aviv University and I. Baidoun.
2.2 Studies on Fatimid, Ayyubid, early Mamluk and Byzantine monetary history.

Most numismatic works and catalogues of Islamic coinages between the 11th and 13th century contribute little or no information on the interplay with the Frankish monetary economy and its borrowing/imitation of Islamic types.26 This trend of regarding the Frankish economy as separate, divorced from historical, typological and monetary developments in the Byzantine27 and Islamic states seems to be continued also in more recent works on Fatimid and Ayyubid/Early Mamluk coinages.28 There are some (very rare and brief) exceptions: Claude Cahen’s terse remarks on simultaneous circulation of Muslim and European-style coins and more recently an article on the circulation of silver dirhem minted by the Isma’ili Assassins’ sect in the Frankish border town of Baniyas.29

Fortunately, there exist a number of important studies on economic and monetary developments in Pre-Crusader Muslim ruled Palestine and surrounding Muslim states between the Fatimid and Mamluk period, that are of direct relevance to our subject.30 These contain particularly valuable information on a wide range of subjects related to money during the 12-13th century in the Near-East: the role of coinage in daily life, financial and fiscal administration, prices and fineness of metals used in coins. In recent years a new generation of studies appeared dealing with monetary issues in

27 No references are made to monetary or economic developments in the Crusader States in catalogues and other numismatic works dealing with 12/13th century Byzantion. See for example such standard works such as Hendy (1985; 1999) and Grierson (1999).
Egypt\textsuperscript{31} but also in Syria and Muslim Palestine.\textsuperscript{32} These contain important information and data for comparison with the monetary economy of the Frankish kingdom. A few studies actually noted the interplay of coin circulation between the Frankish Kingdom and the surrounding Muslim states.\textsuperscript{33} Particularly important is Heidemann’s survey of the currency of Ayyubid Jerusalem and Palestine.\textsuperscript{34} Important (rare) information on coinages and related subjects in the Jerusalem kingdom and surrounding Muslim states can be gleaned from a manual for market inspectors written in late 12\textsuperscript{th} century Ayyubid ruled Tabarriya/Tiberias and hopefully more such information will come available with the continuous intensive study of medieval written sources from the Islamic world.\textsuperscript{35} Nevertheless, no comprehensive work based on archaeological material exists detailing the circulation of Muslim coinages in neighboring Muslim states (Fatimid, Ayyubid and Mamluk) as well as in the territory of the Frankish Kingdom before and during the Frankish settlement. A limited number of publications in particular a growing number of numismatic reports from excavations indirectly touch on the subject.\textsuperscript{36} Historical studies, for example of the neighboring Fatimid state hint occasionally at the importance of cash money for the maintenance of its army and bureaucracy but nothing explicit is mentioned about the importance of money

\begin{quote}
\textsuperscript{31} Lev (2007:307 -348); Li Guo (2004); Goitein and Friedman (2008).
\textsuperscript{33} Cahen (1983); Ehrenkreutz (1992); Heidemann (2007a:117 -142)
\textsuperscript{34} Heidemann (2007b:276 -300).
\end{quote}
circulation in Fatimid society, in particular the enormous quantities of gold dinars produced in a large number of mints within the Fatimid state.\(^\text{37}\)

2.3. Historical studies of the Frankish Kingdom.

Historical studies have tended to avoid a more in-depth analysis of the economy of the kingdom and in particular the role and use of coinage. From the 19th century till the present most historical studies that did refer to the subject did so primarily in the context of a political struggle between two parties: the Jerusalem kings defending their royal rights versus the kingdom's noble magnates enlarging their seigniorial privileges. The various taxes and financial instruments for the collection of royal and seigniorial revenues listed in written sources are recurrently listed by successive historians with little new information or insights. Virtually no study presents quantitative economic information based on a systematic collection of information (for example, prices) from written documents even though most of these were published more than a hundred years ago in France and Germany. Also the more recently (revolutionary) growth in data related to material culture finds thanks to massive archaeological excavations (among these also coins) has hardly begun to be used.

\(^{37}\) For an exhaustive listing of the different types of gold/silver and billon coins produced in the various mints of the Fatimid state see Nicol (2006). Nicol presents a detailed listing but no analysis or conclusion as to the nature of the Fatimid mint policy. Also the issue of Crusader imitations is avoided except for occasional mentioning of suspicious types within the catalogue. An important chapter on the taxes and incomes of the Fatimids in North Africa during the 10th century see Halm (1996: 355 – 364). For the importance of the royal dynasty and the political elite in the Egyptian Fatimid (cash) economy 10-12th c. and the enormous sums of money circulating see Lev (1991: 65 – 78); on fiscal reforms and the importance of cash gold for the development of the Fatimid 'market' economy see Brett (2001:331 ff.); scattered references to the vast sums of cash in Fatimid and Ayyubid ruled Egypt see Lev (1999).
2.3.1. General historical studies of the Jerusalem kingdom

Until the early decades of the 19th century ‘event’ accounts of the Crusades and settlement in the East were basically devoid of any references to coins or monetary matters.\(^{38}\) Michaud’s immensely popular *Histoire des Croisades* was an exception of some sorts, since his 1822 edition contained a twenty-five-page appendix authored by the antiquarian Esprit Marie de Cousinery (1747-1833), one of the earliest numismatics works dealing with Crusader period coinage. Also later 19th century and early 20th century ‘political event’ historians of the Crusades virtually ignored the economic and monetary implications of the Crusade and settlement in the East.\(^{39}\) In fact, very few historians, like the German historian Prutz, underlined the importance of ‘Geldverkehr und Münzwesen’, the huge capital of money and goods set in motion by the Crusades and the settlement in the East.\(^{40}\) The understanding of a ‘Crusader economy’ among these historians was rudimentary and had often little to do with reality.\(^{41}\) By 1940, the American historian La Monte discussing the major methodological problems facing Crusader historians noted the near total lack of studies on ‘non-political’ subjects, among them on the economy of the Crusader States.\(^{42}\) Within this context La Monte prophetically stressed the importance of studying material from archaeological excavations: among these he mentioned the

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\(^{38}\) For example Wilken (1832).

\(^{39}\) Historians like Röhricht (1898), Grousset (1936) and even Runciman (1951).

\(^{40}\) Prutz (1883:364-376); Munro (1935).

\(^{41}\) Prutz for example envisaged a ‘Buntheit’ of western type moneys circulated in the East together with local Byzantine and Arab type monies. Munro (1935:122) noted the use of ‘Greek and Western coins among the Crusaders’ but also the introduction of the gold bezant with Arabic script for use in commerce, ‘which would be acceptable to the Oriental merchants’. Also the editors of Munro’s book published after his death indulged in the favorite pastime of Crusader period historians of illustrating their books with drawings of ‘crusader coins’.

\(^{42}\) La Monte (1940: 71 – 72).
recent ‘recent discoveries’ of Crusader coin hoards (by Cox and Longuet, see above) which in his opinion were to revolutionize the study of the money of the period.  

Historians of the Jerusalem kingdom writing after WW II broadly sketched the importance of cash money in the kingdom’s urban economy, with royal functionaries and absentee feudatories paid cash salaries and money fiefs, and the important role of Italian city states like Genoa and Venice, but once more gave little hard (new) data.  

The general importance of royal power and administration in the 12th century kingdom, also in financial matters, was stressed, but without substantial references to monetary matters or coins. Few studies like Prawer’s ‘Colonial Society’ devoted a small summary of the coinage circulating in the kingdom within the context of a chapter on the 'economic life' of the kingdom. However, the monetary significance and function of cash money within the kingdom’s rural economy, urban settlement

43 La Monte (1940:74 -75).  
44 I refer to such general historical works written by Richard (1953; 1999), Prawer (1971), Smail (1973), Riley-Smith (1983), and Mayer (1987). A telling example of the unfamiliarity of historians with monetary matters, in particular coins, was Prawer’s two-volumed history of the Latin kingdom of Jerusalem (1971). His chapter on ‘Government and Society in the 12th century’ (Prawer 1971:361-431) presented to his readers the coins minted in the kingdom of Jerusalem as illustrations of the administrative and feudal divisions of the kingdom without any reference to their economic or monetary significance (Prawer 1971: 376-379). Just as historians had been doing for the past 100 years Prawer heavily borrowed from the work of Schlumberger (including his plates), published in 1878. As a result Prawer (mistakenly) concluded that the appearance of baronial coins of Sidon, Beirut, Tyre, Jaffo belonged to the 12th century, and used these to underline his thesis of a weakening power of the king vis-à-vis his feudatories from the 1170’s onwards (Prawer 1971:380-382). However since Chandon de Brialles (1942-3:244-57) and particular Edbury ‘s re-appraisal of the Baronial coinage in the kingdom (1980:59-72) we know that the minting of these coins primarily took place in the 13th century.  
and trade was largely ignored by him and others, also in later works. Likewise, the vast ‘Pennsylvania History’ series mentioned briefly, almost in neo-colonial fashion, the circulation of mostly European money among the 'Europeans living in Palestine and Syria' during the Middle Ages but no more. Its last volume, a bewildering amalgam of disparate studies, published under the puzzling title 'The impact of the Crusades on Europe' in 1989 did include two major essays on Crusader period coinage, but these were presented in the tradition of late 19th century ‘auxiliary/specialized studies’, with no attempt made to integrate these in the historical narrative and understand the broader monetary significance of the use of cash money in Frankish settlements. Such a trend of largely disregarding an integrated presentation of the monetary economy of the Crusader settlement continues basically still today in newer general works like The Oxford Illustrated History of The Crusades and the New Cambridge Medieval History and lately The Crusades: An Encyclopedia. A welcome new direction is Tyerman’s God’s War, first published in 2006 which consistently tries to highlight the underlying economic realities of Crusading and the Latin settlement in the East.

47 Prawer (1980).
48 Holmes (1977:7 – 9).
49 Riley-Smith (1995); Mayer (2004: 644 -674); also Murray’s Encyclopedia (2006) perpetuated an ‘archaic’ division between history and numismatics with two separate articles on the economy and money used in the kingdom: an important reassessment by David Jacoby of the kingdom’s economic resources with the framework of the Frankish ‘Levant economy’(Murray 2006: 374 -377); and a ‘traditional’ numismatic survey of the coinage of Outremer by Marcus Philips (Murray 2006: 913 -917). Tyerman (2007:233) clearly influenced by recent scholarship noted the relative dense and intensive settlement of the Latin kingdom which “display a level of economic viability never really matched by political or demographic security”.

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2.3.2.2 Specialized studies

More specialized studies and articles on the kingdom’s institutions do refer to important data, but often with no reference to the wider monetary implications on the kingdom's economy and its inhabitants.

2.2.2.1. Royal financial administration: one of the least documented subjects in the historiography of the Latin kingdom institutions are the royal finances. Primarily this is because the royal archives, and with them the ledgers of its financial records did not survive the two demises of the kingdom in 1187 and 1291. The little we know about the financial organization of the kings of Jerusalem comes mainly from isolated references by chroniclers and surviving 13th legal sources (Assizes) reflecting realities of the previous pre-1187 kingdom. These are repeatedly quoted by historians in the 19th and 20th centuries as the main sources on the subject. In contrast compilation and analysis of financial data in the more numerous surviving (royal) charters, particular in the 12th century, have yet to be attempted. Also combining these with a accumulating archaeological information for clues about the wealth and financial competence of the kings of Jerusalem has still to be accomplished. Likewise, little or no effort was made to understand the significance of a royal currency even though the existence of such a coinage was well known since the end of the 19th century even among general historians. For example a chapter on the ‘organisation financière’ of the kingdom by the French historian Dodu was wholly based on a rudimentary (and often mistaken) reading of legal sources and William of Tyre’s chronicle.\(^50\) He and a long line of Crusader period historians up to the 1970s, mistakenly thought that ‘le droit de batter monnaie’ was shared by the kings of Jerusalem with their ‘grands vassales’ based on a wrong interpretation of Jean d’Ibelin’s lists of 22 fiefs with the

\(^{50}\) Dodu (1894: 235-260).
right of ‘court et coins et justice’. 51 A reading of Dodu's history shows how completely 19th century historians were immersed in documentary sources and divorced from the material (coin) evidence.52 Likewise, John La Monte’s chapter on the ‘administration of finance’ in his ‘Feudal Monarchy in the Latin kingdom of Jerusalem’, written in the 1930's, remained for many years the basic study on the subject and its influence is still felt today.53 La Monte (outdated) interpretation of the Jerusalem kingdom as a ‘typical feudal state’ heavily biased his views and made him conclude for example, without presenting any material evidence, that the royal Secrète in Jerusalem was ‘loosely organized’ compared to the royal bureaucracies of Norman Sicily or Angevin England. Remarkably though he did admit that it had adopted local features of the previous ‘Graeco-Saracenic’ financial administration but gave no further details.54 Successive historians have done little to ameliorate La Monte's views of a 'rudimentary' royal financial administration in the kingdom.55 Several studies put important question marks with regard to the model popularized by La Monte: Kedar’s study of 1183 general tax levied in the kingdom showed that the kingdom was in tune with contemporary administrative customs in the West.56 This has been further vindicated in David Jacoby’s re-evaluation of the strength of the royal tax administration vis-à-vis Italian trading communes in the Jerusalem kingdom

51 Dodu (1894: 243-245). The mistake was only corrected by Chandon de Briailles in 1942 when he convincingly showed that the ‘droit de coins’ in fact referred to the right to *seal* and not to *mint* (Chandon de Briailles 1942:3:244-57). Still, Prawer in his influential Crusader Institutions perpetuates the non-existent ‘Jean of Ibelin-Schlumberger list of baronial coins’ to prove the demise of royal power in the 13th century.
52 Dodu (1894:244-245) remarked ‘une obscurité profonde entoure l’histoire monétaire des rois de Jérusalem’.
53 La Monte (1932:166 – 183).
54 La Monte (1932:166 – 167).
55 See for example Prawer (1975: 135 – 136) who barely dedicates half a paragraph to the subject.
in general and the importance of Acre’s royal fonde in particular.57 Also Hans Mayer’s reassessment of the secrete, based on new written sources in addition to material from the 12th century Livre du Rois and 13th legal works of Jean of Ibelin, Philipe de Novare showed it to be far more systematic than La Monte had ever imagined.58 Mayer’s chancery study also allows to extrapolate some features that could apply to the entire royal bureaucracy, including its financial department: it was relatively small, its personnel was mostly of French or Italian origins, appointed directly by the king, often originating from within the church and mainly schooled in European/French traditions of the Curia regis.59

2.3.2.2. Monetary and economic aspects of rural society: starting with Preston’s early study on rural conditions in the kingdom few works in this field make scattered references to money-matters or coins, and are almost exclusively based on (indirect) evidence from charters and chronicles.60 In general, most historians prefer to circumvent the issue if money played an important role vis-à-vis ‘feudal services’ or payment in kind. With time though, historians produced more sophisticated descriptions of rural conditions and settlement within the kingdom, and have become aware of the key role of cash money. Preston concluded that money was not nearly as

58 (Mayer 1996:165 -170). New evidence from charters showed the sophistication of the royal secrete in Jerusalem: that it held authentic documents related to land holdings and contained registers that noted the income and expenses (introitus et exitus) of the royal treasury.
59Mayer (1996:797-822). Even a ‘poulain’ like William of Tyre had studied in France and Italy. The royal bureaucracy seems to have worked exclusively in Latin – no royal documents drawn up in Arabic are known to have existed, although on the seigniorial level such documents seemed to have been drawn up in relation to the villages like Manueth (Mayer 1996:6; 838). They drew income from a combination of special taxes (like issuing charters in the case of the chancellor) and landed estates (Mayer 1996:798).
60 Preston (1903: 35 - 53).
common as a payment in kind.\textsuperscript{61} By the 1970s though a study of the Principality of the Galilee during the 12\textsuperscript{th} century now noted that its wealthy rulers enjoyed income of large sums of cash money from seigniorial privileges, custom duties, and war booty but without providing details.\textsuperscript{62} Riley-Smith chartered the main rural elements of the ‘feudal economy’ of the kingdom and noted the progressive commutation of village returns for money from 1140’s onwards.\textsuperscript{63} Particular pivotal are Prawer’s detailed discussions of the different rural colonization traditions in the kingdom, providing details (from documents) on payments in kind and cash.\textsuperscript{64} Similar, Jean Richard’s more general review of the different payments demanded of peasants in the Crusader States, free-born or not, the taxes, rents and fees they paid, as they appeared in documents.\textsuperscript{65} These studies perpetuate a mostly autarkic non-money based view of rural society in the kingdom, prevalent even among historians today.\textsuperscript{66} No doubt this is because of most historians’ bias towards written sources and unwillingness to deal with newer archaeological, quantitative data (such as coins). Beyond this there seems to be a latent reticence among many ‘Crusader historians’ to deal with ‘boring’ economic details, preferring the more exciting ‘political’ interpretations. A good example is Tibble’s study on rural lordships within the kingdom.\textsuperscript{67} His study produced a large amount of data about prices of landed properties in rural lordships (Caesarea, Galilee and Sidon/Arsur). These were used to illustrate the political balance of power between royal and seigniorial parties rather than comment on the

\textsuperscript{61} ‘Money was also accepted in lieu of remittances in kind, but was not nearly so common as a portion of the crops’ (Preston 1903:44).
\textsuperscript{63} Riley-Smith (1973:45- 58).
\textsuperscript{64} Prawer (1980:112 -142).
\textsuperscript{67} Tibble (1989).
economic realities of the kingdom. Likewise Mayer had some insightful things to say on the comparative economic/financial conditions of non-noble population (Christian and Muslims) in the kingdom but did not pursue this more in depth.  

2.3.2.3. Monetary and economic aspects of urban life in the kingdom: Historians have dealt only with the general economic ramifications of urban life but not much beyond that. Most of their efforts were centered on Jerusalem and Acre. A study of the Burgess class in the kingdoms of Jerusalem and Cyprus contains many useful references to monetary matters, while another one of the smaller inland towns details the economic occupations of their inhabitants and the economic importance of the main pilgrimage routes along which such towns were erected.

2.3.2.4. Monetary and economic aspects of the Latin Church in the kingdom of Jerusalem: The survival of a number of archives of important Latin church institutions (chapter of the Holy Sepulchre; abbey of St. Mary of Josaphat; St Lazarus Order) situated in the kingdom allows for a more detailed review of the Latin Church’s finances. Important work was done using written sources and charters by Hamilton but more quantitative studies, for example of building costs integrating also now available archaeological data (like Pringle’s survey of some five hundred Crusader churches) are awaited. Mayer provides some important information on the tithes of the Latin church in the kingdom but refers little to economic or monetary matters.

2.3.2.5. Military studies of the Crusades and settlement: Studies in this area refer mostly to technological and tactical issues with little or none on the economic or monetary dimensions of conquest and defense.\textsuperscript{73} Nicolle has a small chapter on finance and payment related to Crusader warfare.\textsuperscript{74} Important information about the ransom prices paid for prominent captives in the kingdom was summarized by Friedman.\textsuperscript{75} Most studies dedicated to the military orders are practically silent on the economic or monetary side of the institutions and their interplay with the economy and society of the kingdom of Jerusalem.\textsuperscript{76} The German historian Prutz contributed one of the earliest studies referring to hard data on the income of the Hospitaller and Templar orders.\textsuperscript{77} Particular valuable data on the general costs of constructing a large 13\textsuperscript{th} century castle in the kingdom is the anonymous account of the 'De constructione castri Saphet' (1240s).\textsuperscript{78} Barber’s works contain some useful references for the Templar order.\textsuperscript{79} The economic and financial conditions facing the Hospitaller Order in the East during the 13\textsuperscript{th} century are detailed in Bornstein's study of the Order but this is mainly for the period after 1187.\textsuperscript{80}

\textsuperscript{73} See for example the works of Smail (1956), Marshall (1992), France (1994), Kennedy (1994) and more recently Ellenblum (2007).
\textsuperscript{74} Nicolle (2007:28 – 38).
\textsuperscript{75} Friedman (2002:148 -161).
\textsuperscript{76} For example Riley-Smith (1967). See also a large four volume series on the Military Orders (Barber 1994; Nicholson 1998; Mallia-Milanes 2008; Upton-Ward 2008) dedicated to the Military Orders. Of the 120 articles only two refer explicitly to the economic role of the Templars and Hospitallers (Torre 2008:121 -128; Bornstein. 2008:197 – 202).
\textsuperscript{77} Prutz (1906: 3–47).
\textsuperscript{80} Bornstein (2005:11–63) summarizes the most important documentary references and data including sums of money involved.
2.3.2.6. Financial resources mobilized for the Crusades: An important category of studies deals with the financial resources mobilized for the Crusades but virtually none of these make any connection with the use of coinage and monetary conditions in the kingdom proper. Traditionally such studies concentrated on the role of the papacy and of church funds for the crusading armies departing from Western Europe. In recent years studies have largely shifted the emphasis to the mobilization of financial resources among the lay medieval society, aristocratic as well as non-aristocratic. Promising attempts to marry numismatic material with historical information from written sources, dealt with cost of warfare and more pragmatic issues of transporting and using money during the First Crusade and the Crusade of Barbarossa. In general the issue of financial support to the kingdom when described by historians remains one of a chronically poor Latin East vis-a-vis a wealthy West.

2.4. Commerce and economy

Studies on the economy of the Middle Ages rarely touch on the Jerusalem kingdom’s (monetary) economy. In this respect little has changed since Postan’s essay on medieval trade. Most works in this category concentrate on reciprocal flow of precious metals between Europe (re-use of gold coins) and the East (silver famine), and the transformation wrought by the Levantine trade on the 12th c. Italian city-

81 Gotlob (1892); Powell (1986).
85 Postan (1952: 119-256).
republics. Spufford’s pioneering monograph on the use of money in medieval European economy omits an in-depth contribution on the subject of the Frankish Kingdom. Even Stahl’s detailed study of the Venetian mint refers only sparsely to circulation of Venetian cash money in the Jerusalem kingdom. The planned seventeen-volumed Medieval European Coinage series, the latest standard work on the monetary history of Medieval Europe is to include a volume on the Crusader States, yet to be produced. A singular attempt to present an economic-theoretical framework for the Crusades was written by a team of economists. In their view the crusades were part of a ‘wealth maximizing strategy’ of the church and individual Crusaders seeking their fortunes in the Latin East. Important general reference works with lots of relevant data for the study of the kingdom’s monetary economy – in particular for exchange rates of currencies used in the Frankish kingdom remain Pegolotti’s 14th c. La pratica della mercatura and Spufford’s recent compilation of exchange rates in medieval Europe. The few studies dealing specifically with monetary and economic activities in the Jerusalem kingdom have done so traditionally in the context of the Western commercial expansion and trade, in particular of the Italian ‘colonies’ or communes in the port cities of the kingdom. The

86 Cipolla (1956;1993); Watson (1967: 1-34); Lopez (1987); a more recent example of such study is Stahl (2007: 889-904).
87 Spufford (2008).
89 The series is a comprehensive survey and reference work of European medieval coinages for numismatists, archaeologists and historians. The project is based on the collection of the Fitzwilliam Museum, Cambridge and has published so far two volumes for the Early Middle Ages (Grierson and Blackburn 1986) and the South Italian Norman, Hohenstaufen and Angevin kingdoms (Grierson and Travaini 1998). There are now 10 volumes in various stages of preparation dealing with the use of coinages in Medieval Germany, France, the Iberian Peninsula, the Low Countries, the Nordic Countries, Hungary and the Balkans, Northern and Central Italy and Central and Eastern Europe.
91 Evans (1936); Spufford (1986).
work was commenced by Heyd who had precious little to say on money affairs. His work was continued by a new generation of historians who emphasized the specific contribution of individual, mostly Italian trade cities but with little emphasis or details about monetary affairs.

The view of the kingdom’s economy driven primarily by trade with the West has in recent years been replaced by a more balanced one that emphasized its activities within the framework of the local commercial economy of the ‘Frankish Levant’ and its economic contacts with Byzantine, Latin Romania and Muslim states in the Eastern Mediterranean. This viewpoint has been propagated in particular by David Jacoby in his many articles. Jacoby especially underlined the dominant economic position of Acre within the kingdom’s economy and its regional importance as a central Eastern Mediterranean emporium. His articles contain important references to the money economy and tax administration of Acre. Particular useful is his upcoming publication of a Venetian trade manual dated to the 1270s with important references to mints, coinages and mint duties levied at Acre.

Recently Jacoby called for a complete re-assessment of the Kingdom’s economy focused more on an ‘inward’ analysis of its agrarian, industrial and trade sectors and

\[92\] Heyd (1879).
\[93\] Airaldi (1986); Abulafia (1993; 2000); Edbury (1999:590 – 606). See also the assessment of the kingdom’s economic importance for Western commerce (Balard 2003:233 -239).
\[94\] For an important re-appraisal of the influence of the Crusades and the Italian merchant emporia in the kingdom of Jerusalem on the Byzantine economy see Laiou (2001:157 – 196) and Laiou and Morrisson (2007:139 – 147). Unfortunately these works contain little information of the reverse influence of the Byzantine economy on the kingdom’s. For a new study on the (economic) role played by Italian merchant cities like Genoa within the crusaders states see Mack (2003).
\[96\] Jacoby (1986:426).
the economic functions of its population.\textsuperscript{97} Part of this new trend to ‘upgrade’ the economic aspects of the Jerusalem kingdom’s history is a study on the money fief origins in the ‘robber’ economy of the kingdom’s first two decades of existence.\textsuperscript{98} Still the fact is that of the large numbers of articles published in the congresses organized by the Society for the Study of the Crusades and the Latin East since 1983 and its journal Crusades, relatively few deal with finances in general or coinage in particular of the Frankish Kingdom.\textsuperscript{99}

\textbf{2.5. Archaeology and material culture of the kingdom.}

There exists a rapidly growing body of studies that deal with Frankish–period archaeology and material culture of the Jerusalem kingdom. However, very few of these studies touch on the subject of money proper, or the wider monetary (need for cash money, financing and costs) or social (who used money) ramifications of two hundred years of intensive construction and production within the kingdom of Jerusalem.

Most excavations and surveys dealing with Crusader/Frankish period archaeology, like of castles are dominated even today by descriptive studies that highlight construction techniques and development of defenses. Besides ‘standard procedure’ numismatic reports used mainly for dating archaeological layers, few if any refer

\textsuperscript{97} Jacoby (2007:159 191).
\textsuperscript{98} Murray (2008:275 – 286). Murray noted the importance of the ‘further study’ of the money fief and its place within the history of the kingdom. On the continuation of Frankish ‘money fiefs’ under Ayyubid and Mamluk rule see Sharon (2005:117-130).
\textsuperscript{99} Only a handful of the articles deal with monetary issues. For some important data about prices at the time of the Third Crusade see Mack (2011:45 -62); on the urban economy of Acre see Jacoby (2005:73-105); on the importance of the Crusader dinar suri and the continuation of Frankish ‘money fiefs’ under Ayyubid and Mamluk rule see Sharon (2005:117-130).
seriously to the use of money and its social ramifications or in more general terms the
everous economic costs involved in erecting the costly fortifications. With one or
two exceptions, the same can be said for the ‘newer’ fields of Frankish period urban
archaeology and archaeology of rural settlement in the kingdom. Likewise, the
‘small finds’ – the array of pottery, glassware, and objects of different materials
(stone, wood, metal, textiles), are dominated by discussions on the material, typology
and functions of the objects. Similarly, studies of the ‘higher’ manifestations of
material culture in the kingdom, art forms such as wall paintings, illuminated
manuscripts and psalters, icons, mosaics and sculpture refer little or none to monetary
matters. Such studies lay emphasize on art-historical considerations, and the
ideological/cultural (East, West or local?) character of the objects and their
creators.

A number of broader surveys and interdisciplinary archaeological studies have
appeared focusing on churches, rural settlement, fortifications, military orders, urban
settlement (for example Jerusalem), urban life and settlement in small towns,
Crusader period housing, daily material life, import and trade of ceramics. However,

100 If at all, references to building costs usually refer back to one written text, the ‘De constructione
casti Saphet’ written in the 1260s. See footnote 79.
101 Boas (2001:167 -168) refers shortly to money-exchanges and royal mint(s) located in Jerusalem;
Boas (2010: 221 – 239) contains a important and detailed chapter summarizing property values and the
cost of housing, primarily during the 13th century in the kingdom of Jerusalem, based on documentary
evidence.
102 Boas (1999: 183 – 188) contains a short chapter summarizing the main types of coins found in the
kingdom.
103 The studies are too numerous to elaborate here. In fact even the art-historical /iconographic use of
Crusader period coins (and seals) is seriously understudied. Kühlne (1994:16 note 7) already noted this
almost two decades ago. Folda (1996; 2005) is among the few scholars who tapped the potential of
coins as major resources for the study of Crusader period (art) history.
virtually none of these studies touch on the subject of money or wider economic and monetary ramifications of settlement in the kingdom.\textsuperscript{104}

3.1. Methodological remarks

The studies presented in the following pages are principally based on *new and previously unavailable data from controlled archaeological excavations and site-finds* from the territory of the Latin Kingdom of Jerusalem, collected by me over the past two decades.¹ Such a broad based research anchored in provenanced material from a large number of identified sites within a delineated region, is in many respect a significant departure from previous Crusader coinage studies. Many of these were based on unprovenanced material in European and Middle Eastern collections or described and analyzed single hoards from the antiquities market with only a general provenance. Metcalf’s ‘checklist of hoards’ from the territories under Latin control published in 1995 was a revolutionary improvement towards a more systematic/scientific based study and it remains an invaluable tool for the numismatist and historians dealing with the monetary history of the kingdom. The relevant hoards from Metcalf’s list coming from the Jerusalem kingdom's territory — some 24 of the 59 registered mainland hoards come with reasonable certainty from the territory from the Jerusalem kingdom — have therefore been incorporated in the data-base for reference.²

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¹ The material collected came from two main sources: the computerized IAA holdings and published material from other (university) institutions that instigated excavations in Israel. The latter often consist of short descriptions in numismatic reports of the excavations.

² Metcalf 1995:308–323;355–363. It should be noted that a disproportionate number of the listed hoards by Metcalf originated from more northern sites in the territories of the Principalities of Tripoli and Antioch. These fall outside the scope of this study.
As to Metcalf's checklist of single finds, this part covered only *four* major sites - Pilgrim's castle, Jerusalem, Caesarea and Acre – which shows how preliminary this part of his research was at the beginning of the nineties.³

The present study is a significant step forward in three ways: first, the core of its material (c. 75%) is systematically registered material from *excavations*, with the remainder (25%) *stray-finds with known provenance*. The material includes two main categories of coins:

1) Isolated coins ‘lost’ unintentionally by their owners on site. These are particular important for statistical comparisons since stray losses/finds are random and represent much more faithfully the day to day use of money than hoards, whose contents are often a-typical and whose creation and concealment are often shrouded in mystery. The idea here is that ‘coin losses’ from such Frankish period sites equate ‘coin use’, coins mislaid during their daily use and *not deliberately* concealed as offerings or hoarded for emergency.⁴

2) Coin hoards that come from excavations and or known provenance. Comparison of hoard material often provides important information on dating and the relative quantity of coin types. This is particular true for hoards from controlled excavations whose use and dating is safely anchored in the non-coin archaeological evidence.

Secondly, it encompasses a much wider range of sites. It suffices to say that not all of the more than 1600 registered antiquity sites with Crusader period remains

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³ Many of these finds include stray-find material from private and public collections.
⁴ See Metcalf (1998) for the importance of single finds as representational evidence for reconstructing a Medieval monetary economy. See Blackburn (1989:15 – 24) on coin evidence coming from excavations.
within Israel have been examined, an impossible task in practical terms. But our list does include a larger number of ‘new’ Frankish period sites that were well excavated in the past two decades. Since the late 1990s these generated detailed site reports that give more detailed insight into what sort of coins circulated where in the kingdom. Of particular importance are the numismatic reports of major Crusader period sites like Atlit, Acre, Jaffa, and Baniyas/Belinas, as well as smaller ones in Jerusalem. But also reports on a host of smaller sites like Zuba/Belmont, Yokneam/Caymont which contain a wealth of new information. Particular interesting is the 'cross-over' circulation of Zandjid/Ayyubid coppers in 12/13th Frankish period sites and vice-versa, the use of ‘Frankish copper and denier money in Ayyubid and early Mamluk contexts.

Thirdly, our data-base is much more of a representative sample of the money circulation in the kingdom. Contextual evidence – archaeological and historical information about the site where the coins were excavated or found – provides us with crucial information about a wide range of different types of settlements in the kingdom’s core territory where coins circulated: rural and urban settlements, minor and larger castles, cities, castle towns, monasteries, churches, casalia and farm houses.

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5 Information from the Israel Antiquities Authority computerized archaeological database. Of these 1224 contained archaeological remains (architecture, material remains such as pottery, glass, coins). My thanks to Iris Yossifon of the IAA Computer department for helping me to extract the information from the IAA database. How many of these are ‘significant’ Frankish period sites is difficult to gauge at this stage. It is interesting to compare these figures with the estimated 1200 settlements active in the Crusader kingdom. Of these historians estimate 235 were Frankish settlements.
3.2. Creation of the database: excavation finds and provenanced hoards

Our database contains more than 4900 records found in an area that constituted the historical heartland of the Frankish kingdom of Jerusalem for almost 200 years. With some exceptions items from two areas of the kingdom were excluded from this study, due to lack of access to available registered material: the area east of the Jordan river which constituted the seignory of Montreal centered around the castle of Montreal/Kerak–now part of the Hashemite Kingdom of Jordan; and the kingdom’s northern territories centered around the coastal cities of Sidon, Tyre and Beirut, now part of Lebanon. Nevertheless hoards and single finds that as far as we could ascertain originated from this area have been included.

The core of the database is made of Crusader, West-European and (a few) Eastern Christian currencies: 1531 isolated site finds and c. 2500 coins from some 54 hoards and assemblages, together more than 2650 coins. These came from some 21 'urban' locations ('cities' or towns and castles with a 'burgus'/faubourg and some 142 rural locations (Table 1).

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6 The kingdom’s northern border (with the Principality of Tripoli) ran somewhere between Beirut and Jubail/Gibelet –ancient Byblos, today the modern city of Jubayl situated c.40 km north of Beirut. In the south it ended with the Templar fortification of Darum/Deir el-Balah, located in the central part of today’s Gaza strip. The eastern boundaries of the kingdom emanated from newly build crusader castles like Montreal/Shoubak and Kerak/Karak, now in the Hashemite kingdom of Jordan. For an in-depth review on the concept and significance of borders in the Frankish kingdom of Jerusalem see Ellenblum 2007: 118-145.

7 As far as I know provenanced medieval coins are virtually non-existent from these areas. Very little has been published. Large scale excavations from the Souks area of Beirut have uncovered some medieval coins but no detailed data is available.

8 The 'urban' sites represent in fact a large number (96) of sub-sites/excavations which took place in recent years in urban areas such as Jerusalem, Jaffa, Acre. Thus caution should be exercised to
<table>
<thead>
<tr>
<th>Settlement category</th>
<th>No. of sites</th>
<th>Qnt. Single finds</th>
<th>Nos. Hoards</th>
<th>Qnt coins hoards</th>
<th>Total coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>19 (96)</td>
<td>937</td>
<td>24</td>
<td>1144</td>
<td>2081</td>
</tr>
<tr>
<td>Castle</td>
<td>9</td>
<td>235</td>
<td>6</td>
<td>477</td>
<td>712</td>
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<td>Small castle</td>
<td>19</td>
<td>99</td>
<td>7</td>
<td>473</td>
<td>572</td>
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<td>150</td>
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<tr>
<td>farmhouse</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>monastery/church/pilgrimage site</td>
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<td>26</td>
<td></td>
<td></td>
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<td>Sugar refinery</td>
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<tr>
<td>way-station/sea-lane</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>295</td>
<td>300</td>
</tr>
<tr>
<td>non-defined rural site</td>
<td>54</td>
<td>111</td>
<td>8</td>
<td>105</td>
<td>216</td>
</tr>
<tr>
<td>Total</td>
<td><strong>163</strong></td>
<td><strong>1531</strong></td>
<td><strong>54</strong></td>
<td><strong>2494</strong></td>
<td><strong>4063</strong></td>
</tr>
</tbody>
</table>

To these are added some 520 Zandijd coppers from c. 88 locations. Traditionally, this group of coins has been associated with the (post) 1187 Ayyubid conquest. However, these coins are often found in Crusader period levels in a substantial number of sites of the 12th and 13th century – sometimes even with Ayyubid fulus and dirhams. This seems to indicate though these were not official Frankish currencies, they played an economic role in the territory ruled by the Jerusalem kings from the 1140’s onwards. In addition, the preceding 10-11th century Fatimid period coinage (208 single finds and some 18 hoards with more than 1400 gold and silver coins) and late 12-13th Ayyubid (c. 2100, mostly copper fulus) currencies from excavated/provenanced sites have been included by me in the database for comparative studies.

The above quantities are in real terms relatively disappointing. Recent studies of Hellenistic, Roman and Byzantine coinages in the territory of Israel, of similar material from excavation and site-finds often measure in the tens of thousands of extrapolate from these numbers that coins first and foremost circulated in the medieval cities of the kingdom.
coins. By comparison, the total number of medieval coins (800 -1500 CE) are a mere 10% of the c. 150,000 identified coins from excavated or known sites in Israel.

Still, compared to the number of hoards (24) and particularly a very partial list of isolated stray-finds published in Metcalf’s gazetteer (1995) the present data-base is something of a quantum leap. In absolute numerical terms it is much larger, with a viable statistical random sample of finds from the territory of the kingdom. Above all the real significance of present database – besides detailed numismatic data - is the archaeological and historical information of the sites where the coins were found: where possible the archaeological context was analyzed to understand the circumstances of the coin find and collect information about its dating and use. Many of these sites are dated to the Frankish period and often detailed historical information existed which could be cross-referenced with the coins. Particularly significant are coin finds from large-scale excavation projects of the Israel Antiquities Authority that uncovered large areas of Frankish Acre and Jaffa, two of most important urban maritime/commercial centers of the Crusader kingdom. Also intensive excavations in and around Jerusalem contributed much new material of the period in question.

9 Syon's (2004) database consisted of more than 10,000 coins. Bijovsky (2011) based her study on more than 44,000 coins from 28 sites. Ariel (2012) used some 1500 site coins just for the thirty-six year reign of the Jewish king Herod.

10 Based on an analysis of the IAA Numismatic Data Base

11 On the importance of the statistical randomness of single site finds to balance hoard evidence see Metcalf (1997: 190).

12 These excavations, the wealth of architectural remains and objects are revolutionizing our understanding of the material culture of the Frankish period. For Frankish Acre and Jaffa in particular see the numerous excavation reports by IAA archaeologists, many of them now available through Hadashot Arkheologiyot – Excavations and Surveys in Israel (HA-ESI) and now available on-line. http://www.hadashot-esi.org.il/index_eng.asp

For excavations of Frankish period Jaffa see in particular Peilstöcker (2006: 99 – 104) and likewise the available reports authored by him and his team on-line at the Hadashot Arkheologiyot website (see above).
Finally a significant group of finds came from smaller Frankish period centers/townships such as Tiberias, Caesarea or Nablus and a host of non-urban settings which until now escaped any systematic discussion – small rural sites. Material from these small isolated settlements, castle/towers, villages, monasteries are particular important for understanding the scale and character of coin use throughout the kingdom.

3.3 ARC/GIS Mapping

To visualize the data-base in more concise and clear manner maps have been added, designed in an ARC/GIS environment showing the spatial distribution of coin finds within the territory of the kingdom of Jerusalem. The main map, divided in four parts (Map 1a-d), shows all the settlements (numbered) where coins related to the kingdom's life-cycle (12/13th c.) were found. The map is accompanied by a numbered list of sites, noting the dates of the Frankish occupation and the types of coins found therein. Sites in the list have been arranged into seven categories according to decreasing settlement patterns and population density (city, castle, small castle/tower, village, monastery/church/pilgrimage site, undefined rural site and

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13 At this stage I have omitted more details on Fatimid and Ayyubid coin finds, even though these were often related to the monetary history of the kingdom. These will be treated in future researches.

14 Historical and archaeological data on the Frankish occupation period of the sites was gathered with the surveys of Prutz (1881: 157 – 193), Beyer (1936:1 – 91; 1940:155 – 209; 1942:165 – 211; 1944/45:183 – 260; 1946/51:148 – 192, 249 – 281; 1953:75 – 87), Kob (1967:136 – 164). The sites mentioned in these (earlier) works are particular important when it come to localizing more ephemeral "rural sites" where coins were found. These works have been indexed and made readily accessible through Schmidt (1970:117 – 164); Pringle's (1993 – 2011) surveys on churches and secular buildings (1997) is extremely important and provides extensive (historical) information on the more well known Frankish period sites. When available, archaeological and historical studies pertaining to specific sites were consulted.
finally way station/sea-lane). Coin finds have been classified in six categories (Crusader, European, Byzantine, Armenian, Zandjid and Islamic). A second map (Map 2a-d) shows the distribution of coin finds (billon, silver and gold) originating from Frankish/Crusader' mints (kingdoms of Jerusalem and Cyprus, principalities of Tripoli and Antioch) and Western Europe (France, England etc.). The main map on the right (Map 2a) presents the sites with hoards marked with a red dot. Of course some categories overlap (finds at Athlit/Chastiau Pelerin defined as castle were in fact largely found in its faubourg/burgus; on the other hand we defined Arsur as 'city' following modern scholarship even though is could be argued that it was in fact a mere burgus, a semi-urban settlement which grew up around its walls) but we tried to avoid the pitfalls of the traditional urban/rural dichotomy categorization. More detailed studies of other categories still await detailed study. There exist a large number of important questions (for example related to medieval French rulers, particular mints – like the coinage of Lucca; which types of French coins were found in the kingdom? do these reflect some of the 'preferred currencies' within French medieval society, specific population groups traveling to the East?) which are of interest to further historical and numismatic research. I have added a map detailing the finds of coins originating from French territorial mints (but not treated here more in depth; Map 3) — both royal and 'feudal' types— to illustrate the possibilities of such a spatial analysis. The open-end data-base and its dynamic mapping system are built to allow additional numismatic, archaeological and historical data in-flow and detailed

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15 For an updated discussion on the question of urban/rural definition of settlements see in particular Ellenblum (2007: 84 – 102) and more recently Kedar's perceptive study (2009:199–210) about contemporary (12/13th c.) Frankish use of such terminologies which is indispensable for any modern historian trying to built a meaningful typology of Frankish period settlements.
treatment of historical and numismatic subjects and their interconnections, in the future.
Map 1b. Coin finds in the territory of the Kingdom of Jerusalem
Map 1c. Coin finds in the territory of the Kingdom of Jerusalem
Map 1d. Coin finds in the territory of the Kingdom of Jerusalem
Map 2a-d. Frankish and European coin finds/hoards in the territory of the Kingdom of Jerusalem. (hoards are marked in red)
Map 3. French coins in the territory of the Kingdom of Jerusalem. (marked in brown).
3.4. List of coin finds in the territory of the Kingdom of Jerusalem according to sites.

Explanation:
1. Site numbers marked in red contain hoards/coin assemblages.
2. Site names marked in bold are mentioned in charters/sources of the 12/13th c.
3. NS/WE coordinates are according to the New Israel Grid.
4. Frankish occupation: Sites marked with 12 or 12/13 are approximations.
5. Unmarked sites contained 12/13th Ayyubid coin material.

<table>
<thead>
<tr>
<th>No site</th>
<th>Site name/Crusader site</th>
<th>NS/WE</th>
<th>Frankish occupation</th>
<th>Settlement type</th>
<th>Crus</th>
<th>Eur</th>
<th>Byz</th>
<th>Arm</th>
<th>Zandjad</th>
<th>Islam</th>
</tr>
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<tbody>
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<td>Ascalon sands</td>
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<td>Givot Etun, Rasm el-Gharbi</td>
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<td>+</td>
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3.5 Research aims and questions

Based on the above numismatic documentation and relevant written sources, I intend to present in the following chapters (4-8) five case studies, highlighting different aspects of the use and circulation of coinage in the Kingdom of Jerusalem (1099-1291).

**Case-study 1** (Chapter 4) examines the billon denier coinage of King Amaury (1163-1174), the main royal issue of the kingdom, well into the first decades of the 13th century. This coinage has been studied by scholars in the past but primarily based on poorly unprovenanced hoards. Presently the new finds of several well dated and contexted hoards from *Vadum Iacob* and *Ibelin*, together with hundreds of excavation finds from some 64 sites – virtually all unpublished – allows us to conduct an in depth study and ask several crucial questions related to the kingdom’s royal coinage: What distinguished the royal Frankish coinage from contemporary billon coinages in 12th c. Medieval Europe? Was the choice of the coin’s iconography religiously or politically motivated? What was the coin’s typological and chronological development (variants, series)? What was the geographical distribution and density of the coins within the kingdom’s territory? What can we conclude from their occurrence or absence in different types of settlements? What does a systematic chemical analysis of the coin-type’s alloy and weight tells us about the stability/fluctuation of the royal currency? Does it tell us something about the royal Frankish administration ability to control its currency? Did these royal coins circulate with other type of coins?

**Case-study 2** (Chapter 5) examines the little known phenomenon of lead token money produced in territory of the Jerusalem Kingdom. Existence of this ‘underground’ type money was previous known only from preliminary and scattered
references and publications. The present study is the first comprehensive examination of this little known monetary phenomenon, based on all the known excavation finds and site material. Several questions are posed: From where did lead money originate – was it a western, eastern or local ‘Frankish’ tradition? What was the extent of its use within the kingdom? Was it limited to certain types of regions, settlements or populations? How was it produced? What were its main iconographic types? And what does it tell about the use of cash money in the kingdom and of its users?

**Case-study 3** (Chapter 6) researches the use of coinage in two 12th century Frankish villages/villeneuves, Parva Mahumeria and Bethgibelin. It presents historical evidence gleaned from charters that record money transaction in these settlements and from other rural areas of the Kingdom of Jerusalem and combines these with a detailed contextual analysis of excavated coins from the sites. Several questions are posed: what characterized the rural economic system of the kingdom, in particular its use of money, vis-à-vis Western Europe and the Muslim states? Did this find expression in written sources related to the kingdom and in what manner? And how was this reflected in the excavated coin evidence unearthed in the two villages/villeneuves?

**Case-study 4** (Chapter 7) analyzes the coin circulation in an inland border castle (Vadum Iacob) during the second half of the 12th century. Excavated coin finds from this fortification which barely existed ten months (1178/79), offer a rare opportunity to research the (military) use of money, at a particular site, at a particular point in time less than a decade before the battle of Hattin (1187). Several questions are asked:

Which types of coins were found at the castle? Do they fit the traditional ‘image’ of the monetary system of the kingdom ‘constructed’ by numismatists and historians
over the past hundred years? And what way does the micro-analysis of excavation coin finds contribute to our understanding of the monetary history of the kingdom?

**Case-study 5** (Chapter 8) examines the use of gold coinage in the Latin Kingdom during the last decades of the 13th century. It is researched through a unique hoard of gold florins discovered during excavations in the harbor of Crusader Acre. Several questions are asked: what was the role of the new gold currency in the economic ascendancy of Florence? How did the use of gold coins develop in the Crusader states? When were gold fiorini introduced in the kingdom of Jerusalem according to documentary evidence? What new numismatic and archaeological evidence did the gold hoard contribute to our knowledge of the use of gold coins in the kingdom of Jerusalem?
Chapter 4: The Royal monetary Economy of the Kingdom of
Jerusalem: A Study of the Amalricus Denier

4.1 Introduction

The billon denier of Amaury (1163-1174) was the main royal issue of the Kingdom of Jerusalem well into the first decades of the 13th century. It has been studied by scholars over the past 170 years, and in more recent decades mainly on the basis of handful and rather poorly provenanced hoards.

Since the early 1990s numerous excavations have been conducted of Frankish period sites within the historical territory of the Latin kingdom of Jerusalem. These have yielded hundreds of new Frankish period coin finds, among them a substantial number of AMALRICVS billon. The accumulation of so much new archaeological material warranted a re-study of the type. The original idea was to write a simple *excursus* into some unresolved classification issues, but it quickly grew into a more comprehensive project.

The novelty of the present study is that it is based on a detailed survey of mostly provenanced material: single finds, mini hoards and larger hoard parcels found in over sixty two sites. These consist of controlled excavation finds but also include some stray-finds, many of them never studied or published. These finds are ordered in a separate checklist of finds (appendix 2). Particularly important for our study are two extremely well dated hoards from excavations at Vadum Iacob/Ateret and Ibelin/Tel Yavneh in 2007 and 2009.
The study of such a critical mass of new material from known context allows us for the first time to seek better answers to several key questions related to the coinage:

1) What distinguished the royal Frankish coinage from the contemporary billon coinages in 12th c. Medieval Europe? And why was the Holy Sepulchre chosen to adorn the coinage of king Amaury? 2) What are the main and minor variants/series of the AMALRICVS billon? Where and when did these circulate in the kingdom? What do they tell us about the mint or mints active in the kingdom? 3) How much silver did the coin’s billon alloy contain? What was its weight? Did these fluctuate or were they stable? And what conclusions can we reach about the royal Frankish administration ability to control its billon currency? 4) What was the geographical distribution of the coins within the kingdom’s territory and what can we conclude from their occurrence or absence in different types of settlements? 5) Did these royal coins circulate with other type of coins?

Answering these questions will hopefully enable us to 'reconstruct' more faithfully the development of the AMALRICVS type begun by Michael Metcalf, and permit us to answer questions regarding the relative importance of billon money in the kingdom and the monetary character of the Frankish economy during the 12th century.
4. 2. EARLIER STUDIES

4. 2.1 A Numismatique des Croisades

The first references to a coinage produced during the Crusades began to appear in the works of French numismatists and antiquarians in the first half of the 19th century. These scholars were drawn like many of their peers in the French intellectual and politician establishment, to Crusader history, motivated by a potent mixture of Romantic and colonialist sentiments.¹

French numismatistes were in fact among the first scholars among their compatriots to produce works on the period of the Crusades, underlining the ‘national importance’ of such an undertaking. Two eminent numismatists of the first hour, Etienne Cartier and Louis de la Saussaye underlined in the very first volume of the Revue Numismatique (1836), the importance of studying the coinage of French feudatories who participated in the Crusades: it formed part of a ‘new’ research field of medieval Feudal coinage whose study was of paramount importance for the understanding of French national history.²

This was still five years before the first volume of the seventeen volume Receuil des

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¹ See Ellenblum (2007: 3-23) and Riley-Smith (1995: 366ff.)

² RN 1836 vol.1 but et plan de la revue iii: "Lorsque, par la pensée, on a suivi nos barons à la croisade, on aime à retrouver leur souvenirs dans les monnoies qu’ils frappèrent pour subvenir aux frais de la guerre sainte, et dans celles qu’ils émirent, à leur retour, lorsque rapportant plus de gloire que richesses, ils obtinèrent de leur suzerain, pour réparer leurs châteaux démantelés, le droit de monnayage, et celui de mettre sur leurs pièces les insignes qui distinguoient, en Palestine, leur pennon de ceux de leurs frères d’armes."
“Historiens des Croisades” – the first systematic collection of primary sources for the study of the Crusades by Académie des Inscriptions et Belles Lettres – France’s prime intellectual institution – was published (1841).

In reality the first mention of royal coinage in the Jerusalem kingdom appeared a decade earlier in an appendix to the 1822 edition of the Histoire des Croisades of Joseph-François Michaud. This immensely popular work saw numerous re-editions during the 19th century (Michaud 1822:525-549). It was a short twenty-five paged essay with catalogue and plates authored by the antiquarian Esprit Marie de Cousinery (1747-1833). Cousinery had assembled a collection of coins ‘frappé en Orient, par les princes croisés’ during his time as French consul in the Ottoman empire.3 His essay was rife with errors and none of the attributions made to coins of the Rois de Jerusalem have withstood the test of modern scholarship. But it is still relevant to us since it plainly illustrates the ‘working methods’ of early 19th century savants-numismatists, motivated by a deep-seated desire to ‘discover’ coins associated with the kingdom’s most famous rulers. For example Cousinery attributed the just discovered TVRRIS DAVID coinage (nowadays associated with a semi-royal type minted during the first regency of Raymond III of Tripoli over the kingdom between 1174-1177 ; Kool 2006:151-156) - to the kingdom’s first de-facto ruler, Godfrey of Bouillon. According to Cousinery its ‘anonymous’ character (the coin mentions no ruler by name) in his opinion complied with Godfrey’s ‘modesty and religious sentiments’ not to be crowned as king of Jerusalem (Michaud 1822:538). Cousinery also erroneously attributed coppers with the name Baldwin

3 Esprit Marie de Cousinery, “Catalogue raisonné de la collection des médailles de M. Cousinery, ancien consul de France en Turquie, qui ont été frappés en Orient, par les princes croisés; médailles totalement inconnues jusqu’à ce jour”. 
appearing in Greek—nowadays firmly associated with Baldwin II of Edessa (1100-1118)–to the three kings by that name of the Jerusalem dynasty. More than anything else, the absence of the AMALRICVS billon, the quintessential royal denier of the Jerusalem Kingdom from his list of coins, illustrated the enthusiastic but often arbitrary quality of the 'research' of the early 19th century savants.

Louis Félicien de Saulcy was undoubtedly the most important scholar of Crusader coinage during this early period.

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4 Cousinery also misinterpreted the inscription on the coins reading into the coins fanciful meanings: Saint Croix sauvez Baudouin or Saint Croix vivifiez Baudouin and seigneur secourez Baldwin. In fact the coins read Baldwin, the servant of the cross.
De Saulcy is nowadays mostly remembered for his lifelong fascination with biblical archaeology. But prior to this he already was considered a serious scholar of medieval numismatics. His *Numismatique des croisades* (1847) was published before his arrival in the Holy Land in the 1850s and his ‘archaeological’ endeavors there. Nevertheless it was the first genuine essay dedicated to the coins of this period.

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5 Saulcy wrote and published extensively on medieval French coinage of Metz and Lorraine as well as on ancient coins from Palestine, Syria and other regions. In 1836 his *Essai de classification des suites monétaires byzantines* won him a prize of the Institut Francaise and was published in 1862.

6 Saulcy’s work was enthusiastically received by his peers judging from the warm reviews it received in the two major numismatic journals of the time, the French *Revue Numismatique* and the British *Numismatic Chronicle*. Saulcy already had built himself a reputation as an assiduous scholar interested in numismatics and was warmly praised by his reviewer in the ‘Chronicle’ as an author with an ‘indefatigable pen’ who had done much ‘towards the illustration of obscure parts of numismatic history.’ He praised his four-volumed *Numismatique des Croisades* as ‘the most important numismatic work which had appeared for many years’ (NC X, 1847-48: 184-186). Also the art historian Etienne Cartier one of the founders of the *Revue Numismatique* in 1836 praised de Saulcy’s efforts. Already in the abovementioned *but et plan de la Revue* in volume 1 Cartier acknowledged the contribution of *notre collaborateur M. de Saulcy* (RN 1836: v). Almost twelve years later Cartier reviewed de Saulcy’s *Numismatique des Croisades*’ and appreciated ‘l’importance de l’ouvrage’ which was ‘an ‘appendice obligé’des grands travaux de M.M Michaud et Poujoulet sur cette grande époque de l’histoire du monde civilize’ (RN 13 1848:389-395). The influence of
Saulcy’s chronology of the Latin kingdom’s royal coinage was built on the axiom that its coinage was not issued earlier than the reign of Baldwin IV (1173-1185). As a result de Saulcy erroneously attributed the by now discovered AMALRICVS billon to Aimery of Lusignan (1194-1205) joint king of Cyprus and Jerusalem. This he thought was further strengthened by the similarity of the Holy Sepulchre’s image on the coin's reverse with the one appearing on a large silver minted by Aimery’s successor, Jean de Brienne (1210-1225) (de Saulcy 1847:70).

Eugène Melchior Vicomte de Vogue (1829-1916), author of a seminal study on Crusader period churches and documents, followed in Saulcy’s footsteps publishing notes on Crusader coinage in the *Revue Numismatique*. De Vogue showed that the symbolic image of the Holy Sepulchre already appeared on royal seals since the early 12th century, implying that the coinage may also have been struck earlier (De Vogue 1856; 1865).

The *Numismatique de l’Orient latin* (1878) of Gustave Schlumberger (1844–1929) was undoubtedly the most influential textbook for Crusader period numismatics for more than a century. In it the author rejected Sauley’s attribution to Aimey in favor of Amaury

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7 De Saulcy used a simple ‘associative’ method: three of the five royal coin types – a small copper with the inscription REX GUIDO of Guy de Lusignan (1185-1192), another one reading COMES HENRICVS of Henri de Champagne (1192-1197) and IOHANNES REX of Jean de Brienne (1210-1237) were attributed with certainty to rulers of the end of the 12th-beginning of the 13th centuries. Therefore the two remaining ones reading BALDVINVS REX and AMALRICVS REX ‘must’ have been related somehow to these coins.
Schlumberger enumerated three main reasons for this: a.) **iconographic** - the image of the Holy Sepulcher was not exclusive to the reign of Aimery but was a ‘type immobilisée’, appearing on the kingdom’s coins and seals already since the early 12th century. b.) **alloy** - Schlumberger was convinced that these deniers were of high silver content (without actually testing or corroborating this in a scientific manner – see below). This he argued, contrasted with the poor billon minted at the end of the 12th century by Aimery’s brother and predecessor, Guy de Lusignan (1186-1194), in Jerusalem and Cyprus. c) **legends** - Aimery would certainly have proclaimed his double title as king of Cyprus and Jerusalem on his coins. However, only the title of REX IERVALEMM appears on the royal coin. Aimery could have minted two separate pieces for both parts of his kingdom, but Schlumberger thought this improbable since it ran against all contemporary numismatic conventions.

Schlumberger regarded the **mauvais denier** types of this royal issue – a seemingly identical coin but minted on small flans of bad quality billon and of substantially lower weight – either to be **produits du faux monnayage** or struck during the reign of Aimery during **une époque de décadence et de détresse financière** (Schlumberger 1878:87).

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8 Schlumberger (1878:85–87) based himself on De Vogue’s observations that the Holy Sepulchre as symbol already appeared on seals of the kings of Jerusalem from the early 12th century onwards. The latter must be credited with this important observation since he wrote this long before the first authoritative work on seals of the Frankish kingdom and the northern principalities, the *Sigillographie de l’Orient latin* was published posthumously for Schlumberger by Adrien Blanchet in 1943.
4.2.2 Hoards studies

Ironically Schlumberger 'novel' theory which associated the type with Amaury, was rejected more than a half a century later, in one of the first 'modern' systematic hoard studies by the Yale University archaeologist Dorothy Cox. Her study was based on a hoard found in Tripoli, Lebanon in 1929 which contained a large number of AMALRICVS types (Cox 1933:37-42). Cox thought the hoard evidence "settles the question beyond doubt" in favor of Aimery of Lusignan for several good reasons: the late burial date of the hoard (after 1220s), proven by the hundreds of early 13th century royal types from Jerusalem and Cyprus as opposed to the isolated presence of a single 12th century BALDVINVS billon; and the fact that none of coins were of poor silver — here Cox decided to completely ignore the already existing distinction made by scholars between the regular ‘heavy’ billon vis-à-vis the mauvais denier type. Cox thought her assaying (on her 'methodology' see below) of the AMALRICVS billon alloy proved that during this period ‘coins of ‘good quality were minted’ in the kingdom.9 Furthermore she (mistakenly) suggested that the intertwined dynastic history of the kingdom of Cyprus and Jerusalem was reflected in a complex series of joined coinages. According to her the hoard 'clearly' indicated that Aimery continued striking the REX GUIDO/DE CIPRO billon started by his brother Guy de Lusignan as lord of Cyprus (1192-1194), from 1194 onwards as de-facto ruler of Cyprus until his coronation as REX CIPRO in 1197.10 Then

9 There is no way to verify the scientific value of Cox’s assaying data. She did not give details of her metallurgical analysis – method of sampling, research method and analyses employed and conclusions- as is expected today.

10 Nowadays this coinage is firmly attributed to Guy de Lusignan as lord of Cyprus (1192-1194) Metcalf (1998:107 - 116). No good explanation exists why Guy’s brother and successor Aimery did not produce his
after marrying the heiress to the kingdom of Jerusalem and elected king of Jerusalem in 1198, Cox suggested Aimery struck two types of AMALRICVS deniers till his death in 1205: the regular ‘heavy’ denier in the mints of his mainland kingdom and a reduced weight ‘mauvais deniers’ struck in Cyprus, en par with the reduced weight standard of the Cypriote coinage (Cox 1933:35-41).

Henry Longuet’s study published two years later of another large early 13th century Syrian hoard (Kessab) which also contained considerable numbers of mauvais deniers rejected Cox theory to locate the entire AMALRICVS series exclusively in Aimery reign (Longuet 1935: 167-172). Longuet’s argued that the heavier Amalricvs types belonged to the earlier reign of Amaury (1163-1173), like Schlumberger had asserted all along. In contrast, the deniers legers were a ‘degenerated types’ dating to the reign of Aimery. Longuet’s arguments were based on two epigraphical and metrological 'discoveries'. First, contemporary documents named Aimery as AIMERICVS, never AMALRICVS; if the coin type was minted solely under Aimery it would read AIMERICVS. Since this was not the case the original coin dated to the period of Amaury. Secondly, the ‘mauvais denier’ was a not a clipped version of the regular AMALRICVS denier as Cox thought. It was with its reduced module and weight, its irregular type (frequently off-centered) and a large variety of annulets and stops, a complete new official series of coins (Longuet 1935:170-171).
It were finally Jean Duplessy and Michael Metcalf who firmly connected the heavy AMALRICVS type with Amaury's reign in a meticulous analysis of a small hoard found on the Greek island of Samos. This they did by re-associating the BALDVINVS coinage with Baldwin III and not Baldwin IV (1173-1185) as previous scholars had thought (Duplessy and Metcalf 1962:178-179).  

Rescinding virtually everything said since Schlumberger a century earlier, Roberto Pesant presented a 'new' chronology of the type during a symposium at Oxford in 1979 (Pesant 1980:105-121). Pesant rejected the idea of two different series used by two different kings. Instead the coin type was now clearly associated with Amaury and 'perhaps continued to be struck by some of his successors' as an immobilized type until the fall of Jerusalem (and its mint) in 1187. After this the type was discontinued. Pesant distinguished three main groups struck in one mint, differentiated by their 'quality' which gradually deteriorated over time.  

4.2.3 Style studies

With the dating of the main regular type now firmly settled a new group of studies commenced, to produce a classification of the type, by looking for style varieties and establish a relative chronology.

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11 See also the important work on this subject by Yvon (1966: 89-107).

12 Pesant distinguished between the earliest issue of larger heavier deniers of good alloys and dies (17-18mm; 0.8-0.95 grams); a second group of smaller and lighter ones (16-17mm; 0.6 to 0.78 grams) but of similar good dies; and the largest third group of lighter coins in 'woeful condition' (Pesant 1985: 105–121).
Sabine’s study was a first though still rather unsystematic attempt to put order in the house (Sabine 1980a:114-115). He distinguished three main 'types' of AMALRICVS coins: a heavy 'fine style' coin, a transitional type and the 'degenerate' type denier. The 'heavy' type consisted of four sub-types according to the presence of stops and annuletis between the REX and AMALRICVS legend on the obverse. Sabine thought these 'very similar' though there were variations in the barring of some of the letters (Sabine 1980a:114). The second 'transition' type (his 'fifth variety') showed a less 'broad and flat' type of lettering and 'spidery appearance' with many double-barred letters. The last type dated to the early 13th century was according to Sabine characterized by careless lettering, coarse dies with many different combinations of pellets and annuletis in the obverse cross which simply do not occur on the fine-style coins. Sabine correlated these three types with substantial variations in the depiction of the Holy Sepulchre on the reverse (shape of the conical top and oculus; angle of the beamed roof; shape and width of the arched colonnade).

The main effort though, to create a systematic typology of the AMALRICVS series were begun by Michael Metcalf who laid the foundations of much of modern research of the coinages of the Latin East and Medieval Greece. In his 1983 edition of the Coinage of the Crusades and the Latin East Metcalf still presented a 'centralistic' model of the types evolvement, arguing that the coins were either struck in one mint or represented dies cut in one place after 1167 (Metcalf 1983:16). At this stage, Metcalf was even hesitant to argue that the decayed half gram specimens of the 13th century was a different type from the heavy type, except for noting 'a different numerical pattern of annuletis' (Metcalf 1983:17). In his subsequent studies though Metcalf adopted a more
nuanced view that a *style* classification tested against hoard and site-find evidence could possibly answer the many questions surrounding the evolvement of the type, in particular the *existence of one or more mints*. His 1987 article on the small Tell-Jemmeh hoard (10 specimens), including an examination of the larger 1927 Jerusalem 'YMCA' hoard (73 specimens), laid the groundwork for all future research by enumerating the main typological elements of the heavy 'regular' type. Metcalf distinguished three main elements related to the use of a particular die and privy markings in the classification of the coin: 1. Style of lettering, in particular three style variations of the *A* on the obverse and reverse dies. 2. The occurrence of two types of stone work in the colonnade of the Holy Sepulchre consisting of six/seven blocks below the colonnade and a second more numerous of eight to twelve blocks. 3. The use of variations of stops and annulets/pellets in the inscription, in particular after REX and on the obverse cross (privy markings). Metcalf hypothesized that the *combinations* of these three elements could provide information about the possible existence of more than one mint for the regular 'heavy' AMALRICVS types. He thus constructed three main series based on the style of the *A*, each with a number of sub-varieties: chevron barred *A*13, double-barred *A*14, and dotted-chevron types *A*.15

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13 Series consisting of five sub-classes with a 'square-box' balustrade of between six to eight blocks: 1. rare varieties with 'triple' or 'star-dotted' privy marks after REX and deviating designs of the Holy Sepulchre (number of roof beams, height of arches); 2. A plentiful variety with a double annulet after REX; 3. The largest group containing two varieties with a single annulet privy mark which according to Metcalf succeeded type No.2; 4. Another group with a single stop; 5. And finally a scarce variety *without* privy mark.

14 These series consisted of three sub-varieties. The rarer types appear with triple or quadruple barring which Metcalf categorizes as earlier experimental types. Many coins of this series are with single annulet
These three series he admitted could not yet be ordered in a chronological fashion because of the absence of more hoard material. But these reflected in his opinion the activity of three mints. The type’s development, Metcalf believed, disqualified the three groups as being mere officina or workshops within one or two mints. Differences in the coin's die-alignment – the axis of the obverse vis-à-vis the reverse – strengthened the conclusion that these were three separate mints. The existence of multiple mints also better explain in Metcalf’s opinion, the rapid re-coinage of the previous royal issue BALDVINVS type. Taking his theory a step further Metcalf thought that the location of the ‘mints’ could be studied from the frequency of site-finds and the presence of particular series in a specific location: Acre and Tyre were ‘obvious guesses’ and possibly a 'third mint further to the south' (Jerusalem) but the sorry state of site-finds from the kingdom’s territory in the late 1980’s was insufficient to say anything definite.

In his revised 1995 edition of the Coinage of the Crusades Metcalf basically re-adopted the above 'style' classification without change but further crystallized his views on the evolvement of the type, dividing the group in two large periods rather than associating them by ruler: A twenty year period in which the regular issues were minted by Amaury and his successors Baldwin IV and V; and a forty year period – between the late 1180s/early 1190s under Henry of Champagne till the 1220's when John of Brienne after REX and appear mostly with the neat 'paling-fence' — a balustrade consisting of more than eight blocks. The rarer specimens of the earliest types appear with 1-4th quarter annulets. This series also shows a considerable number of combinations with plain A at the end of double-barred series’ life-cycle.

15 These consisted of seven sub-series, virtually all with the `paling-fence` balustrade. Some of the types came with regular annulets but there is a considerable number of sub-classes which Metcalf observed came with stops and even a rare REX with stop in between the R and E.
introduced his new royal DAMIETA type. During the latter the good heavy coins disappeared from circulation or continued as heavy clipped specimens alongside a 'new' poorer lower weight AMALRICVS type. Barag’s publication of small hoard from the Bethlehem area basically continued Metcalf’s typology but suggested that all coins were minted in ‘a royal mint’ located in Jerusalem (Barag 2009-2010:244).

The stray-finds from the Faubourg of Pilgrim's castle and the re-examination of the some 220 AMALRICVS deniers of the Tripoli hoard allowed Metcalf to further fine-tuned his ‘style’ methodology and propose a model of the type's development after 1187 (Metcalf, Kool and Berman 1999: 96-97; 114, Nos. 3-41; Metcalf 2000-3:239-244). According to Metcalf these were now minted in Acre. The type gradually deterioration could be observed by looking at the style form of the Rotunda and the loss in weight of the coin. Thus he proposed that the Athlit finds date to after the castle's construction in the 1220's. This group consisted of coins of very poor workmanship that weighed between 0.15-035 grams. This was the last type to be minted.
4.3 CONSTRUCTING A ROYAL TYPE: THE HOLY SEPULCHRE DENIER

The denier produced by Amaury from the late 1160’s was issued, like the David's Tower denier of his predecessor Baldwin III (1143-1163), with the expressed purpose of serving as a royal coinage: the king’s name and his royal title read as one were engraved on both sides of the coin: AMALRICVS REX / DE IERVSALEM "Amaury king of Jerusalem".

The ‘royal’ character of these coins has been duly noticed by historians and numismatists of the Crusader period but given little further attention. Below I contend that the kings of Jerusalem ‘constructed’ a rather unique royal coin system for their times. To clarify this, two little discussed aspects of the royal billon of Jerusalem are highlighted below – its exclusive monetary character and the choice and significance of the imagery appearing on Amaury’s royal billon.

4.3.1 An Exclusive Royal Moneta

The Jerusalem kings issued a protected royal billon coinage relatively early – starting in the 1140’s or possibly even earlier - compared to other territorial rulers in the West. This royal billon was minted jointly with ‘royal’ imitation gold dinars and cut fragments to
serve as protected currencies within the territory of the Jerusalem kingdom during the 12th century.\textsuperscript{16}

The existence of a royal coinage in the Jerusalem kingdom was firmly established in its laws and coutumiers at least since the time of Baldwin III, expressively upholding a royal monopoly over the issue of gold and billon moneys. Clauses related to a royal monategium were already incorporated in the 'Assise on Confiscation of Fiefs', an edict promulgated during the reign of Baldwin III (Prawer 1980: 430 – 468). The original assize did not survive but was copied and preserved in the Livre du Roi, a coutumier composed in the Kingdom at the end of the 12th century.\textsuperscript{17} The assize enumerated twelve particular grave abuses of regalian rights which were defined as crimes against the king himself (\textit{crimina laesae majestatis}) and which could lead to the confiscation of a vassal's fief without trial. Two of these specifically related to violations of the Jerusalem kings monopoly on coinage. The first forbade any liege man from counterfeiting billon money and gold bezants on his estate:

"\textit{se aucun houme liege fait au fait faire fouce monee au faus besans en son casau ou en sa maison; si iuge la raison que il det ester deserites a tous iorais mais}\"

\textsuperscript{16} For a general outline of the kingdom’s coinage during the 12th century see Metcalf (1997). For the kingdom’s main gold coinage in the 12th century, consisting of imitations of Islamic Fatimid dinars and gold cuttings minted for internal use by the local poulain and Muslim population of the kingdom see Metcalf (1995:43 ff.); in particular for the cuttings see Metcalf (1995:113) and more recently for a new interpretation of their origins and use Kool (2011: 31 – 41); for a wider perspective on the use of Muslim imitation coinage by Christian rulers along the Mediterranean see Bresc (2000: 177 – 192); on the transcultural character of this coinage see also Kedar and Aslanov (2010:280).

\textsuperscript{17} Editions of the Livre du Roi were published more than hundred fifty years ago by Kausler (1839) and Beugnot (1841). These have been incorporated in a new critical edition by Greilsammer (1995).
The second was even more explicit. It warned any liege man from violating the king's monopoly by minting coins on his estate:

“se aucun home lige qui que il fust terrier our autre, faisat faire labeurer et batter monnee en sa terre si juge la raison qu’il det ester deserites a tousjors mais por se que houme ne dois avoir parteurer ne or ne monee laborant fors li Rois […]”.

The severity of the sanctions – confiscation – for violating the Jerusalem kings’ minting rights was extraordinary harsh when compared with customs during this period in most of Western Europe. There the violation of the king’s right of coinage was never considered a feudal offence but only an infringement on a regalian right (Prawer 1980: 434 – 463). Moreover, in practice this right had ceased to be enforced since the end of the 10-11th centuries, as the existence of the hundreds of ‘feudal’ mints controlled by lay and ecclesiastical lords showed.

The existence in the Jerusalem kingdom of an exclusive uniform billon royal coinage, protected by severe legal sanctions, and circulating within the kingdom’s entire territory (see chapter 7 below) is all the more remarkable when judged against the existing state of ’royal' coinages issued in Western Europe by the mid-12th century.

Particular striking are comparisons with the kingdom's Alma Mater, France – which continued to be a dominant influence and role model for the kingdom's society and culture.\(^\text{19}\) Minting in Capetian France during the mid-12th c. was scarcely considered a


\(^{19}\) On this influence up to 1291 see Weiss and Mahoney (2004).
royal right, as shown by the existence of very few documents witnessing royal concessions of minting (Bompaire 2000:391). ‘Moneta’, the right to mint coins, a royal monopoly during the Merovingian and Carolingian period, was part of a larger number of regalian rights which were simply appropriated and usurped by seigniorial lords since the 9th century. Often these minting rights were fragmented – rights were granted to a part of the mint or its revenues and simply transferred down the line to a number of lesser vassals or urban monetarii (Bompaire 2000: 393-397). The French kings Louis VI (1108 – 1137) and Louis VII (1137 – 1180), contemporaries of the Jerusalem kings, only issued coins in a dozen local mints, limited to a small stretch of territory centered on Paris and Orleans, constituting the royal domain in the Ile-de-France (Fig 2.)

Above all the coinage minted by the French kings can hardly be called royal since they were virtually indistinguishable from the ‘feudal’ coinages. No royal type in the conventional sense existed: the royal title Ludovicus Rex was not exclusive to royal issues
but appeared also on many ‘feudal’ deniers since its introduction almost two centuries earlier under Louis IV, ruler of West Francia (936 – 954). Also no particular royal coin imagery existed: both ‘royal’ and feudal issues followed the same local immobilized mint type traditions, depicting monograms and derivatives of the *Christiana Religio* temple type which had appeared on coins since the Carolingian period (Duplessy 1988: 46 – 67) (Fig.4).

![Fig.4. Royal mint of Mantes, Central-North France (1137 – 1180)](image)

Within the French kingdom the dozen issues that qualified as ‘royal’ were completely outnumbered by the hundreds of independent seignorial mints striking coins. This contrasted sharply with the situation in the Jerusalem kingdom where its rulers during the entire 12th century successfully withstood any usurpation of their minting rights by their own feudal nobility.20 Some of these French ‘feudal’ coinages like the Blesó-Chartrain head type of the counts of Champagne and their vassals were issued in massive numbers, particularly from the 1150s onwards, to supply cash for the famous annual cycle of Champagne trading fairs and circulated far more extensively than the

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20 The only exception was an isolated case that involved the issue of a semi-royal type during the short regency (1174 – 1177) of count Raymond III of Tripoli over the kingdom (Kool 2006:151 – 155)
royal issues (Duplessy 1985:13 – 19; Spufford 1988:197). In contrast, the circulation of royal issues was limited solely to the immediate surroundings of the respective mint localities in the royal domain. Territorial royal money like in Jerusalem did not exist before the 1190s. Only with Philippe Auguste (1180-1223) French kings started to assert their authority to control minting in their kingdom by taking control of mint workshops which were closed down or ordered to work for the sovereign (Dumas 1983: 543 – 574). Consequently the adoption of a recognizable royal ‘chatel’ type occurred relatively late, in the second decade of the 13th century (Duplessy 1985: 151-158), almost 70-80 years after the kings of Jerusalem had issued their first royal billon under Baldwin III or earlier.

A comparable situation existed in mid-12th century Germany, one of the most powerful states of Europe. Minting under the Salian and Hohenstaufen kings and emperors was fragmented among more than 400 mints, controlled by the emperor and numerous ecclesiastical and lay lords (Lautz 1986:5-6). The period saw a complete ‘regionalization’ of monies, expressed in the principle of Marktherr is Muenzherr (Kluge 2007: 98 – 99). Under Frederick I Barbarossa (1152-1180), Amaury’s contemporary, an imperial mint policy seems to have been instituted, paralleling political and administrative efforts to restore imperial power in the German lands through the creation and enlarging of royal domains (Kamp 2006: 399 – 403). The number of royal controlled

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21 Such was the reputation of these deniers that they were even taken on Crusade as illustrated by two hoards dated to respectively to the 1170s and the early 13th century from Jerusalem (Metcalf 1975: 139 – 141; Glücksmann and Kool 1995: 92 – 94).

22 Legislation which enabled the French royals to project a superior and sovereign minting right within the entire kingdom was only introduced under Louis IX in 1263 (Bompaire and Dumas 2000: 400 – 403).
mints was considerably expanded through the acquisition and reform of older mints and the establishment of new 'royal mints. In 1152 only nine 'royal' mints existed with low production outputs; by the end of the Frederick's I rule in 1189 his administration controlled twenty-six highly productive mints. The cornerstone of this imperial mint policy was the creation of some twelve royal mints in the newly created crown lands. This was part of a larger imperial policy to bring markets, taxes, roads and cities within these crown territories under imperial control (Kamp 2006: 352 – 355). Nevertheless, also in mid-12th century imperial Germany no royal billon coinage existed in the Carolingian sense of the word — a supra regional coin of uniform weight, design and fineness, produced in mints under direct royal control and accepted as a universal means of payment throughout the realm. Coins were minted in royal controlled mints, but widely diverse in design, weight and fineness. They were basically produced for local consumption and circulation. Frequent Renovatiae Moneta— the recall of circulating types to be melted down and reissued as new coins – in particular of the thin bracteate pfennigs, further ensured the monopoly of these 'local' type monies (Weschke 1978).

Royal controlled issues only constituted a mere 13% of the 215 mints that produced coins between 1140 and 1197 in the Regnum Teutonicum (Nau 1977: 89). Like in France there were supra-regional seigniorial mints, like the ones controlled by the Margrave of Meissen or the archbishop of Cologne (Fig.5) with access to the rich silver mines of Freiberg in Saxony, which were far more important than any contemporary imperial/royal mint during the 1160-70s (Haevernick 1935; Spufford 1988: 109 – 110; 195).²³

²³ Philip of Heinsberg, archbishop of Cologne minted during the 1170s a minimum of 2 million 'heavy' pfennigs (1.4gm) a year (Haevernick 1935).
Conspicuous are also differences between the coinage of the Jerusalem kingdom and the one that existed in the Norman kingdom of Sicily under Amaury’s contemporary William II (1166-1189).

This is of particular importance since Norman Sicily resembled the Jerusalem kingdom in many aspects: it was situated on the volatile frontier with the Arab-Islamic realm. Its Norman nobility like the Frankish one in Outremer were a small foreign elite ruling large sways of non-western Christian populations in Apulia and Muslims in Sicily. And rulers of both realms seem to have created a financial administration that mixed in different degrees the existing Islamic diwan and Byzantine sekreton institutions with the West European curia Regis tradition. As in the kingdom of Jerusalem, the main mints (Salerno, Messina and Palermo) seem to have been closely controlled by the royal administration (Traviani 1995a: 96 –97). Likewise, the explicit presence of royal names and titles on both Arabic and Latin coins of William II (Fig.6) — in contrast though to the exclusive use of Latin in 12th century Outremer — shows that the rulers of the Sicilian Regno tried to establish and spread the idea of a royal currency.

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But here resemblances ended. Despite the Regno’s administrative unification, both its mint organization and coinages reflected to a large degree conditions that existed before the creation of the Norman kingdom: Its dual mint organization reflected the organic development of the Kingdom’s administrative two-tier division (Sicily versus mainland Calabria and Northern provinces). And its coinage continued pre-existing Islamic and Byzantine types tailored for particular populations and regions within the Regno (Grierson and Travaini 1998: 76 - 140). The most striking difference though with the Jerusalem kingdom was the absence of a single 'Latinized' denier type royal currency in the Norman kingdom, introduced much later under the Hohenstaufen rule in 1194 (Grassi 2010:122 – 126).

The royal coinage of Jerusalem also differed substantially with the coinages produced in the Iberian Peninsula, another frontier region with Islam during the 12th century. Christian kings, counts and bishops co-existed and fought with independent Muslim Taifa principalities and successive Almoravid and Almohad rulers of Al-Andalus along fluid borders during the 12th century, producing a mixture of European billon diner and Islamic low grade silver dirhem and (imitation) gold dinars (Canto García and Ibrāhīm 2004:135 – 141). Like in the Jerusalem kingdom, Christian kings of Leon-Castile and Aragon allowed for the co-existence and use of the European deniers side by side.
with Muslim gold and Christian imitation gold *mancusos* or *morabetinos* (Balaguer 1999:275-300; Roma-Valdes 2000-1; Traper 2002:354). However unlike Jerusalem these kingdoms lacked a single unified territorial 'royal' billon. A good example the 'unified' Aragon kingdom in 1162, established under another contemporary of Amaury, the ‘count king’ Alfonse II (1164 -1196CE). Under his rule Aragon joined the county of Barcelona and other territories (Provence and Montpellier) and formed one kingdom. However, each territory preserved its own particular financial institutions and currencies (Balaguer 1999:72 – 309).

Surprisingly then the closest comparison to a controlled, territorial royal billon of the Jerusalem kings was the Angevin penny system introduced by Henry II, king of England (1154 –1189 CE). Henry, another contemporary of Amaury, ruled one of the most centralized of the feudal kingdoms in Europe. Among the numerous legal and administrative reforms by which Henry greatly extended the crown's power was the abolition of the 150 year old Anglo-Saxon *Renovatio Monetae* system. This was based on the periodical re-coinage (every 3-4 years) of different type coins of fluctuating quality and weight minted by a large number of semi-independent local moneyers. Instead, a new single royal coin of standard weight (1.46 gram), design and high fineness (0.925) was introduced (fig.7).

25 A number of these 11th-12th c. Iberian dinar imitations were bilingual (Latin/Arabic) and even featured 'Christian' inscriptions (for example mentioning the Trinity) in Arabic and crosses (Traper 2002:364; Balaguer 1999:400). No such bilingual coins were ever produced in the Jerusalem kingdom, unlike in Christian kingdoms of Spain (11-12th c. and Norman Sicily (12-13th c).
The new coin bore the name of the king (and not merely the moneyer as before), and was minted in massive quantities in a restricted number of mints with dies closely supervised by the royal administration. This reform included the strict control of alloy and weight of the coins by royal officers. (Mayhew 1992: 83 –96; Nightingale 1988: 61 –75).

4.3.2 A Royal Iconography

Precious little research has been carried out on the symbolic imagery of the Jerusalem kingdom's royal coinage. The Holy Sepulchre billon of Amaury is no exception to the rule. Numismatists and art historians have focused mostly on a technical debate concerning the image of the Holy Sepulchre depicted on the coin's reverse: which were the architectural elements of the church's rotunda that were depicted? In what manner should it be interpreted vis-à-vis the church's architectural evolution during the medieval period?  


There are a number of (obvious) explanations for this line of research: most historians and scholars from other disciplines remain surprisingly ignorant when it comes to the monetary history of the Crusader kingdom and the coin types produced during the 12th and 13th centuries. Moreover, the appearance of the Holy Sepulchre, a shrine intimately connected with the Crusading movement, on a Crusader coin must have seemed an obvious choice, and thus evoked little comment.

But how 'obvious' was the image of the Holy Sepulchre, in particular the one depicted on Amaury’s billon, showing the ribbed Anastasis dome and oculus, the circular rooftop opening, supported by a circular colonnade of pillars? (Fig.8).

Was it part of a contemporary iconographic program or tradition? Did similar churches and structures adorn coins of contemporary rulers in the Medieval West and East? And why did it suddenly appear on Amaury's royal billon?

In the West a devotional tradition specifically related to the Holy Sepulchre seems to have developed during the Carolingian period and the two centuries leading up to the First Crusade, embedded both in liturgy and architecture.28 Churches, monasteries and

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28 Starting in the Carolingian period an altar/chapel dedicated to the cross or Savior, functioned as substitute for the Holy Sepulchre, which became often the central focus of worship during Easter (Morris 2005: 153–155). With the significant expansion of pilgrimage to Jerusalem during the 10-11th century the
chapels were consecrated and named after the Holy Sepulchre, with some actually displaying the architectural features of the Holy Sepulchre rotunda and edicule.29

After the First Crusade till the mid-12th century material references to the Holy Sepulchre in architecture and relics multiplied exponentially in the West. A growing number of churches were designed to commemorate the Holy Sepulchre in shape, sometimes with a crypt containing a representation of the tomb of Christ. Relics of wood fragments of the cross, ampullae containing dust or oil from the Holy Sepulchre were brought to the West by Crusaders and pilgrims. (Ousterhout 2005: 33 – 54; Morris 2005:230 – 241).

Despite the growing devotion related to the Holy Sepulchre, depictions of the actual structure were few and did not develop into an independent popular imagery in Western religious art.30 Western religious art continued to use an imagery of Jerusalem originating in the Early Middle Ages, ignoring more realistic depictions of Frankish ruled Jerusalem (Kühnel 1991:411).31 Scenes of the Savior’s tomb continued to be depicted in commemoration of the Holy Sepulchre became more frequently expressed in architecture and liturgy. A particular important role was played by returning noble pilgrims, some of them even paying tribute the canons of the Holy Sepulchre in Jerusalem (Morris 2005:143 – 153).


30 The Holy Sepulchre did not appear in the iconographic program of church fronts and facades, dominated by scenes of the Last Judgment or the Triumphant Christ and other traditional Sacred History and Passion cycles and saintly themes (Seidel 1986; Malone 2004:43; Vergnolle 1994: 236 – 283; 331 - 351). Neither did it appear in Romanesque paintings or on manuscript illuminations (Cahn 1996).

31 There were off course exceptions like two rare representations of the Kubbat al-Sakhra/Dome of the Rock on the mid-12th c. west façade of the abbey of Saint-Gilles-du-Gard in southern France, an institution closely connected to the Crusading movement (O’Meara 1977: 21 – 32). There is appears as part of an extraordinary “Expulsion of Synagoga” type (its crown) in the tympanum of the southern portal; and in
prayer books, liturgical dramas, and surviving carvings of church lintels in the age old western iconographic tradition of a tomb with an attendant angel visited by the three women (Esquieu 1993: 215 – 231; Morris 2005:156). 32 (Fig.9).

![Fig.9. the three Marys visiting the tomb attended by an angel, Abbey church St. Gilles-du-Gard](http://www.medart.pitt.edu/image/france/france-st/sgilles/Left-Portal/ma541sgis.jpg and http://www.medart.pitt.edu/image/france/france-st/sgilles/Right-Portal/ma542sgi.jpg)

Local pictorial traditions, very rarely, deviated from this *topos* like in the Auvergne churches in France where an arched and domed shrine appeared to refer to the Holy Sepulchre (Heyman 1996:633 – 642). 33

32 A good example of this *topos* is in the lower lintel of the right portal on the west façade of the above mentioned abbey church of St. Gilles-du-Gard. Its beautiful carved details show two adjoining scenes: the three Marys purchasing spices from an apothecary and visiting the tomb attended by an angel (Pezold 1995:14 – 15). For observing the details see: [http://www.art-roman.net/stgilles/stgilles4.htm](http://www.art-roman.net/stgilles/stgilles4.htm) I am greatly indebted to Prof. Nurit Kenaan-Kedar for these references.

33 No attempt was made to ‘resemble’ the Holy Sepulchre. The representation consisted of a selection of elements which *alluded* to the Holy Sepulchre of Jerusalem: timbered roof, arches, the dome shaped structure. For this particular medieval ‘elemental’ idea of depicting of the Holy Sepulchre see Krautheimer (1942:1 -33).
A different iconographic tradition of the Savior’s tomb theme did apparently develop out of the art produced locally in the Frankish kingdom during the 12th century (Kühnel 2006:484 – 486). Contemporary cross reliquaries, seals, ampulla and anonymous coins produced in the kingdom often showed an abbreviated representation of a superstructure mounted by a large cross over a lower rectangular sarcophagus (Biddle 1999: 20 – 40; Kühnel 1994: 142 -145; Metcalf 1995:77–78) (Fig.10).

Fig.10. Anonymous Crusader coin depicting the tomb/sarcophagus within structure mounted by large cross, 12th century

This new image was also reproduced on a number of maps of Jerusalem dating to the 12th century. These maps combined new topographical and historical details of Frankish Jerusalem with the traditional circular theological image of Heavenly Jerusalem (Levy 1991: 418 – 459). The Cambrai map of the 12th century is a particular good example. It showed in realistic detail the Anastasis rotunda holding the tomb/aedicule flanked by the mid-12th c. Frankish campanile or bell tower, and the adjoining Golgotha and Calvary chapels (Fig.11).³⁴

³⁴ See Folda (1995: 243 – 244). Others that showed details were the Stuttgart map (1125- 1150 CE) with an empty rotunda shaped and domed edifice at the center of large church complex; and the Brussel B map (12th c.) showing detailed elements such as the tomb, calvary and the stone of anointing (Levy 1991: 450; 460).
Grosso modo though, the distinctive dome shaped roof of the Holy Sepulchre rotunda with its landmark oculus, rebuilt by the Byzantine emperors in the 11th century (Biddle 1999: 77-81) was, except for its appearance on the AMALRICVS billon, absent on architectural elements, in paintings or frescoes, or in the illuminated manuscripts commissioned in the scriptoria of Jerusalem and Acre during the 12th century. (Buchthal 1957; Kühnel 1988; Kühnel 1994; Folda 1995).

The representation of the Holy Sepulchre on the Amaury coin is even more remarkable when compared with the imagery appearing on coins in Western Europe and the Byzantine East during the 12th century. By and large, the coin type is clearly modeled on the French denier with its cross pattée and enclosing inscription around the edge of the coin (Folda 1995:290). But the depiction of an existing church structure as seminal as the Holy Sepulchre, on a (royal) coin, goes virtually unparalleled in the European West or Byzantine East. This is further accentuated by the fact that medieval coins of this period were an extremely conservative art medium even by the traditional standards of the

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35 Folda (1995:290) noted something similar when he mentioned that use by the Jerusalem kings of architectural images on their coins was a ‘Crusader innovation’.
Medieval period. It was not unusual to have the same image reappear on a medieval denier as \textit{type immobilisée} for several centuries.

In France at this time most of the imageries on the numerous French royal and feudal deniers were derivatives and adaptations of centuries old types: Merovingian busts and Carolingian monograms and ‘temple’ prototypes (Grierson and Blackburn 1991: 198 – 199). These were complemented with deniers bearing linear or globular elements and acronyms of names and titles of seignorial rulers during the 11\textsuperscript{th} -12\textsuperscript{th} centuries (Dieudonné 1936: 29 – 40) (Fig.12).

![Fig.12. Seignorial Mint of Bourbon, 1160-1200 CE](image)

Only a handful of these 11\textsuperscript{th} -12\textsuperscript{th} century French denier types carried images of a structure. Most of them were directly inspired by the Carolingian "Religio" type, showing a temple facade surmounted by a large cross and the inscription \textit{Christiana Religio}, representing the ‘Christian Church’ at large (Coupland 2005:224). Church structures appeared on only three minor feudal issues, and probably originated from independent, local sources of inspiration.\textsuperscript{36}

\textsuperscript{36} See deniers minted in Celles, Coucy and Dreux (Dieudonné 1936: 96; 232; 319). Only the deniers of Dreux (Orleanais) showed an "eglise ou temple a deux etages, peut-être inspire de quelque edifice contemporain…" which Dieudonné possibly linked to the rebuild parish church of Coulombs (Dieudonné 1936:319, esp. footnote No.2).
Images of structures and churches were likewise absent from other Western coinage during the 11th and 12th centuries. They did not appear on the English royal issues. They were absent from Italian, Norman Sicilian and Iberian Peninsula types, except for a number of isolated cases. Depiction of structures or churches associated with rulers were quite common on 12th contemporary German Hohenstaufen deniers and bracteates but these seem to have been idealized types which had already developed much earlier under the Salian dynasty (900 – 1125 CE) (Kluge 1991:84 –86). These usually showed a triple-towered church structure possibly alluding to the Trinity, or a

37 Cross-crosslet and Tealby-types followed in 1180 by the short-cross type (Metcalf 1969).

38 The iconography of Denari from North and Central Italian mints in the 12th century derived mostly from the Carolingian monogram types. See the relevant volumes of the twenty volumed CNI (Corpus Nummorum Italicorum) and Traviani (2011) for more recent research on this subject see Saccocci (2006: 97-105) and Travaini (2004: 73-90). The non-Muslim type coins of the Norman kingdom are heavily inspired by Byzantine iconography (Grierson and Traviani 1998:10 -11). Only three examples are listed from the Norman Kingdom, all appearing on the reverses of copper follari: a city view minted on a follaro of Gisulf II, (1052 – 1077), Lombard prince of Salerno (Grierson and Traviani 1998: 595 Nos.13 –15); a follaro showing a three tower fortification surmounted by a cross minted at Capua by Roger II between 1130 –1140 ) (Grierson and Traviani 1998:620, No.190); and a castle with three towers and ligature minted by William II (1166-89) at Salerno (Grierson and Traviani 1998 :644, No. 411). The imagery appearing on Iberian diner during this period are heavily indebted to the Carolingian types. Also many of the lay and royal emissions show busts as well as proto-heraldic elements resembling the ones used on 'feudal' coinage in France during the 11th and 12th centuries whereas episcopal coinage show mostly religious imageries (saints, the effigy of the Virgin, the figure of the bishop and the manus dei ‘hand of God’ type) (Crusafont I Sabater 1992: 19 – 75; Balaguier 1999: 366 – 477).

39 In his authoritative study of the Cologne mint between the 10th and 14th centuries Haevernick (1935:5) remarked on this issue that “Wenn man die ganze Bilderreihe ueberblickt, kann man nicht darein zweifeln, das hier niemals auch nur im entferntesten der Versuch gemacht worden ist, ein Bauwerk der Wirklichkeit nachzubilden”. For the iconography of the Bracteates during this period see also the works of Wenschke (1978) and Lautz (1986).
‘Stadsbild’ with walls, towers, arches and portals, the symbolic representation of the medieval ‘Civitas’ (Nau 1977:108 – 188; Klein 1978) (Fig.13).40

![Image of 'Trinity' bracteate, Quedlinburg, 1138-1160](image)

**Fig.13. ‘Trinity’ bracteate, Quedlinburg, 1138-1160**  
*(Nau 1977:143, Abb.108.10)*

Closer by, in the Eastern Mediterranean, the new imperial Byzantine types introduced after the 1092 monetary reform by Alexius I, did not portray any lay or religious structures. Throughout the 12th century they continued to be dominated by the long-established images of an enthroned "Almighty" Christ Pantocrator and the emperor in his regalia, often accompanied by the Virgin or a saint (Hendy 1999: 3-274). Likewise they did not appear on the main denier types used during the 12th century in the neighboring Northern Crusader principalities of Tripoli and Antioch which chiefly continued iconographic traditions prevalent in southern Europe (Navarre-Aragon, county

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40 In fact the first independent city mints in Germany only date from the 13th century when Frederick II gave Annweiler in der Pfalz its minting rights in 1219 (Nau 1977: 88).
of Toulouse and Norman Sicily), reflecting the geographical and cultural origins of its ruling dynasties.\textsuperscript{41}

In sum, both the realistic and symbolic depiction of the Holy Sepulchre on Amaury’s royal billon was practically unknown among the many hundreds of contemporary royal and seigniorial coin types minted in the West and East. It also did not relate to existing Western forms of religious art or to local Crusader art conventions.

Amaury’s Holy Sepulchre type it seems was a purely ‘local invention’, something the historian Eric Hobsbawm termed as an invented tradition which appears old but in fact was completely new (Hobsbawm and Ranger 1983:1–14). Such ‘invented’ traditions were often introduced to answer social and psychological needs in times of great flux.

\textsuperscript{41} The ‘bare-headed’ deniers were the first series of billon introduced in the Principality of Antioch. Introduced under Raymond of Poitiers’ rule (1136 –1149), these coins showed a profile bust which seems to have been inspired from similar bust types circulating in the kingdoms of Navarre –Aragon (Porteous 1989: 371; Folda 1995:172). The ensuing ‘helmet’ type showing the bust of a mailed knight with Norman helmet and nasal bar seems to have been influenced by iconographic traditions possibly arriving from Norman Sicily: see the helmeted knight on horseback on a copper trifoliaro (1098 –1101) of Roger I, Count of Calabria and Sicily (Grierson and Travaini : 608 – 609, Nos. 93 – 101). A same helmeted knight also on horseback appears on seals of the princes of Antioch (Schlumberger 1943:32 – 35; see also a seal of Raymond of Poitiers as prince of Antioch (1136 – 1149) formerly of the Arnold Spear collection, acquired by a private collector in 2007 http://www.archaeological-center.com/en/auctions/40-447/. The star and crescent deniers (c.1145 – 1174) struck by the Toulousian rulers of Tripoli greatly resemble the six/eight legged stars and crescent design of the raymondins deniers struck at Pont-de-Sorgues by Raymond V, Count of Toulouse 1148 –94 (Dieudonné 1936: 151; Poey d’Avant 1858: No. 3723-3736). This 'Languedoc' connection is noted by Sabine (1980b:71–112) but he mistakenly contended that the type could have been a reverse borrowing by the counts of Toulouse from the counts of Tripoli because "star and crescent…was a symbol much used by the Muslims and would therefore have been familiar to the counts of Tripoli" Historically though Sabine's contention is not true: the crescent was perceived as an Islamic symbol by Europeans only from the 15th century onwards and it only became a formalized official symbol at the end of the 18th century in the Ottoman Empire See ‘Hilal’ in EI (1986: 381 – 385).
when old traditions disappeared. The 12th century Frankish settlement was certainly such a period of rapid changes. The unprecedented adoption of the Holy Sepulchre type (like the preceding Tower of David type) seems to express the ‘new’ Jerusalem dynasty aspirations to legitimize its rule by appearing as ‘old’ and unchanging.

The coin type was new and local but not completely sui generis. A virtually similar rotunda type with oculus appeared on the royal seals as soon as Baldwin I established the royal dynasty in 1100 (Mayer 1978a:10; Schlumberger 1943:1–3). This showed the existence of a locally fashioned dynastic tradition that had been firmly established for almost half a century. On the royal seal it appears flanked to the right by the Citadel/Tower of David/Turris David and the Dome of Rock/Templum Domini, the two other structures considered appropriate for the royal imagery from the reign of Baldwin I onwards (fig.14).

![Royal seals of Amaury showing the Holy Sepulchre (L) Flanked by the Tower of David and the Lord’s Temple (Unpublished, Israel Museum Collection)](image)

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42 The original case studies presented by Hobsbawm related in particular to examples over the past two hundred years in which societies transformed rapidly from traditional to modern ones (Hobsbawm 1983: 4-8).

There is no doubt that the design of these royal seals preceded and influenced the choice of the imagery appearing on the issues of royal billon starting in the 1140s. Two of the three iconic structures on the king’s seal appear on the royal billon, the *Turris David* on the billon issued by Baldwin III and the Holy Sepulchre on the following series issued by Amaury, his brother and successor. It is certainly possible that the same group of artisans that produced the matrices of the royal seals were involved in designing the dies of these royal coin types.

Having said this, the appearance of the Holy Sepulchre on Amaury’s royal coin cannot be explained as a mere continuation of a local ‘immobilized’ tradition originating in Jerusalem. The adoption of this particular coin type appeared to have been a deliberate choice made by the king and his court. This becomes clear when surveying the existing coin types that were available to the king.

*Prima facie* it would have made perfect sense if Amaury would have continued minting the existing Tower of David type, the main royal billon issue introduced by his brother Baldwin III only two decades earlier in the 1140s (fig.15).

![Fig.15. Tvrris David type, Baldwin III (1150s -1163)](image)

This coin showed a symbolic representation of a massive tower, the *Turris David*, the main defensive complex of the city located against David’s gate, one of the principal
entries into the city (Boas 2001:73). Control of the citadel was considered imperative for an effective royal government over the city and the kingdom ever since the conquest of the city in 1099. By the second half of the 12th century it had become the royal possession par excellence in the city. Its legendary association with King David since the late Byzantine period added to the aura of royal power. It greatly enhanced the Jerusalem kings status, portraying them as the successors of the biblical kings of Israel, in particular to the Davidic royal line from which Christ was born. The continuation of the ‘Tower’ type by Amaury made every sense. During his reign the tower had converted into the nexus of royal power. The citadel underwent considerable reconstruction and expansion; it contained a royal chapel and was adjoined by a newly built royal palace (Boas 2001:75 – 76; 80; Pringle 2007: 88 – 89). It may well have held administrative institutions like the record office or possibly an office related to the production of royal coin dies.

A different option for Amaury was to adopt another powerful symbol of the kingdom, the True Cross. Recent research shows that the Jerusalem kings had started to mint, possibly as early as the 1120-30s, another anonymous royal type which seems to

44 See for example immediately after the capture of Jerusalem in 1099 the struggle between Godfrey of Bouillon and Raymond St Gilles over its control (WT, IX, 3, p.423); once more in 1100 when supporters of Geoffrey’s brother count Baldwin of Edessa held the complex to ensure his coronation as king Baldwin I (WT X, 3,p.455); it is quite possible that a similar scenario arose in the disputed election of Baldwin de Bourecq, over Baldwin’s I elder brother Eustace of Boulogne as king of Jerusalem (WT XII. 2-3, pp.547-550; Murray 2000: 120 – 123). Though the sources do not mention any explicit event taking place related to the Tower they do mention the advantageous presence of the Baldwin in Jerusalem. In particular should be noted the power struggle between the Queen-regent Melisende and her son Baldwin III during 1149-1152 which ended in the capitulation of the Tower by Melisende to her son who now became the sole ruler of the kingdom (WT XVII, 14,1-65).

45 For the self-image of the Jerusalem rulers, from the early 12th century as successors to the Biblical kings of the line of David, see Schein (2005:96 – 97).
have alluded to the True Cross. The type depicts a double cross flanked by an alpha and omega and the legend REX IERL’M/MONETA REGIS, ‘King of Jerusalem/From the Royal Mint’.\(^{46}\) (fig.16).

![Fig.16. Moneta Regis denier, Kal’at-a-Shuna hoard, North Israel (IAA 10901)](image)

The type was apparently introduced under Fulk of Anjou as king of Jerusalem (1131-1141) and it seems to have been directly inspired on the cross pattée denier with suspended A and Ω minted under Fulk and his predecessor Fulk IV as counts of Anjou in France between 1060 and 1129 (fig.17).\(^{47}\)

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\(^{46}\) These coins have been previously associated with the military orders as regents of the kingdom during the siege of Acre in 1191 (Schlumberger 1878: 90 – 92). Stray-finds of two hoards with northern provenances (Capernaum/Capharnaum, Kal’at-a-Shuna), identified these as a local type minted by the commune of Acre in 1231-43 (Metcalf 1983:20), or the bishops of Acre during the first half of the 12\(^{th}\) century (Metcalf 1995:75 – 76). The presence of these coins in a small hoard excavated at Beth She’an securely dated stratigraphically, as well as numismatically (it contained coins typically associated with the First Crusade and the first decades of the Jerusalem kingdom) to the first half of the 12\(^{th}\) century (Berman 1995:41 – 42), shows it apparently predates the royal type of Baldwin III and Amaury. Other evidence for an early dating is the existence of similar early Moneta type copper denier (1137 – 1152) issued in the Principality of Tripoli.

\(^{47}\) Besides being used to have his own coins minted in his French territories, Fulk was also extremely wealthy compared with contemporary nobles in the kingdom. He was able to maintain a hundred knights in the kingdom for a year at his expenses (WT XIV, 2, 5-6). For his wealth see Philips (1996:29, esp. footnote 73.). According to Orderic Vitalis (Ecclesiastical History 12:29) Fulk arranged an annual revenue of thirty Anjou pounds of silver to the Templars in the early 1120s after returning from the East.
‘Rediscovered’ after the capture of Jerusalem in 1099, the True Cross was carried on military expeditions whenever the king accompanied his army. It quickly attained the status of a genuine talisman associated with the dynasty, according its rulers divine protection to rule their kingdom. 48 Fragments of the cross were also used as powerful political gifts to impress other monarchs, important religious institutions and shrines in the West. 49 Amaury himself is known to have worn a small fragment of the Cross during his expedition into Egypt in 1164; this was later donated to the Abbey of Clairvaux (Frolov 1961:338). Another two pieces were presented by him in 1174 to the Abbey of Grandmont in southern France and to the English king Henry II (Ligato 1996: 325).

Yet another alternative for Amaury was to adopt a royal type denier with the crowned bust of the king. An early precedent seems to have existed among the coins of the first Jerusalem kings: a unique copper coin presumably minted by either Baldwin I or


49 Murray (1998:221); see also Mayer (1967:182, note 185).
II showed a royal bust holding a cross and globus cruciger. This was clearly modeled on the obverse of the royal seal of the Latin kings (Fig.16).\textsuperscript{50}

Royal portraits were also used by Amaury’s successors, Guy de Lusignan as lord of Cyprus (1192 – 1194) and John of Brienne (1210 – 1225) (Metcalf 1998:107 – 116; Metcalf 1995:80-85) (Fig.19).\textsuperscript{51}

\textsuperscript{50} See Meshorer (1999: 281) who attributed the issue of this rare coin to the coronation of Baldwin I (1100); see also Metcalf (1995:40- 42). The reverse of this unique and rare copper showed a dome-like structure topped by a cross associated by both Meshorer and Metcalf with the Dome of the Rock as it appeared on the royal seals of the latin kings. In my view though it is entirely possible that the intention was to depict the HS as it evolved in the local art of the kingdom during the 12\textsuperscript{th} century: a superstructure mounted by a large cross over a lower rectangular sarcophagus (see my remarks above).

\textsuperscript{51} The bust on John of Brienne’s denier bears a very close resemblance to the bust type introduced under the Hohenstaufen rulers on their new denier series for the kingdom of Sicily between 1194 and 1250s (Grierson and Travaini 1998: Nos. 491 and 544). It is quite possible that the Jerusalem ‘Damietta’ deniers minted more or less around the same time (c.1219) were produced with Sicilian technological know-how or even by monetarii, minters/engravers, involved in the minting of the Hohenstaufen denarii in Messina and Brindisi.
For comparison, in medieval France no royal bust appeared on coins till the reign of Phillip IV in 1290 (Duplessy 1988: 87). However, royal busts were used regularly by Amaury’s royal contemporaries both in the West and East on their coins: Henry II of England appeared wearing a crown and scepter on his cross and crosslet types between 1158 and 1180, or just a pearled crown topped by a cross after 1180, a tradition going back to the Anglo-Saxon king Ethelred II (978 – 1016) (Mayhew 1992: 51 – 54; Archibald 2004: 135 – 150). In the German lands Frederick Barbarossa was enthroned as the majestic Christ-like Holy Roman king-emperor holding a lily-topped scepter and orb with cross embodying the *sacrum imperium* image of the Hohenstaufen rulers (Nau 1977: 96; 130). The mid-12th century Christian rulers of the small Iberian kingdoms of Leon and Castille’, Navarre and Aragon-Catalonia appeared with crowned or diademed busts in some cases accompanied by royal attributes like a sword, a long cross or a lily scepter (Roma-Valdes 2010: 183 – 185; Balaguer 1999: 366 – 495; Crusafont I Sabater 1992: 75, Nos. 298 – 299).

52 Archibald (2004) in general noted the strong influence of the ‘German imperial model’ on English royal coins with regard to the crown used by the monarchs: the ‘open’ lily type crown or helmet of the Anglo-Saxon kings was replaced on coins with a ‘closed’ imperial crown used by the German Ottonian and Salian emperors. As for the scepter, introduced for the first time in the 970s it came it seems in three main varieties: surmounted by a quatrefoil, by a lily and finally by a cross.

53 For the development of the crowned image type of the preceding Salian kings and emperors on their coinage see Kluge (1991:79– 82).
Adoptions of Byzantine prototypes occurred frequently among Muslim and Christian rulers that maintained close contact with the Byzantine Empire during the 12th century. Why then, despite the growing dynastic alliance with Byzantium, in the 1150s, did none of the coins draw inspiration from Byzantine iconography? Both states forged close diplomatic relations during this period. The resulting marriage alliances, treaties and joint building projects (like the renovation of the Nativity Church in Bethlehem) resulted in the injection of vast sums of Byzantine cash in the form of gold hyperperri into the Kingdom’s economy during the 1150-1170s. Amaury also seems to have been an avid admirer of Byzantine court culture — he not only married a daughter of the emperor, but also ordered the adoption of Byzantine imperial ceremonial dress and symbols in his own court (Mayer 1967: 176 – 177; Folda 1995: 333).

The introduction of the Holy Sepulchre type thus seems to have been a deliberate choice made by Amaury. If this is indeed the case it is important to answer not only why but when this occurred. It has been suggested that the Holy Sepulchre type was not introduced by the king on his accession in 1163 but minted several years later to celebrate the (legal) unification of the Crusader basilica church around 1167 (Pesant 1980:108 –

54 See for example the 12th century copper dirhams of the Artuqid-Turkish rulers of Kayfa, Sivas, Aleppo and Diyabakir; the copper fals of David IV (1089 – 1125) and Giorgi III (1156 – 1184), kings of Georgia; the silver tram of Levon I (1198 – 1216) of Cicilian Armenia; the copper folles of the Crusader rulers of Edessa (1097 – 1144); and the byzantine style bezants adopted by the Lusignan kings in Cyprus (Metcalf 1997).

55 See for example the huge dowry of Theodora, niece of the byzantine emperor Manuel I Komnenos upon marrying Baldwin III in 1158 which consisted of the enormous sum of 100,000 gold hyperperri, in addition to 10,000 of the same coins for marriage expenses (WT: XVIII, 22, 22 – 28); Or the treaty signed in 1171 between Amaury and Manuel I at Constantinople which was accompanied by an immense quantity of gold bestowed on the former (WT XX, 24, 29 – 34).
More or less following the same argument the Holy Sepulchre type purportedly was thought to have been struck to celebrate the completion of the rebuilding of the shrine around 1167. However, the very early presence of a few of Amaury’s Holy Sepulchre coins in the recently discovered Harim hoard in northern Syria, presumably dated to the summer of 1164, (see No.18, appendix 2) seems to imply that the coins were introduced immediately with the accession of Amaury in 1163.

What then motivated Amaury to replace the relative new billon money introduced by his brother just two decades earlier? A simple answer could be profit. There was easy money to be made with such a coin renewal (Renovatio Monetae) whereby the king received the ‘seigniorage’, the revenue raised from coining new coins. Indeed William of Tyre frequently and disapprovingly noted Amaury's inordinate love for cash money. A more complex and convincing argument is that Amaury recognized the cardinal importance of cash money for the survival of the kingdom in the 1160s, both in times of

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56 This argument has been adopted by other scholars of Frankish period coinage see Malloy (1994:57) and Metcalf (1995:57-58).

57 And not in 1149 based on an inscription at the entrance of the Golgotha chapel. For the pro-1167 argument see Biddle 1999: 81 – 98; Morris 2005: 195. In contrast Linder (2009:31 – 52) argued convincingly based on an analysis of the liturgy of the Anniversary of the 50th dedication of the Holy Sepulchre that it took place indeed on 15th july 1149. Nevertheless, a dedication particularly during the Middle Ages did not imply necessarily the finishing of the works.

58 Pecunie cupidus supra quam regem deceret honestatem (WT XIX, 2, 50-51).
peace and war. The general need for a substantial increase in the quantity of billon currency in the kingdom seems to have been achieved by issuing a new royal coin type (see also chapter 8.1 below).

Did Amaury have a personal, spiritual motive for depicting the Holy Sepulchre on his coins? William of Tyre who knew the king intimately did not regard him as a particular pious person. He merely did what was expected of him as king of Jerusalem, like dissolving his bigamous marriage with Agnes of Courtenay, or attending mass daily.

The more convincing argument seems to be that Amaury’s choice was primarily motivated by political and dynastic prestige. The coin type displayed Amaury's intent, to fortify the association between the Holy Sepulchre shrine and the kings of Jerusalem, reinforcing the dynasty’s legitimate claims to rule the kingdom. Symbolically, the church had enormous significance for the new royal dynasty. Its recapture in 1099 and the celebration of a victory mass within its walls by the victorious Crusaders formed one of

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59 William hinted at this by quoting Amaury verbatim on his 'monetary philosophy':

“Principem quemlibet, et maxime regem, semper hanc debere penes se providentiam habere, ne egeat, propter duo, tum quia tuta est opulentia subiectorum ubi non eget imperator, tum quidem ut pre minibus habeat unde necessitatibus regni sui, si forte inopinate occurrant, consultat…”(WT 19,2, 55-59).

60 Metcalf (1997: 193 – 192) calculated the total output of the 'Tower of David’ billon at 11-12 million pieces. These he thought were ‘very thoroughly replaced’ by the new AMALRICVS but he was not certain to what extent, since he lacked data about verifiable stray-losses (from excavations). The latter provided in this study below clearly shows that Amaury billon seems to have been a substantially larger one than the previous Tower of David issue.

the defining moments of the Crusade movement. Thereafter it became the most important pilgrim shrine and spiritual center of the kingdom.

From the beginning rulers of the Jerusalem dynasty looked to associate themselves with the shrine. They ‘invented’ themselves not merely as mere temporal sovereigns, *Rex*, but also as protectors, *Defensor* of Christendom’s most holy shrine, sometimes over the vehement opposition of the Latin Church hierarchy.  

Besides titles there were other, more tangible expressions of the extraordinary close association between the Holy Sepulchre church and royal dynasty. The shrine appeared on the royal seals with the founding of kingship in Jerusalem under Baldwin I. It served simultaneously as burial church and — since the joint rule of Fulk of Anjou and Melisende (1131) — as coronation church of the dynasty, a virtually unprecedented

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62 Godfrey of Bouillon who allegedly refused to take the title of king was *summus post Deum dominator Iherusalem* but more importantly *advocatus Sancti sepulchri*, “Protector of the Holy Sepulchre” (Murray 2000: 69-77). Upon Godfrey’s death in 1100 his successors from Baldwin I onwards carried next to *rex* (king) apparently also the title *defensor*, ‘protector’ or ‘defender responsible for the protection of the Christian people and churches against the pagans (i.e. Muslims) in the Holy Land, a title that echoed elements of the German Holy Roman emperor’s coronation oath as ‘Defensor’, Protector of the Roman church and Christendom. (Murray 2000: 73 - 76; 95-97;152). Amaury himself was grandly titled by William of Tyre as *locorum venerabilium dominice passionis et resurrectionis defensor et advocatus* ‘protector and defender of the venerable places of the Lord’s passion and resurrection’ (WT XX, 22, 60 – 62).

63 Baldwin used a royal seal at least as early as 1103 (Mayer 1978:10 – 11).

64 Kings were buried within the south transept of the church, below the Cavalry, a short distance from the aedicule, the burial chamber of Christ (Pringle 2007: 16 – 17; 64 – 65). Moreover the burial tombs were virtually located within the main Western double entrance of the new Crusader church, necessitating anyone entering to pass by the royal tombs.
arrangement in Western Europe at this time.\textsuperscript{65} By the time of Amaury’s reign other traditions had been added, substantially deepening the association between the Frankish rulers and the church; the existence of an important royal chapel, the induction of the king in the regular chapter of the church, and the celebration of feast days commemorating kings.\textsuperscript{66}

Royal favor also must have played a role in its chapter acquiring large estates and properties in the kingdom and outside it which were regularly confirmed by the Frankish rulers in their royal charters.\textsuperscript{67} More than anything else, the close association between the

\begin{itemize}
\item \textsuperscript{65} It replaced the earlier crowning ceremony in the Nativity church at Bethlehem instituted under Baldwin I. For a detailed discussion also on the elements of the crowning ceremony, see Mayer (1967:150 - 163).
\item \textsuperscript{66} The existence of dynastic church that combined coronation and burial was virtually unknown at this time in the West: French kings were separately crowned and buried at Rheims cathedral and the royal abbey church of St Denis from the 9-10\textsuperscript{th} centuries onwards. The English Angevin kings were crowned at Westminster Abbey but buried in abbey churches they had founded in France (Abbaye aux Hommes, Normandy; Fontevrault, Anjou) and England (Reading Abbey). Similarly, German kings and emperors were crowned separately as German kings usually at the Aachen Cathedral and as emperors at Rome but buried in the central aisle in front of the altar in the Speyer cathedral. Possibly the closest comparison to such a combined ‘royal’ coronation and burial church was the cathedral of Palermo by the Norman kings of Sicily, although both Roger II and William II tried unsuccessfully to establish separate royal burial churches at Cefalu and Montreale (Deer 1959: 3 –17; Senior-Niv 2008).
\item \textsuperscript{67} The kings of Jerusalem were often ordained as canon of the chapter of the Holy Sepulchre with all rights and duties of a regular canon. The institution imitated similar customs among West-European kings in France, England and Germany during the 12\textsuperscript{th} century (Mayer 1967:184 - 187); the royal chapel was staffed by officials appointed by the king which kept the royal treasury, housed the royal archives and wrote diplomatic correspondence of the king as well as safeguarded the most important relics of the Holy Sepulchre (Mayer 1988: 489 – 509). The death of Godfrey of Bouillon was an official feast day of the shrine (John of Würzburg, 124, 1123 -1125).
\item \textsuperscript{67} Mayer (2010:1711) lists in his new edition of the royal charters of the Latin kingdom of Jerusalem some ninety charters that dealt with the canons of the Holy Sepulchre. Many of these were related to the confirmation and re-confirmations of property-rights.
\end{itemize}
Frankish dynasty and church was cemented by the vast rebuilding program of the new crusader complex begun in the 1140s under royal patronage.\textsuperscript{68} New interior decorations (mosaics, Latin inscriptions) and architectural elements introduced during the renovation clearly alluded to the intimate connection between dynasty and shrine. Frankish kings were crowned in the choir of the new Crusader church against the background of a newly installed Anastasis mosaic depicting a Triumphant Christ, clearly alluding to the parallel between earthly and heavenly ruler.\textsuperscript{69} The construction of the church’s double portal modeled on the city’s Golden Gate drew an analogy between the Byzantine emperor Heraclius’ recuperation of the city and the True Cross from the Persians (629 CE) and the restoration of Christian domination by the Frankish dynasty.

The increasing intimate association between the Jerusalem kings and the Holy Sepulchre shrine seems to have been a concerted effort to usurp the Byzantine emperors’ traditional role as patrons of the shrine.\textsuperscript{70} This seems to have been no small source of friction between the two states, in particular with the strategic re-alliance of the Frankish

\textsuperscript{68} See Kenaan-Kedar (1986: 115) who noted that “the royal house was connected by manifold ties to the Holy Sepulchre; Folda (1995: 202 – 203) on the important role of queen Melisende. Generally, Folda (1995:245) remained unclear to what extent royal patronage was important in the renovation, vis-à-vis the role of the patriarch and canons of the church, though he did call it the ‘state church of the kingdom of Jerusalem’.

\textsuperscript{69} Kenaan-Kedar (1986: 114).

\textsuperscript{70} The renovation of the shrine by the Byzantine emperor Michael IV Paphlagon (1034 – 1041) (and not Constantine Monomachus) after its destruction by the Fatimid ruler al-Hakim showed the appeal of the shrine in terms of the political prestige that was associated with its ‘protection’. For which Byzantine emperor was responsible for the renovation, see Biddle (1999: 74 – 81) and Ousterhout (1989: 66 – 78). So great was its prestige that even as late as 1185 Manuel I Komnenos donated substantial financial resources to decorate the interior of the Holy Sepulchre with gold mosaics (Kühnel 1994:52, note 24).
kingdom as a dependent satellite of the Byzantine Empire since the 1150s. Manuel I Komnenos, the Byzantine emperor seems to have actively tried to counter the Crusader ‘take over’ of the Holy Sepulchre and project his traditional role as Protector of the Holy Places. He apparently pressured Amaury into re-admitting the Orthodox clergy to the Holy Sepulchre in the 1160s over the objections of the Latin clergy. Even as late as 1185 this Byzantine emperor tried to maintain Byzantine influence within the shrine by donating substantial financial resources to decorate the interior of the Holy Sepulchre with gold mosaics. Folda interpreted the adoption of the now only visible Byzantine part of the shrine – the rotunda – on the coin as an effort by Amaury to placate Byzantine feelings. In my opinion though, the adoption of the type by Amaury, immediately upon his accession, was intended for exactly the opposite: to send a clear message of his concurrent status as ‘King of Jerusalem’ (‘REX DE IERVSALEM’ as the coin’s

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72 See for example the ‘joint’ renovation by Manuel and Amaury of the church of Nativity in Bethlehem between 1167 and 1169. The wording of the Bilingual Latin/Greek inscriptions commemorating the work leaves no doubt as to Manuel’s intentions to be regarded as an imperial custodian. In the supposedly more pro-Frankish Latin version he is depicted in a balanced manner as *dator largus pius imperator*, in second place after Amaury who is described as *Rex Amalricvs custos virtutis amicus largus*. The Greek pro-Byzantine version though proclaimed unabashedly Manuel’s superiority. He is mentioned first as the ‘purple born’ *μεγαλου Βασιλεως* as opposed to Amaury who is mentioned second as *μεγαλου ρεγος*. For the inscription see Hunt (1991: 73, esp. note 27 and 28). Also Manuel’s portrait in the church’s nave mosaics metaphorically presiding over the depicted church councils clearly showed the emperor’s intent to be depicted as custodian and arbiter of Orthodoxy (Hunt 1991:78–83).

73 I thank Prof. David Jacoby for bringing this to my attention. See also Mayer (1978b: 190 – 192) and Kool (2007: 181 – 190).


inscription unswervingly proclaimed) and 'Protector' of Christendom’s most important shrine.

Consequently the depiction of the Holy Sepulchre church on his new coinage seemed a natural choice for Amaury. No doubt this was also the reason why the type was never replaced by his successors for the next sixty years, and why it reappeared in different variations on the coins of two other Jerusalem kings, Guy de Lusignan (1192-1197), and John de Brienne (1210-25) as well as a number of minor anonymous issues related to the kingdom of Jerusalem.\footnote{An identical depiction of the shrine appears on the following coins: a billon of Guy the Lusignan, 1192 –1194 as lord of Cyprus (Metcalf 1998: 107 -116); a heavy silver drachma minted by John of Brienne as king of Jerusalem possibly between 1212 –1219 (Metcalf 1995:74); another anonymous drachma minted at Acre possibly between 1220 – 1240 (Metcalf 1995:73). There is also a small group of rare, anonymous deniers minted in the kingdom whose iconography somewhat deviated from the official ‘rotunda’ type. These depicted the edicule and/or sarcophagus within a superstructure mounted by a cross. The types in question are: 1) the sarcophagus/edicule TVRRIS DAVIT type (Metcalf 1995:77); 2) large cross on Golgotha/CRVCIS type (Metcalf 1995:78); and 3) triple-tower church with tomb/SANACRA type (Metcalf 1995:78 –79). These types stressed the visualization of the actual Sepulchrum Domini which seems to have been used in the art of Frankish kingdom during the 12th century (Kühnel 2006:484–486).}
4.4 THE CLASSIFICATION STUDY

4.4.1 Regular versus ‘Mauvais’ Denier

One of the major premises upon which the classification and dating of the Amalricus group currently rests is the difference between ‘regular’ types approximating the one gram denier standard and a lower weight barbarous looking mauvais type which researchers regard as a separate series minted exclusively in 13th century Acre (fig.20).

As I already mentioned the distinction was first made by Schlumberger who associated the mauvais types to the époque de décadence et de détresse financière of Aimery as king between 1197-1205 (Schlumberger 1878: 86-87). Adopted by most scholars of Frankish period numismatics it has since then become one of the paradigms of Frankish period numismatics – including the present study. Metcalf attempted recently to create a more detailed classification of this separate type based on more or less the same style methodology for the regular types (Metcalf 2000-3:239-244).
During my study I registered some eighty-two of these 13th century *mauvais deniers* from eighteen seasons of excavations in seven sites. These complement c. 972 known coins from six provenanced *mauvais denier* hoards of which only two small hoards totaling eleven coins come with certainty from the kingdom’s territory. Systematic study of *mauvais* types lie outside the scope of the present study. Nevertheless the continuous appearance of regular types during the 13th century and consequently the extension of the regular type's 'life expectancy' and circulation, and in particular the simultaneous appearance of regular and *mauvais* types in sites, could reflect indirectly on the type’s evolution and chronology.

4.4.2 Creation of the database: excavation finds and provenanced hoards

For this study a database was constructed of provenanced finds of *Amalricus* type deniers found in Israel and the Palestinian Territories which constituted a considerable part of the historical core territory of the Frankish kingdom of Jerusalem. Virtually excluded from


78 From ‘Atlit/Athlith (4) and Jubayl/Gibelet (7). The other larger parcels — Châtellerault/Latin East (40), Kessab/Djebel el-Akra (263) and Tripoli (652 coins) are either uncertain or originated from the former territories of the northern principalities of Tripoli and Antioch.

79 The kingdom’s territory is described by William of Tyre in the 1180’s: he mentioned the kingdom’s northern border (with the Principality of Tripoli) ran somewhere between Beirut and Jubayl/Gibelet – ancient Byblos, today the modern city of Gubayl situated c.40 km north of Beirut. From there it extended all the way south to the Templar fortification of Darum, modern Deir el-Balah, located in the central part of
this study were two areas of the kingdom, due to lack of access to available material: the area east of the Jordan river which constituted the seignory of Montreal centred around the castle of Montreal/Kerak–now part of Hashemite Jordan; and the kingdom’s northern territories centered around the coastal cities of Sidon, Tyre and Beirut, now part of Lebanon.\(^80\)

The core of the database consists of some 469 ‘regular’ heavy type Amalricus denier from sixty-two registered sites. Additional 24 coins lack basic information to be able to define if they are heavy or mauvais denier.\(^81\)

The 469 ‘heavy type’ coins constitute in real numismatic terms a relatively small number. Metcalf’s typology though was based on less than a hundred coins from two hoards, one of which was of questionable provenance (Jerusalem YMCA hoard, see checklist). The present group of coins contains hundreds of verifiable site finds today’s Gaza strip. The eastern boundaries of the kingdom emanated from newly build crusader castles like Montreal and Kerak today modern Shoubak and Karak in Jordan. For an in-depth review on the concept and significance of borders in the Frankish kingdom of Jerusalem see Ellenblum 2007: 118-145

\(^80\) As far as I know provenanced medieval coins are virtually non-existent from these areas. Very little has been published. Large scale excavations from the Souks area of Beirut have uncovered some medieval coins but no detailed data is available.

\(^81\) A large group of these coins come from the Frankish village of Parva Mahumeria/Qubeibeh excavated and published by Bagatti (1947). Considering the archaeological and historical context of these coins they were certainly ‘regular’ type AMALRICVS deniers. The coins were published by Bagatti in his catalogue of the coin finds (Bagatti 1947:88–114) and recently more in detail by Kool (2007: 103–105).

The recent computerization of the SBF holdings in Jerusalem has allowed me to identify conclusively at least five of the thirteen Amalricus deniers from the site, all regular ‘heavy types. I am particular indebted to Professor Fr. Eugenio Alliata, director of the SBF Archaeological Museum and Professor Bruno Callegher of Trieste University for giving me access to these important finds. Another group of eight coins from Jordan without specific provenance were published by Kirkbride (1939:152-161) but unfortunately without plates or further details.
accumulated over the last decade and half, including twelve hoards and ‘mini’-hoards and constitutes something of a quantum leap. In absolute numerical terms it is much larger, and above all represents a viable statistical random sample.\(^8\) Furthermore the real significance of present database – apart from the detailed numismatic data - is the quality of the archaeological and historical information it contains: every coin comes from an identified site or sub-site, sixty-two in all, listed in an appended checklist below. Each coin site is further grouped according to geographical proximity to a regional center (f.e Jerusalem) and type of settlement it belongs to (city, town, castle, rural settlement). Where possible the archaeological context was analyzed to understand the circumstances of the coin’s find and collect information about its possible dating and use. Virtually all sites mentioned are dated to the Frankish period and in many cases detailed historical information was available which could be cross-referenced with the coins.

Particular pivotal for the study were two extremely well dated excavation hoards: a purse of about 160 deniers discovered in 2007 on the skeletal remains of one of the defendants of the Vadum Iacob stronghold, whose destruction on 31 August 1179 is extremely well documented; and a second purse of 49 coins lost at Frankish Ibelin/Tel Yavneh after the 1190’s (Fig.21).\(^\)\(^8\)

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\(^8\) On the importance of the statistical randomness of single site finds to balance hoard evidence see Metcalf (1997: 190).

\(^8\) Hundred and twenty coins of the Vadum Iacob hoard were cleaned. Some of remaining coins were set aside for a metallurgical study (see below) while two lumps containing part of textile were preserved intact together with another large lump of coins. For a preliminary description see Kool (2008). This hoard, as well as the forty-nine cleaned coins of the Ibelin hoard await a more comprehensive publication by this author.
In addition I have re-examined and included the AMALRICVS deniers of five previous fully published hoards: Tel Jemmeh (9 coins), Jaffa (6 coins), Red Tower (4 coins), YMCA Jerusalem (73 coins) and Bethlehem (25 coins). To these are added another five unpublished hoards and mini hoards: Acre (5 coins), Harenc/Harim (6 coins), Grand Gerin/Jenin (7 coins), Jerusalem Citadel (5 coins) and Mnt Berenice/St George (2 coins) (Fig.22).

Fig. 21a. Discovery of the Ateret/Vadum Iacob hoard (July 2007; photo by the author)

Fig. 21b. Tel Yavneh /Ibelin hoard after cleaning, found together with three Ayyubid dirhams, 2009. Unpublished. (Photo Clara Amit IAA)
Fig. 22. Hoards of ‘heavy’ Amaury deniers excavated and found in the Kingdom of Jerusalem.
Finally the data-base includes some ninety-two single finds from more than fifty excavations and sites, many of them still unpublished. This material spans more than eighty years of excavations, from the Tyropoeon Valley explorations by Crowfoot and Fitzgerald in Jerusalem in 1927 till the Western Wall esplanade excavations by the Israel Antiquities Authority in 2008.\(^{84}\)

Particular significant is that many of these coins come from large scale multi-year excavation projects run by the Israel Antiquities Authority which have uncovered large stretches of Frankish Acre and Jaffa, two of most important urban maritime/commercial centers of the Crusader kingdom. These excavations, their coins and the wealth of pottery and other objects are revolutionizing our understanding of the material culture of the period.\(^{85}\)

Similar excavations have been made and are currently progressing in Jerusalem, the kingdom’s capital till 1187. Finally a significant group of finds come from smaller urban centers/townships of Tiberias, Caesarea or Nablus and a host of non-urban settings which until now have escaped any systematic discussion in numismatic terms –small rural sites, Frankish villages, monasteries and smaller inland castles.

\(^{84}\) For the Tyropoeon Valley see Crowfoot and Fitzgerald (1927: 103-120); for the Western wall esplanade excavations see Weksler-Bdolah (2009) but whose coins are still unpublished.

\(^{85}\) For Frankish Acre see in particular Stern (2000) and the numerous excavation reports by Stern and fellow archaeologists at the IAA, many of them now available through Hadashot Arkheologiyot – Excavations and Surveys in Israel (HA-ESI) now available on-line. [http://www.hadashot-esi.org.il/index_eng.asp](http://www.hadashot-esi.org.il/index_eng.asp)

For excavations of Frankish period Jaffa see in particular Peilstöcker (2006: 99 – 104) and likewise the available reports authored by him and his team on-line at the Hadashot Arkheologiyot website (see above).
4.4.3 Validity of the Metcalf ‘style’ model

For over two decades now the classification of the ‘regular’ AMALRICVS type has been based on a number of style elements proposed by Metcalf back in 1987 and reviewed in detail above. Metcalf was well aware that the above construction was not the final word since it was based, as he himself remarked, on “lamentably few’ hoards (Metcalf 1995:79). The present study primarily based on stray losses and hoards coming from excavations, allows a more representative picture of the type’s classification. However, before progressing headlong into the analysis of the material, I thought it would be valuable to examine closer the validity of some of the style elements that underpin the present classification. Among the different style elements mentioned by Metcalf two in my view play a pivotal role in the classification of the type: the style of the A lettering in the obverse and reverse inscription, and the stonework of the colonnade displayed on the coin’s reverse.

4.4.3.1 The A lettering

One of the major foundations of the current AMALRICVS denier classification is that one can distinguish different classes of coins according to different type of A lettering appearing in the coin’s obverse and reverse inscription (chevron, double, chevron-dotted and other types). This assumption is based in turn on the hidden supposition
that die-makers in the Latin kingdom *intentionally* engraved or punched the same type of A, when producing the obverse and reverse dies used for striking a coin in a particular workshop.

Though he did not have much systematic material at hand at the time except for two relatively small hoards (Tel Jemmeh, YMCA Jerusalem), Metcalf believed that variations in the A lettering, could be used to classify coins, even possibly indicating the working of a particular mint. He noted that sometimes the A on the obverse and reverse *within one coin* could vary (e.g. double varieties 6b and 7) but Metcalf was unable to pursue this in a more methodical manner due to a lack of available material at the time.

To check the validity of Metcalf’s observations in a more methodical and detailed manner I systematically recorded below *all* the *three* instances where A appears on the coin’s legend: twice on the obverse inscription REX MAAMARVICVS and once on the reverse in continuation of the king’s title DE IERVSALEM. Then I calculated their correlation ratio to see in how far a particular A type was used intentionally by die-cutters in all possible combinations: *trice* — twice on the obverse and once on the reverse (A1—A2 — A3), *twice* only on the obverse (A1 — A2) and *twice* on an obverse–reverse die combination (A1 or A2—A3). Below are the result based on 415 of the entire population of 469 coins including both single excavation finds and hoards ordered according to the three main occurring types of A lettering observed by Metcalf (chevron barred, double barred and dotted chevron type). For comparison and control I added data of the published YMCA hoard (re-examined by me), the unpublished Ibelin hoard and the combined (unpublished) hoard and (published) single finds yielded by the Vadum Iacob site over the past decade and a half.
### Table 1. Correlation ratio of A types in ‘regular’ AMALRICVS denier

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Chevron barred</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total pop. (148)</td>
<td>83%</td>
<td>91%</td>
<td>86%</td>
</tr>
<tr>
<td>Vadum Iacob finds (53)</td>
<td>87%</td>
<td>92%</td>
<td>91.5%</td>
</tr>
<tr>
<td>Ibelin hoard (22)</td>
<td>86.3%</td>
<td>91%</td>
<td>88.6%</td>
</tr>
<tr>
<td>YMCA hoard (25)</td>
<td>72%</td>
<td>92%</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Double barred</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total pop. (142)</td>
<td>65.2%</td>
<td>85%</td>
<td>71%</td>
</tr>
<tr>
<td>Vadum Iacob finds (57)</td>
<td>61.5%</td>
<td>88%</td>
<td>65.7%</td>
</tr>
<tr>
<td>Ibelin hoard (19)</td>
<td>79%</td>
<td>95%</td>
<td>81.5%</td>
</tr>
<tr>
<td>YMCA hoard (22)</td>
<td>59%</td>
<td>77%</td>
<td>66%</td>
</tr>
<tr>
<td><strong>Dotted chevron barred</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total pop. (55)</td>
<td>80%</td>
<td>93%</td>
<td>86%</td>
</tr>
<tr>
<td>Vadum Iacob finds (26)</td>
<td>76%</td>
<td>92%</td>
<td>84%</td>
</tr>
<tr>
<td>Ibelin hoard (4)</td>
<td>75%</td>
<td>100%</td>
<td>75%</td>
</tr>
<tr>
<td>YMCA hoard (11)</td>
<td>81%</td>
<td>91%</td>
<td>91%</td>
</tr>
</tbody>
</table>

In varying degrees all main types seem to indicate a relatively high degree of correlation between the presences of a particular type of A on a given coin. For example, for any given chevron A type denier there is at least an 83% chance that the coin will
appear with a similar chevron type Ӧ on all parts of the coin. For the obverse alone the correlation is even higher rising to 91%, whereas the correlation between the Ӧ’s of the obverse and reverse is around 86%. Correlation figures for the dotted chevron Ӧ type which constitutes in absolute numbers circa a third of the chevron Ӧ type deniers (54 versus 149 coins) are virtually similar. Correlation ratios for the double barred Ӧ variety are lower, between 65-71%.

In sum, for all main types chances are in general around 90% or higher for the consistent use of one particular Ӧ type on the obverse die. For a combined obverse-reverse dies the chances are above 80% that a particular Ӧ variety will reappear consistently on a both sides of the coin. This seems to indicate that a concerted effort was made to intentionally engrave dies with a particular Ӧ style and more or less rules out that the use of the Ӧ was merely random. It thus confirms Metcalf’s preliminary observation that the Ӧ lettering are unlikely to alternate “within the same batch of dies” (Metcalf 1995:60). Different varieties of Ӧ lettering were apparently intentionally used and can thus be employed as an ‘classifier’ for these coins.

4.4.3.2 Ambiguities of the Ӧ style: chevron and dotted chevron?

In general the different forms of the Ӧ type – for example between double barred Ӧ and chevron Ӧ are patently clear and do not need any further elaboration. However, Metcalf sounded a warning note that “the difficult distinction between chevron Ӧ and dotted-chevron Ӧ needs to be re-studied as carefully as possible” if new material becomes available (Metcalf 1995:65). This is now possible through the examination of the well
preserved coin specimens of the new Vadum Iacob and Ibelin hoards combined with a re-
examination of the already published Jerusalem YMCA hoard. The examination of the
coins reveals two style ambiguities which make it sometimes difficult to distinguish
between the two types:

.Shape and position of the dot: in some cases the irregular shape of the dot (Fig 23a.),
its small size (Fig 23b.) and the lack of centering (Fig 23c.) make it difficult to
distinguish a real dotted chevron ▼ type from a regular chevron type ▼.

Fig. 23. Shapes of the dotted-chevron type

Reversely the irregular shape and connection of the chevron legs in the chevron
type ▼ occasionally gives the impression of a dot: like the protruding but shortened
crossed ends of the legs in the shape of a short X (Fig 24a.), the legs’ crossing which
widens and thickens (Fig 24b.) or the extension of one of the legs downwards (Fig
24c.). \[86\]

86 See also for example IAA 119566 (Ibelin hoard) and IAA 56570 (YMCA hoard).
a. (IAA 112240)  b. (IAA 112258)  c. (IAA 112294)

Fig. 24. The dotted-chevron type: irregular shape and connection of the chevron legs

The above observations can sometimes be at best defined as ‘ambiguous’ and at worst as confusing. One of the ways to eliminate any reservations about the type is to compare all three occurrences of the A’s in the legend which in most cases decides the issue. One of the conclusions from the above is that the ‘dotted chevron’ very likely developed out of the regular chevron as a type. Nevertheless from the detailed observations of the coins it becomes clear that most of the coins that fall in the chevron and dotted chevron categories are indeed two distinct types.

![Coins](image)

**a. Classical Chevron type** (IAA 122212)  **b. Ambiguous type** (IAA 122298)  **c. Classical dotted chevron** (IAA 122228)

Fig. 25. The chevron and the dotted-chevron types

### 4.4.3.3 The colonnaded stonework of the Holy Sepulchre

The second element Metcalf used a ‘style classifier’ was the variations in the colonnaded stonework of the Holy Sepulchre depicted on the reverse. Metcalf concluded that these constituted *two* main groups: a ‘square’ type made out of six-seven blocks below the
colonnade and a second more numerous one which had eight to twelve blocks which according to him could reveal a particular die-cutter’s hand (Metcalf 1987:85) (fig.26).

Fig.26. The two main types of colonnades of the Holy Sepulchre church
according to Metcalf (1987:86)

A detailed examination of the collonade’s lower ‘blocks’ on coins of the three ‘large’ hoards (Vadum Iacob, Ibelin and YMCA) show however that a two-tiered classification – ‘square’ versus ‘paling fence’, is to a large degree a superficial one. Instead there seems to have been a very large number of varieties starting from 5 blocks to as many as 14 blocks depending on the skills of the particular engraver of the die (fig.27).
The large block category seems to have extended to as many as 9 segments. In this category it is possible to discern sub-varieties which I have classified in a preliminary fashion as either ‘thin’ and ‘thick’ varities.
Data from the hoards and single finds show that the 6 block variety was minted in very large numbers followed to a lesser degree by eight block varieties (although the Ibelin hoard contained a virtual equal number) and numerous 10 and 11 block varieties. Below six, and above eleven segments are much rare occurrences which seem to contradict earlier findings where eight to twelve segments were considered normative for the Amalricus deniers (Metcalf 1995:60).

![Fig. 28. Distribution of segments in coins of Vadum Iacob, Ibelin and YMCA hoard (%)](image)

A simple breakdown of 304 deniers whose segments could be fully numbered according to the six types A type shows the following preliminary results:

1. Six-segmented specimens are overwhelming chevron-barred A (73%).

2. Eight to eleven-segmented types are predominantly clustered around double-barred A types where they constitute around 50% of the types with at least twice lower percentages for chevron A and dotted chevron A types.
3. Twelve segmented types and higher are usually associated with dotted-chevron \( \text{A} \) types, although they also appear with chevron and double barred specimens but in a much lower degree. Nevertheless, it is hard to distinguish a conclusive or consistent pattern in the number of segments/shape of the Sepulchre's arches on the level of individual (sub) types (see appended list of types). A detailed examination of each of the verifiable deniers in the data-base often shows the use of different number of segments within a particular type. For example two of the numerous double barred \( \text{A} \) types (with single annulet or no mintmarks after REX (varieties 3.1.1.1 and 3.1.4.1, see Appendix 1 below) were produced with the entire range of segments, from 6 to 12. Similarly, the abundant chevron-barred \( \text{A} \) type with a single annulet mintmark after REX (varieties 1.1.1.1–4) was mostly minted with six segments but also appears with a small number of eight or even more segments. In conclusion, at this stage the colonnaded stonework of the Holy Sepulchre seems of little relevance in the classification of individual types.

4.4.4 Style analysis of the heavy Amalricus denier

4.4.4.1 The categories of \( \text{A} \)

Metcalf's preliminary YMCA classification noted the existence of four categories of \( \text{A} \) lettering in the inscription of the coins: chevron \( \text{A} \), dotted chevron \( \text{A} \), double barred \( \text{A} \), and a miscellaneous ‘mixed’ category. An exhaustive study of the \( \text{A} \) types of 469 ‘regular’ types, of which 410 could be completely studied, show the existence of at least six \textbf{six} types. The findings show clearly that during a two decade period or more, die-makers in the Latin kingdom produced at least six \textbf{main} types of \( \text{A} \) letterings in the preparation
of dies for the regular heavy royal denier: chevron-barred \( \overline{\text{A}} \), dotted chevron barred \( \overline{\text{A}} \), double-barred \( \overline{\text{A}} \), triple-barred \( \overline{\text{A}} \), unbarred \( \text{A} \) and finally a 'thick' looking single bar \( \overline{\text{A}} \).

These six types further divide into numerous sub-types —we registered at least another forty-one sub-types if we account for all the extant varieties of the A lettering appearing trice on one coin. Significantly, our study confirms unequivocally that there exist three major types – as observed by Metcalf – chevron \( \overline{\text{A}} \), double chevron \( \overline{\text{A}} \) and dotted-chevron \( \overline{\text{A}} \) types. To these must now be added three minor groups: single-barred \( \overline{\text{A}} \), unbarred \( \text{A} \) and triple barred \( \overline{\text{A}} \) types. Proportionally these six groups divide up as follows: two dominant groups of more or less even proportions – the double barred \( \overline{\text{A}} \) (38%) and chevron barred \( \overline{\text{A}} \) (36%) types which account for 74 % of all coins; a considerable smaller group of dotted chevron \( \overline{\text{A}} \) types (14%); and finally three small groups of single \( \overline{\text{A}} \) (5%), triple \( \overline{\text{A}} \) (3%) and unbarred \( \text{A} \) (4%) specimens.
These proportions are faithfully reflected in the make-up of large concentrations of these coins: among both the Jerusalem YMCA hoard and the Vadum Iacob hoard and single finds, the three ‘major’ groups of double, chevron barred and dotted chevron barred constitute between 81% and 95% of all coins (compare with 88% of the total population of coins from excavations and provenanced finds).

<table>
<thead>
<tr>
<th>%</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>VJ 1179</td>
<td>37.5</td>
<td>39.5</td>
<td>17.5</td>
<td>0.7</td>
<td>1.3</td>
<td>3.5</td>
</tr>
<tr>
<td>YMCA</td>
<td>35.1</td>
<td>30.5</td>
<td>15.2</td>
<td>4.1</td>
<td>10</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Table 2. Distribution of A types: comparison between Vadum Iacob hoard and finds and YMCA hoard.
Minor categories, the triple -addon and unbarred -addon types almost exclusively appear in hoard material. For example the triple variety -addon appeared in Tel Jemmeh (2), Vadum Iacob (2) hoards – none among the single finds from Vadum Iacob – and in particular in the YMCA hoard (7) whereas only one such specimen originated as single find from the excavation of a supposedly pre-1187 Frankish period graveyard in Tiberias.\(^{87}\) A single four barred variety -addon came with the Bethlehem hoard.

Similarly, the unbarred -addon type appears in the hoards of Ibelin (2), Vadum Jacob (5) and YMCA (4) but only a handful of single finds are known from Jerusalem (1) Acre (3), Casearea (1) and Safed (1). Their relatively low survival rate among sites finds, in particular from excavations seems to indicate the low penetration of such types in the long-term circulation of *Amalricus* deniers within the kingdom’s territory. This possibly signified that these types were either short-lived, or belonged to an early stage of the coin’s production which barely survived in the hoards by 1179.

In contrast the third minor grouping, those of single barred variety -addon, are found relatively abundantly both in hoards and among the single finds. The particular frequent appearance of a ‘thicker’ one barred variety in later 13\(^{th}\) century sites like Jaffa, Acre and Arsuf and Safed could indicate that this type belonged to the final years of the ‘regular’ type.

\(^{87}\) This Frankish period cemetery was discovered in the grounds of an ancient bathhouse/market during a salvage excavation in 1956 by Bezalel Rabbani of the Israel Department of Antiquities. According to the unpublished report eighty-eight graves were discovered in three layers. Next to skulls six of the skeletons Crusader coins were deposited, all regular royal Baldwin III and Amaury types. A more comprehensive publication will be prepared by me in the near future.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Pre-1187</td>
<td>Late 1160s</td>
<td>1179</td>
<td>c.1175</td>
<td>Pre-1187</td>
<td>1190s</td>
<td>1190s</td>
<td>13th c.</td>
</tr>
<tr>
<td>%</td>
<td>0</td>
<td>0</td>
<td>0.7</td>
<td>4.1</td>
<td>4.5</td>
<td>8</td>
<td>57</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 3. Frequency of ‘thick’ one-barred variety in provenanced excavation finds and hoards

The comprehensive study of all the A’s appearances in the coin’s shows the existence of what seem to be a substantial number of ‘sub-types’ within the above six classes which escaped previous researchers: 12 double barred A varieties; 10 chevron A type varieties; 4 dotted chevron A varieties; 5 single barred A varieties; 3 triple barred A varieties and 7 unbarred A varieties. Presumably their number will grow as more site finds and collection material will be included in future research. Just for the A type alone we numbered forty-one identifiable sub-varieties. This is without counting numerous additional variants when combined with ‘mintmarks’ (annulets/stops appearing after REX) and different combination of annulets/stops in the four squares of the cross (see appended full listing below.)

Still these sub-varieties, at least for the major three A types (double-barred, chevron-barred and dotted chevron barred), constitute in terms of numbers only a fraction of the total number of coins when compared with the ‘full’ varieties – those containing three similar A types on the obverse and reverse of the coin. Below is a breakdown of some 329 fully identifiable coins (coins whose three A’s could be categorized) of all three major types:
The ‘full’ (A₁ — A₂ — A₃) double barred A variety accounts single handed for 73% of all double barred varieties, versus ten sub-varieties which together share only 27% of the coins. With the chevron barred and dotted barred A types the figures for the sub-varieties are even more marginal: the chevron barred A type nine sub-types represent only 9% of the total number of coins which are overwhelmingly ‘full’ chevron-type A’s (91%); the same is true for the dotted chevron barred A type which has a significant lesser number of sub-types registered (3) which account for only 12% of the coins. Also in this group the full types account for at least 88% of all such types of coins.

For two of the three remaining minor groups of type A varieties (triple, unbarred) the statistics of subtypes are less significant since these groups contain anyway relatively small quantities of coins, mostly from hoard material which as I previously noted could indicate a low penetration of such types. Still some of the features are worth noting for their possible implications for the internal classification of these coins (see below). The unbarred type apparently lacks a ‘full’ type variety (three unbarred A’s on obverse and reverse). It seems to be primarily associated with single A and chevron barred A types.
Full triple barred A types do exist and the few registered varieties seem to be associated with the double-barred type.

### 4.4.4.2 Annulets and stops on the obverse cross

Metcalf observed *five* different varieties of *annulets* and/or *stops* combination positioned in the four quarters of the crosses which he thought could be *deliberate* variations of a mint workshop or mint master (Metcalf 1987: 86). These are all confirmed in the 454 database specimens with identifiable annulets and stops. In addition we observed what seems to be at present a virtual unique *1/4 stop* variety appearing on a single find excavated in the Frankish period faubourg of Jaffa belonging to a ‘full’ single barred A type dated to the latest heavy types of the 1190s-1200 (Fig 30.)

![Fig.30. ¼ stop variety, Jaffa excavations (IAA 119068)](image)

<table>
<thead>
<tr>
<th>Variety</th>
<th>Quantity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>327</td>
<td>77</td>
</tr>
<tr>
<td>+</td>
<td>16</td>
<td>3.75</td>
</tr>
<tr>
<td>+</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>+</td>
<td>46</td>
<td>11</td>
</tr>
<tr>
<td>+</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>+</td>
<td>1</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Table 5. Distribution of Annulet varieties in the data-base
The above figures show unequivocally that the vast majority of the Amalricus deniers (77%) were produced with a ‘regular’ 2/3 square annulet pattern in the cross. The 2/3 annulet/stop and stop/annulet combinations appear to be genuine varieties even though some of the stops seem suspect, particular in the stop/annulet variety as they sometimes seem to show a shallow imprint. For example, one shows in square 2 a stop and slightly above it the contours of an annulet type (Fig 31).

![Fig. 31. Shallow imprint of annulet in square 2 (IAA 112208)](image)

The 2/3 stop variety seems to be much more frequent than was originally thought and appears to have had a wide distribution in Frankish period sites mainly with the single stop chevron-barred or dotted chevron type A.

Particularly interesting is the rare 1/4 annulet variety which almost exclusively appears with the double barred type $\text{A}$ variety with single annulet $\text{REX}$ and not triple $\text{A}$ or quadruple barred $\text{A}$’s as was previously thought (Metcalf 1995:60).
4.4.4.3 Mintmarks in the legend: annulets and stops

Metcalf noted the existence of a number of varieties of privy marks, either annulet or pellets which appeared in the legend after REX on the obverse legend of the coin. He deduced that these could have been used concurrently with the annulets and stops in the obverse cross by a particular mint workshop (Metcalf 1987:86-91). In all, his listing, based mainly the 56 identifiable specimens of 1927 YMCA hoard contained seven varieties. Three with annulets: single, double, triple annulets after the X; a fourth single stop variety with an additional stop between R and E;88 a fifth variety with a single stop; a sixth variety with stops in a cross like configuration; and a seventh group with no annulet/stop. Among these the single, double annulet and single stop varieties constituted by far the largest group of coins (84% of the total specimens) in Metcalf’s enumeration of these mintmark varieties.

<table>
<thead>
<tr>
<th>Mintmark types</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>RÆX³</td>
<td>36</td>
</tr>
<tr>
<td>RÆX²</td>
<td>21</td>
</tr>
<tr>
<td>RÆX¹</td>
<td>3,5</td>
</tr>
<tr>
<td>RÆX</td>
<td>27</td>
</tr>
<tr>
<td>RÆX</td>
<td>11</td>
</tr>
<tr>
<td>Singular types</td>
<td>1,5</td>
</tr>
</tbody>
</table>

Table 6. Distribution of Annulet varieties according to Metcalf (1987)

88 Metcalf 1987:85 registered it as a single annulet variety after the REX; however re-examination of the coin clearly shows this to be a single stop.
By comparison, the present group contains 405 fully identifiable specimens (of 469 ‘regular’ types in the database) – including the YMCA and Tel Jemmeh hoard specimens re-examined by me. These show currently the presence of at least 13 different mintmarks, *six more* that registered previously.

<table>
<thead>
<tr>
<th>Mintmark types</th>
<th>New varieties</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>REX</td>
<td></td>
<td>178</td>
<td>47</td>
</tr>
<tr>
<td>REX</td>
<td>X (VI hoard)</td>
<td>1</td>
<td>0.35</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>38</td>
<td>9.7</td>
</tr>
<tr>
<td>REX</td>
<td>X (VI hoard)</td>
<td>1</td>
<td>0.35</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>11</td>
<td>2.8</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>75</td>
<td>20</td>
</tr>
<tr>
<td>REX</td>
<td>(small stop)</td>
<td>1</td>
<td>0.35</td>
</tr>
<tr>
<td>REX</td>
<td>+stop after M</td>
<td>X (VI hoard)</td>
<td>1</td>
</tr>
<tr>
<td>REX</td>
<td>+small stop between L and R of AMALRICVS</td>
<td>X (Tiberias)</td>
<td>1</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>1</td>
<td>0.35</td>
</tr>
<tr>
<td>REX</td>
<td></td>
<td>64</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 7. Distribution of Annulet varieties in present study

These include five with *annulets*: single, double, triple and two of what seem to be previously unregistered singular varieties – one with a single annulet left of the X in
REX, and another with a double annulet and stop – both from the Vadum Iacob ‘purse’ (Figs 32-33).

![Fig.32. Annulet left of the X in REX (IAA 112209)](image1)

![Fig.33 Double annulet and stop (IAA 112319)](image2)

Another seven stop varieties include three observed types by Metcalf (single stop, single stop with an additional stop between R and E of REX and a cross-shaped stop). To these can now be added four previously unknown (provenanced) types: double stop and triple stop varieties, and two single stop varieties containing smaller stops in the REX AMALRICVS legend – one with two small stops, after the X and in the M, all from the Vadum Iacob purse (Fig. 34), and another between the L and R of AMALRICVS found on a single find excavated from the above mentioned pre-1187 Crusader period burial site in Tiberias (Fig. 35). Finally there is a sizable group of coins with no annulet or stop after REX.

![Fig. 34. Two small stops, after the X and in the M (IAA 112280)](image3)

![Fig. 35. Small stop between the L and R (IAA 3429)](image4)

In sum, the present study confirms the particular prominence of the single annulet and single stop varieties which represent 67% of all identifiable specimens. A novelty though
is that the variety without annulet/stop mintmark is the third largest group and not as previously observed (for the YMCA hoard) the double annulet type.

### 4.4.4.4 Combining style elements: frequency distribution of varieties

Below we combined the different style elements (Type A, mintmark/ cross annulets) to try and classify these into more meaningful 'series’– much like what Metcalf did in his 1987 article. This is an important step towards understanding the development and chronology of the *Amalricus* denier.

In theory, our database shows at present at least 546 different possible combinations of coin types, based on the presence of six types of A lettering, thirteen identified mintmarks, and six different registered combinations of annulets and stops in the cross. In practice, the fully identifiable specimens from our database show at present some 100 separate varieties. Below is their breakdown according to the frequency of the A type appearing on the obverse and reverse of the legend.

<table>
<thead>
<tr>
<th></th>
<th>'Full' types</th>
<th>'Double' types</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(A_1-A_2-A_3)</td>
<td>(A_1-A_2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>21</td>
<td>6</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>10</td>
<td>9</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>-</td>
<td>2</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>(\varnothing)</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 8. Main distribution of the 100 (sub) varieties of present database. (For a full listing see appendix I)

The overwhelming majority, some 68 of the observed 100 varieties, have only one or two registered specimens. These account for barely 25% of the examined coins (and between 33-50% of coins of the three large hoards). The remaining 75% of the coins constitute four main groups listed in descending order of frequency. Coins of this first group, containing more than 20 coins per variety, are two to four times more frequent than the next group of varieties ('intermediate' group; see below). This group totals almost 30% of all coins in the database.

<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>REX +mintmark</th>
<th>Annulets/stops</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1.1</td>
<td>A A A</td>
<td>REX%</td>
<td>+</td>
<td>45</td>
</tr>
<tr>
<td>1.1.1.1</td>
<td>A A A</td>
<td>REX%</td>
<td>+</td>
<td>35</td>
</tr>
<tr>
<td>3.1.4.1</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>33</td>
</tr>
<tr>
<td>1.1.2.1</td>
<td>A A A</td>
<td>REX%</td>
<td>+</td>
<td>31</td>
</tr>
</tbody>
</table>

Table 9. Group I: occurrence of more than 20 coins per variety in database

The single largest variety in our study is the full' double barred A-type with single annulet and 2/3 annulets in cross. Some 45 coins of this variety were registered from at least 19 separate hoards and single finds spots. More than 50% of these coins appear both in earlier hoards (Vadum Iacob deposited 1179; Bethlehem 1187; Le Grand Gerin/Jenin 1187?) and later hoards (Tel Yavneh c.1190; YMCA hoard, post 1187-1190s?) showing that this variety must have been minted in very large numbers for most of the twelfth century. Particular interesting is the relatively large group of single finds of these types.
from confirmed pre-1187 excavated sites in Jerusalem (7), Bethgibelin/Bet Guvrin (1) and Tiberias (Crusader burial site) (3). Presumably these coins seem to date to an already ‘early’ phase in the coin’s production. If we add to these the 28 coins of the same double barred A-type with 2/3 annulets in cross, but with no mintmark after REX – also prominent in the early Tiberias graveyard group (4) and the Vadum Iacob hoard (8) – then these double-barred varieties seems to have constituted without doubt the single most minted type in the kingdom.

The second most common variety seems to have been the regular ‘full’ chevron barred A-type with 2/3 annulet in cross, combined with single (35) or double mintmarks (31). In fact, in terms of regional and quantity this is the most wide-spread variety. It appears in at least 21 different excavated sites and hoards from south to north in the kingdom’s territory. They are the single largest group in the Tell Jemmeh hoard, the most southern located find-spot of royal deniers today, maybe connected to Amaury's frequent military campaigns against Fatimid/Ayyubid Egypt during1167–1169. They are also found in virtually all of the coastal urban sites and castles (Yavneh Yam, Jaffa, Arsuf, Caesarea, Acre) and their direct hinterland (Ibelin, Ramleh, Kh. Tantur) as well as many of the inland sites (Jerusalem, Qubeibeh, Jenin, Yokneam, Tiberias, Vadum Iacob). They are also present in all the other large hoards (Vadum Iacob, Tel Yavneh and YMCA).

A second group of some 64 coins is the 'intermediate' group containing between 7–15 coins per variety.
<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>REX +mintmark</th>
<th>Annulets/stops</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.4.5</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>15</td>
</tr>
<tr>
<td>3.1.3.1</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>10</td>
</tr>
<tr>
<td>2.1.3.3</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>11</td>
</tr>
<tr>
<td>2.1.1.1</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>9</td>
</tr>
<tr>
<td>3.2.1.1</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>8</td>
</tr>
<tr>
<td>2.1.3.1</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>8</td>
</tr>
<tr>
<td>7.1.1.1</td>
<td>A A A</td>
<td>REX</td>
<td>+</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 10. Group II: occurrence of 8–15 coins per variety in data-base

Especially prominent within this second group are varieties of the full dotted chevron barred type. They are present in hoards spread out over the entire territory of the kingdom: Tel Jemmeh in the south, and the three ‘large hoards (Vadum Iacob, Ibelin and YMCA) that cover the period between 1179 and early 1190s. The evidence of the single finds - ten finds are recorded for Jaffa, Caesarea, Acre, Bet Alfa, Tiberias and Mt. Berenice/St George near Tiberias - is relatively meager and seems to indicate that these coins were either circulating less within the kingdom’s territory or maybe more convincing, consisted of an earlier type which disappeared gradually by the 1190’s. This seems to be borne out by comparing the number of variations of the dotted chevron A type present in two well dated ‘large’ hoards: 64% of all dotted chevron types known were still present in the 1179 Vadum Iacob hoard. After 1190, this number had dwindled to a mere 21% present in the Ibelin hoard.
Such an increase or decrease of the number of variations of one type measured over time – calculated here by observing their relative frequency in the three hoards, two of them securely dated – can be a helpful tool to reconstruct their relative chronology.

For example 80% of all the 25 observed variations of the double barred type were still present in the Vadum Iacob hoard lost by August 1179. A decade or more later only 36% of these double barred A varieties – the most numerous varieties produced in the kingdom – were still present in the Ibelin hoard deposited after 1190. This could indicate a substantial decrease in the production of these double barred types by the end of the 12th century.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>VJ (1179)</th>
<th>YMCA (c. 1180s)</th>
<th>IBELIN (after 1190s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>48%</td>
<td>39%</td>
<td>48%</td>
</tr>
<tr>
<td>A</td>
<td>64%</td>
<td>36%</td>
<td>21%</td>
</tr>
<tr>
<td>A</td>
<td>80%</td>
<td>28%</td>
<td>36%</td>
</tr>
<tr>
<td>A</td>
<td>17%</td>
<td>50%</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>38%</td>
<td>31%</td>
<td>15%</td>
</tr>
<tr>
<td>A</td>
<td>0%</td>
<td>17%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Table 11. Relative number of variations present in A types in the three dated hoards

In contrast, the chevron A type seems to have a steady 40-50% of its types present in the hoards at any stage within this period. This is all the more significant since it produced the largest number of varieties, twenty-eight — of which twenty-one were of the ‘full’ chevron barred variations — from among all regular Amaury deniers types, and
apparently had the largest regional circulation of all varieties. All this seems to indicate that the various chevron barred ☑️ types were produced throughout most of the core period in which regular weight Amaury deniers circulated as the main royal billon denomination (1160’s – 1190’s).

Similarly the much rarer unbarred ☐ and triple ☑️ types, represented only 7% of all the regular Amaury deniers circulating in the kingdom. These seem to have been produced at an earlier stage and disappeared towards the end of the circulation period of the ‘heavy’ Amaury coinage. 38% of the 13 unbarred ☐ types were still present in Vadum Iacob hoard in 1179. By the 1190s a mere 15% were present in Ibelin. In addition, as I have already noted above, very few of these ☐ types existed among single finds from excavations. For the triple ☑️ type varieties the change was even more sweeping. By 1179 only half a dozen subtypes were hoarded. By 1190s, judging from their absence of the Ibelin hoard, they virtually ceased to circulate. They appear consistently, in the Tel Jemmeh hoard and the Tiberias graveyard which I tend to date both to the late 1160’s early 1170s. Both sites contain exactly the same sub-type:

☑️−☐−☐ with annulet and 2/3 cross annulets. Apparently for unknown reasons there are a higher percentage of them in YMCA hoard which seems to us close in date to the Ibelin hoard (1187-1190).

The only exception on the downward trend is the single barred ☑️ type: none were hoarded in 1179. However by the 1190’s 34% of the single barred ☑️ types registered in this study were present in the Ibelin hoard. Single barred ☑️ types seem to have been relatively plentiful at the end of the 12th century. Their presence as single finds
in ‘later’, primarily urban, settings is noted. A good example is a ‘heavy’ single chevron barred denier from the Ayyubid occupied Faubourg of Safed (1180-1240). Possibly these types were the last regular ‘heavy’ AMALRICVS type minted before the introduction of the reduced weight mauvais types in the first two decades of the 13th century and may have even circulated for part of the period with their ‘barbarous’ cousins.

In sum, the different frequency of distribution of the various types shows the following picture:

1. Early phase of the coinage - *unbarred* ₣ and *triple* ₣ types seem to have been produced for a short period.
2. The simultaneous minting of double barred ₣ and chevron barred ₣ in massive quantities. These appear with three dominant mintmark variations, during the entire production period of the heavy AMALRICVS coin (1160s-1190s).
3. The dotted chevron ₣ was minted on a substantially smaller scale and seems to have been an earlier type or just minted in far more restricted numbers.
4. A thicker single barred ₣ seem to belong to the end period of the heavy type AMALRICVS denier (1190s-early 13th c.).
5. The existence of large numbers of sub-variants in our sample is indicative of a particularly large number of dies used to produce these coins and pointing to the massive circulation of these coins on a daily basis.

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89 The coin was discovered together with a twelfth century Zandjid copper and two early thirteenth century Ayyubid copper *fals* in a context archaeologically dated between the 1180’s –1260s CE (Kool forthcoming; see also for the archaeological report Barbé and Damati (2005).
6. At present the nature and number of mints producing billon coinage in the kingdom of Jerusalem remains a matter of speculation. The above data seems to disavow the possibility of a single mint recently proposed (Barag 2009-10:245). Nor is there any hard ‘archaeological’ evidence to suggest that the above types were minted in Jerusalem, Acre and Tyre (Metcalf 1995:65).
4.5 METALLURGICAL ANALYSIS OF THE ‘HEAVY’ AMAURY DENIER

4.5.1 Earlier metallurgical studies

At present no comprehensive metallurgical study of the Latin kingdom's royal billon coinage exists. Scientific analyses of the metallurgical content of coinage produced in the Latin kingdom of Jerusalem have until now been mainly limited to gold imitation 'bezants' and cuttings. Only sporadic probes exist of the Jerusalem kingdom's billon and those of the Principalities of Tripoli and Antioch. These were performed since the 1930s, mostly on cleaned coins from purchased hoards and unprovenanced coins from private and public collections. Particular important is the 'evidence' of assaying a number of Frankish type coins from the Tripolis hoard, published by Dorothy Cox in an appendix to the hoard (Cox 1933: 56-59). Her results have been quoted and used extensively by scholars since the 1930s. However, their value is debatable since she did not provide details of the number of coins analyzed nor of the method(s) utilized.

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90 This study was made possible through the assistance and guidance of Prof. Sariel Shalev of Haifa University and Prof. Sana Shilstein, Physics Department, Weizmann Institute of Science. They graciously donated their precious time and equipment for the experiment and guided me through the intricacies of metallurgical analysis. In particular I want to thank Prof. Shalev for recognizing the important potential of such a research and canalizing my novice enthusiasm into a methodological sound and exciting study. I am forever in his debt. I also want to thank my son Yoav Kool for helping me patiently and diligently to record all the data and make sure the coins were all inserted in the right manner under the laser-scanner. I also owe a great debt to three outstanding professionals in the field of metal artifacts conservation: Mimi Lavi, Head of the Archaeology Conservation Lab at the Hebrew University of Jerusalem, Ruhi Baharad, Conservator of Artifacts at the Israel Museum and Lena Kupferschmidt, Head Metals Preservation Lab, at the Israel Antiquities Authority, not only for expertly cleaning the coins used in this study but above all in patiently answering my many requests and questions.

91 These studies have used a number of methods with varying results: Specific Gravity analysis (Erhenkreutz 1964: 165-82; Brady 1981: 391-398), (NNA) Neutron Activation analysis (Gordus and Metcalf 1980: 119-150) and (PPA) Proton Activation analysis (Bompaire, Barrandon and Morisson 1998:35–51).
Other piece-mail data but considerably more methodical was published by Michael Metcalf in some of his articles and his 'Coinage of the Crusades' (Metcalf 1978:71-84; 1983; 1995). Virtually all of these were based on 'Howitzer' or Streak Neutron Activation Analyses of a small number of coins from hoards and coins from the Ashmolean collection, were performed in collaboration with A. A. Gordus.92

More recently, a handful of French and North Italian deniers from Lucca, Melguiel and Le Puy which circulated quite extensively in the kingdom during the 12th century were examined by non-destructive XRF and Electron Probe-Micro-Analyses (EPMA) (Matzke 1993: 37-38 N.6; Schultze et al. 2003: 351-353).

Below, I attempted a summary of all the relevant information detailing the type of coin, dating, the amount of silver registered and the methodology used in previous analyses for comparison and reference in my study below.

<table>
<thead>
<tr>
<th>Coinage</th>
<th>date</th>
<th>%</th>
<th>Method used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melguiel and Le Puy</td>
<td>1100-1200</td>
<td>26-32%</td>
<td>EPMA</td>
</tr>
<tr>
<td>Lucca</td>
<td>1100-1200</td>
<td>75-85%</td>
<td>XRF</td>
</tr>
<tr>
<td>Baldwin III</td>
<td>1143-1163</td>
<td>25-30%</td>
<td>'Assay'; NAA; XRF</td>
</tr>
</tbody>
</table>

92 Metcalf does mention the use of an alternative method once: an XRF surface analysis to re-check his results from an NAA procedure while discussing the alloy of the Baldwin coins in the Bourgey hoard (Metcalf 1978: 77, note 9).
### Table 12. Results of previous metal analyses (1930s-2003)

<table>
<thead>
<tr>
<th>Location</th>
<th>Period</th>
<th>Assay</th>
<th>Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amaury</td>
<td>1163-1187</td>
<td>31-34%</td>
<td>'Assay'; NAA</td>
</tr>
<tr>
<td>Crucis</td>
<td>End 12th</td>
<td>15-20%</td>
<td>XRF</td>
</tr>
<tr>
<td>Damiata</td>
<td>1219-1229</td>
<td>22%</td>
<td>'Assay'</td>
</tr>
<tr>
<td>Antioch, Raymond Poitiers</td>
<td>1136-1149</td>
<td>60%</td>
<td>NAA</td>
</tr>
<tr>
<td>Antioch, Barehead deniers,</td>
<td>1149-63</td>
<td>35-40%</td>
<td>NAA</td>
</tr>
<tr>
<td>Antioch, Helmet denier,</td>
<td>1160s-1250s</td>
<td>27%</td>
<td>NAA</td>
</tr>
<tr>
<td>Tripoli, Star/crescent denier</td>
<td>1140s-64?</td>
<td>31%</td>
<td>NAA</td>
</tr>
<tr>
<td>Tripoli, star deniers</td>
<td>1173/4-1230s</td>
<td>27-30%</td>
<td>Unspecified</td>
</tr>
<tr>
<td>Cyprus</td>
<td>20-21%</td>
<td>20-21%</td>
<td>'Assay'</td>
</tr>
</tbody>
</table>

### 4.5.2 Present analysis: Methodology

Two analytical methods were used for the analysis of the coins in our study. First, the largest part of the experiment was carried out with *non-destructive X-Ray Fluorescence* (XRF). This was performed on regular 'heavy' type Amaury deniers and for comparison and control, a set of deniers of Baldwin III (1143-1163) and John the Brienne (1219-1229). Of each coin, the two sides were separately scanned and the mean results calculated. In one case where a large discrepancy between two sides occurred we scanned the surface of the coin not twice but several times in order to calculate more precise results. In total we executed 91 separate XRF readings for the surfaces of the sampled coins.

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93 A coin excavated in Jerusalem's Old City in 2000 (IAA 92456).
In a second separate experiment, the core layer of single coin was exposed by carefully removing the upper layers and measuring the alloy of the core surface with XRF. The separation and removal of the upper layers was accomplished by carefully polishing the coin’s surface by means of a finely grained disk until the layer the ‘reddish colored’ core layer was exposed. This was re-measured by XRF and compared with the XRF surface measurements to gauge the veracity of the XRF measurements.

4.5.3 Present analysis: Sample

The 'heart' of the present study is based on the analysis of 28 regular 'heavy' Amaury deniers. To optimize the representational character of the sample and the accuracy of the study the coins were chosen according the following criteria:

1) All the coins came from hoards and single finds and represent a large number of separate and controlled excavations (circa 22) within the kingdom's core territory.

2) The sample represents an extensive geographical area (from Banias in the north to Jerusalem in the center/south).

3) The sites where the coins were found, were carefully chosen to correspond to the wide variety of settlement types in which these royal deniers circulated: the main urban centers of the kingdom (Jerusalem, Jaffa, Acre, Tiberias), major and minor strongholds (Pilgrim's castle/Athlit, Arsur/Arsuf, Vadum Jacob/Ateret, Hunin/Chastel Neuf) and a number of rural estates (Ibelin/Tel Yavneh, St George/Mnt. Berenice, Kh. Shema).
4) Within the above 'regular' Amaury group I tried to cover all the major existing series and varieties (A-styles, annulets/stops on the obverse cross, and annulets/stops mintmarks in the legend) to see if it is possible to detect alloy differences between them.

5) The sampled coins were chosen to represent a diverse number of different cleaning methods (see below).

6) Finally, twelve samples of two other royal denier types produced in the Jerusalem kingdom before and after the Amaury billon, were analyzed for comparison: eight deniers of Baldwin III (1143-1163) – three of which were of the so called earlier 'rough type' and five of the later 'smooth' type; and four Damiata deniers of John the Brienne, minted between 1219-1229.

4.5.4 The argument against the use of non-destructive analysis

A recurrent argument leveled by numismatists against the possibility of a balanced assessment of the alloy of these thin billon deniers is the so-called issue of "surface enrichment" – the composition changes which have taken place during the life of a buried metal alloy by the leaching out of the less chemically stable elements. In case of silver-copper alloys like the above billon coins this would cause a larger loss of copper at the coin's surface and thus the artificial enhancement of the coin's silver content at the surface (Gitler and Ponting 2003:11). This was thought to make it virtually impossible to
assess the original alloy, especially with non-destructive analysis (Metcalf 1995: 70; Baker and Ponting 2001: 211). An additional reservation leveled against surface analysis was the assumption that medieval coins frequently underwent 'blanching' whereby the base-alloy coin was worked in medieval times to produce a thin surface layer of silver several microns thick to give the impression of a real silver coin, thus making a surface analysis of the coin a statistically imprecise venture (Baker and Ponting 2001:212).

4.5.5 Advantages of the new generation of XRF analyses for coins

The XRF analyzer used in this study belongs to a new generation portable XRF (X-Ray Fluorescence) analyzer. Introduced over the last decade it has two main advantages for the analysis of coins compared with the older generation XRF. First its laser beam scans a very wide part of the coin's surface, up to 8mm of coin's diameter in one session. The Amaury denier's surface is c.15mm in diameter which means that the new XRF analyzer is capable of scanning and analyzing more than 50% of the coin's surface in one scan of 90 seconds. This result in an exponentially much higher resolution of precise data compared to the older XRF methods which could analyze only tiny parts of the coin surface with a small static laser beam. Secondly, the new generation XRF analyzer come attached with advanced analytical software allowing for considerable higher precision, improved detection limits and reduced interference compared with previous generation instruments. This resulted in a statistically much more representational study of the coins alloy, than was previously possible by means of non-destructive XRF surface analysis.

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94 The machine used is a Thermo Niton XLt 800He Analyzer which utilized a helium purge system which allows the detection of extremely light elements in alloy materials.
To further maximize the veracity of the present XRF surface analysis we decided to try and document possible interference of the corrosive layer and cleaning methods in the results. This we did in two ways by means of a controlled experiment and by general notation of the cleaning methods of each and every coin in the sample.

4.5.6 Controlled experiment

One of the major drawbacks of previous metallurgical studies is that no information was available about the precise origin of the coins and the manner in which they were cleaned, prior to their analyses. This created a major 'blind spot' in terms of the research methodology and results.

The discovery of a meticulously documented and dated hoard at the Vadum Iacob castle excavations in 2007 buried for more than 830 years, allowed us for the first time to take a number of deniers and do a controlled experiment. XRF results of the un-cleaned surface of the coins were compared with coins cleaned with different methods.

To optimize conditions we purposely set aside three coins from the excavated Vadum Iacob hoard and proceeded as follows:

a) Two un-cleaned coins (VI '1', VI '2'), still caked with the original corrosive layer and dirt with which they were found in the excavation underwent XRF analysis before being cleaned.

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95 Mrs. Mimi Lavi, Head of the Conservation Lab of the Department of Archaeology at the Hebrew University of Jerusalem graciously donated her time and expertise for this 'cleaning experiment'. I am greatly indebted to her.
b) Subsequently, the same two coins were cleaned in two separate ways at the Archaeological Preservation lab of the Hebrew University under *controlled conditions* as follows: half of the coin (VI '1') was cleaned mechanically, the other half chemically.\(^96\) Coin (VI '2') was 100% chemically cleaned with the same procedure. To complement the experiment a third un-cleaned coin of the Vadum Iacob hoard (VI '3') was added, which was fully cleaned mechanically with the same procedure (Fig. 36).

![Fig.36. to left VI '1' cleaned mechanically/chemically; middle and right VI '2'- V '3' cleaned 100% mechanically](image)

For each step the alloy of all three coins were checked under the XFR analyzer.

<table>
<thead>
<tr>
<th>State</th>
<th>VI'1'</th>
<th>VI'2'</th>
<th>VI'3'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncleaned</td>
<td>41%Ag /57.1%Cu</td>
<td>39%Ag /59.5%Cu</td>
<td>-</td>
</tr>
<tr>
<td>Mechanically</td>
<td>46.7%Ag /51.2%Cu</td>
<td>-</td>
<td>43.7%Ag /54.4%Cu</td>
</tr>
<tr>
<td>Chemically</td>
<td>44%Ag /54%Cu</td>
<td>43.6%Ag /51.6%Cu</td>
<td>-</td>
</tr>
</tbody>
</table>

\(^96\) Half of the coin was cleaned *mechanically* by removing the corrosion on the surface layer with a No.15 metal scalpel combined with a 'Garryflex' abrasive block and the selected use of a fine steel brush attached to a dremel tool. The other half was cleaned chemically with formic acid (5% concentrated) and then rinsed with water, with any patina remains removed with the light use of a 'Garryflex' abrasive bloc and metal scalpel.
The results showed some alterations in the silver/copper alloy of the same coins before and after cleaning (3-5% for silver; 3-8% for copper) to be surprisingly minor. XRF analyses of the coins before cleaning registered higher copper contents as shown by the existence of a green copper colored oxidation layer on the coin’s surface. This rich copper oxidation layer presumably formed as the result of the interaction of the coin’s alloy with the minerals of the terrain in which it was buried for more than 830 years.

In general, changes in the silver content seem to be less (3-5%) than for copper (3-8%) before and after cleaning.

Comparison of XRF results after the removal of the oxidation layer by mechanical and chemical cleaning showed the coins to contain higher silver contents after mechanical cleaning, although the difference between the two methods applied on the same coin seems to be rather minor (see coin VI ‘1’less than 3%); VI ‘2’ the completely chemical cleaned coin showed a similar minor 4% higher silver content. Generally speaking, a carefully applied ‘chemical’ method for cleaning these thin billon coins seems to be as effective, or sometimes better than a mechanical one.

4.5.7 General notation of cleaning method

Where possible we tried to document the cleaning method applied on each of the other individual coins in the sample by different labs and individual conservators over the
years. Since a number of the coins were cleaned many years ago we were only capable of giving a general estimation of the cleaning method involved.

4.5.8 Comparison of XRF analyses of the coin’s surface and core

To further gauge the veracity of the XRF results we decided to systematically study the results of the same single coin (VI’1’) undergoing both ‘conventional’ surface XRF and destructive analysis and compare the results. First an XRF analyses was performed on

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97 *Kindler method*: coins cleaned by Dr. Kindler were usually immersed by him in a solution of highly corrosive sodium hydroxide 'caustic soda' (NaOH), potassium sodium tartrate and distilled water. Thereafter the coin was cleaned with a detergent and a brush and boiled in distilled water to neutralize acids and finally left overnight to clean in distilled water. *Berman method*: a number of deniers of the Vadum Iacob hoard treated by Ariel Berman were cleaned with *electrolysis* using an electric current less than 2 mille-ampere in a solution of c. 5-7% sodium bicarbonate (NaHCO3) and tap water. Subsequently, the incrustation and saline matter on the coin were removed by manual brushing and rinsed within distilled water to neutralize the effects of the active salt and corrosive elements.

*Israel Museum Preservation lab method*: a number of the deniers of the Vadum Iacob hoard stuck together in a lump were cleaned as follows: the coins were immersed in a solution of 4% formic acid until the coins became detached and the upper layer was softened up. (Depending on the coins the immersion was between 15 to 90 minutes.) The later enabled the easy removal of remaining patches of corrosion and patina without disturbing the upper layer. This was done by hand with brush under a microscope. Communication by Mrs. Ruhi Baharad, Conservator of Artifacts, Israel Museum 29/04/2010.

*IAA metals Preservation lab method*: The five Tel Yavneh hoard deniers were cleaned by immersing them in 14% Ammonium hydroxide (NH₃[aq]) solution, thereafter exposed to an electro-chemical treatment using Rochelle salts/alluminium paper, rinsed in distilled water and dried in a heated oven. Thereafter a 3% paraloid solution was applied to the surface of the coins. Other billoon coins cleaned in the IAA lab were usually treated by the above described methods, and 'chemical' cleaning methods like the use of Formic Acid (up to 15%) and the complementary application of No.15 metal scalpel, a fine Fibercastell glass coated brush. Communication by Lena Kupferschmidt, Head Metals Preservation Lab, IAA, 29/04/2010.
the un-cleaned coin, caked with corrosive matter and soil from the excavation. Then the same coin was cleaned under controlled condition using both chemical and mechanical methods and once more analyzed with XRF (see above). Lastly, the coin's obverse surface was grinded and polished until all the surface struck layer was removed and 'fresh' metal of the original flan was visible (Fig. 37).

After all possible surface alterations - such as deliberate surface treatment at the time of production, corrosion caused during deposition, and alterations that could have been caused by the cleaning procedures in the conservation lab - were removed, the depleted surface was re-analyzed by XRF EDS.

The comparative results below show only small variations in the silver-copper alloy of XRF results taken from the surface and core of the coin, confirming the accuracy of XRF analyses. The silver content of the coin's surface after cleaning seems to be somewhat higher by 2-5% compared with the core. Possibly this could be used as an approximate factor to calculate the average silver/copper alloy content of the denier – i.e.
alloy of cleaned coin minus 2-5% - but more analytical work on similar coins from controlled excavations needs to be done before we can draw final conclusions.  

<table>
<thead>
<tr>
<th>Component of coin</th>
<th>Ag</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface - Un-cleaned</td>
<td>41.0%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Surface - Mechanically cleaned</td>
<td>46.7%</td>
<td>51.2%</td>
</tr>
<tr>
<td>Surface - Chemically cleaned</td>
<td>43.9%</td>
<td>54%</td>
</tr>
<tr>
<td>Core - Mechanical polishing</td>
<td>41.7%</td>
<td>56.2%</td>
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</tbody>
</table>

Table 14. Comparison of XRF results for surface (uncleaned and cleaned state) versus core of Vadum Iacob coin '1'

4.5.9 Analysis results: Nature of the alloy

The results of the analysis indicate that in all cases – including the earlier Baldwin III Tower and Brienne's later Damiata deniers – the alloyed metal of the kingdom's royal deniers consisted of basically pure silver and copper. Other trace elements associated with either metals are below detectable levels (Tin, Chrome) or present in very small amounts like Zinc (0.2-0.3%) consistent with their existence in copper ores or associated with the production technology of medieval coins (Fe) as noted in 13th century Latin ruled Greece (Baker and Ponting 2001:214).

98 Interestingly, in the case below analytical results for the un-cleaned surface and core are virtually identical.
The sample also showed the presence of small amounts of gold and lead trace elements in the coins. These showed to be quite consistent and stable: lead (mostly between 0.8-1.6% of the silver content) and gold (mostly between 2-3% of the silver content). This is regarded as normative in medieval deniers and is explained by their presence in the silver ore (Baker and Ponting 2001: 214-215). In the case of lead, particularly smaller amounts of 1% or less observed in our coins, could also be the result of small scale cupellation process (Baker and Ponting 2001: 214-215). This could possibly indicate that the flans of these royal issues were produced in small-sized workshops within the Kingdom.

The above shows that royal deniers struck in the Latin kingdom of Jerusalem (1140's-1220s) were produced with the same type of technology used in Western Europe at this time. No doubt this involved the constant employment of workmen and moneyers with a "European" training or European knowledge of production methods.
<table>
<thead>
<tr>
<th>Acc. No.</th>
<th>Side</th>
<th>Provenance</th>
<th>Series</th>
<th>Sub-series</th>
<th>Cleaning</th>
<th>Ag</th>
<th>Pb</th>
<th>Au</th>
<th>Zn</th>
<th>Cu</th>
<th>Fe</th>
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<td>112307</td>
<td>A</td>
<td>VJ Hoard</td>
<td>chevron-B.</td>
<td>single A; 2/3Ann</td>
<td>IM. lab</td>
<td>49.391</td>
<td>0.603</td>
<td>0.084</td>
<td>0.186</td>
<td>49.652</td>
<td>&lt; LOD</td>
</tr>
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<td>VJ Hoard</td>
<td>chevron-B.</td>
<td>single A; 2/3Ann</td>
<td>IM. lab</td>
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<td>0.075</td>
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<td>0.303</td>
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</tr>
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<td>triple A; 2/3Ann</td>
<td>IM. lab</td>
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<td>0.237</td>
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<td>0.241</td>
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<td>Type</td>
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<td>Ann</td>
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<td>single A; 2/3Ann</td>
<td>Cohen</td>
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<td>IAA lab</td>
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<td>ID</td>
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<td>Notes</td>
<td>Laboratory</td>
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<td>L2</td>
<td>L3</td>
<td>L4</td>
<td>LOD</td>
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<td>single A; 2/3Ann</td>
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<td>single A; 2/3Ann</td>
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<td>0.208</td>
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<td>chevron-B.</td>
<td>single A; 2/3Ann</td>
<td>not cleaned</td>
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<td>HU mechanical</td>
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<td>HU mechanical</td>
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<td>0.205</td>
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<td>D</td>
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<td>0.199</td>
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Table 15. XRF analyses results of Royal Amaury deniers

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<th>Description</th>
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<td>Israel Museum Preservation Lab</td>
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<td>IAA Lab</td>
<td>IAA metals Preservation Lab</td>
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<tr>
<td>HU</td>
<td>Archaeology Conservation Lab, Hebrew University of Jerusalem</td>
</tr>
<tr>
<td>Cohen</td>
<td>Orna Cohen, Conservator of Ancient Artifacts</td>
</tr>
<tr>
<td>TA U. lab</td>
<td>Tel Aviv University Preservation Lab</td>
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4.5.10 Analysis result: Silver content of the Amaury coins

The metallurgical analyses performed above show the following results: more than 80% of the sampled Amaury deniers registered a silver fineness between 37% to 55%, with most of the coins clustered between 40–50% fineness (see Fig. 38). This range includes also one of the Vadum Iacob deniers which after undergoing a partial destructive analysis, showed to contain 41.7% of silver. Far below this 'normative range' were two coins, both originating from the Ibelin hoard, with a silver fineness of 20-21% (other Amaury deniers from Ibelin contained 40-45% silver). Above the normative range were three deniers from three different areas and excavations (Tiberias, Arsuf and Jerusalem) with fineness of 68-75%. These very high percentages of silver we suspect do not represent the original fineness of the coins. Rather these seem to be the result – in particular in the case of the Arsuf coins – of a radical (corrosive) cleaning method applied which destroyed much of the copper layers in the coin.

![Fig. 38. Silver content of the 'heavy' Amaury denier](image)
*Grosso modo*, the results (40-49%) minus 2-5% seem to indicate that the average silver content of the Amaury was substantially higher than what was previously thought based on the isolated samples noted by Cox and Metcalf (31-34%) (Cox 1933: 57ff.; Metcalf 1995: 70-71).

Secondly, the above study clearly shows that silver fineness does not seem to correlate with the coin's typological classification (A type, mint stops). This is further borne out by the fact that the two Ibelin deniers with significant lower silver content (20-21%) are 'normative' chevron and dotted chevron types. *Ipso facto*, the variations in the coin's silver content cannot be used in the typological classification of the coin. Presumably the silver content and weight of the regular 'heavy' denier seems to have been relative consistent over the entire period of its production (1160's – early 13th c.) as borne out by the evidence of dated hoards and single finds below.

**4.5.11 Analysis results: Comparison with other royal and Latin East deniers**

In comparison with the silver contents of similar type of 'regular' royal deniers struck in the reign of Amaury's predecessor Baldwin III (1143-1163) and those struck during John the Brienne's decade (r. 1219-1229) show a gradual debasement of the silver content of the coin.
<table>
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<tr>
<th>Acc. No.</th>
<th>Side</th>
<th>Provenance</th>
<th>Series</th>
<th>Sub-series</th>
<th>Cleaning</th>
<th>Ag</th>
<th>Pb</th>
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<th>Zn</th>
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<td>Baldwin III</td>
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<td>Zn</td>
<td>Cu</td>
<td>Fe</td>
</tr>
<tr>
<td>---------</td>
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<td>------------</td>
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<td>------</td>
</tr>
<tr>
<td>9902</td>
<td>A</td>
<td>Kh. Shema Excv.</td>
<td>John de B</td>
<td></td>
<td>IAA Lab</td>
<td>32.544</td>
<td>1.968</td>
<td>0.11</td>
<td>0.129</td>
<td>65.015</td>
<td></td>
</tr>
<tr>
<td>9902</td>
<td>B</td>
<td>Kh. Shema Excv.</td>
<td>John de B</td>
<td></td>
<td>IAA Lab</td>
<td>29.679</td>
<td>1.791</td>
<td>0.143</td>
<td>0.126</td>
<td>67.874</td>
<td></td>
</tr>
</tbody>
</table>

Table 16. XRF results of deniers of Baldwin III (1143-1163) and John de Brienne (1219-1225)
XRF results of eight Baldwin deniers coming from seven different excavations sites and its main two types ('rough' and 'smooth') show an average 10% leap in the silver content of the denier (c.55%). In contrast the silver content of the later dated Brienne denier lie circa 8% below the average 12th century Amaury denier standard. The gradual depreciation of the silver content of the Kingdom's royal denier detected here seems to match more or less the results of isolated probes of coins by other scholars (Table 12).

Particular interesting is a virtually parallel reduction of the silver in the deniers' types struck by the neighboring rulers of Antioch over a 120 year period: from c.60% silver denier struck by Raymond of Poitiers (1136-1149), to 40% silver for the bareheaded deniers struck in 1149-1163, to below 30% silver deniers struck in massive quantities between the 1160s and 1250.

4.5.12 Conclusion

The alloy of the regular 'heavy' denier seems to have consisted of a pure silver-copper alloy of c.45% silver and 52% copper. Irrespective of the sub-types involved this seem to have been the standard enforced for the entire period of the coin's production, from the early 1160s till the early 13th century.

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99 In terms of silver content there seems to exist no difference between rough and smooth types, which previous scholars (Metcalf 1995, Barag 2010) categorized as two consecutive series.

100 The results which were never published were obtained by analyzing the metal content of the deniers of an unspecified number of coins by Neutron Activation Analysis (NAA) at Oxford (Metcalf 1995: 120-121 n.5-6; 125).
Thereafter, a separate series of much lighter degenerated mauvais denier were introduced whose circulation seems to have been confined largely to Latin East sea board – as evidenced by large concentrations of these coins in 13th century coastal sites within the Latin kingdom (Jaffa, Caesarea, Athlit, Arsuf, Acre) and north of the Kingdom, in coastal settlements of the Tripoli and Antioch principalities (Kool forthcoming.a).  

The preceding Tower of David deniers (and oboles) of Amaury's predecessor and brother, Baldwin III (1143-1163) seem to have been of a higher silver content around 55%, similar to a contemporaneous issue at Antioch by Raymond of Poitiers. This seems partly to explain relative dearth of these coins compared with the massive issues of the Amaury type as evidenced also from excavation and hoard finds. No doubt the higher content silver of the Baldwin denier aided in causing a rapid demonetization of the coin after the lower billon silver Amaury type attained a critical mass circulation after the late 1160s. 

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101 The systematic classification and metallurgical study of these 'leached' types is still wanting. For the latest contribution on their classification see Metcalf (2002: 239-244).

102 The Harim/Harenc hoard discovered in 2007 in North Syria shows that by 1164, one year into Amaury's rule, Baldwin deniers were still widely circulating. The hoard contained massive quantities of Baldwin III deniers (500) and contemporary bare-head Tripoli deniers (1308) but only a mere 6 Amaury deniers. It seems to have been lost around 1164 when Nur-a-Din defeated a coalition of Christian forces there.
4.6 METROLOGY: WEIGHT ANALYSIS OF THE ‘HEAVY’ AMAURY DENIER

4.6.1 General outline

The general outline of the metrological ‘development’ of the AMALRICVS series is well known. There is an easily observable difference in weight between the heavy main series of the 12th century and the much lighter mauvais types used in the 13th century. The former was thought to have been produced to around a 0.90gr standard (Metcalf 1995:59). Forty years later, by the 1220s, evidence from Tripoli and Kessab hoards and Athlit excavations clearly show that the Amaury series had been reduced to a half gram standard or lower, being either minted or clipped to weight (Metcalf 2000-2: 239-244).

Oddly enough we know little about the metrological development of the regular ‘heavy’ type itself during the 12th century. What we know comes from weighing coins of unprovenanced collections and the examining of two hoards: the small Tel Jemmeh hoard (9) and the larger Jerusalem YMCA hoard (73) (Metcalf 1987:84-105). This was problematic because of its possible mixed origins, but played a key role because it was a relatively large sample of coins.

The above evidence suggested that the weight of the earliest types of the Amalricus deniers ‘was the same or close’ to the weight of previous royal Baldwin III denier series, c. 0.95-0.90 (Metcalf 1995:67). Thereafter the picture is less clear: the YMCA hoard indicated that the heavy coins continued to weigh an average 0.91gr
between 1175 and 1200. No direct correlations between the variations in weight and mintmarks or variations in the cross’ annulets were observed. But the existence of lower weight standards connected to the certain style types – a lower weight unbarred type of 0.82gr and heavier chevron types – was hinted at (Metcalf 1995:70).

The current availability of a much more systematic metrological data – almost 270 single finds and mini-hoards from sixty provenance sites, many of the excavations, within the kingdom, and some 170 coins of two unpublished, well dated hoards from Vadum Iacob and Ibelin - allows us to submit the previously published results to the test.

In particular we need to ask if the weight of the heavy denier did indeed gradually decline during the 12th century. If so, can this be observed in the weights of different styles, for example double barred versus chevron barred types? Conversely, were minters free to mint coins at various weight standards, implying that they were relatively independent and not constrained by the royal administration?

Caution must be exercised with the metrological analyses of excavated single finds, as these coins often circulated for long periods of time and incurred considerable weight loss. Many show signs of considerable corrosion due to their prolonged deposit in the soil, and are often broken. Were possible I tried to record these details, including the intentional clipping of coins which could considerable reduce the weight of the coins.

Undoubtedly the data provided by the two hoards cited below is much more reliable. Usually coins in hoards are better preserved. The coins used here, excavated and cleaned under controlled conditions, and extremely well dated, are particular valuable. Available in relative large numbers the coins of these two hoards provide us with extremely reliable statistical data and were therefore extensively used.
### 4.6.2 Weight analysis: Vadum Iacob and Ibelin Hoards

A comparison of the overall weights of the two hoards separated by at least a decade or more shows the following features: as late as 1179, in the reign of Baldwin IV (1177-1185) more than 50% of the deniers continued to be minted at 0.98 grams and above. In fact the hoard contained 53 specimens (36% of the hoard) with weights varying between 1 and 1.17 grams. This unequivocally shows that Amalricus deniers were still minted a decade and half after their introduction by Amaury (1163-1174), at supposedly the same or sometimes even higher standards than the royal Tower of David deniers of Baldwin III (1143-1163).

After 1190 the Ibelin hoard evidence seems to indicate a considerable fall in weight of the deniers. Coins in the Ibelin hoard clearly peak significantly lower at 0.91-0.95, similar to the weights Metcalf noted for the YMCA hoard. This is also recognizable in the overall lower weight distribution of the Ibelin coins: specimens in this hoard, even if we exclude the clipped and circulated types between 0.61 and 0.89, cluster between 0.90 and 0.95 and do not go beyond 1.03 grams. In contrast the range of the earlier Vadum Iacob coins is much shorter and consists of proportionally much heavier coins (0.90-1.17 grams). Could these coins represent part of some massive emergency issue struck to pay for the Crusader's army mobilization against the Ayyubid host at Hattin in 1187? It is difficult to know for sure. The evidence of the Ibelin hoard, and less reliable metrological material from late 12th century sites seems to suggest that by the end of the 1180s the weight standard of the royal denier was less consistently kept, possibly due to the political and military turmoil of the period.
Interestingly, a comparison of the modal weights of the main style sub-types in the Vadum Iacob and Ibelin hoards shows no significant pattern of variation in weights. Double barred, chevrons barred and dotted chevron barred varieties all invariably peak at between 0.96 and 1 grams. The unbarred type seems to peak at a slightly reduced weight between 0.91-.95, but this could also be because there are too few specimens for a meaningful measurement.
Fig. 40. Histogram of the weights of the double barred A variety. Step intervals of 0.05. N = 74. Vadum Iacob coins are indicated by V, Ibelin coins by T
Fig. 41. Histogram of the weights of the chevron barred A variety. Step intervals of 0.05. N =78.
Vadum Iacob coins are indicated by V, Ibelin coins by T

Fig. 42. Histogram of the weights of the dotted-chevron A variety. Step intervals of 0.05. N =35.
Vadum Iacob coins are indicated by V, Ibelin coins by T
This clearly indicates that style variations within the heavy *Amalricus* denier *cannot* be ordered according to weight categories. In turn this seems to imply two things: first, it reinforces our observation that throughout most of the 12th century the weight of the coin was kept at a relatively *fixed* standard, *regardless of the type* or the particular establishment/mint master producing the coin.

### 4.6.3 Conclusion

Presumably the royal administration was capable of enforcing a relative efficient control over the production of its coinage by using a uniform weight standard. This seems to have been the equivalent of at least 480-500 good ‘heavy’ coins according to the popular Troyes mark (c. 240 grams of pure silver) or the Cologne mark (231 grams of pure silver).\(^{103}\) The Jerusalem denier had a fineness of c. 0.45 silver and weighed c. 0.90-0.95 gram. It resembled the weight and fineness of similar mid-12th century coins in use in the

\(^{103}\) A medieval pound consisted of 240 pennies. The popular French Troyes mark of c. 240 grams of pure *Argent-le-Roi* silver (95.8\%) would theoretically result in a pure silver denier of approximately one gram (Morrison 2001:195, n.12). The Cologne mark of 231 grams produced 160 pfennigs of sterling silver (0.925\%), weighing 1.4 grams each in the 1160s. The standard purity of the Amalricus coin was significantly lower (average c.45\%) as I showed above in my study, and also it weight was less, ranging around 0.95gram. Thus an *AMALRICVS denier* of c. 45\% silver would amount to at least 480-500 good ‘heavy’ coins according to the Troyes standard and slightly less according to the Cologne Mark.
West like the French Melguiel and Provins/Champagne *denier* or the popular Lucca *denaro* (Spufford 1988: 102; Matzke 1993: 151 – 168). It was no coincidence that the latter *denaro* also extensively circulated in the kingdom during the entire 12th century, possibly being interchangeable with the royal issues. Secondly, the metrological evidence suggests that the style A variations apparently did not evolve in a rigid chronological manner but existed in more or less simultaneously issued series as already previously noted above.
4.7 A TERRITORIAL BILLON? GEOGRAPHICAL DISTRIBUTION OF THE ‘HEAVY’ AMAURY DENIER

4.7.1 A new checklist of provenanced sites

To map the distribution of the regular *Amalricus* coins was almost impossible in the past due to a lack of systematic information, mainly of excavated finds. Metcalf attempted to address this problem by constructing a check list of hoards and coin finds gleaned from published excavations and private and public collections. The latter are particular important for statistical comparisons since stray losses represent much more faithfully the day to day use of money than hoards. This part of his check-list though was very preliminary since it only included *six* major mainland sites: Antioch, Pilgrim's castle, Jerusalem, Caesarea and Acre. The fully published excavation finds of Antioch and Athlit are important but only due to the *absence* of the heavy type *Amalricus* denier: none were found among the 270 coins of the Latin East excavated in Antioch whereas the Athlit excavations only yielded a single heavy exemplar, the rest being *mauvais deniers* found usually in 13th c. century sites. Registered finds from Jerusalem, Caesarea and Acre, included a few excavations but were mostly based on stray-find material in private and public collections.

The present study is a significant step forward in two ways: first, it is virtually exclusively based on systematically registered *provenanced* material from excavations. Secondly, it encompasses a much wider range of sites. That does not mean that every
Frankish period site has been methodologically searched. This is of course practically an impossible task, though a large number of Frankish period sites have been extensively excavated in the past two decades. Rather, the data-base is what I would call a *representational sample* of the money circulation in the many and different types of settlements and sites that existed in the core territory of the Kingdom. The idea here is that ‘coin losses’ from such Frankish period sites equate ‘coin use’, in other words, we assume that coins were mislaid during their daily use and not deliberately concealed as offerings or hoarded for emergency.

To present an as detailed as possible picture of the coin’s distribution patterns, down to the level of observing the presence of individual style variations within a certain site, all the documented variations (c. 100) occurring in sites and sub-sites were mapped, in a geographical order *from south to north* (Mesad Boqeq to Banias). Some of the sites for example Jaffa in fact represents a much larger number individual excavations and contexts but in order to present the data in a transparent manner I decided to lump these together and ignore some of the local, inter-site implications. In other cases, like Jerusalem I decided it was important to specify the individual excavations because they were significant to distinguish between finds from rural sites versus the city-quarters.

### 4.7.2 Distribution and site analysis of Amaury ‘Heavy’ deniers

*Grosso modo*, the *Amalricus* deniers appear to have been widely distributed over the entire territory of the kingdom. They appear in c. 62 sites and sub-sites (see appendix 2). In numerical terms this is equivalent to c. 24% of the more than 260 sites and sub-sites
where coins dated to the 12th -13th centuries were excavated or found. More important than these statistical figures though, are that these sites are widely distributed and very diverse in character: they represent some of the most important Frankish period cities and port-towns but also numerous smaller towns, rural centers and site finds.

Single finds and small hoards of *Amalricus* deniers have been found as far south as Tell Jemmeh (Metcalf 1987:84-105), beyond the kingdom’s southern border at Darum/Deir el-Balah, and as far north as Beirut and Jubail/Gibelet on the kingdom’s border with the Tripoli Principality (Schlumberger 1907: 282). Finds of these royal coins from controlled excavations east of the Jerusalem/Nablus axis are unknown to me, but they appear among stray-finds from the Crusader’s kingdom’s most eastern seignory of Montreal (Kirkbride 1939:152-161) and in a large hoard allegedly from Umm Qeis (ancient Gadara) in north Jordan.

Evidence of the site-finds shows that the *Amalricus* type circulated in larger numbers than the previous royal David Tower issue of Baldwin III, approximately in a 2:3 ratio. Baldwin denier sites though are of a different character: they are typical 12th century inland sites such as Jerusalem or Tiberias as well as smaller sites in the rural

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104 These form part of a data-base constructed by me of more than 1800 coins dated between 1099 and 1260 which circulated in the territory of the kingdom. I have excluded for the present analysis the large number of 11th c. Fatimid dinars and billon fractions and Ayyubid fals. I have though included the considerable numbers of Zandjid coppers which in my opinion not only accompanied the Ayyubid conquest but also circulated from the 1140s onwards in many of the urban and rural sites of the kingdom.

105 The hoard apparently consists of 533 coins, of which five were gold), the rest billon *deniers* (ADA 2002). I am greatly indebted to Prof. W. Schultz for notifying me of the existence of this hoard.
hinterlands of the kingdom.\textsuperscript{106} Ipso facto, *Amalricus* coins are considerably more common in commercial sites along the broad coastal corridor of the post 1187 Second Kingdom like Jaffa, Arsuf/Apollonia, Caesarea and Athlit.\textsuperscript{107}

Judging from the few published excavations finds which produced a reasonable amount of such coins at Antioch, its port of St. Simeon and Hama,\textsuperscript{108} the regular *Amalricus* deniers apparently did not circulate beyond the core of the 12\textsuperscript{th} century Latin kingdom's territory. Exceptional finds such as the recent Harenc/Harim hoard from Northern Syria merely confirm this rule. The presence of massive quantities of Jerusalem kingdom deniers at Harim (mainly Baldwin and a few *Amalricus* deniers) in this instance, far to the north beyond the kingdom’s territory is tied to a particular event, a singular military campaign to free Harim from Nur-a Din’s invasion (Baldwin 1969:551-552; Metcalf 2008:179-180). The local character of the coinage is confirmed by the total absence such royal deniers in neighboring Cyprus (except for a few *mauvais deniers* from

\textsuperscript{106} Jerusalem and its rural satellites yielded at least 28 separate finds of Baldwin *deniers* from 13 separate excavations. FInds of Baldwin billon are more numerous in the rural hinterlands of Jerusalem (East-Talpiyot, Bethany, Turris Rubea, Hebron hoard, Qubeibeh, Bet Shemesh), and Naplouse/Nablus (Sebastiya, Nablus, Kh, Ghirit). They possibly even circulated in the eastern estates of Kerak/Oultre-Jordain as is demonstrated by the find of a Baldwin denier in the excavation of a domestic structure dating to the Frankish period (Johns and MCQuitty 1989:245) They are also prominent in rural estates around Caesarea (Mikhmoret, Shuni, Kfar Saba, Tel Girit) and Acre (Kh. Utza, Nahal Hagit, Kh Zeneita). This material – most of it still unpublished – was collected by me for an on-going study on Frankish period coin circulation in the Kingdom of Jerusalem.

\textsuperscript{107} See excavations finds from typical Frankish period settlements like Jaffa (Kool forthcoming); Acre (Syon forthcoming), Arsuf (unpublished), Caesarea (Hohlfelder 1980: 127–31; Metcalf 1987:95–105 and Athlit (Metcalf, Kool and Berman 1999: 96–97).

Saranda Kolones), in the Eastern Mediterranean – none appeared among the thousands of excavation at Athens and Corinth – and their total absence further West among hoards/site-finds for example like those of Medieval France (Metcalf 1995: 361-363; Duplessy 1985). Vice-versa, almost no coins of the series of deniers minted during the 12th century in the neighboring principalities of Tripoli and Antioch circulated in the kingdom’s territory. Of the circa hundred and twenty registered finds from excavations and sites virtually all date to the post-1187 kingdom.\textsuperscript{109}

There seems to be no particular geographical concentrations of certain style variations within the heavy \textit{Amalricus} denier. For example, the most common heavy coin types (groups I and II see above) are not limited to a particular geographical region but appear in wide range of sites from south to north, mixed with other less common types. Presumably this demonstrates the high velocity of these coins \textit{within} the kingdom’s entire territory – coins circulated extensively between different settlements and were not limited just to one particular locale.\textsuperscript{110}

\textsuperscript{109} Nineteen excavations produced coins from Antioch and Tripoli. Of these only four yielded a handful of coins dated to the 12th century: an imitation gold \textit{bezant} from Tripoli (IAA 21869) at Caesarea; an early copper of the counts of Tripoli excavated from the area of the royal palace in Jerusalem, adjacent to the city’s citadel (IAA 367; Tushingham 1985: 166-176); three Antioch \textit{deniers} from the western Temple Mount excavations in 1968 (IAA 38168; 39817-18); a Tripolitan \textit{denier} from the St. Mary's Fountain excavations at Nazareth (IAA 88055); and two early 12th century Antioch \textit{folles} from the Suba/Belmont (Metcalf 2000: 81 - 87).

\textsuperscript{110} On the subject of coin velocity and inter-site circulation see Den Velde and Metcalf (2003: 114).
Within the core territory of the kingdom coins circulated in many different types of settlements: urban, proto urban and rural production centers as well as in the more anonymous off-sites or “inter site” hinterland of the kingdom.\footnote{For a definition of ‘production centers’ and significance of inter-site finds of coins see Pryor (2006: 42-46)}
Fig. 44. Distribution map of royal Amaury deniers in the kingdom of Jerusalem
<table>
<thead>
<tr>
<th>No.</th>
<th>Site</th>
<th>Single finds</th>
<th>Hoards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acre, Knights Hotel</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>Acre, Teutons</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>Acre</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>Acre</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>Arsuf/Appolonia</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>6</td>
<td>Ascalon</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>7</td>
<td>Ascalon, sands</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>8</td>
<td>Athlit, Faubourg</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>9</td>
<td>Banias, area C.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>10</td>
<td>Beit Dagan/Casal Maen.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>11</td>
<td>Beit Guvrin/Bethgibelin</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>12</td>
<td>Bet Alfa</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>13</td>
<td>Bet Anan/Bethanam</td>
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<td>+</td>
</tr>
<tr>
<td>15</td>
<td>Caesarea, Hippodrome</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>16</td>
<td>Afar, Tel/Givat Olga</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>17</td>
<td>Caesarea, Sdot Yam Kibbutz Museum</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>18</td>
<td>Dor Tell/Merle</td>
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<td>19</td>
<td>Hunin/Chateau Neuf</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>20</td>
<td>Jaffa, Crusader citadel.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>21</td>
<td>Jaffa, fortified faubourg and street intra muros.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>22</td>
<td>Jaffa, fortified faubourg and street intra muros.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>23</td>
<td>Jaffa, fortified faubourg and street intra muros.</td>
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<td>24</td>
<td>Jaffa, fortified faubourg and street intra muros.</td>
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<td>+</td>
</tr>
<tr>
<td>25</td>
<td>Jaffa, Crusader citadel.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>26</td>
<td>Jaffa, Frankish Faubourg, 1230s-1240s</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>27</td>
<td>Jaffa, mid 13th fortified town entrance</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>28</td>
<td>Jaffa, Old City</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>29</td>
<td>Jemmeh, tell</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>30</td>
<td>Jenin/Le Grand Gerin</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>31</td>
<td>Jerusalem, Jaffa Gate</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>32</td>
<td>Jerusalem, Citadel</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>33</td>
<td>Jerusalem, Qishleh</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>34</td>
<td>Jerusalem, Armenian quarter</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>35</td>
<td>Jerusalem, Temple Mount compound.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>36</td>
<td>Jerusalem, Western Wall esplanade</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>37</td>
<td>Jerusalem, Me’arat Zidkhiyahu</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>38</td>
<td>Jerusalem, Mt of Olives</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>39</td>
<td>Jerusalem, Church of Ascension</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>No.</td>
<td>Site</td>
<td>Single finds</td>
<td>Hoards</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
</tr>
<tr>
<td>40</td>
<td>Jerusalem, City of David</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Jerusalem, Nevi'im street</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Jerusalem YMCA</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>44</td>
<td>Jerusalem, Lifta</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>45</td>
<td>Jerusalem, Ramot/el-Burj.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>46</td>
<td>Jordan/Oultre Jourdain</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>47</td>
<td>Mas-ha, Kh.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>48</td>
<td>Mesad Boqeq</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>49</td>
<td>Nablus/Naplouse, amphitheater/theater</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>50</td>
<td>Qubebeih/Parva Mahumeria</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>51</td>
<td>Ramla, south of White Mosque</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>52</td>
<td>Red Tower/Burgeta kh.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>53</td>
<td>Safed</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>54</td>
<td>Safta Adi’ Kh.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>55</td>
<td>Samaria/Sebaste</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>56</td>
<td>Samaria/Sebaste</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>57</td>
<td>Tantur kh.</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>58</td>
<td>Tel Yavneh/Ibelin</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>59</td>
<td>Tiberias, Crusader cemetery</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>60</td>
<td>Tiberias, Old City</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>61</td>
<td>Mnt Berenice/St George</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>62</td>
<td>Vadum Iacob/Chastelet</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>63</td>
<td>Yavneh Yam/Palmachiem</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>64</td>
<td>Yokne’am/Caymont</td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

Fig. 45. Sites with royal Amaury deniers in the kingdom of Jerusalem: single finds/hoards

royal deniers circulated in typical village settings (Qubebeih, Bethgibelin, El-Burj, Red Tower, Tel Afar, Kh.Tantur, Bet Alfa, Messe/ Kh. Masa), in outlaying religious centers (St. George/Mt. Berenice), in and around large castles and smaller fortifications (Chateau Neuf/Hunin, Merle/Dor, Vadum Iacob/Ateret, Le Grand Gerin/Jenin). Many appear in the faubourgs that grew around larger fortifications (Arsuf/Apollonia, Casearea, Banias), and in the urban settings of towns and cities.
(Jerusalem, Jaffa, Acre, Tiberias). All this indicates a well-established money economy in the kingdom where billon coins played an important role.

Some of the better documented excavated contexts, particular of single coin finds, tell us that the coins were intensively used by many different segments of the kingdom's population in the second half of the 12th century. For example they circulated widely in rural settlements populated by Frankish settlers. In Frankish villages like Parva Mahumeria/Qubebeih the Amaury deniers were certainly the largest group of billon in individual dwellings (Kool 2007:146). Amaury deniers were found in the room and a tower of a Frankish settlement (el-Burj) north-west of Jerusalem and in the fill of the Frankish village at Turris Rubea/Burj al-Ahmar in the Sharon plains.112 Such coins came from presumably similar domestic contexts in more northern located Frankish villages at Bet Alfa and Kh. Turit.113

Beyond these, coins also circulated in more outlaying rural outlets. One royal billon found its way to an isolated hamlet/farmhouse at Bethanan/Beit Anan owned by one of the inhabitants of Parva Mahumeria.114 Other coins circulated in the agricultural hinterland south of Bethlehem which had a large Christian population and was a center of Frankish settlement.115 Similar specimens circulated in smaller farm size sites around

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112 Excavation A-1882/1992. I thank A. Boas for permission to mention these finds.


115 For the provenance of the Bethlehem hoard see checklist below. For example in the village of Kh.Tuqu’/Casal Techue south of Bethlehem stood a Frankish manor house (Ellenblum 2003: 136).
Jaffa and Caesarea (Yavneh Yam, Bet Dagan, Tell Mevorakh, Shuni, Tel Afar). These ‘off-site’ finds – in fact accidental losses – hint to the widespread use of these coins in remote countryside settlements alongside other means of payments. This pattern seems to have been similar in rural areas in Medieval Western Europe.\textsuperscript{116}

Archaeological evidence also illustrates the important role played by outlaying religious centers in the circulation, and distribution of the royal billon. They were discovered during excavations in Crusader period churches in Caymont/Yokne'am and St George/Mnt. Berenice and in the vicinity of the Mt. Tabor monastery. Their scattered contexts on site indicated an economic rather than a ritual function.

Ritual contexts like Frankish period burials demonstrate how widespread these coins were in the kingdom. Excavations of a graveyard at Tel Mevorakh, north of Caesarea, which apparently belonged in the 12\textsuperscript{th}-13\textsuperscript{th} century to a small rural hamlet attached to the casale Feniculi/Jisr A-Zarka in the seignory of Caesarea, yielded one coin from a box grave overlaid with stone plates. Another was found in a burial discovered next to the Cathedral church of St Peter in Caesarea.\textsuperscript{117} Amaury deniers were also found during the excavations of Frankish graves in Tiberias, deposited next to the skulls of six skeletons buried in typical Frankish fashion (see footnote n.85). Yet another Frankish period grave with five Amaury deniers and a single Le Puy denier was uncovered by Johns in 1938 in the Jerusalem Citadel area excavations near the present Jaffa gate (for a

\textsuperscript{116} For the example of extensive coin use and circulation in the Medieval English countryside see Dyer 1998: 30 – 47.

\textsuperscript{117} Unpublished report on burials at area Z/2 dating from 1994. The burial was in locus 802 and dated to the early 13\textsuperscript{th} century. (Pers. Com. 20/06/2008 from Dr. Piers Mitchell, Faculty of Medicine, Imperial College, London.)
preliminary publication, see Metcalf 1995: 314). It seems that a custom of using royal billon in burials extended well into the 13\textsuperscript{th} century as the graves of Templars near Athlit with three mauvais Amalricus deniers deposited near their femurs graphically attest (Metcalf, Kool, Berman 1999:105-106).

![Crusader burials with coins at Pilgrim's Castle/Athlit](image)

Fig. 46. Crusader burials with coins at Pilgrim's Castle/Athlit

What we learn from this is that coins were apparently so numerous that people could be buried with them. More so, the custom showed that royal billon had become an integral part of the material and mental world of the Frankish poulain, so much that they were even buried with them. Undoubtedly, the Frankish inhabitants imitated similar burial customs involving the deposition of money with their dead as pious offerings or memory tokens, as was customary in Medieval Western Europe at that time (Traviani 2004:159-181).

The archaeological evidence of 'purses' of Amalricus deniers showed that these coins also played a key role in funding the military activities of the kingdom. The Vadum Iacob purse discovered on the skeleton of one of its defender's, who died when the castle was overrun by Ayyubid forces in the summer of 1179, is a prime example. The purse which contained some 160 royal deniers, the equivalent of several gold bezant pieces, was a substantial sum of money though no real treasure. Its owner must have been either
a Templar knight or one of the craftsmen supervising the construction of the castle. Other examples of smaller presumably 'military purses' are the hoards of Tel Jemmeh, Ibelin/Tel Yavneh and the huge hoard of deniers reportedly found at Harenc/Harim in Northern Syria lost in the battle for the castle in 1164. The latter contained some six Amalricus deniers (Philips 2008:432-433; Metcalf 2008:179-180).

![Image of coins]

**Fig.47. Part of the Vadum Iacob 'purse' (1179).** The ‘rolleau’/string of coins, clearly preserved the negative of the money bag/purse which held the coins but did not survive. Unpublished

Excavations of dwellings, streets and gate-areas in urban settings, clearly show that these coins circulated in substantial numbers in the cities and towns of the kingdom. Good examples are finds of these coins excavated near the fortified gated structures of Frankish Jerusalem and Jaffa (Ariel forthcoming; Kool forthcoming.b.). Gate areas in medieval towns of the Latin Kingdom, in addition to their defensive purposes were of great economic significance: they served as toll/tax stations and the focus of much the town's economic activity similar to its market places. Several of the kingdom's charters mention the large incomes, the equivalent of hundreds of gold bezants, which came with the rights on these gate taxes in Jerusalem, Jaffa and Ascalon. According to royal charters from the 1170s, the yearly income of taxes at the Porta David (modern Jaffa Gate) in Jerusalem and Ascalon was estimated between 72 to a 100 gold bisantios sarracenatos yearly.
(Röhricht Nos.487, 548, 553). Substantial data from Frankish period market areas like the plentiful medieval finds of the Athenian Agora (Thompson 1954) are still lacking. But isolated finds of these coins for example in Jerusalem attest to their popularity. New unpublished material coming from the Jerusalem Temple Mount area and its western reaches clearly show the dominant presence of these coins in the economy of the city during the second half of the 12th century.118

Likewise, in Jaffa, single finds from excavations in the Flea Market area and other sites within the city show their presence within domestic structures and thoroughfares of the densely populated lower city/faubourg dating to the Frankish period. To these we can also add the stray-find of a small hoard of ten coins, six of which were of the *Amalricus* heavy types (Metcalf 2008:139-139). No doubt, the circulation of money must have been substantial considering the economic importance of Jaffa’s faubourg and its markets, particular because of its harbour. A charter from 1136 estimated the yearly income of Jaffa's marketplace at the equivalent of 400 *bisantios sarracenatos* (Röhricht: No.163). This must have been substantially larger by the second half of the 12th century.

That these coins also circulated in the smaller urban centers of the kingdom is attested by finds in excavations and stray-finds from Caesarea, Arsuf, Nablus, Tiberias and Banias. The frequent use of such small billon in economic transactions in townships is also hinted at in a rare mentioning of the small billon denomination in a document from the local burgess court at Caesarea in October 1167 (Röhricht: No. 432). The court document confirms a sale of a shop between one Isabelle, a ‘colona’, inhabitant of the

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118 My thanks to Dr. Gabi Barkai and Zachi Zweig of the Jerusalem Temple Mount sifting Project for allowing me to go through the medieval coin material and mention these in my study.
town, to the Hospitaller Order for the sum of 30 gold bezants and 12 deniers (XXX
bisantiis et XII nummis). Equally interesting is the fact that among the witnesses
approving the sale in court is one Herbertus cambiator, or money-changer. His presence
clearly demonstrates the pervasive use of money, including small billon among
Caesarea’s Frankish inhabitants and the existence of an established money economy in
the smaller towns of the kingdom.119

4.7.3 Circulation with non-royal billon and Zandjid coppers

Our site-find database (see appendix 2) suggest that the introduction of a uniform royal
coinage protected by severe legal sanctions — in the form of large issues of Baldvinvs
billon followed by ever more massive quantities of 'good' Amalricus billon between the
1160s-1190s, apparently did not spell the end of the presence of other small currencies
for daily use in the territory of the kingdom.

Until now scholars regarded European billon currencies — either brought over
during the first and second Crusades or deliberately exported to the Latin East to fill a
temporary need of small change billon currency in the Kingdom of Jerusalem. The
kingdom seemed, like the principalities of Tripoli and Antioch to the north, to have
functioned without a noteworthy billon currency of its own for the first forty years of its
existence (1099–1140s). Particular prominent were two coin types — minted in Lucca and
Valence — which seemed to have functioned as some sort of semi-official ‘preferred

119 Among the witnesses of the kingdom’s 12th century charters is a considerable group of persons whose
names and titles show that they were apparently related to money-exchanging. For example from a similar
smaller urban center like Nazareth came Petrus de Moneta who witnessed a charter issued by king Baldwin
IV on June 26, 1175 (Röhricht: No. 525).

The monetary reform of Baldwin III, which introduced the royal BALDVINVS billon presumably in the late 1140s, brought c. 17-20 million pieces into circulation over a period of c.20 years; it was thought to have basically ‘swept away’ these European currencies in the Latin kingdom. European currencies remained in circulation only to the north of the kingdom (Metcalf 1978:84; Metcalf 1995:14-21). Recently though Metcalf partially modified his views and suggested on the basis of a small hoard from Jaffa that French feudal coins might still have been circulating in substantial numbers in the coastal cities in the 1190s (Metcalf 2003-6).

The evidence below from excavated sites and provenanced material seems to suggest that European billon circulated over a much longer period and was much more pervasive than previously thought. In terms of numbers, European billon is attested in many of the sites where also regular Amalricus billon circulated and beyond. What is interesting is that these finds did not originate solely from large cities, ports and towns (Jerusalem, Jaffa, Acre, Arsuf, Caesarea), well frequented by pilgrims and traders from Europe carrying such specie. They also circulated en par with the royal billon in the smaller, more insular military (Vadum Jacob, Arsuf) and rural centers (Tel Jemneh, Tel Afar, Red Tower/Burgeta, Ramot/el Burj, Qubeibeh, BethGibelin, St George/Mt Berenice). A particular good example is the joint finds of European and royal billon

120 Metcalf based himself here on the virtual absence of these coins from the Bourgey hoard with large numbers of Baldwin III billon dated to 1150-1167 and their presence in stray-finds north of the kingdom's territory.
within individual rooms and dwellings in the Frankish villages of Parva Mahumeria/Qubeibeh and Bethgibelín/Beth Guvrin between 1150/60s and 1187 (Kool 2007: 141-151). Also a re-appraisal of the hoard material, both published and unpublished, seems to indicate the longevity and their continuous use alongside the indigenous ‘royal’ billon coinage in the Latin kingdom. The large hoard from Harenc/Harim dated to the early 1160s still contained massive quantities of French feudal and Lucca/Valence deniers along with royal billon of the kingdom, while corroded rolls/roleaus of Amalricus billon – obviously the remains of purses – excavated at Tel Jemmeh, Red Tower/Burgeta and Ibelin inevitably contained issues of Le Puy, Lucca or Valence from as late as the 1190’s. In fact almost all of the provenanced hoards and mini hoards from the kingdom’s territory with Amalricus billon include European billon.

The above seems to demonstrate that even after the introduction of massive quantities of Amalricus billon from 1160’s onwards, the available pool of these European currencies was still so large and the need for cash money so great that they remained in active circulation till the end of the 12th century. This and the subsequent massive imports of European coinages during and after the Third Crusade (1189–1192) show that European billon played a crucial role in supplying the Kingdom of Jerusalem with small change billon during most of its existence.

To the above group we can also add large quantities of low value copper coins issued under the Zandjid paramount ruler Al-‘Adil Nûr al-Dîn Mahmûd (1146–1174 CE) at Dimashq. According to archaeological evidence, these coppers circulated widely in Frankish sites – both rural and urban – during the entire second half of the 12th and 13th centuries. Up till now archaeologists and numismatists have completely ignored the
possibility that low value ‘Muslim’ type coppers could circulate in the Frankish kingdom, and have used these coins as 'proof' for the Ayyubid conquest of the area after 1187. This misconception seems to be based on an ideological bias of researchers who tend to have a "Europeanized" view of the kingdom's economy. Archaeological excavations though unequivocally show that these coppers circulated abundantly in Frankish period sites, often together with Frankish and European billon; their finds are recorded from a large number of major and minor Frankish period sites. Apparently both deniers and fâls were used as small change in rural and urban settlements of the period from the second half of the 12th century onwards (Metcalf, Kool and Berman 1999:106–107; Kool 2002: 84–85; Kool 2007:147; Kool forthcoming.a).

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121 This subject is a fascinating one and warrants a separate article which I hope to write in the future. Meanwhile below a preliminary listing of sites with such coins, from Frankish period excavation contexts: Beth She'an castle (1992); Acre, Knights Hotel (1995); Acre Teutons site (1999-2000); Arsuf /Apollonia (1990s); Atlit Faubourg (1930s); Banias (1994-1998); Beth Gibelin/Bet Guvrin (1992-1995); Hunin (1993); Kurđana (1988); Nebi Samwil/Mons Gaudi; Nazareth (1997); Petach Tikva (1994); Qubeibeh/Parva Mahumeria (1942); Mt. Tabor; Kh. Tantur 1988); Tiberias (1970s-1990s); Vadum Iacob (1993-1998); Jaffa (2002-2008); Jerusalem, Me'arat Zidkhiyahu (2011).
4.8 CONCLUSION

His greed for money was greater than was seemly or honorable in a king, thus William of Tyre tersely characterized his patron, Amaury I of Jerusalem, love for hard currency. More than any other figure appearing in his chronicle, William noted Amaury's compulsive occupation with money on many occasions.122 William's observations have been mostly ignored by modern historians of the Jerusalem kingdom except for a few isolated comments.123 Compared to relatively well-studied political, constitutional and prosopographical aspects of his reign, little is known of the economic and monetary aspects of Amaury's rule, nor of his predecessors and successors.124 The above study has attempted to remedy this by studying in depth one particular aspect of his reign – the introduction of a billon currency which for more than half a century, under his rule and those of his successors till the 1220s constituted the kingdom's main petty coinage.

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122 WT XIX, 2, 50-51; 64-66; XX, 7, 1-21; XX, 19, 58 – 62.

123 Hans Ebenhard Mayer noted in the second edition of his "Crusades" that Amaury "appreciated the need for a full treasury" (Mayer 1988:117).

4.8.1 Numismatic conclusions

Several important numismatic conclusions can be drawn from the above research, based on new archaeological material:

1. The existence of two main types (double barred \( \Box \) and chevron barred \( \Box \)) struck in massive quantities and appearing with three dominant mintmark variations. These were found widely distributed over the entire territory of the kingdom and were apparently simultaneously minted during the entire production period of the heavy AMALRICVS coin (1160s-1190s). A third variant, the dotted chevron \( \Box \) was found on a substantially smaller scale and seems to have been an earlier type or just minted in far more restricted numbers. Relatively rare triple \( \Box \) and unbarred \( \Box \) variants seem to be connected to the first issues of these coins. Finally, types with a thicker single barred \( \Box \) seem to belong to the end period of the heavy type AMALRICVS denier (1190s-1220).

2. The existence of large numbers of sub-variants in our sample is indicative of a particular large number of dies used to produce these coins and consequently the massive circulation of these coins on a daily basis. Metcalf estimated the number of coins from the preceding royal *Tower of David* type by Baldwin III at c. 11-12 million coins, produced from 1100 dies over a period of c. 20 years (1143-1163) (Metcalf 1997:193). This would mean theoretically an average of c.550-600,000 coins yearly. This seems a particular high figure compared with the output of 'established' mints in West Europe during this period. Estimations for the production of the contemporary Cologne denier,
one of the important coin types circulating in the Hohenstaufen empire during the 1160s, run into the 1.5-2 million coins yearly (Spufford 1988:195). Estimation of the production of the *cross and crosslets penny* by Henry II, between 1158 – 1180, ranged in the 20-30 million pennies (Metcalf 1977:26 – 31). However, a preliminary estimation of the number of dies used in the Vadum Iacob and Ibelin hoards and finds alone, some 200 – based on the virtual lack of repetition of obverse dies observed in these two hoards by me– seems indeed to point towards a very large volume of coins, possibly estimated in the tens of millions produced between 1163 and 1187/90s.

3. No geographical concentration of a particular sub-type was observed. At this stage it is impossible to identify a certain type related to a particular locale or 'mint' (Jerusalem, Acre, Tyre) as Metcalf suggested earlier (Metcalf 1995:65). The many sub-variations within the Amaury denier and the virtual absence of die repetition within the examined groups *could* indicate the existence of multiple workshops but nothing beyond this can be extrapolated from the material at this stage.

4. The geographical density and distribution of the royal deniers clearly suggests that the royal denier was a 'local’ money, limited to the kingdom of Jerusalem. Beyond that, the contexted rural and urban finds clearly show the deep penetration of this royal billon into the daily economy of the kingdom. This royal money circulated en par with a large pool of European currencies – particular deniers from Lucca and Valence throughout the 12th century – and later on with large quantities of copper Zandjid *fals* from the second half of the 12th century and possibly later.

5. Finally new metallurgical analysis and data show that the administrators under Amaury and his successors were efficient in managing and controlling the production of the
kingdom's coinage during the 12th century. The royal deniers irrespective of type or production locale were minted at a relatively high standard alloy (c. 40%-49% silver) and maintained a fixed weight standard throughout most of the core-production period between 1160s and 1190s.

4.8.2 Historical conclusions

The most important historical conclusion which emerges from the above study is that the kingdom of Jerusalem, from the 1150s onwards, possessed a well-established petty money economy, a substantial part which must have been controlled by the king's Secrète, financial bureaucracy. These royal billon moneys, introduced under Baldwin III and Amaury seemed to have formed the ‘hard’ core of a much larger volume of coins that circulated within the territory of the kingdom during the mid-12th century (Metcalf 1997:189). These seem to have included large quantities of Islamic/Fatimid gold dinars, gold imitation bezants and cut gold fragments, copper Zandjid fals, European billon deniers, and even locally produced Frankish lead token money.

This patently contradicts a perception of the kingdom as having a 'Feudal' decentralized economy, headed by rulers in constant and desperate need for money, totally dependent on the influx of foreign cash, imported by visiting pilgrims, Italian traders and military orders from Western Europe.125 (La Monte 1932: 174 – 183).

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125 This Eurocentric perception of the kingdom’s feudal’ economy has been basically dominant and unchallenged/undiscussed since Prutz’s discussion on ‘Geldverkehr und Münzweisen’ (Prutz 1883:364 - 376). For a more balanced re-assessment see Jacoby (2007: 159-191)
It also seems difficult to reconcile with the idea of a *weakening* royal power in the kingdom versus growing influence of its upper nobility, particular under Amaury and his successors in the second half of the twelfth century.\textsuperscript{126}

It is no coincidence, in my opinion, that exactly during the zenith of the kingdom’s military and civilian expansion and development (1140s-1170s), a sophisticated, royal controlled monetary system was introduced which combined relatively massive issues of royal billon with royal controlled gold currencies in the form of imitation bezants and cut gold pieces. The introduction of these new local royal currencies seems to have been first and foremost a function of the unprecedented expansion of the European population of the kingdom settling in numerous urban and rural centers.\textsuperscript{127} By the mid 12\textsuperscript{th} century the few thousands Frankish inhabitants at the time of Baldwin I had reached a critical mass of more than a 100,000-150,000, large enough at this moment to sustain a local billon coinage in the kingdom, based on Western/French minting traditions.\textsuperscript{128} To these must be added the continuous presence of

\textsuperscript{126} A thesis often propagated by historians, based on their reading of the feudal legislation of the Kingdom (Prawer 1980:35-45; Slack 1991:48; Greilsammer 1995). Other historians though noted that the royal administration sometimes effectively preserved some of its most valuable commercial and legal privileges (Jacoby 1997:155 - 175)

\textsuperscript{127} The theory of Prawer (1970: 568 – 572) and Benvenisti (1970: 18 – 20; 27) that the Frankish population was overwhelmingly ‘urban’ and concentrated in a few cities has been successfully challenged in recent years. Ellenblum (1998) showed the existence of some 230 rural Frankish settlements; Pringle’s survey of churches (Pringle 1993-2009) showed the existence of churches in some 300 smaller townships and rural settlements; Erlich (1999) showed the existence of prosperous smaller inland cities and settlements along the traditional pilgrims routes.

\textsuperscript{128} These figures are estimates since no thorough demographic survey is possible as Ellenblum justly remarked (Ellenblum 1998:31). Prawer and Benvenisti (1970:568 -572) gave conservative estimates of 120,000- 140,000 Frankish inhabitants. Hiestand (1997b: 50) gave much higher estimations of a quarter of
large migrant population of pilgrims, crusaders, mercenaries, merchants and artisans (Linder 2009: 49 – 50) often with their own monies that needed to be exchanged against local moneys. There also existed a substantial non-Frankish rural population of Christians and Muslims (another 200,000- 350,000) who formed the backbone of the kingdom's rural-based economy.

Another important incentive for producing large amounts of royal controlled billon accompanying locally produced gold 'bezant' imitations, was the intensive use by the mid-12th century of money-fiefs – annual payments tied to a specific source of revenue – used in particular in the kingdom’s ‘military’ economy (Murray 2008:276). This included the upkeep of a large army consisting of knights, soudoyers – paid mercenary knights, turcopoles troops, foot-soldiers. 129 A conservative estimate of the yearly costs to sustain some 700 knights mobilized by the kingdom in 1160-1170s, amounted to some 350,000 ‘besants’. This did not include the funding of more than 5000 sergeants recorded in the lists of Jean of Ibelin. To these must be added additional costs for the soudoyers – monthly paid mercenary knights (La Monte 1932) and the payment of large numbers of mounted turcopoles light cavalry troops which could amount to an additional 30-50% to the mounted force (Harari 1997). Finally there were a substantial number of service men not listed in the ‘Royal’ lists of Jean of Ibelin and John of Jaffa (Murray 2008).

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129 For details on how the kings financed their armies through subsidizing vassals and mercenaries see the relevant chapters of ‘Le Livre au Roi’ (chpts 9, 11, 14, 27, 29, 49) - a “Coutumier” reflecting the feudal Laws and customs of the kingdom of Jerusalem in the 12th century (Greilsammer 1995). The upkeep of a single knight amounted to between 400 to 600 ‘besants’ (La Monte 1932:150).
Other related military activities that required particularly large sums of gold and billon money were the building and garrison of castles and the provision of ransom money for captured knights and soldiers. As castles defenses became more sophisticated and elaborate the financial resources to build them radically increased.\(^{130}\) The 20,000 ashlar-stones alone needed to build the walls of the Vadum Iacob castle in 1178–79 could have cost some 80,000 gold dinars.\(^{131}\) By the 13\(^{th}\) century documents show that the construction and above all the upkeep of castles could run into enormous sums of money: more than one million bezants for building the massive Templar castle of Saphet/Safed and an additional 40,000 bezants for its yearly upkeep (Huygens 1981; Kennedy 1994: 196). Also cash ransoms could reach large sums of money. More than a 1000 gold *dinars* for a person of noble status while the price for kings and princes could reach in the tens of thousands of gold coins. (Friedman 2000:32; 158 – 159).

The need for local (royal) cash money in the kingdom’s economy at this time is also echoed in the existence of a sophisticated royal tax administration. Headed by the *seneschal* it included apparently also a large number of scribes, secretaries, and bailiffs in charge of collecting the royal revenues. This department was apparently headed by Western immigrants and *poulains* at the higher levels proficient in Latin and Levantine French but also included lower level custom clerks fluent in Arabic and presumably other local languages (Italian, Provencal, Greek) (Ibn Jubayr 1952: 317 – 318; Greilsammer 1995: Ch. 10; Mayer 1996:165 -170; Jacoby 2001:277 – 293; Aslanov

\(^{130}\) For castles see Ellenblum (2007) and Kennedy (1994:21 – 61).

\(^{131}\) For the dismantlement of the structure alone Saladin was willing to pay Baldwin IV 60,000 to 100,000 *dinars*. See Abu-Shama (1872–1906:194–208).
Aside from the regular agricultural taxations of the royal domains, overland tolls, and a poll-tax paid by the large Muslim population, its main source of income were a range of taxes and dues levied in the royal ports along the seaboard like Jaffa, Acre and Tyre. These following contemporary practices in neighboring Muslim states, were farmed out against an agreed sum of money to individual tax farmers (Jacoby 2001:282). Depending on the type of merchandise, taxation on goods could be between 4-20% of its value (Beugnot 1849: 173 – 178). We lack any hard data concerning the actual income of the king but it must have been considerable. Scattered evidence in surviving charters of gifts and donations to the institutions and individuals of parts of the king’s income from the royal *cathena* and gate-taxes in Jerusalem, the port cities of Jaffa, Acre, Tyre, Beirut but also smaller inland towns like Tiberias or Nablus amounted to thousands of gold dinars/bezants.\footnote{See RR 465 (1169); 479 (1170); 487 (1171); 496 (1173); 512 (1174); 548 (1177); 553 (1177), 614 (1182); 625 (1183); 657 (1186); 674 (1188); 742 (1198).} For comparison, during the same period in 1163 and 1171 the Zandjid ruler Nur-al-Din gave up taxes, most of them similar road tolls and customs duties originating from the main trading cities and towns of the Syrian state at the amount of c. 570,000 dinars (Lev 2004: 226-229).

A great variety of written sources also document the increasing use of cash money in the 'civilian' side of the kingdom’s economy during this period. Legal charters, treatises and chronicles and pilgrim accounts illustrate the thorough acquaintance of its inhabitants with the frequent use of cash money. For example, the more than two hundred charters between 1140s-1170s detail both large and smaller amounts of cash switching hands with the purchase/sale, taxation and donations, at times with other (kind) means of
payments, of rural casalia and castles as well as urban shops and houses. Particular interesting is the appearance in these documents of a cohesive group of money-exchangers and goldsmiths, hinting at the existence of local class of monetarii, involved in the production and distribution of cash money. These charters clearly demonstrate that the king as well as his magnates, major church institutions and monasteries and military orders circulated vast sums of cash money. Cash money was also part of everyday life of the lesser nobility and the non-noble burgess class. Legal treatises such as the Livre du Roi or the Livre des Assises de la Cour des Bourgeois are permeated with monetary terminologies and a considerable part of their content dealt with disputes about money.

133 This data collected from Röhricht's Regesta was compiled by me as part of my on-going research on the monetary economy of the Latin kingdom.

134 For example a Lambertus Cambiator appeared four times as witness to charters between 1157 and 1179 in Jerusalem and Bethany (RR No. 327, 391, 430, 590).

135 As I noted in chapter 2 no detailed study of the (money) economy of the Kingdom in the 12th century exists and this is particular true when it comes to studying the written sources. Murray (2008) wrote an important article on money-fiefs in the early ‘robber-baron’ economy of the kingdom. But for example on the military orders role in the finances of the Latin Kingdom in the 12th c. we only have scattered references (Riley-Smith 1967; Barber 1994). Nothing exists for the 12th century like Bronstein’s study of the Hospitaller’s Order contribution to the economy of the Latin East during the 13th century (Bronstein 2005: 47 – 63). The same is true for the role of the Latin church institutions in the kingdom (Hamilton 1980).

136 For example according to the Livre du Roi a knight wounding a none-noble was to be penalized by lose of his equipment and forced to pay a sum of 100 sous. Greilsammer (1995:190-191) incorrectly noted that this amounted to 180 grams of silver. In fact 20 sous was the equivalent of 1200 deniers of account or 5 pounds of highgrade silver. This sum amounted to possible less than 10% of the sum that a bourgeois in the reverse case had to pay if he wounded a knight – a 100 besant. Note that the social differences between the two are not only expressed in different sums but also in superior gold versus inferior silver.
Studies related to the material culture and archaeological remains of the kingdom bear witness to a vast program of civilian construction in urban and rural centers that must have demanded the use and circulation of unprecedented quantities of cash money. The construction and renovation of entire city-quarters, markets, defensive walls, large numbers of public buildings, among them more than 500 churches as well as thousands of private dwellings were financed during this period (Jacoby 1979:1-45; Bahat 1992; Pringle 1993-2007; Kedar 1994:443 – 455; Boas 2010; Elleblum 2007). Direct royal patronage (and finance) during this period is especially evident in a number of important projects: the renovation of the churches of the Holy Sepulchre (1140-1168) – the largest construction project ever undertaken in the Kingdom, the Nativity church at Bethlehem, the (re)construction of the monasteries of Our Lady of Josaphat and Bethany (1140s) and the triple markets of Jerusalem (1150s), the royal port and quarter of Acre – which *inter alia* generated more income than the entire kingdom of England (Riley-Smith 1973:64), and the re-fortification of Ascalon after its capture in 1153. Parallel to these military orders like the Hospitallers injected and expended vast sums of money and cash in the kingdom on civilian projects. In Jerusalem for example they built and ran a sophisticated hospital capable of taking care of a 1000 patients at the same time, built a massive church and headquarters adjoining it which rivaled with the Holy Sepulchre Church nearby, and serviced the mass burial of pilgrims at Akeldama (Kedar 1998: 3- 26; Riley-Smith 2008:170 -175).

In addition to the monetary needs required by large urban building projects and castle building, an extensive Frankish rural settlements (some 230 sites) existed outside
the larger cities, much larger than what was previously thought to exist (Ellenblum 1998:280-281). Also here considerable amounts of small cash – both gold and billon discovered in archaeological excavations and occasionally noted in surviving written documents – circulated, apparently on a substantially larger scale than in Western Europe at the time (Kool 2007:133-156).

The existence of a sophisticated, royal controlled monetary system in the days of Amaury seems an almost foregone conclusion. However one should take care not to read too much into the archaeological evidence of the above discussed royal billon of Amaury I and isolate them from their historical context, well documented through Frankish and Muslim written sources. The Frankish kingdom’s own gold imitation dinars, cut gold pieces and royal billon, backed up by large amounts of West European deniers and Zandjid coppers, were never intended to fully cover the massive need for money in the Jerusalem kingdom. In my opinion a considerable part of the kingdom’s money needs, in particular its vast ‘military’ expenses were in fact offset by the tributes and ransoms, paid in gold cash, mainly high quality gold dinars issued by surrounding Muslim rulers. Client states like Burid ruled Damascus paid an annual tribute of tens of thousands of dinars to the kingdom annually (Heidemann 2007:120). Not included in these were vast sums paid to the king of Jerusalem to recompense the costs of relief expeditionary forces which could amounted to 20,000 dinars a month. Heidemann (2007:126-7) noted two explicit occasions 1140 and 1147 in which Mu’in al-Din Unur, ruler of Damascus reimbursed the Frankish king for defrayed military costs. This seems to have continued even after Nur-Al-Din’s take over of Damascus for another number of years - now for a reduced payment that amounted to 8000 dinar ‘suri’ (Heidemann 2007:120).
In this respect, Fatimid Egypt seems to have been a true horn of plenty for the Frankish kingdom during this period but presumably also before, providing it with unlimited amounts of gold cash in the form of high quality dinar ‘misri’. For example, the capture of the Fatimid port city of Ascalon in 1153 resulted in a great quantity of booty, a large amount which consisted of cash money (Setton 1969: 558). Thereafter consolidation of Frankish control over Ascalon and its hinterland, and control of the roads leading out of Egypt to Syria and other parts of the Muslim world resulted in even more booty coming from raids and ambushes. One particular raid was documented by William of Tyre in 1154 because it resulted in the capture of a particular rich Egyptian caravan “laden with the richest spoils, indeed fairly bending under the burden of treasures hitherto unknown to our land….” (WT: 18:9). Capture of high ranking Fatimid officials on such occasions was particular worthwhile and could generate huge incomes of tens of thousands of dinars.\(^\text{137}\) Apparently after 1153 a treaty existed between the Fatimid rulers of Egypt and Baldwin which included the yearly payment of an (unknown) sum of tribute to the Frankish royal secrete. Fatimid refusal to continue paying the sum gave Amaury in 1163 the pretext to invade the Fatimid state and demand more gold cash. Amaury, as the first count of the double county of Jaffa-Ascalon was in charge of Ascalon and its hinterland for a decade after its conquest (1153 – 1163) and was no doubt thoroughly acquainted with the potentials of Fatimid riches. He understood the enormous financial advantages that could come with establishing a Frankish protectorate over Egypt tapping the fabulous wealth of the Fatimid treasury and controlling its enormous revenues.

\(^{137}\) The “son of the Egyptian vizier” captured by the Templars was redeemed for the considerable sum of 60,000 dinars (WT:18:9).
deriving from its thousands of agricultural settlements, but also from international trade in particular flowing through the important port-city of Alexandria. The figures of the ‘Egyptian fleshpots’ truly dwarfed anything known to the Frankish rulers of Jerusalem: Its ruler’s treasury in the newly building administrative capital Al-Qahira alone reportedly contained in the 1120s more than twelve million dinars while the Fatimid court expenditure on textiles alone amounted to 600,000 dinars per annum (Lev 2007: 310 - 312). Annual revenues collected through an efficient state collection system, excluding the considerable income from international trade, seem to have amounted to four to five million dinars per annum during the entire 12th century (Lev 2007: 310 -321).

Two initial attempts failed in 1163-1164 but in early 1167 taking advantage of an attempt by Nur-al-Din’s army commanded by Shirkuh to take over Fatimid government, Amaury successfully invaded Egypt and concluded a formal alliance with its strongman Shawar. This included the ratification of an annual tribute of 100,000 dinars to the kingdom and in addition the payment of 400,000 dinars to cover the expenses of the Frankish campaign, of which 200,000 dinars were paid immediately, the rest promised afterwards. A written agreement drawn up shortly before the 1168 campaign between the king and the Hospitallers echoed the enormous expectations the Frankish host had of conquering the riches of Fatimid Egypt: just the capture of some ten cities and other large tracts of land in Egypt proper and North Sinai was to generate some 150,000 besants annually, sufficient to bankroll the Hospitaller force of 500 knights and all their auxiliary Turcopole forces.¹³⁸ This was exclusive of the rich treasures of the Fatimid caliph to be divided separately. Although the campaign did not meet its goal of conquering Egypt

¹³⁸ RR No. 452.
did prove relatively lucrative. Amaury who always interested in gold cash (and billon), seems to have invested Cairo just for the sake of trying to force a large money ransom from Shawar. When that did not work and the Fatimid capital of Fustat was set on fire as a warning to the Franks, Amaury succeeded to extort from his former Fatimid ally a large sum of 200,000 dinars *misri* for the return of his son and nephew, before withdrawing before the forces of Shirkuh who shortly afterwards captured Egypt.

In sum, taking a larger perspective, William of Tyre pointed out the extraordinary influence of the surrounding Muslim states on the Frankish economy during the 1160s-1170s, in particular the influx of what must have been vast sums of Egyptian gold dinars feeding its money economy: “the Egyptians brought to the realm foreign riches and strange commodities hitherto unknown to us…moreover an immense revenue deriving from yearly tribute enriched the fiscal treasury and increased the private wealth of courtiers…” (WT 20:10). It is within this context, of a growing money economy in the Jerusalem kingdom from the mid-12th century that the issuing of its own plentiful billon coinage by Amaury occurred.
4. 10 APPENDIX  1: A CHECKLIST OF FINDS OF THE ‘HEAVY’ AMAURY DENIER

1. **Site**: Akko/Acre  
   **Sub-site**: Acre, Knights Hotel  
   **Type finds**: Hoard + single finds  
   **Excavation**: A-2244/1995  
   **Number of coins**: 7  
   **Context**: Post 1191 fill and foundations for structure built after the 1250's in previously unrecorded 13th century residential area of Acre. Hoard is possibly a foundation deposit found near base of a pillar of a square-box public building constructed after 1191. According to the excavator the single coins found in locus 139 came with early 13th century pottery, below a workshop from the second half of the 13th with five 13th century coins. In an intermediate layer between the Amaury deniers and the workshop, a group of 12th century Zandjid coins and a denier of the Dukes of Bourgogne (1162-1193) were excavated.  
   **Amaury types**: hoard: single barred (3), double barred (1), illegible (1); single finds: double barred; chevron barred. Found with: see above.  
   **Reference**: Syon Forthcoming. ‘Atiqot.

2. **Site**: Akko/Acre  
   **Sub-site**: Acre, Teutons  
   **Type finds**: single finds  
   **Number of coins**: 1  
   **Context**: 13th century found on a small poorly preserved packed earth floor in area C with a denier of Balian III of Sidon (1229-1240).  
   **Amaury types**: single barred. Coin is clipped but belonged to heavy regular 12th century type. It was apparently adjusted to 13th century standards.  
   **Found with**: Balian III of Sidon (1229-1240) circulating between the 1230-1250 on the frankish seaboard; Particular interesting is a gold Hyperperon of Emperor John III (1222–1254; IAA No. 107900), found in the ash layer over the floor in nearby area B, sealed under the collapsed vaults, with thirteenth-century ceramics. For other Frankish period coin finds, including tokens see reference.  

3. **Site**: Akko/Acre  
   **Type finds**: single finds  
   **Number of coins**: 1  
   **Context**: 13th century crusader period wall dated by ceramics  
   **Amaury types**: illegible.
4. **Site**: Akko/Acre  
**Type finds**: single finds  
**Context**: Stray-finds.  
**Number of coins**: 12  
**Amaury types**: single barred (1), double barred (2), chevron barred (4), chevron dotted (1), unbarred (3), illegible (1).  
**Reference**: Metcalf 1995: 359-60; Rahmani and Spaer 1965-6: 68; and unpublished material from the defunct Acre Municipal Museum collection.

5. **Site**: Arsuf/Arsur  
**Type finds**: single finds  
**Context**: Castle and settlement, 12/13th century  
**Number of coins**: 5  
**Amaury types**: double barred (1), chevron barred (2), single barred (2)  
**Found with**: One chevron barred specimen was (IAA 117187) was found with mostly 11-12th century coin material - Fatimid (3), a late Byzantine anonymous folles (11th c.) and a Baldwin III denier(1143-1163) - hinting at a primarily 12th century context; another chevron barred type (IAA 117301) was found together with a denier of Henri I, king of Cyprus (1205-1218), Lucca deniers and Ayyubid material of the 1240-50s as well as an earlier 11th century Fatimid dirham fraction. Surface finds include the two single barred and one double barred specimens apparently from the Faubourg area, mixed with later 13th c. material; Some eight mauvais deniers were found, mostly surface finds. Site finds are c. 90 coins dating between 10-13th centuries: Fatimid (14), Byzantine (2), Latin East: Baldwin III (5), *Mauvais Amalricus* deniers (8), Sidon (1), Cyprus (3), European (7; Le Puy, Chateaudun, Lucca, Barcelona, Bolsward, and unidentified), Cyprus (5).  
**Reference**: unpublished.

6. **Site**: Ascalon  
**Type finds**: single finds  
**Context**: re-inhabited Frankish period domestic quarters within the former Fatimid ruled city captured by the Frankish kings in 1153.  
**Number of coins**: 4  
**Amaury types**: unbarred, double barred and single barred.  
**Found with**: Fatimid period gold and silver fractions, zandjid fals of Nur-a-Din (1146-74), denier of Baldwin III.  
**Reference**: unpublished.

7. **Site**: Ascalon  
**Sub-site**: Ascalon, sands  
**Type finds**: single finds
Context: stray-find, rural hinterland of Ascalon.
Number of coins: 1
Amaury types: double barred.
Found with: early fatimid 11th c. ¼ dinar.
Reference: unpublished

8. Site: 'Atlit/Athlit
Sub-site: Faubourg, adjoining the castle, early thirteenth century.
Type finds: single finds
Context: surface find during a sounding in complex of houses with kiln, in faubourg section, near the castle's wall/entrance.
Number of coins: 1
Amaury types: double barred.

9. Site: Banias/Belinas
Sub-site: area C.
Type finds: single finds
Context: medieval faubourg.
Number of coins: 1
Amaury types: illegible with single annulet after REX.
Reference: Berman and Bijovsky 2008:50.

Type finds: single finds
Excavation: A-2545/1996
Context: Rural Frankish period settlement along the medieval road connecting Jaffa with Jerusalem. Excavation took place in the north-western part of the ancient tell which also formed the nucleus of the Arab village of Bet Dajan till 1948. Finds showed a small settlement active on the tell during the Frankish period.
Number of coins: 2
Amaury types: chevron barred; single barred.
Reference: unpublished reports by M. Peilstöcker and H. Sokolov.

11. Site: Beit Guvrin/Bethgibelin.
Type finds: single finds
Context: Castrum of Frankish villeneuve settlement (1160s-1187) with church, workshops, storerooms stables and domestic structures.
Number of coins: 3
Amaury types: double barred (2) illegible (1).
Found with: c.20 Frankish and European billon deniers and local manufactured lead tokens and a cut gold fragment: Baldwin III (1), Royal gold (1), lead token money (7), Tripoli billon (1), Lucca (6), Valence (1), Provins (1). Two of the Amaury deniers were
found in the grounds of the church complex together with billon of Baldwin III, Valence and tokens.


12. **Site**: Bet Alfa  
**Type finds**: single finds  
**Context**: stray-find, rural hinterland of Bet She’an/Bethsan, La Feve. Collected by kibbutz members around the settlement.  
**Number of coins**: 1  
**Amaury types**: chevron barred.  
**Found with**: mostly 11-13th century Islamic material: Fatimid dirham fractions (5), Zandjid/Ayyubid coppers (10) and two 11th c. anonymous folles.  
**Reference**: unpublished.

13. **Site**: Bet Anan/Bethanam  
**Type finds**: single finds  
**Excavation**: T-326/1942  
**Context**: 'gastina', hamlet/farm in the rural hinterland of Jerusalem, near the medieval main road to Jerusalem.  
**Number of coins**: 1  
**Amaury types**: unavailable.  
**Reference**: Bagatti 1947:185 -186, No.64.

14. **Site**: Bethlehem/Bethleem, vicinity of.  
**Sub-site**: in area 5km south-east of Bethlehem, north of Herodium  
**Type finds**: Hoard  
**Context**: stray-find, rural hinterland of Bethlehem/Jerusalem. purchased from an antiquities dealer in Jerusalem in 2007-8 and presented to the Hebrew University of Jerusalem Coin Collection.  
**Number of coins**: 2  
**Amaury types**: chevron barred (15), double barred (9); one specimen with four bars.  
**Found with**: with the deniers, covered with thin layer of brown earth was a silver dirham covered with a different light brown soil of the Mamluk ruler Al-Ashraf Sayf Al-Din Aynal (1458CE), presumably a heterogeneous find.  

15. **Site**: Caesarea/Cesaie  
**Sub-site**: Hippodrome area, south of the Crusader town.  
**Type finds**: single finds  
**Excavation**: G-38/1992  
**Number of coins**: 1  
**Context**: semi-rural periphery of the Frankish town during the 12/13th.  
**Amaury types**: double barred.  
**Found with**: 25 Frankish period coins mostly dating to end of the 12th and 13th centuries among them **Mauvais Amalricus** deniers (5), European (6), Cyprus (5), tokens (4).
Reference: unpublished.

16. Site: Caesarea/Cesaire
Sub-site: Afar, Tel/Givat Olga, 6km from Caesarea.
Type finds: single finds
Number of coins: 1
Context: Connect to robbery activities during Crusader period by the archaeologists. In my opinion possibly related to agricultural/rural activities within the Frankish seignory of Caesarea.
Amaury types: illegible.
Found with: In previous excavations on the site an earlier European denier minted in Lyon by the archbishops of Lyons dated to c.1150 and two later 13th c. ‘mauvais deniers’ were excavated.

17. Site: Caesarea/Cesaire
Type finds: single finds
Context: Stray-finds from the Sdot Yam Kibbutz Museum. These coins were collected by kibbutz members from the beach and dunes in the vicinity of the kibbutz and Crusader town.
Number of coins: 9
Amaury types: single barred (1), double barred (2), chevron barred (4), chevron dotted (1), unbarred (1).
Reference: Metcalf 1987:95-105;

18. Site: Dor Tell/Merle
Type finds: single finds
Context: semi-urban settlement adjacent to the Frankish period castle.
Number of coins: 2
Amaury types: double barred. (2)
Found with: a denier of John of Brienne (1219-1225 CE) was found during excavations reportedly more coins from other excavations (Stern HA 1998:46) but I have no documentation.

19. Site: Harenc/Harim, Principality of Antioch/ northern Syria,
Type finds: hoard
Context: stray-find of large hoard (c. 3415) in 2007. Site of battle where the combined forces of Tripoli, Antioch and Byzantines were defeated by Nur-a-Din, August 1164, after which the hoard was presumably lost.
Number of coins: c. 6
Amaury types: double barred(?)
**Found with:** large quantity of French feudal issues, Lucca/Valence deniers (1421), Antioch (1327), Tripoli (74) Baldwin III deniers/ooboles (525).

**Reference:** for preliminary listing see Philips (2008: 432-433) and Metcalf (2008:179-180) and personal communication by Marcus Philips 18/05/2010 to the author.

**20. Site:** Hunin, Qal’at/Castellum Novum  
**Type finds:** single finds  
**Context:** 12th century castle lost to Saladin in 1187. Baldwin III deniers were found on the floor of one of the towers (building phase of the fortress) and inside drainage pits (destruction phase). The Amaury denier was a surface find.  
**Excavation:** A-2069/1993; G-36/1994  
**Number of coins:** 1  
**Amaury types:** illegible.  
**Found with:** three Baldwin III deniers, Zandjid and Ayyubid coppers (9), latest coins are coppers of al-Adil (1199-1218)  
**Reference:** Shaqed (1997: 17-18); unpublished

**21. Site:** Jaffa  
**Type finds:** hoard  
**Context:** stray-find found during repair work. Dated to the early 1190s.  
**Number of coins:** 6  
**Amaury types:** double barred (1) of rare 1/4 variety; chevron barred (1); illegible (4).  
**Found with:** with four French deniers of Le Puy (2), Burgundy (1) and Souvigny (1)  
**Reference:** Metcalf 2003-6: 138-139.

**22. Site:** Jaffa  
**Sub-site:** Bet Ha-Eshel street  
**Type finds:** single finds  
**Context:** mostly domestic type structures, part of fortified lower city/faubourg and street intra muros.  
**Excavation:** A-2374/1995  
**Number of coins:** 3  
**Amaury types:** chevron barred (2), single barred (1)  
**Found with:** c. 47 coins dated to the 10-13th century, among them Kingdom of Jerusalem (11).  
**Reference:** unpublished.

**23. Site:** Jaffa  
**Sub-site:** Clock market.  
**Type finds:** single finds  
**Context:** domestic structures and street of Crusader period faubourg.  
**Excavation:** A-4312/2005  
**Number of coins:** 2  
**Amaury types:** chevron barred (1), Illegible (1)  
**Found with:** c.12 coins dated to the 12-13th century, among them Kingdom of Jerusalem (7).
Reference: unpublished.

24. Site: Jaffa  
Sub-site: French Hospital/ Eden Hotel  
Type finds: single finds  
Context: mostly mid 13th century fortifications, remains of southern fortified entrance to the town constructed under Louis IX in 1250’s.  
Number of coins: 2  
Amaury types: single barred with ✶; illegible but clipped.  
Found with: with French denier tournois of Tours dated to the early 13th c.  
Reference: Kool forthcoming; Reem forthcoming.

25. Site: Jaffa  
Sub-site: Kedumim square  
Type finds: single finds  
Context: Crusader citadel area.  
Number of coins: 1  
Amaury types: chevron barred.  
Reference: unpublished.

26. Site: Jaffa  
Sub-site: Kibbutz Galiot and Herzl street  
Type finds: single finds  
Context: mostly domestic type structures, part of fortified lower city/faubourg and street intra muros.  
Excavation: G-4/1976  
Number of coins: 1  
Amaury types: dotted chevron.  
Reference: unpublished.

27. Site: Jaffa  
Sub-site: Qishlehe  
Type finds: single finds  
Context: Frankish Faubourg, built outside the newly rebuilt defensive perimeter of the 1230s-1240s  
Number of coins: 2  
Amaury types: double barred; dotted chevron.  
Found with: c. 25 frankish period coins mostly dated to the 1220-late 1240s.  
Reference: Kool forthcoming; Arbel forthcoming.

28. Site: Jaffa  
Sub-site: Yefet street  
Type finds: single finds
Context: mostly domestic type structures, part of fortified lower city/faubourg and street intra muros.

Excavation: A-2085/1993
Number of coins: 1
Amaury types: double barred.
Found with: c. 11 coins dated to the 12-13th century, among them Kingdom of Jerusalem (5).
Reference: unpublished.

29. Site: Jemmeh, tell, Western Negev
Type finds: Hoard
Corroded lump found during excavations on top of tell in piece of cloth. It possibly constitutes the remains of a small purse. Dated to late 1160's-1170s. (Metcalf dated this hoard to 1175-1187).
Context: Strategic point along ancient way-fare running through Nahal Besor connecting the main road leading to Fatimid/Ayyubid Egypt with the southern reaches of the kingdom of Jerusalem. Presumably lost during the military activities surrounding Amaury's expeditions to conquer Egypt in the late 1160s and 1170s.
Excavation: G-12/1984
Number of coins: 6
Amaury types: double barred (2); chevron barred (1); triple barred (2); dotted chevron barred (3).
Found with: found with two French feudal coins of Melgeuil and Le Puy (midway in the corroded lump).
Reference: Metcalf 1987:84-105; the hoard was re-examined by me after its donation to the IAA Coin department, by the Smithsonian Institute, Wash. D.C. in 2010.

30. Site: Jenin, tell/ Le Grand Gerin
Type finds: Hoard(?)
Context: stray-find; small Frankish castle/castrum
Number of coins: 7
Amaury types: chevron-barred (3), double barred (3), unavailable (1)

31. Site: Jerusalem
Sub-site: Jaffa gate
Type finds: single finds
Number of coins: 2
Context: Frankish/Ayyubid period city gate area
Excavation: A-5815/2010; remains of an early Ayyubid period structure built at the entrance of the city's main West-East thorough fare (Via David), during the Frankish period.
Amaury types: chevron barred, double barred.
Found with: a large number of Zanjid and Ayyubid coppers (c.30); one denier was found in the same locus with a copper fulus of Nur-a-Din (1146-1174) and Saladin (1193).
Reference: unpublished.

32. Site: Jerusalem
Sub-site: Citadel
Type finds: Hoard+single finds
Context: Citadel/David Gate area of 12th century Jerusalem. The hoard consisting of five Amaury coins was found in a burial, together with one coin of La Puy.
Number of coins: 8; hoard (5)
Amaury types: Hoard: double barred (1), chevron barred (3), dotted-chevron (1); single finds: double barred (2), chevron barred (1)

33. Site: Jerusalem
Sub-site: Qishleh
Type finds: single finds
Context: Royal palace, area of the David Gate of 12th century Jerusalem
Number of coins: 5
Amaury types: double barred (2), chevron barred (3).

34. Site: Jerusalem
Sub-site: Qishleh/Armenian quarter
Type finds: single finds
Context: Royal palace, area of the David Gate of 12th century Jerusalem
Excavations: R-100/1967; A-400/1973
Number of coins: 2
Amaury types: unavailable; illegible.
Found with: c.13 Ayyubid fals of the 12th (13th) centuries.

35. Site: Jerusalem
Sub-site: Temple Mount compound.
Type finds: single finds
Context: Templar complex and adjacent religious and secular structures.
Number of coins: 3 deniers and 2 obole
Amaury types: single/ubarred – oboles (2), double barred (1), chevron barred (1); illegible.
Found with: 34 deniers and oboles from the Latin Kingdom and Europe: Baldwin III (7), Guy de Lusignan (1), local tokens (6), Europe (20; Valence, Melguiel, Provins, Burgundy, Lucca and unidentified.)

36. Site: Jerusalem
Sub-site: Western Wall esplanade
Type finds: single finds
Context: domestic, industrial(?) complexes during the Frankish period.
Excavation: A-5432/2008
Number of coins: 1
Amaury types: chevron barred.
Found with: Zandjid and Ayyubid fals.
Reference: unpublished.

37. Site: Jerusalem
Sub-site: Zidkhiyahu cave
Type finds: single find
Context: Frankish period quarry associated with the city's main northern fortification wall and its possible repairs in 1177 (WT 21:25).
Excavation: A-6166/2011
Number of coins: 1
Amaury types: unk.
Found with: deniers of Baldwin III, Gaston III of Bearn, dukes of Normandy and Zandjid and Ayyubid fals.
Reference: unpublished.

38. Site: Jerusalem
Sub-site: Mnt of Olives
Type finds: single finds
Context: Stray-find from the rural periphery of Jerusalem
Amaury types: double barred.

39. Site: Jerusalem
Sub-site: Church of Ascension, Mount of Olives.
Type finds: single finds
Context: underground building in the outer courtyard of the Church of Ascension, part of the Crusader period church
Excavation: A-3049/1999
Number of coins: 1
Amaury types: double barred.
40. Site: Jerusalem
Type finds: single finds
Sub-site: City of David
Context: rural periphery of Jerusalem.
Excavation: A-T-48/1927 found within debris; A-5813/2010
Number of coins: 2
Amaury types: unavailable (1), chevron barred (1).

41. Site: Jerusalem
Type finds: single finds
Sub-site: Nevi'im street
Context: rural periphery of Jerusalem
Number of coins: 1
Amaury types: double barred
Reference: unpublished.

42. Site: Jerusalem
Sub-site: Mamilla (Tolerance Museum)
Type finds: single finds
Context: Frankish/Ayyubid period burials and water pool, outside, west of the Medieval city.
Number of coins: 1
Amaury types: double barred.
Reference: unpublished.

43. Site: Jerusalem (?)
Type finds: Hoard
YMCA Jerusalem; Metcalf tentatively dated this hoard to 1175-1200.
Context: Stray-find. Uncertain.
Number of coins: 73
Amaury types: unbarred (4); double barred (22); chevron barred (25); triple barred (7); dotted chevron barred (11), illegible (2).
Found with: appeared on the market with a number of the other coins but it is not certain these belonged to the original hoard – royal Baldwin III deniers (3), John de Brienne (1), Beirut (1), Tripoli (2), European (4; Melguiel, Le Puy, Celles, Chartres), Cyprus (10).

44. Site: Jerusalem
Sub-site: Lifta
Type finds: single finds
Context: Stray-find from the rural periphery of Jerusalem
Number of coins: 1
Amaury types: double barred.
Reference: unpublished.

45. Site: Jerusalem
Sub-site: Ramot/el-Burj.
Type finds: single finds
Context: Frankish village north-west of Jerusalem
Excavation: A-1882/1992
Number of coins: 2
Amaury types: double barred, illegible.
Found with: c.62 coins from the 12-13th century. Latin East: tokens (2), 13th imitation dirham, (1), Cyprus (1); Le Puy (1), Burgundy (1); Zandjid (9), Ayyubid (39), Seljuq (1).
Reference: unpublished.

46. Site: Jordan/Oultre Jourdain
Type finds: single finds
Context: stray-finds in the eastern periphery of the kingdom
Number of coins: 8.
Amaury types: unavailable.

47. Site: Tavor/Mont Thabor
Sub-site: Mas-ha, Kh./Messe
Type finds: single finds
Context: rural hamlet belonging to the Frankish period monastery on Mt. Tabor since the early 12th century (Röhrich Nos. 39; 51).
Number of coins: 1.
Amaury types: double barred
Reference: unpublished.

48. Site: Mesad Boqeq, Dead Sea
Type finds: single finds
Context: south-eastern periphery of the Frankish kingdom.
Excavation: G-7/1977
Number of coins: 1.
Amaury types: double barred

49. Site: Nablus/Naplouse
Sub-site: amphitheater, theater, stray-find.
Type finds: single finds
Context: town in Frankish kingdom (till 1187).
**Excavation:** Unit of Archaeological staff officer of the Civil Administration.
**Number of coins:** (3)
**Amaury types:** chevron barred (2); single barred (1).
**Reference:** unpublished.

50. **Site:** Qubebeih/Parva Mahumeria
**Type finds:** single finds
**Context:** Frankish period *villeneuve* village (1160s-1180s). Of the sixteen excavated dwellings that contained billon money of the 12th century, seven also contained Amaury deniers. Another two specimens were found in the manorial ‘Domus’, near a gold hoard of bezants and cuttings. Another two were stray-finds.
**Excavation:** T-326/1942.
**Number of coins:** (12)
**Amaury types:** double-barred (5), chevron barred (2), unavailable (5).

51. **Site:** Ramla/Rames
**Sub-site:** south of the White Mosque
**Type finds:** single finds
**Context:** Area of dense Fatimid period residential construction abandoned after the 1068 CE earthquake upon which isolated Mamluk period installations were built. The coin was found pierced, showing its secondary use as jewelry in a later post-Crusader era.
**Excavation:** A-3772/2002
**Number of coins:** (1)
**Amaury types:** chevron barred.
**Found with:** approximately 250 identified coins, mostly Ummayad and Abbasid period material and a few Fatimid and Mamuk coins; the excavation also yielded a late 10th-11th century denier minted in Tours, France, and another illegible denier type coin, possibly from the Latin East.
**Reference:** unpublished.

52. **Site:** Burj al-Ahmar/Turris Rubea
**Type finds:** Hoard
**Context:** Fortified Frankish settlement in Sharon plains. c. 24-25 deniers were found scattered in fill dated by Pringle to 13th. Metcalf dated the hoard to 1187-1189.
**Excavation:** G-10/1983
**Number of coins:** (4)
**Amaury types:** double barred
**Found with:** context shows these to be associated with Le Puy deniers (c.24) and an unknown denier (1).

53. **Site:** Safed/Saphet
**Type finds:** single finds
Context: Medieval urban settlement adjacent to the Frankish period outer defense wall, inhabited between 1180s-1260s. Its context shows that good quality Amalricus deniers circulated deep into the first half of the 13th century.

Excavation: A-4406/2005

Number of coins: (1)

Amaury types: single barred

Found with: twelfth century Zandjid copper and two early 13th century Ayyubid coppers in a context archaeologically dated between the 1180s – 1260s. Excavations also yielded two French deniers: Robert I, Celles, 1178 – 1189 (1) in a context securely dated to the end of the 12th – beginning of the 13th centuries; and a denier of the Dukes of Normandy, late 11th/12th centuries (1), in a mixed 14th century fill.

Reference: Kool Forthcoming.c.


Type finds: single finds

Context: 12/13th c. rural hamlet on the eastern fringes of the Akko Valley between Le Safran/Shefar'am and ‘Ibillin.

Number of coins: (1)

Amaury types: illegible.

Reference: unpublished.


55. Site: Sabastiya/Sebaste

Type finds: single finds

Context: in the vicinity of the Crusader shrine of St John the Baptist.

Number of coins: (1)

Amaury types: double barred.

Found with: billon of Baldwin III (2) and Ayyubid coppers.

Reference: Kirkman 1957:64.

56. Site: Sabastiya/Sebaste

Type finds: single finds

Context: rural. Stray-find in the vicinity of the Frankish stronghold (?).

Number of coins: (1)

Amaury types: double barred


57. Site: Tantur kh.

Type finds: single finds

Context: Frankish settlement in the plain, east of Acre.

Excavation: G-22/1991

Number of coins: (1)

Amaury types: chevron barred.
**Found with:** 14 Zandjid and Ayyubid fals mostly from Saladin; includes also an anonymous fractional copper from Antioch which was misidentified as a copper from Henry of Champagne (Frankel 1988:272).

**Reference:** Berman (1991: 93)

58. Site: Tell Yavneh/Ibelin
**Type finds:** Hoard
**Context:** Frankish castle and settlement built around 1142 which occupied the tell (Taxel 2005:157). The hoard lumped in a rolleau, possibly the remains of a purse, was found at the western base of the Tell during salvage excavations which uncovered remains of an industrial site dating to the Byzantine-Early Islamic period (6-8th century).

**Excavation:** A-5612/2009
**Number of coins:** (49)

**Amaury types:** unbarred (2), double barred (19), chevron barred (22), dotted chevron barred (4), single barred (2).

**Found with:** found with three Saladin dirhams, dated to 1189-1190 and a Lucca denier. During previous excavations (A-3396/2001) at the northern edge of the tell (Kletter 2004) a single Baldwin III denier (1143-1163) was recovered.

**Reference:** [http://www.mynet.co.il/articles/0,7340,L-3697876,00.html](http://www.mynet.co.il/articles/0,7340,L-3697876,00.html); Kool (in preparation).

59. Site: Tiberias/Tabarie
**Sub-site:** Old city, ancient bathhouse/market
**Type finds:** single finds

**Context:** Crusader cemetery discovered in the grounds of an ancient bathhouse/market space on the south-eastern edge of the Roman-Byzantine city. South of the Medieval city but near (c.150m) to Mnt Berenice/church of St. George (see below). It can possibly be identified with the parish graveyard of St George to which Ellenblum alluded in his study of Frankish rural settlements (Ellenblum 1998:119-120). According to the unpublished excavation report from the late 1950s eighty-eight graves were discovered in three layers. Next to the skulls of six skeletons Crusader coins were deposited, all regular royal Baldwin III and Amaury types.

**Excavation:** &-43/1956
**Number of coins:** (20)

**Amaury types:** unbarred/dotted chevron barred; triple/double barred (1), double barred (9); chevron barred (8); dotted chevron barred (1); illegible (1).

**Found with:** early and late type Baldwin III deniers.

**Reference:** unpublished; Kool, *in preparation*.

60. Site: Tiberias/Tabarie
**Sub-site:** Old City
**Type finds:** single finds

**Context:** area to the south adjoining the Crusader period city


**Number of coins:** (6)
Amaury types: double barred (2), single-barred? (1), illegible (2), lost (1).
Found with: Fatimid dirham fractions, Zandjid and Ayyubid coppers, and a Henry of Champagne copper from Acre (1192-1197).

61. Site: Tiberias/Tabarie
Sub-site: Mnt Berenice.
Type finds: ‘mini’-hoard + single finds
Context: 12th century parish church of St George ‘above Tiberias’. A ‘mini-hoard’ was excavated north of the atrium in Abbasid-Fatimid period church which remained in use during Frankish period up to 1187; finds of Baldwin denier and bezant in adjacent prayer area, north of northern row of columns together with Ayyubid coppers up to Al-Kamil, 1218-1237 (showing the continued use of the structure during Ayyubid period.) Single finds mostly from dump.
Number of coins: 9; Hoard (2); single finds (7)
Amaury types: hoard: chevron barred and dotted chevron barred (2); single finds: chevron barred (5); dotted chevron barred (2)
Found with: 25 coins of the 12-13th c. Latin East: Baldwin III oboles (2), royal bezant (1); Europe: Le Puy (1); Fatimid dirham fractions (1); Zandjid and Ayyubid coppers (20),

62. Site: Ateret/Vadum Iacob
Type finds: Hoard+ single finds
Context: unfinished Crusader fortification, which existed barely for ten months – from September 1178 to 31 August 1179. The hoard was found while excavating the remains of a partially burned skeleton of a man, presumably one of the defendants. Numerous single finds were collected within the castle’s grounds and gates, among dead animals, human remains and arrow heads.
Number of coins: 180+; hoard (c.160; 124 cleaned); single finds (23)
Amaury types: hoard: chevron barred (46) and dotted chevron barred (21), double barred (49), triple barred (2), unbarred (5); single finds: single barred (1) double barred (8) chevron barred (7); dotted chevron barred (5); illegible (2)
Found with: hoard with a single helmet denier of Tripoli; single finds with c. 35 coins mostly of the 12 century (a few of the 13th c. dated to the Ayyubid occupation of the site).
Latin East: Raymond of Tripoli (1), royal bezant (2) ‘Vadum Iacob’ token (4); Europe: Le Puy (1); Fatimid dirham billon (1); Zandjid (5), Ayyubid (20), Seldjuq (1) coppers,

63. Site: Yavneh Yam/Palmachim
Type finds: single finds
Context: rural hinterland of Jaffa/Ibelin; local stray-finds in kibbutz museum collection.
Number of coins: 2
Amaury types: chevron barred (2)
Found with: Baldwin III (1), Saladin as vassal of Nur-a-Din (1)
Reference: unpublished.

64. Site: Yokneam/Caymont
Type finds: single finds
Context: excavated from church of crusader settlement/fortification.
Excavation: A-2104/1993
Number of coins: 1
Amaury types: chevron barred
Found with: Zandjid (1)
### 4.9. APPENDIX 2: List of Varieties

<table>
<thead>
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<th>No.</th>
<th>Type</th>
<th>REX +mintmark</th>
<th>Annulets/stops</th>
<th>Frequency</th>
<th>Site Number (checklist)</th>
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Chapter 5. The Kingdom’s Monetary Underground:

The Circulation of Lead Token Money

5.1 Introduction

Comparatively little is known about the existence and function of lead token money in the Crusader kingdom. Originally, low value, unofficial, token money was thought to be limited to the kingdom's major urban and merchant centers like Acre, where the first stray-finds originated. A comprehensive examination of excavation finds and provenanced material - the main crux of this research - though show that

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1 Most Crusader period historians are unaware that such type of money existed in the Latin East. A good example is Holmes’ (1977:7-9) whose short description of moneys in daily life in the Latin East during the 12-13th centuries omits any reference to its existence. This is not surprising since until the mid-1960s also numismatists knew very little about such lead token money in the Frankish East. De Saulcy was the first to refer to a single lead imitation of a Tripolitan gros of the late 13th century in his Numismatique des croisades (Saulcy 1847: planche VII) but the subject remained little studied over the next hundred years. Schlumberger did not mention lead token money at all in his Numismatique de l’Orient latin (1878), the main reference work for Frankish period coinage for more than a century. Even today no comprehensive work or catalog exists on the subject. Material was treated in a preliminary fashion in Metcalf’s Coinage of the Latin East, the modern standard work on Crusader coinage (Metcalf 1995:306 -307), possibly because until the late 1990s published finds of lead tokens were few and consisted mostly of stray-finds from Acre and Caesarea (Rahmani and Spaer 1965-66:73; Metcalf 1975:149) and two large groups of stray-finds of lead tokens originating from Beirut and its environment (Wilkinson 1986; Labrot 1991a:9 -13; Labrot 1991b:9 -15). Publications of excavation finds of lead token money are relatively new: from Acre (Syon 1997:87-89); from the castle town of Athlit/Pilgrims’s Castle (Metcalf, Kool and Berman 1999:109 -110). An important article was published on a 13th century lead token mould from Akko (Syon 1999:163 – 166) and on four lead ‘money’ tokens discovered at excavations at Vadum Iacob castle (Kool 2001:329 -333). However the discovery of a large cash of lead tokens at Belmont/Suba castle received only a short notice (Metcalf 2000:84 – 85).
the use of locally manufactured lead money was far more widespread than previous thought throughout the kingdom of Jerusalem during the 12th and 13th centuries.

Use of unofficial lead token money was a common practice in Roman and Byzantine society, alongside the copious amounts of precious metal (silver and gold) and small change (bronze, copper) that formed the official monetary economy. In Medieval Europe, where the flow of cash money was far more limited, the production and circulation of lead tokens as local ersatz money became a well established tradition in the manorial and early urban economies of the 12 and 13th century. Apparently its use during this period became increasingly important as the demand for cash money, fueled by the more monetized, seigniorial and small urban and fair economies developing since the 10-11th century, outstripped the limited capacities of existing royal and seigniorial mints to provide small daily cash.

Lead token money seems to have played also an important role in the Jerusalem kingdom. The subject though has received little attention in the past due mainly to a lack of material, particular from provenanced sites. The greater availability of such material due to intensive excavations in recent years now allows us to study the phenomenon more in depth.

Beyond purely numismatic/professional considerations, like the study of new types, a comprehensive understanding of its use is significant for two additional

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2 See the works of Mihail Rostowzew (1903, 1095), for more updated studies see Morisson (1993: 79 - 101) and Overbeck (1995; 2001). The phenomenon, apparently on a much more limited scale existed also in Ancient Greece (de Calletay 2010:219 – 255).

3 For France see Labrot (1989:27 – 40); For England see Mitchiner and Skinner (1983:29 – 77) and Dean (1977:137 – 147); for the Iberian peninsula see Crusafont i Sabater et.al. (1996:46 –47); for Venice and its region see Callegher 1996:183 - 210). The last work also gives exhaustive references for the finds of such objects in other parts of Italy (Callegher 1996:184-5, notes 7-8) showing the wide use of such objects in medieval Italy.

historical reasons. First, it allows a more detailed understanding of the Crusader kingdom's monetary economy, particularly the degree to which money was used and available to the population of the kingdom. Secondly, the distribution and use of these lead coins tells us something important about the character of the Frankish settlement in the kingdom: their geographical distribution in my view seems to be directly linked to the presence/absence of the kingdom's European or native born *poulain* population in a particular site or region. This is because no parallel monetary tradition of unofficial lead money on such a scale pre-existed in the Muslim East before the Latin settlement in the East.⁵ Hence, lead token money indisputably represented the translation of a genuine European Medieval monetary custom to the East, which likely accompanied the local *poulain* population wherever they settled.

⁵ There exist a few rare examples of Islamic type tokens from the 12th century but they come from two other frontier regions where Christian Europe and Islam met: from the southern part of the Iberian peninsula (Almoravid ruled Andalusia and the independent Taif/emirate of Majorca) and Norman Sicily (Crusafont 1996:81–85). From the Muslim ruled principality of Majorca also came a unique slate mould to produce a token imitating a *dirhem* of its Aglabid ruler Mubassir Nasir al-Dawla (486–508AH/1093 – 1115 CE) (Crusafont 1996:83; 106 – 107).
5.2 Finds and use of Token money

At present we have documentation of several hundred lead tokens coming from some 30 different known sites and locations within the territory of the kingdom (see the attached catalogue for a detailed description). The core of this group consists of single finds, found in controlled excavations and stray-finds with a known provenance. To these one can add several large assemblages of tokens: a large hoard of lead tokens (436), all of the same type, found in the inner ward of Suba/Belmont castle, a 12th century Hospitaller fortress situated West of Jerusalem; a group of circa fifty-four 'lily' type tokens collected from Frankish period town of Caesarea/Cesaire and its immediate surroundings; and a large group of diverse looking tokens allegedly from the area around Beirut/Beruth. In addition we now know of four moulds for the production of lead tokens: two stray-finds from Acre capable of producing together some 25 different types and two moulds recently excavated from the 13th century Frankish castle of Arsur/Apollonia with at least another 10 types.6

5.2.1 Lead Tokens in Cities

Large numbers of these token moneys seem to have circulated in urban contexts, in particular in the port cities of Acre, Tyre and Beirut. Among these is a large group of stray-finds from Acre without any archeological context, the first exemplars of such European lead token money from the kingdom's territory published.7 Initially, these tokens were associated with the Italian merchants that had settled in semi-autonomous

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6 My thanks to Prof. Oren Tal, Tel Aviv University, for granting me access to this, as yet unpublished material.
quarters in Acre. These, it was originally implied, had imported the tradition from Italian trading towns and used tokens as local money to pay for goods and services. Excavations in the eastern section of Medieval Acre (now outside the Ottoman walls) did indeed yield an example of such an Italian mercantile *tessera* (No.87). However, excavation finds of similar type tokens in other quarters of the city now clearly show that the use of such lead money was not restricted to the Italian merchant community but were produced and used by many different population groups that inhabited Frankish period Acre during the almost two hundred years of its existence.

A closer look at the archaeological contexts of these lead monies from Acre hint to their widespread use and function in the city: a number of tokens were found among defensive structures such as the double walls and moat, defending the eastern part of the city in the 13th century, possibly associated with military activities there (Nos. 87 – 91); others were found exclusively in domestic contexts (Nos. 94 – 97); a third group seems to have been associated with a religious type complex in the Montmusard quarter (Nos. 92 – 93) and a structure thought to be associated with the German Order at Acre (Nos.98 – 99).

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8 Syon (1997:89, No.4) described it as an "anonymous possible European alms token" dated to the 13th century or possibly an Ottoman period token. Its iconography and shape though closer resemble in my opinion the *tesserae* used by Italian merchants during the 13-15th centuries (Bernocchi 1996; Vanni 1997). For examples of finds of such *tesserae* in the Medieval Eastern Mediterranean (Corinth) see Saccocci and Vanni (1999: 201 – 242).

9 Token monies were excavated from the eastern section of the medieval city – nowadays located outside the Ottoman walls (Hartal 1997:1-30;109-114; Syon 1997:87; Tatcher 2000: 27 -41; Tatcher 2005 [http://www.hadashot-esi.org.il/report_detail_eng.asp?id=146&mag_id=110]; For a structure associated with the German order see A.Boas (2005)‘Akko East’ HA 117 [http://www.hadashotesi.org.il/report_detail_eng.asp?id=237&mag_id=110]; for publication of its tokens and money see Kool forthcoming (d) – and from two additional 13th century quarters, a previously unknown Provencal/Hospitaller quarter located in the north-east of Akko’s Old City (Syon
Provenanced finds from other areas in the kingdom show that the use of such token monies was not restricted to Acre, the kingdom's largest and busiest port city, and its trade. Substantial quantities of similar types of lead token monies circulated also in other cities like Tyre and Beirut.\(^\text{10}\)

Particular important are finds of such token money in Jerusalem of which we knew very little until quite recently. Most of these are still unpublished. In contrast to Acre, where most such coin finds seem to date to the 13\(^{\text{th}}\) century, the finds from Jerusalem clearly show that unofficial token money also circulated earlier, during the 12\(^{\text{th}}\) century, in the kingdom's capital. Also here, the various archaeological contexts within the medieval city demonstrate that such tokens were used throughout the Frankish period city by different institutions, groups and individuals. For example, a group of three tokens was excavated from the Herod's Gate/Bab al-Zahra, along the Frankish period northern wall fortifications (Nos.2 – 4).\(^\text{11}\) These could be associated with the remains of a large and impressive Crusader building connected to the line of

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\(^{10}\) For Tyre see Decloedt (1914: 457-458); For Beirut see Labrot (1991a:9-11;1991b:9-14). From the latter originated three parcels of lead tokens representing some 128 token monies.

\(^{11}\) IAA 107035, 107039, 107042 (unpublished) from the Herod's Gate excavations (A-4467/2005). My thanks to the excavators, Dr. Gideon Avni and Dr. Yuval Baruch for permission to mention the find.
the city wall which may also possibly have functioned as a church. Another token came from the southern section of the city, where during the Frankish period the 'Tanner's Road' ran to the Tanner's Gate area, showed their use in the tanning industry in Jerusalem (No.1). A third group of tokens was found, together with a large group of 12th century billon monies, in the earth-fill ‘excavated’ from the ‘Salomon’s Stables’ complex on the Temple Mount (Nos.5 – 13). Presumably these tokens were associated with activities of the Knights Templar, whose compound occupied the southern half of the Temple Mount platform.

12 HA–ESI (1998 113:76*–79*; Pringle (2007) does not mention any church building in this location. The nearest building is the Jacobite Cathedral church of St. Mary Magdalene and Simon the Pharisee, located a considerable distance from the gate to the south-east (Pringle 2007:327 – 335).

13 IAA 119295 (unpublished) from the Temple esplanade excavations (A-5002/2007). My thanks to Dr. Shalumit Wexler-Bedolah for permission to mention this find.

14 My thanks to Dr. Gabriel Barkay and Zachi Zweig of the Temple Mount Sifting Project for allowing me access to the material. For a detailed account of these illegal excavations initiated by the Waqf and the Islamic Movement in Israel which started in earnest during 1999 see Seligman 2007:42*–44*. The tokens were found during a multi-year sifting project of large amounts of earth illegally dug from the northern outer face of Salomon’s Stables (a pit 36m long 43m wide and 12m deep), and the inner face of the Eastern Wall of the Temple Mount (Seligman 2007:45). Bahat (2001:125-130) suggest this fill in fact originated from the immediate surroundings of the Temple Mount, in particular from the City of David/Silwan area; Seligman (pers. comm. June 2012) though located the origins of the fill from the area of the Temple Mount and the vicinity of the structure. Zweig (pers. comm. 24/07/2012) commented that the earth containing many of the tokens and Frankish period coins seem to have originated from within the underground compound which served as stables for the Templar Order’s horses since they are associated with medieval horse equipment and other medieval artifacts within a homogeneously looking earth-fill.

5.2.2 Tokens in smaller towns

Token monies were also present in the smaller towns and urban centers of the kingdom. This is shown by the relatively large group of tokens excavated and collected in and nearby the Frankish coastal town of Cesaire/Caesarea: excavations uncovered a 'mini-hoard of two small lead tokens from what in the 12th century constituted the southern part of the Crusader city, built up with domestic structures and industrial installations (Nos.34 – 35); an identical token was unearthed from an area slightly to the north where in the 12th century the town's main cathedral church of St. Peter stood and adjacent domestic structures (No.33); while some 54 stray-finds were collected in and around the crusader town.

16 IAA 61791-92 (unpublished), from IAA Caesarea excavations (G-38/1992); (this area underwent significant changes during the Louis IX re-fortification of Caesarea during the 1250s with the construction of a moat and extension of the defence wall Porat (1996:35 –73).
18 The pieces derive from several collections: a group of tokens impounded by the IAA Theft Prevention Unit from a detectorist active in Caesarea in 2005 (IAA 109600-109604); several private collections comprising of material collected from Caesarea Maritima (Metcalf and Holland 1993:94).
Fig. 3. Cross/geometrical token, domestic quarter adjoining the Cathedral of St. Peter, Caesarea, 12-13th c.

All these were common type tokens imitating the obverse of billon deniers money and other miscellaneous types. Also a large group of 'lily' type tokens was found (Nos. 36–52), in our opinion, possibly connected to the large numbers of masons and other workmen employed for the construction of the town's massive defenses in 1251 (see below).

Token monies were also found in other smaller castle towns and burgi. Meticulously recorded excavation finds within the walled burgus adjacent to the Pilgrim's Castle at Athlit for example provide us with a wealth of information, how extensive the need for local produced lead money was among the inhabitants of the castle town (together with regular billon) in the mid-13th century (Nos. 62 – 82).¹⁹

Fig. 4. ‘Waterwheel’ token, burgus of Athlit/Château Pélerin.

Finds clearly show the presence of lead tokens in the many different settings within the burgus, domestic quarters, kitchen area, bath-house, mill and stables. In the

case of the Athlit burgus calculations show that the lead money accounted for some 6-7% of the total amount of cash money excavated from the Frankish period castle town between 1218 and 1265 CE.

Excavation finds from Ascalon, Jaffa, Tiberias and Baniyas demonstrate likewise that lead money was used intensively in settings connected to daily life of the kingdom's urban population: in domestic quarters (Ascalon, Jaffa) (Nos.18;28), in a graveyard (Jaffa) (No.19), and in a large public building or church (Tiberias) (No.166).20 The discovery of Frankish period token money in the walled town of Baniyas/Belinas (No.175), under Frankish rule for only a relatively short period (1128-1164), shows that the phenomenon even extended to the urban periphery of the kingdom.21

5.2.3 Tokens in inland castles

Lead money also played a key-role in providing a hard needed substitute form of cash money for the Frankish inhabitants of the more isolated castles, manors and farms of the kingdom. An impressive example is the discovery of a huge cash of lead money, the largest ever found, some 436 identical specimens, excavated from the inner ward of the Hospitaller castle of Belmont/ Suba near Jerusalem (No.16).22 Though it


21 IAA 61060 Paneas/Belinas excavations (G-32/1992; Bijovsky and Berman (forthcoming).

consisted of a well-defended fortification with a central tower/keep and massive outer enceinte, the castle’s main function was to serve as an administrative/economic center of the agricultural estates in the surrounding Hospitaller domain during the second half of the 12th century. In its inner ward stood also installations such as a wine-press and other food-processing installations. The find of such a large stash of cash money nearby seems to suggest that these were somehow associated with the use of these installations, possibly by the surrounding villagers serving the local garrison, though it is not exactly clear how this local lead currency system functioned. What we do know for certain is that the find of such a large quantity of the lead tokens clearly show that these tokens played a major role in the local monetary economy of the castle. This purpose as local 'castle' money is also implied by the design of the token. One side symbolically depicts the main elements of the castle: a moat (symbolized by a fish), a bridge (three arches) and defensive gate (curved line with crenellations). The other side, somewhat more elusive, shows a Medieval Latin inscription PON with a contraction mark above, the equivalent of Pons. Pons/Ponce was a popular medieval name maybe a reference to the person under whose authority these tokens were produced. Alternatively, it could also refer to its original Latin meaning as ‘bridge’, maybe alluding to its function as bridge/toll money? (Fig.5).

Fig.5. 'Castle' token of Belmont castle/Suba.

The importance of cash money, including such lead token money, on the Hospitaller's rural estates around Belmont, finds its expression in a charter preserved in the cartulary of the Holy Sepulchre in Jerusalem. Dated to 1141 it stated that the local Muslim and Christian villages of the estate could pay the Order their annual render in three ways: *pro annona vel bisancis vel pro aliqua pecunia* (‘in produce, or in [gold] bezants or for any other money’). A well-developed cash money economy at Belmont, including large amounts of substitute lead money, can be also explained by the fact that the castle possibly played an important role in providing the large supplies of foods, beverages and other materials needed to run the main Hospital complex of the Order in Jerusalem.

Another example of the wide-spread use of such lead money in an isolated castle environment are a group of four identical tokens unearthed at the short-lived Royal/Templar fortress of Vadum Iacob (1178-1179) in the Eastern Galilee, which guarded a strategic crossing over the river Jordan into Ayyubid controlled Damascus (Nos.167 – 170). The four tokens were all excavated from different locations within the destroyed castle’s perimeter together with regular royal billon money, clearly showing they must have circulated as small cash for small daily transactions. The tokens closely resemble in part regular billon money in shape and iconography, complete with cross pattée and marginal Latin legend. Nevertheless, the legend clearly showed that this was unofficial lead money, to be used only within the castle's immediate surroundings as it clearly read +VADI IACOB, 'from Vadum Iacob' (Fig.6).

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26 For a detailed analysis of the Hospital’s logistical needs see Kedar (1998: 3 – 27).

Presumably these tokens were issued to function as some sort of local emergency money to pay the numerous craftsmen brought to the site by Baldwin IV and the Templars, to complete the castle defenses (unsuccessfully) before the arrival of the Ayyubid host, as witnessed by the historical sources and in particular by the wealth of archaeological evidence discovered at the site during a decade of excavations (unfinished walls, mason tools).²⁸

5. 2. 4 Tokens in rural estates, villages and monasteries

The custom of lead money, it seems, also spread to the smaller rural estates, Frankish villages and monasteries scattered in the kingdom's territory. Two token moneys were excavated in the villeneuve of Khirbat al-Kurum situated along the Vicus, the main road leading to Jerusalem from Jaffa (Nos.14–15).²⁹ Another group of no less than eight(!) lead tokens came from the castrum of the Frankish village settlement of Bethgibelin/Bet Guvrin (Nos.20 – 27).³⁰ Four of these were identical specimens showing a massive fortified wall with battlement and a cross decorated with anullets and a crescent.

The latter were found in pairs, two in the keep, another two in the adjoining church yard within the *castrum*, together with royal billon and Luccesse/Valence deniers, an indication for their use with regular small cash money within the settlement. In similar fashion, in the northern part of the kingdom, token money was found in a small Frankish settlement near the *castrum* of Bethsan/Beth She'an and even in more outlaying, isolated Frankish villages east of Safed like Kh.Shema and Marot/Marus, resettled by Christians and Frankish colonists between 1150-1277 (Nos. 171–175). From the Western Galilee we have material evidence of two Frankish *casalia* where such lead money circulated, connected to a more developed rural monetary economy in the hinterland of Acre during the 13th century: Manueth/Kh. Manuet, a Frankish village, property of the Tabor monastery involved in the lucrative production of sugar cane (No.162); and Cafresi/Kafr Yasif, an important Frankish

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31 Bethsan/Beth She'an: P418149 (unpublished), excavation (G-5/1993); Kh. Shema: Meyers 1976: 281, No. R2013; Marot/Marus: (unpublished list of coins at the IAA Coin Department), excavation G-1402/1985; A re-evaluation of the archaeological evidence (Barbé 2010:267) seems to indicate that these were Frankish villages, re-occupied during the 12-13th c., possibly by a mixture of local Christian and Frankish colonists and not as previously thought continuously inhabited a Jewish population (Meyers 1976).
village, property of the Teutonic Order, located on the main 'royal' road leading out of Acre eastwards (Nos.163–165).  

Finds of tokens at *Fons Vivus*, the small 13th century Frankish period Carmelite community of St Mary on the north-western flank of the Carmel range is another example of the use of such simple 'local' money in a relatively isolated and small rural Frankish community. The find of no less than four of such lead tokens, excavated at this small site is a telling example of the importance of such unofficial lead money even in 'deep' rural communities in the Frankish kingdom (Nos.83–86). The tokens were found concentrated in a small area serving as a service/kitchen area adjacent to the community's church (St. Mary).  

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32 Manueth/Kh. Manuet: IAA63453 (Stern 2001:287); the token was found in a 13th century sugar mill and refinery, located some 250m west of the actual Frankish period village (Stern 2001:277). It was found with a large quantity of sugar pot fragments from the Crusader period (Stern 2001:300). Cafresi/Kfar Yasif: unpublished; the tokens were allegedly from an olive grove near Kfar Yasif (pers. Comm. A.Berman 23/04/2012). Pringle (1997:119) catalogued the site as one for which there was no sufficient evidence of surviving crusader buildings and consequently left its 'Frankish' character open to interpretation. More recent archaeological excavations though confirmed it was settled during the Crusader period (Rafa Abu Raya 2010). More important written sources clearly indicate evidence of its status as an important Frankish estate: it was mentioned some eight times between 1193 and 1283 in Frankish property charters and an agreement with Mamluk rulers; also detailed reading of the documents show it was already an important royal estate in the 12th c. before being sold to the German Order; and it was located on the main 'royal road' leading out of Acre east/northwards, close to two other Frankish villages. I am particularly indebted to Dr. Rabiyya Khamis of Haifa University for sharing with me relevant material from his PhD research on this subject. See also Syon and Stern (forthcoming) who propose to identify the site with medieval Mimas  

33 Kool forthcoming (e).
Possibly these tokens were used by the inhabitants and dependents of the monastery for simple domestic transactions involving foods or clothing or utilized as alms tokens for visiting pilgrims to enabled the procurement of a simple pre-cooked meal and beverages.\textsuperscript{34}

\textsuperscript{34} On the subject of everyday foods for pilgrims and settlers see Yehuda (2011:58).
Map 1. Sites with token money in the kingdom of Jerusalem according to quantity
5.3 The Production of lead token money

Unlike regular money, like the royal billon \textit{deniers} or gold 'imitation' \textit{bezants} of the Kingdom, struck manually from well crafted dies, lead token money was cast in crudely made moulds. The paramount difference between the two was that the minting of coins was done by professional craftsmen 'moneyers'/\textit{monetarii}, at considerable expense and strictly supervised by the royal authorities in Jerusalem and Acre, whereas casting lead tokens could be done for little cost by almost anybody possessing a simple workshop and the basic raw materials.\footnote{On 11-13\textsuperscript{th} c. \textit{monetarii} in Western Europe see Lopez (1953:1 – 43), Metcalf (2001:59 – 66), Travaini (2001:69 -86) and Bompaire (2001: 87 – 100).} A rare example of such a Crusader period workshop, apparently involved in the manufacture of pilgrim memorabilia like lead/tin ampullae, was excavated in a 13\textsuperscript{th} century quarter adjacent to Acre's Hospitaller quarter.\footnote{Syon 1999b: 110 – 115; Syon forthcoming.}

Lead tokens were usually cast by means of a bivalve mould consisting of two superimposed slabs, usually made of fine-grained limestone, rarely of sandstone or slate.\footnote{Dean 1977:138 – 139; Labrot, pers. Comm. (08/08/2012).} The latter material was particular strong and heat resistant but very difficult to carve, usually the work of an experienced master craftsman. Also it was less available in the Frankish East, probably mostly in ports, where it arrived from Europe as part of a ship's ballast.\footnote{Syon and Tatcher, forthcoming.}

Each slab held a number of circular depressions in which different designs of for tokens were carved. Depending on its dimensions the slab could contain between 3 to c. 20 different tokens. These were usually inter-connected by a narrow channel to a

\begin{itemize}
\item \footnotetext[35]{On 11-13\textsuperscript{th} c. \textit{monetarii} in Western Europe see Lopez (1953:1 – 43), Metcalf (2001:59 – 66), Travaini (2001:69 -86) and Bompaire (2001: 87 – 100).}
\item \footnotetext[36]{Syon 1999b: 110 – 115; Syon forthcoming.}
\item \footnotetext[37]{Dean 1977:138 – 139; Labrot, pers. Comm. (08/08/2012).}
\item \footnotetext[38]{Syon and Tatcher, forthcoming.}
\end{itemize}
central channel, forming a 'tree'-like arrangement. Hinges/alignment holes in the two pieces of the mould made sure the two halves fitted perfectly. Next, the molted lead was poured directly into the main pouring channel via an opening between the fitted moulds. After cooling, the two slab-halves were opened and the cast tokens taken out still connected to the tree-like pouring channels (fig 9).

Fig. 9 Modern lead cast of 'tree' of tokens, Acre mould (Syon 1999: Plate 27)

Then the tokens were cut from their channel ready for use, while the remaining lead scrap of the 'tree channel' was re-used once more for casting another batch of tokens.

39 Reproduced with kind permission of the author D. Syon.
The use of lead token moulds appears to have been common in Medieval Europe between the 11th and the 15th centuries. Finds of such moulds appear regularly in excavations and collections. More than two dozen provenanced moulds have been documented. Most come from Medieval France and England but a number were also found in Southern Spain, Switzerland and Italy.

![Fig.10. Reverse mould slab of slate for producing lead tokens, discovered during excavations in St. Denis, Paris. (Meyer 1979)](image)

From the territory of the Jerusalem kingdom we have at present remains of four of such moulds for casting lead tokens: two limestone slabs, stray-finds from Acre and two more moulds recently excavated from the 13th century Frankish castle of Arsur/Apollonia. In addition, a close inspection of the token hoard and assemblage at

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40 Sixteen from France, five from the United Kingdom, two from Switzerland, two from Spain and one from Italy. Eleven of these came from controlled excavations (Labrot 1999; 2000; Crusafont 1996:23; 107). We lack a complete listing of the material used for all these moulds. However, the majority of the documented specimens were made of limestone. The remaining were produced from slate. I am greatly indebted to Jacques Labrot of the Centre Nationale de Recherche sur les Jetons et les Mereaux du Moyen Age (CNRJMM) in France who generously answered my inquiries about these artifacts.

41 Shahaf (1970); Syon (1999:163 – 166).
Belmont and Bethgibelin show the local use of such moulds: the large cache of hundreds of tokens from Belmont, all of the same design, seemed to have been cast from some eight or nine moulds.\textsuperscript{42} Similarly, a close inspection of the four tokens from Bethgibelin showed small variations in the position of the cross’s annulets, proof that the tokens originated from at least two or three different moulds.\textsuperscript{43}

\textsuperscript{42}Metcalf (2000:84–85).

\textsuperscript{43} Two tokens (IAA 109353;109352), one found in the keep, another near the church showed identical sequence of annulets (1\textsuperscript{st}, 3\textsuperscript{rd}, 4\textsuperscript{th}) and crescent (2\textsuperscript{nd}) in the cross’ quarters and seem to have originated from the same mould. The remaining two (IAA 109354, 109351), likewise from the keep and church, showed identical crescent (1\textsuperscript{st}) and annulets (2\textsuperscript{nd}, 3\textsuperscript{rd}) but apparently different symbols in the 4\textsuperscript{th} quarter (hook, illegible symbol).
5.4 Design of lead tokens in the Latin Kingdom

_Grosso modo_, the design of lead tokens in the kingdom of Jerusalem resembled the one in use in Medieval Europe during the 11th – 13th centuries. Once more this clearly shows the European roots of token money produced in the Latin east during the 12-13th centuries. In some cases though, local Islamic designs were adopted but overall they remained few in number. In terms of design the kingdom's token money divides up in a number of categories:

5.4.1 'Monetary' tokens.

These tokens explicitly imitate and resemble official types of billon denier monies. These usually show a cross (pattee) with four dots in four of its quarters.

![Fig.11. ‘Monetary’ token, Jaffa, 13th c.](image)

The phenomenon is well known in Europe where lead tokens often imitated locally issued billon deniers. Examples of such issues in the Latin East were found not only in the more monetary developed urban centers of the kingdom (Acre, Tyre, Beirut) but also in smaller rural estates (Bethgibelin).44 Interestingly, so far no examples of lead tokens actually imitating royal types of the kingdom have surfaced (for example the _Turris David_ or Holy Sepulchre types of the mid-12th c.). Possibly this could be

44 Labrot (1991b: 12 –13) thought these type of tokens imitated existing baronial monies issued in Tyre, Sidon and the independent Principality of Tripoli.
connected to the severity of the sanctions involved against those violating the Jerusalem kings’ minting rights, which were extraordinary harsh even when compared with customs during this period in Western Europe. Nevertheless, it seems that the royal curia of the 12th century allowed such ‘monetary’ tokens to be minted, as long as they did not faithfully imitate the official billon money. A good example is the lead token money excavated at castle of Vadum Iacob minted during a very short period in Baldwin IV's reign, between October 1178 and August 1179. There is no doubt that these tokens were produced with royal consent and under Templar supervision as the king himself, Baldwin IV, was present at the site for most of the time that the Templar fortification was under construction, from October 1178 till April 1179. Possibly, the royal administration was more lenient vis-à-vis the military orders continuous massive need for cash and allowed these to produce unofficial lead money when the need arose, as witnessed particularly by the large lead token hoard found at the Hospitaller castle of Belmont (see above). The Vadum Iacob Templar token's obverse presented all the elements of a denier money of this period: a cross pattée with anullets in its quarters, surrounded by a marginal legend in Latin (in genitive) marking the location of its origin. The reverse though definitely deviated from existing coin convention, showing a heraldic type blazon shield. A similar type 'money-type token circulated in Frankish village of Bethgibelin, a 12th century Hospitaller property. Its obverse showed a cross pattée with anullets and crescent in its quarters; the reverse showed a massive defensive wall with a gate in its center. Similar official gate-type billon money was issued in the kingdom’s port-city of Beirut and by the Lusignan dynasty in Cyprus but much later, during the 13th century and could not have been the

45 See chapter 4, pp.78 – 80.
inspiration behind these types. Another fine example of monetary type tokens in the kingdom, dating to the 13th century came from castle town of Athlit. There four imitative pieces based on the chatel design of the denier tournois – the main royal French coin type since the early 13th century were found. Two of these were found in the excavation of a mill near the castle-town's bathhouse and the others in the town area (Nos.71 – 74).

The obvious 'French' iconography of these objects possibly connected them to the presence of members of the French royal household traveling with Louis IX's consort Margaret during her stay at Pilgrim's Castle in 1249. Similar lead imitation denier tournois types came from Acre (Nos.100; 129 – 132). Lead imitation tokens of deniers tournois were frequently made in France but also other part of the Eastern Mediterranean. In general, many of the tokens imitating money in the kingdom appear – like in Europe – with the characteristic cross pattée and annulets in their quarters of the official billon money. Such tokens were found for example in Jerusalem, Belmont, Acre, Jaffa, Bethgibelin, Ascalon, Caesarea, Athlit, and Beirut.

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48 The type was minted at Beirut under John I of Ibelin, c. 1200 – 1236.
50 IAA 122199; 122202, stray-finds from the coin collection of the former Acre Municipal Museum; see also Rahmani and Spaer 1965/6: PLXIV, no.36.
A very small but interesting group of monetary token includes what seem to be several lead imitations of contemporary Islamic type monies. The tokens, one from Jerusalem, another from Acre seem to imitate on one side the Fatimid style 'bull eye' type – a coin with a large stop in the center surrounded by several concentric circles at times containing with legends (Nos. 10; 152).  

![Fig.13. Crusader ‘bull’s eye’ lead token, Acre, l. Mustansir billah (1036 – 1094) billon fractional dirhem, r., Arsur/Apollonia](image)

The coin type was introduced on Fatimid silver dirham and gold dinar denominations during the second half of the 10th century under the Shi’ite Fatimid ruler al-Mu'iz li-Din Allah (341 – 365AH/953 – 975 CE) of Egypt. Provenanced Fatimid period coin finds from the territory of the kingdom show that this was the dominant coin type used on the small billon dirham fractions during the 11th century, prior to the First Crusade (1099). It seems that large amounts of these small bull-eye dirham fractions, were minted during the long reign of al-Mustansir (/427 – 487AH/1036 – 1094 CE) and remained in circulation during the early period of the Frankish kingdom in the 12th century. The lead tokens seem to be imitation of the smaller dirham fractions – their dimensions are identical also – possibly echoing the continuous use of these small Fatimid billon in small day to day transactions by the indigenous population and Frankish settlers after the establishment of the kingdom. Examples of such ‘dirham fraction type lead tokens are known also from another Medieval frontier

52 Jerusalem Sifting Project Medieval coin No.3; IAA 122197.

53 Our database contains c.150 finds of these small billion fractions from excavations and site-finds, many of the unpublished. Nicol (2006) noted them in his corpus but very little has been published about their circulation and use.
between Christian Europe and Islam, the Iberian Peninsula.\textsuperscript{54} Another example of later, 13\textsuperscript{th} century Islamic type lead token designs appears on a lead token mould from Acre.\textsuperscript{55} Some of its carvings seem to imitate contemporary Ayyubid dirham types from Aleppo. Significantly, silver Crusader imitations of these Aleppo dirham, the 'star' drachmas and half–drachmas, were minted at Acre during the 13\textsuperscript{th} century.\textsuperscript{56}

\textbf{5.4.2 'heraldic' type tokens}

These tokens are far fewer and show the shield type emblem so common in the aristocratic art in Medieval Europe of the 12\textsuperscript{th} century.\textsuperscript{57} As mentioned above a heraldic blazon with symmetrically arranged anullets appear on the reverse of the Templar tokens of Vadum Iacob.\textsuperscript{58} Two identical small tokens portraying a shield with a large boss in its center, flanked by a sword(?) came from the Frankish castrum of Bethgibelin (Nos. 26 -27).\textsuperscript{59}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{shield_and_sword_token.png}
\caption{‘Shield and sword’ token, castrum of Bethgibelin}
\end{figure}

\textsuperscript{54} Crusafont 1996:140-1, No.383.
\textsuperscript{55} Syon (1999:163 – 166).
\textsuperscript{56} Metcalf (1995:100 – 101).
\textsuperscript{57} Bedos-Rezak (1986:17).
\textsuperscript{58} IAA 73061, 73077, 74254, 107777.
\textsuperscript{59} IAA 109364-5.
Similar kite-shaped shields appear on tokens in Athlit, Acre, Beirut. A particular elaborate blazon type token came from an olive grove near Kfar Yasif/Cafriasif (No.163). The shield showed its right part filled, left part divided by bar, and was topped by a crest depicting a rising sun. The other side of the token depicted an eagle with open wings, a favorite German (imperial) symbol. Possibly such an elaborately designed token had been issued by one of the higher born members of the Teutonic Order, owners of the village since the 1190s.

![Fig. 15. ‘Shield/eagle’ token, Frankish casale of Cafriasif/Kfar Yasif](image)

### 5.4.3 tokens with human and animal figures

Tokens from the kingdom carrying human representations are mostly associated with the martial world of the noble class: knights on horses, warriors carrying shields, warrior-heads with helmets, found in Jerusalem, Acre and Athlit (Nos. 7; 70; 114–121; 222 – 224). These seem to echo the prevalent warrior self-image of the

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61 Unpublished, pers. comm. A. Berman 23042012.

62 It seems that the village had been previously part of the royal property around Acre because in February 1193 it was granted by Henry of Champagne ruler of the Jerusalem kingdom and his queen Isabella I to the prior of the newly established German Order: "quoddam casale in territorio Acconensi' situm, quod 'Tocatur Cafresi', cum omni iure suo et cum universis pertinenciis suia" (Strehlke 1869: 25, No.29).

kingdom's noble ruling class, closely paralleling iconographic traditions in mainland Medieval Europe at the time.\textsuperscript{64} A particular interesting series of tokens, apparently originating from Acre (Nos. 114 –118), graphically illustrates what appears to be a fusion of knightly and Crusader ideals: one side shows a mounted knight with large shield, holding a lance, a scene often depicted on seals of this period. The other side shows a warrior bust facing, wearing a customary conical shaped helmet, but this time topped, extraordinarily, by a cross (fig.16).\textsuperscript{65}

Fig. 16. 'Helmet and cross warrior' token, Acre

In similar trend tokens also showed representations of heraldic type animals: German 'imperial' type eagles (with or without open wings) and 'noble' leopard and lion types from Jerusalem, Caesarea Acre, Tiberias and Beirut (Nos.4, 36 – 37, 122-124; 163, 166, 227).\textsuperscript{66} That these heraldic eagle types were produced locally is evidenced by their appearance on a mould provenanced from Acre.\textsuperscript{67} Also simpler animal types were sometimes used on tokens from Caesarea and Acre: bird types, bull's heads and

\textsuperscript{64} Bedos-Rezak 1993:5–14.

\textsuperscript{65} Two of these tokens appeared among tokens and coins which were found in Acre (Shahaf 1970: Nos. 8 and 11). Subsequently I discovered another three identical exemplars: two unpublished specimens which entered the IAA mandatory collection in July 1936 and a third mistakenly published as part of the Byzantine period lead seal collection from the SBF museum in Jerusalem (Manns 1976:267, No.8).

\textsuperscript{66} Acre: Bull's head: two identical tokens see Syon forthcoming; Bird types: Acre (Syon 1999:164, No.17), Caesarea (IAA 60284; unpublished MS); Eagle types: Acre (Shahaf 1970: front page), Kfar Yasif (unpublished), Beirut (Labrot 1991a: 10, no.4); lion/leopard types: Acre Museum Coll., IAA 122064, 122201.

\textsuperscript{67} Front page of Shahaf (1970).
a number of dolphin and fish types. An extraordinary and rare find is a religious inspired token from Acre portraying the Lamb of God with banner (*Agnus Dei*), a popular Medieval religious theme in Western art and liturgy of the period (No.126). In the Latin East it appears in only two rare instances on coins minted in Tripoli, the capital of the Frankish Principality situated north of the Jerusalem kingdom: on a series of copper deniers during the first half of the 12th century, and on an extremely rare gold bezant minted in the last decades of 13th century.69

![Fig. 17. *Agnus Dei* token, Acre, l. *Agnus Dei* bezant of Tripoli, r.](image)

### 5.4.4 Letter and monogram tokens

A few of these exist in the kingdom. Two identical bull's head tokens (see above) from the 13th century Provencal quarter in Acre show on the other side the letter B (Nos.96 – 97). Another two tokens from Frankish village of Cafresi depict the letter T, one of them flanked between two stars, maybe an allusion to the proprietors of the casale, the Teutonic Order (No.164 - 165).70

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69 Metcalf 1995: 50; 159-160. Metcalf convincingly noted the connection with the Provencal rulers of Tripoli who struck a similar type coin in their ancestral fief at St.Gilles (Poey d'Avant Nos. 3714; 3718) during the entire 12th century.
70 Kfar Yasif (unpublished).
In fact the letter T appears relatively frequently on such tokens in the kingdom (Nos. 17; 26–27; 128; 232). Recently another such inscribed token was excavated from a domestic context in the castle town of Arsur (No. 29).

5.4.5 Geometrical/figurative type tokens

A large group of tokens represent an assortment of geometrical and figurative types. These seem to clearly imitate the large number of similar type tokens produced in Medieval Europe. Some of these possibly could allude to the diagonal striations used in tooling of stones. Among the types are: double/triple-lined 'voided' crosses, mostly from Acre and Beirut (Nos. 89, 90, 200);

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71 Unpublished, excavation G-46/2012. My thanks to Prof. Oren Tal of Tel-Aviv University and Prof. Dr. Barbara Scholkmann of Eberhard Karls Universität Tübingen for permission to mention the artifact.


plain geometrical patterns from Acre, Athlit, Beirut and Jerusalem; petalled flower and crosses, sometimes filled with geometrical patterns from Athlit, Tyre, Caesarea, Jerusalem, Acre and Jaffa (No. 18).

![Image of petalled/rosette token, Burgus of Jaffa](image)

**Fig. 20.** petalled/rosette token, Burgus of Jaffa

Particularly popular were the Waterwheel' types – common in Europe and thought to be connected to the local use of flour mills\(^74\) (Nos. 10, 14). These were found frequently in typical urban contexts but also in rural sites such as Frankish *villeneues* of Bethgibelin and el-Burj, near Jerusalem.

![Image of waterwheel token, Frankish village of el-Burj, Jerusalem](image)

**Fig. 21.** 'waterwheel token, Frankish village of el-Burj, Jerusalem

Besides these more common types, there is a group of rarer, miscellaneous types: hexagrams, cross with dots, octagon (Nos. 77 – 78; 164, 166).

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\(^{74}\) Labrot (1989:93 – 95).
5.4.6 Masonry types

some of the tokens seem to depict tools apparently associated with building professions. A token from Caesarea depicts what seems to resemble a mason's hook/plane (No.65).  

![Fig. 22. 'mason's hook' token, Caesarea, Jerusalem](image)

Other tokens from Beiruth and the Carmelite monastery of St. Mary depict triangles (No.85).  

Tokens from Acre and Caesarea seem to depict what could be ladder (No.98).

5.4.7 Fleur-de-lis types

As mentioned above a large group of c. 40-50 'lily' type tokens were found in Caesarea. The tokens are clearly a distinct group, produced together, since all appear with a similar designed fleur-de-lis on their obverse, and many of them are of identical proportions and weight. Also these 'lily' tokens, like the Belmont cache, seem to have been produced in large numbers — some 14 'lily' types combined with

75 IAA 109604.
76 Labrot 1991b: Nos. 12, 22, 34, 44, 89; IAA 138882.
77 IAA 107903 see Kool Forthcoming (d): No.16; Unpublished MSS, token no.22.
78 Unpublished manuscript. My thanks to A. Edelstein for allowing me to refer to this manuscript. See also Metcalf and Holland 1999:162, Pl.26. I also indebted to Cecilia Meir, curator of the Kadman Numismatic Collection at the Haaretz Museum, Tel-Aviv for giving me access to this material.
79 c. 3-4 grams. Significantly, their proportions and weight closely resembles the ones from the large cache of tokens produced at the Hospitaller castle of Belmont (see above).
different reverse designs exist.\footnote{The reverse types show Bird to l., star, 'dots/constellation', lion attacking l., right hand, 'flower', arrow head, a bishops staff, tools such an ax, agricultural tool/comb(?), ladder, key and a smaller token showing an M.} Their association with Frankish period Caesarea is secure since a similar lily specimen (rampant lion on reverse) was excavated from a fill pit in the southern part of the Crusader town (No.36).\footnote{Among the stray-finds from Caesarea there are at least six similar lily/rampant lion types. See Metcalf and Holland (1999:162) and unpublished manuscript, courtesy of A. Edelstein.}

Finds of similar looking 'lily' type tokens excavated in the 13\textsuperscript{th} century Carmelite monastery of St. Mary, some 30km north of Caesarea, seems to indicate that they belong to the 13\textsuperscript{th} century. If so, possibly the local production of such a large quantity of low value lead money could be connected to the numerous masons and other workmen employed by the Louis IX of France in the construction of the town's massive defensive walls and moat in 1251.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure23.png}
\caption{\textit{fleur-de-lis}/lion token, domestic quarter adjoining the Cathedral of St. Peter, Caesarea, 12-13\textsuperscript{th} c.}
\end{figure}
5.5 Conclusion

In sum, the above evidence clearly shows the western medieval custom of using cast lead token money migrated to the Latin East during the 12th century, where it was adopted by the population of the Jerusalem kingdom during the almost two hundred years of its existence. The wide distribution of this lead 'ersatz' money—used only for the smallest local transactions—in many different kinds of Frankish settlements, from urban quarters to isolated hamlets alongside the ‘official’ royal billon money, shows it played a considerable role in providing an additional means of cash payment at the ‘bottom’ of the kingdom’s economy. The lead tokens, mostly used by the non-noble population of the kingdom's towns and rural settlements, are also objects of great historical significance, since they are material evidence of a social class which often escape our attention as they very rarely appear in the surviving documents of the period. In this respect also, the iconography of these types allows us a rare graphic glimpse of the life and mentality of the poulains of the Frankish kingdom.
### 5.6 CATALOGUE LEAD CRUSADER TOKENS

The catalogue is arranged geographically according to the location of the finds. Excavations are mentioned first, thereafter stray-finds. Types are arranged according to the order in the text. Tokens bearing an asterisk have photographs in plates.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Weight (gm)</th>
<th>Diam. (mm.)</th>
<th>Axis</th>
<th>Obverse</th>
<th>Reverse</th>
<th>Date (CE)</th>
<th>Provenance</th>
<th>Type find</th>
<th>Reference</th>
<th>Notes</th>
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<td>12</td>
<td>Geometrical patterns with intersecting lines</td>
<td>Cross pattee filled with horizontal lines</td>
<td>c.12th c.</td>
<td>‘Tanner’s road leading to the Dung Gate</td>
<td>Excavation, A-5002/2007</td>
<td>Unpublished</td>
<td></td>
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<td>2*</td>
<td>0.50</td>
<td>12</td>
<td>Bird to l. with geometrical pattern</td>
<td>Cross Moline with double hooked ends with pellets in each angle; outer radial border</td>
<td>c.12th c.</td>
<td>Large Crusader structure near northern wall</td>
<td>Excavation, A-4467/2005</td>
<td>Cf. Crusafont et.al 1996: No.188.</td>
<td>Unpublished.</td>
<td></td>
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<td>Four petalled flower filled with geometrical pattern</td>
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<td>‘Salomon Stables’ Sifting Project G-68/2004</td>
<td>Cf. Crusafont et.al 1996: No.188.</td>
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<td>Inscription LA (?)</td>
<td>Castle and burgus (town)</td>
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<td>Excavation, G-46/2012</td>
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<td>Flans in mould</td>
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**CAESAREA/CESAIRE, town**

272
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<td>33-35*</td>
<td>0.91-1.06</td>
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<td>Cross, arms ending in dots; within double circle</td>
<td>Cross with central annulet; geometrical pattern in two quarters; within double circle</td>
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<td>Castle town, cathedral area, southern part</td>
<td>Excavation, G-38/1992</td>
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<td>Two of these are a mini hoard from the southern part of the Crusader town</td>
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<td>Triangular shield, field divided in three with horizontal and vertical band</td>
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<td>Mini-Hoard</td>
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<td>Town area near castle entrance</td>
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<td>73*</td>
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<td>Cross</td>
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<td>Bathhouse Excavation, W-3/1930</td>
<td>Same, No.226</td>
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<td>Chatel</td>
<td>Cross; margin with pseudo-inscription</td>
<td>Same</td>
<td>Town area</td>
<td>Excavation, W-31/1934</td>
<td>Same, No.227</td>
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<td>Five petalled flower surrounded by dots</td>
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<td>Metcalf, Kool and Berman 1999: 124, No.215</td>
<td>40.3290</td>
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<td>76*</td>
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<td>Eight-legged waterwheel</td>
<td>Cross</td>
<td>1218 -- 1265</td>
<td>Town near castle entrance</td>
<td>Excavation, W-4/1931</td>
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<td>77-78*</td>
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<td>Five-legged waterwheel</td>
<td>Cross with dots</td>
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<td>75516; 75518</td>
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<td>79*</td>
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<td>21</td>
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<td>Waterwheel, within large radial</td>
<td>Four shields cross wide</td>
<td>Same</td>
<td>Town area</td>
<td>Excavation, Same, Nos.217</td>
<td>72685</td>
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<td>80</td>
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<td>Waterwheel</td>
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<td>Same</td>
<td>W-31/1934</td>
<td>Same, Nos.221</td>
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<td>Waterwheel</td>
<td>Six tranverse lines</td>
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<td>Same</td>
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<td>Johns 1936:54:3</td>
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<td>Geometrical pattern</td>
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<td>Metcalf, Kool and Berman 1999: 124, No.216</td>
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<td>W-11/1932</td>
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<td>83*</td>
<td>19</td>
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<td>Fleur-de-lis; dotted margin</td>
<td>City gate with battlement; dotted margin</td>
<td>13th c.</td>
<td>Service/ kitchen area adjacent to the church</td>
<td>Excavation</td>
<td>Kool (forthcoming 3)</td>
<td>138883</td>
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<td>84*</td>
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<td>Fleur-de-lis</td>
<td>Fleur-de-lis with two stems (Florentine design)</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td></td>
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<td>85*</td>
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<td>Fleur-de-lis</td>
<td>Triangular shield (?)</td>
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<td>Same</td>
<td>Same</td>
<td>Kool (forthcoming 3)</td>
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<td>Fleur-de-lis</td>
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<td>Kool (forthcoming 3)</td>
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<td>87*</td>
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<td>20</td>
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<td>Monogram(?)</td>
<td>18(?)</td>
<td>12-13th</td>
<td>Eastern section, fill associated with crusader tower</td>
<td>Excavation, A-1763/1991</td>
<td>Syon (1997:89, No.4)</td>
<td>36214</td>
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<td>Fleur-de-lis</td>
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<td>Syon (1997:88)</td>
<td>36215</td>
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<td>90*</td>
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<td>11</td>
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<td>Triple lined cross with annulet in center</td>
<td>Two intersecting bars connected by diagonal lines; annulet in center</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td>Cf. Crusafont 1996: 370-71.</td>
<td>49287</td>
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<td>91</td>
<td>2.27</td>
<td>21</td>
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<td>Cross, arms ending in dots, four dots in four quarters</td>
<td>Unclear</td>
<td>13th c.</td>
<td>Wall dated to 13th c. by ceramics</td>
<td>Excavation, A-3431/2001</td>
<td>Same</td>
<td>Fragment 92863</td>
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<td>Rectangular (ladder?)</td>
<td>Cross with circle; dots in squares(?) radial border(?)</td>
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<td>Teutonic Excavations, G-130/1999; G-75/2000</td>
<td>Kool (forthcoming)</td>
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<td>101*</td>
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<td>Cross</td>
<td>arms ending in dots, four dots in four quarters surrounded by radial strokes</td>
<td>same</td>
<td>Same</td>
<td>Same, No.96</td>
<td>Same</td>
<td>Metcalf 1975: 149, No.93</td>
<td>122198</td>
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<td>102*</td>
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<td>Triple lined cross</td>
<td>Cross, four dots in four quarters</td>
<td>same</td>
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<td>Same</td>
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<td>Cross</td>
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<td>Same</td>
<td>Metcalf 1975: 149, No.98</td>
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<td>Cross Moline with double-hooked ends, in dotted border</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Same, No.96</td>
<td>Flan in Mould</td>
<td>75526-7</td>
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<td>106</td>
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<td>Cross, four dots in four quarters in dotted border</td>
<td>n.s</td>
<td>Same</td>
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<td>Shahaf 1970: front-page</td>
<td>Flan in Mould</td>
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<td>107-111</td>
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<td>Imitations of Zandgid and Ayubid fulus</td>
<td>n.s</td>
<td>Same</td>
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<td>Syon 1994-99:165, Nos.15, 16,17, 18, 19</td>
<td>Flans in mould</td>
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<td>112</td>
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<td>double barred cross</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, No.3</td>
<td>Flan in Mould</td>
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<td>113*</td>
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<td>Triangular shield with horizontal bar</td>
<td>Cross, in margins, two concentric circles</td>
<td>Same</td>
<td>Same</td>
<td>Metcalf 1975: 149, No.94</td>
<td>Flan in Mould</td>
<td>75526-7</td>
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<td>114-118</td>
<td>--</td>
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<td>Mounted knight with shield and lance to l.</td>
<td>Bust of warrior with conical helmet, topped by cross</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, No.10-11; Manns 1976: 267, No.8</td>
<td>Flan in Mould</td>
<td>75526-7</td>
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<td>119</td>
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<td>Schematic head(?)</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, No.12</td>
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<td>120</td>
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<td>knight with shield to r.</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, No.14</td>
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<td>Knight(?)</td>
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<td>Shahaf 1970: 2, No.15</td>
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<td>17</td>
<td>Eagle with geometrical pattern</td>
<td>Cross with double-hooked ends</td>
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<td>Eagle, facing, spread wings, head l.</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: front-page</td>
<td>Flan in Mould</td>
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<td>124</td>
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<td>rampant lion</td>
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<td>Shahaf 1970: 2, No.4</td>
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<td>125</td>
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<td>Aigrus Dei/lamb to r., holding</td>
<td>Cross, letters(?) in four squares</td>
<td>Same</td>
<td>Same</td>
<td>Unpublished</td>
<td>Flan in Mould</td>
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<td>Aigrus Dei/lamb to r., holding</td>
<td>Cross, letters(?) in four squares</td>
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<td>127</td>
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<td>banner</td>
<td>n.s</td>
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<td>Shahaf 1970: 2, no.13</td>
<td>municipal museum coll.</td>
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<td>Rahmani and Spear 1965-66: 73, No.36</td>
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<td>131</td>
<td>1.12</td>
<td>14</td>
<td>Chatel(?)</td>
<td>Cross</td>
<td>Same</td>
<td>Same</td>
<td>Unpublished</td>
<td>Same</td>
<td>122202</td>
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<td>132</td>
<td>--</td>
<td>--</td>
<td>Chatel</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, no.7</td>
<td>Same</td>
<td>122202</td>
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<tr>
<td>133</td>
<td>--</td>
<td>--</td>
<td>Hammer</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, no.6</td>
<td>Same</td>
<td>122202</td>
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<tr>
<td>134*</td>
<td>--</td>
<td>--</td>
<td>Six-legged waterwheel</td>
<td>Cross, four dots in four quarters</td>
<td>Same</td>
<td>Same</td>
<td>Metcalf 1975: 149, No. 99</td>
<td>Same</td>
<td>122202</td>
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<tr>
<td>135</td>
<td>--</td>
<td>--</td>
<td>Six-legged waterwheel</td>
<td>Cross</td>
<td>Same</td>
<td>Same</td>
<td>Metcalf 1975: 149, No. 100</td>
<td>Same</td>
<td>122202</td>
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<tr>
<td>136*</td>
<td>--</td>
<td>--</td>
<td>Waterwheel in radial border</td>
<td>Plain geometrical design, on margins: two concentric circles</td>
<td>Same</td>
<td>Same</td>
<td>Metcalf 1975: 149, No.97</td>
<td>Flan in mould</td>
<td></td>
<td></td>
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<tr>
<td>137-142</td>
<td>--</td>
<td>--</td>
<td>Waterwheel in radial border</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Syon 1994-99:165, Nos.2,6,8,10, 11,13</td>
<td>Flan in mould</td>
<td></td>
<td></td>
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<tr>
<td>143</td>
<td>--</td>
<td>--</td>
<td>circular design?</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, no.9</td>
<td>Akko municipal museum coll.</td>
<td>122205</td>
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<td>144*</td>
<td>1.07</td>
<td>15</td>
<td>Four petalled flower in concentric circle</td>
<td>Five petalled flower in concentric circle</td>
<td>Same</td>
<td>Same</td>
<td>Unpublished</td>
<td>Akko municipal museum coll.</td>
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<tr>
<td>145</td>
<td>--</td>
<td>--</td>
<td>Hexagram</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, no.1</td>
<td>Flan in mould</td>
<td></td>
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<tr>
<td>146-151</td>
<td>--</td>
<td>--</td>
<td>Geometric/hexagram design</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Syon 1994-99:165, Nos.1, 3,4,7, 9, 14</td>
<td>Flan in mould</td>
<td></td>
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<tr>
<td>152*</td>
<td>0.93</td>
<td>14</td>
<td>concentric circles with stop in center</td>
<td>Cross with dots(?) in concentric circle</td>
<td>Same</td>
<td>Same</td>
<td>Unpublished</td>
<td>Akko municipal museum coll.</td>
<td>122197</td>
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<td>153</td>
<td>3.58</td>
<td>17</td>
<td>Geometrical pattern</td>
<td>unclear</td>
<td>12-13°</td>
<td>Stray-find</td>
<td>Unpublished</td>
<td>Akko municipal museum coll.</td>
<td>122063</td>
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<td>154*</td>
<td>--</td>
<td>--</td>
<td>Geometrical pattern</td>
<td>Geometrical pattern</td>
<td>Same</td>
<td>Same</td>
<td>Metcalf 1975: 149, No.95</td>
<td>Flan in mould</td>
<td></td>
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<td>155</td>
<td>--</td>
<td>--</td>
<td>Geometrical pattern</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, no.5</td>
<td>Flan in mould</td>
<td></td>
<td></td>
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<tr>
<td>156</td>
<td>--</td>
<td>--</td>
<td>Geometrical pattern</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: front-page</td>
<td>Flan in mould</td>
<td></td>
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<tr>
<td>157-158</td>
<td>--</td>
<td>--</td>
<td>Plain geometric design</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Syon 1994-99:165, Nos.12, 20, No.5</td>
<td>Flan in mould</td>
<td></td>
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<tr>
<td>159*</td>
<td>--</td>
<td>--</td>
<td>Unknown design in zig-zag and dotted border</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Syon 1994-99:165, No.5</td>
<td>Flan in mould</td>
<td></td>
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<tr>
<td>160*</td>
<td>4.05</td>
<td>15</td>
<td>Fleur-de-lis (?)</td>
<td>Cross</td>
<td>Same</td>
<td>Same</td>
<td>Unpublished</td>
<td>Formerly Akko</td>
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<td>Cat. No.</td>
<td>Weight (gm)</td>
<td>Diam. (mm.)</td>
<td>Axis</td>
<td>Obverse</td>
<td>Reverse</td>
<td>Date (CE)</td>
<td>Provenance</td>
<td>Type find</td>
<td>Reference</td>
<td>Notes</td>
<td>IAA No.</td>
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<tr>
<td>161</td>
<td>--</td>
<td>--</td>
<td></td>
<td>fleur-de-lis</td>
<td>n.s</td>
<td>Same</td>
<td>Same</td>
<td>Shahaf 1970: 2, no.2</td>
<td>municipal museum coll.</td>
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<tr>
<td>162*</td>
<td>2.28</td>
<td>18</td>
<td></td>
<td>Cross; one arm extending in shape of scythe</td>
<td>No design</td>
<td>Same</td>
<td>Sugar production site</td>
<td>Excavation, A-2323/1995</td>
<td>Stern 2001:287</td>
<td>63453</td>
<td></td>
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<tr>
<td>163*</td>
<td>--</td>
<td>--</td>
<td></td>
<td>Triangular shield; right part filled, left part divided by bar; above shield/crest a rising sun</td>
<td>Eagle with spread wings</td>
<td>Same</td>
<td>Olive grove near present village</td>
<td>Stray-find</td>
<td>Unpublished</td>
<td>n.s.</td>
<td></td>
</tr>
<tr>
<td>164*</td>
<td>--</td>
<td>--</td>
<td>T</td>
<td>flanked by two six legged waterwheels</td>
<td>Octafoil, within 8 pellets; in center A(?')</td>
<td>Same</td>
<td>Stray-find</td>
<td>Unpublished</td>
<td>n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>165*</td>
<td>--</td>
<td>--</td>
<td>T</td>
<td>cross with 4 dots in four quarters?</td>
<td></td>
<td>Same</td>
<td>Olive grove near present village</td>
<td>Stray-find</td>
<td>Unpublished</td>
<td>n.s.</td>
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<tr>
<td>166*</td>
<td>1.46</td>
<td>16</td>
<td></td>
<td>Linear hexagram, pellets in external angles; waterwheel in center; within dotted margin</td>
<td>Eagle, facing, spread wings, head l.</td>
<td>12th c.</td>
<td>Large building, south-west of the castle</td>
<td>Excavation, A-783/1975</td>
<td>Unpublished</td>
<td>64329</td>
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<tr>
<td>175</td>
<td>1.4</td>
<td>18</td>
<td></td>
<td>Unclear</td>
<td>Unclear</td>
<td>1128-1164</td>
<td>In medieval town</td>
<td>Excavation, G-32/1992</td>
<td>Unpublished</td>
<td>61060</td>
<td></td>
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<tr>
<td>176*</td>
<td>--</td>
<td>16</td>
<td></td>
<td>Cross with 4 dots in</td>
<td>No design</td>
<td>12-13th</td>
<td>Stray-find</td>
<td>Decloedt 1914:457, No.</td>
<td></td>
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<td>Cat. No.</td>
<td>Weight (gm)</td>
<td>Diam. (mm.)</td>
<td>Obverse</td>
<td>Reverse</td>
<td>Date (CE)</td>
<td>Provenance</td>
<td>Type find</td>
<td>Reference</td>
<td>Notes</td>
<td>IAA No.</td>
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<td></td>
</tr>
<tr>
<td>177*</td>
<td>--</td>
<td>19</td>
<td>four quarters</td>
<td>Double cross, anulet l.</td>
<td>Cross, anulets in 3/4 square; around seven dots</td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 59.</td>
<td></td>
<td></td>
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<tr>
<td>178*</td>
<td>--</td>
<td>16</td>
<td>Double cross</td>
<td>Crescent with anulet l.</td>
<td>Crescent with anulet</td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 60.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>179*</td>
<td>--</td>
<td>22</td>
<td>Infant Jesus lying in crib, Cow and donkey l. and r.; Above star of the Magi</td>
<td>Façade of the Nativity church, Bethlehem (?)</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:456, No. 61.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>180*</td>
<td>--</td>
<td>18</td>
<td>T</td>
<td>Crescent, around 6 anulets</td>
<td>Crescent, around 6 anulets</td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 62.</td>
<td></td>
<td></td>
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<tr>
<td>181*</td>
<td>--</td>
<td>20</td>
<td>Key between sword l. and double cross r.</td>
<td>Mason's plan, between two anulets</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 64.</td>
<td></td>
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<tr>
<td>182</td>
<td>--</td>
<td>15</td>
<td>Leg, anulet to l.</td>
<td>Eight legged waterwheel</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 65.</td>
<td></td>
<td></td>
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<tr>
<td>183</td>
<td>--</td>
<td>8</td>
<td>Six legged waterwheel</td>
<td>Cross with 4 dots in four quarters</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 66.</td>
<td></td>
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<tr>
<td>184</td>
<td>--</td>
<td>23</td>
<td>Geometrical design</td>
<td></td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Decleodt 1914:457, No. 68.</td>
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<tr>
<td>185*</td>
<td>--</td>
<td>--</td>
<td>Beirut/Beritum, city</td>
<td>Cross with 4 dots in four quarters, in dotted border</td>
<td>Cross with 4 dots in four quarters, in dotted border</td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, No.11, 20</td>
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<tr>
<td>186-193*</td>
<td>--</td>
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<td>Cross with 4 dots in four quarters, in dotted border</td>
<td>Cross with 4 dots in four quarters, in dotted border</td>
<td>Geometrical pattern</td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, Nos. 11, 12, 23; Labrot 1991b: 10, Nos. 23, 42, 55, 60, 87</td>
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<td>194-195*</td>
<td>--</td>
<td>--</td>
<td>Cross with 4 dots in four quarters</td>
<td>No design</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, Nos.57, 67</td>
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<tr>
<td>196</td>
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<td>--</td>
<td>Cross with 2 dots in third and fourth quarters</td>
<td>Cross</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.76</td>
<td></td>
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<tr>
<td>197</td>
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<td>--</td>
<td>Cross with 2 dots in second And third quarters</td>
<td>Geometrical pattern</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.65</td>
<td></td>
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<tr>
<td>198</td>
<td>--</td>
<td>--</td>
<td>Cross (pattee) (with anulets on legs)</td>
<td>Cross</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, Nos.9, 15</td>
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<tr>
<td>199*</td>
<td>--</td>
<td>--</td>
<td>Cross with triangular base</td>
<td>Cross with triangular base, two anulets l. and r.</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, No.5</td>
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<tr>
<td>200*</td>
<td>--</td>
<td>--</td>
<td>Double cross</td>
<td>Unclear</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.7</td>
<td></td>
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<tr>
<td>201</td>
<td>--</td>
<td>--</td>
<td>Cross</td>
<td>Cross pattee</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.100</td>
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<td>202-210</td>
<td>--</td>
<td>--</td>
<td>Cross (pattee)</td>
<td>Unclear</td>
<td></td>
<td>12-13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, Nos.12, 16, 29, 40, 52, 59, 63, 84, 96</td>
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<td>Cat. No.</td>
<td>Weight (gm)</td>
<td>Diam. (mm.)</td>
<td>Obverse</td>
<td>Reverse</td>
<td>Date (CE)</td>
<td>Provenance</td>
<td>Type find</td>
<td>Reference</td>
<td>Notes</td>
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<tr>
<td>211-214</td>
<td>--</td>
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<td>Cross</td>
<td>No design</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, Nos. 48, 56, 58, 68</td>
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<tr>
<td>215*</td>
<td>--</td>
<td>--</td>
<td>Triangular shield in center; pseudo legend in margins</td>
<td>cross with four dots in four quarters in center; geometrical pattern in margin</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>LaRot 1991a: 9, No.17</td>
<td></td>
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<tr>
<td>216*</td>
<td>--</td>
<td>--</td>
<td>Triangular shield in center</td>
<td>Cross pattee</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, No.18</td>
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<tr>
<td>217</td>
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<td>--</td>
<td>Triangular shield with T</td>
<td>Cross</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.46</td>
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<td>218-219*</td>
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<td>--</td>
<td>Triangular shield</td>
<td>Cross with 4 dots in four quarters</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, Nos.34, 89</td>
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<td>220*</td>
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<td>Triangular shield with dot</td>
<td>Cross</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.44</td>
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<tr>
<td>221</td>
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<td>--</td>
<td>Triangular shield (?)</td>
<td>unclear</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.22</td>
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<td>222*</td>
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<td>Schematic head/portrait</td>
<td>Cross with 4 dots in four quarters, in radial border (?)</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, No.2</td>
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<td>223</td>
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<td>Head facing(?)</td>
<td>Cross</td>
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<td>Labrot 1991b: 10, No.3</td>
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<td>224</td>
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<td>Head facing</td>
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<td>225</td>
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<td>Warrior with sword (?)</td>
<td>Cross pattee</td>
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<td>226</td>
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<td>Lion/leopard(?) to r.</td>
<td>Cross, two small heads (in 2&lt;sup&gt;nd&lt;/sup&gt; and 3&lt;sup&gt;rd&lt;/sup&gt; square?)</td>
<td>13-14&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Same</td>
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<td>227*</td>
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<td>Lion/leopard r., tail high, head turned r.</td>
<td>Eagle, facing, spread wings, head l.</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, No.4</td>
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<td>228*</td>
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<td>A</td>
<td>Six-legged waterwheel</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.26</td>
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<td>229</td>
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<td>A (?)</td>
<td>Cross with 4 dots in four quarters</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.90</td>
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<td>230*</td>
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<td>S</td>
<td>Hexagram/geometrical pattern</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991a: 9, No.6</td>
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<td>232*</td>
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<td>Unclear</td>
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<td>Same</td>
<td>Labrot 1991b: 10, No.6</td>
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<td>233</td>
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<td>U (?) with anulletts l. and r.</td>
<td>Cross with 4 dots in four quarters</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.43</td>
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<td>234-236*</td>
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<td>Chatel</td>
<td>Cross (in radial border)</td>
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<td>Same</td>
<td>Labrot 1991b: 10, Nos.2, 69, 85</td>
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<td>237</td>
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<td>Chatel</td>
<td>Cross pattee with 2 dots in Third and fourth quarters</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Same</td>
<td>Labrot 1991b: 10, No.98</td>
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<td>238</td>
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<td>Structure with cross</td>
<td>Cross with 4 dots in four quarters</td>
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<td>Same</td>
<td>Labrot 1991b: 10, No.13</td>
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<td>239*</td>
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<td>Temple like structure(?)</td>
<td>Cross with 4 dots in four quarters</td>
<td>12-13&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>Labrot 1991b: 10, No.17</td>
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<td>240-</td>
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<td>(Six-legged) Waterwheel</td>
<td>Cross</td>
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5.7. Plates

Plate 1
Chapter 6: Coin Circulation in the *villeneuves* of the Latin Kingdom of Jerusalem: The Cases of Parva Mahumeria and Bethgibelin.

6.1 Introduction

The *villeneuves* of Parva Mahumeria and Bethgibelin in the Latin Kingdom of Jerusalem were established in the 1150s and 1160s on the initiative of the Church of the Holy Sepulchre and the Order of the Hospital respectively. These were settlements exclusively planned and built for Frankish colonists, modelled on the *villani* settlements that European landlords were developing in the West in the twelfth century.¹ The existence of these settlements was relatively brief, lasting only until July 1187 when the destruction of the kingdom’s army at Hattin near Lake Galilee led to the loss of large parts of the rural hinterland and the expulsion of the Frankish settlers.

Recent studies combining both historical and archeological research have challenged the traditional idea that the Frankish population in the second half of the twelfth century, estimated at between 100,000 and 120,000, was mostly located in the urban centres of the kingdom.² This research has pointed out that the Franks were not only administrators but also played an important role in the settlement of the

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² For the view that the Frankish population mostly settled in urban areas, see *Benvenisti (1970: 218; Prawer (1980:102ff)*. For demographic estimates underlining this view, see *Prawer (1969-70: 568-72); Russell (1969-89: 295-315); (1986:53-58)*. According to *Kedar (1990:148-52)*, the total population of the kingdom was estimated at between 400,000 and 480,000 of which nearly 75% were oriental Christians and Muslims.
countryside, at least until the end of the first kingdom in 1187. at least 200 or more of these were Frankish rural settlements and sites.3

The nature of the Frankish settlement in the Latin East differed radically in some key aspects from the western seigneurial model and the Muslim iqta’ system.4 The interaction between the sophisticated urban money economies of Jerusalem, Tyre, Acre and their rural hinterland was much closer and direct than in Western Europe where village and town economies remained largely separate.5 The fact that many Frankish rural settlements were located in close proximity to these cities because of security needs furthered this development to no small extent. Unlike the villani in Western Europe and local Muslim peasants, the Franks were free settlers who could buy and sell property at will. By comparison with conditions in the West, compulsory services on the lord’s demesne was virtually non-existent;6 instead, the lord frequently received monetary payments in conjunction with a portion of the produce from the


4 For the European seigneurial model, see Fossier (2004: 4: 11-46). For the iqta’ system, see Cahen (1960-2004: 1088-91). An iqta’ was a revenue from property (land, towns, tax revenues, custom duties etc.) held in exchange for services due to the rulers of the Fatimid and Ayyubid states. By the eleventh century the Muslim peasantry in Syria and Palestine had lost its free and independent status and was mostly subordinated to large estates owned by Waqfs or absentee landowners. See Cahen (1940:558-60); Gil (1992:193-98).

5 Fossier (2004:44-46) noted that in Western Europe ‘the role of money in the countryside is hard to discern’, although its importance grew between 1050-1175. Spufford (1988:75-104) noted that feudal fragmentation in Western Europe caused a dramatic shrinkage of the amount of coin circulating in the countryside in France during the eleventh and twelfth centuries.

6 Such services demanded by the seigneurial lords played a central role in the manorial system in Western and Central Europe. See Rösener (1992:211-36) (chapter 12, ‘Manorial dependence’) which gives a detailed picture of conditions in central Europe and Germany. For France see also Fossier (1968) two volumes; Duby and Wallen (1992: 563-66). Fossier (2004: 22-32) noted that the classical manorial system built around large estates, so typical of the ninth and tenth centuries, was dying off by the eleventh century and was being replaced by a more diffuse system of tenure where demesne services played a lesser role.
tenants. In my view, these differences seem to have resulted in a rural economic system unlike that of Western Europe, in which the use of a wide variety of coined moneys - gold, billon and local coppers as well as lead tokens - seems to have been highly developed.\footnote{During the settlement period in Outremer the Franks encountered a very different monetary world from the one with which they were familiar in Western Europe. The monetary system in the East was based on the extensive use of gold coins, while in Europe no gold issues were struck for almost 500 years (8\textsuperscript{th} - 13\textsuperscript{th} centuries). The simplistic monometallism of most of medieval Western-Europe where hundreds of small mints controlled by lay or church magnates produced a single type of coin, the billon \textit{denier}, differed radically from the sophisticated multiple alloy economies of the East. In Asia Minor and Northern Syria after the reform of Alexius I (1092), the Byzantine system was based on four alloys: the gold \textit{hyperperon} and its smaller electrum denomination, the concave billon \textit{scyphate}, and the copper \textit{tarteron}. Travelling southwards the crusaders encountered the Fatimid gold dinar and the debased ‘black’ dirhem, and from the 1170s onwards in Syria under the Ayyubids, a high quality silver dirhem.}
6.2 Charters and the rural money economy

The written evidence for this phenomenon comes in the form of the many charters surviving from the Latin East that record transactions such as the buying and selling of land and the payment of taxes and dues in money as well as in kind in rural areas as well as in the towns. Not much systematic research has been done in this field, but information collected from these charters shows that money transactions in the countryside played a much larger role than previously thought.8

At the upper end of the socio-economic scale, the buying and selling of entire rural properties or groups of properties involving nobles, ecclesiastical institutions or the military orders was conducted mostly in gold coin. The documents refer to bizancios or bizancios saracenatos, referring indiscriminately, in my opinion, to both genuine Fatimid dinars and their Frankish imitations.9 It is very rare for documents to

8 For a list of the charters issued in the kingdom during this period, see Regesta Regni Hierosolymitani, edited by Röhricht (1893-1904). Although Röhricht merely summarised the charters published in full by other scholars such as Dellaville le Roulx, Delaborde or Bresc-Bautier, he often provides details of sums and payments in charters. For the purposes of this paper I limit myself to an analysis of the charters of the Holy Sepulchre published in Le Cartulaire du Chapitre du Saint-Sepulchre de Jérusalem, edited by Bresc-Bautier (1984) (= BB).

9 The term bizancios in my view also refers to the Fatimid dinars which circulated in large quantities in the area of the kingdom and neighboring Muslim states and not just exclusively to Frankish ‘Besant’ imitations. The term has had a chequered history and has been frequently misinterpreted by historians of the Frankish period. Renowned researchers including Prutz (1883) or La Monte (1932), simply failed to acknowledge the possibility that the Frankish settlers used the original Muslim coins. No doubt these historians relied heavily on Schlumberger (1878) who was convinced that these transactions represented solely the imitation gold minted by the kings of Jerusalem. Even as late as the 1940s archaeologists including Bagatti (see below) refused to believe that Frankish settlers used Muslim coins and translated the term appearing in charters as ‘Byzantine coins’. Modern historians such as Joshua Prawer or Hans Eberhard Mayer have mostly treated it as a generic term for gold coins during the Frankish period. Modern Frankish-period numismatic studies, for example Metcalf’s Coinage of the Latin East (1995), basically sideline the issue, concentrating solely on numismatic
mention other gold or silver currencies. Prices could range from 200 \textit{besants} for a single \textit{casale} with its \textit{villani} and other assets situated in the vicinity of Neapolis (Nablus), to as high as 7000 \textit{besants} for a property comprising three villages near Bethlehem and Toron des Chevaliers (Latrun). \(^\text{11}\) Proof that these transactions were made in gold currency and that the figures quoted did not represent money of account lies in the fact that these sales were often initiated to generate large sums of gold to pay for the ransom of a captured Frankish noble from the Muslim enemy. \(^\text{12}\) Annual rents were also presumably paid in gold. \(^\text{13}\)

At the lower end of the rural socio-economic ladder cash payments in gold were also to be found, but they were much smaller as charters relating to the issues related to the circulation of different types of imitation dinars within the kingdom. However, well provenanced excavation material like that of the castle of Vadum Jacob, dated securely to 1178-79 showed that dinars and imitation dinars may well have circulated together. See Kool (2002: 73-88).

\(^{10}\) For example, among the more than 170 surviving charters from before 1187 in the cartulary of the Holy Sepulchre, I have noted only eight which mention different types of gold or silver currencies. Five of the documents, \textit{BB}, 68 (1143), 72 (1137-8), 114 (1153-4), 123 (1158-9), 124 (1160) mentioned silver marks (\textit{marcham argentii}) - the traditional unit of weight and account employed in Western Europe from the eleventh century onwards, varying between 230 and 240g. In medieval documents at this period it appears frequently as the standard of payment which involved large sums, frequently made in silver ingots but also involving coins. See Spufford (1988:98-99, 223). One document (\textit{BB}, 71 (1142)) mentioned \textit{solidos publice monete}. Two charters (\textit{BB}, 115 (1154), 119 (1151-7)) noted the presence of demonetized gold and silver bullion in rural settlements such as the abovementioned village of Magna Mahumeria.

\(^{11}\) See \textit{BB}, 30 (1129); 37, 41, 46, 50 (1155).

\(^{12}\) \textit{BB}, 51 (1158); 87-88 (1161) document the cases of two nobles captured by Ayyubid forces at the same battle near Vadum Jacob, on the northern border of the Kingdom, in 1157. The higher ransom was set for Hugh d’Ibelin whose relatives were forced to sell in his name two \textit{casalia} to generate 3000 \textit{besants} for his release. The family of the second noble, John Gothman, sold off four \textit{casalia} to pay a lower ransom sum of 1400 \textit{besants} for his \textit{redemptionis de paganorum captivitate}.

\(^{13}\) \textit{BB}, 63 (1160-62).
villeneuve of Magna Mahumeria (el-Bireh), situated north of Jerusalem on the road to Nablus, attest.14 There the price for a vineyard ranged from 26 to 140 besants.15 Houses in the settlement bought from the first settlers by its landlord, the chapter of the Holy Sepulchre, were rented out around 1160 to other peasants for annual cash payments of between five and eight besants.16 A piece of land situated in the vicinity of the settlement was settled by a group of Cistercians in return for an annual payment of ten besants to the chapter.17 Vital installations like a mill could generate relatively large sums of cash, in one particular instance 120 besants, comparable to the price of a small casale.18 Besides gold coin, payments were also made at this level in other ways, for example, through the use of gold and silver bullion, or by means of the exchange of landed properties (concambium), or by mixed payments of cash and produce or solely by rural products.19 Apparently vineyards played a particularly prominent role as a standard for payment both in cash and kind.20 Payment of the tithes on the estates of the Holy Sepulchre was frequently in kind, although payment in coin must have occurred.21 Interestingly, very few documents detail corvées as payments.22

14 See below note 21.
15 BB, 66 (1128-29), 121 (1158-59).
16 BB, 125, 127, 128 (1160).
17 BB, App. 5 (1178).
18 BB, 111 (1150s).
19 For the existence of gold and silver bullion in the villeneuve of Magna Mahumeria see BB, 115 (1154) …domos et aurum et argentum et omnia mobilia…; for exchange of land see BB, 45 (1160), 52 (1158), 108 (1136-1143); for mixed payments in kind and money see BB, 48 (1158); for payment in rural products see BB, 64 (1160-62), 69 (1151), 78 (1140). In my opinion Ellenblum’s view (1998:145-153) that tithes in rural settlements were mainly collected in kind, even in settlements situated near the well developed money market of Acre, is an oversimplification of the complexities of the rural economy of the Latin Kingdom.
20 BB, 66 (1128-1129), 161 (1175-76).
21 BB, 58 (1128-29), 61 (1136), 107 (1141), 158 (1170).
Hardly any of the charters allude to the smaller, fractional denominations of money circulating in the kingdom. In fact, I only know of two charters, both relating to Frankish villeneuves that specifically mention such currency denominations. In my view this is no coincidence. Both documents concern the terms of agreement between the settlers and their respective landlords, the king of Jerusalem and the Hospitallers. They clearly indicate the existence of money transactions in these settlements; preemption duties, the buying and selling of property rights, mortgage, and the payment of annual rents and fines not just in kind are specifically mentioned.\textsuperscript{23}

The charter of rights (1153) of a similar Frankish village established by the king north of Acre, Castellum Regis (Akhziv), mentions three instances where smaller, fractional coin denominations are to be used by the Frankish settlers in their payments: half a denier for use of the communal bath; one denier for the use of scales at the flour mill to weigh one besant’s worth of flour,\textsuperscript{24} and one carruplam, referring to the billon kharruba, a silver dirham fraction, levied on every besant paid for the sale of house.\textsuperscript{25} The second charter, relating to the villeneuve of Bethgibelin and issued fifteen years later, also mentioned three instances in which settlers were to use

\begin{footnotesize}
\textsuperscript{22} BB, 62 (1131). See also Prawer (1980:195-200).
\textsuperscript{23} Strehlke (1869), no. 1 (1153); Delaville Le Roulx (1894-1906), no. 399 (1168).
\textsuperscript{24} Strehlke, Tabulae, no. 1 (1153): Et quotquot in balneo eiusdem se laverint, dimidium denarium singuli dabunt…. De una quaque bisantiata pro mensuratione denarium dabit….de singulis bisantiis carruplam solam region iuri dabit… Prawer (1980:142) mistranslated the term denarium for dinar. In fact the term refers not to a gold dinar but to the much smaller European style billon denier or penny. It would be illogical for a peasant to pay for a single visit to the settlement’s bath with a gold coin.
\textsuperscript{25} Prawer thought ‘caroubel’ referred to a measure of account, i.e one-twenty-fourth of the whole sum. But Grierson and Travaini (1998: 63-67, 198, 500) show that the kharruba refers to a tiny silver coin whose existence until recently was unknown. I assume that, as in the twelfth-century kingdom of Sicily, the inhabitants of the Latin kingdom adopted the use of Fatimid fractional silver. For the recent discovery of a rare hoard with such fractional silver, see Kool, Berman, Shamir and Tepper (2011: 31 – 41).
\end{footnotesize}
two types of coin smaller than the gold *besant*: the payment of a *robuinus*, possibly referring to the *ruba’i*, a quarter dinar or *besant*, and the payment of ‘part of a *besant’*. These smaller denominations as the charters indicate were mainly used in local transactions, for the payment of *bannum* rights or the sale of individual houses and small plots of land. More importantly, as their collective appearance in these documents clearly shows, by the mid-twelfth century the Frankish settlers were using a mixture of western and local Islamic type coins for day-to-day transactions in rural *Outremer*.

26 See Grierson and Travaini (1998:472) the *ruba’i* (from arab. *rub* ‘quarter’) was the standard gold denomination in Fatimid Sicily. These Sicilian quarter dinars circulated also in the territory of the Latin kingdom as their presence in hoards excavated in Jerusalem in 1970s and more recently in Ramleh in 2005 show. For a preliminary publication of the Jerusalem hoard see Berman (1976: 76-78) (Hebrew).

27 Delaville Le Roulx, *Cartulaire*, no. 399 (1168): *Et cum aliquis eorum vendere voluerit domum suam, aut vineam, aut terram, primum offeret ministro Hospitalis uno robuino minus…et si amplius vel minus quam unam carrucam vendiderint, ad rationem unius bizantii de carruca persolvent venditionem Hospitali, et de domo unum robuinum, et de vinea qualiscumque fuerit unum robuinum…*
6.3 The Archaeological evidence

The question remains as to how far the archaeological material - in this case coin finds - confirms my presumption that coin, in particular the smaller denominations, were circulating in the Frankish countryside. In other words, do we find examples of currency that can be safely identified with the short period of forty years in which these rural Frankish settlements flourished in the second half of the twelfth century? And if so, what kind of money was it that circulated in these villages?

Very few such Frankish villages have been excavated, and in even fewer have coins of this period been discovered. Fortunately for us, two well documented villeneuve settlements, Parva Mahumeria and Bethgibelin, have been systematically excavated, and the finds include numismatic material from the Frankish period. This coin evidence, some of it published more than sixty year ago, other discovered as recent as 1995 and still unpublished, is presented and analyzed here for the first time in a comprehensive manner.

6.4 Coins in the Villeneuve of Parva Mahumeria

The village of Parva Mahumeria (el-Qubeibeh) lay on the medieval road leading from the coastal area to Jerusalem, approximately 12 km northwest of the capital. According to the surviving medieval charters, a Frankish settlement was established here in the 1160s.\textsuperscript{28} Researchers unanimously agree that the settlement

\textsuperscript{28} BB, 135 (1164), 150 (1168-1169).
was abandoned by its Frankish inhabitants in 1187 with the Ayyubid conquest of the area after the battle of Hattin.  

Most of the historical research related to the site has concentrated on the thirty-year period (1160s-1187) during which the Frankish settlement was in existence. The village belonged to the villeneuve type and was established on initiative of the landowner, the church of the Holy Sepulchre, with the intention of settling Frankish colonists on its land around Jerusalem.  

Archaeological enquiry has also largely concentrated on the twelfth-century Frankish settlement. The village was extensively excavated in the nineteenth century and again in the 1940s, and the results were fully published by Bellarmino Bagatti in 1947. More recently scholars including Pringle, Ellenblum and Boas have confirmed Bagatti’s conclusions concerning the type of settlement created by the Frankish colonists: a linear planned villa built on both sides of a central road similar to the villeneues in twelfth and thirteenth-century Europe. The village consisted of approximately fifty rectangular dwellings situated on both side of a street that formed

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30 Benvenisti (1970:224-27); Ellenblum (1998:88-94). For this church’s effort to colonize the area around Jerusalem secundum Mahumerie (according to the custom of Mahumeria), see Prawer (1980:126-35); Ellenblum (1998:68-77). This custom referred to the villeneuve of Magna Mahumeria (el-Bireh) situated on the road from Jerusalem to Nablus which had been in the possession of the church from the beginning of the 12th century and which according to charters dating to the 1130s-1150s - several decades before the establishment of its sister settlement at Parva Mahumeria - was inhabited by mostly French and Poulain colonists. For the important charter enumerating its inhabitants, see BB, 117 (1156).
part of the Roman road to Jerusalem. At the heart of the settlement stood its main institutions: the church, the oven and flour mill and the fortified *domus*.\textsuperscript{33}

Interestingly, despite the detailed archaeological and historical documentation of the village, the coin finds - except for the gold *besants* and cut fragments - have largely gone unnoticed by both archaeologists and numismatists.\textsuperscript{34} This is all the more astonishing as an extremely comprehensive list, detailing the exact provenance of every single coin found in the excavated Frankish-period dwellings and adjacent areas has been available for more than sixty years.

In order to get a clear view where each coin dating to the twelfth or thirteenth centuries was found, I have constructed several tables transposing Bagatti’s original list of finds on to the map of excavated remains as identified by him (Fig. 1).

\textsuperscript{33}Pringle and Ellenblum accurately interpreted the large rectangular structure situated in the centre of the village as the the *domus* or administrative centre, correcting Bagatti’s assumption that these were just another group of individual houses. The find of a hoard of Frankish period gold coins and fractions (see above) is further proof that the building housed the estate’s steward or *curia* and was not simply a cluster of houses.

\textsuperscript{34}Bagatti (1947:88-114) detailed in many cases the finds of Frankish period coins in his description of the crusader period houses. The coins also appear in two appended coin catalogues (Bagatti 1947:170-87). The cut fragments and imitation dinars were published and mentioned by Miles (1967: 183-203); Brady (1978: 133-47); Metcalf (1975: 198-199). However these researchers never properly evaluated the context in which the hoard was found - within the *domus* housing the administrator of the estate.
Figure 1. Frankish period coin finds (blocks I-IV) excavated in the villeneuve of Parva Mahumeria. After Bagatti 1947.
This table shows that the coins were found in four blocks of dwellings inhabited during the Frankish occupation in the centre of the village:

Block I consisted of twelve adjacent spaces/dwellings situated south of the main road dissecting the *villa* (nos. 69-3). Coins were found in three separate dwellings: nos. 11 and 7 contained Zengid and Ayyubid coppers and one silver dirham discovered in an ash fill probably associated with the Ayyubid conquest of the village in 1187; while no. 3 yielded a single billon denier minted by King Amaury of Jerusalem.

Block II consisted of fifteen adjacent spaces and dwellings (nos. 12-26) situated north of the main road dissecting the *villa*. Coins were found in two clusters of adjacent dwellings: nos. 13-16 with three *deniers* and a Zengid copper, and nos. 24-26 where three *deniers* were found in a layer of ash with pottery fragments lying upon platform of beaten earth. In one separate dwelling (no. 20), a group of Zengid and Ayyubid coppers were found inside a vat basin.

Block III consisted of seven adjacent dwellings (nos. 27-33) situated north of the main road dissecting the *villa*. It was here that the largest concentration of coins (18) from the Frankish occupation was found. In all seven adjacent rooms, a mixture of European and Frankish *deniers* was unearthed. Some of them were found lying among wine press and cereal vats or pits together with Frankish period pottery. Associated with them were found a number of contemporary Zengid coppers and Ayyubid *fulus* (18) of which five postdate the Frankish occupation.
Block IV: coins were found in eleven of the twenty ‘rooms’ of the fortified 
*domus* (nos. 34-53) and its surroundings, and in the church compound (the 
*basilica*). Twenty-three of these, fifteen gold pieces comprising a hoard 
and another eight European and Frankish *deniers*, were found concentrated 
in three ‘rooms’, (nos. 35, 36, 43). A particularly large group of 
contemporary copper Zengid *fulus* were found in seven rooms of the 
structure, as well as post-Frankish occupation Ayyubid *fulus* and dirhams 
dating to the 1220-1260s.

An examination of the spatial distribution of the numismatic finds shows several 
interesting conclusions:

1. 97 coins related to the twelfth or thirteenth centuries were excavated in the 
grounds of the village. 52 of these coins came from individual dwellings while 
another 30 single finds and a gold hoard were discovered in the fortified 
*domus*. Thus coins were found in more than 50% of the dwellings. When we 
consider that these coins – with the exception of the gold hoard - represent 
losses from the much larger quantities of small change circulating in the 
village, then the amount of cash circulating in the village during the twelfth 
and thirteenth centuries must have been considerable.\(^{35}\)

2. Of the 29 excavated dwellings, 16 contained 21 *deniers* associated with the 
twelfth-century Frankish occupation of the site. In other words, more than 
50% of the dwellings contained money relating to the twelfth-century 
villeneuve. What is significant here is the even distribution: in almost every 
one of these dwellings examples of coins were discovered showing that money 
was a familiar commodity among the inhabitants.

\(^{35}\) For the relationship between single coin finds and projected coin circulation, see Metcalf (1998).
Three of the twenty spaces excavated in the seigneurial *domus* contained eight *deniers* and a gold hoard comprising imitation *besants* and cut gold dating from the twelfth-century Frankish occupation. In my opinion these finds - extremely rare in excavations - represent taxes or rent paid by the tenants to the administrator of the estate dwelling in the *domus*.

The coins belonging to the Frankish *villeneuve* period (1160-1187) are in geographical and chronological order:

<table>
<thead>
<tr>
<th>Ruler</th>
<th>Coin type</th>
<th>Date</th>
<th>Quantity</th>
<th>Provenance &amp; distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Latin Kingdom of Jerusalem</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Baldwin III             | *billon deniers*   | 1143-1163 | 5        | 1 in dwelling no. 27
1 in dwelling no. 31
1 ‘east of the church’
1 in the village
1 east of the village |
| Amaury                  | *billon deniers*   | 1163-1174 | 12       | 8 specimens in 7 dwellings (3,24,28,30,32,33,36).
2 specimens in *Domus* (one with gold hoard)
1 west of the friars
1 in the ‘mosque’ |
| Hoard of royal gold     | imitation dinars, cut gold | 1150-1187 | 15       | ‘room’ no. 43 of the *Domus*                                                             |
| **County of Antioch**   |                    |         |          |                                                                                           |
| Antioch                 | copper denier      | 1163-1187 | 3        | in dwelling no. 30                                                                       |
| **County of Tripoli**   |                    |         |          |                                                                                           |
| Tripoli                 | *billon deniers*   | 1173-1187 | 3        | Village                                                                                 |
| **Byzantine empire**    |                    |         |          |                                                                                           |
| Manuel Komnenos I       | copper folles      | 1143-1180 | 1        | Road near church                                                                        |
| **Europe**              |                    |         |          |                                                                                           |
| Fulk V of Anjou         | *billon denier*    | 1109-1129 | 1        | Near *Domus*.                                                                           |
| Lucca                   | *billon deniers*   | 1150-1187 | 6        | 3 in dwellings nos. 30-31; 3 in ‘room’ no. 35 of the *Domus*                           |
| Valence                 | *billon denier*    | 1150-1187 | 1        | Dwelling no. 30 near a winepress or vat for cereals                                    |
| Provins                 | *billon denier*    | 1150-1187 | 1        | ‘room’ no. 35 of the *Domus*                                                            |

Table 1. Coin finds from the Frankish village of Parva Mahumeria (1160s-1187)

In addition to these coins, a large number of *Zengid fulus* were discovered in virtually all the dwellings as well as the *domus* alongside the twelfth-century *deniers* and thirteenth-century *fulus* and *dirhams*. From their context it is hard to tell whether these
coins belonged to the Frankish *villeneuve* or the Ayyubid occupation of the site. However, data from other sites indicate that Zengid *fulus* circulated extensively in the territory of the Frankish kingdom from the second half of the twelfth century into the early thirteenth.\(^3\)

Interestingly the coin evidence shows that the village continued to be inhabited after it was conquered by the Ayyubid forces in 1187. From eight of the seventeen dwellings as well as from the fortified *domus* we have coins which certainly date from the thirteenth-century Ayyubid occupation of the village. The majority of these coins are *fulus* and *dirhams* of the Ayyubid rulers of the principality of Aleppo, al-Zahir Ghazi (1186-1216) and al-Aziz Muhammad (1216-1236).

Remarkably these Muslim coins are associated with Frankish *deniers* of types often found in thirteenth-century contexts:

<table>
<thead>
<tr>
<th>Ruler</th>
<th>Coin type</th>
<th>Date</th>
<th>Quantity</th>
<th>Provenance &amp; distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin Kingdom of Jerusalem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Henry of Champagne</td>
<td>copper pougeoise</td>
<td>1192-1197</td>
<td>2</td>
<td>1 in dwelling no. 27, 1 in dwelling no. 28</td>
</tr>
<tr>
<td>Kingdom of Cyprus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hugh I</td>
<td>billon denier</td>
<td>1205-1218</td>
<td>1</td>
<td>Dwelling no. 24: found in an ash layer with pottery fragments lying a platform of beaten earth in the entrance.</td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dijon, France</td>
<td>billon <em>deniers</em></td>
<td>c.1230</td>
<td>2</td>
<td>1 in dwelling no. 27, 1 found east of the <em>Basilica</em>.</td>
</tr>
</tbody>
</table>

Table 2. Coin finds dating to the Ayyubid occupation of Parva Mahumeria (post-1187)

This discovery raises the important question of how these thirteenth-century European *deniers* from Parva Mahumeria are to be interpreted. Did the Frankish settlers remain in their houses after Saladin’s conquest? Unlikely. The pilgrim Wilbrand of Oldenburg who visited the village on his journey to Jerusalem in 1212 stated clearly

\(^3\) See Chapter 7 below.
that the area had been abandoned by its Frankish colonists and was now *inhabitum a saracenis*, Muslim peasants, who presumably had moved in after the capture of Jerusalem by Saladin’s forces in October 1187. Their presence is clearly backed up by the large number of contemporary Ayyubid *fulus* found in the village. Two other possibilities present themselves: first, these Frankish and European *deniers* were lost by pilgrims following the *vicus*, the main pilgrim’s route from Jaffa to Jerusalem, which led through the village. However, the fact that these coins were found *in situ* inside five separate houses seems to make such a theory somewhat far-fetched. The second possibility, that these coins were lost during the short period between 1229 and the early 1240s in which the area reverted to Frankish rule, seems too much like an instance of forcing the archaeological finds into a historical straightjacket.\(^{37}\) In my view these Frankish and European *deniers* formed part of the currency circulating in the post-1187 Ayyubid phase of these settlements, as is also shown below in the example of Bethgibelin.

### 6.5 Coins in the Villeneuve of Bethgibelin (Beth Guvrin).

The Frankish settlement of Bethgibelin was founded by King Fulk around 1136 as part the kingdom’s strategy to contain Fatimid Ascalon. According to the surviving charters it was originally built as a fortress and transferred to the Hospitallers who around the time of the fall of Ascalon (1153), reorganized the settlement along the lines of a *villeneuve*.\(^{38}\) Thirty-two Frankish families originating

\(^{37}\) The inability to even contemplate their continuing use during the Ayyubid period forced Bagatti (1947: 171) to make the implausible suggestion that the presence of these coins ‘makes us conclude that also in the first half of the thirteenth century the inhabitants were Latins or in communion with them.’

from southern Europe and neighbouring settlements in the kingdom were brought in by the Hospital in the 1150-60s to settle its land. They received extensive privileges as free colonists in contrast to the other ten villages belonging to the lordship of Bethgibelin and inhabited by the indigenous peasantry.

The area of the medieval castrum was extensively excavated between 1992 and 1995. The excavations revealed that the site was constructed in two phases during the approximately forty years of its occupation in the twelfth century. The first phase coincided with its founding as a military outpost when a rectangular castrum (enclosure castle) was constructed fortified with towers. Inside the complex remains of a refectory, storerooms and other installations used by its first inhabitants were excavated. The second phase corresponded with the creation of the civilian settlement in the 1160s: the fortified area was significantly enlarged and was now surrounded by a new concentric system of outer defensive walls, towers and a moat. Inside the castrum, an elaborate Romanesque church was constructed adjacent to the southern wall of the keep which was partially dismantled for this purpose. The enlarged fortification now held numerous workshops, store-rooms, stables and domestic structures, pointing to a substantial (civilian) population inhabiting the castle grounds. Possibly this enlarged ‘civilian’ castrum constituted the administrative centre of the Frankish agricultural settlement mentioned in the documents.

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39 Kloner and Hubsch (1996: 85-106); Kloner and Cohen (2000: 32-39). My thanks are due to both excavators for allowing me to refer to the as yet unpublished numismatic material from the site. In particular I would like to thank them for answering my questions with regard to the provenance of the coins and the numerous excavation details relating to this fascinating site.

40 The laying of the floor of the church was dated by a coin of Amaury (1163-74). See Kloner and Cohen (2000: 38).
During the excavations twenty-three coins finds presumably belonging to the Frankish villeneuve period (1160-1187) were found in different parts of the castrum (Fig. 2).

Figure 2. Frankish period coin finds excavated in the villeneuve of Bethgibelin. After Kloner and Cohen 1999
Below they are ordered in detailed chronological and spatial sequence:

<table>
<thead>
<tr>
<th>Ruler</th>
<th>Coin type</th>
<th>Date</th>
<th>Quantity</th>
<th>Provenance &amp; distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin Kingdom of Jerusalem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baldwin III</td>
<td>billon deniers</td>
<td>1143-1163</td>
<td>1</td>
<td>Church and southern annex</td>
</tr>
<tr>
<td>Amaury</td>
<td>billon deniers</td>
<td>1163-1174</td>
<td>3</td>
<td>2 in church and southern annex</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 in amphitheatre area</td>
</tr>
<tr>
<td>Royal gold</td>
<td>cut gold</td>
<td>1150-1187</td>
<td>1</td>
<td>Dump</td>
</tr>
<tr>
<td>Bethgibelin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local tokens</td>
<td>lead token</td>
<td>1160s-1187</td>
<td>7</td>
<td>3 in Church and southern annex</td>
</tr>
<tr>
<td>County of Tripoli</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tripoli</td>
<td>billon deniers</td>
<td>1173-1187</td>
<td>3</td>
<td>Keep area</td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lucca</td>
<td>billon deniers</td>
<td>1150-1187</td>
<td>6</td>
<td>2 east of the amphitheatre</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 in keep area</td>
</tr>
<tr>
<td>Valence</td>
<td>billon denier</td>
<td>1150-1187</td>
<td>1</td>
<td>Church and southern annex</td>
</tr>
<tr>
<td>Provins</td>
<td>billon denier</td>
<td>1150-1187</td>
<td>1</td>
<td>North-western tower</td>
</tr>
</tbody>
</table>

Table 3. Coin finds from the Frankish village of Bethgibelin (1150s-1187).

What is particularly noticeable is the strong similarity with the types of coins found in the settlement at Parva Mahumeria: the same mixture of royal gold and billon coins of the kingdom with billon from Tripoli and similar deniers from the mints of Lucca, Valence and Provins.

Among the numismatic finds is a rare bilingual cut-gold fragment found in the area of the amphitheatre which functioned in medieval times as stables and storage-area (Fig 3).
Metcalf suggested that these cut fragments functioned as offering-pieces for the use of pilgrims.\textsuperscript{41} However, a survey of both hoards and single finds from the Fatimid period shows that the use of cut gold and silver and billon fractions was already widespread in the territory of Palestine and Syria prior to the crusader conquest.\textsuperscript{42} The finds of these cut pieces in these villeneuves and similar stray-finds in the vicinity of Caesarea and Sidon where Frankish settlement was particular intensive, seem to me indicative of their day-to-day use in rural settlements in the kingdom.\textsuperscript{43} The existence of ‘bilingual’ pieces reveal that the Franks simply adopted a regional Islamic tradition of small cut gold currency by weight for use as small nominal coins.\textsuperscript{44}

\textsuperscript{41} Metcalf (1995:116).
\textsuperscript{42} This survey forms part of my ongoing research. See also above notes 25, 26.
\textsuperscript{43} For finds in Caesarea and Sidon, see Metcalf (1995:107-11).
\textsuperscript{44} Another bilingual piece was among the cut pieces excavated off the Carmel Coast, see below note 47. Bilingual pieces with pseudo(?)-Arabic inscriptions are known from the coin collection of the Ashmeolean Museum and the American Numismatic Society. See Metcalf (1995: plate 14, nos. 307-308) and Malloy (1994: 66-67), who interpreted them as transitional types. I am of the opinion, however, that Fatimid and Frankish cuttings were in use simultaneously. Occasional traces for this can be found in hoard material, for example in the Sidon hoard which included an Islamic fragment of the
different types of cut moneys circulated widely both in the Latin kingdom and Ayyubid Syria is clearly attested by a late twelfth-century Islamic legal manual from Tiberias. Additional cut fragments found in a shipwreck off the Carmel coast and as far north as Marash in the Principality of Edessa indicate that these pieces also circulated in trade far beyond the confines of the kingdom.

Another important group of low denomination ‘coins’ found at Bethgibelin are a set of four identical tokens, portraying a fortification wall with battlement (Fig. 4).

Seldjus of Iraq dated to 1136-1160 among the more than hundred Frankish gold cuttings. See Besly (1985: 421-32). An unprovenanced hoard of gold coins and jewelry acquired by the American Numismatic Society in the late 1970s contained, beside 40 Latin fragments, 6 with Islamic or pseudo-Islamic inscriptions. See Brady (1978:141). Similarly, in the area of Caesarea both Frankish and Fatimid cut gold were registered in almost equal quantities. See Metcalf and Holland (1992-93: 94) and Metcalf and Holland (1994-99: 162).


Nine cut fragments were excavated off the Carmel coast, near the remains of a ship that transported iron ingots. My thanks to Dr. U. Galili and K. Sharvit of the IAA Maritime Unit for permission to mention these finds. For the find of a Fatimid cut fragments in a Byzantine shipwreck off the southern Anatolian coast, see van Doornick (2002:143-44). Recently gold fragments imported from Fatimid Egypt and the Byzantine Empire were discovered in excavations at the Citadel of Damascus. See Heidemann (2003): http://www.archaeologie-online.de/magazin/fundpunkt/2003/04/c_1.php
The use of tokens, as supplementary money for local use, is a typical European monetary tradition unknown in the East at this period. Most of these tokens are known to us from stray-finds found in the cities and towns of the kingdom, for example Acre, Jerusalem and Caesarea. Recent excavations show that the tokens also circulated in smaller, inland castle settlements such as Vadum Jacob or Belmont. At Belmont castle, near Jerusalem, which like Bethgibel in was a Hospitaller property, a large hoard of hundreds of such tokens were uncovered with a cryptic inscription and a similar battlement iconography. Presumably the Hospitallers, faced with a temporary shortage of money in the 1160s, attempted to circumvent the royal prerogative of coinage by minting tokens on their estates that resembled money.

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47 See Labrot (1989); Crusafont and Sabatier (2000).
48 For Belmont (Zova) where a large cache of 436 identical tokens was discovered within the central courtyard of the castle, see Metcalf (2000:81-85). A dozen or more were recovered from the Faubourg of Atlit Castle excavated by C.N. Johns in the 1930s. See Metcalf, Kool and Berman (1999: 89-164). For Vadum Jacob where four lead denier-sized tokens bearing the name of the castle were excavated together with a group of Amalricus deniers, see Kool (2002:83-84).
In addition to the above coins, large quantities of Zengid and Ayyubid coins were excavated, primarily from the inner ward, the church and southern annex area. These consisted of approximately 60 Zengid copper fulus and almost 500 mostly Ayyubid copper fulus. The latter group mostly dated to the first half of the thirteenth century.

These finds clearly indicate in my view that the settlement was active as an Ayyubid outpost after 1192 when the army of Richard the Lionheart finally abandoned the area to Ayyubid control. Interestingly, a Tripoli denier dated to the 1230s was also discovered, indicating that here, as in Parva Mahumeria, Frankish coins remained in circulation during the post-1187 Ayyubid occupation of these villeneuves.49

49 As in the case of Parva Mahumeria, it seems improbable that these coins date to the short four-year interlude, 1240-1244, when the site was reoccupied by the Franks.
6.6 Conclusion

In conclusion, the use of moneys in these Frankish rural settlements during the second half of the twelfth century can be summarized as follows:

1) Historical documentation, as well as archaeological evidence, demonstrates that petty cash for day-to-day use circulated in ample quantities and was a common feature in the rural economy of the Latin kingdom.

2) The common use of gold coins and fractions, as noted in the surviving charters relating to these settlements, is borne out by the archaeological evidence: in both settlements remains of imitation dinars and cut gold minted in the kingdom were found. In the case of *Parva Mahumeria*, their provenance - the *domus* of the estate - strongly suggests that gold was used by the tenants for paying taxes or rent to the estate administrator.

3) The billon money types circulating included coinage minted in the kingdom proper but also small amounts of *deniers* and coppers from the Northern principalities of Antioch and Tripoli, as well as European imports from the same three French and Italian mints (Provins, Valence and Lucca).

4) Substantial quantities of Zengid coppers were found in the remains of both settlements, complementing evidence from other sites that these *fulus* circulated extensively in the territory of the Frankish kingdom from the second half of the twelfth century to the beginning of the thirteenth.

5) Finally, the considerable presence of post-1187 Ayyubid coppers and dirhams show that after the departure of the Frankish settlers these settlements continued functioning under Ayyubid control. Interestingly, in both cases, we witness the
continuing circulation of Frankish and European money, securely datable to after 1192.
Chapter 7. Coins at Vadum Iacob: New Evidence on the Circulation of Money in the Latin Kingdom of Jerusalem during the Second Half of the Twelfth Century

7.1 Introduction

Excavations conducted between 1993 and 1998 by Ronnie Ellenblum and Adrian Boas have uncovered the remains of the Frankish castle of Vadum Iacob, Iacob’s Ford, also known under its thirteenth-century French name Chastelet (Fig.1).¹

Fig.1 Fortress of Vadum Iacob, view to East. Excavated massive defense wall is visible.

King Baldwin IV and the Knights Templar jointly erected the castle in October 1178 on a strategic site that overlooks virtually the only crossing of the Jordan between the kingdom’s territory and the hinterland of Damascus, then ruled by Saladin (Fig.2).
For our purposes the most important detail of the castle’s history is its extremely short existence. It was only eleven months, from October 1178, when Baldwin IV gathered his entire army at Iacob’s Ford and initiated the construction of the castle, until August 30 when the forces of Saladin successfully mined its unfinished walls, stormed the castle, and captured or killed the Templar garrison of approximately fifteen hundred men.

The brief existence of the castle is amply recorded by both contemporary Muslim and Frankish sources and has been backed up by the recent archaeological finds.²

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² For a detailed survey of the historical sources see Ellenblum 2003.
Among these are approximately 160 coins of which half belong to the medieval period and which form the basis for my discussion here.

For the student of Frankish period numismatics, the extremely short existence of the castle — barely ten months — offers a snapshot in time, a ‘frozen picture’, which presents us with a rare opportunity not only to research the use of money at a particular site at a particular point in time, but also to reach some valuable conclusions about the circulation of coinage in the Latin Kingdom during the second half of the twelfth century, up to the battle of Hattin.
7.2 Vadum Iacob and its contribution to the study of coins from the Frankish period.

The study of the coinage used in the Frankish East is not a new discipline. De Saulcy, who pioneered many numismatic studies, already published his Numismatique des Croisades in 1847. He in turn acknowledged that he had borrowed substantially from an essay written by another French savant, Marie Cousinèry, which was to have formed part of Michaud’s Histoire des Croisades but was never fully published. However, Frankish numismatics has remained at large on the margins of modern crusader historiography. Except for a handful of medieval numismatists utilizing state-of-the-art methodologies such as stylistic analysis, die-studies and hoard comparisons, the crusader research community has chosen largely to ignore the potential contribution of this field to the economic, cultural, and art history of the period.

Curiously enough, this was not so more than a century ago. The nineteenth-century historian Eugène de Rozière, the French historian of Lusignan Cyprus, not only regarded the study of coins of the Frankish period as an important branch of the historical

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3 de Saulcy (1847).
4 Esprit Marie Cousinèry, “Catalogue raisonné de la collection des medailles de M. Cousinèry, ancien consul de France en Turquie, qui ont été frappées en Orient, par les princes croisés; medailles totalement inconnues jusqu’a ce jour.”(Extrait du 5ème volume de l’Histoire des Croisades de Michaud, edition 1822.)
5 Historians like Joshua Prawer, Jonathan Riley-Smith and Hans Mayer noted the importance of cash money in the kingdom’s urban-based economy but avoided a more in-depth analysis of the use of coinage in the kingdom. Of the large numbers of articles published in the congresses organized by the Society for the Study of the Crusades and the Latin East since 1983, very few deal with coinage of the Frankish Kingdom. There exist studies dealing with the financial resources mobilized for the crusades, but virtually none of them makes any connection with the use of coinage in the kingdom proper. See Kedar (1974: 339-
métier, but he also wrote his own work on the Lusignan coinage. True, the identification and the study of this coinage was then largely done with simple means of quoting crusader chronicles, dating dynasties and individuals, something which from today’s perspective of the modern trained historian and numismatist looks quite outdated. This perception of Frankish coinage as a branch of dynastic history has had a hard time dying out, particularly since Schlumberger’s *Numismatique d’Orient latin*, published in 1878, remained the dominant work in the field for more than a century. Only quite recently was his work superseded by Michael Metcalf’s *Coinage of the Latin East* of 1983, substantially re-edited and enlarged in 1995.

Metcalf’s research, in particular his meticulous publication of Frankish coin hoards, has done much to rehabilitate this field of study and make it part of modern crusader historiography. His efforts to combine modern numismatic methodologies with a critical reading of historical sources has given the study of Frankish coinage a solid scientific and historical basis. However, it is still very much a work of classification of types primarily minted by Frankish rulers in the Latin East, and less a monetary history. As a result, questions regarding the use of regular coinage in the Frankish kingdom, the role of other means of payments and questions related to the integration of Muslim and European use of money are hardly touched upon. In this respect it is important to focus on two new directions of research. First, to survey comprehensively coins discovered in recent years in archaeological contexts dating to the Frankish period. Secondly, to

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6 de Rozière (1847).
7 Schlumberger (1878).
chronicle the possible use by the inhabitants of the kingdom of less well known coin types, such as Muslim bronze coinage or lead token money, in parallel to the kingdom’s regular coinage.

Well-documented excavations such as Vadum Iacob can provide us with the exact context and dating tools which have been lacking up to now in the study of the coin circulation of the Frankish Kingdom. Indeed, the coin material from Vadum Iacob forms an important instrument to test and compare the present state of knowledge, until now largely based on hoard material.

7.3 12th century monetary circulation: present state of knowledge

Most of what we know of twelfth-century monetary circulation is based on barely a dozen smaller and larger published hoards, while stray-finds are virtually non-existent
for the period. In fact, until recently site finds came exclusively from three major coastal sites: Acre, Caesarea and ‘Atlíth (Pilgrims’ Castle) and are mainly of the thirteenth century. The above material draws the following picture of currencies circulating during the second half of the twelfth century:

From the 1140s onwards gold and billon issues minted by the kings of Jerusalem dominated the currency. The gold coins, or “bezants” as they were known to the kingdom’s inhabitants, consisted primarily of imitation dinars of the Fatimid caliph al-`Amir (1101-30). These coins were characterized by faulty epigraphy and lower weight; also, they contained close to 80 per cent gold, instead of the 90-95 per cent standard used in the Fatimid mints. Numerous contemporary charters that document transactions involving landed properties and goods indicate that these gold imitations formed the backbone of the kingdom’s monetary system. The Latin kings supplemented these large currency units with two series of petty billon coinage. These were modeled on the European billon denier, a thin coin weighing about one gram, containing less than 50 per cent silver. The first was the Tower of David denier issued by King Baldwin III (1143-63), which circulated between the 1140s and late 1160s. Presumably it was withdrawn when a new type showing the rotunda of the Holy Sepulchre was issued during the reign of King Amaury (1163-74). The later type was issued in large numbers and remained in circulation as a type immobilisée till the mid-thirteenth century. In addition, a small number of anonymous types depicting religious symbols like the True Cross or Christ’s Tomb were minted, but not much is known about the circulation of these rare types.

7.4 Numismatic methodology of an archaeological site

Strictly speaking, the coins excavated at Iacob’s Ford are random site-finds, single coins in use at the castle that were lost while the site was active. As a rule, the random quality renders site finds statistically secure evidence, whereas single coin losses, as opposed to hoards whose chronology can be precisely established by its latest coin, usually cannot be dated accurately, nor used to establish a chronological order of different coin types. However, the above finds come from a well dated and controlled excavation, explored intensively for several seasons. Consequently the coin material behaves much like conventional hoard material, adding substantially to the quality of the conclusions below about currencies circulating during this period. In addition, the abundant documentation by both Muslim and Frankish chroniclers, describing almost month by month the events surrounding the rise and fall of Vadum Iacob, allows us to establish quite accurately who used the coins found on the site.

To what extent do the finds at Vadum Iacob enrich present knowledge? For purposes of analysis I have divided the finds into four categories: gold besants, billon deniers, lead token money, and Muslim copper fals (Zandjid and Ayyûbid), each of which I will briefly present.
7.5 The Finds at Vadum Iacob

Two al-`Amir *besants* were discovered in the castle’s ground: one came from the northern castle-wall, while another coin was excavated *in situ* from under a tabun, outside the fortifications of the southern main gate.

<table>
<thead>
<tr>
<th>Context</th>
<th>Nos.</th>
<th>Weight</th>
<th>Diam</th>
<th>Reference</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gate area</td>
<td>1</td>
<td>3.82</td>
<td>22</td>
<td>Balog and Yvon 1958: 151, No.27a.</td>
<td>Reddish glow; annulets between inner rings.</td>
</tr>
<tr>
<td>On the Northern Wall</td>
<td>2</td>
<td>3.79</td>
<td>22</td>
<td>Balog and Yvon 1958: 151, No.27b.</td>
<td>Whittish; rough script.</td>
</tr>
</tbody>
</table>

Fig. 5. Details of Frankish *besants* excavated at Vadum Iacob.

Both display clearly the illegible pseudo-kufic script so typical of the imitation dinars minted by the kings of Jerusalem at Acre and Tyre. The dinars are of the types classified by Yvon and Balog as ‘crude’ imitations.\(^{10}\) Similar types of imitation dinars have been previously dated by the metrological studies of Gordus and Metcalf to the period from 1148-59 to 1187.\(^{11}\) The finds of these *besants* at Vadum Iacob securely dated to the years 1178-79 now firmly confirms and further refines their suggested chronology.

\(^{10}\) Balog and Yvon (1958:133-68). The coins here are classified by Balog and Yvon as Nos. 27a and b.

These “Saracen besants” appear frequently in surviving charters of the Frankish Kingdom that chronicle sale of landed property and houses. In contrast, gold coins in general and those of the Frankish period in particular are extremely rare among site-finds in controlled excavations. Such coins were deemed too valuable by contemporaries to be discarded accidentally. Finds of Frankish gold therefore usually appear in the form of hoards deliberately concealed by their owners. Two such hoards which are dated to the second half of the 12th century, are the besants excavated in 1932 in the Nativity Church in Bethlehem and a group of besants found with cut gold pieces excavated in 1942 in the manor house in the Frankish village of Parva Mahumeria (el-Qubeibeh), in the vicinity of Jerusalem.12

The discovery of two isolated site-finds at Vadum Iacob is therefore even more remarkable. Or is it? A similar coin was excavated in the nearby site at Mount Berenice above Tiberias, recently identified as the site of the late 12th century settlement of St George.13 It is tempting to suggest that new excavation material like ours may indicate that these coins circulated on a much larger scale in rural Frankish sites than is presently thought. As for Vadum Iacob itself, the coins’ provenance near the walls of the castle

12 Hamilton (1934:1-8); Bagatti (1947); see also Bagatti (1987:8-13). Both the besants and the cut pieces were studied and described by Miles (1967:189-203) and Metcalf (1975:198-199), Pl.19.
13 The site was excavated by Yizhar Hirschfeld for the Israel Antiquities Authority. See his “The Anchor Church at the summit of Mt Berenice, Tiberias,” Hadashot Arkheologiyot 101 (1994: 29-32) [in Hebrew]. For the identification with the Frankish period settlement of St. George see Ellenblum (1998). A Charter of the monastery of Our-Lady-of-Josaphat in Jerusalem dated to 1178 hints to the existence of a settlement that included both Syrian ‘local’ Christians and Latin settlers around a parochial church. Two earlier charters show that settlement’s origins date back to the early 12th century see Delaborde (1880: 40, No.14 ) and Kohler (1889: 113-14, No.2). For the coins of the site see Bijovsky (2004:169 – 176).
possibly indicate that they were lost by one of castle’s defenders during the final battle with Saladin’s forces in August 1179.

The second major discovery, twenty-two billon coins, were all excavated within the castle’s grounds and all of them are exclusively *Amalricus* type *deniers*.

<table>
<thead>
<tr>
<th>Type</th>
<th>Context</th>
<th>Weight</th>
<th>Diameter</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series with chevron-barred A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Main Gate area (?)</td>
<td>0.96</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>South East Gate: section fill of a trench.</td>
<td>0.83; 0.94</td>
<td>18; 17</td>
<td>2-3</td>
</tr>
<tr>
<td></td>
<td>Main Gate area: fill below collapsed vault, above floor.</td>
<td>0.99</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Northern inner section of castle: surface level.</td>
<td>1.17</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Main Gate area.</td>
<td>1.04</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Main Gate area: fill below collapsed vault, above floor.</td>
<td>1.02, 0.94, 0.85, 0.94, 1.00</td>
<td>17, 17, 17, 18, 17</td>
<td>7-11</td>
</tr>
<tr>
<td><strong>Series with single-barred A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>In Northern Gate.</td>
<td>0.82</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td><strong>Series with double-barred A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Center of Main Gate.</td>
<td>0.83</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Main Gate area: fill</td>
<td>0.86</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Main Gate area: in burnt living surface level.</td>
<td>0.90</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>In living surface below collapsed stones.</td>
<td>0.94, 0.85</td>
<td>18, 18</td>
<td>17-18</td>
</tr>
<tr>
<td></td>
<td>Main Gate area: fill below collapsed vault, above floor.</td>
<td>0.99</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Fill near inner part of the Main gate.</td>
<td>1.05</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Northern inner section of castle.</td>
<td>1.00</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Surface: stray-find.</td>
<td>0.35</td>
<td>14</td>
<td>22</td>
</tr>
</tbody>
</table>

**Fig. 7** Details of *Amalricus denier* types excavated at Vadum Iacob.

The majority of the coins were uncovered in sealed contexts dating to the Frankish occupation within the castle’s perimeter near the main gate area. The concentration of billon coins of the same type in such a small excavation area is by any measure an extraordinary large quantity. These do not really fit the label of “accidental” losses —
petty coins that may have slipped unintentionally out of their owner’s hand during the life-cycle of a site. In fact, the detailed context of the coins found in this area suggest that they were lost during some catastrophic event, most likely an attack by the Ayyûbid forces on the Frankish defenders in this area.¹⁴ They were found below the collapsed remains of a barrel-vaulted structure together with the remains of horses and human skeletons, or lay strewn on the Frankish living surface together with remains of pigs, cattle, metal tools, ceramics and numerous Ayyûbid arrowheads. Only of four coins the contexts remain unclear: two coming from the section fill of a trench dug near the south-eastern corner of the castle and two others whose exact provenance cannot be established.

All of the twenty-two coins except one belong to the good quality, heavy weight *Amalricus* type (c.0.80-1.00 gram) minted as *type immobilisée* at least till 1187.

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The only specimen weighing below the 0.80 range is a coin in the collection of Kibbutz Gadot, located nearby, weighing 0.35 grams. This coin, a surface find, was collected by members of the kibbutz on the site many years before the excavation. It is a ‘cut Amalricus type’, resembling the early 13th century mauvais denier types described in the Tripoli and Kessab hoards and the recently published material from Atlit/Pilgrim’s Castle. However, in this case the coin, because of the narrow dating of the Frankish occupation of the site, undoubtedly belongs to the late 12th century. Possibly the bad condition of the coin was caused by its exposure to a combination of chloride salts and moisture of the upper soil, whereas the other Amalricus coins were found in the burned layers below which remained virtually intact. Could this imply that many of the low weight Amalricus type found in hoards and excavations dated securely to the 13th century were in fact minted in the First Kingdom up to 1187? If so, these coins remained in circulation for an extended period and were not the product of a new mint situated in early 13th century Acre.

<table>
<thead>
<tr>
<th>Weight of coins</th>
<th>Nos. of coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 0.85 gr.</td>
<td>1</td>
</tr>
<tr>
<td>0.80-.84 gr.</td>
<td>3</td>
</tr>
<tr>
<td>0.85-.89 gr.</td>
<td>3</td>
</tr>
<tr>
<td>0.90-.94 gr.</td>
<td>5</td>
</tr>
<tr>
<td>0.95-1 gr.</td>
<td>4</td>
</tr>
<tr>
<td>Above 1 gr.</td>
<td>6</td>
</tr>
</tbody>
</table>

Fig. 9 Weight distribution of Amalricus Deniers at Vadum Iacob.

15 Cox (1933); Longuet (1935:163-81); Metcalf, Kool, Berman (1999: 89-164).
Ten different varieties of the *Amalricus* coin were found at the site. They divide into two main stylistic groups according to the parameters established by Metcalf\(^{16}\): eleven chrevron-barred A and nine single/double barred A types (one bended coin remained illegible). The single largest group of coins is the double chevron type combined with REX followed by one centered anulet, which is also the most plentiful series in the contemporary ‘Jerusalem YMCA hoard’. The chevron and double-barred types appear in virtually even quantities (9 versus 11). Their weights do not indicate any significant differentiation between the two types. This seems to rule out any definite conclusions about the relative chronology of these two types based on the material of the Vadum Iacob excavation. The only remarkable fact is the absence at Vadum Iacob of the A chevron-with-dot variety which were tentatively identified as a separate mint or workshop.

<table>
<thead>
<tr>
<th>Type of coins</th>
<th>Nos. of coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chevrons-barred A</td>
<td>Total: 11</td>
</tr>
<tr>
<td>REX without stop and Cross with two annulets</td>
<td>1</td>
</tr>
<tr>
<td>REX with stop and Cross with two annulets</td>
<td>4</td>
</tr>
<tr>
<td>REX with annulet and Cross with two annulets</td>
<td>2</td>
</tr>
<tr>
<td>REX with two annulets and Cross with two pellets</td>
<td>2</td>
</tr>
<tr>
<td>REX with three annulets and Cross with two pellets or with one pellet and one annulet</td>
<td>2</td>
</tr>
<tr>
<td>2. Single barred A types</td>
<td>Total: 2</td>
</tr>
<tr>
<td>REX without stop and Cross with two annulets</td>
<td>1</td>
</tr>
<tr>
<td>REX with annulet and Cross with two annulets</td>
<td>1</td>
</tr>
<tr>
<td>3. Double barred A types</td>
<td>Total: 7</td>
</tr>
<tr>
<td>REX without stop and Cross with two annulets</td>
<td>1</td>
</tr>
<tr>
<td>REX with annulet and + Cross with two annulets</td>
<td>6</td>
</tr>
<tr>
<td>Chevron-with-dot variety</td>
<td>None</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
</tr>
</tbody>
</table>

Could this imply that these coins simply did not reach Vadum Iacob or were of an issue that circulated later (1179-87) than the castle’s short existence? A comparison with the existing hoard material tends to confirm the latter: both the Tel Jemmeh and the Red Tower hoards which can be dated to an earlier pre-1179 phase of the *Amalricus* coins — both contain still European *deniers* as opposed to the Vadum Iacob finds— do not contain these types. However, more research on this subject is needed to give a sound base for this conclusion.

In sum, the presence of these *Amalricus deniers*, virtually all datable to the last days of the castle’s existence (summer of 1179) seems to confirm Metcalf’s observation that King Amaury’s successors continued the minting after 1174 of good quality, heavy weight *Amalricus* type (c.0.80-1.17 gramme) as *type immobilisée* at least up to the battle of Hattin. Moreover, they possibly indicate that the *Amalricus* type were widely distributed in the kingdom’s hinterland and not just in the urban and commercial centres along the coast.

As interesting as the dominant presence of the *Amalricus* type is the absence of other billon types. There are none of the earlier *Tower of David* coins of Baldwin III. Presumably by 1178-79 these ‘older’ types had been called in, and all but disappeared from circulation. Moreover, no European billon brought to the Frankish kingdom during the first half of the twelfth century was found. Presumably by the time of the construction of the castle European *deniers* had ceased to circulate actively within the kingdom. There is a marked absence of rarer types like the anonymous *Moneta Regis deniers*, although
finds of these coins were made in the near vicinity (20 km perimeter) of the castle.\textsuperscript{17} This seems to reinforce the assumption that these “royal”coins, possibly minted in Acre, belong to the period before Baldwin III’s reform of 1140.\textsuperscript{18} Finally, the absence of billon from the Northern principalities is a fact. No Antiochene ‘Helmet’ type or Civitas Tripolis deniers were discovered at the site, which is consistent with the behavior of other hoard and excavation material from the territory of the kingdom. Very few of these abundantly minted coinages circulated in the kingdom proper during the 12th century.

The combination of a well-dated archaeological context and abundant historical sources furnishes us with precise knowledge on the sequence of events at the castle within a very limited period (less than a year). Datable Muslim coins (appearing with the name of the ruler and date) further provide us with exact tools to distinguish which of these coins were used during the Frankish occupation (1178-79) and which during the Ayyûbid settlement thereafter up to the second half of the thirteenth century. Four Zandjid coins minted under Nûr al-Din at Damascus (1146-74) were found at the site.

Fig. 11. Fals of Nur-a-Din, 1146 – 1174 CE, Vadum Iacob

\textsuperscript{17} Three hoards containing “Moneta Regis” deniers were found in the vicinity of Vadum Iacob. Seven deniers were discovered in a lump near the ruins of a fortified building at Qal’at-esh-Shûna (Nahal \textsuperscript{1}Amud). Another five deniers and an obole were found in a lump at Capernaum. Four additional deniers in a corroded lump were excavated at the Frankish citadel of Beth-She’an. See Spijkerman (1975: 47-48); Rahmani (1980:72-76); Berman (1993:38-42) [in Hebrew].

\textsuperscript{18} Metcalf (1995:76-77).
Two of them belong to a Frankish context: one coin was found with four *Amalricus* coins in the burnt remains of a Frankish-period living surface. Another coin was found in a collapsed vaulted area adjoining the main gate. A third specimen was excavated from the remains of medieval settlement constructed after the destruction of the castle while a fourth was collected as stray-find. Zandjid coppers are regularly found in other Frankish period sites, and appear to have circulated abundantly in Frankish held territory. Apparently these *fals* were used as small change together with *deniers* in Frankish rural and urban settlements.

The site also yielded seventeen Ayyūbid coppers, all from the mints of Damascus and Aleppo. These coins seem to have circulated in settlements in the kingdom during the thirteenth century, as in stratified finds from material excavated in the faubourg of Pilgrims’ Castle attest. Still, a systematic survey of this material has yet to be accomplished. An intriguing question is how did these Ayyūbid coppers become part of the money system of the kingdom. Was this a gradual process which started during the 1170-80s before Saladin conquered most of the Frankish territory? Or did this transpire with the sudden demise of royal authority following the defeat at the Horns of Hattin? The finds at Chastellet seem to favor the latter scenario. Except for one coin, dating to Saladin’s early rule under the overlordship of the Zandjid ruler al-Salih Isma‘il (1174), all the Ayyūbid coins *postdate* the destruction of Vadum Iacob. This excludes their use during the short Frankish occupation of the site. Saladin started minting coppers in his own name at the mints of Damascus and Aleppo in 1174, five years before the destruction of the castle. If Ayyūbid coins did circulate in Frankish settlements, they certainly would have been present at the castle, located relatively close to Ayyūbid
territory. As it stands, the bulk of the Ayyûbid money from Vadum Iacob was minted after 1195, more than fifteen years after the site was destroyed by Saladin’s army. This also excludes the possibility that this money was used by the soldiers of the Ayyûbid host. Presumably the outbreak of the plague at the castle three days after the final battle and the resulting hasty departure of the Ayyûbid army left too little time for a significant quantity of stray losses of the money used by Ayyûbid soldiers. Clearly the coins date to the period when the destroyed castle was reoccupied by villagers at the beginning of the thirteenth century. Coins from al-Aziz ‘Uthman (1195-98) and al-ʿAdil (1199-1218) were discovered in the remains of houses constructed adjacent to the east wall. Most of the other Ayyûbid period coppers were found in nearby areas. The latest coin belongs to the last part of the reign of the Ayyûbid ruler of Aleppo, al-Nasir Salâh al-Din Yusuf II (1242-58).

7.6.1 The Finds of the Tokens

The most remarkable numismatic find from the site are four lead denier-sized tokens bearing the name of the castle.

<table>
<thead>
<tr>
<th>Context</th>
<th>Nos.</th>
<th>Weight</th>
<th>Diam</th>
<th>Inscription</th>
</tr>
</thead>
<tbody>
<tr>
<td>South East Gate: fill above floor.</td>
<td>1</td>
<td>3.65</td>
<td>18</td>
<td>[- - -]: IACOB:</td>
</tr>
<tr>
<td>North Gate,</td>
<td>2</td>
<td>3.66</td>
<td>18</td>
<td>+ VAD[I]: IACOB:</td>
</tr>
<tr>
<td>Main Gate: fill Below vault stones, above floor.</td>
<td>3</td>
<td>2.00</td>
<td>17</td>
<td>+ VADI: IACOB:</td>
</tr>
<tr>
<td>Main Gate</td>
<td>4</td>
<td>2.68</td>
<td>19</td>
<td>+ VADI: IACOB:</td>
</tr>
</tbody>
</table>

Fig.12.Details of Vadum Iacob Tokens
During a first inspection these “coins” seemed somewhat enigmatic since they did not fit into any of the known categories of numismatic material usually found in excavations. The obverse (Fig. 13a) resembled an ordinary denier with a cross patée surrounded by a legend. Only a few letters of the inscription were legible. The reverse (Fig. 13b) in contrast clearly displayed the form and iconography of a medieval token or seal. It showed a blazon-type shield bordered by nine small anullets positioned in symmetrical fashion around the shield with no inscription.

Two better preserved specimens were found during the third and fourth season (1995-6), together with a group of Amalricus deniers below the remains of the collapsed structure in the main gate area mentioned above, thus securing their medieval provenance. These allowed us to decipher and reconstruct the entire legend of the “coin-tokens:”

+VADI Iacob i.e., “of(?) Iacob’s Ford”.19

For a moment we played with the possibility that a local craftsman who produced the mould or die for these tokens may have mixed the Arabic ‘Wadi’ for the Latin VADVM.

19 The inscription is written in the genitivus locativus commonly used on medieval coins. It is improbable that a local craftsman who produced the mould or die for these tokens mixed up the Arabic wadi with the Latin vadum, for the first signifies a stream whereas the second distinctly carries the meaning of a ‘river-crossing,’ which the site is in fact.
However this seemed unrealistic as the first signified a ‘stream’, whereas the latter distinctly carried the meaning of a ‘river-crossing’ which the site is in fact.

VADVM IACOB was the Latin name the Franks commonly used for the castle, as the Frankish historian William of Tyre, recorded\(^{20}\): \textit{...in eo loco qui vulgo Vadum Iacob appellatur} alluding to the Christian tradition which identified this spot with Iacob’s crossing of the Jordan to meet his brother Esau (Gen.32.10).

The fact that these ‘coins’ are made of lead and the castle existed only for 10 months clearly indicates some type of short-period emergency issue. Possibly they could be associated with the concentrated building effort, functioning as some sort of local money to pay the large numbers of craftsmen laboring to complete the castle’s defenses.

The tokens provide the sole epigraphic evidence that identifies the excavated site with the medieval castle of Vadum Iacob. This in itself makes them objects of great archaeological and historical importance. In addition, the tokens shed light on hitherto unknown aspects of the use of money in the late twelfth-century kingdom. The fact that these “coins” are made of lead and that the castle existed only for eleven months clearly indicate some kind of short-period expediency issue, a type of local money to pay the large numbers of craftsmen labouring to complete the castle’s defences. Alternatively, these beautifully crafted and well-struck or cast specimens may have had some internal use among the Templar garrison. Interestingly, they do not stand alone. There exists a similar type of ‘lead coin’ with a cross patée and an in a circle but with a different


There are two surviving charters issued by Baldwin IV during his stay at the castle (\textit{RRH}: 149, No 562; 154, No.577). One is dated November 17, 1178, the other April 1, 1179. Both charters were written under
inscription in which one can read the letters: (C?)AST(R?)V M[...]. Presumably the use of supplementary lead “money” within the kingdom’s estates during both the second half of the twelfth and the thirteenth centuries was more widespread than previously thought. Similar material was found in excavations at Belmont castle near Jerusalem and in the faubourg of Pilgrims’ Castle. This seems to point out that some of the seignorial rulers, faced with a temporary shortage of money, attempted to circumvent the royal prerogative of coinage by minting tokens that resembled money. However, more material from other seignorial sites in kingdom is needed to better understand this phenomenon.

7.6.2 Significance of the Finds.

The discovery of the tokens is significant in two respects. First, from an archaeological standpoint they provide clear epigraphic evidence that the site is indeed the medieval castle of Chastelet. This makes them objects of the highest archaeological and historical importance. Secondly and more important, the tokens contribute to the hitherto unknown facet of the minting of lead moneys in the 12th century Frankish Kingdom.

The existence of lead tokens was largely ignored by the first scholarly works dealing with Frankish period numismatics. Only with the systematic descriptions of numismatic

the supervision of William of Tyre in his capacity of Head of the Royal Chancellery.

21 My thanks to Shraga Qedar of Jerusalem for allowing me to study this rare specimen of his private collection.

22 At Belmont (Zova) a large cache of 436 identical tokens was discovered within the central courtyard of the castle. See Metcalf, “The Coins and Tokens,” in Harper and Pringle (2000: 81-85). A dozen or more were recovered from the faubourg of Pilgrims’ Castle excavated by Cedric N. Johns in the 1930s. See: Metcalf, Kool, Berman (1999:109-10).

23 Saulcy (1847); Schlumberger (1878).
material from the Frankish period did numismatists start taking notice of these artifacts.\textsuperscript{24} However, by and large research has ignored\textsuperscript{25} or failed to grasp the extent to which this lead ‘money’ formed an integral part of the money circulating in the territory of the Frankish Kingdom. This is mainly because until quite recently most of the material was very meager and thought to originate from larger urban settlements like Acre or Caesarea.\textsuperscript{26} However, a growing number of new specimens, found at castles, manors and rural strongholds near Jerusalem, the coastal area and the Galilee in recent years sheds new light on this phenomenon.\textsuperscript{27} This material seems to indicate that some of the seignorial rulers of the Frankish Kingdom, faced with temporary shortage of money attempted to circumvent the royal prerogative of coinage by minting tokens that resembled money. Particular fascinating because of the large quantities (hundreds!) are the types excavated at Belmont castle: like the \textit{Vadvm Iacob} types these lead tokens carried on one side an inscription whereas its reverse was an anegraphic design depicting a bridge and fish below.

Recently an unprovenanced similar type of ‘lead coin’ with cross patée and annulets in a circle but with a different inscription (C?)\textit{AST(R?)VM} has come to our attention.\textsuperscript{28}

\begin{itemize}
\item \textsuperscript{24} Rahmani and Spaer (1965); Shahaf (1970); Metcalf (1995:306-307).
\item \textsuperscript{25} Malloy (1994).
\item \textsuperscript{26} Rahmani and Spaer (1965-6:67-73); Shahaf (1970); Metcalf (1975:141-149); Metcalf (1995:358-60); Syon forthcoming.)
\item \textsuperscript{27} Large part of this material is still unpublished. For the published material see Metcalf, Kool and Berman (1999, pp.109-110) (‘Atlit-Pilgrim Castle); Metcalf (1995:307) (Belmont Castle near Jerusalem).
\item \textsuperscript{28} Our thanks to S. Qedar for allowing us to study this rare specimen which forms part of his private collection.
\end{itemize}
In sum, the accumulation of lead material seems to indicate that the minting of supplementary lead ‘money’ on feudal estates in the kingdom both during the second half of the 12th and first half of the 13th centuries was more widespread than was previously thought.

7.6.3 Seignorial mints in 12\textsuperscript{th} century Latin Kingdom

This fresh evidence for the production of lead coins on seignorial estates has important implications for an axiom that has dominated the field of Frankish period numismatics for the last fifty years: that only the kings of Jerusalem minted money in the territory of the kingdom during the 12th century.

Since the 17th century scholars have when discussing the right of minting in the Frankish kingdom exclusively concentrated on chapter 270 of the ‘Livre de Jean d’Ibelin’.\textsuperscript{29} This mid-13\textsuperscript{th} century legal treatise authored by Jean d’Ibelin, one of the kingdom’s leading nobles and jurists, enumerated the twenty-two seignories which had the right of *court, et coins et justise* in the Kingdom of Jerusalem. The passage was thought to signify that these feudal lordships had the right of minting coins. This interpretation was subsequently adopted by numerous scholars starting with Schlumberger in 1878 and has held such an authority that even until very recently it was still quoted in a work dealing with the period.\textsuperscript{30}

\textsuperscript{29} Beugnot (1841-3: 419).

\textsuperscript{30} Malloy (1994:412).
However, in the 1940’s the count Chandon de Briailles proved convincingly that this right of ‘coins’ referred to the right of sealing with lead, one of the seigniorial rights attached to holding a fief in the kingdom and not minting.\textsuperscript{31} Briailles’ study and the accumulation of numismatic evidence which showed that only two \textit{types imobilisées} issued by the kings Baldwin III and Amaury I circulated abundantly in the kingdom, led scholars from the 1950’s onwards to disregard the theory of seignorial mints. They became convinced that the Latin kings in the 12th century were strong territorial rulers who successfully upheld their exclusive regalian minting rights much like the kings of Norman Sicily.\textsuperscript{32} Astonishingly, virtually all scholars overlooked two other important passages which clearly implied that there existed a problem with seigniorial minting in the 12th century. The clauses appear in the ‘Assise on Confiscation of Fiefs’ promulgated by Baldwin III (1142-1163).\textsuperscript{33} The original assise did not survive but was fortunately copied and preserved in the \textit{Livre au Roi}, a posterior coutumier composed in the Kingdom of Jerusalem at the end of the 12\textsuperscript{th} century. Two editions of the ‘\textit{Livre au Roi}’ were published more than hundred fifty years ago by Kausler (1839) and Beugnot (1841) but its contents were largely ignored by scholars of Crusader numismatics.\textsuperscript{34}

The Assise as it appeared in chapter 16 of the \textit{Livre au Roi}, enumerated twelve particular grave abuses of regalian rights. They were defined as crimes against the

\textsuperscript{31} Chandon de Brailles (1943:244-257).
\textsuperscript{32} Metcalf (1983;1995); Malloy (1994); Porteous (1989:369-70); Balog and Yvon (1958).
\textsuperscript{33} The Assise of Confiscation was studied in detail by Prawer (1980:430-68). The anonymous author of the \textit{Livre du Roi} named roi Bauduin segont, Baldwin II (1118-1131) as its compiler but Prawer tentatively dated the assise to the long reign of Baldwin III (1143-1162).
\textsuperscript{34} Recently these two editions have been incorporated in the new critical edition of Greilsammer (1995).
king himself (*crimina laesae majestatis*) and led to the confiscation of a fief without a trial.

Significantly, two of these (number three and six) explicit dealt with abuses related to the *monategium*, the royal monopoly of coinage. The first forbade any liege man from counterfeiting money gold *besants* and other money, at his manor or house:

‘*se aucun houme liege fait au fait faire fouce monee au faus besans en son casau ou en sa maison: si iuge la raison que il det estre deserites a tous iors mais*’

The second warned any liege-man from violating the king’s monopoly by minting coins on his estate:

‘*se aucun home lige qui que il fust terrier our autre, faisat faire labeurer et batter monnee en sa terre si juge la raison qu’il det estre deserites a tousjors mais por se que houme ne dois avoir parteurer ne or ne monee laborant fors li Rois...*’

The severe sanction - confiscation - for the above offences in the Latin Kingdom of the mid-12th century was extraordinary as was pointed out by Prawer.\(^{36}\) Abuse of the right of coinage was never considered a feudal offence. At the utmost it was an infringement on a regalian right, but this was rarely upheld as the existence of numerous feudal mints in 12th century Western Europe testified. Interestingly, by mid-13th century the same paragraphs had disappeared from the laws of the Latin Kingdom presumably accommodating to the reality of baronial minting which had been firmly established by

\(^{35}\) Greilsammar (1995), p.112

this time.\textsuperscript{37} These draconic measures then seem to indicate that there existed an acute problem with seignorial counterfeiting of gold coins and other money by the mid-twelfth century. Otherwise why was it necessary to include two prohibitions? Possibly then our findings on the minting of supplementary lead money is tangible evidence that the practice of counterfeiting money during the second half of the twelfth century was more widespread than was previously thought.

7.7 From the Horse’s Mouth: Re-Dating the Anonymous TVRRIS DAVIT Issue

Among the finds at Vadum Iacob was a single specimen of the relative rare TVRRIS DAVIT type. The coin (Fig 14) carries an eight-pointed star on one side, usually associated with the \textit{deniers} from the county of Tripoli. On that side the preserved portion of the legend reads VIT. At first we associated legend with the common CIVITAS inscription appearing on the \textit{deniers} minted by the counts of Tripoli. Further cleaning of the coin enabled a full reading: DAVIT.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig14.png}
\caption{TVRRIS DAVIT \textit{denier}, excavated at Vadum Iacob}
\end{figure}

\textsuperscript{37} The lords of the four main baronies -Sidon, Beirut, Tyre and Jaffo-Ascalon minted numerous series of billon and copper coins with Latin and French inscriptions until c.1270.
The coin and a Chrismon and cross billon *denier* minted by the bishops of Le Puy were the only specimens of their type found at the site. No other billon or copper *deniers* except for 24 of the royal *Amalricus* types were found. The copper *denier* was found lying directly on the jaw bone of an articulated horse skeleton. The horse presumably belonged to a Frankish warrior. Evidence for the battle may be seen in the dozens of arrow heads found lying nearby.

7.7.1 TVRRIS DAVIT: previous attributions

The anonymous TVRRIS DAVIT copper has had a long and checkered history of attributions. More than a century and a quarter ago, Schlumberger tied this enigmatic coin to an emergency issue minted during Saladin’s siege of Jerusalem in October 1187 (Schlumberger 1878:88–89). There Schlumberger noted the existence of a singular TVRRIS DAVIT coin overstruck on a *denier* of Beirut. Exactly one hundred years later, in 1978, Sabine published a detailed article dedicated solely to this type (Sabine 1978:85–92). In it, Sabine further dwelled on Schlumberger’s ‘Beirut-overstrike’, and noted the existence of two thirteenth century Beirut *deniers* overstruck on the TVRRIS DAVIT copper. This and eleven TVRRIS DAVIT coppers from the Beirut market

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38 For a comprehensive review of the coins found at the site see Kool 2002:73–88 and Kool 2001:329.
convinced Sabine that these coins were minted in Beirut in the late twelfth century. In support of his claim Sabine presented stylistic, iconographic, and historical arguments linking the issue to the short lordship of Raymond III of Tripoli over Beirut in 1184–1186:

1. Stylistically, the coins were struck from many well prepared dies suggesting a long period of time rather than the four week emergency siege issue as Schlumberger had claimed. This idea was first put forward by Seltman (1966:63) and subsequently adopted by Sabine (1978:86).

2. The module of the coin resembled the star *denier* struck at the Tripoli mint.

3. The iconography of the coins joined the Tower of David, the royal symbol of the Kingdom of Jerusalem and the eight-pointed star associated with the counts of Toulouse and Tripoli. Following the sickness and death of the leper king Baldwin IV, Raymond III of Tripoli was appointed to the regency of the Kingdom of Jerusalem. As a prize for his services he was given custody of the city of Beirut and its revenues (Sabine 1978:87; see Riley Smith 1973:107–108, especially n. 27).

Sabine’s theory was adopted by Edbury and Metcalf and others and has become the consensus in Crusader period numismatics (Edbury 1980:61; Metcalf 1995:87–88).
7.7.2 TVRRIS DAVIT at Vadum Iacob: new findings

Now however, the recent find of a TVRRIS DAVIT specimen at excavations in Mezad Ateret, in northern Israel, directly challenges Sabine’s view. The context of the coin in Vadum Iacob makes it impossible to date the coin to 1184–1186. Additional new data DAVIT type did not solely circulate on the margins of the kingdom in the north as was previously thought (Sabine 1978:89, n. 17). These coppers are found in the Kingdom’s heartland towns and cities of Jerusalem, Jaffa and Caesarea.39 This suggests that in addition to a correction of the TVRRIS DAVIT’s date, there is reason to re-attribution its mint location to a locale further south from Beirut.

How does one explain the presence of this anonymous coin type circulating in the Frankish kingdom in the twelfth century not later than 1179? If a coin of the Latin Kingdom of Jerusalem, could it have been an anonymous royal issue minted either before or during the reigns of Baldwin III or Amaury I? This seems highly unlikely, if we consider that the kings of Jerusalem struck their own denier issues on which their names clearly appear. And why would they issue a royal coin with a Tripolitan heraldic symbol? Could it have been a denier issued by the princely rulers of Tripoli? Also here the same logical argument applies: the counts of Tripoli had their own extensive coin issues both billon and copper which proclaimed their names and titles. Why should they mint an anonymous type which carried a royal symbol of the kings of Jerusalem?

39 Specimens were recorded from the Citadel excavations in Jerusalem (1935), and excavations in Jaffa (1993–95). A stray-find is recorded from Caesarea. More recently five stray-finds of TVRRIS DAVIT coppers were reported from the region between Acre, Nazareth and Tiberias. My thanks to A. Berman for
Part of the answer lie in closely re-reading the political events of the time as witnessed by contemporary sources, in particular the chronicle of William of Tyre and the Old French continuations of William’s chronicle (Morgan 1984:17-25.). William related that upon the death of Amaury I on July 11, 1174, his son Baldwin IV was crowned king (*Willelmus Tyrensis*:21.2). However the boy-king was only thirteen years old and already stricken by leprosy. Miles de Plancy, a favorite of the late king, presumably usurped the regency, over the objections of a group of powerful nobles lead by Count Raymond III of Tripoli (Riley Smith 1973:101–102). With the assassination of Miles in Acre, the High Court of the kingdom granted Raymond III the regency which he held till 1177. It appears now that it was during Raymond’s first regency, between 1174–1177 (and not the second one, 1184–1186, as Sabine had argued), that the TVRRIS DAVIT coins were minted.

No doubt Raymond III seems a good candidate for having issued these ‘regency’ coins. As ruler of Tripoli he minted his own coins, and as lord of Tiberias and the king’s most powerful vassal he no doubt had the political clout to do so in Jerusalem (Baldwin 1936; see also Mayer 1988:127). Sabine’s iconographical argument that the type combines a blend of royal and baronial iconography suits Raymond III’s first regency as much as his second. There may have been more practical reasons for the supply of these small coins. Under his regency, the kingdom waged a relative large number of military campaigns to counter the growing military power of Saladin (Richard 1999:192–193). It is possible that the frequent mobilization of the kingdom’s forces created a demand for currency that the extant supply of royal issues already in circulation could not satisfy.
Interestingly, no coins of another controversial anonymous issue, the *Moneta Regis deniers* were found at the site. But finds of these coins were made in the near vicinity (20 km. perimeter) of the castle. Could it be that these anonymous “royal” coins were also related to Raymond’s regency and not minted in Acre before Baldwin III’s reform of 1140, as Metcalf proposed (1995:76–77)?

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40 Three hoards containing *Moneta Regis deniers* were found in the vicinity of Vadum Iacob. Seven *deniers* were discovered in a lump near the ruins of a fortified building at Qal’at-esh-Shûna/Nahal ‘Amud (Rahmani 1980:72–76). Another five *deniers* and an obole were found in a lump at Capernaum (Spijkerman 1975:47–48). Four additional *deniers* in a corroded lump were excavated at the Frankish citadel of Beth-She’an (Berman 1996:47).
7.8 Conclusion

The medieval coin finds of Vadum Iacob seem to confirm to a large degree Metcalf’s proposal—based on hoard material — with regard to the circulation of gold and billon issues in the twelfth century. However they also provide new information. First, that the presence of gold and billon in military outposts, and possibly in rural sites, was much more widespread that previously thought. Secondly, that seignorial rulers may have started, already in the twelfth century, to mint lead money in order to circumvent the royal prohibition of minting money. Thirdly, the appearance of Muslim petty coinage in Frankish period sites must be acknowledged. To what extent this was a widespread phenomenon needs to be studied further. The material at Vadum Iacob seems to indicate that Zandjid fāls were used during the Frankish occupation whereas the Ayyûbid coppers found there must have circulated later, after the site was re-settled by villagers.
8.1 The florin (fiorino d’oro) and the re-introduction of gold coinage in the west and east

In 1252 the Italian republics of Genoa and Florence virtually simultaneously re-introduced the minting of gold coinage in western Europe after a gap of more than five centuries.¹ Without doubt the most influential of the two was the gold florin

(fiorino d’oro), a coin of almost pure gold (98–99%) weighing 3.53 grams minted by the Florentine Commune. The obverse showed a fleur-de-lis or ‘fiorino’, symbol of the city and the legend +FLOR – ENTIA. The reverse depicted the patron saint of the city, John the Baptist, in a coat of animal hair, his left hand holding a sceptre over his shoulder and his right hand raised in benediction with the legend S.IOHA – NNES.B.

The introduction of the new currency coincided with the economic and political ascendancy of Florence, in particular the period of rapid growth between the later twelfth and the middle of the thirteenth century. During this period Florence witnessed an unprecedented demographic and economic expansion. The resulting accumulation of landed wealth coupled with an expanding trade in cloth and grain generated a growing class of rich Florentine burghers during the first half of the

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There has been some argument over whether the first gold coins were struck by Genoa or Florence. R. Lopez, 'Settecento anni fa: il ritorno all’ oro nell’ occidente duecentesco', Rivista Storica Italiana, 65 (1953), pp. 19–55 and 'Back to gold, 1252' EcHR 9 (1956), pp. 161-98 argued that Genoa was first with genovino d’oro, a gold coin weighing 3.52 gr., while Florence followed several months later minting its first fiorino d’oro in November; L. Travaini, 'Genova e i tari di Sicilia' RIN, 93 (1991), pp. 187-94 proposed that Genoa began to strike gold coins much earlier in the 1180s for trade with the Norman kingdom of Sicily. Recently new information, to be published in the forthcoming volume in the MEC that covers northern Italy, has come to light indicating that Genoa’s large genovino was introduced two decades after the gold florin, c.1270.

thirteenth century.³ Already under Hohenstaufen rule, an increasingly independent
Florence had opened its own mint in c.1237, striking the silver fiorino grosso, a
multiple penny. With the death of its nominal overlord, Frederick II, in 1250 Florence
openly asserted its independence and became a sovereign entity.

Research on the economic development of Florence has repeatedly stressed
that the new gold currency introduced two years later formed the foundation upon
which the Florentine economy expanded internationally.⁴ Gold florins minted on a
large scale allowed Florentine merchants to accumulated vast wealth as papal tax
collectors and bankers in Tuscany and Italy from the 1290s onwards. More important,
Florentine gold financed an extensive wool and cloth trade with the Champagne fairs
in eastern France, Flanders and England, and the establishment of a large cloth
manufacturing industry on the banks of the river Arno.⁵ As a result, between 1250
and 1320 Florence developed into one of Europe’s principal commercial and financial

³ G. Brucker, The Golden Age, 1138–1737 (Berkeley, 1998); E.S. Hunt, The Medieval Super-
⁴ This is evident both in general historical works like the Cambridge Medieval History and researches
related to the economic and monetary history of Florence like A. Sapori, Studi di storia economica
medievale-secoli XIII, XIV, XV (Florence, 1955–67); C.M. de La Roncière, Un changeur florentin de
Trecento, Lippo di Fede del Sega 1285 env.–1363 env. (Paris, 1973); C.M. de La Roncière, Florence,
centre économique régional au XIVe siècle, 5 vols. (Aix-en-Provence, 1976); T. Walker, “The Italian
gold revolution of 1252: Shifting currents in the pan-Mediterranean flow of gold” in Richards, Precious
Metals (n. 1), pp. 29–52; R. Goldthwaite and G. Mandich, Studi sulla moneta fiorentina (secoli XIII–
XVI) (Florence, 1994).
⁵ R.A. Goldthwaite, The building of Renaissance Florence: An Economic and Social History
(Baltimore, 1980).
centres. Curiously in the first decades after its introduction, the gold florin remained unpopular in the city itself. The chronicler Paolo Pieri writing in 1305 stated that ‘there was virtually nobody who wanted it’.7

There is a large literature on the circulation and imitation of the Florentine florin in Europe and the Middle East during the fourteenth century.8 There is much less information about the second half of the thirteenth century.9 In Italy florins appear in documents recording tithe payments from 1275 onwards.10 There are a few hoards. One buried at Pisa in the last decade of the thirteenth century contained

6 C.M. Cipolla, Money, Prices and Civilization (n. 1).

7 Lopez, ‘Back to gold, 1252’, EcHR2 9 (1956), p. 236. The same applied to its circulation in Tuscany in the 1270s, where the gold florin was still little used for the payment of the papal tithe.


Sicilian taris and Florentine florins. A contemporary account of treasure recovered from French ships returning from Tunis after the 1270 crusade, which were wrecked in a storm off Trapani in Sicily and included a high proportion of florins is discussed below.

Peter Spufford has argued that north of the Alps gold coins in general functioned as a commodity rather than a currency. On the other hand there are commercial documents from France which mention the presence of gold florins at the trade fairs already in 1265. There is a reference to them in England dating from 1285 but such references are few and far between.

8.2 The use of gold coins in the crusader states

With the arrival of the First Crusade at Antioch in 1097 the debased gold Histamenon nomisma of Michael VII, was still readily available in large numbers in

12 See L. Carolus Barré, ‘Objet précieux et monnaies retrouvés dans le port de Trapani en 1270, dont 21 écus d’or de Saint Louis’, RA 18 (1976), pp. 115–18. A good example for the problems facing researchers in this area is the hoard list published by J. Duplessy Les trésors monétaires (n. 8). Twenty-one of the 440 hoards found in the historical territory of the kingdom of France contain gold florins of Florence. The deposit dates of the hoards are virtually all fourteenth century but no doubt many also contain earlier florins. Unfortunately details on individual coins are difficult to find, significantly hampering research in this area. Grierson and Travaini, MEC 14, p. 176 note the same problem for the territory of Southern Italy and Sicily.
Northern Syria. Traveling southwards towards Jerusalem the Crusaders encountered the almost pure gold Fatimid dinar. Presumably vast quantities of these dinar misri, minted in Egypt, remained in circulation for most of the 12th and the beginning of the 13th centuries in the Latin kingdom of Jerusalem. In addition, Frankish mints at Acre, Tyre and Tripoli struck large numbers of gold coins imitating Arabic types from the 1140’s onwards but it is unclear exactly when and why the issue ceased in the mid 13th century. In 1251, following Papal intervention, a small issue of gold imitation 'bezants' with correct Arabic script and Christian legends were struck at Acre but this issue seems not to have lasted beyond 1258. There was also a supply of Ayyubid gold dinars from Egypt but these apparently did not attain a large scale circulation in the remaining territories of the Crusader States and Muslim controlled Syria. According to current thinking very little can be attributed to the years after 1258.

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17 Except for one hoard (1150-1250 CE) allegedly found near Aleppo (see Metcalf 1995: p.316, hoard No.31) which contained a single Ayyubid dinar together with 23 imitation bezants there are no Egyptian-Ayyubid recorded hoards from the Crusader territory or Muslim Syria. See also S. Heidemann, 'Economic Growth and Currency in Ayyubid Palestine' In: S. Auld and R. Hillenbrand (eds.) Ayyubid Jerusalem: The Holy City in Context, (London, 2008), p.15
After the Fatimid mints closed there was no Islamic gold coined in Syria until the Mamluks under Baybars I (1260-77) struck dinars, but only on a limited scale, at Damascus. Arab sources though note that Crusader imitations continued to circulate well into the 1280s with the last mention being 1302-3.\(^{18}\) It is possible that the Crusader gold stopped being issued because it was replaced by the new Italian gold coins. One difficulty with this explanation is that the Syrian Arabic sources do not mention *genovini* or *fiorini* at least in the thirteenth century, and, until now, only one unpublished hoard was noted. This is discussed below.

8.3 Numismatic and documentary evidence of gold florins in Acre

Evidence for the use of florins in *Outremer* can be found in a number of Tuscan and Venetian trading manuals which record their use in second half of the thirteenth century. It would seem, that before the late 1270s florins were little used. A private manual written c.1270 by a Venetian merchant or notary residing in Acre, which contains detailed information on the workings of the mints of Acre and Alexandria, the transfer of gold bullion and coins, cost of minting omits any allusion to florins.\(^{19}\) The earliest reference appears in the *Memorie de tucte le mercantie*, a manual


\(^{19}\) Personal communication from Prof. D. Jacoby. See also Jacoby, ‘Migration trade and banking in crusader Acre’, pp. 105–19.
compiled by a Pisan merchant in 1278 that notes the exchange rate of the florin in Acre and Alexandria: 20

\[
\text{Florini d’oro tornano inn Acchari biz. 3…‘One florin of gold is changed in Acre for three bezants …’}
\]

\[
\text{Li pesi C di biz. torna in Alexandria enra fiorini d’oro CXXII…‘The weight of 100 bezants is changed in Alexandria for a 122 florins of gold …’}
\]

They are also referred to in later fourteenth century manuals such as Pegolotti’s \textit{Pratica della mercatura} and by the Venetian \textit{Zibaldone da Canal}. 21 The \textit{Pratica} – some of which reflects conditions in the last decade of Frankish rule – mentions the rate of exchange of florins against gold dinars and silver dirhams in Alexandria. 22 Neither of these mention their occurrence in Acre and, as already pointed out, there is nothing in the Arab sources for thirteenth century Syria and Palestine.

\begin{itemize}
\item \textsuperscript{22} Pegolotti (ed. Evans), \textit{La pratica}, p. 72.
\end{itemize}
Contemporary commercial contracts and notarial records from the Levant also hardly mention the Florentine currency. Among the more than 1000 contracts drawn up by the Genoese notary Lamberto di Sambuceto in Famagusta several years after the fall of Acre, only two documents dated 1296 and 1302 mention a transaction in florins. Their near omission from Latin documents originating in the Latin East does


not prove that they did not circulate locally. Some Florentine gold must have come eastwards with the growing presence of Florentine merchants there. Indeed, in the same contracts of Sambuceto one can read of a large presence of Florentine bankers and merchants in Famagusta by the end of the thirteenth century.\textsuperscript{25} Also, earlier in Acre, merchants from the Tuscan hinterland, including Florentines, traded with the crusader states under the Pisan flag.\textsuperscript{26} By posing as pseudo-Pisans these merchants had the advantages of being exempted from the taxes levied on Latin merchants. Sources mention the presence of Florentine spice-dealers, cloth-merchants and representatives of merchant companies in Acre, who used the city as a base for trade with the Syrian hinterland. In particular Aleppo played an important role in the trade of saffron, dyes and other wares.\textsuperscript{27} It was Florentine capital which financed much of the Sicilian trade in grain and other foodstuffs to the kingdom of Jerusalem in the second half of the thirteenth century. The eviction of the Genoese from Acre after the War of St Sabas (1256–8) meant that Florence may well have dramatically

\begin{flushright}
\footnotesize
\textsuperscript{25} Many of the documents issued between 1296 and 1302 include names of individual merchants (‘de Florencie’) as well as the presence of representatives of large merchant companies (‘societas’) such as the Bardi and the Peruzzi, see Polonio, \textit{Notai Genovesi in Oltremare}, nos 15, 58, 64, 73, 75, 76, 126, 178, 238, 262, 263, 281, 343, 354–6; Pavoni, \textit{Notai Genovesi in Oltremare (6 luglio 1301–27 ottobre 1301)}, nos 36, 97, 153, 153a; Balard, \textit{Notai Genovesi in Oltremare}, nos 10, 36; Pavoni, \textit{Notai Genovesi in Oltremare Sambuceto (gennaio-agosto 1302)}, nos 13, 58, 64, 87, 88, 205, 217a, 238, 238a.


\textsuperscript{27} Abulafia, ‘Crochuses and crusaders’, pp. 227–33.
\end{flushright}
augmented its share of trade with that city, under Pisan disguise.\textsuperscript{28} Presumably this involved transporting its new gold currency eastwards, sealed in leather ounce bags.\textsuperscript{29}

Until now the numismatic evidence for the circulation of early florins in the eastern Mediterranean has been exclusively based on the discovery of a single hoard of some 600 early florins and a small number of other gold coins in Aleppo in 1953–5.\textsuperscript{30} This unique find, which was never published, has been used by successive historians and numismatists to argue that florins circulated extensively in the Levant. The fact that the Aleppo hoard is but a single hoard and perhaps an anomaly tended to be overlooked. Instead it was taken as an indication of the high position the florin held in the eastern Mediterranean in the later thirteenth century.\textsuperscript{31} It also helped fill

\begin{itemize}
\item \textsuperscript{29} Spufford, Money and its Use (n. 1), p. 176.
\item \textsuperscript{30} The only published account of the Aleppo hoard consisted of incidental remarks by Philip Grierson in papers devoted to other subjects. ‘The coin list of Pegolotti’ (n. 15), pp. 488–9; ‘La moneta veneziana nell’economia mediterranea del Trecento e Quattrocento’ in La civilità veneziana del Quattrocento (Venice, 1957), pp. 77–97 at pp. 82–3; ‘The interpretation of coin finds (I): presidential address delivered at the annual general meeting, the Royal Numismatic Society, June 16, 1965’ NC, 5 (1965) pp. i–xii at p. vi. All are reprinted in Later Medieval Numismatics (London, 1979), as nos xi, xii, and xxi respectively.
\end{itemize}
the vacuum created by the cessation of crusader gold coins. The discovery of another group of early period florins is therefore important because it seems to confirm that florins indeed circulated in the Levant in the closing decades of the thirteenth century, a belief until now based solely on the Aleppo hoard and the aforementioned scattered documentary references.
8.4 The Acre Harbour hoard

The florins were recovered in two groups at the same point on the sea bed during two consecutive seasons of underwater surveys in 1993 and 1994 preceding clearing work east of the medieval harbour of Acre: twenty-one coins were discovered in 1993 and an additional nine were excavated during 1994. Together with the florins, three other gold coins were recovered: a solidus dating to the beginning of the reign (641–6) of Constans II and two medieval coins, a Byzantine histamenon nomisma of Basil II and Constantine VIII (1005–25), and a North African dinar of the Muwahhid ruler, Abu Muhammad ‘Abd al-Mu’min b.-‘Ali (AH 524–8/AD 1130–63), minted at the port of Bijayah (Bougie) in eastern Algeria.

32 The coins were recovered during an underwater survey by the Israel Antiquities Authority Marine Archaeology Branch, carried out by E. Galili, Y. Sharvit and U. Dahari. During the survey a further nineteen bronze and copper coins dating from the Roman to Ummayad period were found. See E. Galili, J. Sharvit, U. Dahari, N. Bahat-Zilberstein, G. Finkelisztejn, E.J. Stern, R. Kool, and Y. Kahanov, ‘Akko harbor, underwater surveys’, Hadashot Arkheologiyot 114 (2002), pp. 13–15.

33 The concentrated find of such diverse gold denominations demonstrates Acre’s importance as a transnational port in the Mediterranean. Acre and its hinterlands were part of a triangular trade system which linked Egypt, the Byzantine empire and the West. This and its expansion into a major transit centre for thousands of pilgrims and immigrants during the crusader era made Acre into an important international money-market during the eleventh to thirteenth centuries. It ceased to function as such after being destroyed by the Mamluks in 1291. For the Fatimid period see: M. Gil, A History of Palestine 634–1099 (Cambridge, 1992); for the crusader period see: D. Jacoby, Migration, trade and banking in crusader Acre. ΒΑΛΚΑΝΙΑ ΚΑΙ ΑΝΑΤΟΛΙΚΗ ΜΕΣΟΓΕΙΟΣ (12ος-17ος ΑΙΩΝΕΣ), (Athens, 1998), pp. 114–119. The debased and thin shaped Histamenon, the Byzantine empire’s main gold currency till 1092, presumably reached Acre when the port was under Fatimid rule. To my knowledge finds of these gold coins are almost unknown from southern Syria and Fatimid ruled Palestine. Likely their infrequent appearance is connected to the extremely limited flow of gold
The coins were discovered under conditions of controlled dredging. According to the excavators an additional 20 to 30 coins still lay dispersed on the sea bed. Unconfirmed reports speak of another 22 coins found by local fishermen. It is likely then that this group of florins belonged to a single hoard of at least 70 or 80 coins that were lost on the sea bed of the harbour. It is highly unlikely that such large quantities of gold coins from a single location are merely chance losses. Finds of gold coins, especially single ones, are very rare. It was a precious commodity, frequently hoarded in times of crisis (war, conquest) and debasements, or melted down to be incorporated into the next generation of coins.

beyond the political borders of the Byzantine empire – now extending eastwards after the Byzantine reconquista of Northern Syria (969-1084) see S. Heidemann 383-6 for circulation of Byzantine gold in Muslim Syria. The other medieval coin, a North African Muwahhid dinar reached Acre from the port of Bijayah/Bougie in eastern Algeria. Gold from North Africa circulated in this area under the Fātimids during the tenth and eleventh centuries. This is attested both by documents from the Cairo Geniza as well as from the surviving hoard evidence. Presumably North African gold re-entered the Latin Kingdom on a smaller scale with the trickling of Muslim pilgrims from the Maghreb transiting its territory to Mecca and North Italian traders carrying goods between the Maghreb and the Middle Eastern seaboard see: Usamah ibn Munqidh (1095-1188). Memoirs of an Arab-Syrian gentleman; or, An Arab knight in the Crusades: memoirs of Usamah ibn-Munqidh (Kitab al-itiibar). Translated from the unique manuscript by Philip K. Hitti. (New York, 1929), p.110 and The Travels of Ibn Jubayr, trans. Ronald J. C. Broadhurst (London, 1952), pp. 317-325.

34 Personal communication 29 May 1997 from E. Galili and Y. Sharvit.
8.5 Types, mint symbols, and die-links

Additional evidence for the view that the two groups of florins found in Acre harbour belong to one hoard is that they show a considerable degree of homogeneity. Three factors in particular point this way:

1. *Same type of florins.* The *florins* in both groups belong to the same, early ‘small florins’ type (see below).

2. *Occurrence of similar mint symbols in both groups.* Five of the 20 coins of the first season (nos 14, 17, 18, 22, 28) had *segni* which occurred on four of the nine coins discovered in the second season (nos 13, 16, 21, 27). This establishes a significant correlation between the two groups.

3. *Die-linking.* Also significant is the fact that two pair of coins discovered in different seasons – nos 14 and 17 in 1993 and nos 13 and 16 in 1994 – were struck from the same obverse dies. The reappearance of similar mint symbols and die-links is summarized below in fig. 1:

<table>
<thead>
<tr>
<th>Segno</th>
<th>1993 season</th>
<th>1994 season</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no. 8</td>
<td>no. 10</td>
</tr>
<tr>
<td></td>
<td>no. 9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>no. 26</td>
<td></td>
</tr>
</tbody>
</table>

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359
8.6 Dating the Acre Harbour hoard. The identification of types and segni

**Types**

The 30 florins in the hoard can be dated to the earlier period of issue (up to 1380) by their style and typology:

1. All carry the inscription S. IOHA-NNES. B which is characteristic of coins struck between 1252-1450.\(^{36}\)

2. All belong to the ‘small gold florin’ type with a diameter of 20 millimetres. These coins were struck before 1422.

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\(^{36}\) Between 1450 and 1533 the inscriptions read S. IOAN-NES. B, see: H. Ives, ‘The design of Florentine florins as an aid to their dating’, *ANSMN* 5 (1952), p. 108.
3. All depict St John wearing a coat of animal hair fringed at the sides and the bottom. These coin types were struck before 1411.37

4. The *fleur-de-lis* on the obverse of all the coins portrays two W-shaped (unopened) buds with globules attached at each of the three points. These appear on types struck before 1380.38

Herbert Ives’ analysis of the design of the Florentine *florins*, mentioned also the ‘unopened leaves’ motif on the pendants of the obverse *fleur-de-lis*. According to him these only appeared on coins minted *before* 1300. This particular stylistic element was not included by Bernocchi in his elaborate classification of fourteen different obverse types appearing between 1252 and 1422.39 Consequently this motif has been omitted as a dating device.

**8.7 Florin Segni - mintmarks**

Stylistic analysis only helps to restrict the dating of the hoard to before 1380. Fortunately the *segni* provide a more precise dating instrument. In the case of the

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37 See M. Bernocchi, *Le monete della Repubblica fiorentina*, vol. 4: *Valute del fiorino d’oro (1389–1432)* (Florence, 1978), pp. 124 ff. Bernocchi (see tables I-XIX) further distinguished between 1252 and 1421, the period of the small florin, nineteen different types of fringed coats made from a coarser textile, with ornamental stitchings at bottom.


Florentine gold coinage this takes the form of a small symbol appearing on the coin’s reverse before the inscription (early florins), but mostly between the end of the inscription and the halo enclosing St John’s head.\(^{40}\) This *segno* was the emblem of the officiating mint master. According to the Florentine Commune’s constitution the office of the mint master rotated every semester (six months) among members of the city’s leading economic institution, the *Arte di Calamala*, the guild of the foreign cloth-dressers.\(^{41}\) At the inception of gold minting in 1252 the emblem or badge (*segno*) was a simple mark, an annulet. It rapidly developed into a pictorial design alluding to the mint master’s family (*type parlant*). During the fifteenth century it evolved into a full-fledged coat-of-arms. Bernocchi’s extensive research on the Florentine mint produced 668 *segni* for the 282 year period (1252–1533) in which the *florins* were produced. In theory, we therefore possess an extremely accurate dating device which allows us to identify a coin to within six months. In practice, several crucial hiatuses exist, in particular with regard to our knowledge of the earliest florin issues minted between 1252 and 1303. Accordingly, the Acre Harbour hoard below warrants a closer inspection of the both relevant mint documents, and the *segni* displayed.

\(^{40}\) The earliest florins had no mint master’s mark according to the *Libro della zecca*: ‘Reperitur florenos auri coniatos fuisse per commune Florentie sine aliquo puncto’, see M. Bernocchi, *Monete fiorentina*, vol. 1: *Il libro della Zecca (1252–1533)* (Florence, 1974), p. 2.

8.8 The earliest gold florin segni (1252–1303): problems of identifications and dating

In 1317 the Commune of Florence established the *Liber Monetae Communis Florentiae* or *Libro di Zecca*. The purpose of this ‘mint book’ was to collect the different records related to the activity of the mint into one *registrum* or ‘mint register’. The account was organized chronologically, containing the names of the principal mint officials serving every semester. The register not only specified names of the two mint masters for gold and petty coinage, it also reproduced in the margins of the manuscript drawings of the *segni* they had used. By 1533, the ultimate date of its codification, the register consisted of 29 sections or *cahiers* – assemblages of folded sheets – which were composed by 90 different scribes. This

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42 The original manuscript *Zecca No.79-Fiorinaio* (Inventario 89) can be consulted in the Archivio di Stato, in Florence. A new edition was published by Bernocchi-Fantappie in *Monete fiorentina*, vol. 1.


44 The images of coins appearing in the register consisted of two types: impressions of the obverse coin die on the parchment using gold or silver leaf or even wax, some of them dated to the fourteenth century; and drawings of the *segni* appearing on the reverse which were added in the fifteenth and sixteenth centuries.
collective work contained the names of hundreds of mint masters together with nearly 1000 segni compiled over a period of 217 years.\textsuperscript{45}

In his famous chronicle of Florence Giovanni Villani (1276–1348)\textsuperscript{46} – who during his term as mint master in 1316–17 initiated the compilation of the liber monetae – stated that the Republic of Florence had begun minting gold 65 years earlier, in 1252.

...i mercatanti di Firenze per onore del comune, ordinario col popolo e comune, che ssi battesse moneta d’oro in Firenze; e eglino promisono di fornire la moneta d’oro, che in prima batte moneta d’ariento da danari XII l’uno. E allora si cominciò la buona moneta d’oro fine di XXIII carati, che si chiamano fiorini d’oro e contavasi

\textsuperscript{45} Between 1317 and 1533 there are 797 segni which can be securely identified within a six month period. Another 153 segni exist but their date can only be fixed approximately (from several years to several decades). For the complete listing of mint masters and symbols see Bernocchi, Monete fiorentina, vol. 2.

\textsuperscript{46} See Giovanni Villani, Nuova Cronica, a cura di Giuseppe Porta, 3 vols (I. Libri I–VIII; II. Libri IX–XI; III. Libri XII–XIII), (Parma, Fondazione Pietro Bembo / Ugo Guanda Editore, 1990–1991); Giovanni Villani was the scion of an important Florentine mercantile family. He became a shareholder in the Perruzi (who also were active in Acre) and Buonaccorsi compagnies, two of the leading Florentine trading and banking firms. As a merchant in the service of the Peruzzi, he travelled around Europe for several years. Upon his return in 1307 he became involved in government of his native city. He died, in 1348 presumably of the plague, which killed half the population of Florence. Villani’s Cronica, divided into twelve books, described not only Florentine political history but also contained a wealth of economic information (statistical data, cost of provisions, details of the finances of the state). For Villani see: M. Luzzati, Giovanni Villani e la Compagnia dei Buonaccorsi, (Rome, 1971); ‘Giovanni Villani’ in: C. Kleinhenz (ed.), Medieval Italy. An Encyclopedia, vol. II, (New York, 2004), pp. 1143–7
l’uno soldi XX; e ciò fu al tempo del detto messere Filipo degli Ugoni di Brescia, del mese di novembre gli anni di Christo MCCLII... (Villani, Cronica Liber VII, cap. 53).

From Villani’s words it would appear that we lack even the most basic record on more than a 100 mint masters and their segni during the first 65 years of the gold minting. In fact, in the original Liber Monetae compiled on 15 March 1317 (and preserved in the first two sheets of the manuscript) its author, the notary Salvi Dini de Florentia, recounted how he had succeeded in fully reconstructing the records as far back as 1303. Dini noted that for the first 50 years of the mint’s existence (1252–1303) he had been unable to find any books or documents that named the mint masters. He was, however, able to compile a list of 72 segni belonging to the early period. These segni were based on a previous inquiry made earlier in 1317. This inquiry had been based on three sources which were no longer available to Dini. The first was the missing liber sive quaternus, the semesterial records of the mint written by the notaries of the mint up to 1303. They were later incorporated in the Memoria

47 Villani, Nuova Cronica, p. A 346.
48 Bernocchi, Monete fiorentina, vol. 1, p. 2.
49 ‘videntibus et audientibus quod, de dominis et officialibus et signis ditte monete, qui a die ipsius initiate, fatte et ordinate monete usque in diem presentem fuerunt et fatti sunt, nulla in communi Florientie supraditto reperitur memoria, que singulis ipsos volentibus pateat’, see: Bernocchi, Monete fiorentina, vol. 1, pp. 1–2. The names of the mint masters for two terms 1280–1 (Guido Cambi and Tedicio Manelli) and 1286–7 (Coppo Guiseppi and Ticio Manovelli) were added to the Liber Monetae at the beginning of the fifteenth century, but without the mint symbols. See Bernocchi, Monete fiorentina, vol. 1, p. 10.
or deeds of the mint. Secondly, there were oral accounts of several functionaries who had worked in the mint during this early period. Thirdly, the list of 72 segni was supposedly based upon examination of the coins themselves but errors in their description by Dini showed he was using an earlier list.  

Consequently, the Dini-‘Zecca’ list, as it may be called, became the authoritative reference for the early segni (1252–1303). It was published for the first time in 1761 when Ignazio Orsini reproduced the entire text of the Liber Monetae in his history of the Florentine mint. Orsini noted errors in the original ‘Zecca’ list but reproduced the original drawings of the segni with their inaccuracies as they had been incorporated in the Liber Monetae by Salvi Dini in 1317. Orsini’s work on the Florentine mint was barely superseded in 1930 by the catalogue of the ‘Toscana-Firenze’ region appearing in volume 12 of the Corpus Nummorum Italicorum. It contained no new information on the earlier segni indeed only nine of the 48 segni drawn by Orsini were inserted. The work provided little new information on the earlier period. It noted some varieties but presented no systematic analysis of the material.

In 1952 A. Carson Simpson published a seminal article which for the first time outlined the problems of researching the early period segni (1252–1303). The article questioned the status of the Liber monetae as an accurate source, and

50 Bernocchi, Monete fiorentina, vol. 1, pp. 20–3.
51 I. Orsini, Storia delle monete della Republica Fiorentina (Firenze, 1760).
52 CNI vol. XII, Toscana (Firenze) (Rome, 1930).
suggested possible serious shortcomings in the original list. It noted that a more comprehensive study of the segni and mint masters which consulted external source material, both archival and coins themselves, was needed.

This was largely accomplished in Mario Bernocchi’s five-volume study of the Florentine mint published between 1974 and 1985. Bernocchi made an extensive study of the mint’s archive and related documents preserved in the Archivio di Stato in Florence. He also studied a large number of florins in major collections, in Italy and elsewhere. The result was a detailed catalogue with more than 800 gold and silver coin types struck by this city between 1252 and 1533.

With regard to the earliest period of the mint’s activity (1252–1303), Bernocchi presented a comprehensive list with a large number of new types. These he divided into two major groups. The first comprised 101 segni dated to 1252–1303 (as against the original 72 mentioned in the Liber Monetae). To these he added a second group consisting of another 54 segni appearing on the ‘small florin’ fiorino stretto type which was struck until 1421. These coins he dated to the period 1252–1421, uncertain if they were the earlier 1252–1303 or post 1303–1421 types.

8.9 The segni of the Acre hoard

The thirty fiorini of the Acre Harbour hoard bear twenty different segni, one of which seems to be a previously unpublished type. The coins divide into several groups

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54 These coins had a diameter of 20 mm. From 1422 until 1533 Florence struck a larger gold florin type with a diameter of 22 mm.
according to periodisation of the *segni* established by Bernocchi and the Logge dei Banchi hoard.\textsuperscript{55} 

a) One coin belongs to the earliest group of florins without *segni* struck in the first year of the mint’s establishment in 1252.

<table>
<thead>
<tr>
<th>Series I without <em>segni</em></th>
<th>no. 1</th>
</tr>
</thead>
</table>

b) Two coins bear one *segno* used in the period c.1252/3–60.

<table>
<thead>
<tr>
<th>Series III with cluster of three pellets</th>
<th>3</th>
<th>no. 2, no. 3</th>
</tr>
</thead>
</table>

c) One coin bearing a *segno* used in the period 1260–7.

<table>
<thead>
<tr>
<th>Series III with 7-petal flower</th>
<th>7</th>
<th>no. 4</th>
</tr>
</thead>
</table>

d) Twenty one coins bear fifteen *segni* which were used between 1252 and 1303.

<table>
<thead>
<tr>
<th>Pellet between legs of saint</th>
<th>-</th>
<th>no. 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring with pellet</td>
<td>○</td>
<td>nos 6 and 7</td>
</tr>
<tr>
<td>Six-pointed star</td>
<td>★</td>
<td>no. 8</td>
</tr>
<tr>
<td>Crescent with pellet</td>
<td>♒</td>
<td>nos 9 and 10</td>
</tr>
<tr>
<td>Five petal flower</td>
<td>♪</td>
<td>no. 11</td>
</tr>
<tr>
<td>Key</td>
<td>☁</td>
<td>no. 12</td>
</tr>
<tr>
<td>Voided cross with four pellets</td>
<td>¶</td>
<td>nos 13 and 14</td>
</tr>
<tr>
<td>Four petal flower with stem</td>
<td>☋</td>
<td>no. 15</td>
</tr>
<tr>
<td>Vine leaf</td>
<td>★</td>
<td>nos 16, 17 and 18</td>
</tr>
<tr>
<td>Two oak leaves with stem</td>
<td>♪</td>
<td>no. 19</td>
</tr>
<tr>
<td>Hammer</td>
<td>☠</td>
<td>no. 20</td>
</tr>
<tr>
<td>Shell</td>
<td>☠</td>
<td>no. 21</td>
</tr>
</tbody>
</table>

e) Two coins bear a *segno* which Bernocchi dates to 1252–1421.

<table>
<thead>
<tr>
<th>Segno 7</th>
<th>☓</th>
<th>nos 27 and 28</th>
</tr>
</thead>
</table>

g) Lastly, two coins carry an identical but possibly unpublished *segno* resembling a ‘poppy’ which for purposes of analysis can be dated to 1252–1421. This design resembles the *papavero* dated by Bernocchi to 1251–1421 but differs substantially from it with regard to the size of the upper cone, body and stem. In addition, Bernocchi lists other *fiorini stretti* bearing a poppy as the emblem used by Nerone del Nero in the first semester of 1347. Bernocchi also lists a fifteenth-

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56 For further examples of two pre-1303 coins and one from 1344 bearing this privy mark see: G. Toderi and F. Vannel, *Monete italiane del Museo nazionale del Bargello*, vol. 2: *Firenze: Repubblica* (Florence, 2005), tables 48–9, nos 108–9 and table 74, no. 493.
century grosso and several soldini with a poppy as the mint-master’s emblem but also this mark hardly resembles the above ‘poppy’ mark.  

| ‘Poppy’ | nos 29 and 30 |

The above data show that the majority of the coins are dated exclusively to within the early period 1252–1303. Four of these can be firmly dated to the early years of the florin’s existence (1252 to the late 1260s). The remaining coins bear segni which cannot be exactly dated bearing in mind the typology and fabric of the coins as outlined above but all of them can be dated to the early period (1252–1380). More important none of them can with certainty be dated to the period after 1303. Only one coin bears a segno (wheat sheaf) which was struck during the early period but was then re-used by a mint master in 1344. Another two coins have an identical emblem (segno 7) which Bernocchi was unable to date precisely and classified it to the general period 1252–1421. Lastly two coins carry a design (‘poppy’) which does not appear either among the group of segni which Bernocchi was able to describe and date accurately (1303–80) nor among those in the general category ‘1252–1421’. We presume that this unknown segno belonged to the earlier period.

In sum, the segni clearly indicate that the hoard dates to the second half of the thirteenth century. More important, the hoard’s provenance in Frankish Acre

contributes to a refinement of the dating. Frankish Acre with its large Italian merchant quarters was captured and destroyed by the Mamluks in May 1291. The *terminus ante quem* of these early *segni* can thus be taken back from 1303, a date based on Dini’s findings in 1317, to at least a dozen years earlier. The presence of three other Byzantine and North-African gold coins (seventh to twelfth centuries) found with the florins, all considerably pre-dating the fall of Acre (1291) and the absence of any European or Muslim gold post-dating the 1290s further indicates an early dating of these Florentine gold coins. It thus seems extremely unlikely that the coins could have been lost after 1291, following the capture of Acre, and the systematic destruction of the town as a commercial centre or port by the Mamluks.

### 8. 10 Comparison with the Aleppo hoard

At the start of my research on the Acre Harbour hoard the only relevant numismatic references were the brief comments by Philip Grierson on a large hoard of similar coins which had been found in Aleppo in Syria, in the mid 1950s. The hoard was subsequently dispersed in Europe and the United States. Since then to the best of my knowledge, no other hoard of this kind has ever been noted or published. During a sojourn at Oxford University in 1996 I contacted the late Professor Grierson at Cambridge University and asked him if he had received any additional information on these enigmatic coins. In reply I received his unpublished notes and a draft for an
article on the Aleppo hoard. These substantially enlarge our knowledge of this hoard and form the basis for the comparisons below.\textsuperscript{58}

The Aleppo hoard contained a sizeable quantity of gold c.2.2 kilograms, or 629 coins. The majority of these were florins (c.600). Apparently the coins were found during repairs on a wall of an old house in the city of Aleppo around 1953–5.\textsuperscript{59} Grierson noted that the hoard contained the following coins:

<table>
<thead>
<tr>
<th>State</th>
<th>Ruler</th>
<th>Denomination</th>
<th>Nos of coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>Philip IV, the Fair (1285–1314)</td>
<td>Petit royal assis</td>
<td>8</td>
</tr>
<tr>
<td>Venice</td>
<td>Giovanni Dandolo (1280–9)</td>
<td>Ducat</td>
<td>4</td>
</tr>
<tr>
<td>Venice</td>
<td>Pietro Grandenigo (1289–1311)</td>
<td>Ducat</td>
<td>17</td>
</tr>
<tr>
<td>Florence</td>
<td>Commune 1252–1303</td>
<td>Florin</td>
<td>c.600</td>
</tr>
</tbody>
</table>

He tentatively dated this hoard to the plunder of Acre (1291) by the Mamluk sultan al Ashraf Khalil (689–93/1290–3), a conclusion which was subsequently adopted by historians and numismatists dealing with the period.\textsuperscript{50} Re-examination of the surviving unpublished documentation of the hoard seems to confirm its dating.

In a letter to Philip Grierson the French archaeologist and numismatist, Henri Seyrig, discussed in detail the mint symbols and dates of a large part of the c.600 florins in the hoard examined by him in Beirut in April 1955, before its dispersal

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\textsuperscript{58} Letter to the author from Grierson, dated 5 September 1996.

\textsuperscript{59} Details on the provenance of the hoard were relayed to Mr. Leopoldo Cancio of the International Bank for Reconstruction and Development by Mrs. Dorsey Stephens, the wife of the Middle East Bank representative in Beirut in three letters between 8 May and 16 August 1955. The information was subsequently sent by Cancio to Henry Grunthal of the American Numismatic Society in a letter dated 29 September 1955. My thanks to Alan Stahl who kindly provided me with this unpublished material from the ANS archives in January 2000.
around July 1955. He studied 110 coins and recorded 40 different *segni*, all of them dating to the early period (1252–1303). From this it is possible to infer with a high degree of certainty, assuming Seyrig’s lot was chosen at random, that the entire florin complement belonged to the earliest group. Another 35 coins of the dispersed Aleppo hoard bought by Grierson and the American Numismatic Society between 1955 and 1958 yielded an additional eight to ten *segni* all belonging to the early florin types.

The 110 to 120 fully documented coins (assumed to be a random sample) from the total of about 600 form, in statistical terms, a significant group (c.20%). All of the documented coins contain only early-period *segni* which make them extremely suitable for comparison with the Acre Harbour hoard. Such comparison shows that fourteen of the 21 *segni* of the Acre Harbour hoard reappear among the 48 recorded

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62 A large number of the coins were subsequently put up for sale in coin markets in western Europe and the United States. Grierson bought a number of Aleppo gold florins in Rome in early 1955. He bought eleven specimens at Brussels in January 1956 and three (?) other coins over the next two years in London. In addition, the American Numismatic Society acquired another lot of 20 Aleppo gold florins in 1955 and received a gift of another specimen in 1956. All of these coins have *segni* dating exclusively to the early period. This further strengthens the impression that the Aleppo hoard contained only early-period florins (1252–1303).
marks of the Aleppo hoard. Does this relatively strong correlation between segni populations possibly point to a connection between the hoards? The question is difficult to answer unequivocally. The rarity of the find, the chronological similarity and the geographical proximity of the coins point in this direction.

FIG. 2. Segni: comparison between the Acre Harbour hoard and the Aleppo hoard

<table>
<thead>
<tr>
<th>Mintmark</th>
<th>Acre Harbour hoard</th>
<th>Aleppo hoard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series I (without symbols)</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Series III with cluster of three pellets</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Pellet between legs of saint</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7-leaf</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ring with pellet</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Six-pointed star</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Crescent with pellet</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Five petal flower</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Key</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Voided cross with four pellets</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Four petal flower with stem</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vine leaf</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Two oak leaves with stem</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Hammer</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Shell</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Pine-cone</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Trefoil with stem</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hook</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Segno 7</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Poppy</td>
<td>2</td>
<td>?</td>
</tr>
<tr>
<td>Wheat sheaf</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
8.11 The Acre Harbour hoard and the end of crusader Acre

On Friday May 18 1291, after a siege of several weeks Frankish Acre fell to the Mamluk army. In the succeeding mêlée soldiers and citizens, desperate to escape the enemy, crowded into the harbour. Eye-witnesses like the anonymous ‘Templar of Tyre’ and accounts written several decades later related that a few, mostly noble ladies and merchants, succeeded in escaping by bribing owners of small rowing boats with jewellery and gold to be ferried off-shore to ships sailing for Cyprus and Tyre. Many however drowned with their precious possessions in the stormy sea.

Whether the Acre Harbour hoard is related to this event remains in the realm of conjecture. The numismatic evidence presented above clearly suggests that this group of coins constituted a hoard or part of a hoard of coins which reached Acre in the last decades of Frankish rule, and presumably were dispersed on the seabed due to a catastrophic event. There is an interesting parallel in the account of the treasure salvaged at Trapani, mentioned briefly above, preserved in the reconstructed registers of the Angevin chancery. During a violent storm in November 1270 parts of the French fleet returning from the unsuccessful Crusade to Tunis led by Louis IX, was destroyed in the Sicilian port of Trapani. Witnessing the disaster, Charles of Anjou, King of Sicily (1266-85) nominated a royal commission to draw up an inventory of all the unclaimed wreckage lying in the harbour. The inventory itself was lost but a list detailing the finds of coins, and objects of precious metals super naufragio

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Trapani survives. According to the list more than 200 gold coins were recovered. Of these the majority, 137 coins, were florins.

In sum, the evidence of the Acre Harbour hoard together with the above documentary information imply that by the late 1270s imports of high quality gold florins began to reach Acre, supplementing the imitation dinars (bezants) struck in the Latin Kingdom until 1260. This abundant flow of florins was presumably instrumental in undermining the last attempts to mint gold in the Frankish east after the 1260s (like the rare Agnus Dei bezant). Florins continued to circulate locally till the last days of crusader settlement, and also beyond in the fourteenth century, as historical sources witness. The other high quality gold coin minted in the West, the Venetian ducat, only became available in 1285, too late to make a serious impact on the economy of what remained of the kingdom of Jerusalem. The discovery of this small hoard thus considerably enlarges our understanding of the last chapter of the kingdom’s monetary history prior to its fall in 1291.

64 Carolus Barré, ‘Objet précieux et monnaies retrouvés’ (n. 13).


CATALOGUE

The coins below are gold *fiorini* (florins) and additional gold denominations found together with the hoard. The *fiorini* (florins) are arranged chronologically according to mint marks.

<table>
<thead>
<tr>
<th>No</th>
<th>IAA No.</th>
<th>Wt. (gm)</th>
<th>Diam. (mm)</th>
<th>Axis</th>
<th>Obverse</th>
<th>Reverse</th>
<th>Mint mark</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>72830</td>
<td>3.48</td>
<td>21</td>
<td>➔</td>
<td>+ FLOR–ENTIA fleur-de-lis</td>
<td>+ ' S IOHA–NNES'B John the Baptist nimbate, st. in front, in a coat of animal hair; l. hand sceptre; r. hand raised in benediction</td>
<td>Florence, c.1252 – <em>Fiorino</em> Series I without symbols</td>
<td>Bernocchi 1975:9, No. 69.</td>
</tr>
<tr>
<td>3</td>
<td>72831</td>
<td>3.47</td>
<td>20</td>
<td>➔</td>
<td>Same</td>
<td>Same</td>
<td>Cluster of three pellets Same Same</td>
<td>Same</td>
</tr>
<tr>
<td>7</td>
<td>72837</td>
<td>3.51</td>
<td>20</td>
<td>➔</td>
<td>Same</td>
<td>Same</td>
<td>Ring with pellet Same</td>
<td>Same</td>
</tr>
<tr>
<td>10</td>
<td>72828</td>
<td>3.48</td>
<td>20</td>
<td>➔</td>
<td>Same</td>
<td>Same</td>
<td>Crescent with pellet Same</td>
<td>Bernocchi 1975:14, No. 136.</td>
</tr>
<tr>
<td>11</td>
<td>72840</td>
<td>3.47</td>
<td>20</td>
<td>➔</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ ' S IOHA–NNES'B Same</td>
<td></td>
<td>Cf. Bernocchi 1975:15, No. 149. new variety with elevated pellet before B</td>
</tr>
<tr>
<td>No</td>
<td>IAA No.</td>
<td>Wt. (gm)</td>
<td>Diam. (mm)</td>
<td>Axis</td>
<td>Obverse</td>
<td>Reverse</td>
<td>Mint mark</td>
<td>Ref.</td>
</tr>
<tr>
<td>----</td>
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<td>---------</td>
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<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>*13</td>
<td>72822</td>
<td>3.53</td>
<td>20</td>
<td>✷</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ ' S IOHA–NNES'B Same</td>
<td>Bernocchi 1975:19, No. 204.</td>
<td></td>
</tr>
<tr>
<td>*14</td>
<td>72834</td>
<td>3.50</td>
<td>20</td>
<td>+</td>
<td>Same</td>
<td>Same + ' S IOHA–NNES'B Same</td>
<td>Bernocchi 1975:21, No. 228.</td>
<td></td>
</tr>
<tr>
<td>*15</td>
<td>72819</td>
<td>3.54</td>
<td>21</td>
<td>✷</td>
<td>+ FLOR–ENTIA Same</td>
<td>Same</td>
<td>Bernocchi 1975:21, No. 233.</td>
<td></td>
</tr>
<tr>
<td>*17</td>
<td>72829</td>
<td>3.50</td>
<td>20</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td>Bernocchi 1975:21, No. 235.</td>
</tr>
<tr>
<td>*18</td>
<td>72833</td>
<td>3.51</td>
<td>20</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
<td>Bernocchi 1975:21, No. 235.</td>
</tr>
<tr>
<td>*20</td>
<td>72818</td>
<td>3.53</td>
<td>21</td>
<td>✷</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ ' S IOHA–NNES'B Same</td>
<td>Bernocchi 1975:24, No. 266.</td>
<td></td>
</tr>
<tr>
<td>*22</td>
<td>72824</td>
<td>3.52</td>
<td>20</td>
<td>✷</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ ' S IOHA–NNES'B Same</td>
<td>Bernocchi 1975:26, No. 301.</td>
<td></td>
</tr>
<tr>
<td>*23</td>
<td>72842</td>
<td>3.48</td>
<td>20</td>
<td>✷</td>
<td>Same</td>
<td>Same</td>
<td>Pincone</td>
<td>Same</td>
</tr>
<tr>
<td>No</td>
<td>IAA No.</td>
<td>Wt. (gm)</td>
<td>Diam. (mm)</td>
<td>Axis</td>
<td>Obverse</td>
<td>Reverse</td>
<td>Mint mark</td>
<td>Ref.</td>
</tr>
<tr>
<td>----</td>
<td>--------</td>
<td>----------</td>
<td>------------</td>
<td>------</td>
<td>---------</td>
<td>---------</td>
<td>-----------</td>
<td>-----</td>
</tr>
<tr>
<td>*25</td>
<td>72845</td>
<td>3.48</td>
<td>20</td>
<td>(\downarrow)</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ S IOHA–NNES B Same</td>
<td>trefoil with stem hook</td>
<td>Bernocchi 1975:29, No. 340, unknown variety without stops</td>
</tr>
<tr>
<td>*27</td>
<td>72821</td>
<td>3.52</td>
<td>20</td>
<td>(\uparrow)</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ ‘S IOHA–NNES B Same</td>
<td>Segno 7</td>
<td>Same</td>
</tr>
<tr>
<td>*28</td>
<td>72844</td>
<td>3.48</td>
<td>20</td>
<td>(\uparrow)</td>
<td>Same</td>
<td>Same</td>
<td>Unpublished.</td>
<td></td>
</tr>
<tr>
<td>*29</td>
<td>72835</td>
<td>3.50</td>
<td>20</td>
<td>(\uparrow)</td>
<td>+ FLOR–ENTIA Same</td>
<td>+ ‘S IOHA–NNES B Same</td>
<td>poppy(?)</td>
<td>Unpublished.</td>
</tr>
<tr>
<td>*30</td>
<td>72839</td>
<td>3.48</td>
<td>20</td>
<td>(\uparrow)</td>
<td>Same</td>
<td>Same</td>
<td>poppy(?)</td>
<td></td>
</tr>
</tbody>
</table>

Florence, 1252-1291 – Fiorino Serie XX with symbols

<table>
<thead>
<tr>
<th>No</th>
<th>IAA No.</th>
<th>Wt. (gm)</th>
<th>Diam. (mm)</th>
<th>Axis</th>
<th>Obverse</th>
<th>Reverse</th>
<th>Date</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*31</td>
<td>72847</td>
<td>4.31</td>
<td>20</td>
<td>(\downarrow)</td>
<td>[dN CONSTAN–IN VS PPAV] Beardless bust facing, wearing chlamys with tablion ornamented by four pellets, and crown with cross on circlet; in r. hand, sceptre.</td>
<td>VICTORIA AVG I Cross potent on base and three steps. In ex.: CONOB</td>
<td>641–646</td>
<td>DOC 2.2: 421, No. 1j.1</td>
</tr>
<tr>
<td>*32</td>
<td>73197</td>
<td>4.22</td>
<td>27</td>
<td>(\downarrow)</td>
<td>[bNSXPSPREXREG NANThIm] Facing bust of Christ Pantocrator wearing stola and koloboin; blessing with r., holding in l. Gospels; behind, cross nimbata</td>
<td>BASILCONSTAT VR Facing busts of Basil II l., and Constantine VII r., wearing stemma; Basil wears square patterned loros and holds longshafted cross;</td>
<td>1005-25</td>
<td>DOC 3.2: 621, No. 6a.6.</td>
</tr>
<tr>
<td>No</td>
<td>IAA No.</td>
<td>Wt. (gm)</td>
<td>Diam. (mm)</td>
<td>Axis</td>
<td>Obverse</td>
<td>Reverse</td>
<td>Mint mark</td>
<td>Ref.</td>
</tr>
<tr>
<td>----</td>
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<td>---------</td>
<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>*33</td>
<td>72846</td>
<td>2.24</td>
<td>21</td>
<td></td>
<td>with two crescents in the upper quarters.</td>
<td>above him suspended crown; Constantine wears chlamys with tablion.</td>
<td></td>
<td>Hazard 1952: 143, No.447.</td>
</tr>
</tbody>
</table>
KOOL, A THIRTEENTH CENTURY HOARD OF GOLD FLORINS FROM ACRE (2)
KOOL, A THIRTEENTH CENTURY HOARD OF GOLD FLORINS FROM ACRE (3)
KOOL. A THIRTEENTH CENTURY HOARD OF GOLD FLORINS FROM ACRE (4)
PLATE 61

KÖOL. A THIRTEENTH CENTURY HOARD OF GOLD FLORINS FROM ACRE (5)
Conclusion

Considera quaeso, et mente cogita, quomodo tempore in nostro transvertit Deus Occidentem in Orientem. nam qui fuimus Occidentales, nunc facti sumus orientales....qui habuerant nummos paucos, hic possident bisantios innumeros…

‘Consider, I pray, and reflect how in our time God has transformed the Occident into the Orient. For we, who were Occidentals have now become Orientals...Those who had few coins, here possess countless besants...’

Thus wrote Fulcher of Chartres in the late 1120s in an iconic passage in his Historia Hierosolymitana commenting on the enormous social and cultural changes facing Western settlers that had moved to the newly created kingdom of Jerusalem. Among the unfamiliar skills Westerners had to learn within one generation was the intensive use of money and coinage in the East, in particular gold coins ('bisantios/besants' as contemporaries called them). Comparatively few Westerners before traveling East used coins and certainly most had never seen a gold coin before arriving there — gold currencies had disappeared in the Christian West in the 8th c. CE returning only in the mid 13th c. In contrast a full blown monetary system using gold coins and a plethora of smaller silver/alloy and copper currencies was well established and widely used by the populations in the urban, agricultural and trade based economies in the Byzantine and Muslim East, which included also the newly conquered territories of the Crusader States.

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1 Fulcher of Chartres III, 37:2-8.
Over the past 150 years, the collecting of 'Crusader' coins but also serious numismatic research into types, hoard analysis and metals study has enabled us to map the basic organization of the Latin kingdom's monetary system and draw certain conclusions about the coinage's economic and cultural character.

A fuller, more balanced grasp of its true economic, cultural and ideological character though, involves two additional 'missing links': the examination of excavation finds from its territory and the examination of written sources connected to economic activities in the Latin kingdom, and in particular the use of coinage.

The above study constitutes a first step in this direction. It used for the first time a large database of archaeological coin material from hundreds of sites, both single finds and hoards, many still unpublished. These formed the basis for a study of five aspects, some better known others hitherto unstudied, of the coinage used in the kingdom: the royal billon of king Amaury I and his successors (1160s-1220s), lead token money, the circulation of cash money in Frankish rural sites, the presence of coinages in a border castle, and the introduction of European gold towards the end of kingdom's existence in the 13th century. These studies showed the following:

1) The invention and adoption of an royal western style, stable coinage, part of a larger dual gold-billon coinage system maintained by the Jerusalem kings. Comparisons with contemporary Western and Byzantine type royal coinages, the study of documents and the coin's iconography showed the 12th century kings of Jerusalem instituted early on a royal monopoly of gold and billon moneys, while 'constructing' a local unique coin imagery, mustering messianic and crusading ideals for dynastic legitimacy.
A detailed study of coin's types, their spatial distribution in a large number of urban and rural sites, and a systematic analysis of its alloy and weight showed the massive circulation of a well controlled stable billon coinage throughout the kingdom’s territory. It showed that the Jerusalem kings possessed a well-controlled petty money system, which reflected the strong political and economic position and status of the royal dynasty of Jerusalem, particular between 1140s – 1170s, and possibly beyond. This massive coinage seems to undermine the notion of the kingdom possessing a weak 'Feudal' type of economy, entirely dependent on the influx of foreign cash and financial injections from the West. Written sources and new material evidence clearly suggest that considerable amounts of gold coinage, consisting of local crusader imitations but above all vast amounts of gold dinars originated from the surrounding Muslim states through trade, taxes and booty circulated in the kingdom of Jerusalem during the 12th/13th centuries.

2) The use of local manufactured lead money, considerably more widespread than was previous thought, in the kingdom of Jerusalem during the 12th and 13th centuries. Lead coinage was non-existent in the East previous to the Crusades, and its production in similar type moulds found in Western Europe provides us with tangible proof of the import and persistence of European monetary traditions in local Frankish society. Lead 'ersatz' money– used only for the smallest local transactions – was found in many different kinds of Frankish settlements, from urban quarters to isolated hamlets alongside the ‘official’ royal billon money. It played a considerable role in providing an additional means of cash payment at the ‘bottom’ of the kingdom’s economy. The lead tokens, mostly used by the non-noble population of the kingdom's towns and rural settlements, are also objects of great historical significance, since they are material evidence of a social class which often escape our attention as they very
rarely appear in the surviving documents of the period. Thus the iconography of these types allows us a rare graphic glimpse of the life and mentality of the *poulains* of the Frankish kingdom.

3) The relative widespread use of money in Frankish rural settlements in the kingdom. This is suggested both by evidence in surviving charters, recording property transactions, tax payment and dues, mostly in gold but also sometimes smaller denominations; and in particular by excavated finds of a large variety of petty cash, Frankish, European and Muslim coins, in ample quantities in Frankish rural settlements. The spatial distribution of the coins, minutely mapped and analyzed within the archaeological/historical context of two Frankish *villeneuves* witness the relative deep penetration of money in Frankish rural sites.

4) The abundant finds of Amaury billon deniers, a pair of imitation gold bezants and several unique lead money tokens excavated within the castle grounds of a late 12th century royal/Templar border castle. These finds originated from an extremely well documented archaeological phase and provided crucial evidence for the site's identification with *Vadum Iacob* and graphic details of its construction and violent destruction. Extremely well dated by the extreme short life span of the castle, these coin finds also constitute an important benchmark for comparative research of such type of coins coming from other sites. Most importantly, these coin finds are concrete evidence for the widespread use of cash money in the hinterland of the kingdom.

5) The crucial role of the gold *fiorini* in the economic and political ascendancy of Florence after 1252, at a time that Islamic gold *dinars* and imitation bezants were still in use in the kingdom of Jerusalem till the late 1250s/1260s. Consequently, the rapid acceptance of Florentine gold in the Latin East, by the late
1270s is shown in trade manuals and a few commercial contracts and above all by the find of well dated hoard in Acre's medieval harbor. Possibly an abundant flow of Florentine gold was instrumental in phasing out the local use of imitation gold in the Kingdom and aborting the last attempts to mint gold in the Frankish East after the 1260s (the rare *Agnus Dei* Bezant for example).

Besides enhancing our understanding of the scale of the kingdom's monetary economy, the above studies also touch on a larger historiographical question about the nature of the kingdom's society and its relations with the surrounding Muslim states, in the two centuries of its existence: Did the Frankish rulers and population remain economically segregated from the large native Christian and Muslim population in their own kingdom and from the surrounding Muslim states? Or did they interact and assimilate in the surrounding monetary system of the Islamic world on a far larger scale than we tend to think?

Part of the answer lies with the above studies which certainly present a more complex and multifaceted picture of the coinages in use in the kingdom of Jerusalem than was previous thought. Another part of the answer lies with the documentary evidence — which still needs to be studied more in depth — related to the use of coins in the kingdom. Reading he kingdom’s charters and other written accounts it becomes clear that both rulers and the populations of the kingdom adopted Islamic monetary instruments, chiefly the gold *dinar* (both as a financial unit for reckoning/money of account and as gold cash money) as the basis of their economy. Within this context, Frankish gold imitation *bezants* and cuttings, often presented as the seminal Crusader coinage, were possibly only a small part of a whole spectrum of Islamic and European type monetary instruments in use in the kingdom. Such
conclusions seem to be borne also by new material evidence like joined finds of imitation *bezants* and genuine *dinars* and the recent discovery of a large Islamic gold hoard from an undisputable late Crusader context. Nevertheless as we saw from the above case-studies the kingdom's rulers and population continued to mint and use western looking billon and lead coinage which was part traditional European, part local ideological and cultural constructions.

Much work still needs to be done. In particular a closer examination of the use of gold coinages found in Crusader period excavation phases, an updated survey of Medieval European coinages found in the kingdom's territory, and a detailed study of Islamic/Zandjid coppers in Frankish period living contexts. All these studies together, will further enhance our understanding the scale of the kingdom's monetary economy and its complex character.

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2 Tal, Baidoun and Kool (forthcoming).
10. Bibliography

Abbreviations

AJN: American Journal of Numismatics
ANSMN: American Numismatic Society Museum Notes
AOL: Archives de l’Orient latin
HA: HA
HBN: Hamburger Beiträge zur Numismatik
INJ: Israel Numismatic Journal
INR: Israel Numismatic Research
NC: Numismatic Chronicle
NZ: Numismatische Zeitschrift
QDAP: Quarterly of the Department of Antiquities of Palestine
PEQ: Palestine Exploration Quarterly
RB: Revue Biblique
RBN: Revue Belge de Numismatique
ROL: Revue de l’Orient Latin
RN: Revue Numismatique
RIN: Rivista Italiana di Numismatica
ZDPV: Zeitschrift des Deutschen Palaestina-Vereins

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המחזור והשימור במטבעות
בממלכת ירושלים הצלבנית, 1091–1299

חיבור לשם קבלת תואר דוקטור לפילוסופיה

מאית

רוברט קול

וונש לסנט האוניברסיטה העברית בירשהלם

נובמבר 2013
עבורה ובעשה בחדרככם של:

פרופ' בנימין זאב קדר
פרופ' מיכאל דוד מסקלף
ההיסטוריה וה dàyות של ממלכת ירושלים הצלבנית (011–031) במקורות היסטוריים

המטרה של העבודה היא לחקור את המטבעות של ממלכת ירושלים הצלבנית (011–031) במקורות היסטוריים ובמקורות ה.fontSize(11). It is a small contribution to a larger field of study. The research is based on the reading of a variety of documents and primary sources, and in particular, on the findings of a large numismatic collection, which is an important part of the research. The collection is based on the results of archaeological excavations that have taken place in Israel in recent centuries. There is no other comprehensive study of the coinage of the Kingdom of Jerusalem or the development of the monetary system in the kingdom.

The chapter 4 of the study presents the history of the study of the Kingdom of Jerusalem and the monetary history of the Byzantine Empire, which ruled in parallel to the Crusaders in the eastern basin of the Mediterranean. Most of the books and catalogues of the coins of the 11th–14th centuries do not contribute to understanding the development of the Crusader monetary system and do not reveal the source and influence of other monetary systems that developed in the area.

The research focuses on the monetization of the Crusader realm and the role of the Crusader mint in the economy. Researchers who collected economic data used them mainly to describe the political struggle between the king and the barons. Studies that were dedicated to financing Crusades neglected the nature and value of the coin that developed in the Kingdom of Jerusalem. The exorbitant costs that were incurred in the construction and maintenance of the castles and in military campaigns and the release of captives were almost not studied economically. Studies that deal with the economy of Europe in the period do not refer to the economic development of Jerusalem, even when they examine the relationships between the area and the realm. One of the main topics of these studies is the balance of precious metals between Europe and the region.

The book devotes a special chapter to the numismatic history of the Crusader realm (chapter 5) to understand the role of the Crusader mint in the development of the economy. The book also deals with the monetary history of the Crusader realm and the monetary history of the Byzantine Empire, which ruled in parallel to the Crusaders in the eastern basin of the Mediterranean. The book presents a detailed study of the coinage of the Crusader realm and the role of the Crusader mint in the economy.

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The flow of gold to Europe and of silver to the eastern Mediterranean.

Other studies focus on the role of the Italian communes in trade between Europe and the Levant.

The current view is that the basis for the existence and development of the kingdom was trade in local markets. This view is fundamentally different from the view that was prevalent during the late 13th century to the middle of the 13th century, according to which the kingdom of the Franks was almost completely dependent on trade with western Europe.

In recent years, studies of local markets, that is, agriculture, trade, and industry within the kingdom, as well as studies by archaeologists on the development of material culture, such as the production of clay or glass items and trade in them, do not deal at all with the sources or prices of the finished product.

Research in military, religious, and public architecture in Jerusalem ignored almost completely the processes involved in obtaining the raw materials, in hiring labor and in the management of the buildings. Many researches have not even mentioned where the money was collected, or what was the economic importance of these activities.

Finally, the role of money in research among archaeologists is usually tied to dating.

Research methods (Chapter 2) present the research methods and how these methods provide answers to the issues that still exist in today's research.

The research is based on an information center that includes coins found in surveys and excavations.
麥ענין. מנאגר מידע זה שלbrates בקואופרציות מבואות המатурונים מטמנו את השכירות, או✨שחיתת כביכול על מטמון שנמצא במשיטה ובמשיטה, אך השחיה היחידה במשיטה השכירה של מטמון שנמצא במשיטה בשכירת יｄע. זتلك דרמטכלי זה ההיתור הראשה שעריך השכירה של מטמון שנמצא במשיטה במשיטה ומשיטה והמיתר את השכירתו, או✨במשיטה של סכנת בציבורangel כמשיטה, דרמטכלי שעריך שעריך של מתעבט שעריך דרמטכלי אנג׳ל, או✨של משיטה של אוספים פרטיים ובמשיטה, ובמשיטה של במשיטה, או✨במשיטה של שעריך של משיטה של משיט
הסוגיות שנחקקו ושאלות מחקר

מתיאר המידע שלշלשת המפות נגור חמש ס고יות שדרשה מחקר, של כל אחת מהם נבחנה הפרוטוטרי

במאطقة มקרה הפרד (פרק 4–8).

הסוגיות הראות את רבעים הממלוכית. כמקרה מבוא נבחנה المتحב מתוחפת שלטונות של הממלוכית, בימי אמוריו וירשיו (1160–1220). שאלת המפתה בסיוגיה זו: המים באちらות של מתוחפת שלטונות ביבשת! האהמה של הממלוכית: בחירת המטבעות והסכום נעשה קלאסיתית נבשק תופס מתוחפת שלטונות ימיים או פליטיים? המים התחרותית

הטורפלגיו של התופס מתוחפת של מ過程 מהפכת הגיאוגרפית והיוונית והת.payment בין בול במלוכית הגיאוגרפית התופס מתוחפת של כל גל של למ⍗ת ממקה חכם של מתוחפת שלטונות בממלוכית

במלוכית!

הסוגיות לשנייה היא מתוחפת של אסימונים숩ִה — תופעה שלא נבחנה עדיין. בלוחות

ステורונאי יהיו והתחפויות של אסימונים סופִה — תופעה שלא נבחנה עדיין. בלוחות

סיגונ גבונן של אסימונים סופִה במאגר המודייה. השלחת שוד产学: מה היה אופי של ביטעה אסימונים סופִה במלוכית começou מה הייחודה? האוס מוקד ה -------------------------------------------------------------------------------------------------------------------- מה הממלוכית! באורפִים ואשר בדילומס הממלוכית? האוס והריחם באסימונים הרגולلاحואור מוסי, לסוג ישוב במלוכית ואשר בדילומס הממלוכית! באוז ישב לכלוש ואשר בדילומס הממלוכית! באורפִים את האסימונים מכל 몇ו הה מאפייני האיקונוגרפיים

שלחמן!

הסוגיות השלישיות היא שימשו במתוחפת הפרק ימי באורפִים בפרטים. כמקרה מבוא נבחנה התופס מתוחפת של מesehen שיווך הפרק: קבצה ביבג נובר. השלחת המפתה וワイ: מה יהיו הפרקים והריחם של השימשו

במתוחפת הפרק ימי במלוכית בחושאה הבה בפרקים באורפִים באסימונים המוסלמיים השוכנה!

v
The study examines the issue of money and coins used in written documents, compared to coin finds in archaeological sites.

The fourth issue dealt with money and coins in fortresses. As an example, the coins found in the fortress of the Cross of the Red Lion and Jacob, mentioned in the Hebrew Bible, were examined. The questions were:

1. What types of coins were found in the fortress? Was the coinage similar, similar, or different from the coinage found in religious and secular sites across the kingdom?

The fifth issue was the use of gold coins at the end of the 13th century. For this purpose, a gold hoard was examined that was discovered in the port of Acre. The key questions were:

1. What was the role of gold coins in the economic boom of Florence?
2. How did the development of gold coins in the kingdom and in Crusader states in the Levant start?
3. When did the florins appear in Jerusalem according to written sources?
4. What was the contribution of this hoard to research?

The conclusions drawn from the issues mentioned above are:

1. The monetary system in the Crusader kingdom adopted the European monetary system, and adapted it to its needs. The Crusader kings adopted the monarchs of the West, and established a monopoly on gold and silver coins.
2. At the same time, they developed a local coin unique, whose iconography represented ideas of messianic and crusading ideologies, and was even used to give legitimacy to the local dynasty.
3. The variety of coins, their metal content and distribution indicate the extensive use of coins that were minted within a uniform and centralized system, which was found under the rule of the king. This system reflects the political and economic status of the Jerusalem dynasty, especially in the years 0021–0081 and perhaps later.
4. In addition, the conclusions contradict the assumption that the economy of the kingdom was weak and dependent on the economic West-African and the contributions of the royal treasury in the West.

2. The use of carnelian stones was more common than expected. The origin of the carnelian stones was in the West; this idea is not known in the Muslim countries.

The carnelian stones were used in daily transactions, and were made with carnelian stones as a means of giving value and making transactions more secure.
לימיוסי באסימונים היהודים סוף תורמה וחלות להיזמות Öl העומדים המונכיסים על כלכלת המאבק, מתחילת תורמת משושת באסימונים שהלך במדים במקורות התכניות. האיסומרים

שלא האסימונים מתאימים له הצעדיה של תקף שלכל משקית בשתייה וה었습니다.  

(3) המחדר הקומאני המitics והונות ממידי בזויה של伸びים עם רוח מתמטית יישובים

הפרטיקים הפך כי הממלכה הליגודית. המוסר והיתספורים, וחיים ממחצית הארסיואל, מתחכים משכל. והמסגרת והמשעון הגורר התינוקות בכרוב שונים וכרודים שיעוד מוגע

על الشمال החוף במרפסת עם באואר הספר עירא 혹은 הים של השוק

(4) הזוחל הפלנרטיני היה בשימשו בשוק הממלכה שלב במשבר המונוטגראים של המשכל השל

השביעי של המאה הירוקה לטס"ו, כעשרים שנה שלאר המוסקאות הרוממות. ייחדを持つ חכמה המודל לש

יפורים בשוק הממלכה מהאוהב המועדון של מסעדה והשקית את מוסטבול הלך

סיכום

בנתים שלוש השנון מעלה מונון רוח ומגיני של שאלת הסטטיסטרופית לו כביר ויאפה של

החבור הצלבניים והגון לחתונים הככללים עם המודול המוסלמי השכן. כאומ השולטים

הפרטיקים והמלכותים הממלכה עליים קזרמיים עלי הקול וטנערת המוקדס, ואי עם חדים

המتسليم בחרכי הממלכה מהונה: הוא יתכן שמשל היסי הממלך הייחודי הרבוהו חנות גשים שליחים לים

למה! המוסר המגון במעוז הצהוב ומעיון תומנת מרכבה וירש שיצמן חקור ביניב. על כל קלח המושואות öld אריש ליי שלושי באמצעת מוסר מוסר וירש המילר החסרים. על האסיבתתños של המספרית, ולא החרית, של מחוץ המReleasedים מיסים של שילוב של כל המוניטרה שמסירות במדברים

אחת המוסרונות התשדחת, ואולי השובנות, של מחוץ זה, יש לי, שלימים הממלכה ביסס השלג מוקדט

אצלאם, בחרו אנוש, שימיון של היחידה השישית, והם מוסר הממלכה Öl כלים שלילואזרי במרחב

ולשחור. האלקזית לאחרי טלי את השישון במדברים והזחלים והיוור זיפור, אוהבód עם המשך הוא

והנה, שיחיו בмонтажים בחל מרבעים משיקון, והם חזרו ומיתסף, שחייתו חיזים מיתספי

עבורה. בטיסי כל של אוכף מיפו 150 ש.rand עכל הצלבניים מוסיעות והשחייתו שלטועית
הזהב המוסלמיים, ולא ט obraحي מוטבע "צלבניים" בו חושר, ליער גו שמטבע בובוני הפרנקי, שלעתים קרובות הוצג כמטבע העיקרי והחשוב ביותר בממלכת הצלבנים, היה למעשה רק מטבע אחד מmonths של מגוון של מטבעות אסלאמיים ואירופאים שחי במחוון במחוזה, יהו קשרים במחוזים במחוזים המחוזים של הממלכה. לבסוף, לנוכח השפעת האירופאים והמוסלמיים על המטבעות הפרנקיים, הציגו שליטי הממלכה וה遏בים לייצר מטבע מוכן דמי דnier אירופאי וכנא במגמות מעורר, אשר שילבו במחוזים וה遏בים במגמות מעורר, האירופאים לכסמים מוכנים שליבים הממלכה וה遏בים מכסמי ירושלים.