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# MADE FOR TRADE

A NEW VIEW OF ICENIAN COINAGE

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JOHN TALBOT

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*Front cover: Boar Horse B (A) Stater reverse from die 13; Norfolk Wolf A Stater obverse from die K (© J. Talbot).*

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# Chapter 1

## Introduction

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### 1.1 Background and introduction

The English Late Iron Age saw the introduction of coinage across much of England – that much is clear. What is less clear is what this change tells us. Does the start of coinage reflect the creation of a hierarchical society, as is often thought? Was it issued by political leaders? It has even been proposed that the images of horses and men on the coins are symbols of the right to rule. How were the coins used? Were they simply used for military purposes or were they prestige gifts? Is it true that the quality of the imagery on the coins gradually degenerates and follows different rules to other forms of Late Iron Age art?

This book attempts to answer some of these questions by using evidence from my study of Icenian coinage. As we shall see, some of the results are surprising and many assumptions about the coinage need to be reconsidered.

### 1.2 The broad aims of the book

When I started to work on Icenian coinage my original objective was simply to understand how it was organised and the relative chronology of the various types of coin. In order to achieve this I undertook a die-study of all 10,000 known Icenian coins, identifying the individual dies that struck each coin. Key information about each coin, such as weight, findspot and dies were entered into an Access database. I was able to meet my objectives and obtained long chronologically ordered sequences of dies for many types. With the data from the die-study I realised that I had an opportunity to take the study further and examine the coinage's scale, imagery, distribution, manufacturing accuracy and patterns of hoarding and how these changed with time.

This book records how this information was used as the evidence for broader conclusions about the use of the coinage, the organisation and location of its manufacture, and its original purpose in Late Iron Age East Anglia. It also

examines what the coinage can tell us about the nature and organisation of society, and how that society and its belief systems may have been changed by its introduction. I have also attempted to see whether the echoes of historical events can be detected in the coinage and the extent to which it reveals the influence of Rome.

### 1.3 The structure of the book

Chapters 2 and 3 provide an overview of the structure of Icenian coinage, which was the original objective of the die-study. Chapter 2 mainly discusses the earliest Icenian coinages, but begins with a summary of even earlier coinages, which appear to have been present in East Anglia but were minted elsewhere. Chapter 3 covers the coinage of the denominational periods. In this I discuss the three main mints: how I identified them, their relative size, and the scale and distribution of their Issues. The types that make up each Issue are briefly discussed.

Chapters 4 to 6 each deal with specific features of the entire coinage, pulling the relevant evidence together in order to extract the maximum information. Chapter 4 deals with production and addresses the scale of the coinage; it covers metallurgy, weight accuracy, and the relationship between the various denominations. It also considers plated forgeries which provide evidence about early coinage use. Chapter 5 examines imagery and the inscriptions on the coinage. Key aspects of the imagery are each addressed, including hidden faces and a consideration of how imagery changed with time. I discuss the introduction of inscriptions on Icenian coinage and refer to previous etymological studies. Chapter 6 covers deposition; it summarises the data that I was able to extract from hoards and examines the nature of hoarding. This chapter provides many clues as to the nature and purpose of the coinage and shows that, contrary to expectations, hoarding was intermittent in

East Anglia. The finds from two unusual sites are analysed, as are differences between the mix of coinage from hoards and site scatters. I consider overall coinage distribution as well as distribution by period, mint and denomination.

Chapter 7 summarises current thinking about Late Iron Age society, ancient economies and the use of early coinage. This is then considered in conjunction with the key findings from earlier chapters, and conclusions are drawn about the nature of Icenian coinage. It also addresses some broader questions about the Late Iron Age and the extent to which this study has provided additional insights and evidence.

A number of appendices are included that supplement the evidence detailed in this book. Appendix I is particularly important as it is the photographic record of the die-study. The plates in Appendix I follow the order of Chapters 2 and 3 and illustrate each die used in the coinage. The illustrations of coins throughout this book are not to scale, however 1.4x scale images of each die are presented in Appendix I. They show the number of known examples of each die combination and of brockages. Many examples of plated forgeries are also illustrated. Appendix IV provides a statistical summary of the die-study and the Esty forecasts of original die numbers (Esty formulae estimate original die numbers from surviving populations of dies and their applicability to Icenian coinage is discussed in Chapter 4). A glossary of terms used in the book is included as Appendix VII. This is intended to help readers who are unfamiliar with some of the numismatic terms used; the glossary includes a discussion about findspots and the sources of this information.

The chapters are referred to by Arabic numerals and are sub-divided into sections and sub-sections. The appendices have a similar structure but use Roman numerals for the appendix number. Cross-references within the book usually omit the words ‘chapter’ or ‘appendix’; these are readily identifiable by the type of numeral. The numbering of figures and tables is similar, using the appropriate form of numeral for chapter or appendix.

The remaining sections of this chapter give an overview of the background to the study. I begin with the Icenii and what has been learned from archaeology and other sources about East Anglia in the Late Iron Age. I explain, for those who have not studied coinage, why a die-study is such a valuable tool for extracting evidence from ancient coins. I briefly discuss previous work on Icenian coinage and finally provide an overview of the structure and scale of Icenian coinage as an introduction to the more comprehensive information in Chapters 2 and 3.

#### **1.4 The Icenii and East Anglia in the Late Iron Age**

The Icenii is the name commonly used for the inhabitants of Late Iron Age northern East Anglia. Most ancient references to the tribe relate to the period following the

Roman conquest and particularly to the Boudiccan revolt of AD 60–1. The earliest reference to the tribe is probably as the Cenimagni, one of the five groups that surrendered to Caesar (*The Gallic War* 5.21). The next reference is not until after the conquest when Tacitus refers to the tribe of the Icenii revolting against their disarmament in AD 47, noting that the tribe had never previously fought against Rome (*Annals* 12.31).

Late Iron Age East Anglia has suffered from a lack of excavation and its major sites are poorly understood. Metal detecting and fieldwalking have revealed an extensive area of activity in and around Saham Toney on the northern edge of Breckland (Brown 1986; Davies 2008, 124–25), which has never been thoroughly investigated. Only limited excavation has been conducted at the famous site of Snettisham (Stead 1991; Hutcheson 2011; British Museum in preparation). Rescue archaeology resulted in the comprehensive excavation of a ritual site at Fison Way in Thetford (Gregory 1991), although this is within another major area of largely un-investigated Late Iron Age activity (Davies 2008, 120–25). The lack of attention afforded to East Anglia is starting to change as a result of the work by John Davies and others. Davies (2008, 109–18) emphasises the distinctive nature of Icenian culture, with unenclosed settlements and hillfort-type enclosures in west Norfolk and distinctive decoration on coinage and other artefacts.

There is little evidence of Icenian engagement with Rome: early amphorae are not present as they are to the south, and there is little obvious Roman influence upon the coinage. The region does seem to have been rich in horse equipment. Natasha Hutcheson (2004, 95–96), who has studied the metalwork of the region, speculates that wealth may have been displayed through ‘native’ artefacts and display, rather than Roman commodities.

Icenian coinage was struck in four denominations: Staters and Quarter Staters in gold alloy and Units and Half Units in silver or silver alloy (Fig. 1.1). It was produced for about a century up to the Boudiccan Revolt of AD 60/61. The coinage includes a number of inscribed types that bear a variety of names including Anted and Ecen, but there are no clear references to kingship.

Late Iron Age coinage distribution is commonly used to demonstrate the discrete identity of different regions, such as that inhabited by the Icenii (Fig. 1.2). The map shows all Icenian coinage finds (red dots), revealing a distribution across Norfolk, northern Suffolk and parts of fenland Cambridgeshire. It also shows the locations of the principal sites, areas and rivers discussed in this book. As we shall see, Icenian coinage was not a single coinage produced at a regional level on behalf of a tribe, but its overall distribution was reasonably consistent throughout its period of issue. It is not known if the Late Iron Age people of the region recognised themselves as part of a single tribe or grouping and if they did, whether they called



Figure 1.1 The four Icenian denominations (clockwise from the modern penny, included for scale): *Quarter Stater*, *Unit*, *Half Unit* and *Stater*

themselves Icenii. Nevertheless, I will use the term Icenii, or Icenian, as convenient shorthand for both the inhabitants and their coinage. Similarly, I call the region East Anglia when discussing the more restricted geographic area in which the coinage circulated. The neighbouring region to the south I refer to as ‘North Thames’, an area often associated with Aylesford-Swarling burial rites and the tribal groupings of the Trinovantes and Catuvellauni.

Each time the Icenii appeared in Roman narratives they were referred to alongside a reference to allies or neighbours, who were either unnamed or, in the case of Caesar, are now unknown: the Segontiaci, Ancalites, Bibroci and Cassi (*The Gallic War* 5.21). This, and the minting of later Icenian coinages in parallel ‘streams’, caused researchers to suspect that the Icenii were probably the eponymous leaders of a group of associated or federated tribes and that each stream

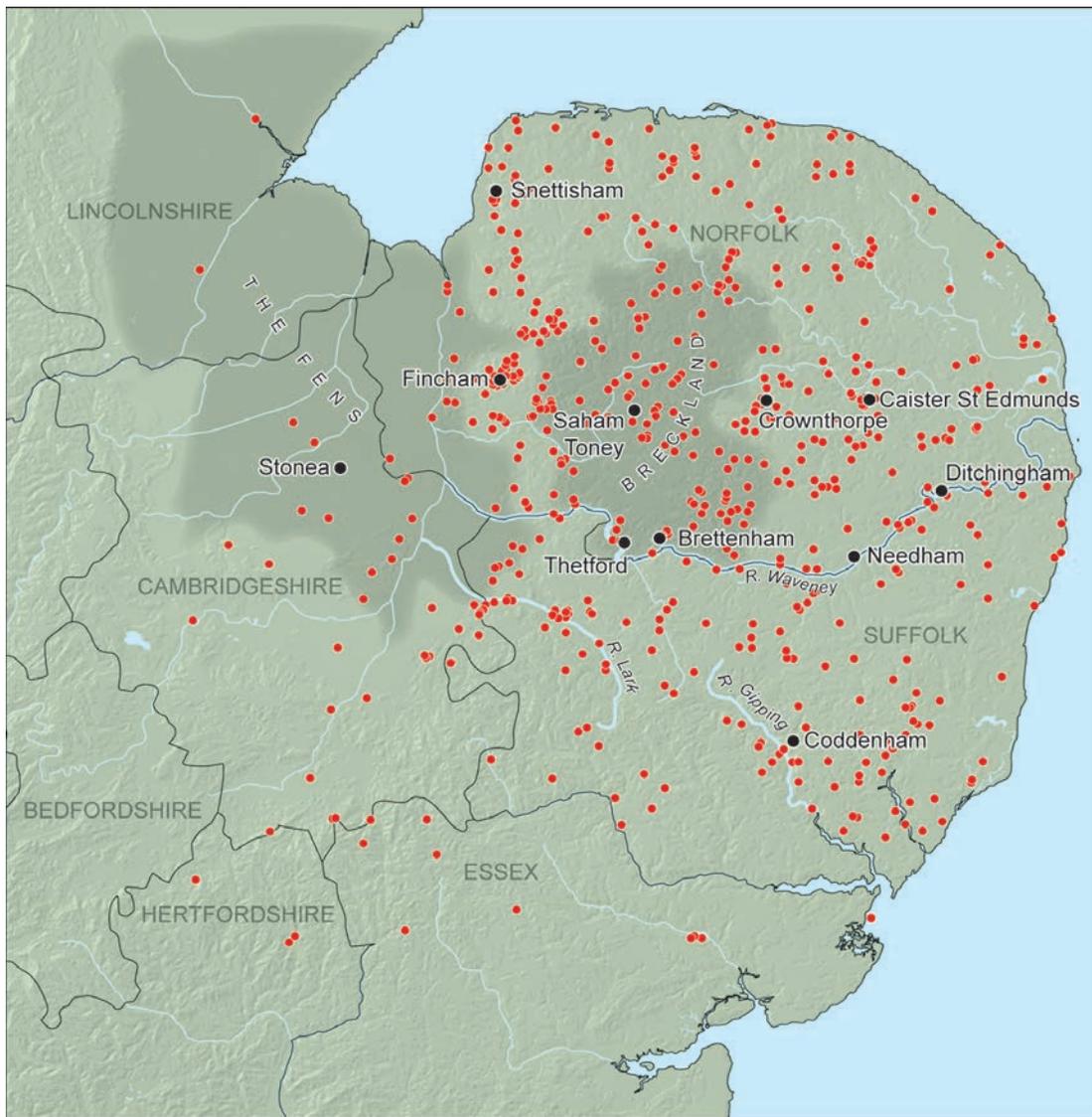


Figure 1.2 Icenian coin finds and key locations

of coinage probably represented a component element or 'pagi' (Allen 1970, 14; Chadburn 2006, 480–82). As will become clear, the evidence from this study of the coinage does not support these interpretations, nor is it necessarily evidence for the development of a hierarchical society. What I will argue can be inferred from the evidence is that the East Anglian Late Iron Age economy was much more advanced than has hitherto been thought and that its coinage was part of a sophisticated monetary system.

### 1.5 The die-study

The die-study, which is the basis of the analysis and ideas contained in this book, took many years to complete. I will show below how a die-study of coinage can provide insights that are not provided by other forms of material culture. It can prove that coins are related to each other in terms of minting and sometimes provide a definitive assessment of relative chronology; this reduces the need to rely upon subjective assessments of stylistic similarity and change.

Icenian coins were produced by striking either an unmarked metal pellet or a blank flan between a concave anvil die and a physically separate convex hammer die. There was no cast coinage. When a coin is struck, its obverse receives an impression of the design on the anvil die and the reverse that of the hammer. I usually refer to hammer dies as reverse dies, differentiated by a number, and anvil dies as obverse dies, identified by a letter.



Figure 1.3 Two Boar Horse B Staters struck from die 6



Figure 1.4 Boar Horse B Staters struck by die 6:D, D:7 and 7:F

No two coins are ever identical even if they are struck consecutively from the same dies. Variations arise for a variety of reasons:

- Most dies were between 150% and 200% of the surface area of a coin, therefore the area of the die impressed on the coin differed with each strike.
- The shape of each coin is subject to much variation resulting from the differing forces exerted by each manual strike and by pellets or flans lacking uniformity.
- Usually there is no standard alignment of obverse and reverse dies, thus the top of the obverse of a coin may equate to any point on the circumference of the reverse. Sometimes there seems to be a 'preferred' alignment, possibly due to the presence of a grip on the hammer die.

Figure 1.3 shows two coins struck from different areas of the same die.

The physical separation of the obverse and reverse dies is the key to the value of a die-study. All dies deteriorated with use, and reverse dies had approximately half the life expectancy of an obverse die. Therefore new dies were introduced intermittently into a mint and it was normal for each obverse die to be used with several different reverse dies and, to a lesser extent, vice-versa. Figure 1.4 shows how dies change appearance with use. On the left is a coin struck from an un-worn obverse die D coupled with a strike from reverse die 6; die 6 shows die deterioration in front of the horse's breast. The coin in the centre is also struck from die D but at a later stage in its life; many flaws have developed including one at the bottom of the right crescent. Die 6 was no longer being used and the reverse is struck from a fresh looking die 7. The final coin, on the right, is also struck from die 7 but shows dramatic die deterioration; at this stage die 7 was being paired with an un-worn obverse die F.

Dies that are linked in this way are called a die-chain. The example illustrates how the identification of dies, and of their degree of wear, makes it possible to order a die-chain into a definitive chronological sequence. Much of the new information in this book has been gained from the examination of such sequences.

No Icenian coin dies have ever been found; the images in this book are the 'negative' impressions created on coins. Icenian coin dies were made with great care, but each

one is different and distinguishable. Using the die-study I have been able to assess the chronology of stylistic change introduced into a sequence of dies. I used Adobe Photoshop to overlay images in order to verify die identification. This also enabled me to produce composite photographic images of dies. Two examples are shown in Figure 1.5; the Boar Horse B Stater incorporates parts of the coin shown on the left of Figure 1.3.

Most die studies illustrate die-chains graphically, as shown in Figure 1.6. The chart shows obverse dies in the left column (letters) and reverse dies in the right (numbers). It shows reverse die 1 to be linked to five obverse dies (A–E), the final two of which (D and E) are linked to three other reverse dies (2–4) and so on. The sequence illustrated is not a continuous die-chain. I have highlighted one break by a red dashed line, since there are no die-links to prove that either obverse die H followed G, or that reverse die 6 followed 5. The numismatist will have examined the dies for stylistic development, and the chart reflects their subjective judgement as to the correct ordering. It is often assumed that breaks in die-chains are caused by:

- A shortage of samples.
- The simultaneous replacement of all dies in a mint. This may involve only two dies as sometimes only single obverse and reverse dies are used at any one time.
- Intermittent minting, with new dies being used after a gap in production.

However, a gap in a die-chain does not automatically mean there is a missing link in a continuous sequence. I have found examples where the two parts of what might have been a single, but ‘broken’, die-chain had differing distributions, suggesting that they were probably minted separately and had never formed a continuous chain. For types with a significant sample size, usually above an average of four coins per reverse die, I have called each die-linked chain of dies a ‘die-group’ to give it an identity and to facilitate further study. On a few occasions, the reasons for which are noted, un-linked dies have been added into a die-group.



Figure 1.5 Composite images of Boar Horse B Stater die 6 (left) and Norfolk Wolf B Stater die 18 (right)

The charts in Appendix I illustrate every known Icenian die. An extract is illustrated in Figure 1.7; this shows the start of a long die-chain for Anted Units. It reveals that obverse die A is linked to six reverse dies of which three (dies 3–5) are also linked to obverse die B and so on. The small red numbers record the number of known examples of each combination.

The photographic die-charts reveal stylistic change within a type and are a key tool for die identification. Using them in conjunction with a detailed analysis of hoards clarified much of the chronology and organisation of the coinage. This enabled me to divide the coinage into periods and identify the parallel output of different mints. Types and denominational groupings of coinage were subsequently identified and named.

### 1.6 Previous work on Icenian coinage

Sir John Evans (1864, 357–403) devoted a chapter of *The Coins of the Ancient Britons* to the ‘coins of the eastern district’, which ‘appears’ to have been occupied by the Icenii, comprising Norfolk, Suffolk and probably portions of adjacent counties. Evans (1864, plates 14–16) illustrated

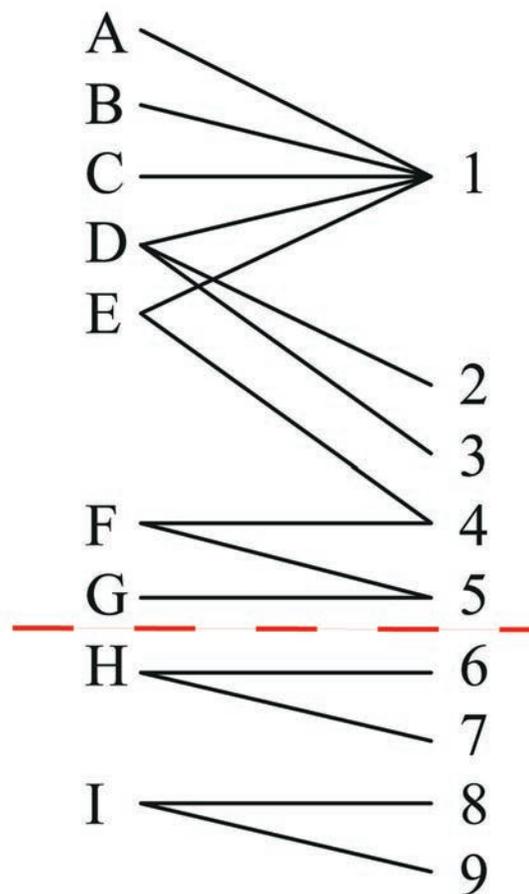


Figure 1.6 Extract from a graphic die-chart

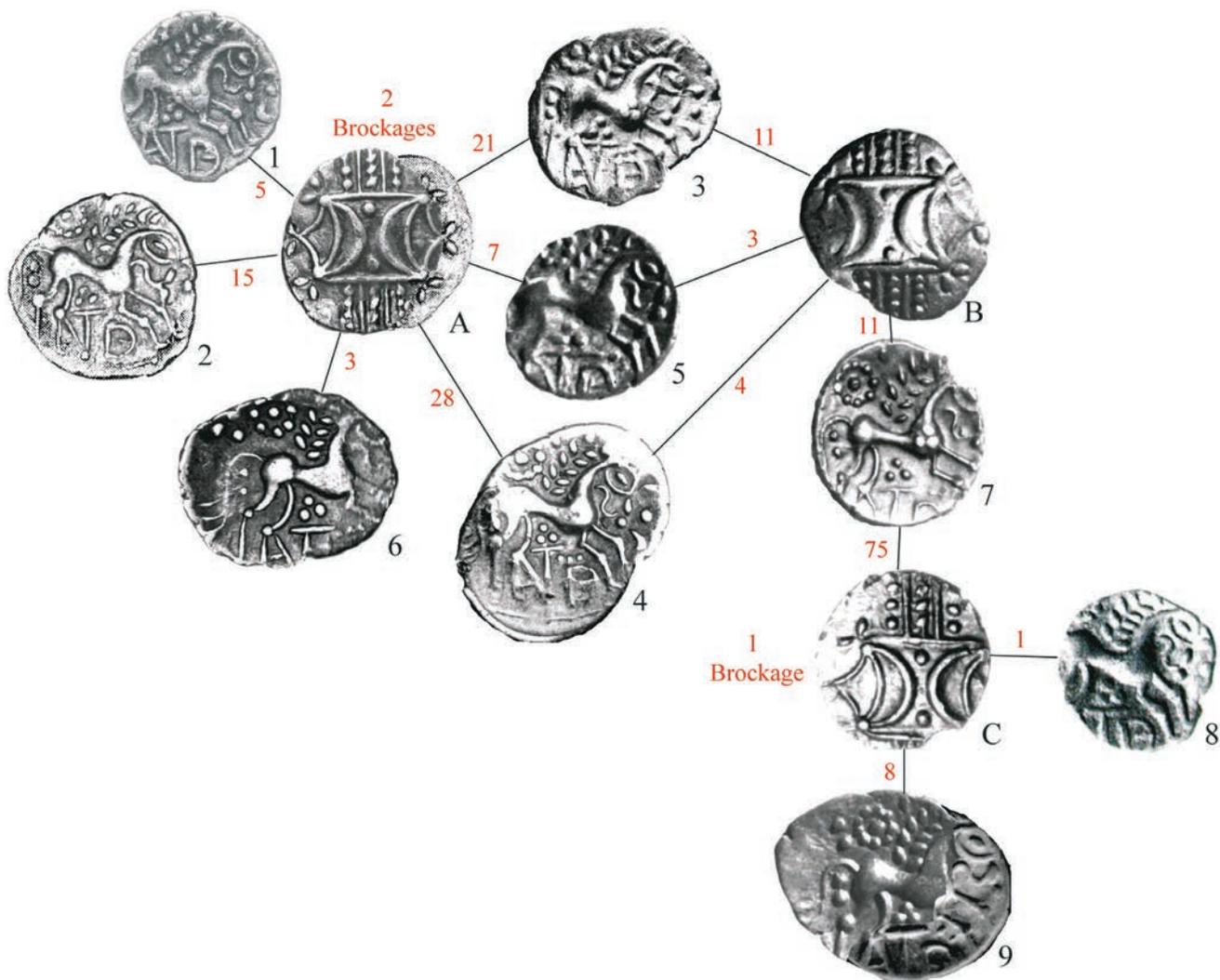


Figure 1.7 Anted Units: extract from die-chart

27 Icenian coins. Earlier writers had also identified coins as relating to the Iceni, and Evans suggests that the first such attribution was an Ece A Unit illustrated on a plate of 'British coins in Gold, Electrum, Silver, and Copper, in the possession of John White, 1773', which was accompanied by two pages of description. Subsequent writers on British Iron Age coinage such as Commander Mack (1953) followed the lead of Evans.

The first thorough study of Icenian coinage was published by Derek Allen in *Britannia* in 1970. This established a theoretical structure which informed much subsequent writing about the coinage. Allen observed that all known examples of the silver coins had a boar, horse or pattern on the obverse, and this was always coupled with a horse on the reverse. He assumed that the Iceni were a group of associated or federated tribes and that the different obverse designs represented three separate traditions each relating to a pagus of the Iceni. He named the three

traditions 'Boar-Horse', 'Face-Horse' and 'Pattern-Horse' and concluded that these three main streams of coinage were produced in parallel but mingled to form a single mixed stream. He identified separate types of coin within each stream and usually named them by either appending a single letter suffix, and sometimes the prefix 'early', to the name of the stream. Examples of coins from each of his three traditions are shown in Figure 1.8. I have also found parallel sequences of minting and three main mints in later periods of the coinage, but they cannot be separated by the obverse design as thought by Allen. Nonetheless I have retained many of Allen's names with the exception of those relating to the many earlier 'Face-Horse' types.

Tony Gregory began working in Norfolk in 1974 as Assistant Keeper of Archaeology at Norwich Castle Museum and played a leading role in developing relations with the metal detecting fraternity. This massively increased the number of Iron Age coins recorded in the county,



Figure 1.8 Allen's 'traditions' (left to right): Boar-Horse, Face-Horse and Pattern-Horse

which has been invaluable for this study. Gregory wrote an important paper on 'Early Face-Horse' Units, the numbers of which had grown to 77 from only six such coins known to Allen. This was published after his untimely death at the age of 42. It named many new types including Bury A, B and C, so called because the first examples were found near Bury St Edmunds (Gregory 1992).

In 1994 John Creighton stimulated much debate with a paper that concluded that the late hoards of the Iceni, previously considered to date from the Boudiccan revolt, had been deposited over a range of dates between the Roman conquest in AD 43 and the Boudiccan revolt of AD 60/1. I have found that Creighton's dataset was distorted by the inclusion of poorly recorded hoards from the 19th and early 20th centuries. He assumed that the mix of types in the modest numbers of coins that can now be traced from each of these hoards is representative of the mix within each entire hoard – this is not logical. The coins that can be identified today as coming from old hoards will have a bias towards the more unusual coins in the hoard, often the oldest. These are the coins that will have been selected from the mass of material for retention by early collectors. This process was demonstrated by Ian Leins and myself using data from the Freckenham hoard (Talbot and Leins 2010, 11 and 14). This distortion led Creighton to identify the poorly recorded 19th and early 20th century hoards as predating the others in terms of date of deposition. They did predate the others but only in terms of discovery (see Table 1.1).

In 2006 Amanda Chadburn completed a study of Icenian coin hoards. Her work was a key resource and starting point for my own work on deposition. Chadburn suggested that hoarding was a cultural tradition of the Iceni, and having studied the dies used in the Field Baulk hoard and one of the batches of the Fring hoard, she noted their homogeneity (1990 and 1992). She concluded that the late hoards were economic in nature and left unrecovered for multiple reasons such as forgetfulness, death and unrest. Like Allen, Chadburn concluded that Icenian coinage was produced in 'three streams' during the latter stages of production. In the absence of any distribution analysis, she tentatively attributed each of these streams to a pagus. The distribution analysis included in this book has resulted in somewhat different groupings of coinage and re-examines Icenian coin hoarding patterns and the reasons for the parallel production of different types of coinage.

Table 1.1 Icenian hoards as ordered by Creighton (1994)

Hoard in Creighton order (earliest first)	Date of discovery
Weston	1852
Santon Downham	1869
Wimblington	Pre 1906
Chatteris	c. 1986 (Only 7 coins)
March	1839
Honingham	1951
Lakenheath	1959
Field Baulk	1982
Fring	1990
Eriswell	1972
Scole	1982–3
Joist Fen	c. 1950s

The key catalogue of Icenian coin hoards now forms part of Philip de Jersey's (2014) study of British Iron Age hoards. He has combined all the previous work and much original research into a single corpus giving each hoard a definitive reference; I refer to these with a 'PdeJ' prefix. Details of hoards which postdate de Jersey are given in Appendix V with some additional information on a few key earlier hoards. I have not duplicated the detailed lists of hoard content given by de Jersey.

The most complete catalogue of British Iron Age coins is *Ancient British Coins* by Cottam, de Jersey, Rudd and Sills (2010) which gives each type of coin a number. When I discuss non-Icenian British Late Iron Age types, I frequently refer to this catalogue for which I use the abbreviation 'ABC' followed by the 'type' number in the catalogue. Icenian coins can be cross-referred to ABC by using the concordance (Appendix VI). I use the abbreviation 'DT' followed by a type number when I refer to the catalogues of Gaulish coinage by Delestree and Tache (2002–8).

### 1.7 An overview of the coinage

In order to gain an understanding of the coinage I needed to find a way of simplifying what had previously been long lists of seemingly unconnected types and denominations. It was clear that the earliest coinages had no stylistic links between

Table 1.2 Indicative chronology of Icenian coinage

Possible dating	Period	Mint group A	Mint B	Mint C
55 BC–15 BC	1	Early Local Coinage		
15 BC–AD 5	2	Snettisham		Saham Toney
		Plouviez/Irstead		
		Early Boar Horse		
AD 5–AD 25	3	Boar Horse B	Early Pattern Horse A	Early Pattern Horse B
		Boar Horse C		
AD 25–AD 60	4	Anted/Ecen	Late Face Horse	Aesv, Saenv, Ece B
		Ecen		

gold and silver types and that at this time there were many separate types of silver which often appeared to have been produced and used very locally in small volumes.

A breakthrough occurred with the realisation that there was a point at which silver and gold had started to be produced in linked denominational groupings. Although a few local types continued to be minted, I found that most subsequent types of coin could be allocated to one of only 13 different stylistically-linked denominational groupings, which I called ‘Issues’. These Issues, based on their different stylistic qualities, could be readily attributed to one of three mints. The period of 40 years or so before full denominational coinage I named ‘the early local period’ and I divided the denominational coinages into three periods. This resulted in a total of four periods of Icenian coinage production:

1. Early local: period of *c.* 40 years before full denominational coinage
2. First denominational: imagery became less flamboyant and increasingly less variable within a type
3. Mid-denominational: coinage produced by three mints; back-to-back crescent motifs become widespread, occurring on at least one denomination in most Issues
4. Late denominational: inscriptions were introduced; there was a marked reduction in the use of gold.

I have named each of the denominational Issues after its best-known component type, thus the Boar-Horse B Unit loses its hyphen and gives its name to an Issue that contains the Boar Horse B Stater and Boar Horse B Half Unit. The Boar Horse B Stater was formerly known as an Early Freckenham type, but there was no common name for the Half Unit. The only Issue for which I invented a name was the Plouviez Issue, which had no common name. This was named after the archaeologist responsible for excavation of the site of the Dallinghoo hoard. Table 1.2 is a schematic representation of the periods, mints, main types and relative chronology illustrating my organisational hypothesis. This



Figure 1.9 Norfolk Wolf A Stater from dies M:14



Figure 1.10 Bury A from dies B:3a

provides the structure for Chapters 2 and 3 which describe the coinage in more detail.

The main gold coinages of the early local period were Norfolk Wolf A and subsequently Norfolk Wolf B Staters (Fig. 1.9). Allen (1960) called these Staters British JA and JB respectively. Within a few years of the start of gold coinage production in the region, the first silver Units Bury A and Bury C were also being produced (Fig. 1.10). Sometime after the start of the Bury coinages three types were produced on large dishd flans: Large Flan A, Large Flan B and Large Flan C. A few Quarter Staters and Half Units were produced alongside these early coinages. The numismatic imagery of this period often borrowed heavily from Gallo-Belgic coinage but with much variation and innovation.

The Issues of the denominational periods are formed of different denominations which are stylistically linked



Figure 1.11 The Snettisham Issue

Table 1.3 Overview of the die-study

Period	Coin numbers		Number of official dies				
	Official	Plated	Stater	Quarter	Unit	Half	Total
Early local	1122	115	144	12	204	24	384
First denominational	1267	10	80	55	113	30	278
Mid-denominational	1773	91	55	13	337	59	464
Final coinages	5022	154	7	0	363	41	411
Later local	454	1	0	0	40	10	50
<i>Total</i>	<i>9638</i>	<i>371</i>	<i>286</i>	<i>80</i>	<i>1057</i>	<i>164</i>	<i>1587</i>

and appear to have been produced contemporaneously as a 'complete' coinage. Stylistic similarities in the design of the reverses, especially the head of the horse, usually link the types within an Issue. Such similarities can be seen in Figure 1.11, which shows the first denominational grouping, the Snettisham Issue, with its denomination specific obverse imagery.

Table 1.3 provides an overview of the die-study. It shows the numbers of known coins and identified dies for each period. The table shows the increasing importance of Units and the dramatic decline in the use of gold during the century or so of Icenian coinage production. It also highlights the

disproportionate number of coins recorded from the final period of production as a result of the hoards relating to the Boudiccan revolt.

This chapter has explained how this book came about and why the die-study has provided so many insights into the Late Iron Age in East Anglia. It has also included an outline of previous work on Icenian coinage and an overview of my hypothesis for the chronology and organisation of the coinage. The next two chapters provide a deeper analysis of the structure of the coinage and are followed by chapters which examine broader issues of manufacture, imagery and deposition.

## Chapter 2

### The early local Icenian coinage and its predecessors

#### 2.1 Introduction

This chapter begins with a brief discussion about several pre-Icenian coinages which probably brought about familiarity with the concept of coinage before local production started. Most of this chapter describes the coinage produced in East Anglia during the early local period. The start of the period is marked by the first minting of coinage in East Anglia in the middle of the 1st century BC and ends with the introduction of full denominational coinage, probably some forty years or so later.

The defining features of the coinages of this period are the lack of stylistic links between the main gold and silver coinages and the local nature of many of the types. Despite these features, there was consistency in the metal, the denominations and major elements of imagery. The early local coinage is exceptionally beautiful and clearly reflects a burst of creativity as Late Iron Age art began to be applied to coinage. Later coinages do not have the hidden imagery and variability of these early types. This aspect of the coinage is more fully explored in Chapter 5.

I have not included a full descriptive catalogue of the early local period coins in this book, but for each type of coin I include details of the numbers of known examples, die-groups and dies, distribution, unusual features, links with other Icenian and non-Icenian coinages, and an illustration of a typical example.

#### 2.2 Early non-Icenian coinages in East Anglia

##### 2.2.1 Gallo-Belgic gold coinage

The earliest coinages found regularly in Britain are the Gallo-Belgic Staters Gallo-Belgic A, C and E and their related Quarter Staters. Most studies of these coinages conclude that Gallo-Belgic E, the last of these, was issued during the Gallic Wars (e.g. Scheers 1972, 1-2; Sills 2003, 330-33; Fig. 2.1). Gallo-Belgic A and Gallo-Belgic C Staters are frequently found in Kent and around the Thames estuary but are uncommon in East Anglia. A typical British distribution for these early types is shown in Figure 2.2.

The Gallo-Belgic E Stater has been found throughout East Anglia including in two hoards with Icenian Norfolk

Wolf A Staters (6.4.2). Whilst the less common Gallo-Belgic C was the probably the immediate prototype for the obverse of the Icenian Norfolk Wolf A Stater (5.3.1), the Gallo-Belgic E Stater must have been a major factor in the region's familiarity with gold coinage.



Figure 2.1 Gallo-Belgic E found at Brinton in Norfolk (©Norfolk Historic Environment Service)

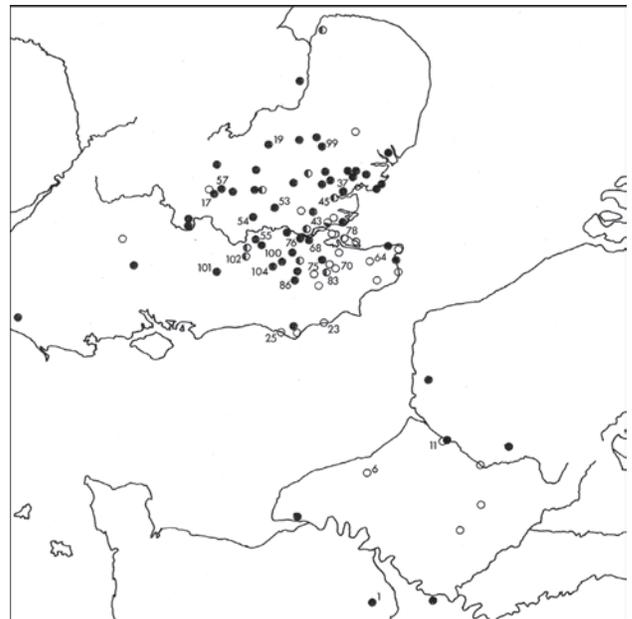


Figure 2.2 The distribution of Gallo-Belgic A (©John Sills 2003, map 19)

### 2.2.2 British Potins

Potins are cast bronze coins with a high tin content and are thought to be one of the earliest British coinages (Fig. 2.3). British production was centred on Kent and Essex.

At Ken Hill, Snettisham, 145 Flat Linear Potins were found in Hoard C. This hoard was associated with Hoard B, which closed with Gallo-Belgic C Staters and an Ingoldisthorpe Quarter Stater (6.2.1). Potins have also been found at several other sites in East Anglia. Whilst they may have helped familiarise the region with coinage, any close relationship with Icenian coinage is unlikely – the two coinages have no stylistic links and have not been found hoarded together.

### 2.2.3 Roman Republican Denarii

There is evidence for the pre-conquest presence of Republican Denarii in East Anglia (Fig. 2.4), but unfortunately much of this evidence is circumstantial. Worn Republican Denarii are found on East Anglian Iron Age sites such as Saham Toney (Brown 1986, 8–9) and in revolt period hoards with Icenian coinage (6.5.2); but they are not found in earlier hoards, and the Denarii that have been found in revolt period hoards and elsewhere could be post-conquest arrivals. Republican Denarii were used as prototypes for Early Icenian Units, such as Bury C and Bury B (Fig. 5.10), but this does not prove that the prototypes were widely available. Recycled Republican coinage was likely a major source of silver for the early Icenian silver coinage (4.4.2), but this could have been metal that had already been recycled in Gaul. Despite the



Figure 2.3 'Thurrock' Potin found at Snettisham



Figure 2.4 Republican Denarius found at Shernborne, Norfolk

lack of firm evidence, I strongly suspect that familiarity with Republican Denarii through trade was a major factor in the decision to start local production of coinage. Their absence from early hoards is discussed in Chapter 7.

### 2.2.4 The Ingoldisthorpe coinage

Ingoldisthorpe Staters were first found in 1989 at Ingoldisthorpe in Norfolk, and three of the four subsequent finds have been from East Anglia (Fig. 2.5). These are die-linked to North Thames Westerham Staters which Allen (1960, 105) called British A and considered the first British gold coinage. I will use Allen's term British A to describe the overall Westerham and Ingoldisthorpe coinage. The Ingoldisthorpe reverses are distinctive, but obverse dies are sometimes shared with North Thames Westerham Staters. Figure 2.6 shows Westerham and Ingoldisthorpe reverses, with the obverse die used with both in the middle. Until the discovery of the large Great Waltham hoard (PdeJ 58), Ingoldisthorpe Staters were thought to predate the more abstracted Westerham Staters (Sills 1997; 2000). The die-links connecting the two types shows that Ingoldisthorpe Staters were minted in parallel with Westerham Staters, with the earliest reverses in the main die-group being Westerhams (I.1). Although Westerham and Ingoldisthorpe Staters were interspersed in the same production sequence, Westerham Staters are mainly found in the North Thames area. By contrast the only Ingoldisthorpe Stater found outside of East Anglia was in the Great Waltham hoard, the largest component of which was Westerham Staters.

Table 2.1 lists the hoards that contain British A Staters, showing separately Ingoldisthorpe (A1 Ing), North Thames Westerham (A1 West), South Thames Westerham (A2 West) and any Gallo-Belgic Staters present. Early British A1 and Gallo-Belgic E Staters have a similar metal content, but the British Staters are heavier, with a target weight of 6.35 to 6.5g. This weight is similar to later classes of the earlier, and finer, Gallo-Belgic C. Hoards containing British A1 Staters usually contain Gallo-Belgic E Staters as well, and none have been found in hoards that closed with an earlier Gallo-Belgic coinage.

John Sills (1998) first identified the Ingoldisthorpe Quarter Stater and assumed that it related to both Ingoldisthorpe and Westerham Staters. Its prototype is the less complex design of Gallo-Belgic D, the Quarter Stater, which seems to have been the lower denomination of both Gallo-Belgic C and E Staters. Figure 2.7 shows the clear relationship between the reverses of the two Quarter Staters. The distribution of the Ingoldisthorpe Quarter Stater is predominantly East Anglian (Fig. 2.5), although three examples are recorded in the Celtic Coin Index with vague North Thames provenances. Both distribution and imagery make it likely that the Ingoldisthorpe Quarter Stater related to the Ingoldisthorpe Stater only. The Clacton Quarter Stater (ABC 2356) was probably the lower denomination for

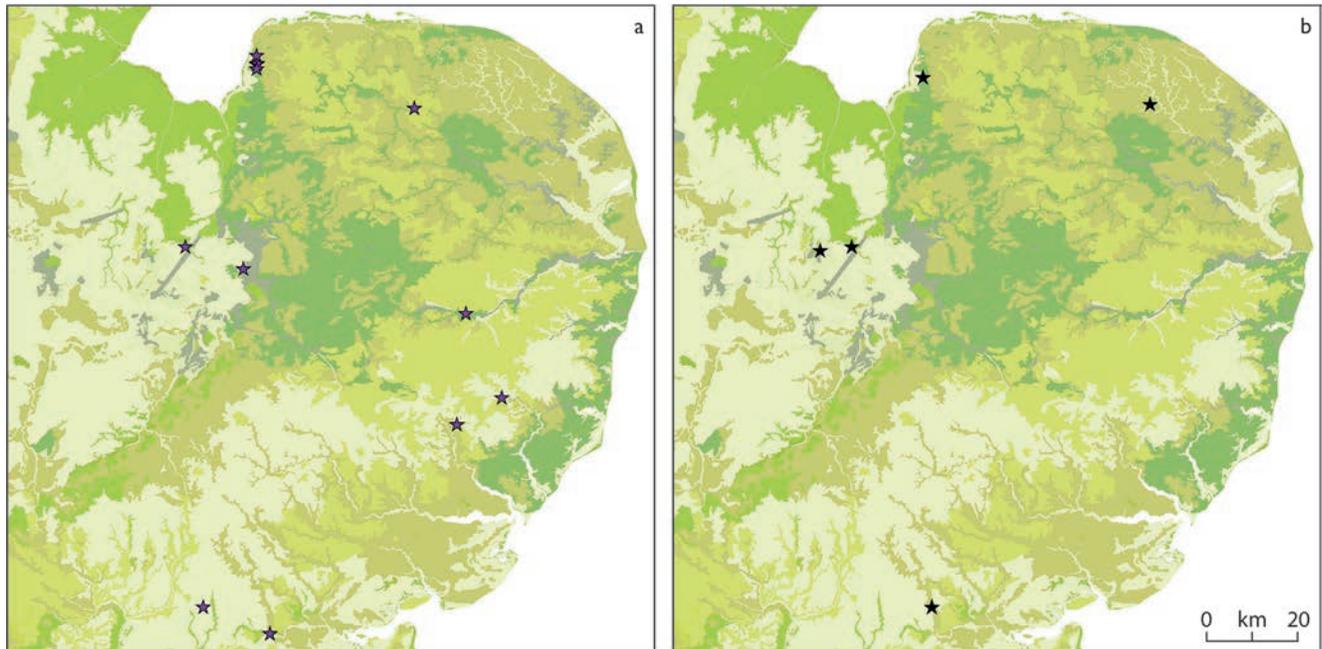


Figure 2.5 Distribution of Ingoldisthorpe types: a) Quarter Stater; b) Stater



Figure 2.6 British A1 obverse (centre) with reverses of Westerham (left) and Ingoldisthorpe (right)

Table 2.1 Hoards containing British A1 with associated finds (from de Jersey 2014)

Hoard	Area	A1 Ing	A1 West	A2 West	% Ing of A1	GB Staters in hoard	Later British present
Ingoldisthorpe	EA	2	0	0	100	None	No
Welney	EA	2	3	1	40	2A 2C 3E	Possibly
Clacton	NT	0	5	1	0	2 A 2C 34E	Yes
Great Waltham	NT	15	51	2	22	28A 1E	No

the North Thames Westerham Stater. Most Ingoldisthorpe Quarter Staters seem to have had a target weight of 1.25–1.29g with a minority having a target of over 1.45g. The Ingoldisthorpe type is thus similar to later Icenian coinages, with Quarter Staters really being fifths of a Stater (4.3.3).

Sills (2000) speculated that British A1 might have been issued by Cassivellaunus to finance British resistance to

Caesar's second invasion in 54 BC. He argued that the low weight of the Ingoldisthorpe Quarters was evidence that they, and the related Staters, do not predate the Gallic Wars. I suspect that they are dated slightly earlier than proposed by Sills, as an Ingoldisthorpe Quarter Stater was found in Snettisham hoard B, which included four GB C Staters but none of the later Gallo-Belgic E Staters (6.2.1; Clarke



Figure 2.7 Reverses of Gallo-Belgic D (left) and Ingoldisthorpe Quarter Stater (three right)



Figure 2.8 From left: Norfolk Wolf A Stater, Norfolk Wolf A Quarter Stater and Norfolk Wolf B Stater

1954, pl. 13). If they were minted very early in the Gallic Wars, around 58 to 55 BC, it would explain their presence in Snettisham hoard B, their weight being equivalent to Gallo-Belgic C but their metal content being similar to Gallo-Belgic E, and their not having been found with Norfolk Wolf A Staters.

My die-study shows that Ingoldisthorpe Staters were produced alongside Westerham Staters from a similar alloy and to the same weight standard. The different reverse dies are not due to chronology but appear to relate to the two differing markets or clients. The less abstracted reverse imagery used on the East Anglian coins may reflect East Anglia's indigenous metal working skills. Or perhaps Sills' (2000) argument is more logical: he attributed finer die cutting to an experienced *émigré* die-cutter. However, as the types were minted in parallel, the different style of imagery appears to have been a matter of choice rather than of training.

The largest element of early British A1 Stater production – and all later production – was of the Westerham Stater, destined for the North Thames area. It is possible that British A1 was produced by a mobile moneyer, who moved between North Thames and East Anglia, transporting obverse dies but not necessarily reverse dies. However, given the scale of the coinage, it seems more likely that minting took place in a single location in the North Thames area. The Ingoldisthorpe Quarter Stater is not die-linked to any other type, and it may have been minted exclusively in East Anglia. However, the vague North Thames provenances make this less likely, and it was probably produced alongside the Stater.

The Ingoldisthorpe types were produced at a time when large quantities of Gallo-Belgic E Staters had reached Britain, probably early in the Gallic Wars. Irrespective of

where they were minted, they reflected a desire for a local coinage with distinctive imagery and were a major step towards an exclusively East Anglian coinage. The quality of imagery seems to have been of more importance in East Anglia than in North Thames. This may be indicative of East Anglian coins being seen as prestige objects alongside their monetary role, an idea which will be discussed later.

### 2.3 The coinage of the early local period

The remainder of this chapter discusses the Icenian coinage of the early local period. The main gold coinages of this period are stylistically unrelated to the silver and are reviewed chronologically in section 2.4. During this period the minting of the gold became both increasingly dispersed and debased, before being superseded by denominational coinage in the following period. There were many types of both silver Units and Half Units. Few links between these two denominations have been positively identified, and the two denominations are considered separately in section 2.5. Two rare Quarter Staters are examined in section 2.6; these appear to relate to the early local period but do not form part of the main gold coinage.

### 2.4 Early local gold coinage

The first gold types unequivocally produced in East Anglia were the Norfolk Wolf A Stater and Quarter Stater, which were superseded by the closely related Norfolk Wolf B Stater (Fig. 2.8). All had obverse imagery based on Gallo-Belgic gold and a distinctive wolf-like animal on the reverse, both of which are discussed in section 5.3.

Table 2.2 Early local period gold types

Type	Die groups	No.	Obverse dies	Reverse dies	Plated coins	Esty forecast	
						Obverse dies	Reverse dies
Norfolk Wolf A Stater	4	114	14	24	2	19	32
Norfolk Wolf A Quarter	N/A	4	2	3	-	3	8
Norfolk Wolf B Stater	18	396	26	80	67	27	101

Table 2.2 shows the much greater issue size of the Norfolk Wolf B Stater as compared to the A. Several new Norfolk Wolf A Stater dies have been identified since the database was completed, therefore Esty projections of the likely original die populations are also given in this table.

#### 2.4.1 Norfolk Wolf A Stater and Quarter Stater

The Norfolk Wolf A Stater is found widely dispersed across the region (Fig. 2.9). A few early obverse dies are inconsistent (see 5.3.1), but the imagery on the majority follows a fairly standard formula. The Norfolk Wolf A Staters can be separated into three varieties, based on the form of the ‘fibula’ on the obverse and of small pellets below the wolf. Two varieties each coincide with a die-group and the third with die-groups 3 and 4 combined.

The two main die-groups of Norfolk Wolf A Staters, 1 and 4 (Table 2.3), likely represent a single chronological sequence with two main periods of activity. The minting of die-group 1 was unusually intense with several dies being used simultaneously. Die-group 1 is composed of the earliest Norfolk Wolf A Staters, and their weight and gold content were higher than those of die-group 4 (Tables 4.3 and 4.16). They have a target weight of *c.* 6.15–6.25g; this is similar to class 2 of the Gallo-Belgic E Staters and some 3% to 4% lighter than the Ingoldisthorpe Stater. Coins from die-group 1 have been found hoarded with Gallo-Belgic E Staters (6.4.2), and the only metal analysis from this die-group reveals a composition broadly similar to both the Gallo-Belgic E and Ingoldisthorpe Staters (4.4.1).

There is no significant difference in distribution between die-groups 1 and 4. However, the few finds of die-group 2 Staters are all in the south-west of the region, and this die-group may represent parallel production from a separate site (Fig. 2.9). The number of known coins per die reveals a survival rate for die-group 4 that is much higher than for other die-groups (Table 2.3). This may have been caused by an episode of hoarding towards the end of Norfolk Wolf A Stater production. Although no such hoards have been recorded, the high survival rate

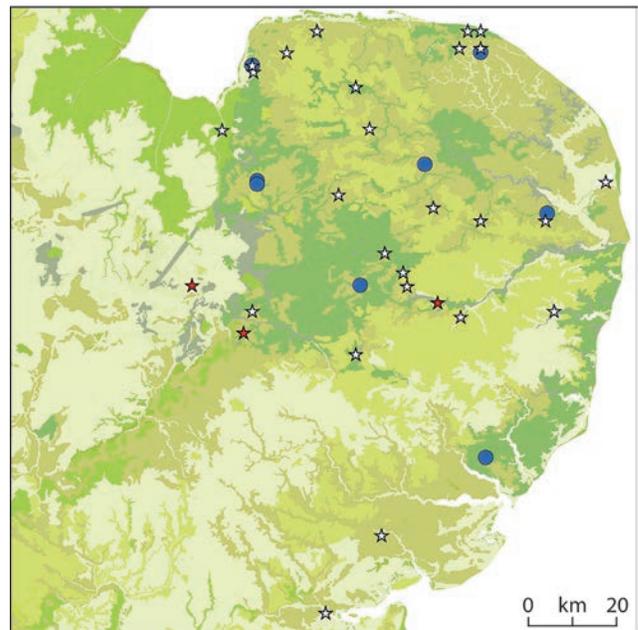


Figure 2.9 Distribution of Norfolk Wolf A Staters: blue) die-group 1; red) die-group 2; white) die-group 4

Table 2.3 Norfolk Wolf A Staters

Die-group	No.	Obverse dies	Reverse dies	Coins per die
1	24	9	8	2.8
2	5	1	3	2.5
3	1	1	1	1
4	84	3	12	11.2
Total	114	14	24	6
Plated	2			

of these coins suggests that there are likely to have been undeclared hoards (see 6.4.2).

The Norfolk Wolf A Quarter Staters have the same style and colour as early Norfolk Wolf A Staters of die-group 1. The only four known examples are struck from two obverse dies and three reverse dies, implying that



Figure 2.10 Typical reverse dies from Norfolk Wolf B Sub-types A–D

several more dies remain to be discovered. Of these, there are only two recorded provenances, from north-west and central Norfolk, and only two recorded weights (1.53g and 1.59g), which are approximately a quarter of the weight of die-group 1 Staters.

The minting of Norfolk Wolf A Staters probably started during or shortly after the Gallic Wars, using recycled Gallo-Belgic E's as the raw material. Initial production was intense; the Quarter Stater was minted in substantial volume alongside early Staters. Stater production then slowed and the Quarter Stater discontinued. Most minting was from a single location, but there may have been a small level of output from a second site.

#### 2.4.2 Norfolk Wolf B Stater

The Norfolk Wolf B Stater is similar to the Norfolk Wolf A Stater; the key difference is that the obverse and reverse imagery are reversed. I have not been able to fully unravel the organisation of this complex coinage, which has 18 die-groups and more recorded dies than any other Icenian Stater. The organisation of minting towards the end of its production is clearer; it coincided with a major episode of hoarding resulting in a high survival rate per die. Many early dies are known from a single example, implying that the die count will grow and some die-groups may combine as more discoveries are made.

The size and complexity of the issue, and the rarity of early dies in hoards dating from late in the issue, indicate that the coinage was minted over an extended period. My analysis of hoards shows that at least three later die-groups were produced in parallel (6.4.2). I have used this evidence, combined with stylistic and other evidence, to divide the coinage into four sub-types – a reverse die from each of which is shown in Figure 2.10. The die-groups allocated to each sub-type are shown in Table 2.4.

Sub-type A is stylistically cohesive, and its eight die-groups cover the entire period of production. It includes die-group 1, the coins of which have the highest gold content of any Norfolk Wolf B Staters to have been tested (Table 4.16). Sub-type A's reverse dies are the closest to

Table 2.4 Sub-types of Norfolk Wolf B Stater

Sub-type	Die-groups	No. coins	Obverse dies	Reverse dies	Coins per die
A	8 (1–8)	97	9	23	6.1
B	1 (9)	13	1	3	6.5
Ci	6 (10–15)	34	7	17	2.8
Cii	1 (16)	157	2	23	12.6
D	2 (17–18)	90	7	14	7.7
Poor		5			
Total	18	396	26	80	7.3
Plated		67			
Total		463			

Norfolk Wolf A Stater reverses. Thus die-group 1 was probably minted immediately after the Norfolk Wolf A Stater, whereas hoard evidence shows that die-group 8, the last in the sub-type, was minted in the final stages of Norfolk Wolf B Stater production (6.4.2). Sub-type B comprises a single late die-group, which stylistically appears to have been issued in parallel with the final die-group of sub-type A. Sub-type C is also stylistically cohesive and includes the very early die-group 10 and the large, and late, die-group 16. Die-group 16 is so large that in most analyses I have shown it separately as sub-type Cii with the remainder of sub-type C as Ci. Sub-type D is composed of two late die-groups.

Non-hoard finds of the sub-types reveal some differences in distribution (Fig. 2.11):

- Sub-type A is mainly found to the east of the centre of the region and is rare in the west.
- Sub-type B has the most southerly focus of the sub-types.
- Sub-type C may be centred on Saham Toney in central Norfolk; Ci spreads north and Cii both north and south into Breckland.
- Sub-type D is mainly found in the northwest of the region, around Snettisham.

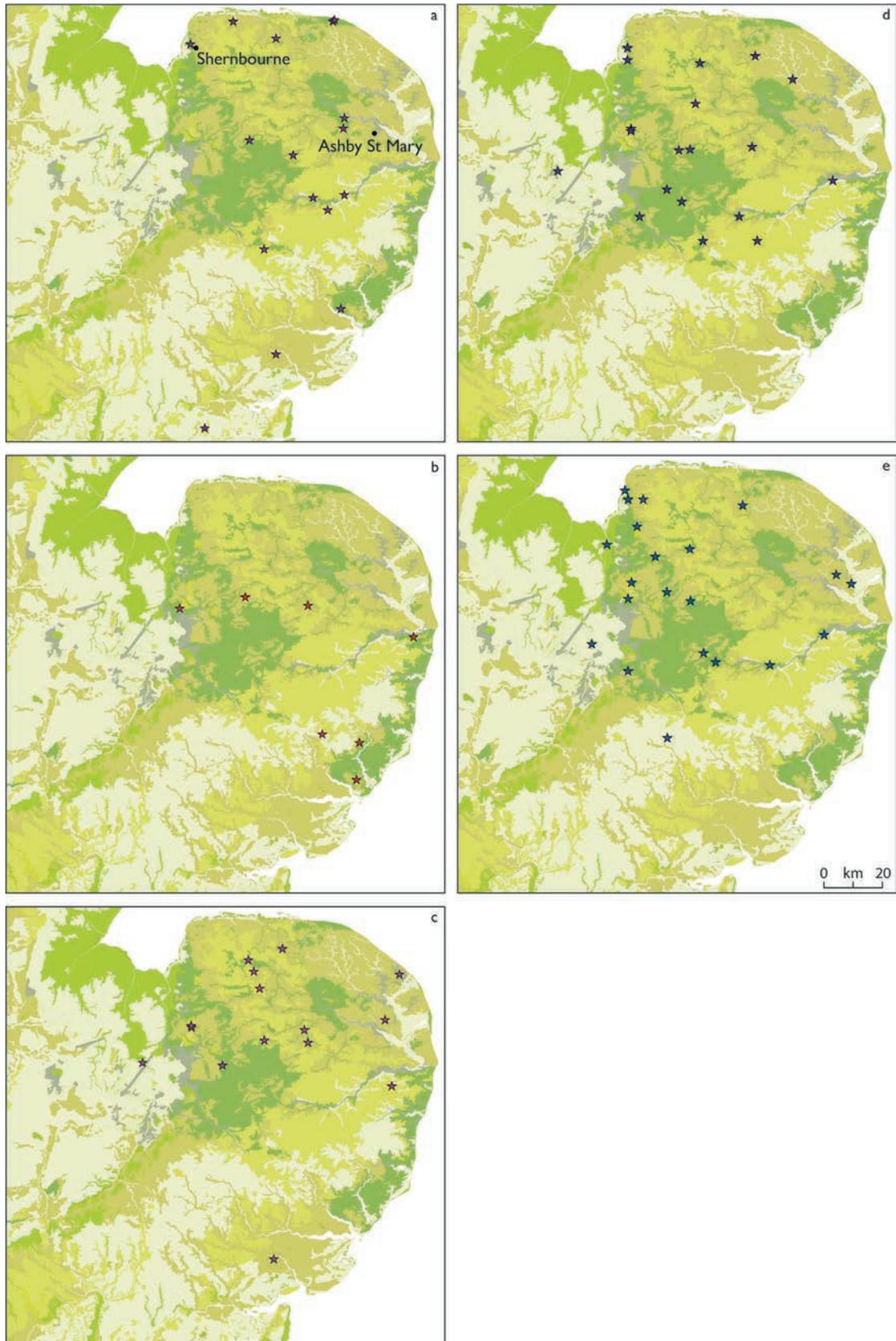


Figure 2.11 Distribution of Norfolk Wolf B Sub-types: a) JB A; b) JB B; c) JB Ci; d) JB Cii; e) JB D

Hoard analysis (6.4.2) has provided further evidence of sub-regional distribution. The Ashby St Mary hoard in the east is mainly composed of Norfolk Wolf B Staters of sub-type A (die-group 8), with some sub-type Cii, but no sub-type D, which is usually found the furthest from the hoard. Shernborne A hoard, in the north-west, included Staters of sub-types Cii and D, the most local to the hoard, but none of sub-type A, which is usually found the furthest from the hoard. The locations of these hoards are shown on Figure 2.11.

The allocation of die-groups to sub-types has facilitated the examination of the coinage but is not entirely satisfactory. The above analysis implies that Norfolk Wolf B Staters were being produced in parallel from at least three locations. I think that minting was more complex than this, as some die-groups of sub-type A appear to have differing distributions. Sample sizes are small, but even so it is clear that die-group 1 has a North Norfolk focus, whereas the few finds of die-groups 2, 4 and 5 are mainly from the Waveney valley (Fig. 2.12). The distribution of the sub-type C die-groups is less clear but also seems to show some sub-regional variation.

Both weight and precious metal content declined during Norfolk Wolf B Stater production, with late production of sub-types Cii and D having less than 20% gold content (Table 4.16). Later die-groups show an increased weight range, implying that control over production weakened. An analysis of a chronological sequence of die combinations of die-group 8 coins from the Ashby St Mary hoard showed weight declining from die to die (Table 2.5). An analysis of all known weights of die-group 8 Staters revealed a

similar chronological decline in weight, which shows that the decline was not a feature peculiar to the Ashby St Mary hoard.

There are numerous plated Norfolk Wolf B Staters, many of which can be associated with specific ‘official’ dies (Appx I.8). Their production seems likely to have involved some form of hubbing (a cold metalworking process). The unusual silver-coloured plated Norfolk Wolf B Staters from the Hunstanton II hoard are discussed in section 6.4.3.

The Norfolk Wolf B Stater was produced in much greater volume than the Norfolk Wolf A Stater, and the evidence implies that ultimately three main sites operated in parallel, each with a distinctive style. I suspect that there were other sites producing small volumes which are represented by some of the smaller die-groups. Late Norfolk Wolf B production went through a period of debasement, and the end of minting coincided with a major episode of hoarding. I suspect that the debasement took place rapidly in view of the die to die reductions in weight in die-group 8, but more precision is not possible as production volume relative to time is unknown.

Table 2.5 Average weight of chronological sequence of die-group 8 die combinations in Ashby St Mary hoard

Die combination	Sample size	Average weight
F : 16	17	5.53
F : 18	9	5.06
F : 20	4	4.95

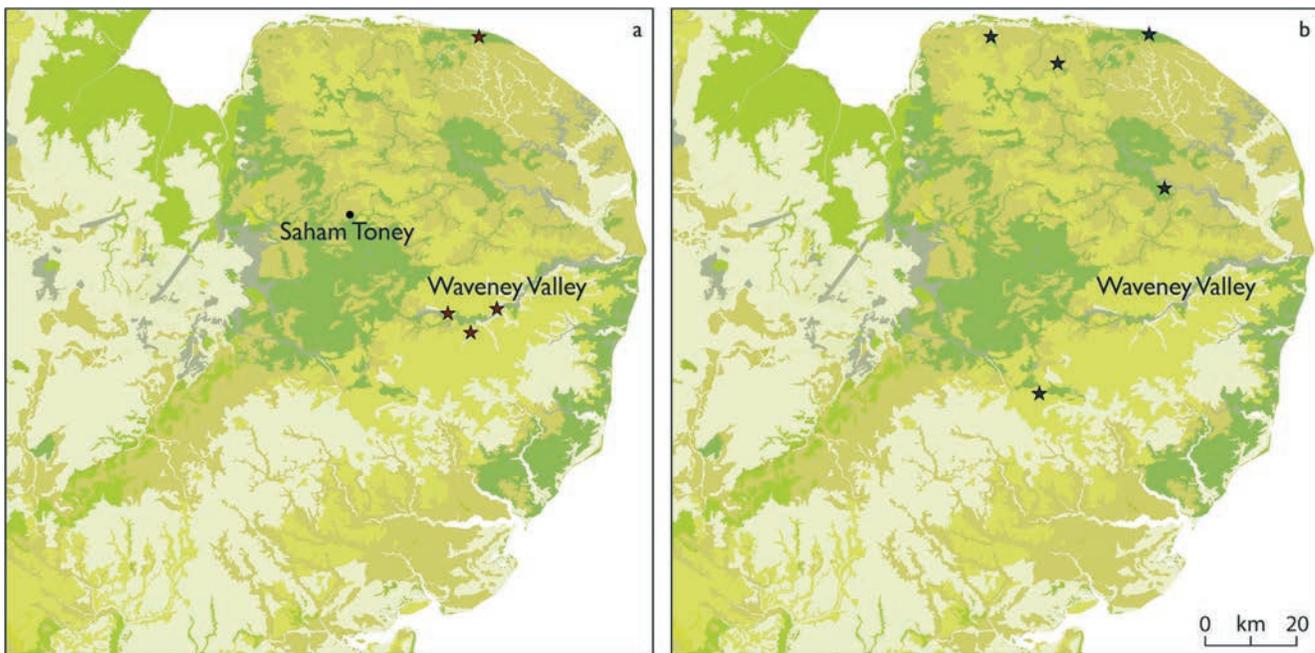


Figure 2.12 Distribution of Norfolk Wolf B Sub-type A die-groups: a) die-groups 2,4 and 5; b) die-group 1

Table 2.6 Early local Units

Type	No. coins	Main die-groups	Obverse dies	Reverse dies	Plated coins	Weight (grams)
Bury A	172	2	12	17	9	Target 1.40–1.44
Bury C 1	29	1	8	9	-	Target 1.35–1.39
Bury C 2	14	1	1	2	-	Target 1.35–1.39?
Bury B	117	5	10	30	2	Target 1.35–1.39
Large Flan A	77	1	10	27	3	Target 1.30–1.34
Large Flan C	123	3	16	19	32	Target 1.30–1.34
Bury D	15	1	2	5	-	Target 1.34–1.39?
Bury E	4	1	4	2	-	1.11 & 1.18
Bury F	2	1	1	2	-	1.27 & 1.39
Bury G	2	1	1	2	-	1.41 & 1.48
Bury H	4	2	2	4	-	None intact
Large Flan B I	12	1	2	5	-	Target 1.30–1.40?
Large Flan B II	6	1	2	5	2	Target 1.25–1.35?
Large Flan B III	3	1	1	1	-	1.08
Large Flan D	9	1/2	3	5	-	Maximum 1.18
Spiral	1	1	1	1	-	0.83



Figure 2.13 The earliest Units: Bury A, Bury C 1, Bury C 2 and Bury H

After completion of the die-study a new variety of Norfolk Wolf B Stater was found. This is illustrated in Appendix I.7 as dies CA:79. The obverse has a cruciform pattern with a pair of central back-to-back crescents and the reverse has a right-facing wolf; both sides have unusual additional decoration. Despite the right-facing wolf, the weight (5.53g) and the style of the reverse suggest that it is a Norfolk Wolf B Stater rather than a Norfolk Wolf A. It is probably a very local issue from late in the early local period or even early in the next period. This may account for the obverse design, which is not otherwise seen in the earlier period.

## 2.5 Early local silver coinage

The silver coinage of the early local period includes 16 types and sub-types of Unit (Table 2.6) and five types of Half Unit. The denominations are discussed separately starting with Units, although I suspect that each type of

Half Unit had a denominational relationship with a Unit, or a succession of Units. I discuss some possible relationships in section 2.5.5.

### 2.5.1 The first issues of early local period Units

The earliest types of Unit were Bury A, both sub-types of Bury C, and Bury H (Fig. 2.13). These have the most realistic form of representation of the early Units, and are stylistically similar to both continental and other early British coinages. Subsequent types became increasingly less representational but with extremely skilfully cut dies.

Hoard evidence (6.4.3) and the similarity of some reverse dies (Fig. 2.14) indicate that Bury A and C were broadly contemporaneous. Bury H is very similar to Bury A but with the obverse facing right rather than left. Bury C Units and early Norfolk Wolf A Staters were found together in the Sculthorpe Hoard (6.4.2), implying that Units were being minted soon after the gold coinage began to be



Figure 2.14 From left: Bury A die 6, Bury C die 4 and Whaddon Chase Stater (© Chris Rudd)

produced. This conflicts with stylistic evidence, as there are similarities between the reverses of the earliest Units and those of North Thames Whaddon Chase Staters (ABC 2341). This can be seen in the Stater reverse illustrated in Figure 2.14. The Whaddon Chase Stater is somewhat lighter in weight than early Norfolk Wolf A Staters and is probably contemporaneous with late Norfolk Wolf A or early Norfolk Wolf B Staters. This suggests a later start for the silver coinage relative to Icenian gold. However, the use of perceived prototypes as dating evidence is always tenuous, and I suspect that the silver coinage started within a few years of the gold.

The obverses of Bury A and Bury C have differing prototypes, the former Gallo-Belgic whereas the latter is Roman (see 5.4.1). There are several examples of Bury C dies being amended; these are discussed in 5.4.3. The two Bury C sub-types are separated by minor design details and have different distribution patterns; the first is focused on central Norfolk, the second is more southerly. The main die-group of Bury A has a more general distribution but with a stronger presence in the south-west of the region than either Bury C sub-type. Bury H is found in the Waveney valley in the east of the region (Fig. 2.15). Most examples of Bury A belong to a single die-group, much of which may have been produced in a single burst of activity, as it is unusually heavily die-linked. Two reverse dies seem to have been used simultaneously for much of the production, and two obverse dies may also have been in use at times. There is another small die-group and a number of unlinked dies but there is no evidence to suggest that these represent production from secondary locations. The distribution analysis is not definitive, but I suspect that the earliest Icenian silver coinage was produced at four different sites.

### 2.5.2 Large Flan A, Large Flan C and Bury B

Stylistic, hoard and weight analyses indicate that Large Flan A and Large Flan C followed and possibly slightly overlapped with, Bury A and Bury C.

As their names suggest, Large Flan A and Large Flan C are both struck on large flans; they are deeply dishd and have a similar style of right-facing horse on the reverse

(Fig. 2.16). They have more stylised imagery than earlier coins, and many obverse dies display complex ‘Chimirri Russell’ effects, whereby three-quarter profiles or full-frontal faces are seen on rotation (5.4.1). The decoration above the horse on the reverses also sometimes creates hidden faces (5.4.1). The horse on the reverse of Large Flan C is placed over a vertical pole or branch derived from a Carthaginian prototype (Fig. 5.21). The horse on Large Flan A appears more ethereal, an impression given by its surrounding detail, which includes what appears to be a flame emerging from its mouth. This detail also occurs on many subsequent types (Fig. 2.17).

In the die-study I identified a coin struck by reverse die 17 of Large Flan C, one of the earliest Large Flan C dies, and obverse die F of Large Flan A (Fig. 2.18); the coin shows no obvious signs of being plated, and its whereabouts are unknown. This die-link implies that production of Large Flan C began when Large Flan A was well underway and that there was a period of overlap, possibly with some production from a common site. If the coin is plated there would be no evidence of production links but still an implication that the two types were broadly contemporaneous. The majority of the Large Flan A dies form a single die-group, and early obverse and reverse dies each carry a diamond-shaped symbol. On later dies this was replaced by a hollow star. It is likely that all dies will eventually be found to be part of the same sequence. There are a number of uniface coins with plain obverses, which are likely to be late strikes from die F of the main die-group. Many Large Flan A reverse dies, particularly uniface examples, have very similar horse bodies but differing ancillary detail, suggesting that punches may have been used to create key design elements.

There are five Large Flan C die-groups, but each has a similar distribution. This combined with stylistic evidence implies that the type was produced in a single continuous sequence. Coins struck at the end of die-group 3 are often very irregular (see Fig. 2.20), implying that minting was hurried. Late die-group 3 and die-group 4 obverses are much cruder than the earlier dies, but the lack of care over the flans does not recur in die-group 4. This implies an urgent need for coinage about halfway through production of the type but that production subsequently reduced to more normal levels of activity. It is also likely that the target weight of Large Flan C was reduced over the course of its production.

The number of plated examples of Large Flan C is unusually high, as 28 plated examples were found in the Hunstanton II Hoard (see 6.4.3). Large Flan C has a distinctive distribution focussed around Breckland, whereas Large Flan A has a more widespread distribution with more recoveries from the east and south-east. Large Flan A may originate in the Waveney valley on the Norfolk-Suffolk

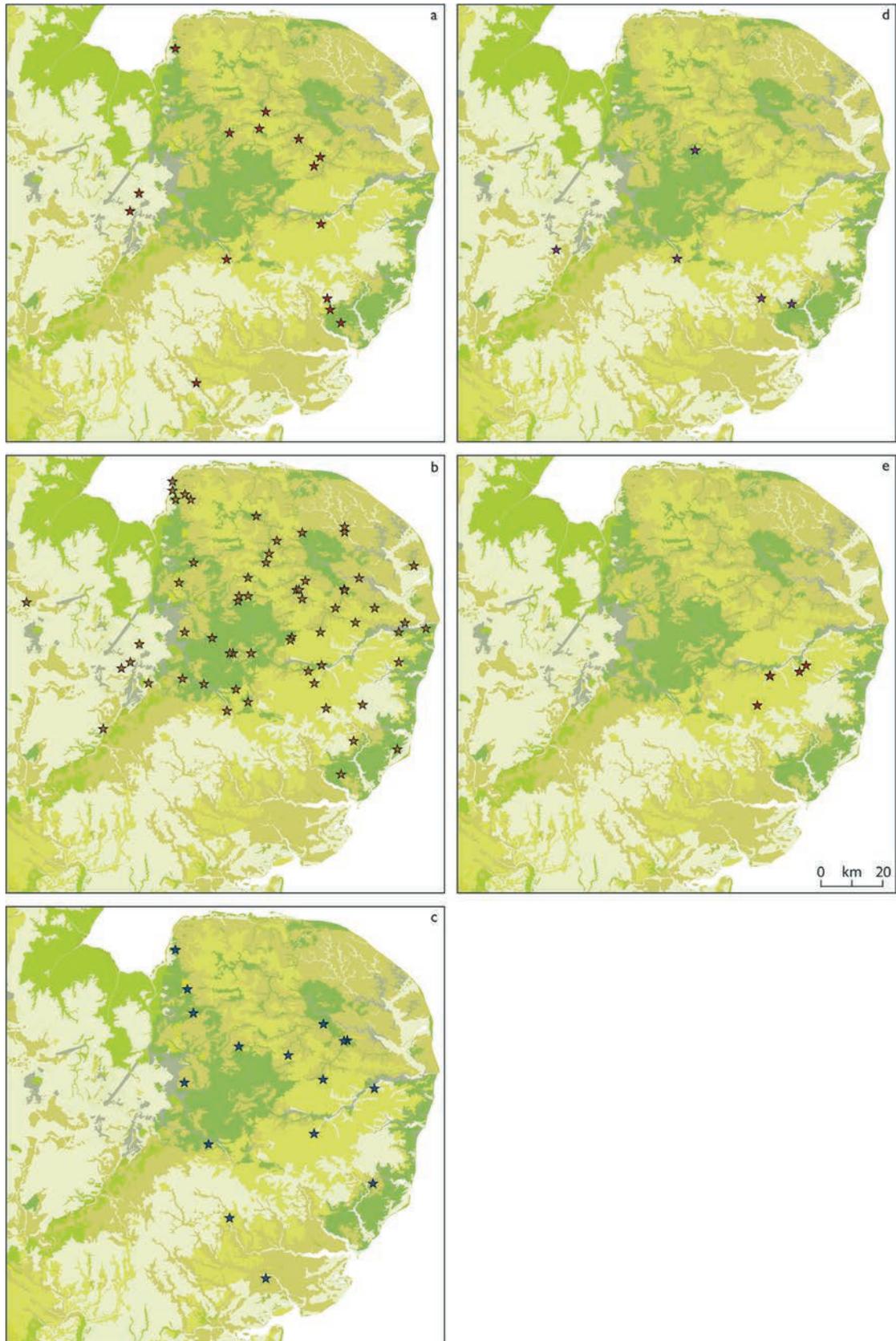


Figure 2.15 Distribution of: a) Bury A die-group 1; b) Bury A die-group 2; c) Bury C Sub-type 1; d) Bury C Sub-type 2; e) Bury H



Figure 2.16 Early local Units: Bury B, Large Flan A and Large Flan C



Figure 2.17 'Flame' from mouth of Large Flan A reverse (die 6)



Figure 2.18 Mule showing die-link between Large Flan A and Large Flan C (CCI 78 0085)

eastern border where many of the earliest of the type have been found (Fig. 2.19).

The last of the larger issues of early local Units is Bury B, which was struck using more dies than any other Unit of the period. Bury B is probably the successor coinage to Bury A and Bury C and is contemporary with later Large Flan A and Large Flan C. The stylised head on the obverse developed from Bury C (Fig. 5.10) and additional decorative elements were used to create an excellent example of the Chimirri Russell effect (Fig. 5.15). Both obverse and reverse dies include the hollow stars that

appeared partway through the production of Large Flan A; the concentric circle patterns on the decorative reverse are also seen on Large Flan A.

Bury B has three main die-groups which have some differences in distribution (Fig. 2.21), although the imagery does not vary by die-group. Overall distribution differs from Large Flan A and Large Flan C: it is focused in the Saham Toney to Crownthorpe area in central Norfolk (Fig. 2.19).

### 2.5.3 Smaller issues of the early local period Units

This section discusses the nine types of the early local period Units shown in Figure 2.22: Bury D, E, F, G, Large Flan B I, II, III, Large Flan D and the Spiral Unit, although the latter two may date from early in the first denominational period. Most were issued in small quantities using only two or three dies, yet they include some of the most beautiful and complex examples of Icenian numismatic art.

Bury D and Bury F both appear to be very early. Bury F has a diamond symbol which may be related to that on early Large Flan A dies; it also shares other design elements and a similar weight. Bury D is probably from the Snettisham area (Fig. 2.23). Bury E is unusual in having two different styles of both obverse and reverse dies within its six known dies. Unlike most other smaller issues, the four recorded finds are widely dispersed. The issue was probably not large as three of the four known coins share the same reverse die. It probably dates from the middle of the early local period, as the second style of reverse includes a crude hollow star. The obverse of Bury G is unusually crude, but the reverse has a few stylistic links to other Icenian types. The heavier weight suggest that it was an early type. The only two examples were allegedly found at Bury St Edmunds, thus it was probably very local.

The three sub-types of Large Flan B have hollow stars similar to those of later Large Flan A dies. They are very decorative with strong stylistic links to Large Flan C. I suspect that they are contemporary with, and probably related to, these two types. The Large Flan B sub-types are found in the south-west, with a strong focus in and to the south-east of Fincham (Fig. 2.23).

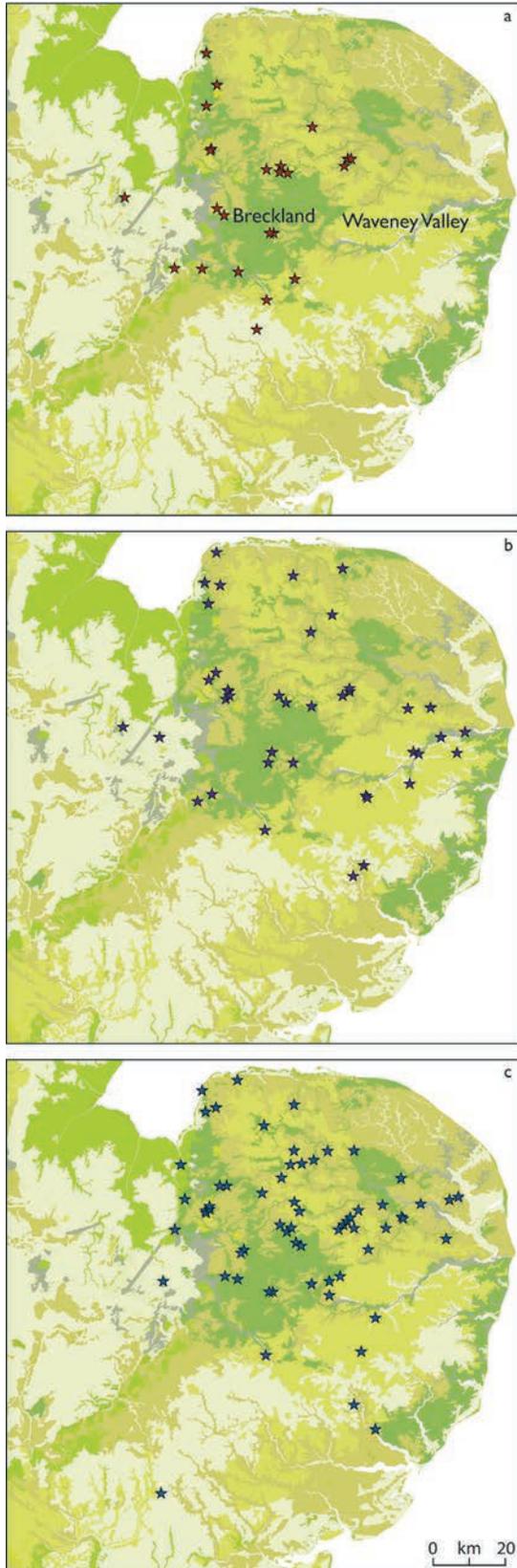


Figure 2.19 Distribution of: a) Large Flan C; b) Large Flan A; c) Bury B



Figure 2.20 Poorly struck Large Flan C die-group 3 coins from dies 6 and 7

Large Flan D has the open form of horse's head of the first denominational period, but its obverse is clearly based on Large Flan A. Recoveries are from the south-west of the region with a high proportion of finds from the fens and fen edge (Fig. 2.24). I suspect that this is a local issue which may slightly postdate the early local period.

The Spiral type is similar to Bury G in having a crude obverse and a more sophisticated reverse but with an open form of horse's head; the only known example is lighter in weight than other Units. This type may also date from early in the first denominational period.

#### 2.5.4 Observations on two larger issues of early local period Units

The data for Bury A and Bury B provide an interesting contrast. Bury B has more known dies (40 compared to 29), but these have yielded significantly fewer surviving coins (117 compared to 172), resulting in 5.8 known coins per die for Bury B and 11.8 for Bury A. It is revealing to consider the possible reasons for this difference.

Bury A has two main die-groups but was probably produced in a single sequence at one location; the main die-group has multiple links between dies which implies a period of intense production with several dies being used at once. In contrast, Bury B seems to have been minted at several sites, and its die-groups look orderly with only a single obverse die being used at any one time. The likely intensity of production of Bury A is also revealed by die condition. Unlike Bury B, several Bury A dies were used until they were extremely worn; three examples are shown in Figure 2.25 together with the only Bury B die that has comparable wear. These factors indicate that a higher output per die was probably achieved for Bury A than from the more fragmented production of Bury B.

A further factor which may have caused the higher survival rates of Bury A is that there is some evidence of hoarding of this issue (6.4.3). The circumstances that gave rise to this hoarding may have been a factor in its intensive production. Despite these observations, Bury A does not appear to be an emergency coinage issued over a short

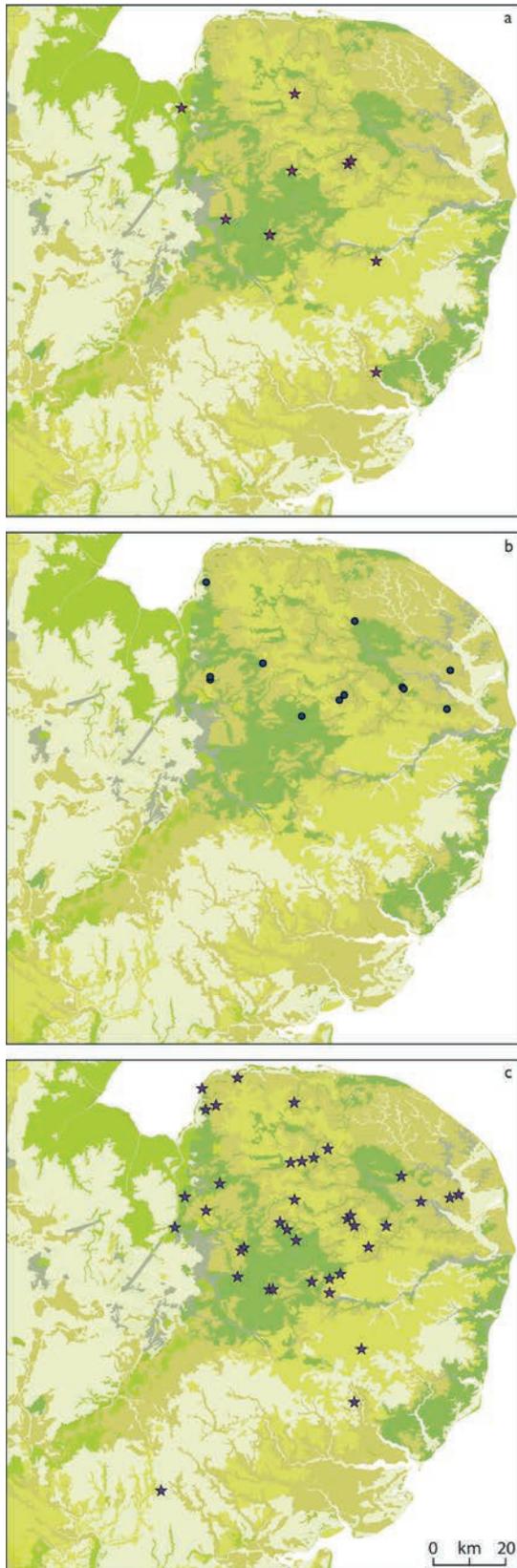


Figure 2.21 Distribution of Bury B die-groups: a) die-group 1; b) die-group 2; c) die-group 3

period, as finds of plated coins indicate that it was copied to a greater extent than the other major Bury coinages (Table 2.7). I suspect that its high volume, centralised production and wide distribution led to it being well-known and thus a rewarding target for forgery.

### 2.5.5 Half Units

The early Half Units are the least known of any important grouping of Icenian coins (Fig. 2.26; Table 2.8). Recent years have seen an increase to 16 examples from only four known prior to 2000, a growth probably attributable to the increasing sensitivity of metal detectors. Most dies are known from a single example, thus I expect many more dies and die-links to emerge in the future.

The Half Units were struck on broad, thin, flat flans, replaced in the denominational periods by smaller but thicker flans. The flans are unusual for Icenian coins as they are similar in size to the engraved area of the dies. A pelleted outer-border can be seen on many examples, evocative of that seen on certain Bury C dies, and identical to that on the closely related coins of the Ambiani (DT 341–8).

I suspect that the Large Flan B Half Unit formed a denominational relationship with sub-type I or II of the Large Flan B Unit, but I have been unable to relate the unique example of the Bury Face-Horse Half Unit to any other denomination. The remainder of this section deals with the two better-known Half Unit types: Bury Pallas and Bury Butterfly ('Pallas' and 'Butterfly').

Both Pallas and Butterfly had obverse imagery and elements of reverse imagery probably derived from the coinage of the Ambiani (5.4.4). I think it likely that each had a denominational relationship with at least one of the early local period Units. Both have general stylistic links with early Units such as Bury C and Bury A, but neither has been found in association with these specific Units and the stylistic links do not identify specific relationships.

There are two varieties of Pallas that are not die-linked but which are likely to form a sequence that encompasses the entire early local period. The earliest dies are closest to the Ambiani prototype (5.4.4), and the final coins struck from a Pallas obverse die are of the Snettisham denominational type. Figure 2.27 shows two coins struck from Pallas obverse die D. That to the left is a typical late Pallas reverse die. On the right a worn example of the same obverse die is paired with a Snettisham Unit reverse die and is struck onto a smaller and thicker flan. Die D is also found paired with a Snettisham denominational period Half Unit die.

Although sample sizes are small, Figure 2.28 indicates that the Butterfly distribution is to the south-east of Pallas. The figure also shows the distribution of Bury A and Bury C which were probably minted at a similar time as the earliest Half Units. Although the distribution evidence is rather tenuous, I suspect that Pallas is related to Bury A

and Butterfly to Bury C and in both cases to any directly superseding issues of Units.

### 2.6 Unusual Quarter Staters

These two very rare Quarter Staters are likely to date from either the early local period or early in the first denominational period (Fig. 2.29 and Table 2.9).

The reverse of the Large Flan Quarter Stater is stylistically similar to the Large Flan D Unit. They even share the unusual

pellet-ended lines which lead to the lower ring on the reverse of the Quarter Stater, otherwise only seen on the Unit and die 15 of the Snettisham Stater. The only known findspot is near Beccles in Suffolk, whereas the Units are found in the west of the region. A denominational relationship with the Unit is possible as gold coinage is more dispersed than silver, but it seems more likely that they were simply struck from dies cut by the same die-cutter. The obverse is similar to the Early Snettisham Quarter, thus this type may date from early in the first denominational period.



Figure 2.22 The rarer local Units: Bury D, Bury E, Bury F, Bury G, Large Flan B 1, Large Flan B 2, Large Flan B 3, Large Flan D, Spiral

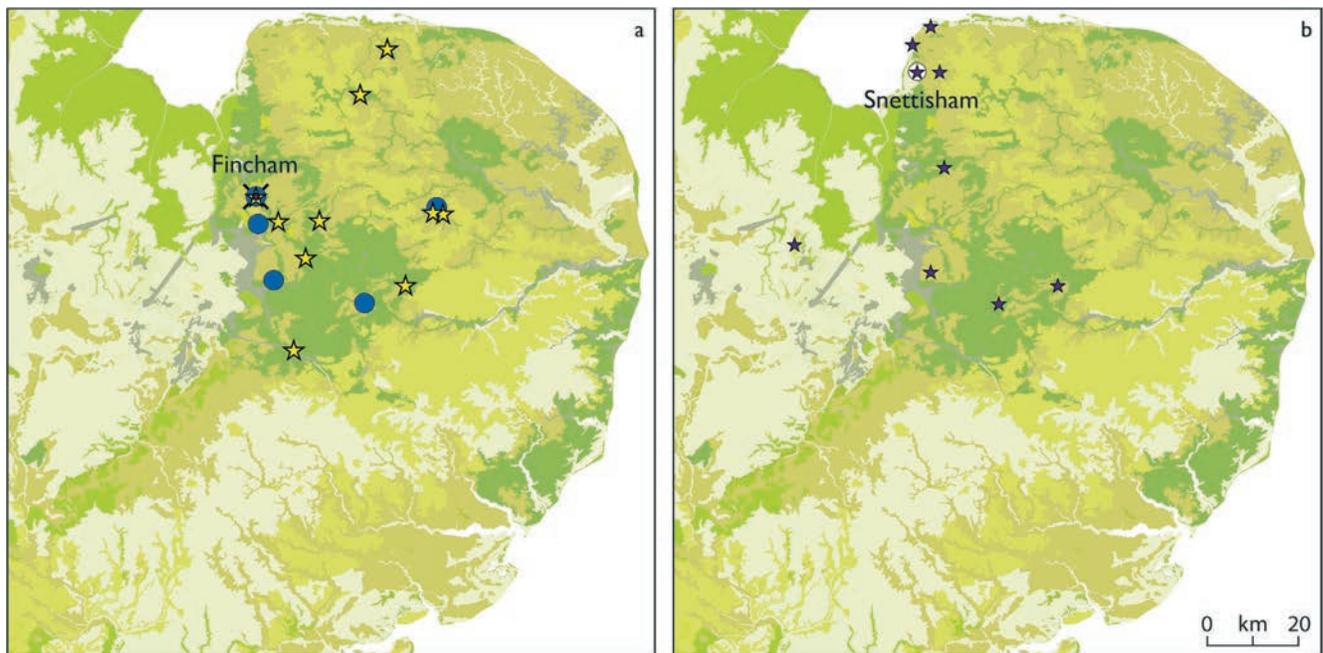


Figure 2.23 Distribution of: a) Large Flan B sub-type I (yellow), sub-type II (blue) and sub-type III (black); b) Bury D

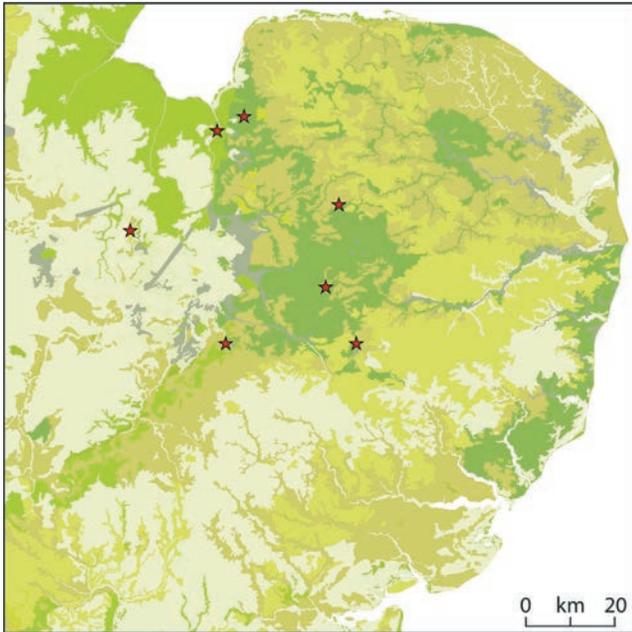


Figure 2.24 Distribution of Large Flan D Unit

The Bury Quarter Stater has a large flan and is heavier than most Snettisham Quarter Staters. The realistic horse's head, chain like device below the horse, and the form of pelleted outer border imply an early date, possibly contemporaneous with Bury A and C. The only example was found at Saham Toney.

**2.7 Summary and conclusions**

There were a number of coinages that were present in East Anglia prior to Icenian coinage, which probably created a suitable environment for local production. The first gold coinage present in any volume was the Gallo-Belgic E Stater

Table 2.7 Plated examples of the main Bury types

Type	Official coins	Plated coins	Forged obverse dies	Forged reverse dies
Bury B	117	2	2	2
Bury A	172	9	3	4
Bury C	43	-	-	-



Figure 2.25 Worn dies. From left: Bury A dies D, E and F; and Bury B die E

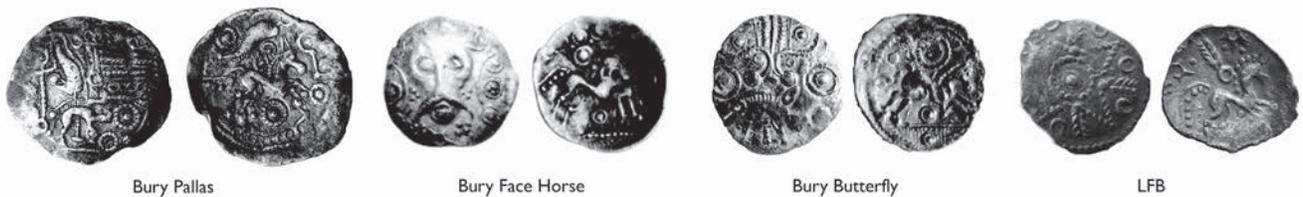


Figure 2.26 Early local period Half Units: Bury Pallas, Bury Face Horse, Bury Butterfly, Large Flan B



Figure 2.27 Strikes from Bury Pallas Half Unit obverse die D

Table 2.8 Early Half Units, including 4 Pallas/Snettisham from the denominational period

Type	No. coins	Obverse dies	Reverse dies	Likely target weight (grams)
Bury Butterfly	7	3	4	0.60–0.70
Bury Face-Horse	1	1	1	Actual 0.68
Large Flan B	1	1	1	Actual 0.59
Bury Pallas I	5	3	4	0.65–0.80
Bury Pallas II	2	1	2	0.50–0.60
Pallas/Snettisham	4		2	

Table 2.9 Rare local Quarter Staters

Type	No. coins	Obverse dies	Reverse dies	Weight (grams)	CPD
Large Flan	2	1	1	1.03	2.0
Bury	1	1	1	1.17	1.0

of the Gallic Wars, which may have been the source of metal for the first Icenian Staters. I think it most likely that Roman Republican Denarii were also present but have found no definitive proof of this.

I argue that the Ingoldisthorpe coinage, which was minted in the North Thames area, was probably the first coinage primarily intended for East Anglian use. The first gold coinage minted in East Anglia, the Norfolk Wolf A Stater and its successor the Norfolk Wolf B Stater, spanned the early local period. Production started in a burst of activity but continued over an extended period, with the final significant output of Norfolk Wolf B Staters being produced in at least three locations and becoming increasingly debased. I estimate that the early local period lasted some 40 years from about 55 BC. This estimate takes into account: the gradual stylistic development of these types, the hoards of late Norfolk Wolf B Staters containing few of the earlier Norfolk Wolf B Staters and usually no Norfolk Wolf A Staters, the development of sub-regional production, the large number of plated examples of later Norfolk Wolf B Staters, and the scale of production. It also takes into account the likely timing of later coinages. The production accuracy and imagery of Norfolk Wolf A and B Staters are explored in Chapters 4 and 5.

There were many types and sub-types of silver Units during the early local period. Some were large issues that were widely distributed across East Anglia; others were minted using only two or three dies for very local usage. There were also a small number of types of Half Unit whose production continued throughout the period. The silver coinage has no stylistic links with the gold, and its imagery becomes increasingly sophisticated and remarkable during this period; this is explored in Chapter 5.

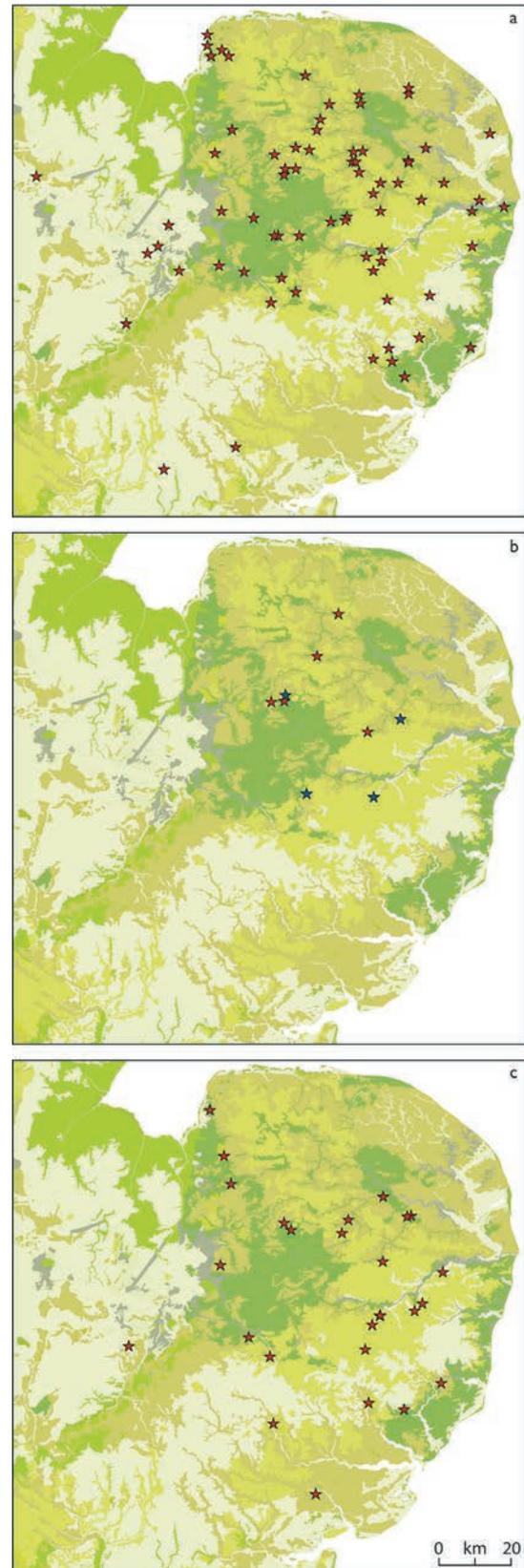


Figure 2.28 Distribution of: a) Bury A Unit; b) red: Bury Pallas, blue: Bury Butterfly; c) Bury C Unit



Figure 2.29 Large Flan Quarter Stater (left) and Bury Quarter Stater (right)

Most production during the period appears to have been relatively orderly, but two die-groups show more die-links than usual, implying that production was exceptionally intense. These are the first die-group of the Norfolk Wolf A Stater and the main die-group of Bury A. The former may be related to the events that stopped Gallo-Belgic coinage reaching East Anglia after class 4 of Gallo-Belgic E. The intense production of Bury A may

be connected to the same events, but this is uncertain, as the limited evidence of relative dating is ambiguous. The final debased issues of gold coinage also show some signs of hurried production. These coincide with, and are probably related to, an episode of hoarding at the end of the early local period and the introduction of denominational coinage. These will be discussed in later chapters.

## Chapter 3

### The mints and coinages of the denominational periods

#### 3.1 Introduction

In this chapter I examine the Icenian coinage of the denominational periods, when gold and silver coinage was produced in stylistically linked Issues. I start with an overview of the three denominational periods and their three main mints. Each mint is then examined separately, examining their unique features and summarising their Issues. At the end of the chapter a number of East Anglian types that I have not linked to a major mint are discussed; most of these are smaller and more local.

#### 3.2 Overview of the denominational periods

As we have seen, the gold coinage of the latter stages of the early local period became severely debased and were subject to major fluctuation in weight. The three parallel sequences of this coinage (Norfolk Wolf B sub-types A, Cii

and D) all ceased production at about the same time. This coincided with an episode of hoarding and the introduction of the first denominational coinages, which had much finer gold Staters of tightly-controlled weight. It seems likely that

Table 3.1 Known dies for Issues of the first denominational period

Issue	Stater	Quarter Stater	Unit	Half Unit
Snettisham	25	28*	33	17*
Plouviez	19		18	
Irstead	18	22	15	4
Early Boar Horse	18		13	12
Total Mint A	80	50	79	33
Saham Toney – Mint C	-	5	26	-

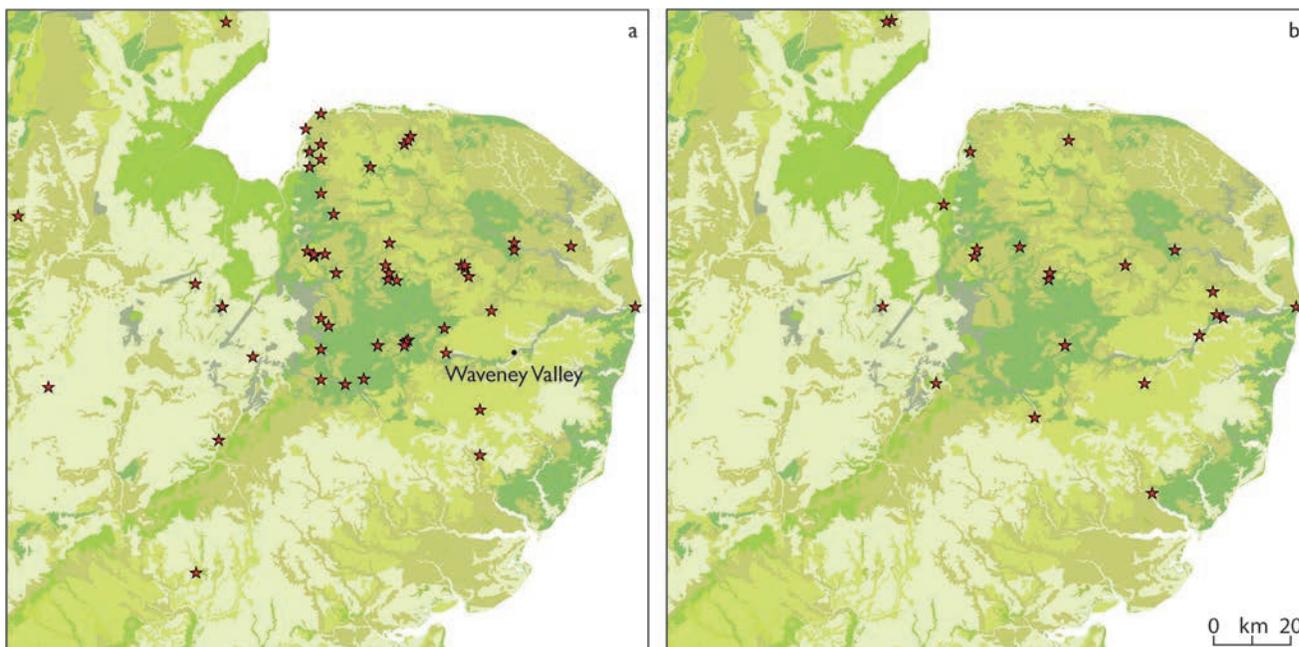


Figure 3.1 Distribution of Units produced during the first denominational period: a) Mint A; b) Mint C

Table 3.2 Known dies of the main mints during the final two denominational periods

Issue	Stater	Quarter Stater	Unit	Half Unit
Boar Horse B	33	5	70	12
Boar Horse C	18	4	141	24
Anted			72	9
Ecen	7		73	30
Total Mint A	58	9	356	75
Early Pattern Horse (A)	2		89	17
Late Face Horse			182	
Total Mint B	2	-	271	17
Early Pattern Horse (B)	2	4	33	6
Aesv/Saenv/Ece B			34	
Total Mint C	2	4	67	6

this numismatic transition reflected an underlying period of political turbulence and change.

I have separated the denominational coinage into three periods and identified three major mints. The first denominational coinage had no stylistic relationship with the earlier Norfolk Wolf A and B gold coinages. However, there is stylistic continuity from the silver coinage of the early local period. In the first period, estimated at some 20 years from approximately 15 BC, only two mints, A and C, appear to have been active. Mint A struck four consecutive Issues whilst Mint C produced only the Saham Toney Issue (Table 3.1). Included in the asterisked totals in Table 3.1 for Snettisham Quarter Staters and Half Units are 6 and 3 dies respectively that may relate to the early local period. There are differences in the overall distribution of the output of each mint. The Units of Mint A are concentrated to the west: the fen edge, the Snettisham area and around Breckland. Those of Mint C have a greater presence in the east of the region and in particular in the Waveney Valley (Fig. 3.1).

The mid-denominational period, which is also estimated to have lasted some 20 years, saw the introduction of back-to-back crescents as a key iconographic element on at least one denomination of each Issue of coinage. The start of this new period coincided with another hoarding horizon of gold coinage, new Issues from Mints A and C, and the start of production from Mint B. These factors point to the new period being somehow linked to political change.

In the final period of Icenian coinage inscriptions were applied to the output of Mints A and C. There is no indication of hoarding at the transition from the mid- to the final period – the separation of these periods is a convenient construct that probably had little or no contemporary meaning.

The number of dies used by each mint during the final two periods provides an indication of their relative output.

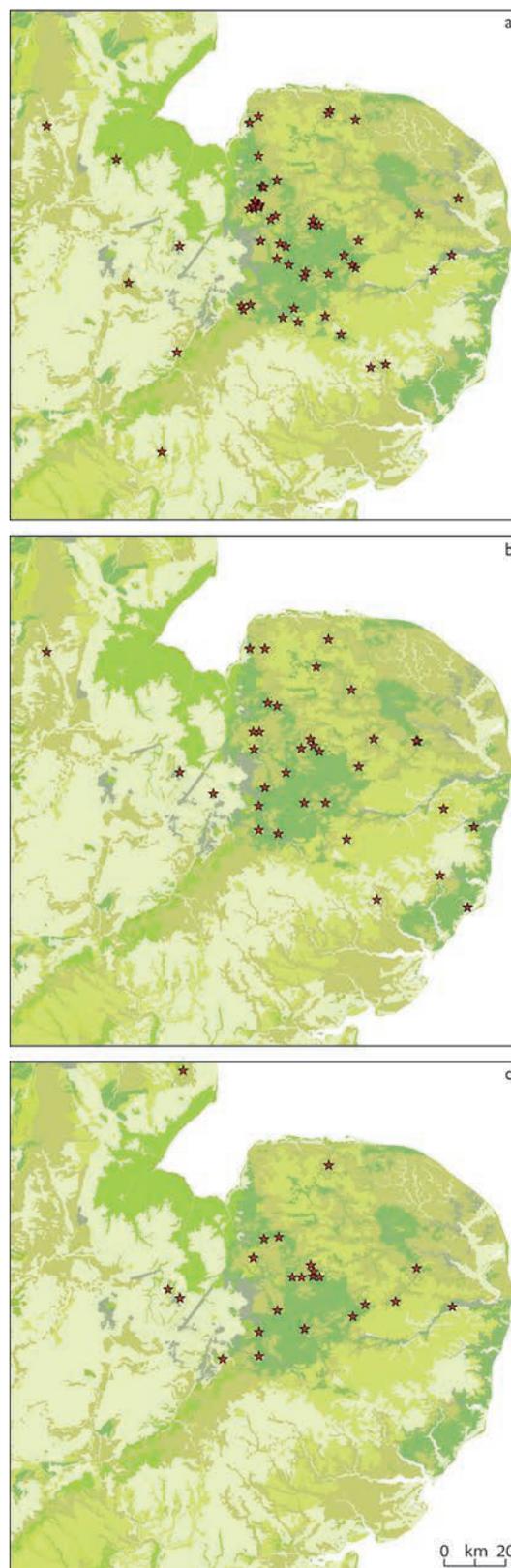


Figure 3.2 Mid-denominational period Units from Mint A, B and C: a) Boar Horse B; b) Early Pattern Horse A; c) Early Pattern Horse B

Mint A continued to dominate gold production, but its Unit production was rivalled and may have been ultimately exceeded by Mint B. Mint C was relatively small (Table 3.2).

In the mid-denominational period Mints A and B had similar distributions but that of Mint C was more restricted. Findspots of broadly contemporaneous Units from each mint are shown in Figure 3.2. The distribution of non-hoard coinage from the final denominational period shown in Figure 3.3 presents a similar picture, but Mint C has a stronger presence on the fen edge than in the previous period.

### 3.3 The Mints

There are 13 denominational Issues of Icenian coinage: Snettisham, Plouviez, Irstead, Early Boar Horse, Saham Toney, Boar Horse B, Boar Horse C, Early Pattern Horse (A), Early Pattern Horse (B), Aesv/SaenvandEce B, Late Face Horse, Anted and Ecen. The later Issues can be readily allocated to the three mints by the design of the horse on the reverse, particularly its head. Two Units from each mint are shown in Figure 3.4. The allocation of types of coin to the 13 Issues was usually straightforward; where it was potentially contentious I have included notes in the relevant section of this chapter (other details are included in Talbot 2015).

The parallel output of the three mints can be seen in the Boudiccan Revolt hoards, the analysis of which shows the relative chronology of later Issues (6.5.3). I have traced the distinctive output of each mint from Issue to Issue, and each of the denominational Issues is linked to a particular mint (see Table 1.2). Each mint exercised strict control over the weight and imagery of its Issues, notwithstanding that the same Issue often appears to have been struck at a number of sites within the region. This implies that each mint may have comprised a group of workshops under some form of central direction. Whilst there are frequently different areas of emphasis, no mint appears to have had sub-regional geographic exclusivity.

### 3.4 Mint A

Mint A is the largest mint in terms of number of dies used. The silver coinage of the first denominational Issue of the mint, Snettisham, shows stylistic continuity from the early local period. The mint was almost certainly in operation in that period, possibly producing the Large Flan A Unit which has a similar reverse.

Stylistically, the Snettisham, Plouviez, Irstead and Early Boar Horse Issues appear to lead from one to the other, probably representing a continuous sequence (see Fig. 3.5). The obverse dies, on the upper part of Figure 3.5, develop from the cross of the Plouviez Stater to the more complex Early Boar Horse, with its flower-like centre retaining the cross in the background. The reverses show the horse's head gradually becoming more open. Links between Snettisham

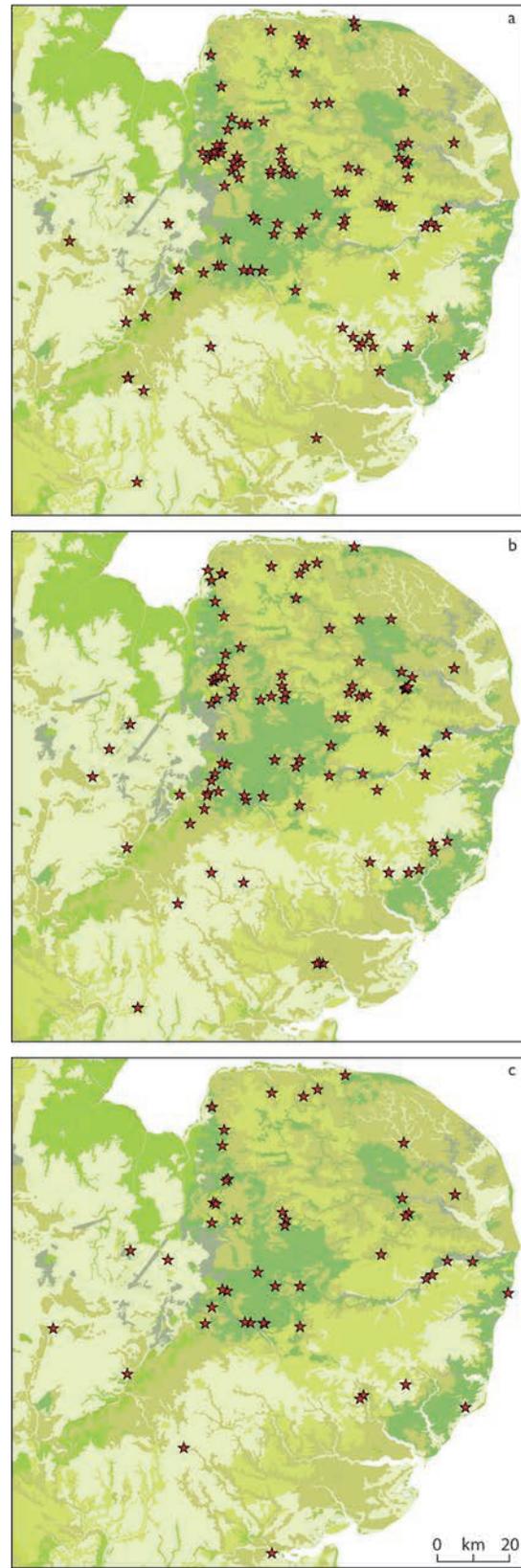


Figure 3.3 Final denominational period Units from Mint A, B and C: a) Ecen; b) Late Face Horse; c) Ece B

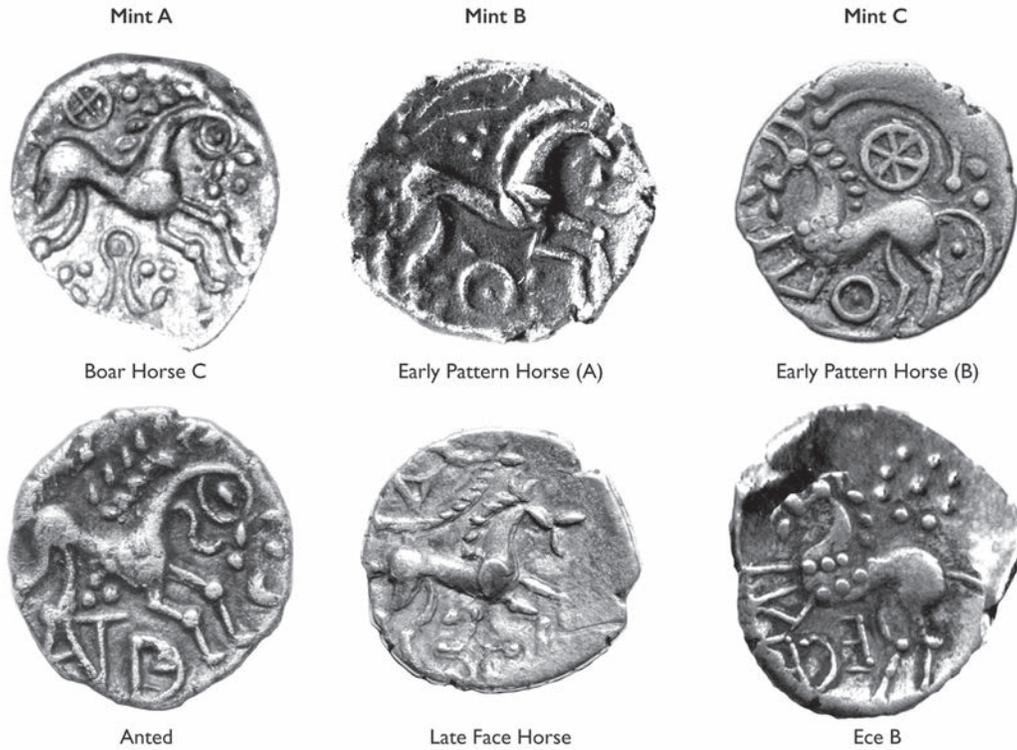


Figure 3.4 Consecutive Unit reverses from Mint A, B and C



Figure 3.5 From left to right: Stylistic development of Mint A Staters

and Plouviez Staters are less clear, but there are strong stylistic links between the Units of these Issues. The Staters of the mid-denominational period differ from those of the previous period, but there is continuity between the last dies of Early Boar Horse and the early dies of Boar Horse B, the first Issue

of the new period (Fig. 3.6). The four early Issues of Mint A had broadly similar distributions, as shown in Figure 3.7.

The Issues of the mid-denominational period, Boar Horse B and Boar Horse C, appear to have been minted consecutively, but those of the final denominational



Figure 3.6 From left: Late Early Boar Horse Stater die D and early Boar Horse B Stater dies of both sub-types

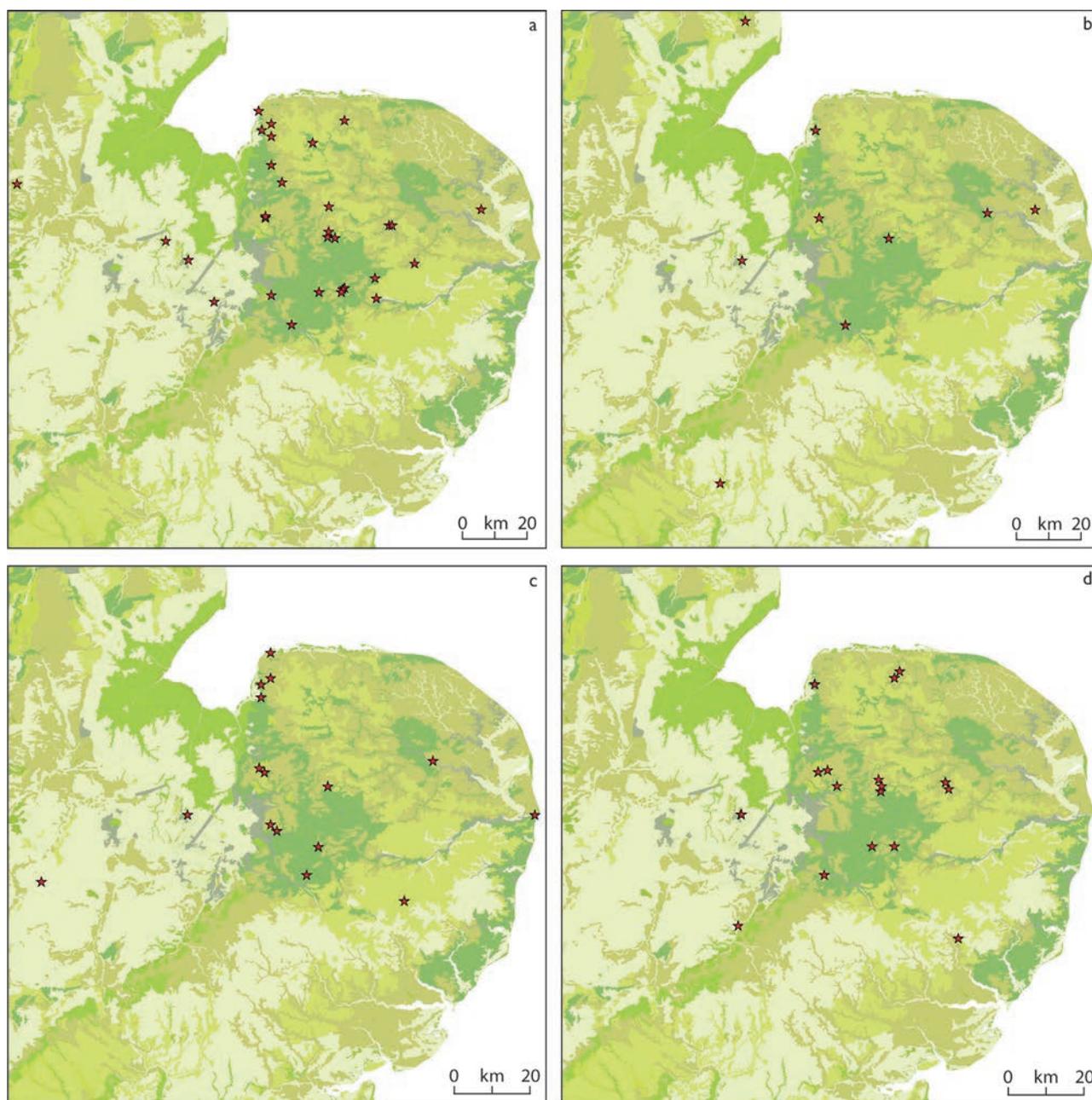


Figure 3.7 Distribution of Mint A Units: a) Snettisham; b) Plouviez; c) Irstead; d) Early Boar Horse

period, Anted and Ecen, were minted in parallel. Whilst the largest Anted and Ecen Unit die-groups initially were concurrent, that of Anted ceased first, although Anted Unit production probably continued with die-group 6. The parallel production of Anted and Ecen was an unexpected and important discovery. This was first suspected when I found that the early sequences of each had similar numbers of coins per die in the late hoards (Table 6.19) and was confirmed by the discovery of a die-link between Anted and Ecen Units on a broken coin from Saham Toney (Fig. 3.8). This coin links an early strike of Anted die E to Ecen die 17, which in turn links to Ecen die J. Anted die E continued to be used to strike Anted Units and later strikes show die deterioration; thus when Anted die E was used with an Ecen die, it was a current die and not an old die being reused. Subsequently a die-link was found between a late strike of Ecen die M and Anted die 14. This was further confirmation that the main die-groups of Anted and Ecen were produced in parallel, probably at the same site



Figure 3.8 From left: Anted die E and Ecen die 17 mule

but with care being exercised to minimise links between the two streams of production. The distribution of casual losses from the two die-groups are broadly similar; Ecen is more dispersed but over the same general area as Anted (Fig. 3.9).

During the first denominational period, Mint A produced four types of Stater but only two Quarter Staters: the Snettisham and the Irstead. Production of the Snettisham Quarter Stater seems to have continued during the Plouviez Issue. Likewise, the Irstead Quarter Stater was used with the Early Boar Horse Issue. I believe that two Quarter Staters types which are often treated as variants of Irstead actually relate to the Boar Horse B and Boar Horse C Issues. The reverse dies of the three different types are shown in Figure 3.10 and key statistics in Table 3.3. Table 3.4 shows the attribution of Quarter Staters to the Issues of Mint A, showing comparative die numbers for Staters and Units.

The following sub-sections briefly discuss the Issues of Mint A.

### 3.4.1 Snettisham

This is the first Issue with clear denominational links between gold and silver types.

The weight and metal content of the Snettisham Stater seems to have restored 'value' after the major decline in both purity and weight during the latter years of the early local period. This Issue marks the start of a move away from the artistic experimentation of the early local period towards coinages that become more stable and ordered. The links between its denominations are expressed in the similarity

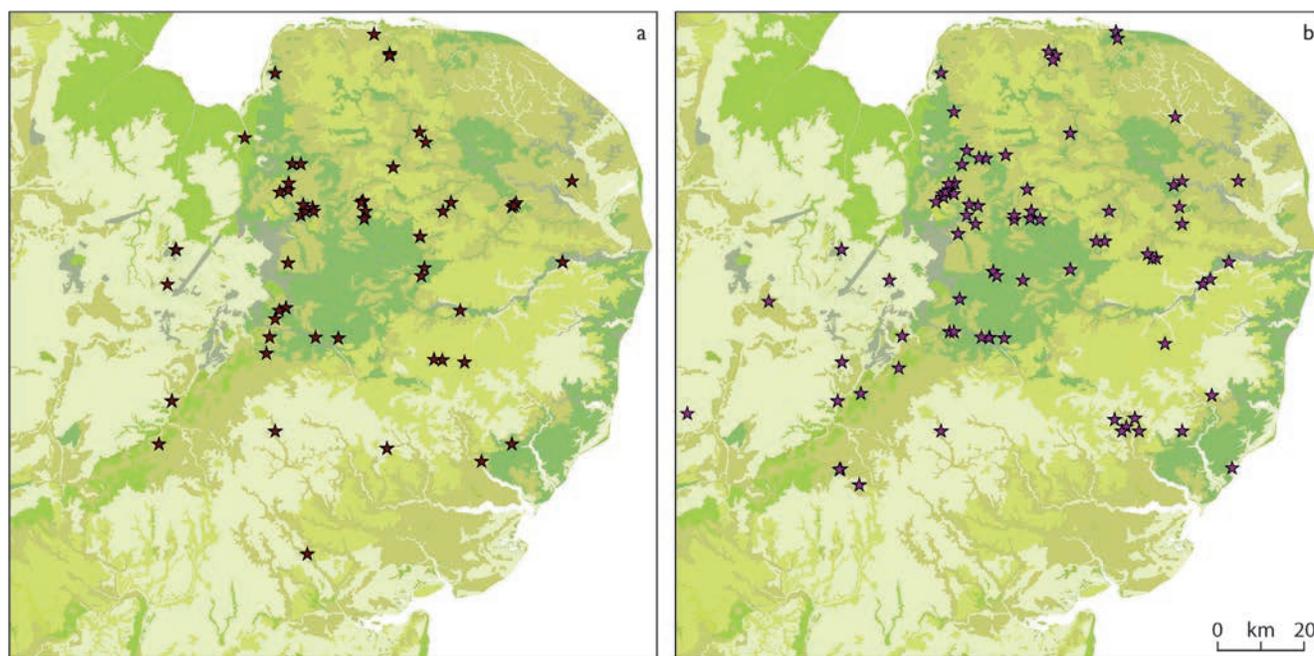


Figure 3.9 Distribution of late Units from Mint A: a) Anted die-group 1; b) Ecen die-group 1

of reverse dies, especially in the depiction of the horse as shown in Figure 3.11.

The rare Early Snettisham Quarter Stater (Fig. 3.12) has stylistic links to both early Snettisham Staters and Large Flan A Units of the early local period. On balance I think it more likely to have been part of the Snettisham Issue, and it is included in the data shown in Table 3.5. The almost plain obverse dies of the Stater appear to have been re-used from an earlier un-identified coinage, and elements of the reverse imagery of the Stater are very similar to the North Thames Whaddon Chase Stater. The earliest Snettisham Quarter Stater reverse dies are very similar to those of two North Thames Quarter Staters, ABC 2466 and ABC 2255. Similarly the obverse of ABC 2466 can only be separated from die A

of the Snettisham Quarter Stater by minor variations. These similarities are illustrated in Figure 3.13. Both North Thames types are very rare and were produced from few dies. After die 1, the Snettisham reverses became increasingly distinct, with more typical Icenian horse's heads. These links and their implications are discussed further in Chapter 5.

Both Stater and Quarter Stater appear to have been minted in a single chronological sequence. As discussed in section 3.4, the Quarter Stater probably continued being minted as part of the Plouviez Issue. There are two sub-types of Unit, separated by the presence or otherwise of a diamond symbol on the reverse, which also probably represent a single continuous sequence. The Half Units are die-linked to types of the early local period which were minted on broader thinner flans (2.5.5).

The distribution of the various denominations shown in Figure 3.14 shows that overall the Snettisham Issue is concentrated in west Norfolk. The Half Unit is the most focussed, whereas the Quarter Stater is particularly dispersed with a strong presence in eastern Norfolk.

Table 3.3 Later Mint A Quarter Staters

Type	No. coins	Obverse dies	Reverse dies	CPD	Plated	Average weight (grams)
Irstead	115	8	14	10.5	1	1.06
Boar Horse B	54	3	2	21.6	2	1.03
Boar Horse C	7	2	2	3.5	0	0.99

3.4.2 Plouviez

The Plouviez Issue is very rare, the Stater occurring in limited numbers in later hoards. It has crudely produced



Figure 3.10 'Irstead' Quarter Staters. From left: Irstead, Boar Horse B and Boar Horse C

Table 3.4 Quarter Stater dies allocated to Mint A Issues

	Snettisham	Plouviez	Irstead	Early Boar Horse	Boar Horse B	Boar Horse C
Stater	25	19	18	18	33	20
Unit	32	16	12	13	47	144
Quarter		22		22	5	4



Figure 3.11 The Snettisham Issue. From left: Stater, Quarter Stater, Unit and Half Unit

obverses, but the reverses are finer and typical of Mint A (Fig. 3.15). The Stater is intermediate between Snettisham and Irstead in terms of its increased copper and reduced silver content (Table 4.16). The two main die-groups of Staters are likely to represent a single chronological sequence – the final dies are indistinguishable stylistically from the earliest Irstead Staters.

I suspect that the triangular design on the obverse of the Plouviez Half Unit (Fig. 3.15) was introduced with this Issue. Later Snettisham Quarter Staters were likely to have been part of the Plouviez Issue, but none have been allocated to the Issue in Table 3.6.

### 3.4.3 Irstead

The denominations of the Irstead Issue are recognisable by the distinctive style of horse on the reverse (Fig. 3.16). Half Units are very rare, but there are at least three die-groups for all other denominations (Table 3.7). These may represent more than one mint site, as the distribution of the Stater die-



Figure 3.12 Early Snettisham Quarter Stater

groups differ, although sample sizes are very low (Fig. 3.17). Quarter Stater distribution also shows some differences of emphasis with die-group 1 being centrally focussed and die-group 3 stronger on the fen edge (Fig. 3.18).

There are a number of examples of Quarter Stater reverse dies being used to strike Units. These have helped to confirm the denominational relationships and the parallel minting of different denominations. The discovery of a mule composed of a late strike from a Quarter Stater reverse die and an Early Boar Horse Unit obverse helped to confirm the extended duration of the Quarter Stater as discussed in section 3.4. Examples of the cross-denominational die-links are shown in Figure 3.19.

### 3.4.4 Early Boar Horse

As discussed above, the Irstead Quarter Stater continued to be produced as part of the Early Boar Horse Issue (Table 3.8). This Issue introduced the boar as the key element on the obverse of the Units; previously only seen as a minor element on early Half Units (Fig. 3.20). The Early Boar Horse Issue has distinctive, deeply cut reverse dies on each denomination. A ladder-like exergue was introduced on Staters and Units, replacing the toothed exergue on the Irstead Staters. Despite several innovations there is stylistic continuity from Irstead to Early Boar Horse. This includes the overall design of the Stater and the use of a large crescent above the horse on two of the Unit dies.

There are a number of indications that the Early Boar Horse coinages may have been minted from two locations. All three denominations have two die-groups, forming two sub-types in the case of the Half Unit. The die-groups of Staters and Units appear to have different focuses of

Table 3.5 The Snettisham Issue

Denomination	No. coins	Main die-groups	Obverse dies	Reverse dies	Plated coins	Plated dies
Stater	76	3	8	17	2	3
Early Quarter Stater	8	-	3	3	-	-
Quarter Stater	101	2	5	17	-	-
Unit	82	3	11	22	1	-
Half Unit	12	1	3	9	-	-
Total	279	9	30	68	3	3



Figure 3.13 From left: ABC 2466, Snettisham Quarter dies A:1 and ABC 2255

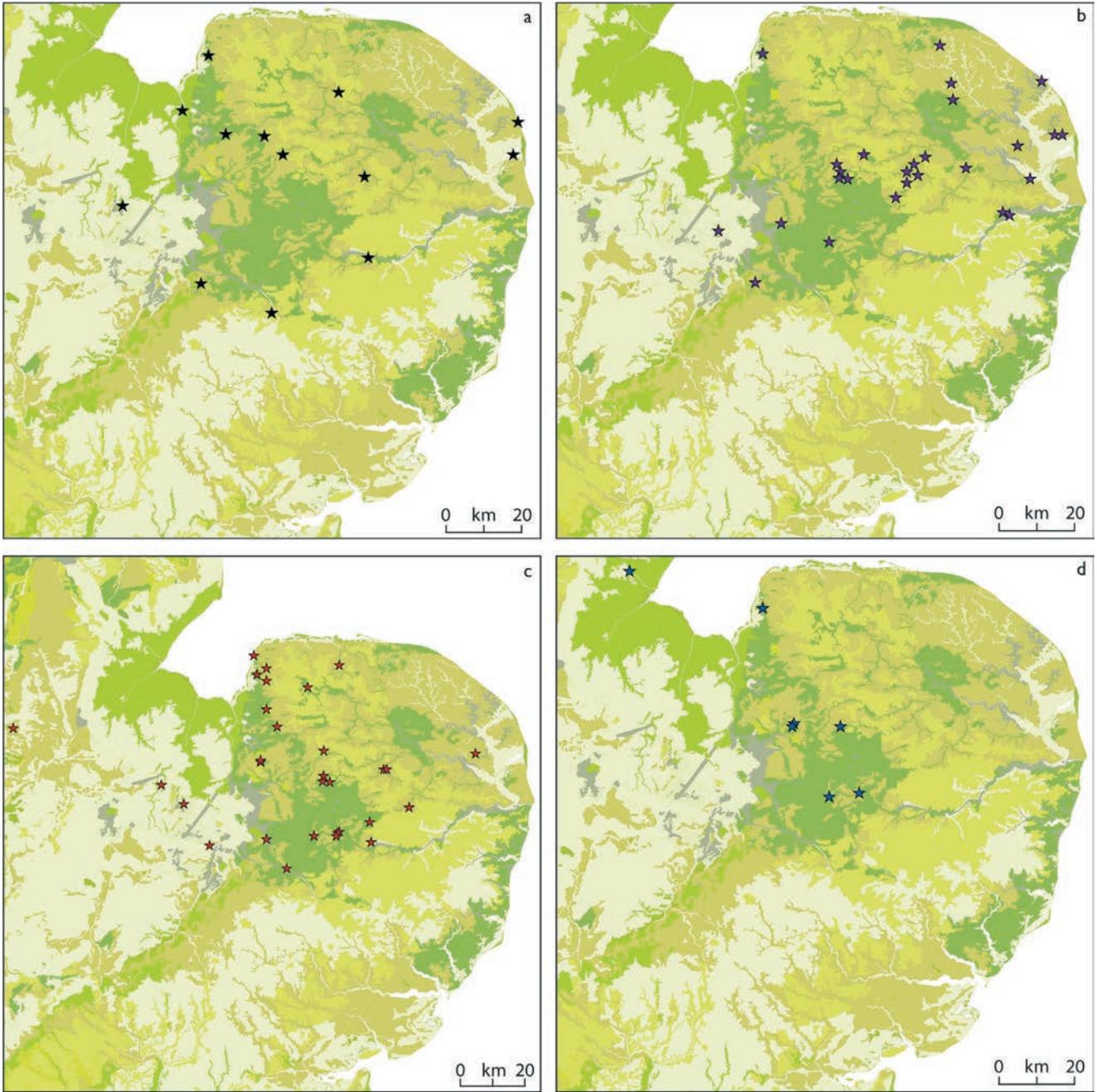


Figure 3.14 Distribution of the Snettisham Issue: a) Stater; b) Quarter Stater; c) Unit; d) Half Unit



Figure 3.15 The Plouviez Issue. From left: Stater, Unit and Half Unit

distribution, although sample sizes are small (Fig. 3.21). Stylistically and in terms of distribution, Stater die-group 1, Unit die-group 2 and the Boar sub-type of Half Unit may represent one production site. The Units and Half Units are frequently found at Fincham, where coins of the other grouping are absent. It is also possible the two groupings represent a single chronological sequence, as the Stater shows stylistic continuity from die-groups 1 to 2, and the former has a higher gold content than the latter. The end of this Issue and the beginning of Boar Horse B saw an active period of gold deposition (6.8).

### 3.4.5 Boar Horse B

The Boar Horse B Issue has been the key to establishing the relative chronology of much of the Icenian coinage (Table 3.9). It acts as a link between the ‘middle period’ of Icenian hoarding, where the Stater was found in large quantities in the Dallinghoo hoard and in small quantities in three other hoards, and the end of Icenian coinage. The Unit is one of the earliest types to be found in any quantity in revolt period hoards.

In addition to the main issue (Fig. 3.22) there is a sub-type Boar Horse B (A). I think that these reflect two separate

workshops, which each produced all four denominations with similar iconography. This division may reflect a continuation of the two sub-types within the Early Boar Horse Issue. All Staters carry back-to-back crescents, and both Staters and Units of the main issue change how the horse’s head is portrayed in mid-sequence from a figure of eight shape (shown on the left of Fig. 3.23) to the more complex form on the right. Unusually, two obverse dies were used simultaneously for later production of the Stater, suggesting that there was some urgency in minting.

The obverses of die-group 4 of the Unit of Boar Horse B (A) have marks above the boar which loosely resemble script; one illustration of this is included in the examples of the sub-type denominations shown in Figure 3.24. Production of Boar Horse B (A) probably started later than the main issue, as the Boar Horse B (A) Unit utilises the later form of horse’s head. The statistical analysis of the relative chronology of Units in the late hoards (Table 6.20) supports this, although the results are slightly ambiguous. The Dallinghoo hoard excluded the final dies of the Stater for both the main issue and the sub-type, implying that in their later stages they were being produced in parallel. The maps in Figures 3.25 and 3.26 show that the distribution of Boar Horse B (A) is more focussed on the east of the region than the main Boar Horse B issue.

The Boar Horse B Quarter Stater of the main issue has a second form of obverse die that is used in parallel with the first. This is shown on the right of Figure 3.27 and is almost identical to that used on the North Thames Quarter Stater ABC 2395, shown on the left. The North Thames obverse differs in having a central line in the double band of pellets and is attributed to Dubnovellaunus as, although uninscribed, it is closely related to the inscribed Stater ABC 2392.

Table 3.6 The Plouviez Issue

Denomination	No. coins	Main die-groups	Obverse dies	Reverse dies	Plated coins
Stater	76	2	6	13	-
Unit	25	1	6	12	-
Half Unit	7	1	2	3	-
Total	108	4	14	28	-



Figure 3.16 The Irstead Issue. From left: Stater, Quarter Stater, Unit and Half Unit

Table 3.7 The Irstead Issue

Denomination	No. coins	Main die-groups	Obverse dies	Reverse dies	Plated coins	Plated dies
Stater	242	3	7	11	2	4
Quarter Stater	115	3	8	14	1	-
Unit	45	4	5	10	-	-
Half Unit	3	-	2	2	-	-
Total	405	-	22	37	3	-

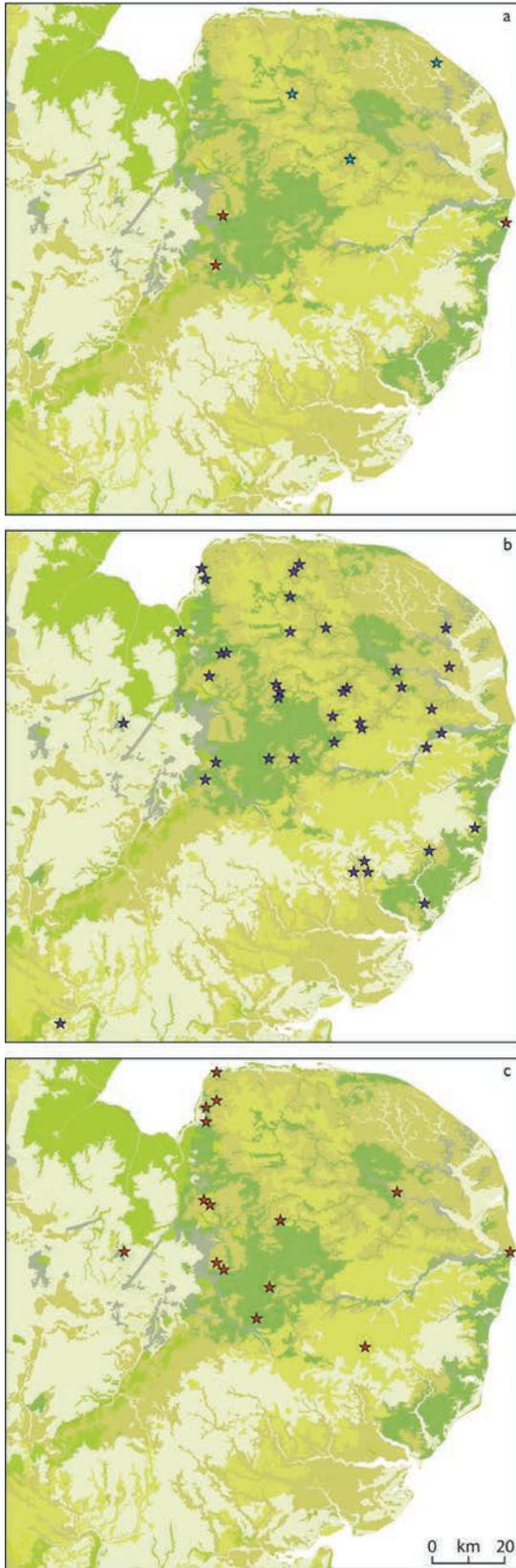


Figure 3.17 Distribution of the Irstead Issue: a) Stater die-group 1 (blue) and die-group 3 (red); b) Quarter Stater; c) Unit

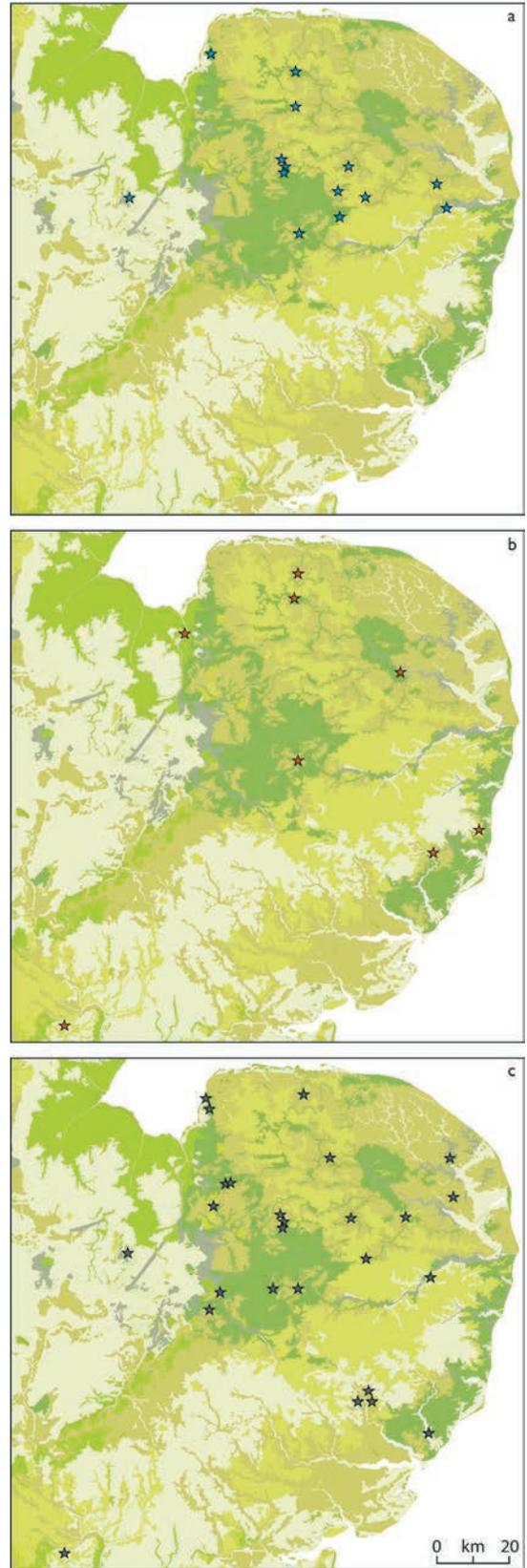


Figure 3.18 Distribution of Irstead Quarter Staters: a) die-group 1; b) die-group 2; c) die-group 3



Figure 3.19 From left: Irstead Quarter reverse die 3 paired with Unit, Quarter Stater and Early Boar Horse Unit



Figure 3.20 From left: Early Boar Horse Stater, Unit and two sub-types of Half Unit

The reverse of all Quarter Stater dies shows a stepping horse. This is rare in Icenian iconography, occurring only on the first reverse die of the Saham Toney Unit and the later Ece A Unit. A stepping horse is seen on several North Thames coins of Tasciovanus and Cunobelin (see ABC 2586 and ABC 2975) and on certain of the Kentish coins of Dubnovellaunus and Eppillus (e.g. ABC 321 and ABC 390). The latter are similar in style to the Irstead Quarter Stater.

Over the Quarter Stater horse is a trefoil. This does not appear elsewhere on Icenian coinage but occurs in a similar form on the reverse of the North Thames Quarter Stater ABC 2395 attributed to Dubnovellaunus, as shown in Figure 3.28. A slightly different trefoil also occurs on a Quarter Stater from Kent, which is also attributed to Dubnovellaunus (ABC 312). The horse's head on Boar Horse B Quarter Staters is unusual for an Icenian coin and is also similar to that used on ABC 2395.

Whilst the Quarter Stater is undoubtedly East Anglian, it is stylistically closer to North Thames coinage than to the rest of the Issue. Possibly the designs used on this type are the result of an artisan adopting ideas from coinages to the south. I think that this is unlikely as, at this time, imagery was tightly controlled with little variation within a type. It seems more likely that the references to the symbolism used by Dubnovellaunus were deliberate and had political or economic significance. They may be related to the introduction of back-to-back crescents onto the Boar Horse B Staters.

There was an increase in forgeries during the Boar Horse B Issue that affected all denominations. I have found as many plated dies for Half Units as I have official dies. This contrasts strongly with the previous Early Boar Horse Issue, which has only two known forgeries (both Half Units).

### 3.4.6 Boar Horse C

This large coinage is stylistically a clear antecedent to Anted and Ecen (Fig. 3.29). It includes all four denominations, and the 141 known dies used to strike the Units (Table 3.10) are only exceeded in number by those of the Late Face Horse Unit. Hoard analysis shows that Boar Horse C postdates Boar Horse B. The Dallinghoo hoard, for instance, contained numerous Boar Horse B Staters but no Boar Horse C Staters (6.4.4). Stylistic analysis confirms the chronology, as the final Boar Horse B Stater reverse dies are very similar to early Boar Horse C Staters, particularly in the illustration of head, mane and tail.

The Boar Horse C Unit has a reverse which is quite different in style to the preceding Boar Horse B Unit; it re-introduces the open horse's head which continued to be used by the mint on the ensuing Anted and Ecen Issues. The horses on certain reverses are very similar to those seen on early Anted Units (see Fig. 3.30). Reverse dies from the only major die-linked sequence of the Half Unit, die-group 1, have horse's heads which are very similar to those seen on late Boar Horse B Units and Boar Horse B (A) Half Units. A rein-like line connects the breast and head, which subsequently appears on Anted and Ecen Half Units. Thus this die-group appears to span the entire Boar Horse C Issue. Some rarer unlinked Boar Horse C Half Units have open horse's heads as seen on Boar Horse C Units, and it seems likely that these relate to distinct Boar Horse C die-groups of Units.

The large minting of Units is in two broadly similar styles with many die-groups. Twenty-nine of the 141 dies are known from only a single example, which implies that more dies will be found and that die-groups will consolidate. Nonetheless, I expect there will continue to be many separate die-groups. Distribution analysis shows all denominations

Table 3.8 The Early Boar Horse Issue

Denomination	No. coins	Main die-groups	Obverse dies	Reverse dies	Coins per die
Stater	333	2	4	14	35.8
Unit	44	2	3	10	6.8
Half Unit	16	2	5	7	2.7

to be well-dispersed over the region (Fig. 3.31). I suspect that some Unit die-groups will eventually prove to have distinctive distributions, but this is not discernible from present data.

Boar Horse C Staters were minted at a time when the use of gold was being reduced in Icenian coinage and are the last Staters produced in high volume. Recoveries per

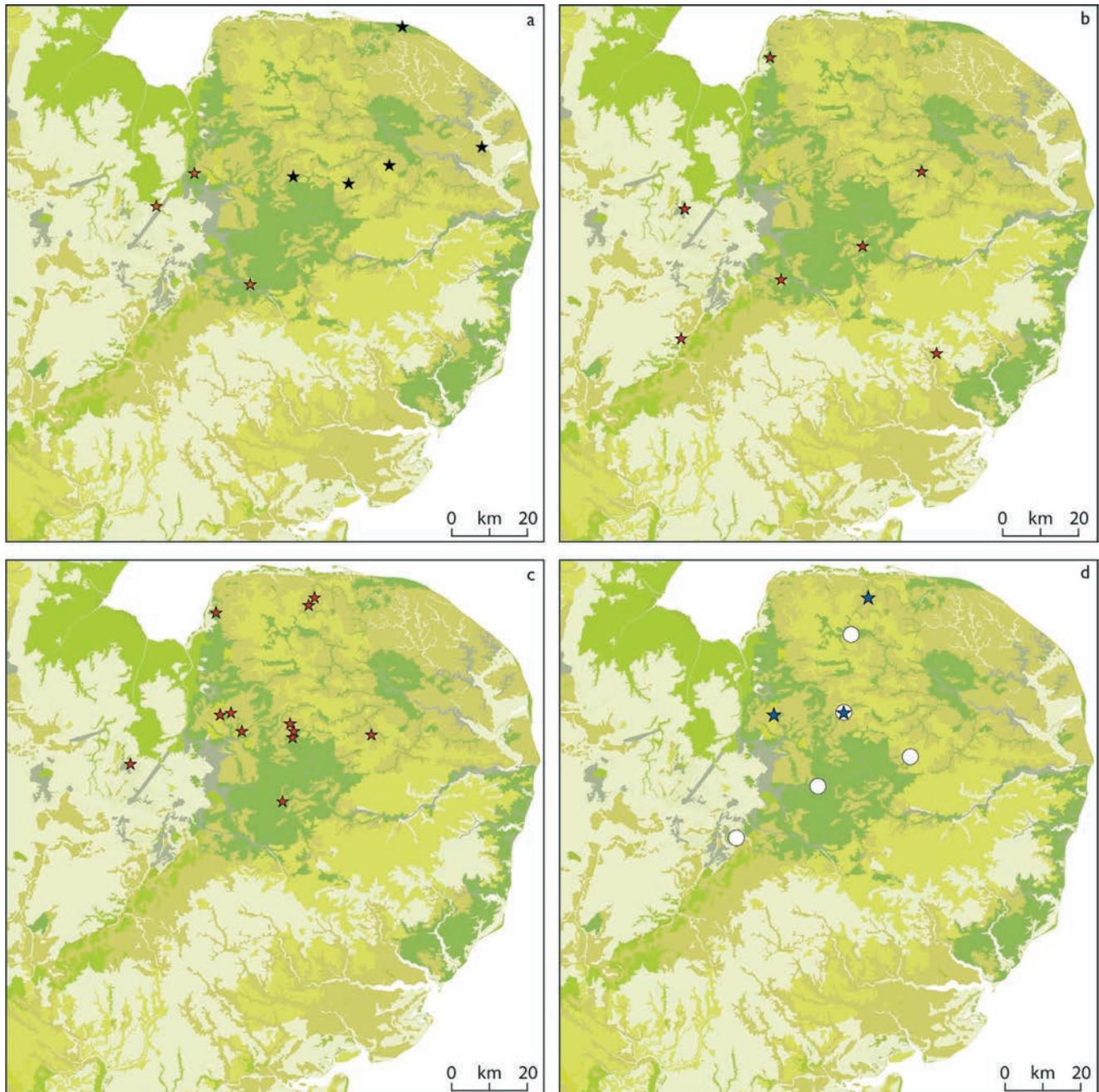


Figure 3.21 Distribution of the Early Boar Horse Issue: a) Stater die-group 1 (black) and die-group 2 (red); b) Unit die-group 1; c) Unit die-group 2; d) Half Unit Spiral (white) and Boar horse (blue)

Table 3.9 Sub-types of Boar Horse B

	Main Boar Horse B issue				Boar Horse B (A) subtype			
	No.	Die-groups	Obv. dies	Rev. dies	No.	Die-groups	Obv. dies	Rev. dies
Stater	400	1	13	14	41	1	4	2
Quarter	46	1	2	1	8	1	1	1
Unit	265	3	16	30	65	4	16	8
Half Unit	57	2	4	5	13	1	1	2
Total	768	7	35	50	127	7	22	13



Figure 3.22 From left: Boar Horse B main issue, Stater, Quarter Stater, Unit and Half Unit



Figure 3.23 Boar Horse B Horses Heads

die are very low, and of the 16 dies, six are known from only a single example. More dies and die-links are expected to emerge in the future, and Esty formulae indicate that the die count will rise from 18 to 23. There are 13 known forged Stater dies, compared to only 18 known official dies. This high level of forgeries implies that the Stater was originally more important and better known than its present rarity suggests. Coins struck from forged dies are hard to identify from photographs as the dies are usually well-produced, but the coins are underweight and brassy. Most do not appear to have been plated and may contain small amounts of gold to deliberately enhance their appearance in antiquity. The example in Figure 3.32 weighs only 3.98g but had been recently polished to enable it to be sold as an official Stater, thus continuing its role as a forgery.

The Boar Horse C coinage as a whole is less resolved than most Issues and there is much still to be learned about its production and organisation.

### 3.4.7 Anted

The Anted Issue (Table 3.11; Fig. 3.3) and the Ecen Issue (3.4.8) were minted in parallel and are the first inscribed

multi-denominational Issues of Mint A, and probably of the region. The Anted inscription was always written with a barred D or Tau Gallicum (Fig. 3.33). A small late local coinage inscribed Anted SIA is considered in section 3.7. The obverse die used to strike the Anted Staters was also used for Ecen Staters. An analysis of die wear indicates that the earliest known strike was of an Anted Stater, but subsequent production appears to have been intermingled. There is no known Anted Quarter Stater.

Large quantities of Units survive as a result of their inclusion in the Boudiccan Revolt hoards. There is an average of 43 known coins for each obverse die, which has greatly facilitated the die-study. Approximately half of all Units belong to die-group 1, a long die-linked sequence. The Half Units, which do not appear in the revolt hoards, are much less well-known. They are scarce, with few known coins per die. The Half Unit was clearly of contemporary importance as more plated than 'official' dies have been recorded, and there is also a high ratio of plated to official coins (Table 3.11).

The distribution of the Issue's denominations varies (Fig. 3.34): overall distribution of the Units is heavily focussed on Breckland and the fen edge; Half Units are more focussed on the Saham Toney area and Breckland; and the three records of Anted Staters are widely dispersed. The mapping of late Units is complicated by scattered revolt period hoards but, nonetheless, some Anted Unit die-groups have distinctive distributions as shown in Figure 3.35. Die-groups 1 and 6 have a concentration on the fen edge, whereas die-groups 2 and 4 seem to have a more easterly focus, and die-groups 3 and 7 are stronger in the area around eastern Breckland. Plated Units have a similar focus to Half Units in the south-west of the region. This evidence implies that the Anted Unit was produced in



Figure 3.24 From left: Boar Horse B (A) Stater, Quarter Stater, Unit and Half Unit

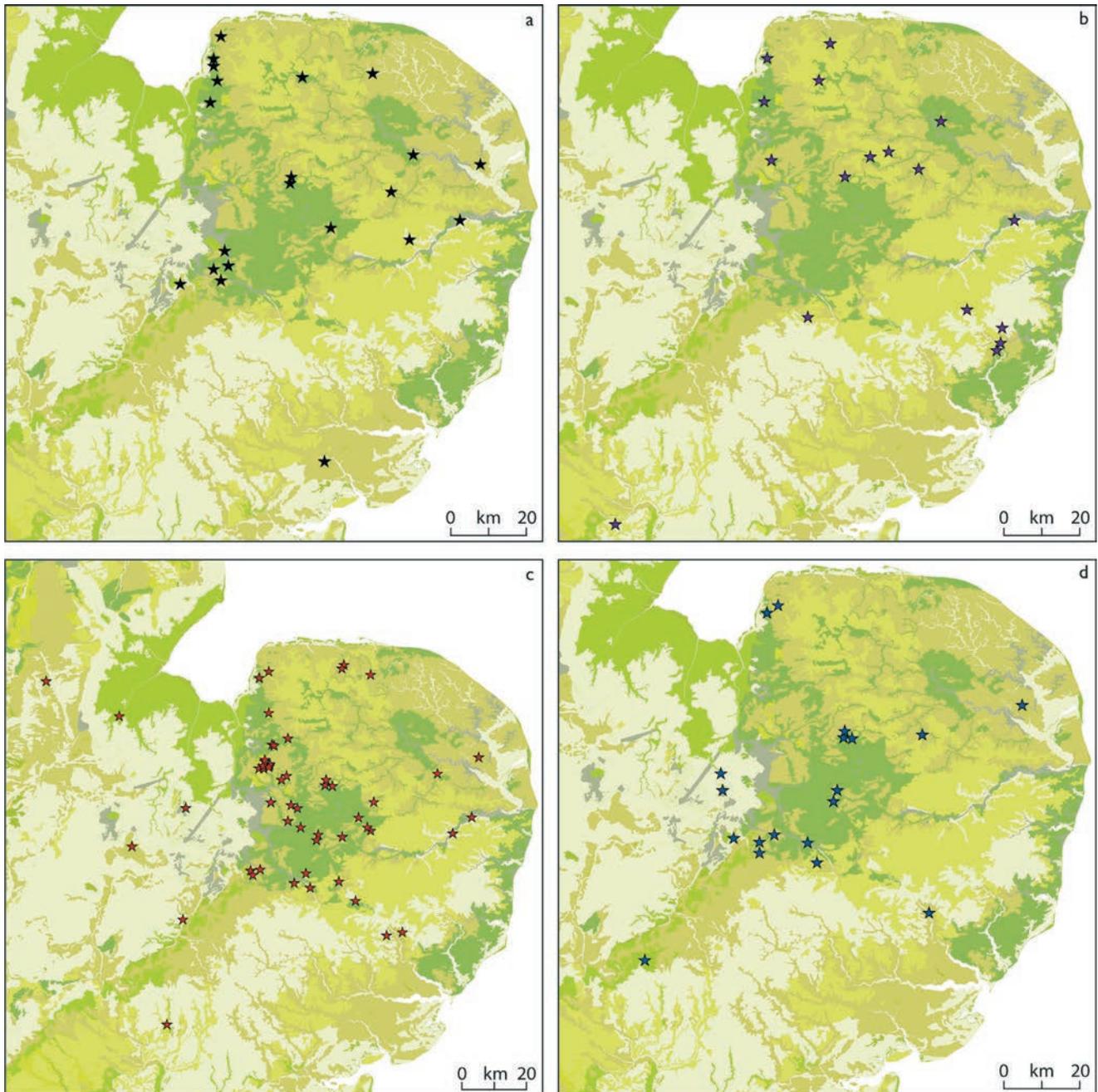


Figure 3.25 Distribution of Boar Horse B Main issue: a) Stater; b) Quarter Stater; c) Unit; d) Half Unit

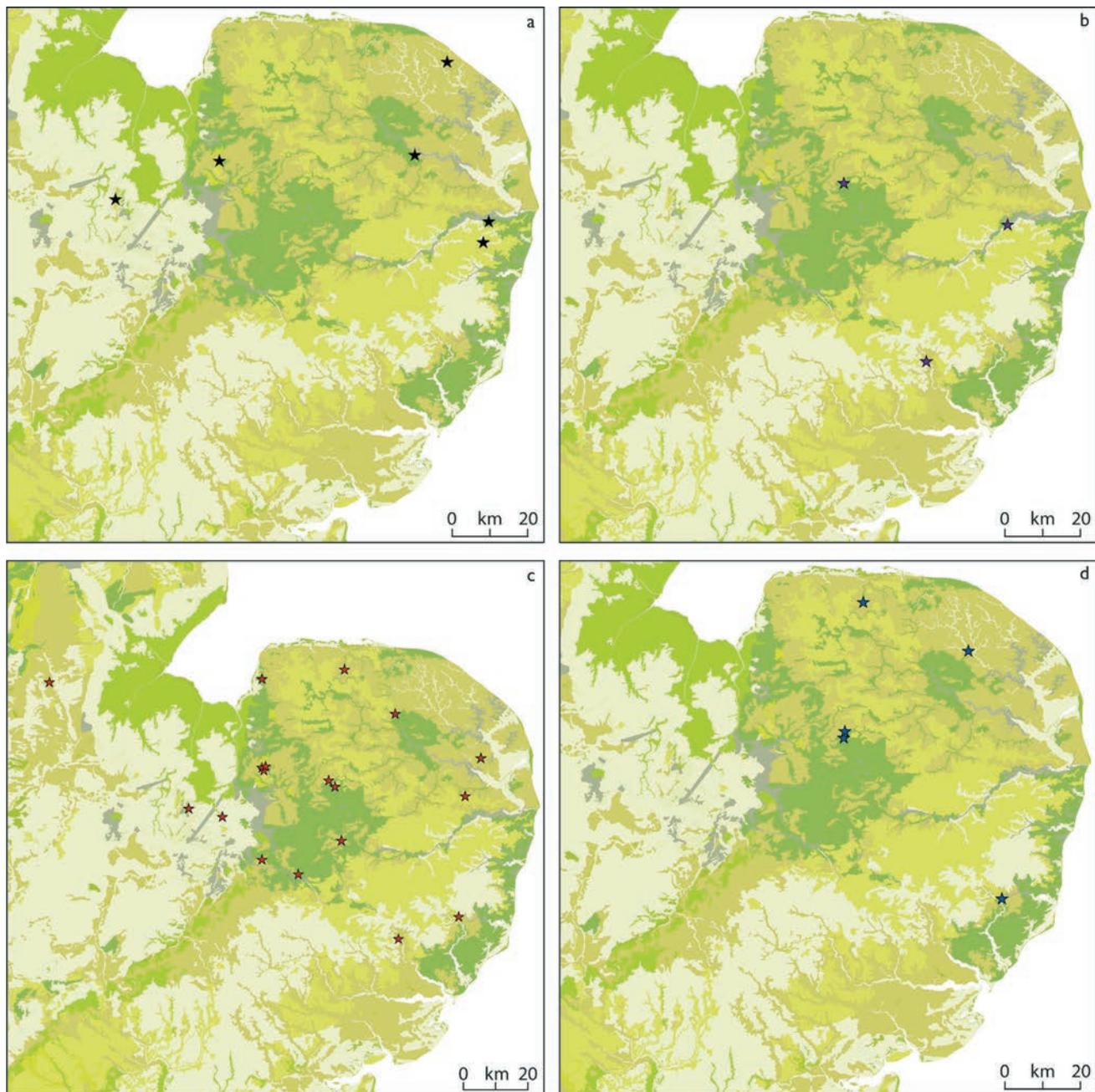


Figure 3.26 Distribution of Boar Horse B (A) sub-type: a) Stater; b) Quarter Stater; c) Unit; d) Half Unit



Figure 3.27 From left: obverse of ABC 2395 (left) and Boar Horse B Quarter Stater die A (right)



Figure 3.28 The trefoil on ABC 2395 (left) and on a Boar Horse B (A) Quarter Stater (right)

Table 3.10 The Boar Horse C Issue

Denomination	No. coins	Main die-groups	Obverse dies	Reverse dies	Plated coins	Plated dies
Stater	51	2	7	11	8	13
Quarter Stater	7	2	2	2	-	-
Unit	435	12	39	102	20	25
Half Unit	39	1	11	13	-	-



Figure 3.29 The Boar Horse C Issue. From left: Stater, Quarter Stater, Unit and Half Unit



Figure 3.30 Similarities between Boar Horse C die 96 and Anted die 1

parallel at a number of sites and that die-group 6 probably represents a continuation of die-group 1.

### 3.4.8 Ecen

The Ecen Units are inscribed ECEN, EDN or possibly just ED; these variants are die-linked with the shorter inscriptions appearing on later dies (Fig. 3.36). Half Units are usually inscribed ECE or ECEV. In the long die-linked sequence of Unit die-group 1, both inscriptions and imagery became progressively cruder (Fig. 3.37). The closely related 'Symbol' Units and Half Units, shown in Figure 3.38, are uninscribed but are analysed alongside the Ecen coinage to which they are die-linked as Half Units and probably Units (Table 3.12). The overall distribution maps for Anted and Ecen Units in Figure 3.39 are broadly similar, although Anted has a slightly stronger fen edge and fenland distribution, which is noticeable in the concentrated line of findspots to the south of Snettisham.

Evidence showing the parallel production of Ecen and Anted Units is discussed and illustrated above (3.4). The first reverse dies in the main Ecen die sequence are

stylistically very similar to the earliest dies in Anted die-group 1 and also to those of the preceding Boar Horse C Unit. The first Ecen die in die-group 1 seems to have been originally destined to be an Anted die (Fig. 3.40): the Anted reversed S can be seen below the horse's head and the E of Ecen seems to have originally been a D. Ecen and Anted Half Unit obverses are similar, but there are various styles of Ecen reverse. The earliest is very similar to early Anted Half Unit dies, as shown in Figure 3.41, and later reverse dies are similar to later Anted Half Unit dies. This is further evidence of the parallel production of the two Issues. Similarly, Anted and Ecen Staters were produced with a shared obverse die and appear to have been minted in parallel.

The die-groups of the Ecen Unit give indications of differing distributions, although the results are likely to have been standardised to some extent by recoveries from dispersed revolt period hoards, which all have broadly similar content (6.5.1; Fig. 3.42). Die-group 1 is well-dispersed but concentrated to the north of Breckland. Die-group 3 appears to have a bias towards East Norfolk, and the few known provenances of coins from Die-group 2 have a Breckland focus. Die-group 4, comprising Symbol coinage, is mainly found in the north-west and the south-east of the region.

The distribution of the Half Unit is more restricted than the Unit, largely excluding the north and the east of the region (Fig. 3.43). There are subtle differences between the die-groups. Die-group 2 is focussed on Saham Toney, which has yielded eight of the 13 finds spots. Die-group 1 has a strong Fenland presence, including the only two examples of the type from Stonea, as well as three finds from Saham Toney. Die-group 3 includes the Symbol Half Unit, but it does not replicate the north-western aspect of the distribution of the Symbol Unit.

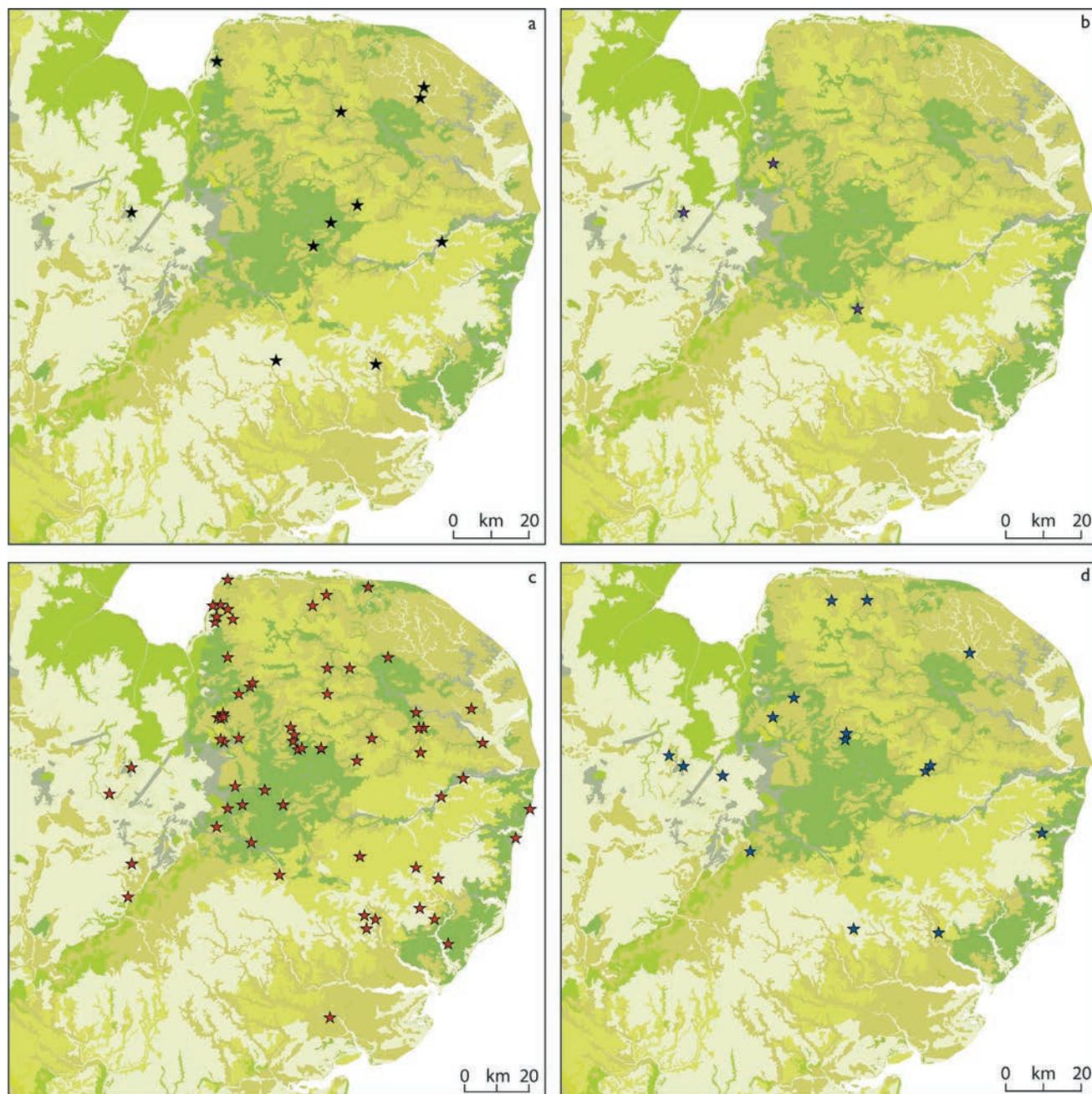


Figure 3.31 Distribution of the Boar Horse C Issue: a) Stater; b) Quarter Stater; c) Unit; d) Half Unit



Figure 3.32 Re-polished false Boar Horse C Stater

### 3.5 Mint group B

Mint B, the last of the three main mints to operate, started production at the beginning of the mid-denominational period, probably in the first two decades of the 1st century AD. This coincided with the introduction of back-to-back crescents as a key motif on East Anglian coinage. Metal analysis has shown that the silver alloy used by Mint B contained more tin than that used by the other two mints (4.4.3). The mint has no obvious antecedents, and it produced only two Issues: Early Pattern Horse (A) and Late Face Horse, both of which were large. Early Pattern Horse

Table 3.11 The Anted Issue

Denomination	No. coins	Main die- groups	Obverse dies	Reverse dies	Coins per die	Plated coins	Plated dies
Stater	17	1	1	2	11.3	3	4
Unit	1164	7	27	45	32.3	46	58
Half Unit	27	2	3	6	6	10	11



Figure 3.33 The Anted Issue. From left: Stater, Unit and Half Unit

(A) comprised Units, Half Units and a very small issue of Staters. The Units are too early to be well-represented in the Boudiccan hoards and are generally rare, having one of the lowest survival rates per die of any significant type of Icenian Unit. Units are often found in poor condition and the dies are difficult to identify.

The final Issue of the mint, Late Face Horse, is exclusively Units which were seemingly produced at multiple sites, as was probably also the case for Early Pattern Horse (A). Late Face Horse differs from the late Issues of the other two mints as it lacks back-to-back crescents and inscriptions. In the past there has been speculation about the dating of Late Face Horse and whether it predated inscribed coinages such as Anted. My analysis of the revolt period hoards indicates that Late Face Horse was produced over a longer period than contemporary Issues, including a period when it was minted alongside the late inscribed types. Whether minting continued until the very end of Icenian coinage is uncertain – the evidence is ambiguous, but I strongly suspect that it did.

### 3.5.1 Early Pattern Horse (A)

Early Pattern Horse (A) differs from other Icenian Issues in having broadly similar obverses for each denomination. These are cruciform with a central back-to-back crescent motif (Fig. 3.44).

The Unit and Half Unit were struck from many dies, but the organisation of production has not been resolved, as recoveries per die are exceptionally low (Table 3.13). The present total of 89 known Unit dies results in this being the third largest issue of Icenian Units. New dies are regularly found and Esty formulae indicate that there may have originally been 131 Unit dies and 52 Half Unit dies, which would make it the largest Icenian issue of Half

Units. The Stater, on the other hand, is rare, although two additional examples have been found since the completion of the database, including two new dies. The Stater appears debased, and the three recorded weights are low, averaging only 5.07g. The reverse of the Stater has an unusual quartered ring or wheel below the horse; this also occurs below the horses on the ‘Biga’ Stater and Quarter Stater of Cunobelin (ABC 2771 and ABC 2807). Other similarities with these North Thames types include leaf shapes above the horse and cruciform forms of obverse (Fig. 3.45).

The distribution of Units shown in Figure 3.2 reveals a concentration in Breckland and the south-west of the region, and the distribution of the two largest die-groups is similar. The few Half Units with a provenance (Fig. 3.46) are mainly from the south-west of the region, including four separate records from the Saham Toney area. This suggests a Breckland focus similar to the Unit.

### 3.5.2 Late Face Horse

Late Face Horse (Fig. 3.47) is the largest Icenian issue of Units in terms of the number of dies used in its manufacture; and is second only to Ecen in the number of known examples. There are no other known denominations.

The head on the obverse appears like a mask or a decapitated head (see 5.4.1). Allen (1970) observed that the head was derived from a Republican denarius (Crawford 1974, type 412/1), but I do not see a particularly strong likeness and therefore find this suggestion unconvincing. The reverse has a kite-like device below the horse, to the left of which is a small device. This varies from die to die and appears to be a form of mintmark.

Allen (1970, 9) separated this Issue into three sub-types partly based upon the presence or otherwise of a moustache on the face of the obverse; those without

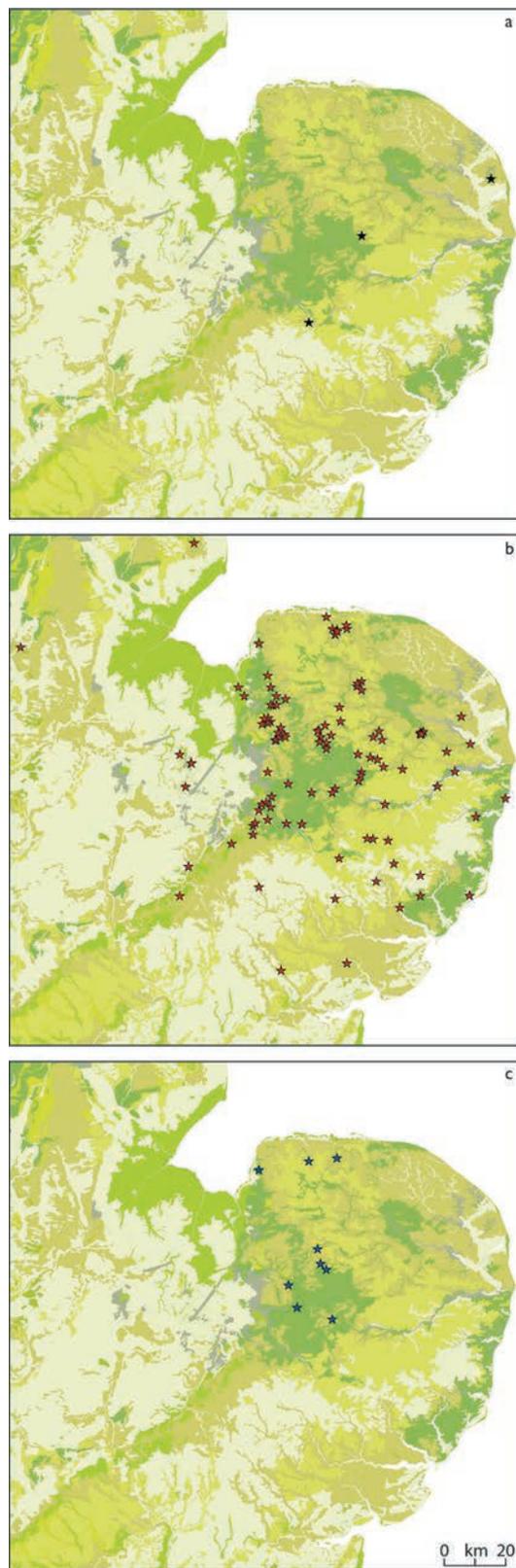


Figure 3.34 Distribution of the Anted Issue: a) Stater; b) Unit; c) Half Unit

were classified as Normal Face Horse A and those with, as either Normal Face Horse B or C. The die-study has shown that Allen's differentiation between B and C is not meaningful, but obverse dies without a moustache are rarely linked to those with one. An exception is die-group V, but in this group the obverses without moustache have a unique additional feature, a crescent-shaped line below the eye.

The Units fall into 23 different die-groups, most of which each contain dies with similar features, a similar style of 'mintmark', and often appear to have been cut by the same hand. In order to try to make sense of the coinage I divided the die-groups into three 'subsets' on stylistic grounds (Table 3.14 and Appendices I.43–I.47). Subset 1 includes most of the moustache-less obverses, and 2 and 3 are divided on more subjective stylistic grounds. There are also a number of unlinked pairs of dies referred to as 'pairs' in Table 3.14. These are often represented by a single coin and are frequently crude or unusual. I have assumed these to be plated although this is not proven.

Attempts to assess the relative chronology indicate that several of the earliest die-groups are in subset 1, but later die-groups from all three subsets appear likely to have been minted in parallel. There appears to be no overall difference in distribution between the subsets, although possibly some between individual die-groups, examples of which are shown in Figure 3.48.

Overall there are fewer known examples per die of Late Face Horse than other late Units such as Ecen and Ece B (see 6.5.3) which, *prima facie*, implies that Late Face Horse predated other late types. I argue that this is misleading as, unlike the other types, Late Face Horse appears to have been minted in small local batches of low volume production. Die-group 19, the largest of the Late Face Horse die-groups, has similar statistics to Anted. I think it likely that the Late Face Horse Unit was produced from a number of separate locations over a longer period than other late types and that some small Late Face Horse die-groups were amongst the final Icenian coins to have been minted, as some have few or no provenanced casual losses.

### 3.6 Mint C

Mint C is the smallest of the three mints, and overall its output differs in distribution from that of the other mints. There has been less found in the north-west and proportionately more in the east (Table 3.15 and Fig. 3.49).

Saham Toney is the mint's earliest identifiable Issue and is likely to have been produced at the same time as a succession of the first denominational Issues of Mint A. I suspect that Saham Toney was minted intermittently over a

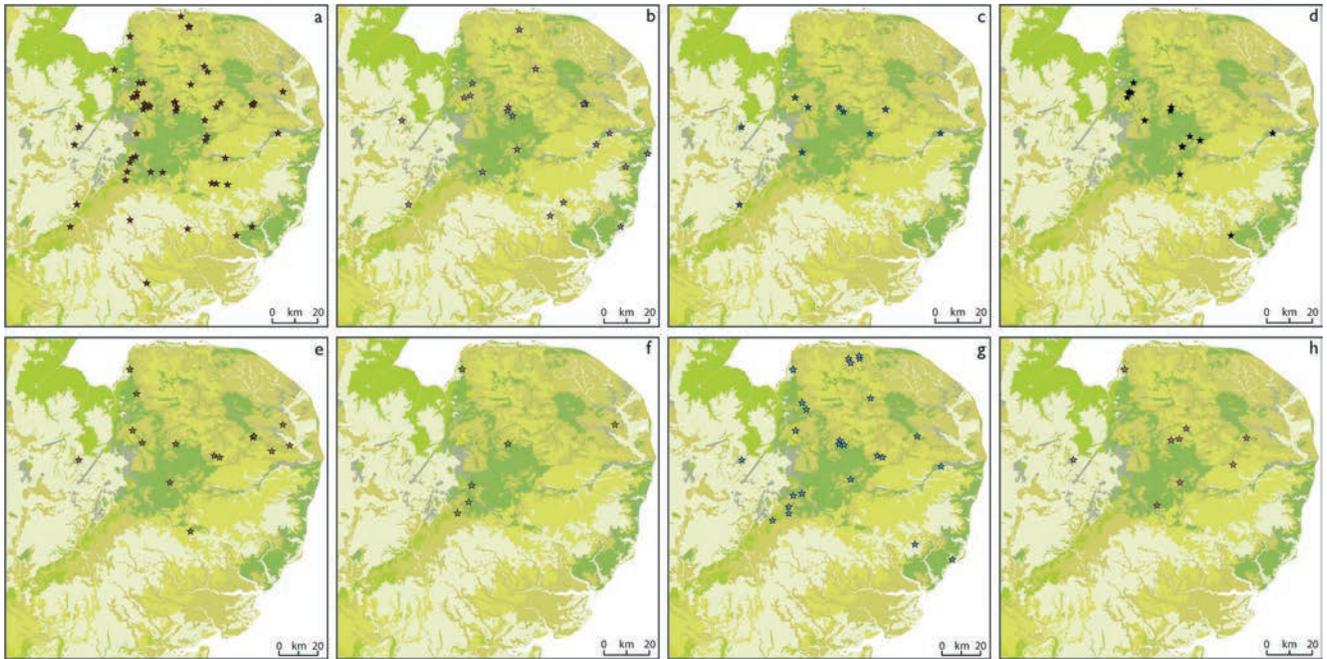


Figure 3.35 Distribution of the die-groups of the Anted Unit: a) die-group 1; b) die-group 2; c) die-group 3; d) plated; e) die-group 4; f) die-group 5; g) die-group 6; h) die-group 7



Figure 3.36 The Ecen Issue. From left: Stater, Unit and Half Unit

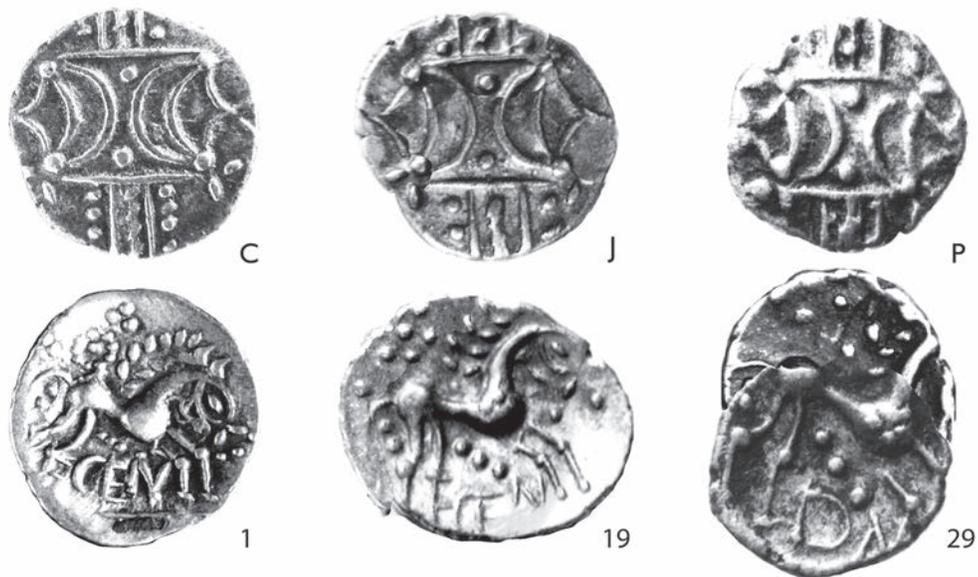


Figure 3.37 From left: Early, mid and late dies from Ecen die-group 1

Table 3.12 The Ecen and Symbol Issue

Denomination	No. coins	Die- groups	Obverse dies	Reverse dies	Coins per die	Plated coins	Plated dies
Stater	4	1	1	1	4	1	2
Unit	1452	3	23	41	45.4	38	43
Half Unit	131	3	8	22	8.7	8	8
Symbol Unit	126	2	2	7	28	-	-



Figure 3.38 Symbol Unit (left) and Half Unit (right)

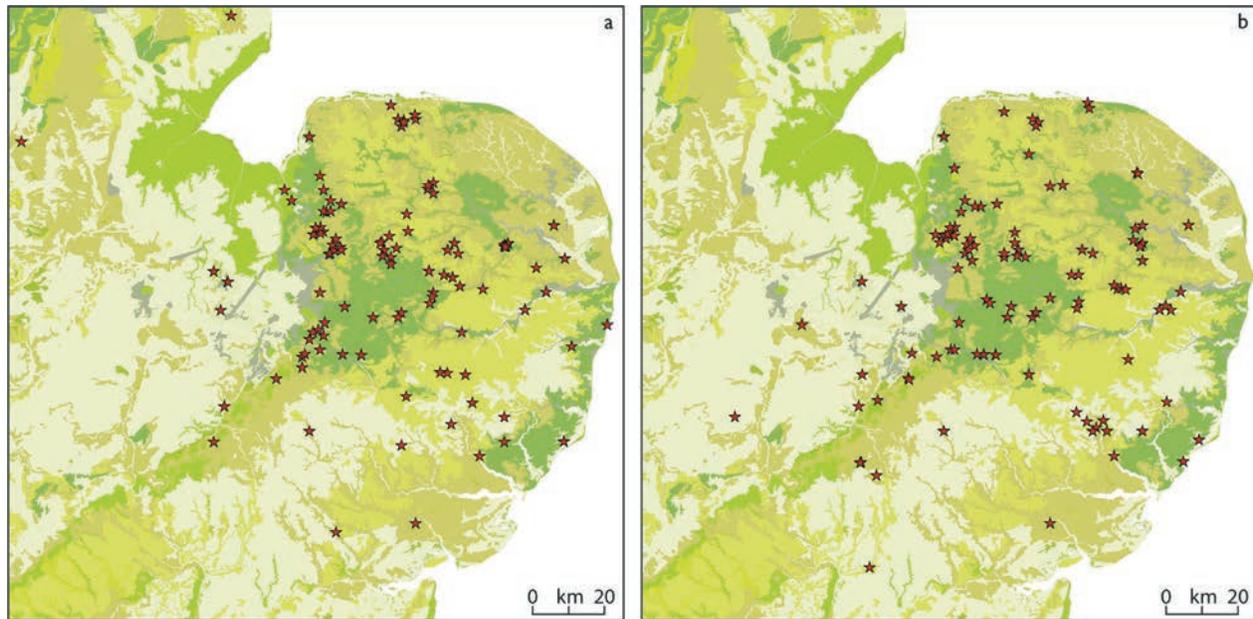


Figure 3.39 Comparison of the distribution of a) Anted and b) Ecen Units



Figure 3.40 Ecen die 1



Figure 3.41 Early Ecen and Anted Half Unit reverses

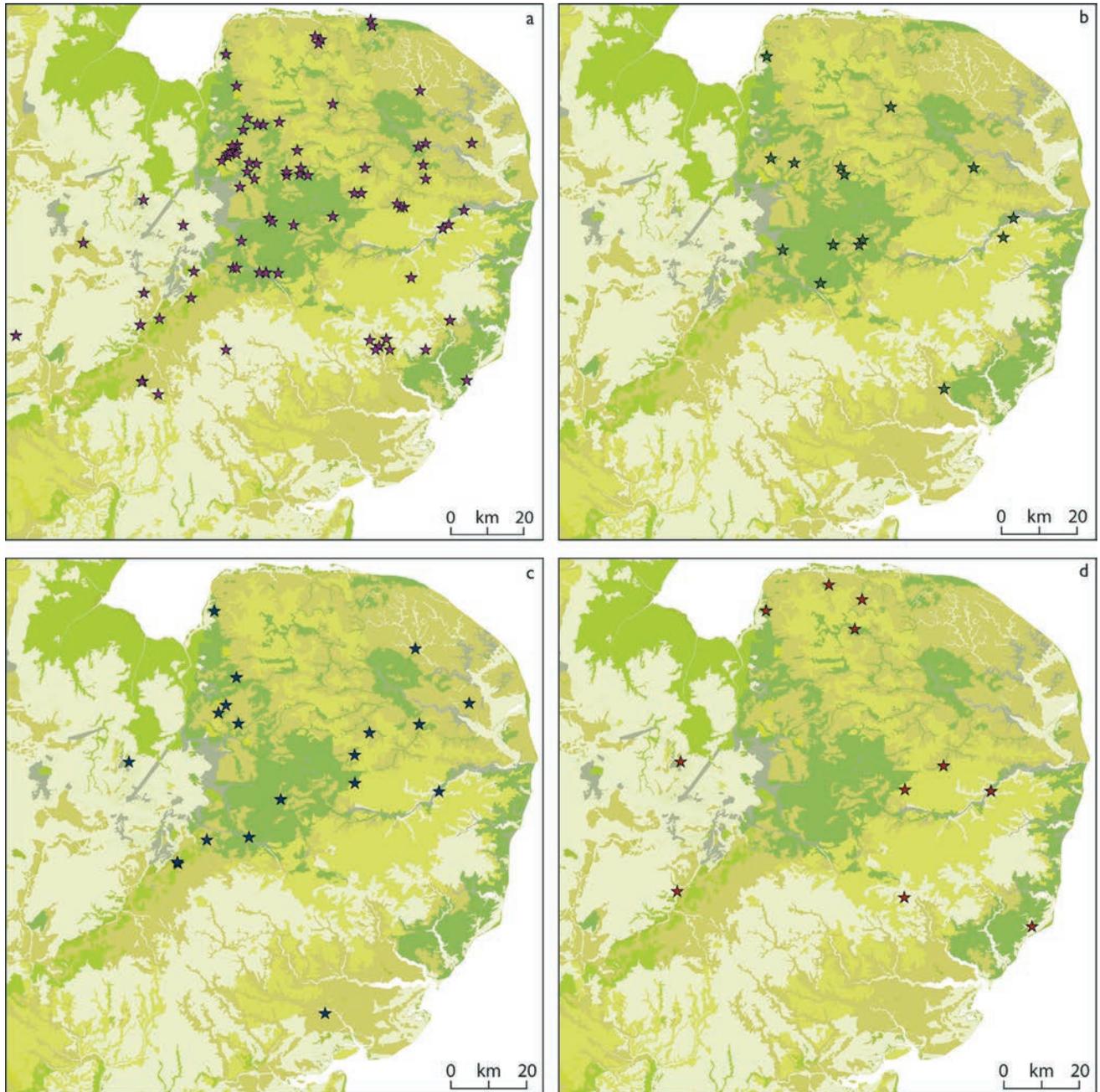


Figure 3.42 Distribution of Ecen Units of the main die-groups: a) die-group 1; b) die-group 2; c) die-group 3; d) die-group 4

lengthy period, although it forms a continuous, die-linked sequence. Like Mint A this mint may have its origins in the early local period, but no clear stylistic or other links have yet been identified. The hoard evidence is slightly ambiguous, but the start of the second Mint C Issue, Early Pattern Horse (B), was probably contemporary with the Mint group A Issue Boar Horse B (6.5.3).

Many early and all later Units of this mint have a distinctive Y-shaped horse's head crossed by an elongated

pellet, which is probably based upon a North Thames Stater (Fig. 5.33). This head is first seen on some Saham Toney Units; stylistic links between these Units and the next Issue of the mint, Early Pattern Horse (B), are shown in Figure 3.50. The horse on Early Pattern Horse (B), and on later Units of the mint, has two lines of three pellets on the breast. These replace the two angled lines seen on the Saham Toney Unit and presumably represent strapping (see Fig. 3.50).

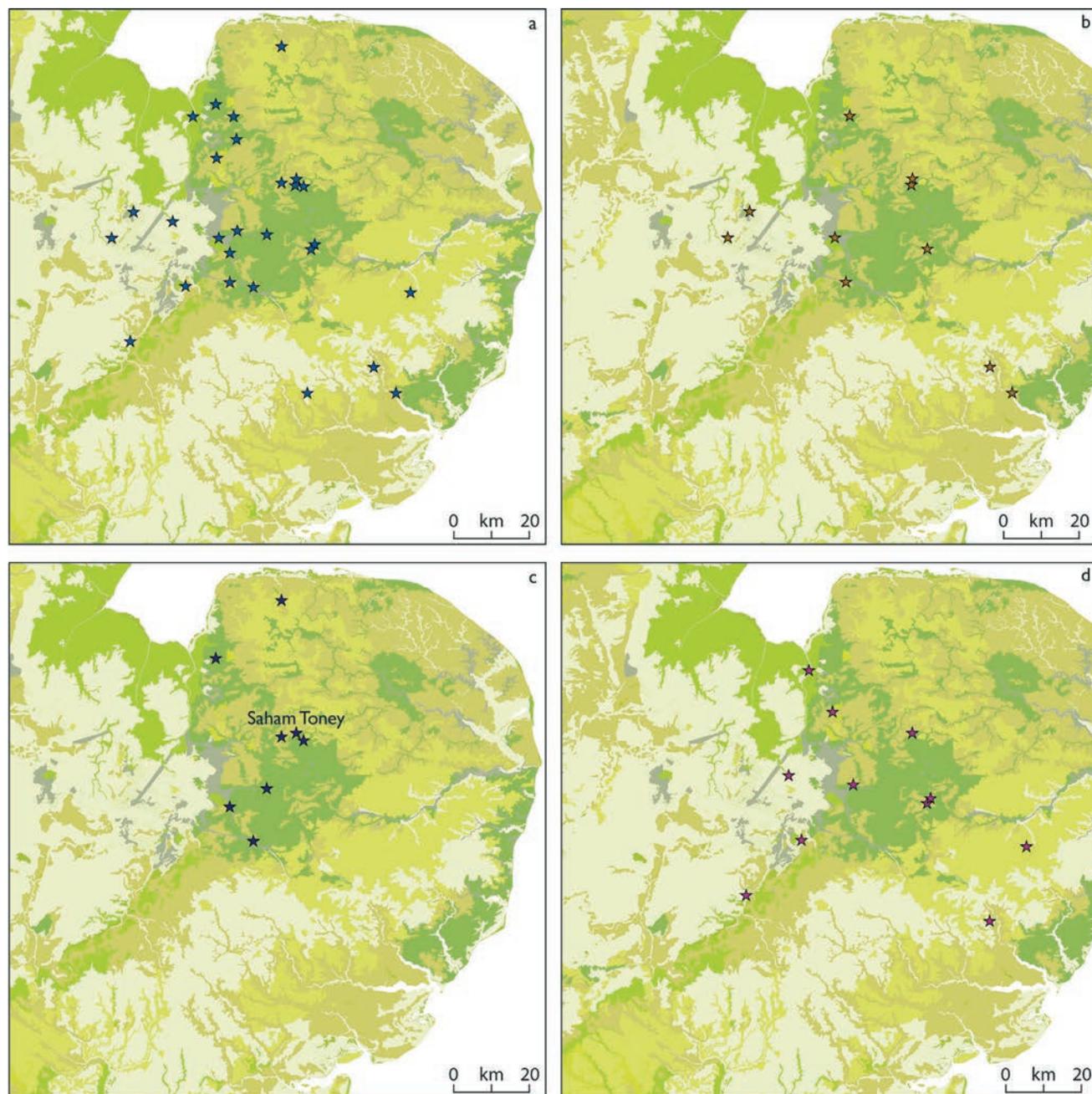


Figure 3.43 Distribution of Ecen Half Units: a) all finds; b) die-group 1; c) die-group 2; d) die-group 3

The Units of the final Issue of the mint are inscribed Aesv, Saenv or Ece. The three inscriptions are die-linked in die-group 4, but the Units of the other three die-groups are solely inscribed 'Ece'. As discussed in section 3.6.3 it appears likely that several sites were involved in the production of this Issue, the die-groups of which have differing distributions.

A few examples of non-Icenian Units being over-struck with Icenian dies were identified in the die-study. All the examples identified so far emanate from this mint.

### 3.6.1 Saham Toney

The Saham Toney Issue appears to have been in production over a lengthy period (Table 3.16). The earliest reverse dies of the Unit and Quarter Stater have ornate horses with unusual 'hooked' feet. These are similar to those seen on early local coinage, such as the late Norfolk Wolf B Stater dies from die-groups 6–8 and Bury D. Later dies have stylistic links to the next Issue, Early Pattern Horse (B), from the mid-denominational period, probably some twenty years

Table 3.13 The Early Pattern Horse (A) Issue

Denomination	No. coins	Main die- groups	Obverse dies	Reverse dies	Coins per die	Plated coins	Plated dies
Stater	2	unknown	1	1	2	4	8
Unit	133	unknown	37	52	3	5	4
Half Unit	12	unknown	8	9	1.4	-	-



Figure 3.44 The Early Pattern Horse (A) Issue. From left: Stater, Unit and Half Unit



Figure 3.45 Similarities between Early Pattern Horse (A) Stater and Cunobelin Biga type (© Chris Rudd)

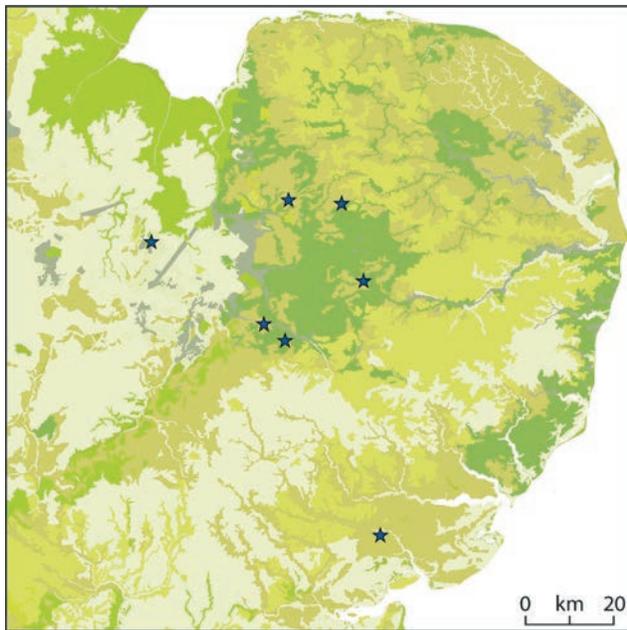


Figure 3.46 Distribution of Early Pattern Horse (A) Half Units around Breckland

after the start of Saham Toney production. The Saham Toney Unit is unique within Icenian coinage in having radically different styles of obverse and reverse in a single die-linked sequence (see Figs 3.51–3.52); this may be linked to the duration of the Issue. One of the obverses of the Unit is very similar to a North Thames coin of Tasciovanvs (ABC 2610), the left-facing head of which is reversed to aid comparison in Figure 3.53. The nose, mouth, chin, eye, ear, beard and hair of both obverses are drawn in an identical manner, and the two dies appear to be by the same hand.

Some Units and a Quarter Stater have clearly been over-struck onto existing coins. The only underlying coin that has been identified is a Kentish Unit of Dubnovellaunus (ABC 321). I have found several unidentifiable examples, and it is possible that a considerable part of the early output of this mint is re-processed coinage from other regions (Fig. 3.54). The over-strike onto the Unit of Dubnovellaunus provides a *terminus post quem* relative to the Kentish coinage, and the close similarities between the Icenian obverse and the Unit of Tasciovanvs provides a further clue as to dating. Unfortunately, the dating of Dubnovellaunus and the North Thames coinages are far from resolved. Leins (2012, 89–90)



Figure 3.47 Late Face Horse Issue: two examples of Unit

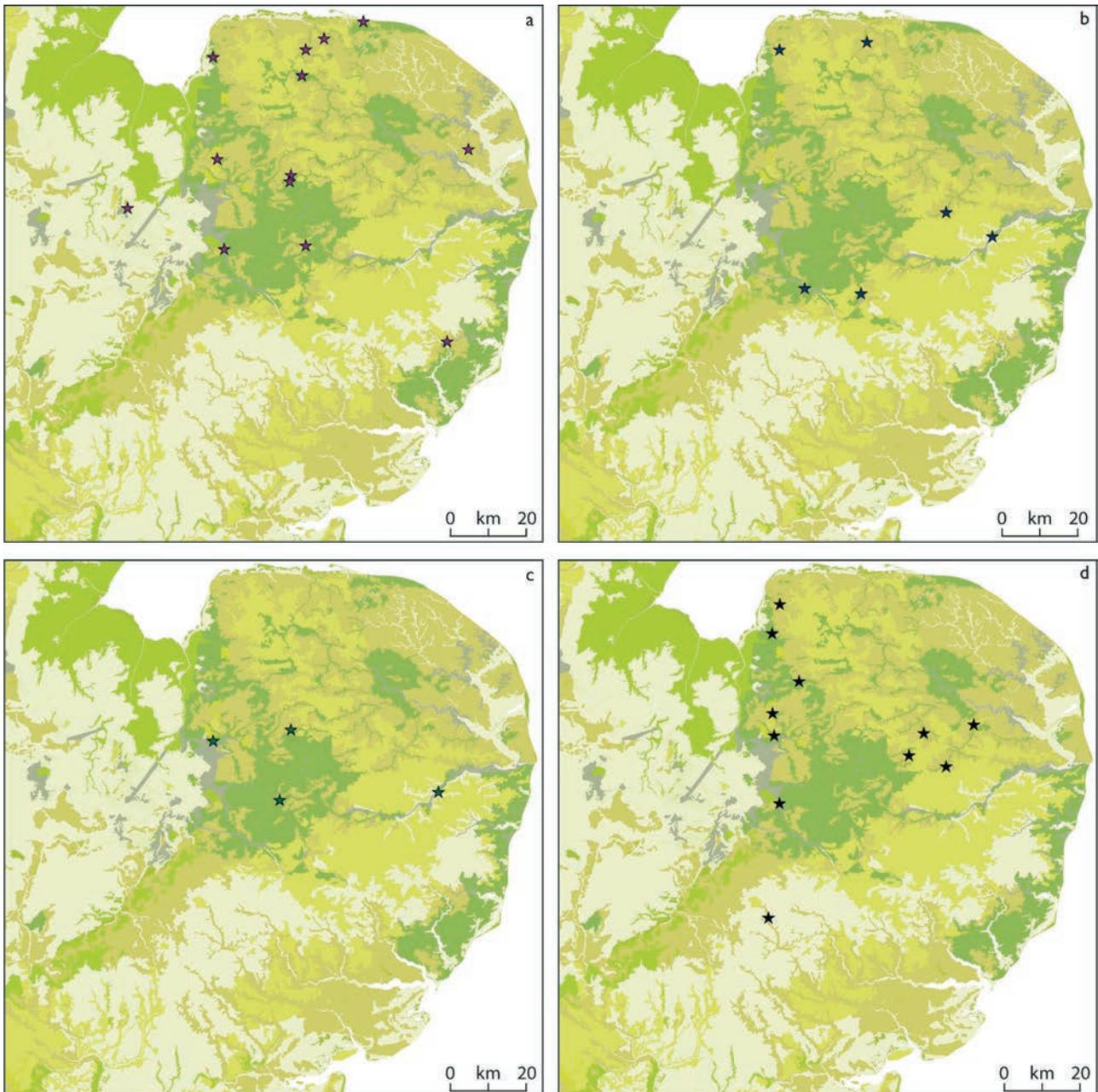


Figure 3.48 Distribution of Late Face Horse die-groups: a) die-group 5; b) die-group 6; c) die-group 10; d) die-group 16

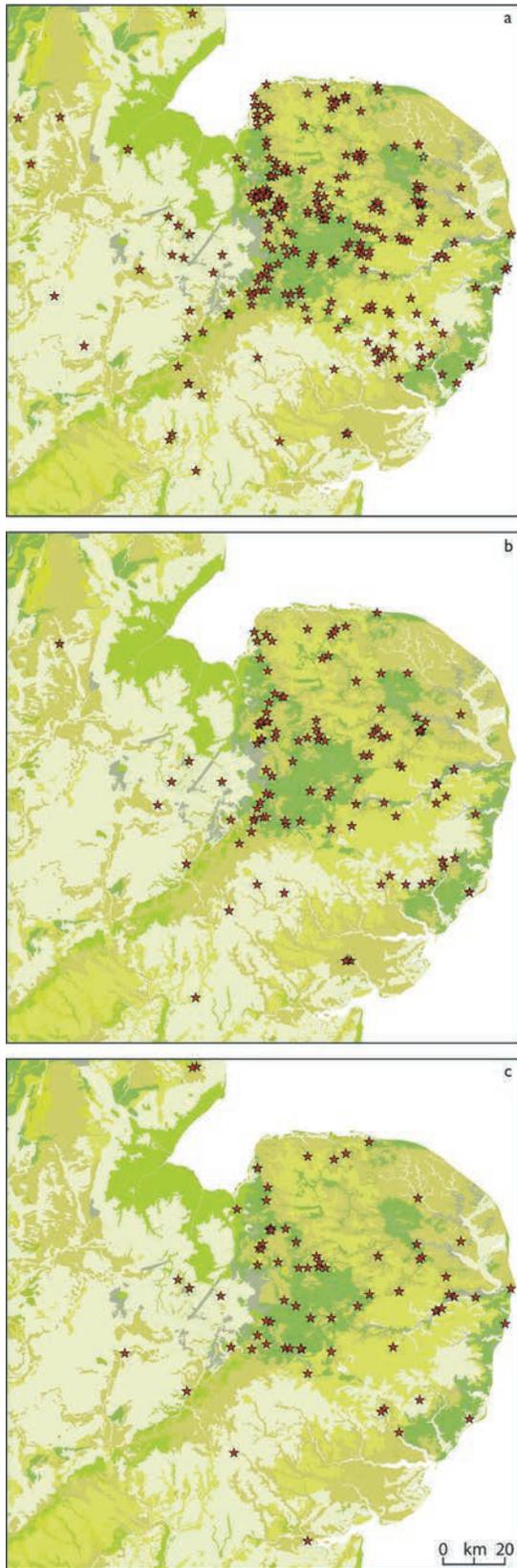


Figure 3.49 Distribution of Units from the three mints: a) Mint A; b) Mint B; c) Mint C

Table 3.14 Late Face Horse die-groups

Subset	Die-groups	Known coins	Obverse dies	Reverse dies
Subset 1	1–9	294	21	32
Subset 2	10–18	359	31	35
Subset 3	19–23	681	31	32
Poor		39		
Official		1373	83	99
Plated		28	13	16
Pairs		14	13	14

Table 3.15 The Issues of Mint C

	Total number of known dies used in production			
	Staters	Quarter Staters	Units	Half Units
Saham Toney	-	5	26	4
Early Pattern Horse B	2	4	33	6
Aesv/Saenv Ece B	-	-	34	-

summarised present thinking, suggesting a dating of c. 20 BC–0 AD for Dubnovellaunus and 20 BC–AD 10 for Tasciovanvs.

The distribution of the Unit is distinctive with an unusual strength in the Waveney valley, to the north-east of Needham, and a strong distribution in central Norfolk (Fig. 3.55). There are no differences in distribution between coins with different styles of obverse or reverse. The 45 coins with a known provenance include nine found separately at Saham Toney over many years; two recorded by Robin Brown (1986) were found 100 yards apart but on opposite sides of Watton Brook. Four examples of the Unit come from the probable ritual site at Fincham in West Norfolk, some 15 miles from Saham Toney. Four examples have also been recorded in South Lincolnshire, probably emanating from a single deposit at Candlesby Hill.

The earlier Large Flan A type has a similar focus on the Waveney valley and also carries a kite symbol somewhat similar to that seen on some Saham Toney reverses (Fig. 3.56). Only a single Large Flan A has been found at Saham Toney, but nonetheless it is possible that Mint C was active in the early local period and produced Large Flan A. This linkage is somewhat tenuous, as the kite is later seen on Late Face Horse Units and also appears on unscripted Corieltavian coinage (e.g. ABC 1818).



Figure 3.50 Similarities between Early Pattern Horse (B) in the centre and Saham Toney Units



Figure 3.51 Saham Toney Issue. From left: Quarter Stater, Unit and Half Unit



Figure 3.52 Saham Toney Issue. Examples of Unit obverse and reverse dies



Figure 3.53 Comparison between Units of Tasciovanvs (left) and Saham Toney (die B, right)

Traces of ACB 321 showing part of DUBNO inscription and ring and pellet from original coin

Figure 3.54 Saham Toney die 4 struck onto Unit of Dubnovellaunus

### 3.6.2 Early Pattern Horse (B)

Each denomination of Early Pattern Horse (B) has a cruciform obverse and a similar left-facing Y-headed horse on the reverse (Fig. 3.57; Table 3.17). Unlike the Saham

Table 3.16 The Saham Toney Issue

	Die-groups	No. coins	Obverse dies	Reverse dies	Plated
Quarter Stater	1	8	1	4	1
Unit	1	70	9	17	1
Half Unit		2	2	2	
Total		80	12	23	2

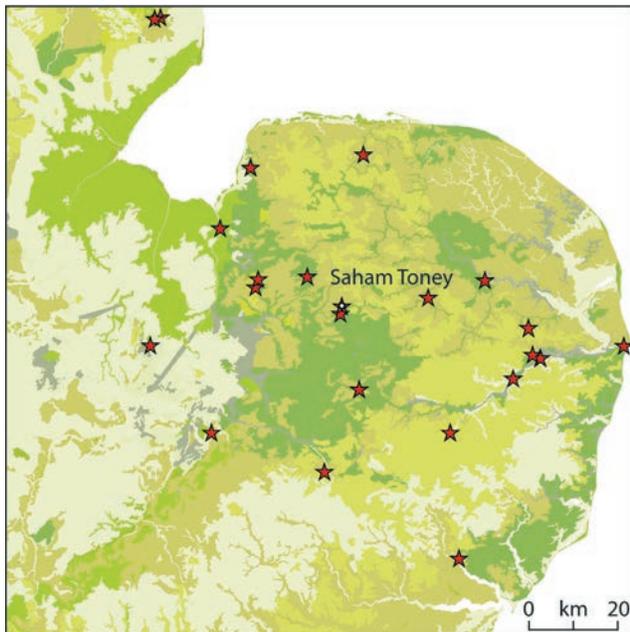


Figure 3.55 Distribution of Saham Toney Units

Toney type there are no signs of coins being overstruck. Three of the denominations have a small crescent echoing the shape of the upper front rear leg (Fig. 3.58). The only other instance of the crescent so far noted on an Icenian coin is on a recently discovered example of a Saham Toney Unit, struck by the very late die 14, shown in Figure 3.59. In this case the crescent is in a slightly lower position on the die, and it occurs behind the front rather than the rear legs, presumably because the horse is reversed. This is perhaps a mintmark of some type and demonstrates the close relationship between the Saham Toney and Early Pattern Horse (B) Issues. The cruciform pattern of the obverse of the Stater appears to be derived from Whaddon Chase Staters (ABC 2240), although a design almost identical to Early Pattern Horse (B) also appears on a North Thames Stater of Addedomarus (see Fig. 3.60).

The Stater and two of the three reverse dies of the Quarter Stater are only known from a single example; the Esty forecast is that there were originally seven Quarter Stater reverse dies. Most of the Unit dies are from a single die-group, but there is a small second die-group that may represent secondary production activity. The Unit is found at low volumes in the late hoards, the analysis of which implies a dating broadly similar to Boar Horse C (6.5.3).

Unit die-group 1 is found in central and southern Norfolk (Fig. 3.61) with a cluster around Saham Toney where five Units have been found; there are also seven records from Fincham. The three provenances for die-group 2 include two from the south-east of the region. Finds of the Half Unit have been mainly in the centre and west of the region (Fig. 3.62).

### 3.6.3 Saenv, Aesv and Ece B

The three types of Unit, Saenv, Aesv and Ece B, are only readily distinguishable by their inscription (Fig. 3.63). As the three inscriptions are die-linked, I have treated them



Figure 3.56 Comparison between kites on Large Flan A (left) and Saham Toney (right)

as a single Issue. I strongly suspect that the late Stater inscribed Ece also belongs to this Issue; it is known from three examples struck by two reverse and a single obverse die. It is not die-linked to the Anted and Ecen Staters from which it has subtle stylistic differences, including its forelegs which are closer to those of some Ece B Units (Fig. 3.64). There is also a poor photograph in Henry Mossop's records at the Celtic Coin Index of what may be a Half Unit related to Ece B (M321); this is reproduced in Appendix I.53.

Previous studies of this coinage have assumed that the earliest of the three inscriptions was Ece B followed by Saenv and then Aesv, with the latter being a very late type. I have found that the obverse die used for Saenv and Aesv was later used to strike an Ece B Unit (Fig. 3.65). On the left of Figure 3.65, Saenv/Aesv obverse die A paired with Saenv die 1 is shown, and on the right, the same obverse die paired with Ece B die 22. Die wear shows Ece B to be the later type. This does not definitively prove that all Ece B's postdate Saenv as Ece B reverse die 22 has not yet been found die-linked to other Ece B's. This and other chronological evidence is discussed in 6.5.3.

Unit die-groups 1 to 3 are exclusively Ece B. Die-group 4 contains Aesv and Saenv dies and Ece B die 22 (see Table 3.18). Coins from die-group 3 are more dished than those from the other die-groups, although the elements making up the imagery are identical. The body of the horse on the reverse of several dies is very similar and may result from the use of a punch.

Die-groups 1 to 3 have differing distributions (Fig. 3.66), differences which are supported by finds from key sites and from outside the region shown in Table 3.19. This leads to the supposition that die-groups 1 to 3 represent separate production sites. Die-group 1 had the largest output and is the most widely distributed. This indicates that it probably succeeded die-group 1 of the Early Pattern Horse (B) Unit, but had a greater distribution in western Norfolk from Snettisham to the south of Fincham.

Die-group 2 has three records from the Waveney valley and may thus be the successor to die-group 2 of Early Pattern Horse (B) and in turn to the Saham Toney Issue and possibly even the Large Flan A Unit. This die-group has an unusually high proportion of recoveries from outside of the region; coins have been found in Dover, Broadstairs,

Table 3.17 The Early Pattern Horse (B) Issue

Denomination	No. coins	Die- groups	Obverse dies	Reverse dies	Plated coins	Plated dies
Stater	1	-	1	1	-	-
Quarter Stater	5	1	1	3	-	-
Unit	133	2	12	21	10	12
Half Unit	12	1	2	4	3	6



Figure 3.57 Early Pattern Horse (B) Issue. From left: Stater, Quarter Stater, Unit and Half Unit



Figure 3.58 From left: Small crescent on Unit, Quarter Stater and Stater of Early Pattern Horse (B)

Maldon and Burton Hastings in Warwickshire, as well as two from Cambridge. The percentage of coins from outside the region for this die-group is the highest in the entire Icenian series. The small and distinctive die-group 3 has its focus in the south-west of the region with no recoveries from either Fincham or Saham Toney.

The distribution of the Saenv die-group is similar to die-group 1, but it is more focussed on Breckland. Saham Toney has generated 25% of all non-hoard finds with a provenance, but surprisingly there is only a single record from Fincham. I suspect that the Saenv die-group was the immediate successor to die-group 1 of the Early Pattern Horse (B) Unit followed by die-group 1 of Ece B, and that Ece B die-groups 2 and 3 were among the final Icenian

coinages (see also 6.5.3). The non-hoard provenances for die-group 2 are uniquely dispersed, and it is tempting to see this as being connected to the aftermath of the Boudiccan revolt, although alternative trading-related scenarios are also possible.

### 3.7 Local coinage of the denominational periods

This section discusses eight types illustrated in Figure 3.67, which appear unlikely to have been produced by the three major mints: Mildenhall Quarter Stater and Half Unit, Cani Dvro Unit, Antedi Sia Units and Half Units, Ali Sca Unit, Esv Prasto Unit, and Ece A Unit. As Table 3.20 shows, most of these are small issues.



Figure 3.59 Small crescent below Saham Toney Unit die 14



Figure 3.60 Stater obverses of Early Pattern Horse (B) (left) and Addedomarus ABC 2514 (right) (© Chris Rudd)

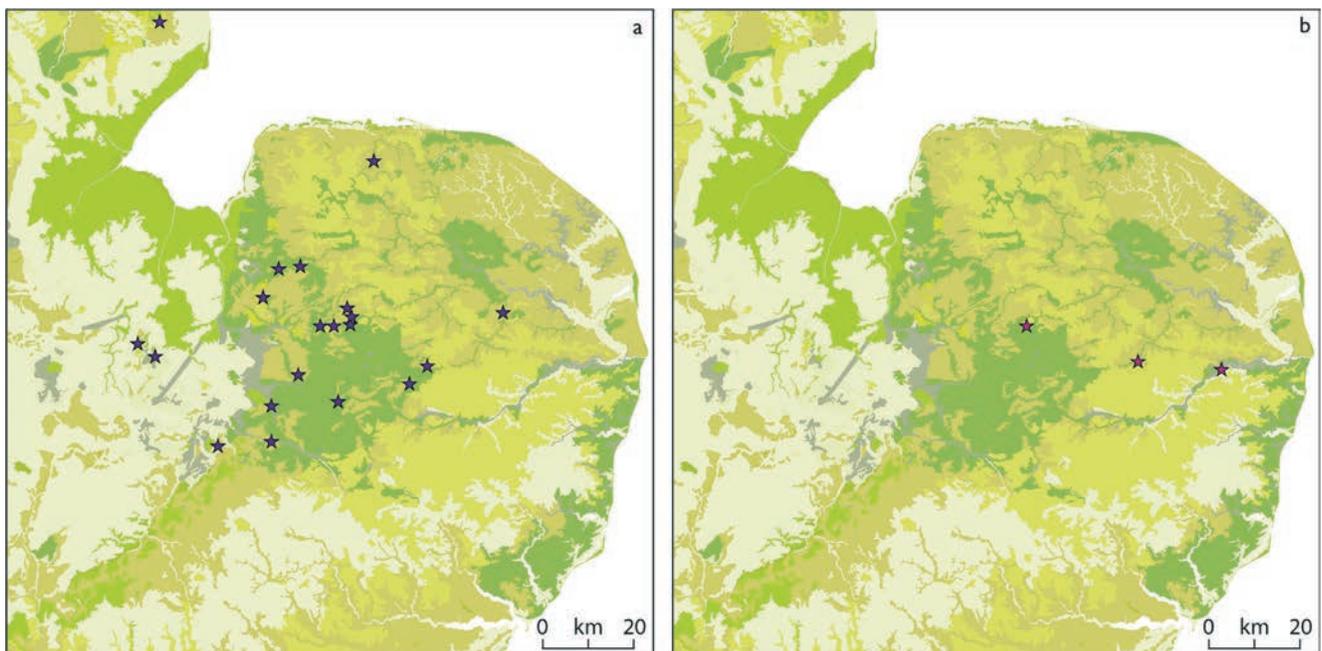


Figure 3.61 Distribution of Early Pattern Horse (B) Units: a) die-group 1; b) die-group 2

The Mildenhall Quarter Stater and Half Unit were given related names because of similarities in the style of the horse on the reverse. There are no geographic links, however, and I suspect that they are not part of a denominational grouping. There are some stylistic similarities between these two types and the Saham Toney Issue of Mint C. The back-to-back crescents on the Quarter Stater imply that they probably date from the denominational periods.

The Cani Dvro Unit is stylistically closely related to Boar Horse C, and it probably overlaps with the end of Boar Horse C and the beginning of Anted. Its inscription may be the first on an Icenian coin (see 5.7). The small issue size, lack of other denominations and distribution (Fig. 3.68) imply that it is a local type from the south-west of the region. I have treated the type as a local issue, but in view of similarities to Boar Horse C it is possible that it may have been produced by Mint A alongside that Issue.

There are only single examples of the Antedi Sia Units and Half Units, which may both come from Mildenhall in Suffolk. These are the only Icenian types with the tablet form of inscription more frequently seen in North Thames

and elsewhere. Whilst the obverse inscription links these coins to other Anted types, stylistically they are different and were probably minted to different weight standards. The Sia element of the inscription may be related to the Sca element of the inscription on the Ali Sca Unit, to which they are also linked by low weight and the style of the horse's head on the Antedi Sia Half Unit.

The Ali Sca Unit and its Scavo sub-type are separated by obverse design and inscription, the alternative readings of which are discussed briefly in section 5.7. The Scavo sub-type was first reported in 2002. Although I have not carried out a comprehensive search, it is the only Icenian type that I have found with fixed die alignments, indicating that obverse and reverse dies may have been attached to each other. This initially caused me to doubt the authenticity of the sub-type, concerns which have been largely allayed by a study of corrosion on some examples. AliSca and the Scavo sub-type probably form a single sequence with Scavo coins being the earliest, although as shown in Figure 3.69 they may have differences in distribution. Overall they have a more north-easterly focus than other Icenian types.

Esty calculations indicate that there may have originally been 21 Ali Sca dies, the large issue size accounting for its wide distribution and the existence of the core of a plated Unit. The style of composition of the horse and boar and their surrounding devices are not typical of East Anglia, and elements evoke the coinage of Cunobelin, including the leaping horse which

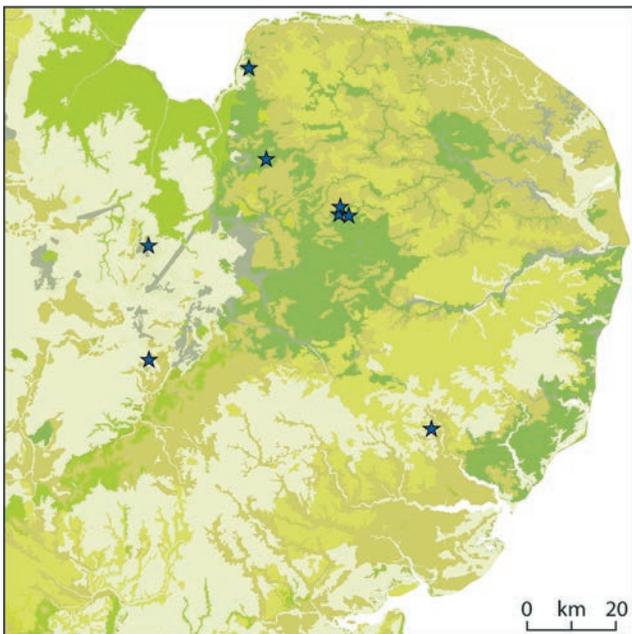


Figure 3.62 Distribution of Early Pattern Horse (B) Half Units

Table 3.18 The Saenv, Aesv and Ece B Units

Die-group	No. coins	Obverse dies	Reverse dies
4 Saenv etc.	146	1	4
1	366	5	14
2	143	2	3
3	61	1	4
Unclear	6		
Subtotal	722	9	25
Plated	6	3	5
Total	728		



Figure 3.63 From left: Units of Saenv, Aesv and Ece B

is similar to the ‘dog’ on the right of Figure 3.70. The high silver content, inscription, distribution and rarity of Ali Sca, and its similarities to the coinage of Cunobelin, indicate that it is another very early inscribed coinage, say from c. AD 25, probably originating in north-eastern Norfolk.

The design of the Esv Prasto Unit is not typically Icenian, and much has been written about possible Roman prototypes. However, the closest parallel is a slightly less decorative Unit of Cunobelin (Fig. 5.34). The important inscription is discussed in section 5.7. Esv Prasto has been recorded from only three sites: 11 Units from Joist Fen (6.7), three from Fincham (both in the west of the region), and the other from Briston, in north Norfolk (Fig. 3.71). I suspect that Esv Prasto is a small sub-regional type from western Norfolk and was probably minted in the last decade or so before the Roman conquest. The highest recorded weight of Esv Prasto is only 1.05g – a target weight much lower than other Units. This may explain its absence from most late hoards which tend to be composed of Units with a similar target weight.

The Ece A Unit was minted in a single unbroken sequence of 18 dies; three of the final four are the least common of the 11 reverse dies, indicating that they were probably still in use when production ceased. There are 407 known examples of the type but only two known plated

coins, an exceptionally low ratio for a late Unit. As shown in Figure 3.72, the facing horse on the reverse appears to be closely related to, and may be based upon, a bronze Unit of Cunobelin (ABC 2975). The distribution appears to be focussed on the centre of the region and lacks the fen edge concentration seen for many other types such as Anted, which I have shown for comparison in Figure 3.73. There is a scatter of coins from outside the region, including an important example in a pre-conquest context in the Hallaton hoard (6.6.1).

### 3.8 Summary

In this chapter I have examined the coinage of the denominational periods. Their minting probably began in the second decade BC and ended with the Boudiccan revolt of AD 60/61. The period started with the re-establishment of the quality of gold coinage after its extreme debasement at the end of the early local period. From the start of the denominational periods, gold and silver types became stylistically linked, and I have allocated most to a modest number of separate Issues. Stylistic links between the different Issues, and evidence from hoards, show that these Issues were produced by three main mints which were ultimately all producing Issues in parallel.

Prior to this study, most individual types of Icenian coinage had not been related to each other in denominational groupings, and the output of the different mints had not



Figure 3.64 Ece Stater from dies B:4

Table 3.19 Finds from outside normal distribution area and from two major sites

Die-group	Non-hoard provenances	Found outside region	Fincham	Saham Toney	Other
4 Saenv	16	1	1	4	10
1	40	5	5	7	23
2	17	6	5	0	6
3	7	1	0	0	6



Figure 3.65 Saenv and Ece B die-link

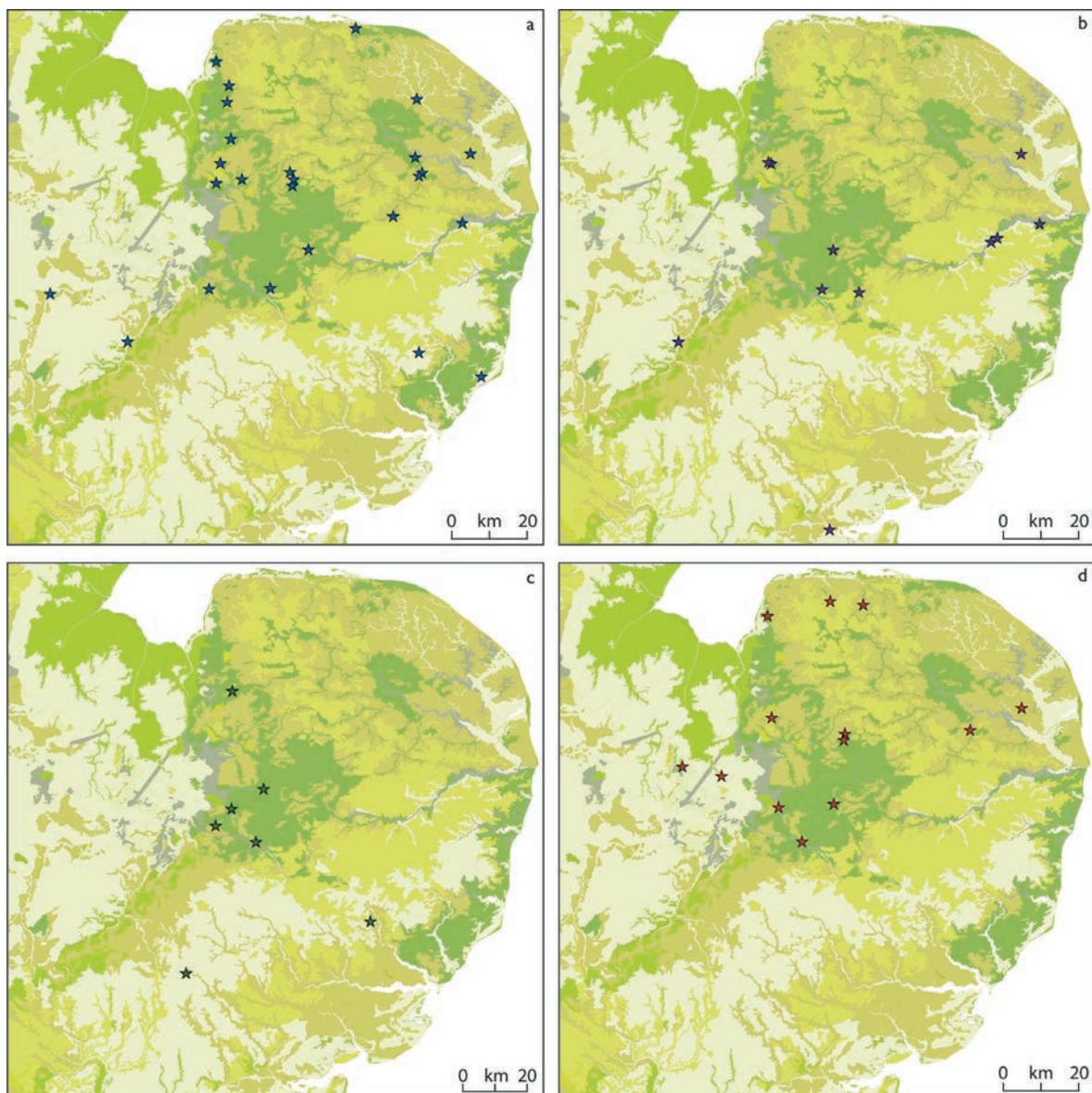


Figure 3.66 Distribution of Saenv, Aesv and Ece B Issues: a) die-group 1; b) die-group 2; c) die-group 3; d) Aesv and Saenv



Figure 3.67 Local coinage types of the denominational periods

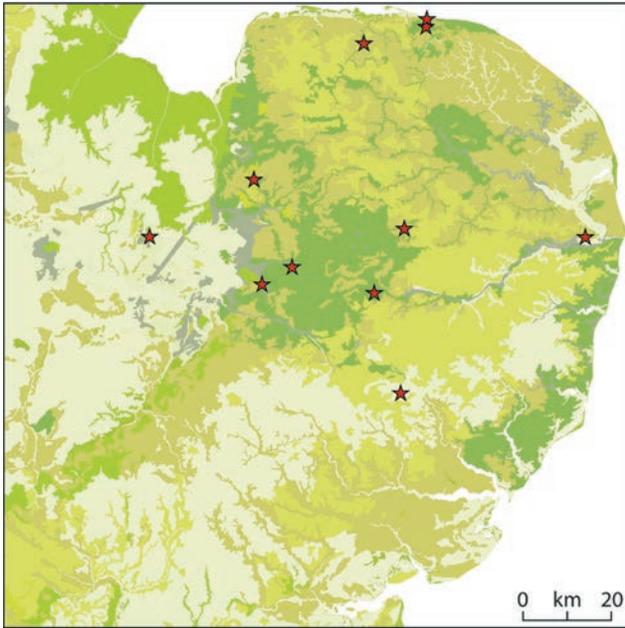


Figure 3.68 Distribution of Cani Dvro

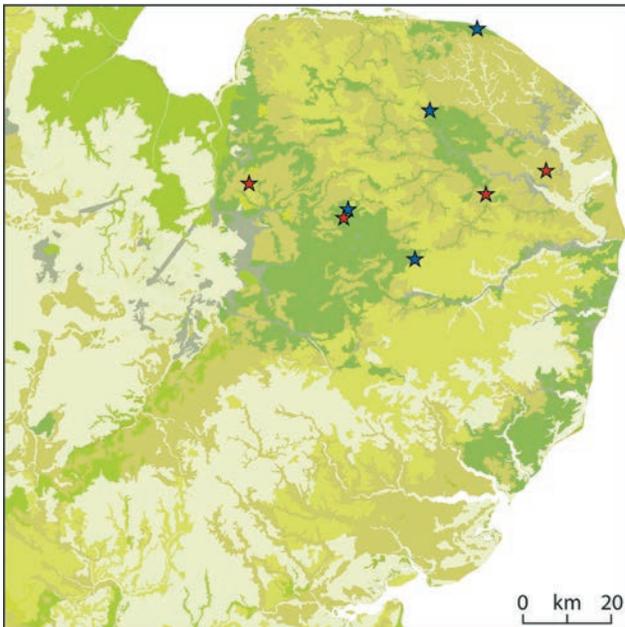


Figure 3.69 Distribution of Sca (red) and Scavo (blue) Units

been identified. Although there were thought to be separate 'streams' of coinage included in the late hoards of silver (1.6), the Icenian coinage as a whole appeared to be a mass of separate types. I have consolidated 76 separate types listed in ABC into 13 Issues from three mints. As so many of these links between types have been made for the first time, details of some of the evidence that has helped to confirm them were included in this chapter.



Figure 3.70 Cunobelin bronze Half Unit ABC 2990 (© Chris Rudd)

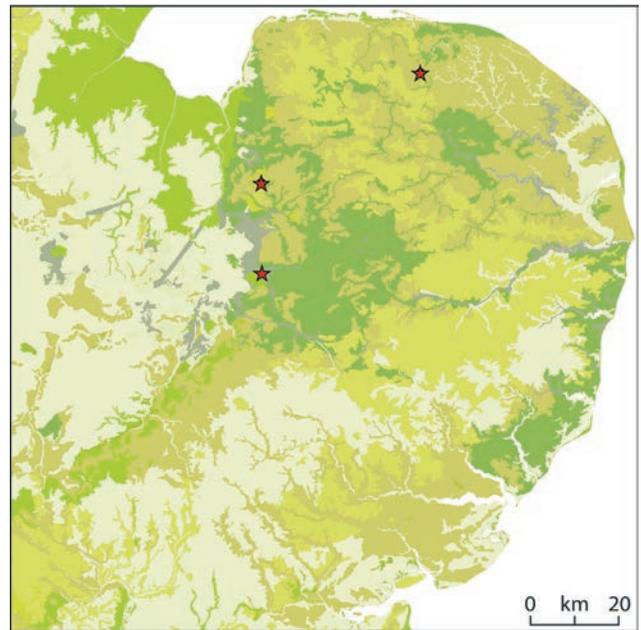


Figure 3.71 Distribution of Esv Prasto



Figure 3.72 Ece A (left) and Cunobelin reverses (© Chris Rudd)

The denominational coinages were carefully structured and ordered, and stylistic variation within any particular type of coin was gradually reduced. An example of this can be seen in Mint C, between the Saham Toney and the ensuing Early Pattern Horse (B) Issues: the former has several different styles of reverse and the latter none. The

Table 3.20 Later local types

	<i>No. coins</i>	<i>Die-groups</i>	<i>Obverse dies</i>	<i>Reverse dies</i>	<i>Weight (grams)</i>	<i>Coins per die</i>	<i>Plated</i>
Mildenhall Quarter	2	1	1	2	0.99–1.07	1.3	-
Mildenhall Half Unit	2		blank	1	0.81 & 1.01	2	-
Cani Dvro Unit	48	1	1	3	1.23–1.24	24	1
Antedi Sia Unit	1		1	1	0.94	1	-
Antedi Half Unit	1		1	1	0.51	1	-
Alife Scavo Unit	14	1	2	2	Max 1.13	7	
Ali Sca Unit	9	unclear	5	5	Max 1.15	1.8	1
Esv Prasto Unit	16	1 & pair	3	5	Max 1.05	4	1
Ece A Unit	407	1	7	11	Table 4.7	45.2	2

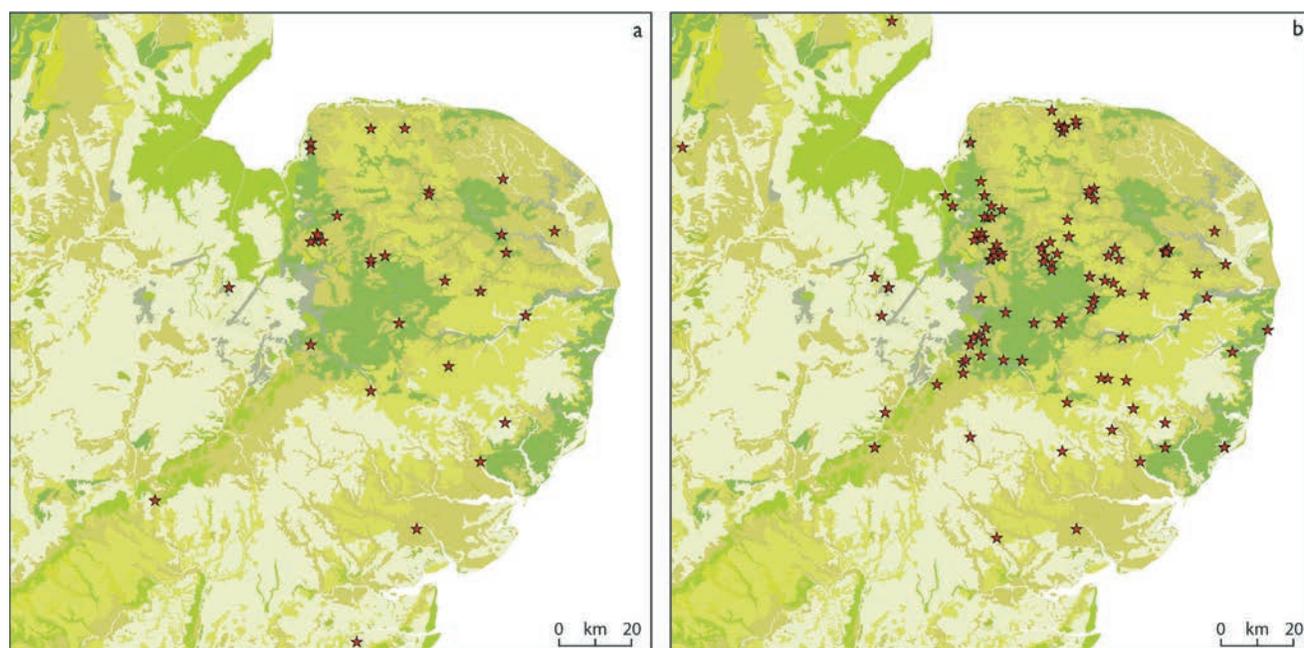


Figure 3.73 Distribution of Ece A: a) Ece A; b) Anted

denominational period coinage gives the appearance of being part of a cohesive monetary system; this becomes increasingly obvious with the later Issues of each mint.

The use of gold became less prevalent with time; some later Issues were only produced in silver or with very few dies for gold coinage. This chapter has revealed the large scale of coinage production with Mint A latterly minting two Issues in parallel. All mints eventually appear to produce in a number of locations to common standards

of imagery and weight. The three main mints dominated denominational period coinage production. Nonetheless, a few types continued to be minted in low volumes, often for local usage, alongside the output of the major mints. This chapter has shown how back-to-back crescents started to be widely used across the entire coinage at approximately the same time. The motif was subsequently used on all major Issues with the exception of the final Issue of Mint C. This will be addressed in more detail in Chapter 5.

# Chapter 4

## Production: metallurgy, weight accuracy, minting and scale

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### 4.1 Introduction

This chapter combines the analysis of Icenian coinage into chronological periods, mints, denominations, Issues and types presented in Chapters 2 and 3 with empirical evidence that gives an indication of production activity or efficiency. This provides clues as to the purposes of Icenian coinage and whether these were consistent across time and for all types. The most important empirical data are weight, metal content and number of dies, which are all discussed in this chapter.

This chapter also explores whether the change in Icenian coinage from the early local period (when imagery appeared to be a primary concern and production was often local) to the later denominational coinages (which have the appearance of being mass produced) is reflected in Icenian control of production variables. It also examines the production scale of the coinage. By combining data on die numbers, weight and metal content with the chronological analysis of the coinage, it has been possible to assess and compare the relative scale of the coinage over the various periods of its issue.

The later coinage has a form of hierarchy. There were three main mints and each produced a series of Issues. Each Issue was usually composed of three or four types of coin, each of a different denomination. Each type of coin was often composed of separate die-linked sequences which I have called die-groups. In this chapter some of these different groupings of coinage are examined to assess whether there are variations in their production characteristics.

The first section of the chapter assesses the number of dies used in production. The results of the die-study are summarised and an estimate of the original die population is computed using the Esty formulae. This is followed by an examination of coinage weight and the extent to which this was controlled as part of the minting process. There is then a similar examination of metal content and the control of the alloys used in minting. The next section examines whether there were standard ratios between denominations of coinage based upon metal content. This is followed by an assessment of overall production volumes and metal usage for the various periods.

Section 4.7 draws together information about the organisation of minting. This starts with the physical evidence of minting and then addresses evidence from the die-study. Before the conclusion I briefly address the relative scale of plated coinage, as I strongly suspect that this is an indicator of the economic use of coinage.

### 4.2 Die numbers

Chapter 6 explains how the hoarding of Icenian coinage was intermittent and focussed on Staters and later Units; this will have produced bias in the surviving population of coins. In order to draw meaningful conclusions from the analysis of dies, it is therefore necessary to adjust the numbers to reflect the sample size in each category. Table 4.1 shows the number of known dies by period and denomination. In order to compensate for this bias in the sample, I have used formulae produced by Warren Esty (2006, 359–60); these enable one to estimate the original population of dies for different types of coinage from the results of a die-study. Esty's formulae are based upon an assessment of the probability that the next coin found of a particular type will be from a die that is already known. The formulae provide a point estimate that is the 'best guess' of the original die population and also a range within which there is a 95% probability that the original population will fall.

In order to test the applicability of Esty's formulae on Icenian coinage I have re-created the Icenian contents of the Celtic Coin Index as it would have been in 2000, 1990 and for some types in 1965, and then compared the results of Esty calculations based on that historical data with current knowledge. The results indicate that the formulae provide a realistic estimate of original die numbers, except for the very few types that have proportionately high numbers of dies known from a single example. In these cases it may underestimate the original population. To estimate the total original population of Icenian dies I therefore applied the formulae to my database of Icenian coins – the resultant point estimates are summarised in Table 4.2. The table shows in red the percentage increase of the point estimates over known die numbers.

Table 4.1 Known Icenian dies

Period	Number of dies				
	Stater	Quarter	Unit	Half Unit	Total
Early local	144	12	204	24	384
First denominational	80	55	113	30	278
Mid-denominational	55	13	337	59	464
Final coinages	7	0	363	41	411
Later local	0	0	40	10	50
<i>Totalw</i>	286	80	1057	164	1587

Table 4.2 Estimate of total dies based on Esty formulae

Period	Number of dies									
	Stater		Quarter		Unit		Half Unit		Total	
Early local	179	23%	18	50%	248	22%	44	83%	489	27%
First denominational	91	14%	69	25%	148	24%	60	100%	368	32%
Mid-denominational	63	15%	17	31%	412	22%	109	85%	601	30%
Final coinages	9	29%	0	0	384	6%	47	15%	440	7%
Later local	0	0	0	0	53	32%	10	0%	63	26%
<i>Total</i>	342	19%	104	30%	1245	18%	270	65%	1961	24%

The variation between the estimates based on the Esty formulae, and actual identified dies, are instructive. The final coinages are those with the lowest percentage of unidentified dies at only 7%. This is a consequence of the many recoveries from hoards relating to the Boudiccan Revolt. Half Units and Quarter Staters are the denominations with the highest percentage of unknown dies. This is because these denominations were rarely hoarded and, because of their small size, Half Units are the least likely of the denominations to give a signal to metal detectors. A simple summation of the confidence ranges for each type indicates that there is a 95% probability that the total number of original dies will be somewhere between 1672 and 2515. Very small issues with only a single example of each obverse and reverse die have not been extrapolated.

Overall the die analysis has shown Icenian coinage to be substantial; 1587 dies have been identified as being used in its production, and there may have originally been some 2000 dies. There was substantial production in each period, but the tables clearly reveal a marked decline in the use of gold. The estimated number of Stater dies fell from 179 in the early local period to only nine in the final period. A full summary of identified dies and Esty estimates of original die numbers are given in Appendix IV.

The use of the Esty formulae in conjunction with the die-study has confirmed that most dies from the final period of coinage are likely to have been identified. It has also provided indirect confirmation of the intermittent and denominationally specific nature of Icenian coinage hoarding, which is discussed in Chapter 6.

### 4.3 Weight

A weight is recorded for 8387 of the coins within the die-study, of which 5069 are from hoards. The hoarded coins, and many others, have been weighed using scales that measure hundredths of a gram, but other coins have only been weighed to the nearest tenth of a gram. This caused an excessive number of Units to be shown as having weights at 0.1g intervals, but there is no similar distortion in respect of the weights of Staters. This is likely because most Stater records are either from well-recorded hoards or would have been accurately weighed by reputable dealers due to their value.

Silver coins are very vulnerable to weight loss when loose in the soil, frequently being chipped or broken. The later types with a high copper content also suffer leaching and corrosion. In view of these problems, and the potential weight distortions on the 0.1g intervals, only coins from fully recorded hoards have been used in the weight analysis of later silver coinages. Unfortunately, hoard examples are not available for earlier silver coinages.

Other than the most debased Norfolk Wolf B Staters, gold coins do not corrode in the ground and the malleable nature of the metal resists chipping and breakage. Clipping does not appear to have taken place and the most common likely cause of weight loss is scraping by a spade or a plough. There is no distortion due to insufficiently fine weight measurement, thus I have assumed that 'non-hoard' Staters do not distort the weight statistics.

The following sub-sections consider the weight accuracy of each of the denominations and the relationship between denominations of the same metal.

Table 4.3 Percentage of Stater weight within a 0.1g range (\* sample from Dallinghoo only)

Type	Maximum percentage within a 0.1g range	Actual 0.1g range	Total sample size
Wolf A die-group 1	58	6.13–6.22	19
Wolf A die-group 4	60	6.08–6.17	55
Wolf B die-group 8	18.8	5.50–5.58	48
Wolf B die-group 16	27.8	5.54–5.62	126
Wolf B die-group 18	19.1	5.26–5.34	47
Snettisham	58.5	5.56–5.64	65
Irstead*	49.5	5.55–5.64	188
Early Boar Horse*	45	5.41–5.50	221
Boar Horse B*	56	5.37–5.46	334
Boar Horse C	70.6	5.31–5.39	34

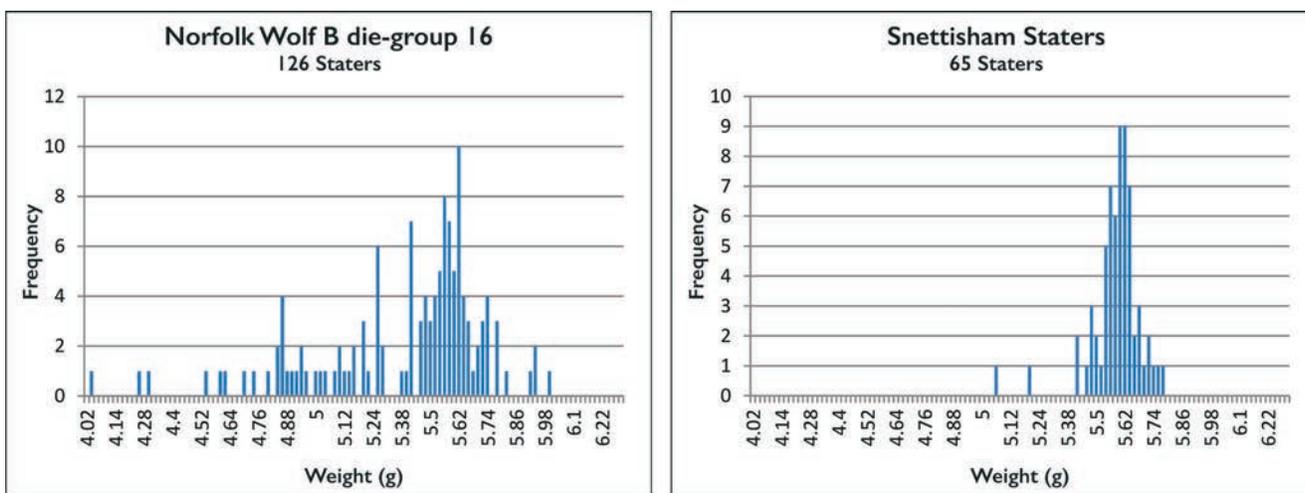


Figure 4.1 Weight distribution of Norfolk Wolf B die-group 16 and Snettisham Staters

### 4.3.1 Staters

In an attempt to assess whether there was accurate measurement around a standard weight for Stater production, Table 4.3 shows the maximum percentage of Staters of particular types that have a weight falling within any range of one-tenth of a gram. The analysis included Stater types with over 15 recorded weights; all records were included in the sample except for Irstead, Early Boar Horse and Boar Horse B Staters. For these, large numbers of coins in the Dallinghoo Hoard had been weighed consistently, and so became the sample. The analysis was undertaken at 0.01g intervals, except for Norfolk Wolf B and Snettisham Staters where there was a large weight range and 0.02g intervals were used. The compressed range of Boar Horse C was due to an absence of examples in the immediately adjoining intervals.

This data reveals that there was accurate weight control for all major types except the Norfolk Wolf B Stater. The

apparent relaxation of control during this coinage may be slightly exaggerated by corrosion of the more debased examples. Subsequent to the Norfolk Wolf B Stater, weight control was re-established, with accuracy peaking with Boar Horse C, the final Stater minted in volume. Seventy percent of all Boar Horse C Staters fell within a range of 0.09g. The accuracy of Boar Horse C is even higher for its large die-group 1, where 85% of examples fell within a range of 0.1g. Data from Table 4.3 are illustrated graphically in Figure 4.1 where the dispersed weight distribution of the largest Norfolk Wolf B die-group contrasts with the tight grouping of the Snettisham Stater, although both probably had a similar target weight.

The Dallinghoo hoard contained large volumes of Icenian Staters from Plouviez to Boar Horse B types. The analysis of this hoard examined the consistency of weight throughout the course of production of each major type. The results confirmed that weight was tightly controlled

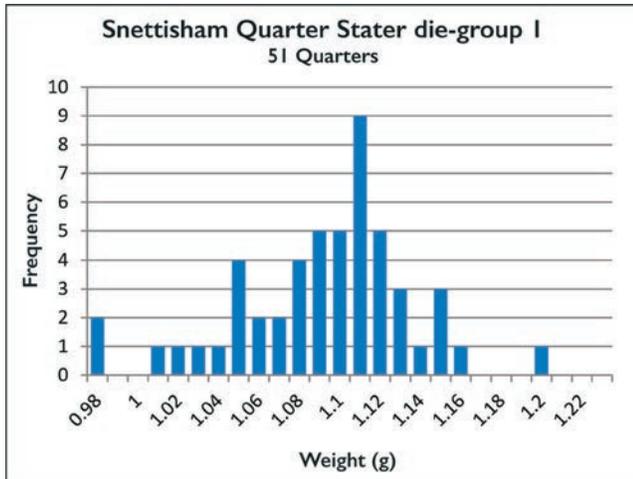


Figure 4.2 Weight distribution of Snettisham Quarter Stater die-group 1

and reasonably consistent, and changes in weight were not gradually introduced into the coinage but coincided with the transition to a new type (Talbot and Leins 2010). The average weights of chronologically ordered die-linked sequences are given in Table 4.4.

In summary, the above analysis reveals that the Norfolk Wolf A Stater weighed approximately 6.1–6.2g. Precise control of weight ceased during the Norfolk Wolf B type, although the very late die-group 16 seems to have a targeted weight of approximately 5.6g (see Fig. 4.1). The target Stater weight for the Snettisham, Plouviez and Irstead Staters remained approximately 5.6g. There were modest declines for each of the two successive Issues, Early Boar Horse and Boar Horse B, with the latter having a targeted weight of some 5.4g. Boar Horse C showed a further reduction in weight to some 5.35g.

### 4.3.2 Quarter Staters

There are only two recorded weights, 1.53g and 1.59g, of the first Icenian Quarter Stater, the Norfolk Wolf A. These two weights are heavier than the Snettisham Quarter Staters, which were very tightly controlled. Figure 4.2 shows all known weights for coins from die-group 1: 78.4% of all records are within a range of 0.1g and 55% within a 0.05g range. Snettisham Quarter Staters from die-group 2 are also tightly grouped, with 74.2% within a range of 0.1g and 58% within a range of 0.05g. The average weight of the Snettisham Quarter Stater, excluding one exceptionally heavy coin, is 1.08g (unadjusted 1.085g). These weight data also indicate a slight reduction in target weight between the two die-groups.

The recorded weights for Irstead, Boar Horse B and Boar Horse C Quarter Staters may be slightly distorted by an excessive number of coins being weighed in tenth-gram intervals. Nonetheless, it is clear that they were produced

Table 4.4 The average weight of sequential ‘batches’ of coinage

Type	Dies	No. coins	Average weight (grams)
Irstead	7	58	5.56
Irstead	8–9	34	5.52
Irstead	10–11	20	5.56
Early Boar Horse	1–4	75	5.42
Early Boar Horse	5–6	38	5.44
Early Boar Horse	7–8	25	5.46
Boar Horse B	A–C	66	5.38
Boar Horse B	D–H	85	5.40
Boar Horse B	J–L	183	5.40

Table 4.5 Weight statistics for Irstead Quarter Staters and related types

Type	No. coins with weight data	Average weight (grams)	Weight range (30%–95% grams)
Irstead	79	1.062	1.04–1.14
Boar Horse B	37	1.035	1.01–1.10
Boar Horse C	7	0.993	0.99–1.08

Table 4.6 Weight ratios between Staters and Quarter Staters

Type	Likely Target Weight		Ratio
	Stater	Quarter Stater	
Norfolk Wolf A	6.08–6.22	1.53–1.59	4:1
Snettisham	5.56–5.64	1.02–1.14	5:1
Irstead	5.55–5.64	1.04–1.14	5:1
Boar Horse B	5.37–5.46	1.01–1.1	5:1
Boar Horse C	5.21–5.38	0.99–1.08	5:1

with careful attention to precise weight measurement, and that there was a gradual decline in the target weight with each new type. Table 4.5 shows the average weight of known examples of the three types and also their weight ranges after excluding the heaviest 5% and the lightest 30% of coins (these outliers were excluded as many of the lightest coins are damaged, and excessively heavy coins have often been found to have their weight inflated by corrosion products).

### 4.3.3 Relationships between Staters and Quarter Staters

Table 4.6 shows the ratio between the weights of related Staters and Quarter Staters based on the data discussed above. The Norfolk Wolf A Quarter Stater had a target

Table 4.7 Maximum proportion of hoard Units which fall within weight ranges (\*same result for 1.19–1.23g)

Unit Type	Die-group	Maximum % within a 0.1g range	Range (grams)	Total sample size	Max % in a 0.05g range	Range (grams)
LFH	19	77	1.19–1.28	314	47.5	1.21–1.25
LFH	5	68	1.18–1.27	72	36.1	1.22–1.26*
Anted	1	64	1.16–1.25	325	39.4	1.19–1.23
Ecen	1	71	1.19–1.28	641	43.7	1.22–1.26
Ece B	1	71	1.18–1.27	226	40.3	1.21–1.25
Ece A	All	70	1.19–1.28	268	41	1.22–1.26
Boar Horse C	All	45	1.13–1.22	130	26	1.18–1.22
Boar Horse B	All	66	1.13–1.22	29	34	1.17–1.21

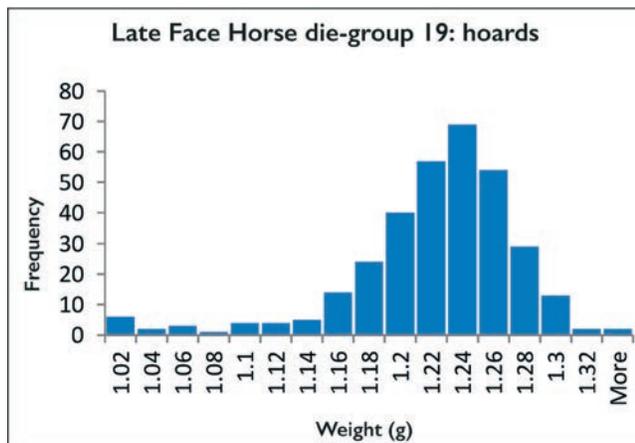


Figure 4.3 Weight distribution of Late Face Horse die-group 19 coins from hoards in 0.02 g increments

weight of approximately a quarter of the corresponding Stater, but the relationship then changed, and subsequent Quarter Staters are really fifths of a Stater. This relationship also applies to the only known example of an Early Pattern Horse (B) Stater, which weighs 5.31g with the Quarter Stater weighing 1.03–1.09g. Despite the lower gold denomination being, in reality, a fifth of the weight of the Stater, I have followed existing practice and continued to describe them as Quarter Staters. Snettisham and Irstead Quarter Staters have been subjected to metal analysis and, as discussed below, the results are similar to those of the respective Staters. This implies that differing metal content does not need to be factored into these denominational relationships.

#### 4.3.4 Units

It is very difficult to form views about the importance of target weights and production accuracy for much of the Icenian silver coinage. With the exception of the revolt period, silver does not appear to have been actively hoarded, and most samples available for study have suffered damage in the soil. In this section I will look first at the later types

where the late hoards have provided large samples and then at the more problematic evidence for earlier issues.

The die-study and database have made it possible to select samples of later types which are indisputably from the same sequence of minting. Previously the different die-groups within a single type were unknown, and there was much misidentification of similar looking types. The samples used in Table 4.7 and Figure 4.3 are die-linked sequences from well-documented late hoards, including confirmed Bowl Hoard coins. They have all been carefully weighed, usually under museum-controlled conditions, and are mostly in un-circulated condition (6.5.3). No further selection has taken place, thus the samples will include a number of damaged coins.

The analysis shows that the weight of these Units was tightly controlled. The greatest accuracy found was die-group 19 of the Late Face Horse Issue, of which 77% of a large sample fell within a weight range of 0.1g and 47.5% within a range of 0.05g. Icenian mints were clearly able to strike a high percentage of coins within weight tolerances of less than a tenth of a gram, and were probably seeking greater accuracy than this. Table 4.7 indicates that the target weight for the later Units was approximately 1.24g, with Anted possibly being slightly lower. The table includes two earlier Units, Boar Horse B and Boar Horse C, which are less well represented in the late hoards. The analysis of these Units is useful in assessing their target weight, but less so in assessing production accuracy. This is because the sample size of Boar Horse B is low, and the Boar Horse C sample is composed of multiple die-groups and not a single production sequence. Icenian success in achieving a target weight is further illustrated in Figure 4.3, which shows the sample of 314 coins of Late Face Horse die-group 19.

Figure 4.4, which charts the 25 coins of Late Face Horse die-group 19 recorded as casual losses, emphasises the difficulty in relying upon samples that are not from hoards. There is a remarkable difference in weight distribution between the two samples: there is only one non-hoard coin weighing over 1.2g, and no coins fall within the three 0.02g bands that contain the highest number of hoard coins.

Table 4.8 Weights of main Bury Unit types

Weight (grams)	Bury A	Bury C	Bury B
Over 1.54	0		0
1.54–1.50	0000000		
1.49–1.45	00000000000000000000	0000	0000000
1.44–1.40	00000000000000000000000000	000	00000000000
1.39–1.35	0000000000000000000000	00000000	000000000000000000
1.34–1.30	0000000000000000	00000	0000000000000
1.29–1.25	00000000	0000	0000000000
1.24–1.20	00000000	00	00000000
1.19–1.15	000000	000	00000000
Below 1.15	0000000	000000	000000000000000000

Table 4.9 Weights of Large Flan Unit types

Weight (grams)	LFA	LFC
Over 1.54	0	
1.54–1.50	0	
1.49–1.45		00
1.44–1.40	0000000	00000
1.39–1.35	000000	0000000000
1.34–1.30	000000000000000000	0000000000000000
1.29–1.25	00000000	000000000
1.24–1.20	00000	000000000000000
1.19–1.15	00000	000000000000000
Below 1.15	000000000000000000	000000000000000000

Table 4.10 Weights of Snettisham Units

Weight (grams)	No. coins
Over 1.35	0
1.34–1.30	00
1.29–1.25	000
1.24–1.20	00000000
1.19–1.15	000000
1.14–1.10	00000000000000
1.09–1.05	0000000
Below 1.05	(21)

This comparison illustrates the need for extreme care when assessing the original target weight of coins which have not been found in well-protected hoards.

There are relatively large samples of coinage available for a few types from the early local period, such as the Bury coinages analysed in Table 4.8. Bury A probably had a target weight in the range of 1.4–1.44g and Bury B a somewhat lower likely target weight range of 1.35–1.39g. Bury C is less clear but probably similar to Bury B. Table 4.9 indicates that target weight fell to 1.3–1.34g for Large Flan A and Large Flan C. This analysis implies a gradual decline in target weight from Bury A to Large Flan A and Large Flan C. Accuracy was clearly important, but I have been unable to quantify the extent to which this was achieved. Large Flan A and Large Flan C have large, relatively thin flans and often suffer damage in the soil, as illustrated by the large number of underweight examples in Table 4.9.

I have also been unable to accurately assess target weights or levels of production accuracy for subsequent coinages, prior to those heavily represented in the revolt period hoards.

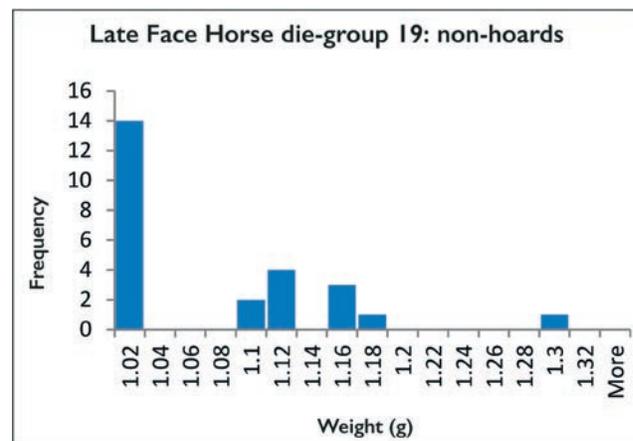


Figure 4.4 Weight distribution of Late Face Horse die-group 19 coins not from hoards in 0.02 g increments

This problem is illustrated by the weight distribution of Snettisham Units (Table 4.10). The distribution may suggest a target weight of 1.2–1.24g, but many Units fall in the 1.1–1.14g band. The bar chart (Fig. 4.5) shows a peak at exactly 1.1g, which is likely due to individual finds by metal

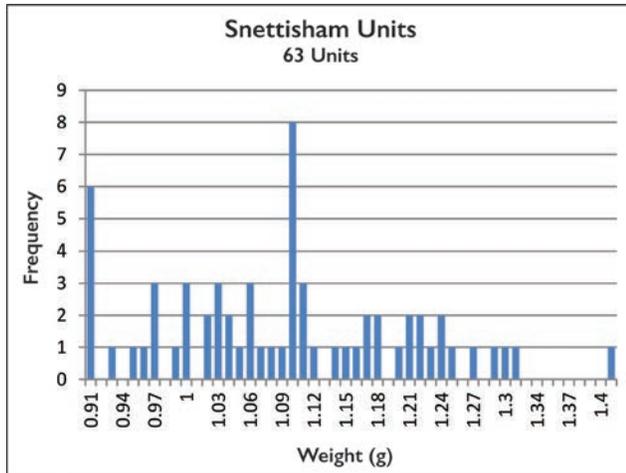


Figure 4.5 Weight distribution of Snettisham Units in 0.01 g increments

Table 4.11 Weights of selected undamaged Units

Type of Unit	Reference	Dies	Weight (grams)
Bury A	J1295	E:17	1.46
Bury B	87 0584	B:1	1.41
Bury B	J1028	G:22	1.41
Bury Pallas Half Unit	J1230	B:2	0.71
Bury Pallas Half Unit	J1225	A:1	0.77
Large Flan C	00 1192	E:3	1.31
Large Flan C	03 0093	B:1	1.31
Large Flan A	J809	F:11	1.40
Snettisham	02 0243	E:11	1.21
Snettisham	96 1976	M:18	1.11
Snettisham	J864	M:18	1.20
Plouviez	06 0169	E:8	1.07
Plouviez	J939	C:6	1.09
Irstead	J407	A:1	1.17
Irstead	J1495	B:2	1.13
Early Boar Horse	J599	A:2	0.95
Early Boar Horse	02 0193	B:6	1.16
Boar Horse C	J454	O:33	1.19
Boar Horse C	02 0735	DA:74	1.01

detectorists having been weighed with scales measuring in tenths of a gram.

Some particularly fine examples of Units and Half Units that have no damage, obvious surface porosity or wear (other than die wear) are listed in Table 4.11; the weight distribution of Plouviez, Irstead and Early Boar Horse Units are shown in Table 4.12; and a summary of likely target

Table 4.12 Weights of Plouviez, Irstead and Early Boar Horse Units

Weight (grams)	Plouviez	Irstead	Early Boar Horse
Over 1.29	00	00	
1.29–1.25		00	
1.24–1.20		000	
1.19–1.15		00000	0
1.14–1.10	000	00	00
1.09–1.05	00	00000	0
1.04–1.00	0	000	000000
0.99–0.95	00	000	00000
Below 0.95	(7)	(9)	(15)

weights for Units based on all available evidence is shown in Table 4.13. Thus, the Snettisham Units probably had a target weight of 1.2–1.24g, while the Irstead Units were lower, somewhere in the 1.15–1.24g range. The results for the Plouviez and subsequent Early Boar Horse Units are inconclusive, the condition of most known examples being poor.

During the course of the Icenian coinage the target weight of the Unit gradually declined, but there was a modest increase in weight for the final types of Unit. The results for the early Bury A and B types imply that there was considerable focus on achieving a target weight, although the absence of hoard material does not permit the measurement of minting accuracy. The results for the early denominational Units are more ambiguous. It is possible that controls were looser for Plouviez and Early Boar Horse Units than for Snettisham and Irstead Units. The final types of Unit were produced with remarkably effective weight control.

Although rigorous control of the weight of Units can only be demonstrated for late Units, I think that it was likely to have been a feature throughout the entire period of coinage production. The weight distribution of the early local types, shown in Tables 4.8 and 4.9, suggest a clustering of samples around a target weight.

#### 4.3.5 Half Units and their relationship to Units

Most types of Half Unit are rare and have suffered damage in the soil. Neither target weight nor production accuracy can be reliably assessed, as illustrated by Figure 4.6 which shows the two largest groups of Half Unit. Five of the Boar Horse B Half Unit weights exceed 0.52g, the maximum weight recorded for an Ecen Half Unit from die-group 1. However, a number of Bury Half Units have survived in good condition (Table 4.14), and those of Bury Pallas variety I appear to have a target weight of some 0.65–0.75g. This is approximately half the weight of the early Bury Units.

Table 4.13 Likely original target weights of major Unit types

Type of Unit	Possible target weight (grams)	Notes
Bury A	1.40–1.44	Table 4.8
Bury B	1.35–1.39	Table 4.8
Large Flan A & C	1.30–1.34	Table 4.9
Snettisham	1.20–1.24	See above
Irstead	1.15–1.24	Probably below Snettisham – see above
Early Boar Horse		Inconclusive
Boar Horse B & C	1.13–1.22	Table 4.7
Saham Toney		Inconclusive
Early Pattern Horse (B)	1.17–1.21	Late hoard analysis
Early Pattern Horse (A)		Data unclear – probably similar to late Units
Late Units	1.21–1.26	Table 4.7

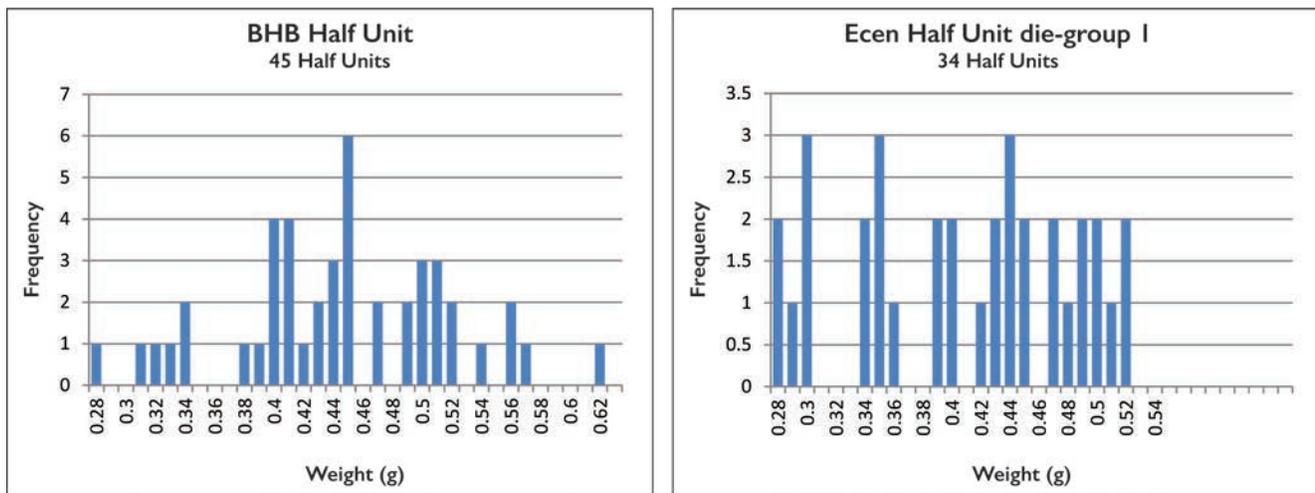


Figure 4.6 Weight distribution of BHB Half Units and Ecen Half Unit die-group 1

Other observations on the commoner late Half Units are as follows:

- The two highest Boar Horse C weights are 0.52g and 0.53g.
- The highest non-plated Anted is 0.54g, the next highest is 0.49g.
- The results for Ecen die-group 1 are shown in Figure 4.6; seven examples survive from other Ecen die-groups, which are heavier, weighing between 0.55g and 0.57g.

The target weight for the Units that relate to these late Half Units is 1.21g–1.26g for Ecen and Anted, and slightly less for Boar Horse B and Boar Horse C. The limited data available indicates that throughout the coinage Half Units were intended to be just that – the maximum weight is usually less than half of the Unit, but the shortfall is insufficient

Table 4.14 Weights of early local and Snettisham Half Units

Weight (grams)	Pallas variety I	Pallas variety II	Butterfly	Snettisham
Over 0.75	0			
0.74–0.70	00		0	
0.69–0.65	00		0	
0.64–0.60			0	
0.59–0.55		0	00	0
0.54–0.50		00		000
0.49–0.45		0		000
0.44–0.40		0	0	0000
Below 0.40		0		0

to suggest a different denominational relationship and may simply reflect production cost and minting profit.

Table 4.15 Tests by Peter Northover on five gold coins (2007)

Type	Ref	Number of tests	Gold %	Gold $\sigma$	Silver %	Silver $\sigma$	Copper %	Copper $\sigma$
Norfolk Wolf A	J239	6	55.24	0.45	34.72	2.41	9.65	1.91
Norfolk Wolf B	01 0283	6	31.47	1.53	43.87	2.54	24.16	1.66
Norfolk Wolf B	08 8917	12	15.87	1.96	35.33	12.09	46.48	11.49
Ir Q	J541	10	37.95	1.40	19.62	5.65	41.97	4.50
Ir Q	02 0240	10	39.53	1.42	19.69	5.79	40.68	4.45

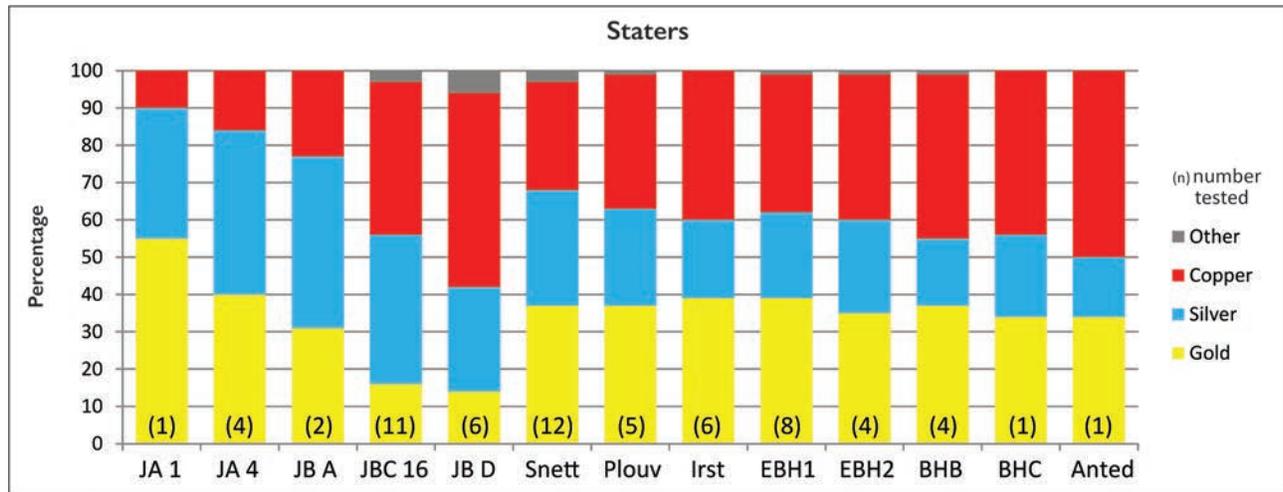


Figure 4.7 Average metal content of Staters

#### 4.3.6 Summary

Wherever reliable information has been found, it has shown that great care was taken to ensure that the weights within each type were consistent. Many examples of remarkable standards of accuracy have been found, including 77% of Late Face Horse die-group 19 coins falling within a tenth of gram range and 58% of Snettisham Quarter Staters falling within a twentieth of a gram range. The analysis has shown that there were fixed weight ratios between denominations in the same metal. A Half Unit is accurately described, however all but the earliest Quarter Staters are actually fifths of Stater.

#### 4.4 Metallurgy of the coinage

Icenian coinage was only produced in alloys of silver or gold. The following two sub-sections summarise the results of research undertaken on metal content of gold and silver coinage and their implications for its likely use. The final sub-section addresses the tin content of Icenian coinage.

##### 4.4.1 Gold

The key work to date on the Icenian gold coinage was carried out by Peter Northover at the University of Oxford (1992) and by Michael Cowell using coins from the British Museum

collection (Cowell 1992; Hobbs 1996). These results are listed in Appendix III, together with a small number of previously unpublished additional analyses conducted by Peter Northover for this project (2007).

The gold coinage is composed of an alloy of gold, silver and copper together with other trace elements. Tin is sometimes significant – in several coins comprising between 1% and 5%. The mix of the three main elements determines colour: copper-rich alloys appear red, and those that are silver-rich appear a paler yellow. A discussion of different alloys used in the British and Gallo-Belgic coinages, their colour and other properties, is included in the 1992 publications of both Northover and Cowell, these papers suggested that the colour of the gold coinage may have been of contemporary importance. In this section if I refer to an alloy as a three-part ratio, for example 60:30:10, this is the ratio of gold:silver:copper. If the ratios do not total 100%, it is due to the presence of other trace or minor elements.

When assessing metal content a number of samples are usually taken, and published results are typically the average of these. Table 4.15 summarises the tests on five gold coins, showing the number of tests, average metal content and the standard deviation ( $\sigma$ ). Gold has a low standard deviation, indicating that it is relatively even in distribution throughout the alloy in each of the coins tested. The results are less

Table 4.16 Stater types with number of coins tested, metal ratios and standard deviation

Type and die-group	No. tests	Gold %	Silver %	Copper %	Other %	$\sigma$ % Gold	$\sigma$ % Silver	$\sigma$ % Copper
Norfolk Wolf A die-group 1	1	55	35	10		N/A	N/A	N/A
Norfolk Wolf A die-group 4	4	40	44	16		1.3	1.9	0.9
Norfolk Wolf B sub-type A die-group 1	2	31	46	23		0.7	2.2	1.5
Norfolk Wolf B sub-type C die-group 10	1	26	46	28		N/A	N/A	N/A
Norfolk Wolf B sub-type C die-group 16	11	16	40	41	3	5.3	6.3	10.8
Norfolk Wolf B sub-type D	6	14	28	52	6	3.6	2.4	5.9
Snettisham	12	37	31	29	3	2.5	4.6	6.4
Plouviez	5	37	26	36	1	2.7	8.5	6.6
Irstead	6	39	21	40		3.1	2.6	3.3
Early Boar Horse die-group 1	8	39	23	37	1	5	5.1	8.6
Early Boar Horse die-group 2	4	35	25	39	1	3.6	0.7	3.5
Boar Horse B	4	37	18	44	1	1.7	7.1	5.3
Boar Horse C	1	34	22	44		N/A	N/A	N/A
Anted	1	34	16	50		N/A	N/A	N/A

consistent for the other two metals, varying most when the alloy contained the least gold. These results suggest that copper and silver are likely to form separate phases when in an alloy with gold, as they do in the simpler copper and silver alloys (4.4.2 below). Thus test results for alloys of gold are unlikely to be precise, but the gold content is likely to have been reasonably accurately measured.

All known test results on Icenian gold coinage are averaged and summarised by type in Figure 4.7. The results are plotted in chronological order with the earliest coinages on the left. Results are either for types or die-groups of types. The earliest Stater, Norfolk Wolf A die-group 1, has the finest alloy at 55:35:10. This is similar to the alloy of the Gallo-Belgic E Stater (59:31:10 per Northover 1992, 282) and the Ingoldsthorpe Stater. Fineness then deteriorates during the continuing production of Norfolk Wolf A and B Staters. The Snettisham Stater, the first denominational Issue, re-establishes a higher bullion level, although not to the fineness of Norfolk Wolf A Staters. After this follows a steady decline in the bullion content of the coinage, manifested most clearly in a reduction in silver content. The same data is repeated in Table 4.16 with the full names of the types or die-groups. The standard deviation of the tests for each of the elements is also given as a percentage of the total mass of the coin.

As the coin tested from die-group 1 of the Norfolk Wolf A Stater is similar in composition to Gallo-Belgic E, it is tempting to conclude that the first Icenian gold coinage was composed of recycled Gallo-Belgic E Staters. This is probably the case, although it is not fully supported by the metal analysis. In common with some later Icenian coins, the Norfolk Wolf A Stater tested has a measurable tin content of 0.17%, whereas only two of the 12 Gallo-Belgic E's tested

by Northover registered tin, the highest being 0.03%. It is unclear if the Norfolk Wolf A result is anomalous or if Gallo-Belgic E's were not the main source of raw material.

The test results of the four Norfolk Wolf A staters from the large die-group 4 are all similar, as confirmed by the low standard deviations. The average ratio of 40:44:16 is not common in the British series but is close to that of the British B or Chute Stater of the south-west (Cowell 1992, 210).

The Norfolk Wolf B series has a much-reduced gold content. This is a complex series with significant variation in the alloy. The two coins tested from sub-group A (both from die-group 1) are similar and have the highest gold content of the type. The six results from sub-group D are also similar to each other but are highly debased. The large die-group 16 of sub-type C shows significant variation in metal content; this is apparent from the coins, as some appear golden and others very darkened. No tests have been undertaken on coins from the other Norfolk Wolf B die-groups.

Finer coinage was re-introduced with the Snettisham series and the subsequent denominational Issues. Six Snettisham Quarter Staters from die-group 1 have been tested and reveal a metal content similar to the Staters, implying production from a common pool of metal. Only one die-group 2 Quarter Stater has been tested and was revealed to be more debased at 29:22:45.

The six Irstead Staters tested included two from die-group 1; these had the highest gold content at 41.0% and 41.4%, implying that the Irstead Stater die-groups represent a chronological sequence with a declining gold content. The only Irstead Quarter Stater that has been subjected to metal analysis has a ratio of 40:20:40, similar to the Stater. This mix produces a red gold (Northover 1992, 240, fig. 1), the

colour of most Irstead Quarters, but a minority are yellow, suggesting less copper and more silver in their composition. The colour of these Quarter Staters does not appear to be related to chronology, as three examples struck from dies G:8 have been compared side by side; both 02.0188 (the earliest strike) and J952 (the latest) are red gold, whereas the intermediate coin 62.0147 is yellow.

It appears that there may have been a drop in gold content between die-group 1 and die-group 2 of Early Boar Horse with the average falling from 39.2% to 35.4%, although results were erratic in die-group 1, as shown by the higher standard deviations. The four Boar Horse B Staters suggest a gold content only slightly lower than the average of the Early Boar Horse Staters but with a marked reduction in silver from an average of 24% to 18%. The reduction in silver would have been even more marked but for an early coin from Boar Horse B die-group 1 which had a high silver content at 29%. A Boar Horse B Quarter Stater from dies A:1 has a ratio of 38:20:42, which is similar to both Boar Horse B Staters and the Irstead Quarter Stater. Boar Horse B Quarters are typically red gold in colour. Only a single Boar Horse C Stater has been tested which had a lower gold content than any of the Boar Horse B Staters, implying some debasement between Boar Horse B and Boar Horse C.

No gold coinage has yet been found that relates to the large Late Face Horse Issue, and the gold of the contemporary Anted and Ecen Issues was produced in low volumes. The single Anted Stater tested reveals continuing debasement, its copper content being only exceeded by the late Norfolk Wolf B Staters.

#### 4.4.2 Silver

Megan Dennis and Peter Northover have analysed many Icenian coins using electron probe microanalysis with wavelength dispersive spectrometry at the Department of Materials at the University of Oxford. Certain results have been published with additional technical information by Northover (1992), and others are included in Dennis's doctoral thesis (2005). Analysis has also been carried out at the British Museum by M. R. Cowell on coins from the Field Balk hoard and Stonea Grange excavations using energy dispersive X-ray analysis in a scanning electron microscope. An area on the edge of each coin without corrosion was selected and this was polished for testing (Cowell 1996). These results are all included in Appendix II, together with a few previously unpublished additional analyses conducted by Northover for this project.

In antiquity, the silver used to manufacture coins and other objects was not pure but contained traces of gold, bismuth, lead and other elements associated with the ore from which the silver was extracted, or with the extraction process itself (Craddock 1995, 211–14). The combined level of these four named elements is shown in Appendix II as the

bullion content of the coin. Unfortunately, the measurement of the bullion content of ancient coins is far from problem free, particularly where there has been debasement. Alloys where the silver content exceeds 90% will usually solidify into a single homogeneous phase. Below this the alloy will separate into two distinct phases, one copper-rich and the other silver-rich, the proportions being determined by the alloy composition (Butcher and Ponting 2005, 173). A further complication arises as a result of the skill of ancient mints in enriching the surfaces of their coins to disguise any decline in silver content. Such 'depletion silvering' is effected by the removal of copper from the surface layers and can create a surface which resembles plating (see Butcher and Ponting 2005, 173–74).

The most reliable non-destructive method of assessing the ratio of silver to copper in a heavily debased coin is Neutron Diffraction Analysis, an extremely expensive process which is capable of quantifying the copper-rich and silver-rich phases of which the coin is composed. This process was used by Farley (2012, 53–58) to examine North-Eastern Late Iron Age silver coinage, as described in her doctoral thesis, but it has not yet been used to examine Icenian coinage. Dennis and Northover both sought to penetrate the surface layers by grinding and polishing an area on the edge of the coin. Within this area Northover took three separate analyses of areas of 50 microns square and Dennis five or more analyses from areas 10 microns square. The average of their readings for any particular coin is included in Appendix II this is all that is available in most published material. An examination of the individual analyses reveals the difficulty of assessing the precise composition of the alloy. The test results vary significantly depending upon whether the test was of a copper-rich or silver-rich area, or an area of surface enhancement. Dennis sought meaningful results for debased coinage by choosing one test-point in an area of copper-rich dendritic growth, one on silver-rich eutectic and the others in areas where these were both present. On occasion additional tests were taken (Dennis 2005, 56). These results were then averaged to indicate the overall metal content. She concluded that the early Icenian coinage typically contained about 5% copper, and that later coinages were probably further debased by the addition of increasing amounts of copper to this mix (see Fig. 4.8).

Butcher and Ponting (2005) have analysed Julio-Claudian Denarii and shown that the Denarii of Augustus and Tiberius usually had a bullion content of over 99.5%. Walker (1976) also found that most Denarii of these reigns had very high levels of silver, the lowest being 94%. Recent research by Pardini and others used x-ray fluorescence and laser-induced breakdown spectroscopy to examine over 100 Republican Denarii (Pardini *et al.* 2012). These tests revealed that, except in times of conflict, most Denarii had less than 1% and all had less than 2% copper (Pardini *et al.* 2012, 158, fig. 4). The legionary series of Mark Antony clustered at about 95% silver, although there were a few which were

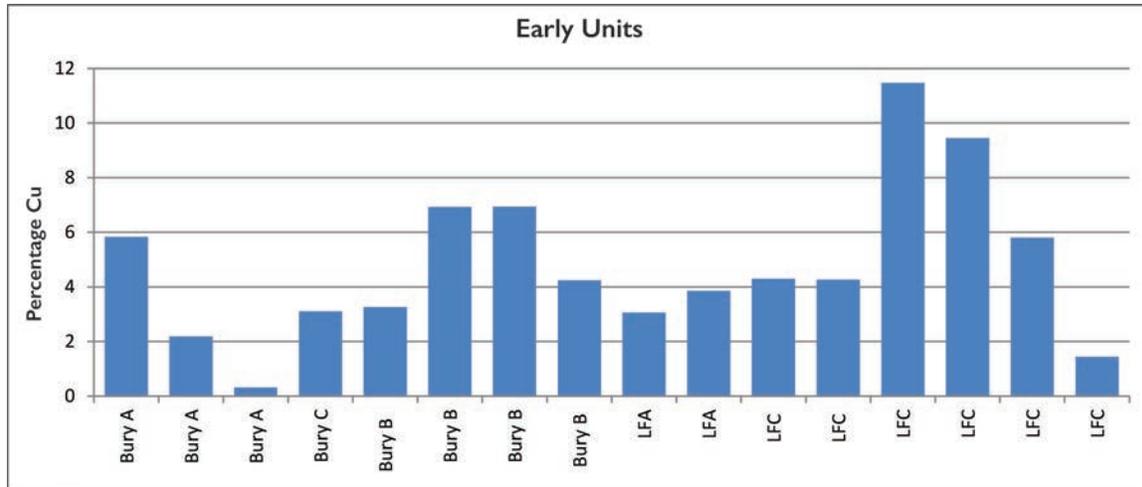


Figure 4.8 Copper content of early Units (from Dennis 2005)

much more debased with the lowest having between 65% and 70% silver (Pardini *et al.* 2012, 159, fig. 6). These results for Republican silver are similar to those reported by Crawford (1974, 570–71) and Walker (1980).

Dennis (2005, 2.2) concluded that the metal within the early Icenian coinage came either directly, or indirectly, from recycled Roman Denarii with no additional debasement in Britain. Subsequent metal analysis of Roman coinage suggests that if the source material for the earliest Icenian coinages was Republican Denarii, then it was debased with copper prior to incorporation into the coinage.

Northover and Dennis revealed that gold is a significant trace element within the Icenian silver coinage, originating with the silver component, not the copper. The average gold content across all tests in the entire Icenian silver series was 0.448% of the bullion content with a standard deviation of 0.225%. Vincenzo Palleschi (pers. comm.), who undertook many of the tests detailed in Pardini *et al.* 2012, reports that the average gold content of the non-legionary Republican Denarii tested was around 0.5%, with variability of plus or minus 0.4%. These results confirm that Roman Republican coinage could have been a significant component in the Icenian silver, whereas imperial coinage appears likely to have had too much gold to be the dominant component; comparable figures extracted from the work of Butcher and Ponting (2005, table 1) for the coins of Augustus and Tiberius were 0.743% gold content with a standard deviation of 0.459%.

The early coinages have a high silver content, and therefore relevant metal analysis should be accurate. The bullion content of relevant tests are summarised in Table 4.17 (see also Appendix II). It appears that:

- The finest coinages are Bury A, Bury C and Large Flan A, which all show an average bullion content above 95%.

Table 4.17 Bullion content of early silver coinages (from Dennis 2005)

Type of Unit	No. tests	Bullion content %	Average bullion %
Bury A	3	94, 97.8 & 99.5	97.1
Bury C	1	97	96.8
Bury B	4	90, 91, 96 & 96	93.5
Large Flan A	2	96 & 97	96.5
Large Flan C	6	88, 90, 93, 96, 96 & 98	93.6
Snettisham	3	82, 91 & 92	88.5
Plouviez	1	55	54.7
Irstead	1	94	94.5
Early Boar Horse	2	84 & 93	88.2

- Bury B and Large Flan C are also very fine, averaging over 93% bullion.
- Snettisham and Early Boar Horse average 88% bullion, but the results are more erratic.
- The single Plouviez Unit tested had only 55% bullion; this is unexpected and further tests are needed to establish if this type was debased or the result is an anomaly.

There are numerous tests of the later coinages, but the results are problematic due to the difficulty in assessing the silver content of heavily debased Units. The results of the three main researchers are inconsistent. Table 4.18 shows the number of tests undertaken by each researcher on three types of late Unit and their average results.

Dennis's results show consistently higher silver content than the others. The difference with Northover's results is

Table 4.18 Differing test results for the silver content of late Units

Type	Dennis			Northover			Cowell		
	No. coins	Average silver	$\sigma$	No. coins	Average silver	$\sigma$	No. coins	Average silver	$\sigma$
Ecen	13	77%	12.5%	8	55%	12.8%	7	49%	5.1%
Anted	6	74%	13.8%	2	46%	1.6%	4	44%	2.5%
Late Face Horse	16	72%	16.4%	6	56%	7.7%	11	50%	3.3%

Table 4.19 Bullion content of mid-denominational coinages

Type of Unit	Dennis bullion %	Northover bullion %	Cowell Silver %
Ali Scavo		92	
Boar Horse B (A)	81 & 95	92	42 & 43
Boar Horse B	83, 89, 92, 94 & 95	93	51 & 52
Boar Horse C	60, 62 & 76	68	46 & 46
BH CD	77 & 88	63	51
Saham Toney	66, 69, 93 & 97		
Early Pattern Horse (B)	83 & 88	89 & 94	
Early Pattern Horse (A)	70 & 79	40 & 61	33

unexpected as they used similar methodologies, although Northover's sample covered 150 microns square whereas Dennis's was of 50 or sometimes 60 microns square. It is possible that the larger surface areas tested by Northover and Cowell resulted in a more representative sample, as their results are closer and generally have a lower standard deviation. The results of Cowell show the lowest silver content of the three. This is surprising, as the technique used by Cowell is usually thought to over-estimate silver, because it is harder to avoid areas of surface enrichment. The results of both Cowell and Northover imply that the late Icenian coinages had a reasonably consistent silver content of approximately 45% to 55%. In the absence of tests using Neutron Diffraction Analysis, it is impossible to confirm whether or not the mix of the alloy was an important factor in the production of later Icenian coinage. However, in view of the consistency of each researcher's results, and the correlation between those of Northover and Cowell, I strongly suspect that it was. It was probably targeted at a 50:50 mix of silver and copper.

Tests of mid-denominational period Units are also inconsistent. In most cases Dennis's and Northover's results are similar and Cowell's much lower. Table 4.19 shows the average results for each coin tested by the researchers. The tests of Boar Horse B Units are particularly strange. Dennis's five tests range from 83% to 95% bullion and Northover's single test produced a similar result, yet Cowell's two tests indicated little more than 50% silver. The coins tested by the three researchers are from the same sequence of production, and Cowell and Dennis tested coins struck using the same dies. These differences probably relate more to the differing methodologies of the researchers than to the variability of the Icenian alloy.

Table 4.20 Average tin content of later Units, with standard deviation in red

Type	Tests	Tin %	$\sigma$ %
Boar Horse B	6	0.049	0.059
Boar Horse C	4	1.149	1.541
Anted	15	0.354	0.501
Ecen	21	0.562	0.533
Ece B	6	0.713	0.774
Early Pattern Horse (A)	4	1.581	0.883
LFH	21	1.884	1.076

The tests listed in Table 4.19 give little confidence in any assessment of the bullion content of the mid-denominational coinages, although all results imply that the Boar Horse C coinage is more debased than Boar Horse B. The results of Cowell are the most consistent, although unfortunately this does not necessarily mean that they are the most accurate. Regrettably he did not test older types, which would have given a further opportunity to compare the results of the three researchers. Unfortunately it is only possible to draw conclusions about the bullion content of the earliest and latest silver coinages.

#### 4.4.3 Tin content

The problem created by the phasing of copper and silver in an alloy does not invalidate the findings of Dennis and Northover in respect of trace or minor elements. An

interesting feature of their work has been the relatively high levels of tin identified in the Early Pattern Horse (A) and Late Face Horse Units of mint group B, which is shown in Table 4.20.

Occasionally Units of other types have a high tin content, such as a Boar Horse C Unit with 3.4% and an Early Pattern Horse (B) Unit with 5%, but the two Mint B Units, Late Face Horse and Early Pattern Horse (A), are consistently high. These results imply that either Mint B had a different production methodology or a different source of raw material. The high tin content in Late Face Horse Units was noted by Northover (1992, 257); the similarly high tin content found by Dennis in the earlier Early Pattern Horse (A) series reinforces the identification of Mint B as a separate entity.

Tin is associated with the copper content of the coinage. The occasional coins with an exceptionally high tin content appear to be due to a potin-like copper alloy being used to debase the silver (Dennis 2005, 88–94); Farley (2012, 66–67) found that a similar alloy was sometimes used in the North-East.

More Icenian gold coinage contains detectable amounts of tin than other British coinages, and where present the

quantity tends to be higher, with several containing between 1 and 2% (Cowell 1992, 225). Cowell assumed that this was caused by the copper added to the alloy having been in the form of tin bronze, often with a high antimony content. The high tin content is particularly evident in Plouviez and Early Boar Horse Staters, where the average for each type, in cases where this element has been sought, is approximately 0.7% of mass.

#### 4.5 Relative values of Staters and Units

I have used the results of the study of metallurgy and weight to assess whether there was a standard ratio of value between Staters and Units. Any such ratio would imply that Icenian coinage had a fixed value in a monetised economy.

A key variable in any such assessment is the relative value of silver and gold. There is no information available on how the Icenians valued the two metals, if indeed they did so in this sense. In Rome, during the reign of Augustus, gold was valued at some 12.5 times an equivalent weight of silver. One gold Aureus of 7.96g being equivalent in value to 25 silver Denarii of 3.99g (Sutherland 1984, 3). It

Table 4.21 Relative values of Staters and Units

Period	Stater type	Wt	Au %	Ag %	Unit type	Wt	Ag %	A	B	C	D
Early local	Norfolk Wolf A (group 1)	6.17	55	35							
	Norfolk Wolf A (group 4)	6.12	40	44	Bury A	1.42	97	4.3	53.9	23.4	24.2
	Norfolk Wolf B (group 1)	5.85	31	46	Large Flan C	1.32	94	4.4	55.4	19.2	20.4
	Norfolk Wolf B (type D)*	5.3	14	28	Large Flan C	1.32	94	4.0	50.2	7.6	8.1
First denom.	Snettisham	5.6	37	31	SU	1.22	88	4.6	57.4	22.7	25.7
	Irstead	5.6	39	21	IAU	1.20	95	4.7	58.3	23.7	25.0
	Early Boar Horse	5.45	37	24	Early Boar Horse	1.16	88	4.7	58.7	22.9	26.0
Mid-denom.	Boar Horse B	5.42	37	18	Boar Horse B	1.17	91	4.6	57.9	22.3	24.5
	Boar Horse C	5.35	34	22	Boar Horse C	1.2	50	4.5	55.7	19.9	39.9
Late	Anted	5.39	34	16	Anted	1.22	50	4.4	55.2	19.5	39.0
Standard deviation: all periods								0.22	2.7	5.0	6.7
$\sigma$ as % of average relative value of Stater: all periods								5%	4.8%	24.9%	27.9%
Standard deviation: denominational periods only								0.12	1.43	1.72	2.67
$\sigma$ as % of average value of Stater: denominational periods								2.6%	2.5%	7.9%	9.9%

is reasonable to assume that any relative values used in East Anglia would have been similar. If the Iceni were trading directly or indirectly with Rome, to have used a different ratio would have invited arbitrage by Roman traders, which in turn would have driven the metals towards parity with the Roman ratio.

Table 4.21 presents the relationship between Staters and Units for the major Icenian coinages. The weight and metal contents are based on the analyses summarised earlier in this chapter; however a number of observations or assumptions should be highlighted:

- Bury A has been assumed to have been minted alongside die-group 4 of the Norfolk Wolf A Stater (2.5.1). Large Flan C is taken as proxy for Units which were contemporary with Norfolk Wolf B Staters.
- The weight and metal content for the Early Boar Horse Unit are best estimates based upon limited data.
- The Plouviez Issue is ignored, as there is only a single anomalous metal analysis for the Unit.
- Stater metallurgy for Norfolk Wolf A die-group 1, Boar Horse C and Anted are each based on a single test.
- The Anted and Boar Horse C Units are assumed to have a silver content of 50%.
- All calculations of relative value ignore the value of copper, which is likely to be minimal.
- Gold is assumed to be 12.5 times as valuable as silver for the same mass.

The table shows the following calculations:

- A. The Stater expressed as a multiple of Units by weight.
- B. The value of the Stater as a multiple of Units if the Stater was 100% gold and the Unit 100% silver.
- C. The value of the Stater as a multiple of Units based on the Stater's actual metal content but assuming the Unit is 100% silver.
- D. The value of the Stater as a multiple of Units based on the actual metal content of both Staters and Units.

The calculations indicate that throughout the period of coinage production the weight of a Stater and that of a Unit were related (columns A and B). The reducing weight of the Stater was broadly tracked by that of the Unit. This correlation between the two denominations grew closer during the denominational coinages. This is shown by the standard deviations in Table 4.21, which are lowest when they relate to the denominational period alone.

It appears that no efforts were made to maintain the relative value, in terms of metal content, between the two denominations during periods when one or the other was debased. During the early local period, Units were not debased or reduced in weight to reflect the debasement of

the Norfolk Wolf B Staters. Similarly, Staters do not reflect the debasement of later Units.

The calculations suggest that in terms of actual metal content a Stater was worth some 25 Units throughout much of the period of production. This relationship was lost as the Norfolk Wolf B series was debased, dropping to as low as 8 Units to the Stater, but was reinstated with the first denominational coinages. The relationship was lost again with the debasement of the late Units.

#### 4.6 The scale of coinage production

The die-study has provided evidence about the scale of production of coinage in Late Iron Age East Anglia; the work on metals has given information about the fineness of the coinage; and I have collated data about target and actual weight levels. I will now combine these data to give an indication of the scale of coinage in terms of precious metal usage.

The major uncertainty in assessing overall production volume is the number of coins that were struck by each die. A common estimate is some 10,000 coins per die – this is based on experiments by Sellwood (1963), who used 20% tin-bronze dies to produce 99.5% silver 'Greek' coins weighing some 17g each. Sellwood found that with hot-striking an average of 8000 coins per reverse die would not be unreasonable, based upon the life of the dies that he produced. He felt that his obverse die would have produced 16,000 coins and thus considered 10,000 as a probable minimum. Possibly the best data on the durability of dies which were produced and used 'professionally' comes from a study by Martin Allen (2012) on medieval English minting. Allen (2012, 132) had sufficient data in terms of output and die acquisitions for the period 1248 to 1327 to postulate that each silver penny reverse die produced between 11,010 and 23,000/27,000 coins per reverse die and that obverse dies produced 20,000 to 50,000 coins.

Surviving medieval coins dies had the coin designs engraved onto steel die-caps which were welded to iron shanks (Allen 2012, 108). The only known British surviving Late Iron Age coin dies are bronze and may well be forgers' dies. Surviving continental dies are also bronze, and those analysed have a high tin content (de Jersey 2009, 258–59). Sellwood (1963, 219) discusses the advantages of bronze in die manufacture, suggesting that with a tin content of around 20% it hardens on slow cooling.

However, Sellwood was producing much larger coins than any struck by the Iceni; this implies that he needed greater force to strike them, causing greater die wear. Countering this, the silver alloy used for much Icenian coinage would be harder than pure silver at room temperature, although Sellwood considered this to have little effect when working at high temperature. It is also probable that the East Anglian

Table 4.22 Precious metal used in Icenian coinage based on Esty formulae

Period	Kilograms of metal			
	Gold in Staters and Quarters	Silver in Staters and Quarters	Silver in Units and Fractions	Total Silver Equivalent
Early local	877	1425	2313	14,711
First denominational	830	568	1252	12,200
Mid-denominational	454	290	2942	8909
Final coinages	55	32	2176	2986
Later local			303	303
<i>Total</i>	<i>2218</i>	<i>2315</i>	<i>8986</i>	<i>39,020</i>

Table 4.23 Hypothetical dating based on production levels

	Present assumption (table 2.3)	Based on production value (Esty)	Based on die numbers for silver coinage
Early local	55 BC–15 BC	55 BC–15 BC	40 BC–22 BC
First denominational	15 BC–AD 5	15 BC–AD 20	22 BC–11 BC
Mid-denominational	AD 5–AD 25	AD 20–AD 41	11 BC–AD 19
Final coinages	AD 25–AD 50	AD 41–AD 50	AD 19–AD 50

dies were less robust than those used over a thousand years later. Therefore, in order to calculate indicative production volumes, I have assumed that reverse dies produce approximately 10,000 silver coins and obverse dies 20,000, giving an average production per single die of approximately 6700 coins when using numbers combining obverse and reverse dies.

Unfortunately, little success has been had in replicating striking the gold alloys used in Stater production. De Jersey (2009) found problems when trying to strike replica Staters in an alloy of 40% gold, 20% silver and 40% copper. It proved impossible to get the required depth of design. When excessive pressure was applied in order to attempt this, the flan was damaged (De Jersey 2009, 268). Haselgrove (1984), when estimating Stater production during the Gallic Wars, assumed an output per pair of dies of only 1000 coins. He considered that episodic production may have precluded dies working to full capacity and, in a mint working under pressure, he suspected that breakages would have been high. It is clear that Haselgrove (1984, 90) intended to be conservative in his estimates. When considering Gallic Wars Stater production, de Jersey (2009, 266) used the same output levels per die as Haselgrove, largely because of the immense numbers of Staters and usage of gold that would have been involved if higher estimates had been used.

Clearly the striking problems encountered by de Jersey had been overcome in the Late Iron Age, as deep detail on struck Staters is normal. In the absence of meaningful data regarding Stater production per die, I have assumed that output per die is half of that for silver and that Quarter Stater production is similar to silver

production. I think it is unrealistic to reduce assumed output per die further, as Haselgrove's fears regarding intermittent production and highly pressured work do not seem to apply. The dies of Icenian Staters form long, well-ordered die-chains, and signs of emergency production are unusual.

Indicative calculations of the precious metal used in the Icenian coinage are shown in Figure 4.22. In order to produce readily comparable data, metal usage is expressed in kilograms of silver, with gold converted at 1:12.5. I use Esty calculations to assess likely die numbers (4.2) and estimates of weight and metal content are based on the data discussed above. I have assumed 20% debasement to silver coinage in the mid-denominational period and 50% in the final period. The calculations indicate gross metal usage; re-coinage can result in metal being recycled into successive coinages

The most surprising result of these hypothetical calculations is the low relative value of the final coinages. Table 4.22 indicates that the value of coinage in the final period of production, which I have assumed to last for some 25 years, was only equivalent to some 3000 kilograms of silver, whereas in the mid-denominational period of some 20 years it was nearly 9000 kilograms, and in the first 40 years nearly 15,000 kilograms. Table 4.23 shows that if production value per annum had been evenly spread the final coinages could have been produced during only nine years. This alternative is highly unlikely, and hoard evidence suggests that the final coinages were not produced rapidly (6.5.3). I think it much more likely that the value of new coinage from the mints declined as a result of a reduction in the availability of gold and an underlying change in political or economic



Figure 4.9 Possible Stater flans. From left: ST907, ST850, GC658 and CR78 15 (© Chris Rudd)

circumstances. Table 4.23 also shows the hypothetical dating if the annual minting volumes of silver had been constant, but starting in 40 BC to reflect a probable delay after commencement of gold and the likelihood of lower output per die in the early local period. These results are close to the assumed dating used in this book, unfortunately there is some circularity in the calculations as the differing silver coinages were an important factor in my original hypothesis as to dating. Nonetheless I suspect that the picture presented of a reasonably stable annual production of silver coinage may be realistic.

#### 4.7 The organisation of minting

In this section I consider briefly the likely processes involved in the minting of coinage, and archaeological evidence for the presence of mints. I then summarise the findings from the die-study, which assist in understanding the organisation of minting.

##### 4.7.1 Processes of minting and archaeological evidence

The steps involved in silver coinage manufacture in the Late Iron Age seem likely to have been as follows:

1. The raw materials of copper and silver were held in granular or powder form.
2. They were mixed in the proportions required to create the desired alloy.
3. Enough of the mixture to make a single coin was weighed out, and put into a hole in a pre-prepared ceramic tray, probably containing 25 or 50 such holes.
4. The trays were heated to a temperature sufficient to smelt the metals and create the alloy; the heating may

have been directed to the top of the trays (Longden 2008).

5. The resultant pellets of alloy were removed from the trays.
6. The pellets were heated and struck between two dies to produce a coin.

The suggestion that metals were held in granular or powder form, and the alloy manufactured within the pellet mould, is speculative. In a study of the coin moulds from the North Thames Ford Bridge assemblage, which were for bronze coinage, the homogeneity of tin concentrations on a metal prill suggested to Longden that the bronze had been pre-alloyed. However, small quantities of silver found in the vitrified clay could have resulted from its addition as a separate ingredient (Longden 2008). The work of Landon (2010) on the same assemblage of moulds demonstrates conclusively that the holes in the trays were not themselves measuring devices. Using my findings about the precise weights of Icenian Units, he concluded that the metal could not have been introduced in a solid state (Landon 2010, 60–61).

The above processes appear to be appropriate for silver, and possibly, with the addition of granulated gold, for Quarter Staters. Staters may have been produced by a different process. Flattened circular un-marked pieces of gold alloy are often found on Late Iron Age sites and are commonly thought to be unstruck Stater flans. Known examples from East Anglia are listed below, and three are illustrated in Figure 4.9:

- Great Cressingham, Norfolk – 5.61g (GC658), flat with a slightly thicker area on one part of circumference, slightly reddish gold.
- Saham Toney – 5.54g (ST850), pellet-like with two flattened faces, which appear to be scraped or filed, reddish gold.

- Saham Toney – 5.56g (ST907), similar to ST850 but appears highly debased.
- Beck Row, Suffolk – Chadburn (2006, 435) recorded a pale gold blank at 5.46g, a bun-shaped pellet at 5.44g and a further gold pellet of unknown weight.
- Forncett St Peter – 5.84g (CR78 15), similar to ST850 but lighter gold. XRF testing of this pellet showed it to be 42% gold, 43% silver and 11.5% copper with 2% iron, 0.6% tin and 0.2% lead (test results from Chris Rudd).

These examples have weights that all fall within the range of Icenian Staters, and their colour is similar to the Staters that are appropriate to the relevant weight. For example ST850 has the debased appearance of a late Norfolk Wolf B Stater. The Forncett pellet has the weight and metal content of a late Norfolk Wolf A Stater with the exception of the iron content which, when noted, has always been minimal. Notwithstanding the unusual iron content of the Forncett pellet, I suspect that these objects are unstruck flans for the minting of Staters. Most examples appear to have been produced in pellet form and subsequently flattened, whereas GC658 appears to be cast in a flattened shape. The regular finds of flans may indicate that their preparation was separated from the striking of coinage. It is conceivable that flans had a role beyond being simply an intermediate stage in minting. These flans are an interesting topic for further research, which, at the very least, is likely to shed additional light on Late Iron Age minting processes.

Silver pellets, ‘blanks’ and droplets have been found at Fincham with Late Iron Age coinage, but only a minority correspond to the weight of an Icenian silver coin (Chadburn 2006, 435). Other examples of unstruck silver from Late Iron Age sites have also been encountered during this study, but most are not of an appropriate weight for Icenian silver coinage.



Figure 4.10 Fragment of pellet mould from Saham Toney

No Icenian coin dies have yet been found, but direct evidence of minting activity is provided by clay pellet moulds in the form of broken trays (Fig. 4.10). These have been found at the following sites:

- Saham Toney – six fragments in the stream area (Brown 1986, 8).
- Thetford, Fison Way – 109 fragments (Gregory 1991: 139). They have ‘cups’ with an average diameter of 9mm, a depth of 11mm and are laid out on a grid with 18mm centres. XRF analysis detected silver on the majority of pellet mould fragments. These moulds are of similar dimensions to some of those measured by Mark Landon (pers. comm.) at Ford Bridge in the North Thames area.
- Needham, Waveney Valley – a single fragment in a sealed deposit in a ditch with other material dating to c. AD 50 (Frere 1941).

A single sherd was also found at West Stow in Suffolk with pellet mould-like depressions and has been recorded as a possible Late Iron Age pellet mould (West 1990, fig. 45), but the illustration shows this to be unlikely.

The pellet moulds indicate that minting activity took place at Saham Toney, Thetford and probably Needham (shown in black in Fig. 4.11). The evidence from the die-study coupled with distribution analysis suggests that there was minting activity at many other sites, some of which may be indicated by the finds of Stater flans discussed above and shown in red in Figure 4.11. There has been little excavation

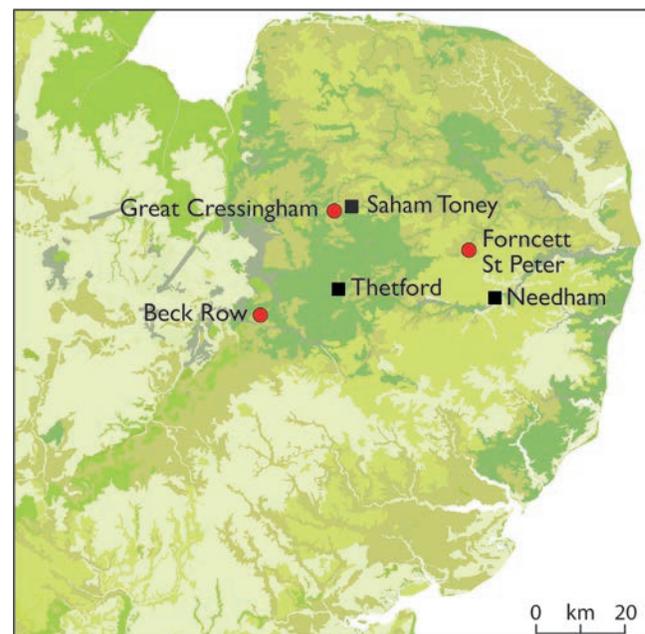


Figure 4.11 Sites with possible evidence of minting: Stater Flan finds (red); pellet mould finds (black)

of major Late Iron Age sites in East Anglia, and I expect there will be future finds of pellet mould debris from such sites. The finds of pellet moulds at Fison Way, Thetford were on a site thought to be used for ritual or ceremonial purposes (6.6.2), which have been taken to imply that minting may have had ritual associations. There is no context for the finds from Saham Toney and no suggestion that Needham was anything other than a settlement site.

#### **4.7.2 Findings from the die-study**

In this section I draw together, and comment upon, my key findings regarding the organisation of minting in Chapters 2 and 3.

In order to make sense of the coinage, I found it effective to make a fundamental division between the early local and later denominational coinages. In the early local coinages there were no stylistic links between gold and silver, and there was much minting on a local basis for local usage. The denominational periods saw gold and silver as separate parts of a single Issue, and there was a growth of larger mints, each producing coinage with a wide circulation within East Anglia. The start of denominational coinage appears to represent a fundamental change, which seems to be related to other events in Icenian society. Nonetheless, I am concerned that my division between early local and later denominational periods risks over-simplification.

In the early local period, the minting of silver coinage often involved only a few dies and a small area of circulation. These were probably struck at a low output per die by itinerant moneyers. However, in parallel, larger organisationally complex types such as Bury A and Bury B were being minted. The position was not so dissimilar in the denominational periods; most production was from three main mints, but in parallel there continued to be a reduced number of smaller local coinages. Mint A was the largest mint of the denominational periods; although the evidence is somewhat tenuous, I strongly suspect that it was also a major force in the early local period. In section 2.5.5 I have shown that the early local period Bury Pallas Half Units die-link to Snettisham, the first denominational Issue, and I have speculated that these Half Units form a denominational grouping with Bury A and probably a later early local period Unit. In this scenario, which I think likely, Mint A was in operation for the whole period of Icenian coinage production. I suspect that Mint C, which produced that Saham Toney Issue in the first denominational period, also had its origins in the early local period, probably minting Large Flan A (see 3.6 and 3.6.1).

If the operation of mints was continuous in this way, the major numismatic event at the end of the early local period was the cessation of the Norfolk Wolf gold coinage and its replacement by the denominational gold coinage of Mint A. That this was not a natural evolution is suggested by

the extreme debasement of the final Norfolk Wolf B issues, the hoarding horizon that accompanied the change and the much finer gold subsequently issued by Mint A.

In the early local period the types struck in large volume, such as the Norfolk Wolf B Stater and Bury B, often appear to have been struck in different locations using similar, but un-linked, dies. There were a few types that show signs of having been issued as a matter of urgency, such as die-group 1 of the Norfolk Wolf A Stater and die-group 2 of Bury A, but most production appears to have been executed in an orderly way.

Most of the coinage of the denominational periods was produced by three mints. Their scale of operations and geographic coverage is summarised in 3.2 and discussed in more detail later in that chapter. They appear to have exercised strict control over weight, alloy mix and imagery, yet each produced from a number of sites within the region without seeming to have an exclusive area of sub-regional focus. The largest of them, Mint A, produced the Anted and Ecen Issues in parallel and may also have produced earlier Issues in parallel. Alongside the output of these mints there continued to be small local production of types such as Esv Prasto and Cani Dvro, although to a lesser extent than during the early local period.

#### **4.7.3 Summary**

It appears from the die-study and related distribution data that throughout the period of Icenian coinage production minting was widely dispersed. Archaeological evidence of mint sites is very limited. At all stages, small-scale production took place alongside large-scale minting. The larger issues were often produced from different sites using common iconography, alloy mixes and weight. None of the minting activities appeared to have areas of geographic exclusivity, and areas of distribution overlapped.

There were some uniform aspects of coinage. Weights and metal content were generally standard at any given point in time with a few limited exceptions, such as Ale Sca. The same denominations were used throughout the entire period. Despite these elements of uniformity, the only example of a symbol or inscription being applied to all East Anglian Issues at the same time is the widespread use of facing crescents, at the start of the mid-denominational period. These were subsequently excluded from the final Issue of Mint B. Models of organisation which may be appropriate to these findings are discussed in Chapter 7.

#### **4.8 Plated coinage**

The die-study included consideration of plated coinage. This was essential in order to correctly identify official dies, but also important as I believe plated coinage is an indicator of official coinage having transactional value. A study of

Late Iron Age plated coins by Cottam (2001) convincingly concluded that they were counterfeit money. He showed that plated dies were cruder than those which struck solid coins, that the foil used is often of a different colour to solid coins, and that careful examination of plated coins, which initially appear to be from official dies, have tell-tale signs of hubbing. Cottam's analysis applies to Icenian coinage and is generally in accordance with my own findings.

There are plated examples of Icenian coins from every period of coinage, for all denominations and for most major types, some of which are illustrated in Appendix I. The 10,000 Icenian coins in the database include 344 that were originally plated. Most were struck with specially made dies, of which 348 different examples are recorded, but there are also many examples of plated coins struck from what appear to be hubbed copies of official dies.

The forgery of Icenian coinage was present from the beginning of production but grew significantly during the final periods of production. This is illustrated in Table 4.24, which shows the ratio of false to official dies for each denomination over the four periods, expressed as a percentage of official dies. The statistics for the early local period are somewhat distorted by the Hunstanton B hoard, which is discussed in section 6.4.3 and which included many plated Norfolk Wolf B Staters and Large Flan C Units. The plated Staters from this hoard are unusual in being produced with a silver appearance, thus it is possible that they were not designed for purposes of deception, at least not in a temporal sphere. There are also limited amounts of more typical plated coinage in this period, including two plated Norfolk Wolf A Staters and nine plated Bury A Units. The significance of plated coinage will be further discussed in Chapter 7.

#### 4.9 Summary

This chapter focused on the production of Icenian coinage, focussing on particular aspects that may provide clues as to how it was used. With the exception of Quarter Staters in the final period, all four denominations were used in each period of coinage. The tables of dies clearly illustrate the decline in the minting of gold over the period of production and provide a basis for further analysis of the coinage (Table 4.1 and 4.2).

The first aspect was weight. From the beginning, silver and gold coinage was produced with strict control over

weight. Almost 60% of samples from die-group 1 of the Norfolk Wolf A, the first Icenian Stater, were within a tenth of a gram weight range centred on 6.17g. With the exception of the Norfolk Wolf B Stater, all subsequent gold coinages were produced with strict control over weight. Stater weight was gradually reduced but, except for the Norfolk Wolf B Stater, this was also tightly controlled. Reductions took place at the change from one type to another or in the exceptional case of the Norfolk Wolf A Stater between die-groups, not during the course of production (4.3.1).

The degree of weight control over silver coinage is harder to assess as sample sizes are small, and coins suffer damage in the soil. However, examples of the early Unit Bury A reveal a well-controlled target weight of between 1.4 and 1.44g. For the late Units there are many examples in excellent condition from hoards; these show remarkable weight control with 77% of the 314 samples of Late Face Horse Units from die-group 19 falling within a weight range of 0.1g around a target weight of 1.24g (4.3.4). The analysis of the weight of the different denominations has shown that there was a fixed relationship between the weights of Staters and Quarter Staters and between Units and Half Units (4.3.3 and 4.3.5).

The second main analysis was of metal content. Considerable attention was paid to the control of metal content within the coinage. This is clearly demonstrated for gold coinage, the results of the many metal tests showing generally low standard deviations, particularly for gold content (Table 4.16). The test results for silver and copper in the gold coinage included the greatest variations; this is likely to be related to the measurement problems for these elements when mixed in an alloy. The earliest coinage had a similar gold content to the Gallo-Belgic E Stater at 55%, but this soon dropped while the denominational coinages stayed between 34% and 39%. The coinage started with a high silver content and low copper and this gradually reversed (4.4.1).

The earliest silver coinage was produced with high bullion content, averaging some 97% silver, and remained high until the mid-denominational period, when most tests were still above 90%. Thereafter there was debasement of the silver by the addition of copper, and it seems probable that the later coinages were about 50% bullion (4.4.2). It has not proved possible to obtain accurate results for the metallurgy of the debased silver coinage, due to the

Table 4.24 False dies as a percentage of official dies

	<i>Early local</i>	<i>First denomination</i>	<i>Mid-denomination</i>	<i>Late denomination</i>
Stater	26%	7%	67%	71%
Quarter Stater	0	7%	31%	N/A
Unit	14%	4%	20%	45%
Half Unit	0	10%	29%	46%

separation of silver and copper into separate phases when mixed in an alloy.

The review of metal content has given a few clues as to the source of the precious metals, which may have helped to elucidate contemporary trading relationships. The silver for the early silver coinage may well have been Roman Republican Denarii with added copper. The earliest Norfolk Wolf A Stater has the same mix of major elements as Gallo-Belgic E Staters, but it appears to have more tin than the Gallo-Belgic coins. Only one Norfolk Wolf A Stater from die-group 1 has been tested, but the result raises doubts about whether recycled Gallo-Belgic E Staters provided the metal for the first East Anglian gold coinage.

I have attempted to establish if there was a standard relationship between either contemporaneous types of Staters and Units in the early local period or between those of the same Issue for later coinage. The results show that there was a clear relationship between the weight of a Stater and that of a Unit, except for later Norfolk Wolf B Staters. I was unable to find evidence of a stable relationship between the precious metal content of gold and silver coinage, and there was definitely no such relationship during the production of the Norfolk Wolf B Stater and the later debased silver coinages (4.5).

An indicative assessment of the precious metal needed for the entire coinage is 2200 kilograms of gold and 11,300 kilograms of silver, some of which would have come from metal being recycled from earlier to later types. These calculations are based upon broad estimates of coinage

production per die, as well as the other data from the study. The usage of gold declined significantly during the mid- and later denominational coinage, the usage of silver did not replace the value of the absent gold. The 'value' of coinage production appears to have suffered a significant decline in these latter periods, irrespective of uncertainties about the relative duration of each of the four periods into which production is divided (4.6).

A third key point of focus was the scale and distribution of production. In the early local period much minting was dispersed and often local in distribution. However, there were a number of larger issues that may have been minted from multiple sites but which clearly had common standards of weight, metal content and design. Denominational minting was often widely dispersed, yet was tightly controlled by a limited number of mints that appeared to operate in parallel. At the same time there continued to be other small local productions of coinage. It appears likely that two of the mints of the denominational periods were also operating in the early local period. There was production of plated coinage of all denominations and in all periods but with a major increase in the final two periods.

In summary, there does not appear to have been any form of monopolistic control over minting activity, yet Icenian coinage was standardised in terms of denominations, weight and to some extent metal content, as if these criteria were centrally controlled. The significance of these observations will be discussed in Chapter 7.

## Chapter 5

### Art, imagery and inscriptions

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#### 5.1 Introduction

The first coinage produced in East Anglia was part of a massive burst of creativity. Imagery was produced which was not only beautiful, but which also contained ‘hidden’ elements not immediately apparent. With time the nature of the imagery changed, and other aspects became important, such as consistency from die to die and repetition of specific symbols and words.

This chapter explores what can be learned from this imagery and its possible social and cultural implications. The die-study and the detailed photographic records of over 1600 dies, many of which are chronological sequences, provide a unique opportunity to study the imagery. It is possible that Icenian coins had symbolic or artistic importance in their own right. This could be an alternative to other roles of the coinage or an addition to them. The term art or artistic in prehistoric studies is widely debated (Garrow and Gosden 2012, chapter 2 summarises many of the arguments). I have no wish to step into this particular minefield, but it is clear that the imagery on the coins contains important clues about their purpose and whether this changed with time. To extract this information requires consideration of issues of style and stylistic change.

I have used the results of the die-study as a basis for a high level objective analysis of how the numismatic imagery developed and changed. It was noted during the die-study that the coinage fell into three main stylistic groupings:

- The early gold Norfolk Wolf A and B Staters and the Norfolk Wolf A Quarter Stater, with Gallo-Belgic styled obverses and reverses which appear to depict a narrative.
- The early silver coinage with its variable imagery, which was often produced sub-regionally and is related to other forms of Late Iron Age art.
- The denominational coinages with stable imagery and stylistic links between denominations.

This chapter begins with a brief discussion about the approach that I have adopted in studying Icenian numismatic imagery, and how it is different from that used in some studies of Late Iron Age art. I then examine the early gold, which has little in common with other Icenian coinage. This is followed by a review of the key components of imagery for the rest of the coinage. These are addressed in an approximation of chronology, but are not divided strictly between periods of coinage, as many types of image are common to all periods. Heads and faces and then the horse are considered. These reviews concentrate on the more artistically creative and variable coinage of the early local period, but also address relevant imagery on denominational coinages. Two aspects of imagery from the early local period are then examined: symbols and Gallo-Belgic influences on the two largest issues of early Half Units.

In sections 5.5 to 5.7, I concentrate on imagery that is mainly relevant to the later periods. I look briefly at the use of imagery to define denominational groupings followed by a more in-depth examination of the back-to-back crescents symbol. Also discussed are the pellet-triangle motif and images of the boar. I also address the impact of Augustan imagery in East Anglia before giving an overview of the impact of inscriptions on Icenian coinage and the clues that these provide about the people who minted the coinage.

The final sections of the chapter look at imagery in a wider context. These begin with an examination of the close relationships between Icenian and other regional coinages identified in a number of examples. I then consider whether it is possible to objectively illustrate my general observations about the different uses of imagery between the early local and the denominational periods. This includes an evaluation of the use of main forms of obverse imagery and the extent to which these follow a chronological or alternative pattern. Finally, there is a summary of overall observations on the study of Icenian numismatic imagery and their impact on conclusions about the likely purpose of the coinage.

## 5.2 Icenian numismatic imagery

Many studies have assumed that Late Iron Age numismatic imagery follows a pattern of degeneration or debasement until Roman ideas are copied and the art flourishes – this is an assumption with which I heartily disagree. This idea can be traced back to the ideas of John Evans (1850, 127) and his hugely influential article, which identified the Macedonian Stater as the prototype for the British coinage and laid the foundations for subsequent studies of ‘Celtic’ coinage. The problems arise from a diagram he produced, which purports to illustrate how it was possible to date British coinage by an assessment of the extent to which imagery had degenerated or simplified relative to the prototype. I doubt whether any Late Iron Age British coinage truly conforms to Evans’ theory of degeneration. The Durotrigan coinage is commonly thought to be the clearest example of this, but the most convincing arguments are heavily reliant upon the late Durotrigan cast bronzes being put into an assumed chronological order on the basis of perceived simplification of imagery, and then being used as a striking example of chronological ‘descent’ (see for example Creighton 2000, 34, Fig. 2.4).

Early Icenian coinages have considerable variation between dies within a type, mainly in respect of the detail around the main image, but these changes do not follow any steady pattern of simplification. Subsequent Icenian numismatic imagery was remarkably consistent within a type, and if anything there seems to have been a strong preference to avoid change. The chronological sequences of mid- and later Icenian coinage do not show the widespread die to die variation that one would expect to see if the imagery was degenerating or influenced by a concept such as serial imagery (Eco 1990; Creighton 2000, 35–37). Major stylistic changes do occur in these periods, but these usually coincide with a new Issue of coinage or the final dies of the old Issue. The key point is that change is sudden and not gradual.

The theory of gradual degeneration has led to numismatic imagery being treated separately from other Late Iron Age forms of art and imagery and to assumptions that there is little to be learned from it. It has either been excluded or only briefly touched upon in many studies of Iron Age art (e.g. Megaw 1989; Stead 1996; Garrow and Gosden 2012). I would argue that numismatic imagery can aid in studies of Late Iron Age art, and equally, developments in the study of ancient art could help shed light on the purpose of Icenian coinage – evaluating the two in tandem is the main goal of this chapter.

## 5.3 The early gold coinages

### 5.3.1 Obverses of Norfolk Wolf A and B Staters

The obverse imagery of Norfolk Wolf A and B Staters is similar to that of other very early British Staters and is derived by a process of abstraction from the coinage of



Figure 5.1 Comparison between Gallo-Belgic A (left) and Norfolk Wolf A Stater obverses (right)

Phillip II of Macedon (359–336 BC). The relationship between the right-facing abstracted head on the Norfolk Wolf A Stater and its less abstracted ancestor Gallo-Belgic A can be seen in Figure 5.1 (the latter is reversed for easier comparison). The wreath, the bar through the hair, and the drawing of the hair to the left of the wreath are similar. The face has become more abstracted: the three large curls to the right of the wreath on the Gallo-Belgic A form a major part of the Norfolk Wolf A face, the upper curl seeming to represent the eye and the central curl possibly the ear. A rudimentary nose and lips can be seen to the extreme right of the Norfolk Wolf A. Below the head on the Gallo-Belgic A is an arrangement of lines and pellets which represents a cloak; these details are also present on most Norfolk Wolf A dies but are surmounted by the fibula discussed below. The derivation of the Norfolk Wolf A obverse from Gallo-Belgic A is probably via Gallo-Belgic C as illustrated in Figure 5.2.

At the top of the cloak on Gallo-Belgic C is what appears to be a fibula. In the Norfolk Wolf A and B coinages this device evolves, becoming more elaborate and unlike known examples of British fibulae. The most complex example is shown in Figure 5.1, which has a resonance with decorative ironwork of the period (see Jope 2000, pl. 310b–c). Below the fibula on Norfolk Wolf B die D is an ornate, seashell-like, design so far only seen on that die (Fig. 5.3).

Norfolk Wolf A die A, possibly the first obverse die, differs from other obverses in that it is left-facing and crude in execution, the ‘fibula’ is missing and the treatment of the base of the hair bar is different. This die is close in style to the insular form of Gallo-Belgic C, which Sills (2003, 261–67) believes to have been struck in Britain and is possibly the earliest regular British gold coinage. These similarities suggest that the two types may have been close contemporaries. The Gallo-Belgic C is shown reversed in Figure 5.4 to facilitate comparison.

### 5.3.2 The reverses of early Icenian gold

The Icenian gold reverses show an animal, usually identified as a wolf, with open jaws baring its teeth. I follow Chadburn



Figure 5.2 Two Gallo-Belgic C dies (© John Sills 2003, fig. 75) and Norfolk Wolf A die M (right)



Figure 5.3 Shell or floral-like device below fibula



Figure 5.5 The Norfolk wolf



Figure 5.4 Comparison between Insular Gallo-Belgic C (left) and Norfolk Wolf A die A

(2006, 313) in calling it a wolf but, as she suggested, it could be a large hunting dog (Fig. 5.5). The use of a wolf or dog on coinage is uncommon. Sleeker dog-like creatures appear on a number of the North Thames silver coins of Cunobelin (for example ABC 2846). The only British Late Iron Age coin bearing an animal in a similar posture is a Corieltavian Unit (ABC 1788), an example of which was allegedly found in the Hunstanton II hoard (6.4.3). The Corieltavian Unit is likely to be broadly contemporary with the Norfolk Wolf A and B Staters, with which it shares a crescent close to the wolf's mouth (Fig. 5.6).

Above the Icenian wolf are a crescent and a number of large pellets, perhaps intending to give the impression of a night sky. On the Norfolk Wolf A Stater above the wolf to



Figure 5.6 The Corieltavian wolf (ABC 1788)

the right is a large irregular shape that forms a bird's body. This is connected to two of the pellets, which form feet, and to a third pellet above the crescent which forms the bird's head; this pellet is given a beak and a crest as shown on the left of Figure 5.7. Early dies look less bird-like and are closer to what may have been the starting point for the design, the arms of the horse-rider on Gallo-Belgic E Staters.

On the rear of the wolf on both types of Stater is another bird, two examples of which are shown on the right in Figure 5.7. Kretz (1999) made a plausible case for identifying

the upper bird as a Lapwing (*Vanellus vanellus*), which is common in East Anglia. This bird originally inhabited coast and grasslands but adapted well to traditional farming techniques. The bird on the back of the wolf may be a representation of a wader or a member of the heron family. It may be related to a bird sitting on the back of a horse on continental Late Iron Age coinage (for example DT 146).

In front of the wolf's mouth on the Norfolk Wolf A Stater is a shape like a solid square with a corner missing, the crescent within its jaws possibly representing a tongue or a crescent moon. In front of the head and behind the tail is an almond-shaped ring with an elongated central pellet, which is also seen on Gallo-Belgic E Staters.

### 5.3.3 Summary

Consistency in obverse imagery appears to have been important, and there is no sign of change or simplification. Most of the key elements of the reverse design are present on all dies, such as the standing wolf with a crescent above and a bird on its back. The crescent close to the wolf's mouth and the upper bird both seem to disappear in the later dies of Norfolk Wolf B. There are local sub-types of Norfolk

Wolf B with additional decoration and detail, but the key elements usually remain constant.

Daphne Nash Briggs (2010) imagines that the scenes on the reverse of these East Anglian Staters and on some continental coinages likely represent a myth associated with a lunar or solar eclipse. Her theory relies heavily upon Norse mythology recorded in medieval times. Nash Briggs' interpretation certainly fits with the 'astral' imagery above the wolf, and it is possible that the crescent, seen close to the mouth of the wolf on Norfolk Wolf A and B Staters, represents a moon about to be devoured. The crescent in front of the wolf was certainly initially seen as important, as it remained part of the simplified imagery of the Quarter Stater. Whether or not Nash Briggs' interpretation is correct, the consistency and complexity of imagery on these reverse dies gives the impression of a deliberate attempt at the illustration of a narrative.

### 5.4 The early local silver coinages

In this section I examine the key design elements of the early silver coinage: the head and the horse. In both cases the main focus is on coinage of the early local period, but

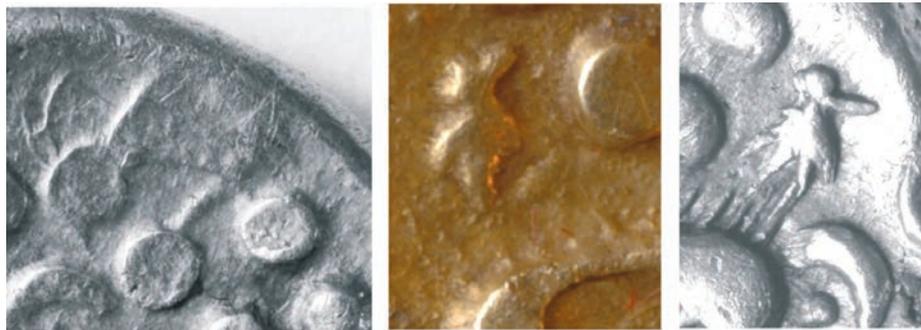


Figure 5.7 From left: the upper bird on Norfolk Wolf A die 22 and rear birds from Norfolk Wolf A and B



Figure 5.8 Heads on Icenian obverses: a) Bury Face Horse Half Unit; b) Bury A; c) Bury C; d) Large Flan A; e) Bury D; f) Bury B; g) Snettisham Unit; h) Irstead Unit; i and j) Saham Toney Units; k) Late Face Horse

I also refer to the use of these elements in later coinages. Other design elements that are important in the early local period and the strong links between the imagery of early Half Units and some Gallo-Belgic silver are also discussed.

#### 5.4.1 The head or face on silver coinage

The head is the dominant motif on the obverses of the early local and the first denominational silver coinages. With somewhat different attributes it re-appeared in the later Late Face Horse series of Units. Heads or faces are also often hidden on both obverses and reverses on gold and silver coinage. First I discuss the clearly displayed obverse heads and then the hidden imagery.

Heads on the obverses of silver coinage are usually shown in profile and are not abstracted like those seen on the early Staters. Nonetheless, they are stylised and do not appear to depict a particular individual (see Fig. 5.8). A number of general observations can be made about the heads other than those found on Late Face Horse:

Generally there is a lack of facial hair; exceptions include the moustache on the facing head (Fig. 5.8A), and beards in various forms on Bury D (Fig. 5.8E), Saham Toney (Fig. 5.8I) and some Large Flan C dies which can be seen in Appendix I.13.

- Most eyes are relatively large and appear to be intended to represent a living being; possible exceptions are Large Flan A (Fig. 5.8D) and Bury D (Fig. 5.8E).



Figure 5.9 From left: Bury A die K, South Thames Quarter Stater and Ambiani Unit DT 351 (© Chris Rudd)

- The Bury Face Horse Half Unit (Fig. 5.8A) is unique in showing a frontal view of a moustachioed human face as the main element of the obverse design. The extra detail to the upper left of the face represents hair or a headdress and the residue of a ring and pellet.
- The heads shown in profile usually reveal the neck and often part of the shoulders. The intention is to portray an intact head *in situ* on a body.

The Late Face Horse head (Fig. 5.8K) is different; it is not bearded and most die groups are entirely composed of dies showing heads either with a moustache or lacking any facial hair. None of the 83 obverse dies show the head having a neck or shoulders. The base of the head is always represented by a horizontal concave line stretching from the chin to the back of the head. The eyes are small and do not give the appearance of life. I believe it is likely that the head on this large issue represents a detached trophy-head or a mask.

Bury A is one of the earliest Icenian heads and is almost identical to that on a South Thames Quarter Stater (ABC 551). Both of these are similar to some Gallo-Belgic Units attributed to the Ambiani (examples of all three are shown in Fig. 5.9). The two British heads are so similar that they are probably the work of the same die-cutter. If so, this implies that either dies or die-cutters travelled between regions in the early years of silver coinage production. Stylistic links to the continental Unit are also strong, indicating that earliest die-cutters of Icenian coinage may well have been of Gallic origin.

The helmeted head of Bury C, probably contemporary with Bury A, appears to be based on the helmeted head of Roma on Roman Republican Denarii. The process of this transformation is illustrated in Figure 5.10. On the left is a Republican Denarius of L. Minucius (133 BC) found on an Iron Age site in East Anglia (Crawford 1974, Type 248/1). On Bury C, the lower part of the helmet has been altered to a diadem. Bury B appears to be a further stage in the adaption of the same image to a local aesthetic, but



Figure 5.10 From left: Republican Denarius, Bury C and Bury B

it still retains the shape of the helmet and the detail to its rear. The adaptation of the image was not a gradual process. All Bury C dies are broadly similar and all Bury B dies use the ‘new’ adapted form. The adaptations shown in Figure 5.10 are illuminating:

- Any risk of the image being an identifiable portrait is eliminated.
- ‘Local’ features such as the diadem and locks of hair are introduced in two stages.
- The final image is adapted by the depth of die-cutting and adding the lock of hair before the eye for the Chimirri-Russell effect (see below).
- On Bury B hollow stars are introduced. These are discussed in 5.4.3.
- The Roman obverse is itself derived from images on Greek coinage, but the helmet detail shows the Roman coin to be the immediate prototype.

There are many hidden faces on Icenian coinage. Some of these are not difficult to see and are similar to those found in other Late Iron Age art. The Bury Butterfly Half Unit, for example, closely echoes some of the hidden faces seen on the Battersea Shield (Fig. 5.11; Stead 1996, pl. 82). Faces in the Half Unit can be seen by treating a pair of rings as representing eyes, for instance the smallest pair which are just above the centre of the coin form a face by treating the lower part of the sinuous curves as sides to the nose, the pellet above the boar as nostrils, and the back of the boar as a mouth. Faces can also be seen by inverting the image and continuing to treat the differing pairs of rings as eyes.

Other faces are less straightforward but can be detected by rotating a coin. The examples from Bury D, shown in Figure 5.12, make use of the large circular design above

the horse as a mouth, the rings either side of the forelegs as eyes, and the body of the horse as a combined nose and moustache.

The horse is also used to hide faces on many other types, two of which are shown in Figure 5.13. The image on the left is a Snettisham Stater (die 9) and the central coin a Large Flan A Unit (die 19). In both cases a left-facing profile is created by using the body and neck of the horse as a nose, its head as lips, and a ring and pellet as an eye. However, there are more faces hidden in each image. Another example can be seen on the right; this shows Large Flan A die 19 with the horse’s body used as a nose again, but this time inverted. Yet another face is seen if this image is rotated through 180 degrees.

Similar effects can be seen on many types including Bury A, Bury C, Bury E, Bury D, Bury B, Bury Half Units, Large Flan C, Snettisham Unit, Snettisham Quarter Stater, Plouviez Unit, Irstead Unit, Early Boar Horse Unit, Saham Toney Unit, Boar Horse B Stater, Boar Horse B (A) Unit and the Boar Horse C Unit. The effect is less clear, but detectable, on Anted, Ecen and Ece Units.



Figure 5.12 Hidden faces on Bury D reverse dies



Figure 5.11 Hidden faces on Bury Butterfly Half Unit and the Battersea Shield (© Trustees of the British Museum)

Faces hidden within horses are not exclusive to East Anglia, and similar effects can be seen on other coinages such as those of Dubnovellaunus in Kent (e.g. ABC 321), South Coast silver (e.g. ABC 671 and 791), some Corieltavian silver (e.g. ABC 1794), some Dobunnic coinage (e.g. ABC 2018), and North Thames types (e.g. ABC 2303). It can also be seen on some continental Late Iron Age coinage, such as bronze Units of the Meldi (DT 576 and 577) attributed to the period c. 60 BC–30/25 BC. A more obvious face appears above the horse on the Irstead Quarter Stater of the first denominational period (Figure 5.14).

Other animals have also been used, such as the dog-like creature on ABC 2846 which is a rare example of the effect on the coinage of Cunobelin. A comprehensive analysis of British Late Iron Age coinage has not been undertaken, but it appears from an examination of the illustrations in Cottam (2010) that the use of hidden faces was more widespread in the Icenian region than in other British coinage producing areas.

Geraldine Chimirri-Russell (2003) discovered that certain Gallo-Belgic coins with a profile head create realistic, almost three-dimensional, images when rotated and viewed obliquely. The true purpose of certain symbols in front of the face becomes apparent as they form elements of the new image, invariably including a second eye. In order to create this effect the curvature of the die, and differential depth of die-cutting, were used to ensure an alignment of nose, lips and chin on rotation. This is defined as the Chimirri-Russell effect.

I have identified excellent examples of this effect on a number of Icenian Units from the early local period. It is perhaps seen at its most impressive on Bury B and the rare Bury F. The effects of light that help to create the face are best seen when the coin is physically examined, and are hard to capture in a photograph, but an attempt has been made in Figure 5.15.

Design elements such as the ‘beard’, the line from the mouth on Bury F, and the placement of the hollow stars on Bury B, give a three-dimensional structure to the image when it is rotated. Other Icenian coins incorporating the Chimirri-Russell effect include many of the dies of Large

Flan A and Large Flan C. In a rotated Large Flan A, the new nose is formed by the space between the original nose and the scroll in front of the face, and the new mouth is either a large pellet or a large pelleted ring before the original chin. The Large Flan A dies illustrated in Figure 5.16, show convincing hidden images when rotated in the hand, but I have found them almost impossible to replicate photographically.

Other writers have commented upon the importance of faces on Late Iron Age coinage. A study of hidden faces on continental Celtic coinage by Brigitte Fischer (2009) identified examples in a range of coinages from both eastern and western Europe. These range from an early imitation of a Macedonian Stater to a Stater of the Coriosolites. Fischer’s images were all hidden on the obverse of the coins. They were usually revealed by rotating the coin or by extremely close examination of a section of the image, such as an ear (Fischer 2009, 101, fig. 4). She found not only hidden human faces but also many animals including dogs (or wolves), cows, horses and a cockerel. I have not found Fischer’s type



Figure 5.14 Not-so-hidden face on Irstead Quarter Stater die 6



Figure 5.13 Hidden faces on the reverses of a Snettisham Stater and a Large Flan A Unit



Figure 5.15 The Chimirri-Russell effect on Bury F die A (left) and Bury B die B (right)



Figure 5.16 Chimirri Russell effect on Large Flan A (left) and Large Flan C (right)

of image within the designs of Icenian coins. It seems that the key aim on the obverses of the early Icenian silver was to create the Chimirri-Russell effect, and for the reverses the use of the horse's body to create a human or somewhat demonic face.

The hidden imagery on the early Icenian silver coinage was so common that it may well have been the driver for much of the detail seen on the coins. For instance, upon seeing a scroll in front of a face on an early Icenian coin, I now automatically rotate the coin to search for the three-dimensional image. Although Derek Allen (1980, 148) warned that the desire to look beneath the surface of Celtic coin types makes 'a happy hunting ground for the crankish interpreter in pursuit of devious religious symbolism', hidden faces have long been considered an important element of Celtic Art.

Similar effects to those seen on Icenian coins have been recognised on numerous artefacts. Jacobsthal (1941, 308) described 'things having floating contours and pass into other things' as part of his 'Cheshire style', named with an

allusion to Alice in Wonderland. Megaw, in his 1970 paper, illustrated hidden faces on many artefacts, some of which were British, in what he called the La Tène Disney style, comparing the faces to those of Mickey Mouse. His British examples included the harness mount and casket mount illustrated in Figure 5.17 (Megaw 1989, 222 and 230). The casket mount is probably from the post-conquest period, but its central image is evocative of faces seen on Icenian coins, such as those in Figure 5.12.

Other East Anglian examples include the hidden faces on the Snettisham Torcs (e.g. Jope 2000, pls 113a–b) and many recently recorded on horse harness metalwork by Jennifer Foster (2014). Whilst there is a subjective element to the interpretation of many of these semi-abstract images, their incorporation into both coinage and other artefacts confirms that Late Iron Age numismatic imagery is not fundamentally different to other forms of Late Iron Age art, and should not be treated as a subject apart.

The head and the horse are two of the obvious dominant themes of early Icenian numismatic imagery. When hidden imagery is taken into account, the face becomes the overwhelming feature of the early silver coinages. Yet the face never appears to be personalised – it is not a portrait.

Perhaps a clue to its importance is given in the work of Gell (1998). He discusses at length the importance of eye contact with the idol in much idol worship, pointing out that idols frequently have particular attention paid to the eyes. Gell (1998, 136) suggests that this is because they are perceived as the route to the most important element of the idol, which is 'the mind immured within it'. In Icenian coinage, the hidden faces usually emphasise the eyes and the mouth. In traditional Marquesan art, a figure (the 'etua' motif) is transformed to a face with elongated nose and nostrils and prominent eyes, which can also be inverted and read as a different face (Gell 1998, 188, Fig. 8.13/1). These transformations are evocative of the creation of faces in Icenian art.



Figure 5.17 1st century BC East Anglian harness-mount (left © Museum of Archaeology and Anthropology, University of Cambridge) and Humberside casket-mount (right © Hull and East Riding Museum)



Figure 5.18 Horses with human features (left and central images © Trustees of the British Museum)

#### 5.4.2 The Horse

The horse is the ubiquitous image on Late Iron Age coinage on both sides of the channel. Icenian coinage is unusual in having a wolf replacing the horse on its earliest gold types, but all other types throughout the coinage had a horse on the reverse.

The importance of the horse is also suggested by its use as a vehicle for the depiction of human faces, which is discussed in 5.4.1. This may be related to the androcephalous horses seen on Continental coinage, such as the Stater (DT 122) depicted on the left of Figure 5.18. Similar ideas may be being conveyed by the human legged horse on the Late Iron Age Aylesford Bucket and on the reverse of Bury G (centre and right respectively of Fig. 5.18).

The horses on Icenian coinage appear to show three stages of development. The first stage is depicted on the reverse of the earliest coins, Bury A and C; they are technically well produced and naturalistic, displaying considerable energy, but they are similar to the horses shown on contemporary Late Iron Age coinage from other regions of Britain and the continent. In the second stage, the types become more distinctive and identifiably Icenian, particularly in the surrounding detail (Fig. 5.19). This is apparent on Bury B, which has both a more complex field



Figure 5.19 Bury A (left) and the more decorative Bury B (right)

and additional detail such as reins and a more elaborate tail. These horses frequently show what appears to be flame emerging from their mouths (see C in Fig. 5.20). As the coinage develops the horse becomes more stylised and less naturalistic, particularly in the rendition of the horse's head, which differs from those used in other regions. A selection of horses covering all phases of East Anglian coinage is shown in Figure 5.20: A is from the first phase, B–E are from the second phase, and F–J illustrates the more stylised third and final phase of development.

Like the wolf, the horse is frequently associated with detail possibly representing the sun or stars. Examples can be seen above the horses in Figure 5.19 and Figure 5.20. These



Figure 5.20 Examples of Icenian horses: a) Bury C; b) Bury F; c) Large Flan A; d) Large Flan B; e) Snettisham Stater; f) Early Boar Horse Unit; g) Boar Horse B Unit; h) Early Pattern Horse (A); i) Ecen Unit; j) Late Face Horse Unit

potential solar or astral symbols are usually key elements of any transformation of the horse to a hidden face.

The horse on the reverse of British Late Iron Age coinage can be traced back to the Celtic imitations of the Stater of Philip II of Macedon, first arriving in volume in Britain with Gallo-Belgic Staters (2.2.1). However, the image of the horse that transforms into a human face may indicate an importance beyond simply a continuing tradition or its use as a signifier of value, although it may have been those too. Once the Iceni adopted the horse, it was used on every reverse die. This is not unique, as the Corieltavi and the Dobunni show similar allegiance to the horse, but other regional coinages sometimes used different reverse imagery.

The horse on early dies of the Large Flan C Unit is unusually upright and has a branch below it. This appears to be derived from bronze coins of Carthage. This North African coinage is thought to date from the 4th century BC, and shows a standing horse in front of a palm tree. An example (Alexandropoulos 2000, no. 18) is shown on the right of Figure 5.21. Two of the Carthaginian bronzes, which are illustrated in Figure 5.22, were found in the Ken Hill deposits at Snettisham (6.2.1). Large Flan Cs were also found in quantity at Snettisham and were an important element of the Hunstanton II hoard (6.4.3), where many were plated. The distribution of LFC seems to be focussed on Breckland (2.5.2). However, of the 118 official and plated Large Flan C Units with a provenance, 65 were found at Snettisham and 21 at the likely ritual site of Fincham in west Norfolk. Perhaps there is a link between this equine imagery and some element of ritual activity at Ken Hill, Snettisham and possibly Fincham.

We know that the horse was of great importance in East Anglia. Natasha Hutcheson (2004, 12–22) found that a disproportionately large number of locations in Norfolk and Suffolk had produced items of Late Iron Age horse



Figure 5.21 Large Flan C reverse (left) with bronze of Carthage (right)

equipment relative to other counties and concluded that this reflected Iron Age practices rather than modern recovery and recording methods. Sally Worrell (2007, 375) examined Portable Antiquities Scheme finds between 1997 and 2004 and found that the highest quantities of horse and vehicle equipment were found in Norfolk and Suffolk. The scale of such finds, relative to other metalwork, was also greater than for most counties, again indicating that the exceptional levels of such finds were not driven by modern detection or recording efforts.

### 5.4.3 Other design elements

There are a number of symbols that do not appear to be designed simply to help form hidden faces. Symbols were clearly important on the Bury C Unit, as there are examples of them being amended. Figure 5.23 shows a solid pellet on an early strike of die 10 being replaced with a ring. The change was not straightforward, as the upper part of the horse's foremost rear leg was re-cut to accommodate the ring. A second example of amendments to Bury C dies is shown in Figure 5.24. A heavy oval mark is superimposed



Figure 5.22 Carthaginian bronzes from Snettisham



Figure 5.23 Amendments to Bury C die 10



Figure 5.25 Early and later strikes of Bury C die 3 showing counter-punch (right)



Figure 5.24 Counter-stamps on Bury C dies 7 (left) and 2 (right)

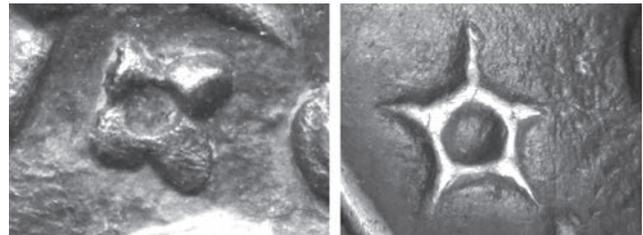


Figure 5.26 Recurring symbols: diamond and hollow five-pointed star

on existing detail above the horse. On die 7 (upper left) the crude oval ‘punch’ (upper centre of the image) appears to overlay parts of an earlier ring and a ring and pellet. Figure 5.25 shows two states of die 3 demonstrating that this symbol was added after the start of production.

Other symbols recur regularly in the coinage, and consistently in relation to particular types. I have used two symbols, a diamond shape (or four-pointed star) and a hollow five-pointed star, to provide an indicative relative chronology for early types of Unit. They have also helped in identifying some rare coins as being East Anglian. These are shown in Figure 5.26.

The diamond-shaped symbol was used on early Large Flan A dies up to and including dies D:10, and thereafter it was replaced by the hollow five-pointed star. The consistent use of one, or both, of these symbols on certain coinages indicates they may have been used to convey information. This is certainly suggested by the sudden move from one symbol to the other on Large Flan A. Whatever the meaning, it was not

applicable throughout the region, as other types, such as Large Flan C, were minted simultaneously without either symbol.

Another symbol that appears on early Icenian coinage is made up of concentric circles of rings or pellet rings, sometimes rayed and sometimes with a central pellet. These are most likely an astral or a solar representation and occur on the reverses of Bury D, Bury B, Large Flan A and possibly Large Flan C. They are often also associated with hidden faces (see Figs 5.12 and 5.16). Similar, but less extravagant, designs appear on other British Late Iron Age coinages including the obverses and reverses of early Corieltavian Boar Horse types (ABC 1779 and 1782).

#### 5.4.4 The imagery on early Half Units

The obverse imagery of the Bury Pallas Half Unit is part of a continuing sequence of abstraction. A predecessor is the obverse of the Gallo-Belgic head of Pallas series (DT 188–94). This was abstracted to form part of the Ambiani



Figure 5.27 Prototypes for the Bury Pallas Half Unit (right) (three images to left © Chris Rudd)



Figure 5.28 Early Boar Horse denominational Issue, from left: Stater, Unit and Half Unit

‘fonds commun’ (DT 341–8). This sequence, ending in the Bury Pallas Half Unit, is illustrated in Figure 5.27. The coin to the left is DT 189 and DT 343 is second from the left. DT 343 is rotated (third from left) to reveal its relationship with the Bury Pallas Half Unit (right). The standard or weapon on the left of the Icenian coin, and the curved branch to its right, were originally the helmet of Pallas. The flag-like design to the top right of the Icenian coin was originally the cloak. The influence of these Gallo-Belgic coins bearing the head of Pallas Athena upon the early development of British coins was originally noted by Derek Allen (1980, 96). The earliest of the Pallas head types are thought in turn to derive from the head of Athena seen on the Staters of Alexander III of Macedon. An innovation on the Icenian coin is the addition of a boar which appears to be mounted on a standard (see 5.5).

The Bury Butterfly Half Unit has sweeping symmetrical lines above the boar, which contain many hidden faces (see Fig. 5.11). The design evokes Gallo-Belgic Units with horses facing each other above a boar (e.g. DT 442 and 443), which I presume were the starting point for the abstraction of these Icenian images.

### 5.5 The denominational coinages

This section discusses the use of imagery to link different denominations of an Issue, followed by an analysis of the widespread introduction of back-to-back crescents, which came to be a key feature of much late Icenian coinage.

Finally, there is brief discussion about two other elements of imagery: triple crescents and the boar.

The denominational Issues saw a reduction in the use of the most complex forms of hidden imagery. Obverses were usually denomination-specific, but the style of reverse imagery was standardised, with all denominations of an Issue usually being similar; this is illustrated by the Early Boar Horse Issue in Figure 5.28, where the similar reverses are seen on the right of each pairing. More detailed discussions about the use of imagery in Issues and mints were included in Chapter 3.

After the first few denominational Issues there was a change from the use of the human head to back-to-back crescents as the key obverse motif. The crescents motif can also be seen to include hidden faces, and thus they represent a continuation of the ‘Disney’ style of La Tène imagery. Examples are shown in Figure 5.29. The back-to-back crescents appear within another pair of crescents on example D (above) and on a few types crescents appear in triplet form, as on the Anted and Ecen Stater (H above) and on a Boar Horse B Half Unit.

The earliest appearance of back-to-back crescents was probably either on the Irstead Quarter Stater, where the crescents have a central box or on a very rare variety of Norfolk Wolf B Stater discussed in section 2.4.2. Their next appearance was either on two very late and rare Early Boar Horse Stater dies, C and D, from Mint A or on Early Pattern Horse (A) of Mint B. Thereafter they appear on every significant Issue with the exception of Late Face Horse.

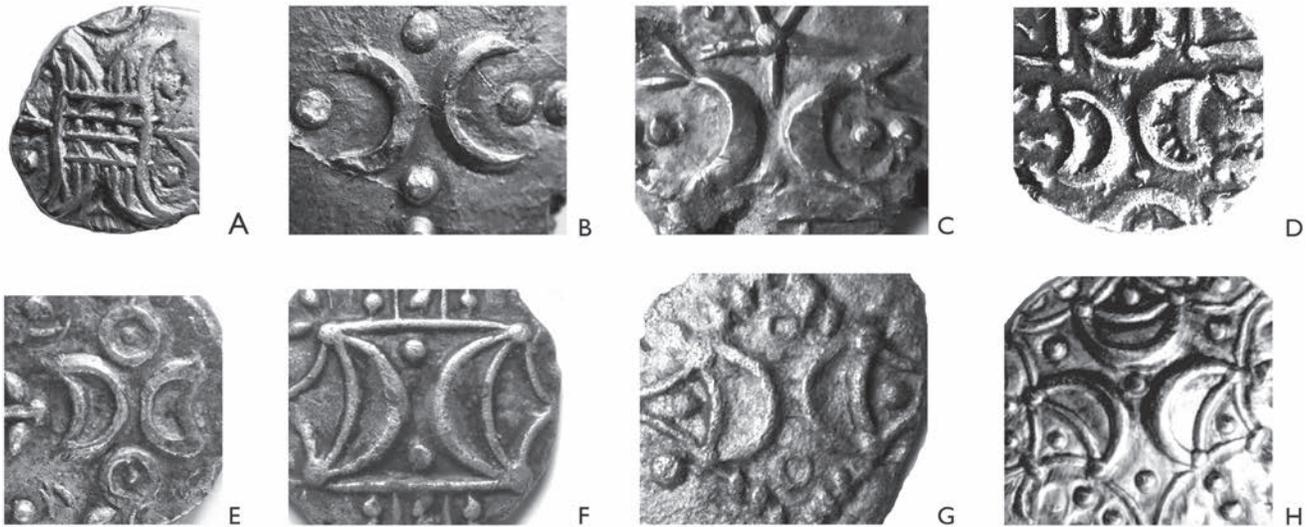


Figure 5.29 Back-to-back crescents: a) Irstead Quarter Stater; b) Early Boar Horse Stater; c) Boar Horse C Stater; d) Early Pattern Horse (A) Unit; e) Early Pattern Horse (B) Unit; f) Anted Unit; g) Anted Half Unit; h) Anted and Ecen Stater



Figure 5.30 North Thames Staters with back-to-back crescents: a) Middle Whaddon Chase ABC 2442; b) Addedomarus ABC 2511; c) Addedomarus ABC 2514; d) Dubnovellaunus ABC 2392; e) Tasciovanus ABC 2565

The back-to-back crescents motif was not exclusive to the Iceni. It appeared on many North Thames types, the earliest of which were Middle Whaddon Chase Staters (ABC 2240, 2442 and 2445). It was also common on the ensuing inscribed coinages of Dubnovellaunus, Addedomarus, Tasciovanus and Andoco, but almost entirely absent from the coinage of Cunobelin (Fig. 5.30). Its presence outside North Thames and East Anglia is spasmodic, occurring on occasional coins such as the Kentish Units ABC 246 and 249 and the Western Savernake Stater ABC 2089.

Derek Allen (1970, 6) assumed that the motif was introduced into East Anglia from the coinage of Tasciovanus or one of his immediate predecessors. His view was widely accepted, leading to suggestions that the adoption of the motif may have been as a result of the political influence from beyond the southern borders of the Icenian area. The stylistic linkage between Whaddon Chase Staters and early Icenian coinages, such as the Snettisham Stater and Quarter and the Bury A Unit is very strong, and these latter coinages clearly predate the widespread introduction of the motif into East Anglia. Allen was therefore likely correct in assuming that the motif was first used in North Thames, where it ceased to be used under Cunobelin, whilst in East

Anglia it continued and came to dominate almost all coin Issues in a way not seen elsewhere.

The ubiquity of the motif in later Icenian coinage makes its exclusion from the large Late Face Horse Issue surprising, particularly since it was used on all three denominations of Early Pattern Horse (A), the Issue which preceded Late Face Horse from mint group B. The exclusion of the motif on Late Face Horse could be interpreted as implying that it was purely decorative, but I think it more likely to be a deliberate statement of independence from some form of political, or other, grouping.

The pellet-triangle was used widely during the denominational coinage, and it appears throughout British Iron coinage (Hobbs 1996, 232) but is especially common in East Anglia. This is shown by Figure 5.31, which is a schematic representing the Icenian coinages in a chronological sequence. The earliest gold is shown top left and silver top right; the lower part represents the denominational Issues of the three mints starting with S for Snettisham, P for Plouviez and I for Irstead. The schematic shows all of the major types and Issues that contain this motif, highlighting its limited occurrence in light blue and its intense usage in dark blue.

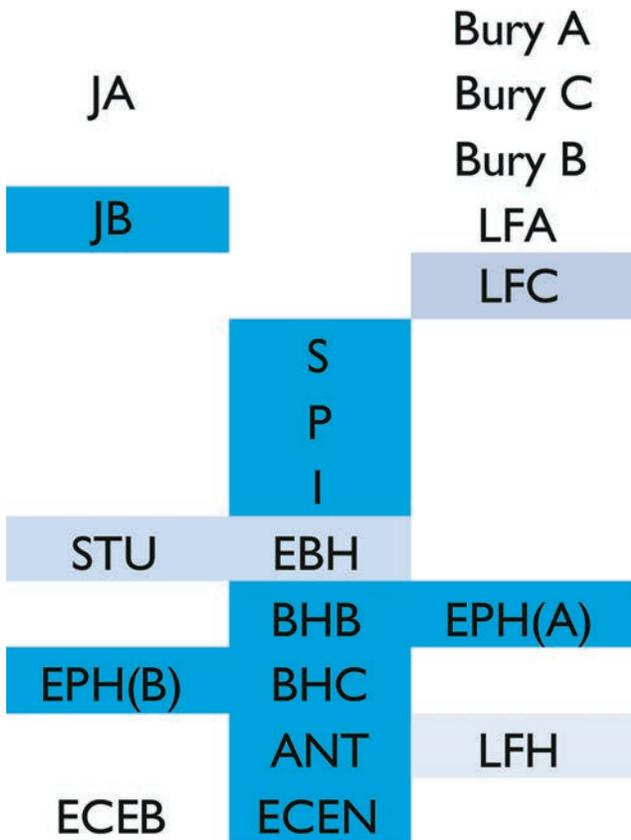


Figure 5.31 Occurrence of the pellet-triangle motif on a chronological schematic of Icenian coinages, where light blue denotes limited occurrence and dark blue denotes intense usage

The importance of groups of three in ‘Celtic’ art has often been noted (e.g. Green 1986, 208), and the pellet-triangle also appears on artefacts other than coins in the Late Iron Age (for East Anglian examples see Davies 2008, 115–16). I suspect that this symbol has no particular significance in relation to Icenian coinage, but it serves to illustrate the stylistic links between coins and other forms of material culture.

The boar first appears as a minor element in Bury Half Units, apparently mounted on a standard as shown on the left of Figure 5.32. The depiction of a boar as part of a standard occurs on Gallo-Belgic coinage, including early Potins such as DT 225.

The boar first appeared as a major element of Icenian coinage design on Early Boar Horse Units, and what is probably the first die has an outer line enclosing the hairs on its back (Fig. 5.32). This gives the impression of it being a depiction of a sculptural device for the representation of hair, rather than hair itself, implying that the coin may depict a sculpture and not a wild beast. All the boars that occur on Icenian coinage are stylised, and it is possible that they are all intended to depict a standard rather than a wild animal.

Most early Units of the Corieltavi have a boar on the obverse. Hoard evidence suggests that early Corieltavian Units predate the Early Boar Horse Unit (6.4.3), but the Icenian type does not appear to directly copy the earlier Corieltavian Units which display a more naturalistic interpretation of the hair on the back of the boar.

### 5.6 Augustan and other ‘realistic’ forms of imagery

The late Icenian coinage was largely immune to the move towards the Greco-Roman style of imagery seen on the later coinages of south-eastern Late Iron Age Britain. Figure 5.33 illustrates the different approaches; on the left is a horse and rider from the North Thames coinage of Tasciovanvs. Its classical style contrasts with the more stylised Saham Toney Y-headed horse for which it may have been the inspiration.

The avoidance of Greco-Roman forms of representation extended to Augustan imagery. This became popular throughout the Roman Empire and beyond in the decades following the battle of Actium (Zanker 1990). Creighton (2000, ch. 4) identified the use of this imagery on many Late Iron Age British coins.

The Esv Prasto Unit is the only Icenian type which clearly adopts a Greco-Roman form of representation. It appears to be modelled on a Unit of Cunobelin (Fig. 5.34) and has a star on an obverse die and all reverse dies, which is unlike those seen on other Icenian coins. The star resembles sidus Iulium, the comet that became the symbol of Julius Caesar’s deification. The Esv Prasto Unit is a small local issue from the denominational period, and its adoption of Greco-Roman styled imagery clearly had no significant influence on the major coinages of the region.

### 5.7 Inscriptions

A major change in the late denominational coinage was the widespread introduction of inscriptions. Table 5.1 shows a version of each inscription in an indicative chronology, with the earliest coins at the top of the chart. Different names were used in parallel, and also they were minted alongside the issue of uninscribed Late Face Horse coinage from Mint B. The precise chronology of the ‘late local’ inscribed coinage is unknown, but it is probable that Cani Dvro is the first inscription in the region.

Much has been written about these inscriptions. Recent studies by Daphne Nash Briggs (2011) and Amanda Chadburn (2006, 319–27) have attempted to explain the etymology of the words, with Nash Briggs examining potential Germanic as well as Gaulish roots. I have not attempted to duplicate their analyses here.

The reading of the inscriptions is not always straightforward and the following observations are relevant:



Figure 5.32 Boars on Bury Pallas Half Unit (left) and Early Boar Horse Unit (right)



Figure 5.33 Tasciovanvs Stater ABC 2565 (left; © Chris Rudd) and Saham Toney Unit die 4 (right)

The introduction of writing does not seem to have changed the nature of the coinage. It did not result in simplified imagery, reduced variation between dies, nor improved control over factors such as weight or metallurgy. An important question is whether the inscriptions give information about social organisation or the organisation of the production of coinage which could provide clues as to its purpose. It would be immensely helpful if we knew what was represented by the words on the coinage. Generally accepted ideas are listed below. I have included as a possibility 'traders', which is less commonly included as a possibility when discussing ancient coinage. My reasons for including this as a possibility will be discussed in Chapter 7. Typical meanings include:

- ANTEDI or abbreviations thereof are always written with a 'Tau Gallicum' rather than a 'D', which had a sound probably closer to our S.
- ECEN was corrupted to EDN on several later dies, and on the Half Unit appears as ECE or ECEV.
- The two types, Ece A and Ece B, are both inscribed ECE, never Ecen.
- There is an S form between the head and neck of the horse on Ece and Ecen types which is reversed on Anted and Cani Dvro. This could be an additional letter or a representation of reins.
- SAENV could possibly be read as SAEMV.
- There are multiple actual and possible versions of ALIFF/ (R) SCAVO, the most common version should probably be read as ALI SCA.
- Rulers
- Moneyers
- Traders
- Other officials or their titles
- Places
- The names of tribes or sub-groups of tribes
- A mixture of some or all of the above

It is striking that, with the possible exception of the R placed above SCAVO on one die, there are no obvious references to kingship, but it is dangerous to read too much into this as such references are relatively rare on other coinages. Even Cunobelin's coinage is commonly inscribed simply with an abbreviation of his name and of his mint, Camulodunum.



Figure 5.34 Esv Prasto Unit (left) and Cunobelin ABC 2873 (right)

Table 5.1 Relative chronology of Icenian Inscriptions

Mint A		Mint C		Late local
ANTEÐI	ECEN			CANI DVRO + ESICO FECIT / SVB ESVPRASTO ALIFF/ (R) SCAVO + ANTEÐI(O?) SIA
		SAENV + AESV then ECE		ECE

One of the most important inscriptions is on the Esv Prasto Unit, a small local issue from the final few decades before the conquest. The reverse inscription ‘ESICO FECIT’ is clear and seemingly unambiguous, with the fecit in Latin meaning ‘made it’. Thus on any straightforward interpretation we have a coin bearing the name of a moneyer, although Williams (2000, 277) questioned whether ‘Esico’ could be a reference to a political authority as ‘moneyers are not normally mentioned on Iron Age coins’.

The obverse inscription is ‘SVB ESVPRASTO’ – ‘svb’ in Latin means ‘under’ and ‘Esvprasto’ presumably the person or body in authority. The first part of this name ESV is a divine Gaulish name which also formed the first part of many continental personal names identified by Evans (1967, 200). Whether this is such a name or, as Nash Briggs (2011, 95) suggests, a chiefly title with Prasto coming from the Latin praestes, is conjectural, but both seem to point to an individual rather than to an organisation.

Other relevant observations are:

- The Esv of Esv Prasto is probably related to the Icenian Aesv coinage, although not necessarily to the same individual. Eisv also occurs on late coinage of the Dobunni and as Iisvprasv on late coinage of the Corieltauvi.
- Anted appears on the coinage of the Dobunni in association with RICV (and possibly rigv and/or ricov); Antedi in its various forms appears likely to be a personal name, although Nash Briggs (2011, 86) speculated that it could also be a tribal sub-unit or a title of office.
- The Ece and Ecen inscriptions are often assumed to be an abbreviation of the tribal name (e.g. Evans 1864,

384). Others have concluded that they are variants on a personal name or an abbreviation thereof. Chadburn (2006) supports this theory, due to the lack of precedent for a tribal name on British tribal coinage, the initial E replacing the well-attested initial I, the similarity of other contemporary personal names to tribal names or places, and the lack of logic in suddenly switching from a personal to a tribal name.

- The first element of Cani Dvro is as close to the possible tribal name Cenimagi, mentioned by Caesar, as Ecen.

On balance I suspect that the coinages inscribed either Ecen or Ece, are referring to the same ‘name’. A superficially attractive argument is that post-conquest production was required to bear the tribal name. This cannot be so, as I have found that the Ecen coinage was minted in parallel with both Anted and the unscripted Late Face Horse coinage (Chapter 3). In addition, hoard evidence suggests that Ece A, with its Ece inscription, predates the conquest (6.6.1).

The meaning of the inscriptions can be narrowed a little, as some of the possibilities for the names Ecen, Ece, Aesv, Saenv and Anted can be discarded. In view of the occurrence of two of these names in other regions, and that my study indicates that Aesv, Saenv and Ece are a consecutive sequence, it seems most unlikely that they represent places or organisational units. They are also unlikely to represent a title or position, in view of the succession of different names within the same mint. Thus it appears most likely that the words represent the names of people. These people could be moneyers, but early Anted and Ecen Unit dies look to be cut by the same hand, and thus the two moneyers would need to have been using the same die-cutter.



Figure 5.35 Similar reverses of Large Flan B (left) and ABC 2276 (right)

The Late Face Horse Issue demonstrates that not every type needed to follow the same rules. Therefore, although it seems likely that most inscribed types carry the name of an individual, it is also possible that Ecen and Ece could represent the name of a sub-regional tribal grouping. Nonetheless, I believe it most likely that the names represent traders, moneyers or officials, such as the leaders of sub-tribal units.

### 5.8 Stylistic links between Icenian and other British Late Iron Age coinage

Earlier in this chapter I discussed links between early Icenian types and Gallo-Belgic coinage. I have found other stylistic links between Icenian coins and types from other British regions. These include:

- The obverse of Bury A and the South Thames Quarter Stater ABC 551 (Fig. 5.9).
- The Norfolk Wolf A and B Staters and the rare Corieltavian Unit ABC 1788 (see Fig. 5.6).
- The reverses of Large Flan B and the North Thames Unit ABC 2276 and to a lesser extent ABC 2380 (discussed below).
- The early reverses of the Snettisham Quarter Stater and the North Thames Quarter Staters ABC 2255 and 2466 (Fig. 3.13).
- The Snettisham Stater and the North Thames Whaddon Chase Stater.
- The North Thames Unit of Tasciovanus ABC 2610 and one of the types of Saham Toney obverse (Fig. 3.53).
- The Boar Horse B Quarter Stater and Quarter Staters of Dubnovellaunus (3.4.5).
- The Early Pattern Horse (A) Stater and the Biga Stater of Cunobelin ABC 2771 (Fig. 3.45).
- The tablet form of inscription on Antedi Sia and various other coinages including North Thames.

Numerous other examples of stylistic similarities have been noted during this study, many of which are presented in Chapters 2 and 3. The Icenian Boar Horse B and Corieltavian Boar Horse Units are also similar, although always readily separable.

In this section I will attempt to examine three different types of similarity and the lessons that can be learned from each. The most important is probably those where I believe that the same hand has produced dies in East Anglia and in other regions. The best example of this is the closeness in style and execution of the reverses of two small issues, the Icenian Large Flan B Unit and the North Thames Unit ABC 2276 (Fig. 5.35). Each has a horse with its body formed of ringed pellets, above which is a bucranium. In front of each horse is a ring and pellet and below it, a branch. The Icenian Unit is clearly identifiable as such by the hollow star above the horse's tail. The most likely explanation is that the same die engraver or moneyer produced the dies for different 'clients'. The likelihood of mobile moneyers is suggested by Leins (2012, 70–72) in his thesis about coinage distribution in Late Iron Age Britain. Other examples of work appearing to be by the same hand are certain Saham Toney Unit obverse dies and a Unit of Tasciovanus. Saham Toney is a large Issue which was probably produced slowly or intermittently, and this may provide an explanation for the use of mobile moneyers who were also working in another region.

The second type of stylistic similarity is the repetition of what appears to be a key motif across the coinages of more than one area. The back-to-back crescent motif, already discussed above, is an example of this. It appears to have originated in the North Thames area but became widespread on Icenian coinage. Motifs such as this could result from political imposition or be a sign of political allegiance. It is possible that the similarities noted between the Early Pattern Horse (A) Stater and the Biga Stater of Cunobelin may fall into this category, as may the similarities between Boar Horse B Quarter Staters and the coinage of Dubnovellaunus.

The final type of similarity involves borrowing specific stylistic elements, other than key motifs, from the coinage of one region to another. The decision as to what is a key motif is fraught with difficulty but a likely example of this type of relationship is that between the Ali Sca Unit and a South Thames Unit of Verica (Fig. 5.36). The crescent and pellets of the obverse of the South Thames Unit are very similar to those occurring above the boar of the Icenian Unit. It is unknown whether such ideas moved through direct



Figure 5.36 Unit of Verica ABC 1220 (left; © Chris Rudd) and of Ali Sca (right)

or indirect sharing of design: it could have been the result of craftsmen or moneyers travelling from region to region suggesting designs to their clients, or from coinage itself travelling and being appreciated (and elements copied) by foreign communities. Collis (1971) described the concept of coinage itself spreading in this indirect way from one ‘system’ to another.

Many of these stylistic linkages are considered further in chapter 7.

## 5.9 Overview of stylistic change

The following sections examine stylistic change over the entire period of Icenian coinage. The first seeks objective evidence about whether imagery within a type became more stable with time, and whether there was a pattern to any such change. The second examines the major elements of obverse imagery and how these changed throughout the coinage.

### 5.9.1 Overview of stylistic change: die variability relative to chronology

In the die-study I recognised a contrast between the variability of dies for early types and the lack of variation in dies for later types such as the Boar Horse C Unit, where there are even a fixed number of hairs on the boar’s back. I have attempted to verify these observations objectively by analysing all types that were produced in sufficient volume to provide an expectation of stylistic change. I selected a cut-off point, which excluded from the analysis all types with fewer than 10 reverse dies. This resulted in a dataset of 16 types of Unit and eight types of Stater with examples from each of the periods of minting. Half Units and Quarter Staters were excluded, as there are only two types of each with more than 10 reverse dies – insufficient to produce a meaningful comparison.

For each type all obverse and reverse dies were carefully examined for variability. The review considered:

- Changes in the main design element of the die, e.g. head to boar.

- Major changes to the main design, e.g. style of horse or head.
- Significant changes to ancillary imagery, such as pellet rings or scrolls being added or subtracted.
- Very minor changes such as additional single pellets, or small marks, were noted but not included in the quantitative analysis.

There was no change of the main design element for any of the types of Unit examined in the study. In respect of the Staters there was a change in obverse design at the end of both the Plouviez and Early Boar Horse Staters. There are two styles of Boar Horse B Stater obverse, but one is only seen on the sub-type Boar Horse B (A). The following were the only examples of major changes made within a type, while still retaining the main design elements:

- Differing styles of heads on Large Flan C Unit.
- Very different styles of head and horse on the Saham Toney Unit.
- Changes in the style of horse’s head on both Boar Horse B Units and Staters.
- Reversing the direction of the reverse image on Ece B Units and on Norfolk Wolf B Staters.

There were unavoidable weaknesses in the methodology:

- The assessment of change as either significant or minor is subjective, but in most cases it was an obvious decision.
- It is not possible to accurately assess the rate of production of each type, and hence its duration. However, all types selected appeared to have been produced steadily with a small number of dies being used at any one time, with the possible exception of part of the Late Face Horse Issue. Anted, Ecen and Ece B Units are often thought to have been produced quickly, however, analysis of the late hoards has revealed them to have been produced over an extended period (6.5.3). I think it most unlikely that the contrast between types having variable or stable

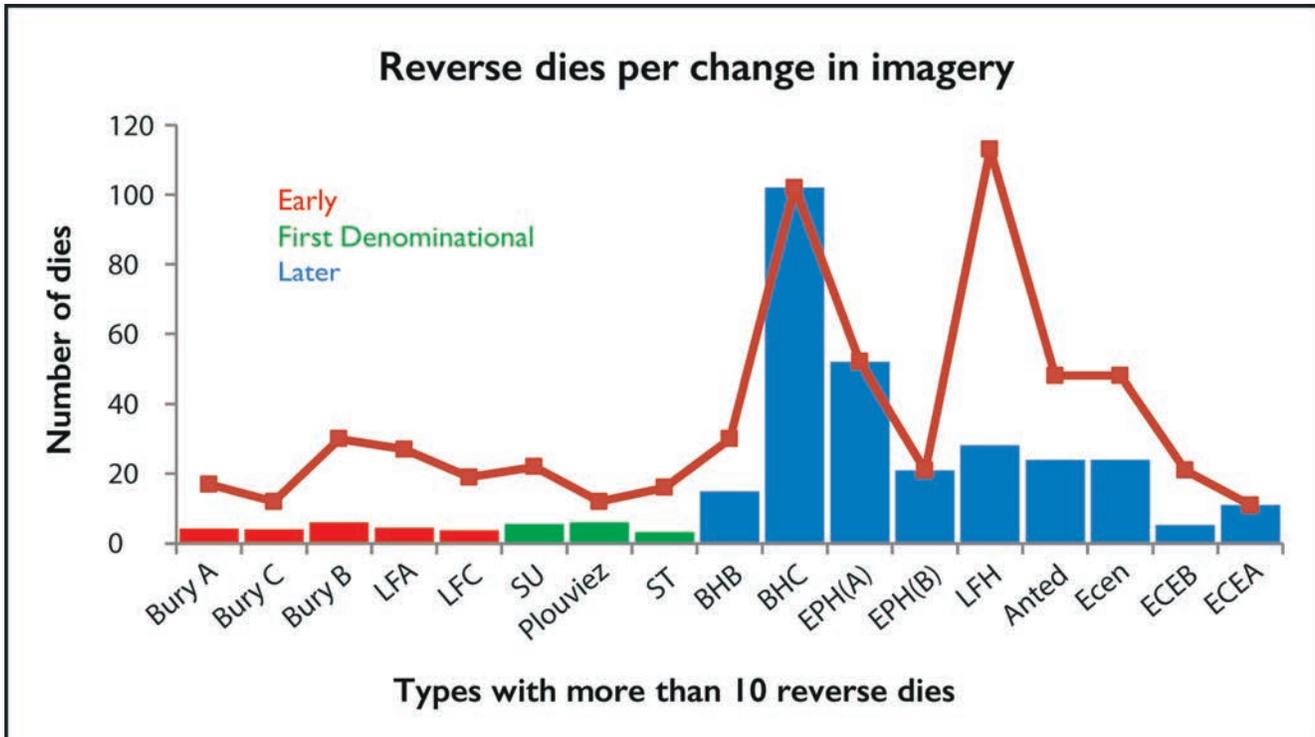


Figure 5.37 Chart showing the average number of reverse dies before there was a change in imagery and total number of reverse dies for major types of Unit

imagery is a result of the short duration of production of those types with stable imagery.

- The quality of known specimens of Plouviez, and to an extent Snettisham, Units is poor and may have resulted in change being missed; for reverse dies this is irrelevant as these types clearly have a high rate of die variation that is readily discernible.

Figure 5.37 illustrates the rate of change of imagery on the reverse dies of Units by showing on the bar chart the average number of dies used before there was a significant change in the imagery. The more rapid the change in imagery, the lower the bar. The first bar relates to Bury A, and shows that there was an average of only four dies produced before a significant change in the imagery occurred, whereas for Boar Horse B there were 15 dies produced before such a change, and for Boar Horse C 102 dies with no change. In order to give an indication of the relative scale of production, the upper line on the chart shows the total number of reverse dies known for each type.

There was clearly a much higher rate of stylistic change in the early local period than in the later denominational periods. Unexpectedly, the rate of change was also revealed to be high in the first denominational coinages, which are shown in green. Die numbers in the later periods were generally higher, but this does not distort the measure of die variability. Although the measure of average dies per

change is somewhat coarse, the results are unambiguous. They clearly indicate that from Boar Horse B onwards, the reverse imagery of Units was much less variable than before. Ece B is an exception in being a late type with four variations in only 21 reverse dies.

Figure 5.38 analyses the variability of obverse dies for Units, which reveals broadly similar results to those for reverses. An exception is that Bury A and Plouviez do not show variability. The poor condition of most Plouviez Units may have meant that changes in iconography were not identified. This is not the case for Bury A which was struck from 12 obverse dies, all remarkably consistent in their imagery.

Staters do not change from variable to stable imagery. Most types have reverse dies which show significant die variability, as shown in Figure 5.39. Obverse Stater dies are broadly similar although there are some signs of reduced variability for the final two types Boar Horse B and Boar Horse C (Fig. 5.40).

### 5.9.2 Overview of stylistic change: faces, patterns or boars

Icenian Units have on their obverse a head, a boar or a pattern based around back-to-back crescents. As discussed in section 1.6, these were historically thought to represent three pagi making up the tribe. It is now clear that this is not the case. Instead, this section seeks to draw broad conclusions

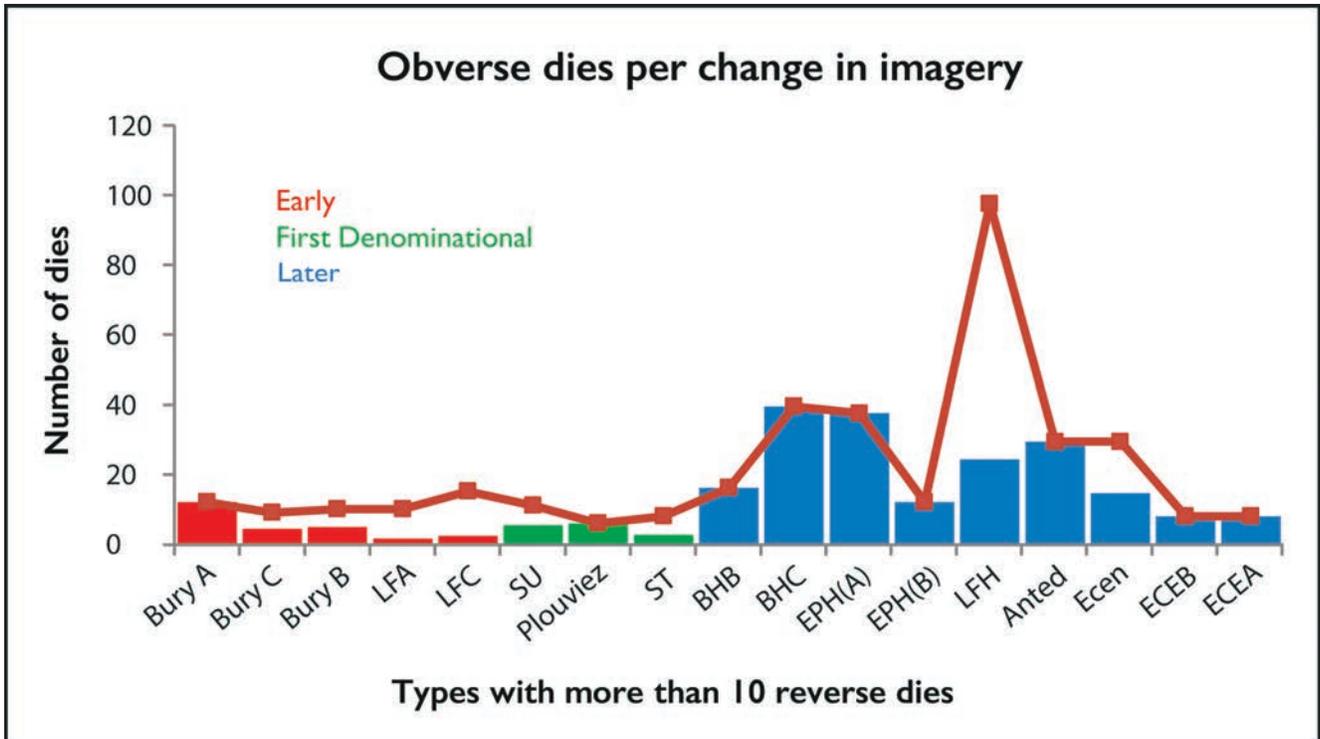


Figure 5.38 Chart showing the average number of obverse dies before there was a change in imagery and total number of obverse dies for major types of Unit

about these three design elements by looking at the relative chronology of their appearance on the coinage.

Each of the tables in Figure 5.41 is intended to represent the Icenian coinage in a chronological sequence. The earliest gold is shown top left and silver top right; the central single line reflects the first denominational Issues of gold and silver: S for Snettisham, P for Plouviez and I for Irstead. The lower part of each table represents the Issues of the three mints in operation from the mid-denominational period as three columns: Mint A (centre), Mint B (right), and Mint C (left).

Where one of the design elements is a major feature in a type or an Issue the background is a solid colour, but a fainter colour where it occurs in a minor way. Back-to-back crescents include all forms in which this device can occur, and they are treated as present if they occur on one or more denominations of an Issue. The analysis shows a remarkable lack of overlap between coinages with a head, and those with back-to-back crescents on one or more of the denominations. The change from head to back-to-back crescents represents a chronological sequence, although the Late Face Horse Issue is an anomaly. It appears that the Boar is of lesser overall significance (Fig. 5.41).

### 5.9.3 Overview of stylistic change: summary

The analysis in section 5.9.1 has shown that Units had variable imagery until the end of the first denominational

period. The imagery for each type then became very stable. Staters do not show the same pattern, and the rate of change in imagery does not appear to vary on a consistent basis. When this is considered alongside the analysis in section 5.9.2, it becomes clear that the change to more stable imagery on silver coincided with the introduction of back-to-back crescents as the main obverse element of design for the coinage as a whole.

These findings suggest that early Units were initially highly valued for their variation. However, at the time when the back-to-back crescent motif was introduced on a widespread basis, stability and consistency between coins of a type became more important. It is tempting to see these changes as being connected to, and perhaps the result of, broader political developments.

### 5.10 Summary

The major elements of imagery on the early gold coinage did not vary greatly. The obverses are directly derived from Gallo-Belgic prototypes (5.3.1), whereas the reverse imagery is, with a minor exception, specific to East Anglia. It appears to depict a narrative, perhaps a myth (5.3.2–5.3.3). The imagery of the early silver was examined by subject matter, considering first the human head and face. What may be the two earliest heads on Unit obverses show the least experimentation; one is probably derived

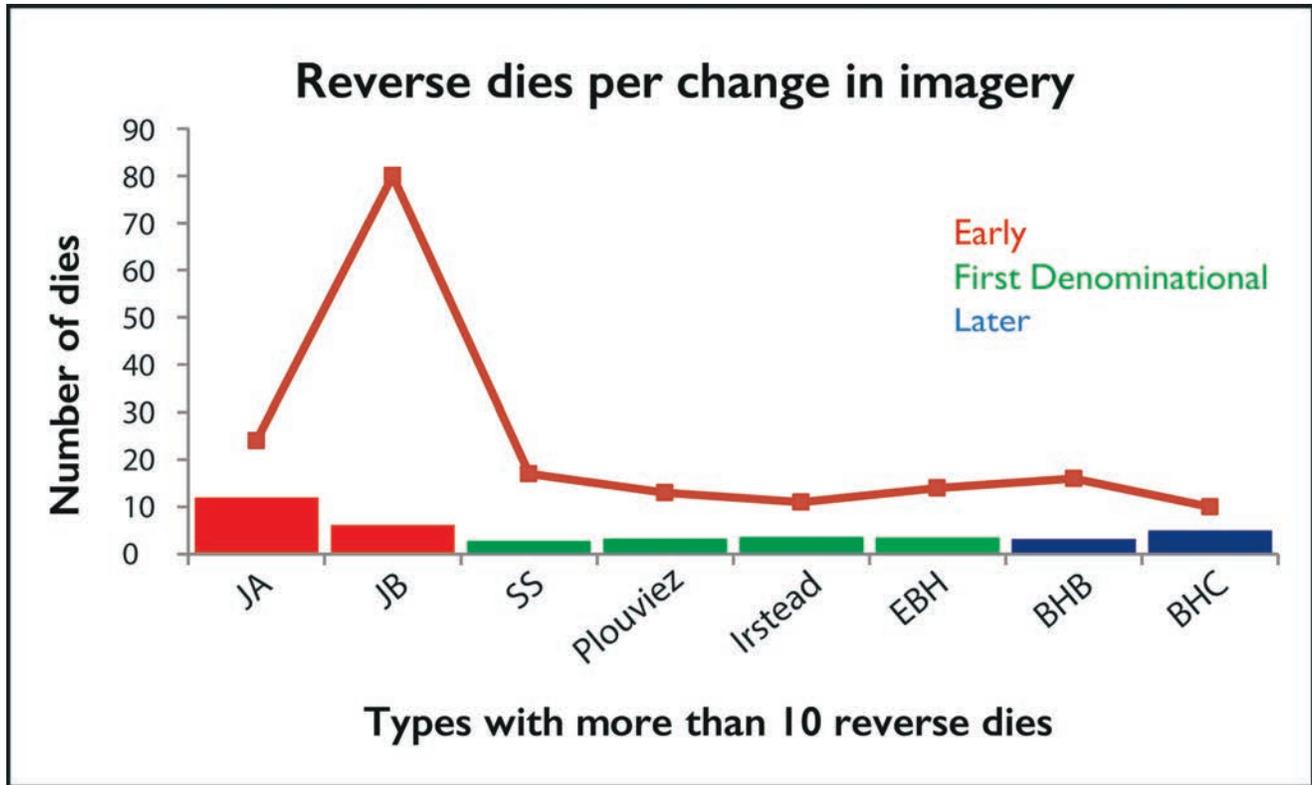


Figure 5.39 Chart showing the average number of reverse dies before there was a change in imagery and total number of reverse dies for major types of Stater

from a Gallo-Belgic prototype and another from a Roman prototype. With subsequent types the imagery becomes more complex and starts to include hidden facial imagery, some of which is very complex and sophisticated. There appears to be no attempt to make any image resemble an actual person (5.4.1).

A horse occurs on every Icenian reverse die other than the early gold types. The horse is sometimes used to create a hidden human face; such transformations may be related to Gallo-Belgic androcephalous images. The horse was extremely important in East Anglia, as evidenced by finds of horse equipment and by early Carthaginian bronze coins found at Ken Hill. These bronzes are prototypes for the Large Flan C Unit, many of which also have been found at Ken Hill (5.4.2). A review of symbols used on silver coinage provided examples of their importance, demonstrated by the efforts made to change post-production dies and by the consistent substitution of the diamond by the hollow star on Large Flan A (5.4.3). The obverse of the Bury Pallas Half Unit is clearly at the end of a chain of Gallo-Belgic stylistic development (5.4.4).

The key change with the denominational coinage was the adoption of consistent reverse imagery between the different denominations. From the mid-denominational period, the back-to-back crescent motif was present on most Issues, and imagery

for each type became extremely stable. The crescent motif originated in the North Thames area where it was discontinued with Cunobelin, but it became dominant in Icenian numismatic imagery with the notable exception of the Late Face Horse Issue. Other later elements of design, the pellet-triangle and the boar, have also been explored; the former is not thought to have any specific significance to Icenian coinage, and the latter displays linkages with earlier Corieltavian coinage and may depict a standard rather than a living boar (5.5).

Icenian coinage generally avoids the Greco-Roman styles of representation, and this extended to Augustan imagery which otherwise would have been expected to influence the later denominational Issues. This avoidance presents a contrast to southern and south-eastern Late Iron Age regional coinages (5.6).

The introduction of writing on the coinage does not coincide with other changes or simplification of imagery. An overview of epigraphic evidence suggests that the most common inscriptions are likely to be personal names. There is no reference to kingship with the possible exception of an R, on an Aliff Scavo die. The inscription on the small issue of Esv Prasto Units appears to include the name of a moneyer, and it is possible that the other inscriptions may represent traders, moneyers and officials, such as leaders of sub-tribal units (5.7).

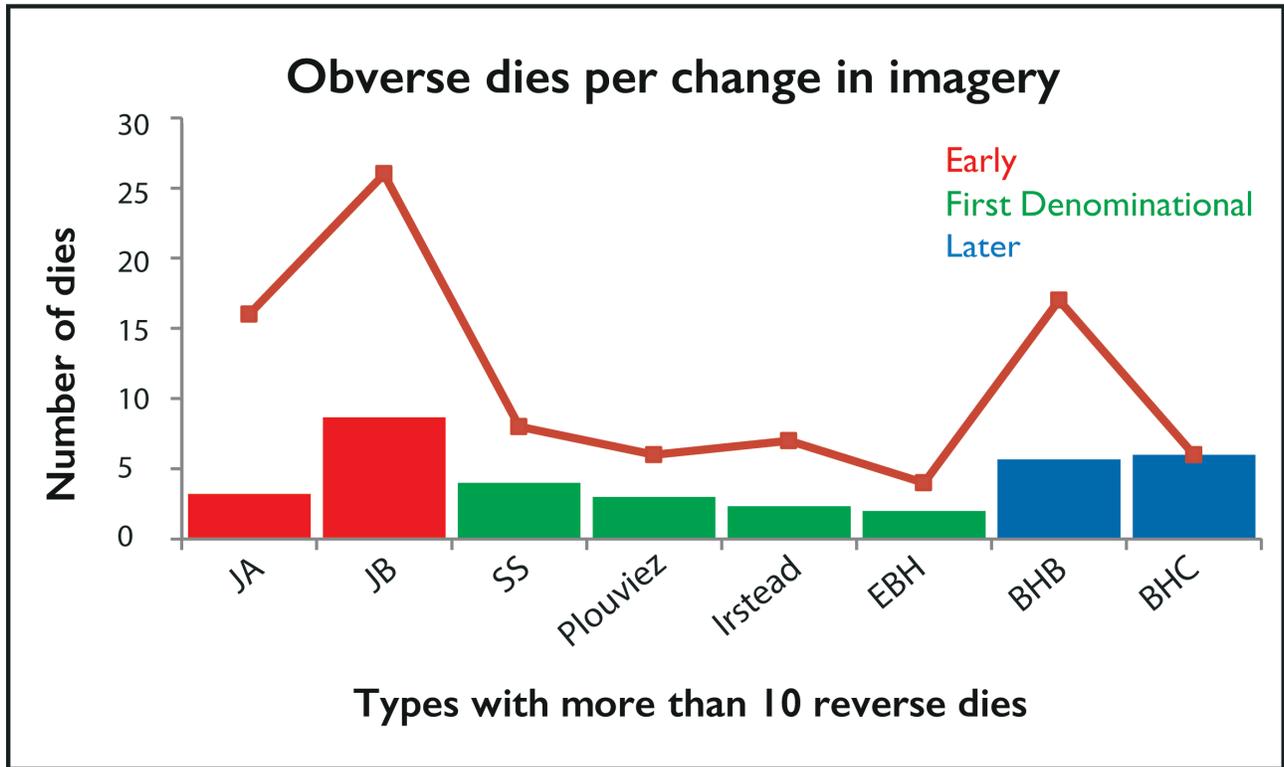


Figure 5.40 Chart showing the average number of obverse dies before there was a change in imagery and total number of obverse dies for major types of Stater

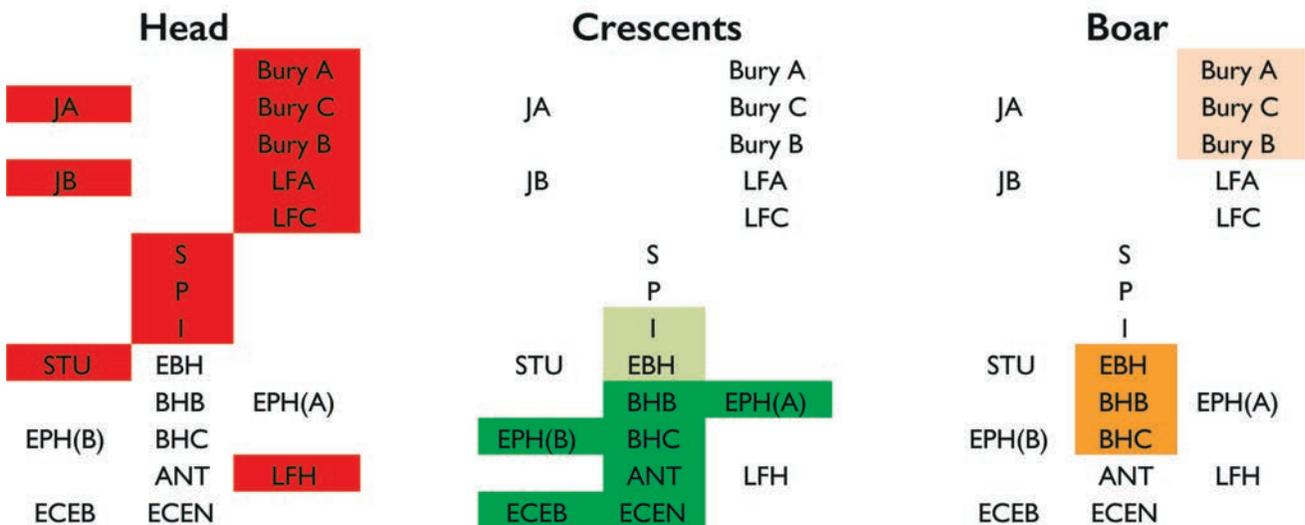


Figure 5.41 Occurrence of key design elements (head, crescents, boar) by chronology

A number of close stylistic links have been identified between coinage from East Anglia and that of other regions, particularly for earlier coinage types. Certain of these examples appear likely to result from the same person cutting dies in different regions. This implies that some coinage was produced

locally on a relatively informal basis. Other similarities seem more likely to represent the movement of ideas about style, although Roman styles appear to have been consciously ignored (5.8). Other introductions, such as the back-to-back crescents may have been politically motivated (5.5).

The most important design element in the early Units is the human head or face, which is often hidden. During this period there was continuing change to, and experimentation with, the imagery, although the basic components remained constant. The changes made between one type and another, seen in Figure 5.10, appear indicative of a general artistic philosophy. This was to move from a straightforward Greco-Roman form of literal interpretation to a more complex, but less 'realistic', manner of illustration. The latter contained hidden levels of information which would be open to the initiated or to those who searched for them.

### **5.11 Conclusions**

This chapter has shown that Icenian numismatic imagery was part of the wider development of Late Iron Age art and decoration. This is shown particularly in the use of hidden faces, which are seen on metal artefacts of many types. It has also shown how prototype imagery was changed to reflect a much more adventurous local aesthetic. Further research on the extent to which a discreet East Anglian aesthetic could

be separated from that of other English regions would be illuminating.

The early local and first denominational silver coinage showed great variety in its imagery. This reveals an excitement and willingness to experiment fuelled by a desire to create hidden and unusual effects. The imagery then became standardised, with little or no emphasis on hidden forms. This later coinage has features of mass-production. An extreme example of standardisation was the Boar Horse C Unit, which was struck from 102 reverse dies with no significant variation.

Much of the imagery and script adopted on the mid- and later denominational coinage is related to the expression of power and stability. The introduction of back-to-back crescents lends itself to this interpretation, as it seems to have been adopted almost as a form of regional insignia, although it was excluded from the major Issue Late Face Horse. However, I suspect that the strength or power expressed may not be predominantly political. I will explore in Chapter 7 whether commercial strength and reliability were also communicated through this script and imagery.

## Chapter 6

# Searching for evidence from hoards and coin scatters

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### 6.1 Introduction

The analysis of Icenian hoards in conjunction with the die-study was a key factor in understanding the organisation and relative chronology of the various types of coinage which have been discussed in Chapters 1 to 3. After gaining such an understanding, the hoards and the distribution of non-hoard coinage were further analysed to search for clues and insights into how coinage was used, the nature of hoarding, and more general social organisation and practices in Late Iron Age East Anglia.

In order to make sense of such a large amount of material, coinage distribution was divided into coins found in hoards and those found individually or scattered across a location termed 'casual losses'. The division between these two categories is somewhat arbitrary, as some casual losses are likely to be the remnants of dispersed hoards. Indeed it is impossible to say whether even a single isolated coin find is really a genuine casual loss, or is the equivalent of a hoard of a single coin. Despite these difficulties the division has generally been useful, and the analysis of what are clearly hoards has generated large amounts of information. This led to the revelation that hoarding was an intermittent, not a continuous, practice. The analysis of casual losses has also revealed new insights; these include the sub-regional focus of many types or die-groups of coinage and differences between the types and denominations of coinage found as casual losses, and those that were hoarded.

As discussed in Chapter 1.6, the key study of Icenian coin hoards forms part of Philip de Jersey's (2014) study of British Iron Age hoards. He gives each hoard a definitive reference which I refer to with a 'PdeJ' prefix. Details of hoards that postdate de Jersey are given in Appendix V with some additional information on a few key earlier hoards. I have not duplicated the detailed lists of hoard content given by de Jersey.

Hoardings have been a key tool in my assessment of the relative chronology of Icenian coinage, which otherwise would have been dependent upon assumptions about weight,

metal debasement and stylistic analysis. Information has been obtained by comparing chronologically ordered die-chains of the most common coins in the hoard to identify the points at which the hoard 'closed'. This enables conclusions to be drawn not only about the types present in the hoard, but also about those absent. Types not present, but which appear broadly contemporary, may well postdate those that are present. Much information has also been obtained by 'coins per die' calculations (CPD) – the principles behind which are discussed in Appendix VII, and the relevance of which are demonstrated in this chapter.

This chapter begins with a discussion about two unusual sites in the Snettisham area. Ken Hill, where the 'Snettisham Treasure' was found, has yielded large amounts of coinage. Metal detection and excavation at this site has produced an unusual mix of coinage that appears to be an amalgamation of a number of separate votive deposits. Finds from a nearby site at Shernborne are much less important, but some features of the site are similar to Ken Hill.

The next section examines all hoards in chronological order, based upon the latest coins present in each hoard. The section is split into three parts and includes evidence of the intermittent nature of hoarding and the formulaic structure of most hoards. The third section of the chapter examines a number of site assemblages from prolific sites, and extracts clues about different uses of coinage. The coinage from these sites is compared to that found in hoards and also to the site at Fincham. This analysis indicates there are clear differences between the prolific sites and both Fincham and hoard content, with only the former having material quantities of Half Units, plated coins and non-Icenian bronze coins.

The final section considers the information obtainable from large-scale mapping of 'casual losses'. The sub-regional distribution of certain types and die-groups is analysed in Chapters 2 and 3. This section examines the overall patterns of coinage distribution in East Anglia and variances in distribution between different denominations, which provides clues as to how coinage was used.

## 6.2. Snettisham

### 6.2.1 Snettisham – Ken Hill

The importance of Ken Hill in Snettisham became apparent when the famous finds of torcs in the so-called ‘gold-field’ were first discovered in 1948 as a result of deeper than normal ploughing (Clarke 1954). Subsequent excavations and metal detecting resulted in the discovery of further hoards of artefacts and coinage including the massive ‘Bowl Hoard’ which was illegally detected at the site in 1990 or 1991 following British Museum-led excavations at the site in 1990. Subsequent informal excavation and metal detection at the site uncovered the remains of a stone building. Natasha Hutcheson identified this as a ‘Romano-Celtic Shrine’ situated at the edge of the gold field, following a short professional excavation in 2004 (Hutcheson 2011). She clarified the layout of the site with the shrine and its surroundings, including the gold field, enclosed within a temenos ditch (Hutcheson 2011). Hutcheson found the archaeology of the site to be severely disturbed, but it was clear that the Romano-Celtic temple reflected the continuation of an Iron Age ritual site.

Table 6.1 lists the documented hoards found at the site that contain coinage, annotating the latest type of coin in each hoard. Each hoard is designated by a letter, a practice initiated by Clarke for the five hoards found between 1948 and 1950, and continued by Stead (1991) when documenting the British Museum’s excavation on the site.

Hoards B and C were two of the first three hoards found on the site in 1948, some 30 ft apart (Clarke 1954, 30–31); the hoards also contained torcs and other metalwork. Both hoards were found to have been surrounded on all four sides by iron nails, suggesting to the excavator that they had been buried in 3 ft<sup>2</sup> wooden boxes (Clarke 1954, 35).

The Bowl Hoard (PdeJ 196.6), the largest and most important hoard of late Icenian coinage ever found, was detected illegally on the site and dispersed without its

contents being recorded. This hoard is reputed to have contained some 6000 coins in a silver bowl with a separate deposit of 500 gold coins and ingots buried below it (Stead 1998, 147). Other estimates vary; Chadburn (2006, hoard 41) estimated *c.* 6600 silver coins in the bowl and *c.* 90 gold coins below it.

Fortunately, a collector borrowed and photographed 1135 coins from the Bowl Hoard and recorded them for the Celtic Coin Index at the University of Oxford. These coins, analysed in Appendix V.1.1, reveal a strong similarity to the revolt-period hoards, but it seems likely that the sample lent to the collector had had most of the commercially valuable Aesv/Saenv and Cani Dvro Units removed. Like the revolt hoards, the sample contained strikes from the late dies of Units such as Anted and Ecen. The gold coinage is similar to the silver in being biased towards later Issues. These factors suggest that the Bowl Hoard closed at the same time as the other late hoards.

At the same time as Bowl Hoard coins were ‘on the market’ another group of coins also appeared, referred to as Hunstanton II (Chadburn 2006, hoard 45; PdeJ 196.7). These coins were mainly from the early local period and do not appear to be part of the Bowl Hoard, but still seem likely to emanate from Ken Hill (Appx V.1.2). The gold in this hoard is a cohesive group of 56 Norfolk Wolf B Staters and 90% of the silver is Large Flan C Units. These two components appear related; they are broadly contemporaneous and both include many plated coins. The Units include three later coins. This would be significant if the integrity of the hoard were beyond question, but unfortunately this is not the case, and it is likely that the cohesion of the hoard has been compromised. As discussed in Appendix V.1.3, I am also not convinced about the integrity of the Dersingham Bypass hoard (PdeJ 196.8, Chadburn 2006, hoard 40) which includes coins that may emanate from Ken Hill – these have been ignored in my analysis.

In addition to the hoards discussed above, there have been numerous finds of Late Iron Age coins by metal detectorists on the site. Two groups of finds have been properly recorded and give an indication of the nature of the material that has been found on the site. Batch 1 comprises 42 identifiable coins. Some were found scattered across the site during a British Museum excavation project following the discovery of Hoard F, which removed the topsoil from 1.2 ha and exposed five more hoards, though none contained coins (Stead 1991). The remainder were found nearby by the metal detectorist who discovered Hoard F (see PdeJ 196.4). Batch 2 comprises 162 identifiable coins found by metal detecting and amateur excavation on the site between 2003 and 2010.

The two batches of coins are different in composition, and each seems likely to include a series of scattered deposits. In the list below I have tried to make sense of the finds by collating coins that seem to relate to each other into groups,

Table 6.1 Documented Ken Hill hoards containing coinage

Hoard	deJersey	Contents	Closing type
B	196.1	Metalwork with 12 Staters and Quarters (1 Ingoldisthorpe)	G-B C/ Ingoldisthorpe
C	196.2	Metalwork and 145 flat linear potins	Potins
E	196.3	Metalwork with single Quarter Stater in torc terminal	G-B D (insular)
F	196.4	Metalwork and 9 Staters and Quarters (5 within torc)	G-B C
N	196.5	5 G-B A Staters and 2 G-B C plus 1 ‘oddity’	G-B C

which may reflect some of the original deposits. The groups from batch 1 are in italics:

- 2: 3rd or 4th century BC Bronzes from Carthage, the prototypes for Large Flan C (discussed in 5.4.2)
- 7: *Gallo-Belgic Staters and Quarter Staters, which may be from Hoard F*
- 10: Gallo-Belgic D Quarter Staters
- 5: *Flat linear Potins*
- 37: Thurrock Potins
- 2: *British A Staters, 1 Clacton Stater and an Ingoldisthorpe Quarter Stater*
- 6: Clacton Quarter Staters
- 17: *Norfolk Wolf B Staters, including 5 each from die-groups 8 and 18, and 3 from 16*
- 5: Norfolk Wolf B Staters from die-group 18 and 16
- 16: Early local period Units, including 5 Bury A, 4 Bury B and 6 Large Flan C
- 9: Boar Horse B Units
- Late Units, including 21 Ecen, 11 Anted and only 4 Late Face Horse

My attempt to recreate original deposits from the mixed assemblage is conjectural, but at least five of the 10 Gallo-Belgic D Quarter Staters are definitely closely related, as they are coated in a similar unidentified deposit which appears to have been melted onto them. Three are illustrated in Figure 6.1. Some other groupings appear obvious, such as the Thurrock Potins and the Clacton Quarter Staters from batch 2.

It appears that there have been numerous deposits of coinage on Ken Hill. Many records are of coinages from early in the coin-using period such as Potins, Gallo-Belgic gold and early British coinages. The evidence is not suggestive of continuous deposition of Icenian coinage, and hoarding appears to be particularly concentrated in three main phases: before local production started, the end of Norfolk Wolf B Stater production and the revolt-period, the latter two coinciding with wider episodes of Icenian coinage hoarding.

The coinage found on site included much non-Icenian material, but surprisingly little pre-revolt Roman coinage. The group of detector finds from 2003–10 included only a single coin from this period, a Republican Denarius of 81 BC, although there was later Roman material. Likewise the Bowl Hoard is also seemingly largely devoid of Roman

material. Chadburn's (2006, hoard 41) research, which began soon after the hoard's discovery, recorded only three Denarii. The relative absence of Republican Denarii is strange given that they were clearly present in the region, being found in hoards dating to the revolt and as a likely raw material for Icenian coinage. It seems plausible that they were being deliberately excluded from this highly important site, perhaps because they were viewed as being alien or barbarous.

### 6.2.2 Snettisham area – Shernborne

A series of coinage finds have emerged from a field in the parish of Shernborne, two to three miles from Ken Hill. There are some similarities to the coins from Ken Hill although there are fewer non-Icenian examples.

The first major find from the field was Shernborne A – a substantial hoard of Norfolk Wolf B Staters and Snettisham Staters, Quarters and Units – which was discovered in two batches in the late 1980s (discussed in 6.4.2 and Appx V.1.4). One batch closed at the end of Snettisham Stater production and the other may have closed slightly earlier. The final seven Snettisham Quarter Stater reverse dies are omitted from the hoard, providing support to my conclusion that this type was minted as part of the ensuing Plouviez Issue (3.4).

Another area of the field, measuring some 170 × 200 m, yielded 50 identifiable finds during 2014 which I have called Shernborne B (Appx V.1.5). These form several groups which may be separate deposits:

- 7 Norfolk Wolf B Staters: 6 from die-group 18 and 1 from die-group 16. A plated South Ferriby Corieltavian Stater may also belong to this group
- 22 Quarter Staters from early Snettisham to Boar Horse B types
- 7 Early local Units, including 4 Bury B's

The remaining 14 coins are not obviously attributable to discrete deposits and include two post-conquest Denarii from AD 69.

The group of Quarter Staters include an example of every Snettisham obverse die and all periods of Irstead production, as well as two of the ensuing Boar Horse B Issue. They represent production over a number of decades and lack the bias towards later types expected if they were



Figure 6.1 Examples of Gallo-Belgic Quarter Staters with surface deposit

deposited in a single event from a ‘pool’ of coinage. They give the appearance of having been accumulated gradually over an extended period, possibly by the annual addition of a single coin. It is conceivable that they are the result of a regular votive offering of a single Quarter Stater, although of course there are other possible interpretations.

### 6.3 The hoards

East Anglian hoards are discussed below. Section 6.4 addresses all hoards which closed prior to the Boudiccan revolt, and 6.5 relates to the late hoards which date from the revolt period. Important information has been obtained from these hoards about the formulaic nature of their content and the relative chronology of Icenian coinage. Section 6.6 uses some of these data and further evidence to examine the likely timing of the cessation of Icenian coinage. Section 6.7 briefly considers two other possible late hoards which are not considered in 6.5. And finally, 6.8 draws together the information from the previous sections to look at the relative chronology of all Icenian hoards – it concludes that hoarding was not a continuous phenomenon.

## 6.4 East Anglian Late Iron Age hoards pre-dating the Boudiccan Revolt

### 6.4.1 Hoards of Gallo-Belgic and Early British coinage

The earliest Gallo-Belgic gold coinages Gallo-Belgic A and C are rare in East Anglia, although they were found in hoards at Ken Hill (see 2.2.1). The ensuing Gallo-Belgic type, Gallo-Belgic E, has been frequently found in the region, including in the following five well-recorded hoards from Norfolk in Table 6.2 and in Heacham II and the Sculthorpe hoards (6.4.2).

The five hoards are similar: the biggest component is Gallo-Belgic E class 2 Staters, and each closes with either class 3 or a small number of class 4 Staters. Sills (2005) and Scheers (1983, 340) suggest that the classes of Gallo-Belgic E reflect a chronological progression. Thus it is possible that these hoards were deposited within a short period of each other, close to the transition from class 3 to class 4.

Finds of the Ingoldisthorpe coinage, the East Anglian variant of British A, are discussed in 2.2.4.

### 6.4.2 Hoards of early local gold

There are only two hoards known to close with die-group 1 of the Norfolk Wolf A Stater, both of which also contain Gallo-Belgic E Staters: the fully documented Sculthorpe Hoard, found in 2015 (Appx V.2.1), and a hoard believed to have been found over a number of recent years in the Heacham area of North Norfolk, which I call Heacham II (Appx V.2.2).

The Sculthorpe Hoard contained 11 Norfolk Wolf A Staters, all from die-group 1, and nine Gallo-Belgic E Staters, of which eight are clearly from classes 2 and 3 (the other is unclear). This hoard also contained four Bury C Units which were badly corroded, but which appear to all be from reverse die 3. Few details about Heacham II are available; the only recorded contents are 2 Norfolk Wolf A Staters from die-group 1 and a Gallo-Belgic E Stater of either class 1 or early class 2.

These two hoards are extremely important because they contain both the earliest Norfolk Wolf A Staters and Gallo-Belgic E Staters. Weight, stylistic evidence and metal content had already led to an assumption that the two types were close in date – the contemporaneous presence in these hoards further supports this hypothesis. As well, the Bury C Units in the Sculthorpe hoard indicate that Icenian silver coinage probably started within a few years of the earliest Norfolk Wolf A Staters (2.5.1).

The Sculthorpe Hoard includes a full range of dies from die-group 1 of the Norfolk Wolf A Stater, and it is possible that there was a hoarding horizon at the end of this die-group, which coincided with a reduction in gold content and weight. However, the existence of an extensive episode of hoarding at this point seems unlikely, as there are only 2.8 known coins per die (Table 2.3) for die-group 1, and new dies continue to be found. This implies that there are no major undeclared hoards of these coins. The physical differences between die-group 1 and subsequent production, and the absence of die-linking to later die-groups may simply reflect a pause in production.

There are no fully documented hoards closing with later Norfolk Wolf A Staters, but there are clearly undeclared

Table 6.2 East Anglian hoards containing Gallo-Belgic E Staters and D Quarter Staters

Hoard	de Jersey	Gallo-Belgic E class				G-B D	Other	Total
		1	2	3	4			
Fring II	183	39	90	39	2	3		173
Weybourne	205	14	33	4	-	4		55
Buxton with Lammas	177	5	8	3	-	-	1 Clacton Q (ABC 2350)	17
Sedgeford	194	7	19	11	2	-		39
Wormegay	206	-	5	2	-	-		7

hoards, as there are over 11 known coins per die for die-group 4 (Table 2.3). Coins from two such hoards have been traced, hoards M and N, which contained tightly die-linked groups of five and four coins respectively (see Appx V.2.3 and V.2.4). Three small groups of Staters are also recorded from normally ‘non-prolific’ locations, and these are probably also from hoards. This evidence, taken together with the many coins without a provenance, implies that there was an episode of hoarding towards the end of the Norfolk Wolf A series (Table 6.3).

Norfolk Wolf B Staters were minted in at least three parallel sub-types. Like the Norfolk Wolf A Stater, there are few coins per die for the earlier die-groups and many more for the later ones, implying that there was an episode of hoarding towards the end of Norfolk Wolf B Stater production. There are several well-recorded hoards of Norfolk Wolf B Staters, as well as several unrecorded hoards identified by myself and others. All are listed here, and more details are given in Appendix V:

- Ashby St Mary (ASM)
- Lochdales (L) – PdeJ 305
- Beccles (Be)
- Brettenham (Br) – part of PdeJ 175

*Table 6.3 Analysis of Norfolk Wolf A die-group 4 provenances*

Hoards M and N of uncertain provenance	9
Two or three coins from 3 non-prolific sites	8
Other provenanced coins	19
Coins without provenance	48
<i>Total die-group 4 coins</i>	<i>84</i>

- Hoard D
- Heacham (H) – PdeJ 185
- Hunstanton II (SH II) – PdeJ 196.7
- Shernborne A (Sh A) – PdeJ 195
- Shernborne B (Sh B)

The hoards are summarised in Table 6.4. Each plated Norfolk Wolf B Stater has the characteristics of a particular die-group of Norfolk Wolf B, to which they are allocated in the table and shown in brackets. The silver content of Hunstanton II is not fully resolved and is discussed in Appendix V.1.2; Table 6.4 includes only its gold content which is cohesive, and likely to be accurate.

There is a scattering of coins from earlier Norfolk Wolf B die-groups and a single Norfolk Wolf A Stater in these hoards. With the exception of the small hoard from Beccles, most of the Norfolk Wolf B Staters are from the late die-groups 8, 16, 17 and 18. Each hoard is usually focussed on one or two of the final die-groups, information which helped in confirming that the different sub-types of the Norfolk Wolf B Stater have sub-regional distributions (2.4.2). Most of the hoards with a provenance are from north-western Norfolk, which seems to have been the main area of focus for sub-type D (die-groups 17 and 18) and is close to the more central East Anglian focus of sub-type Cii (die-group 16). The only hoard which is predominantly of coins from die-group 8 of sub-type A was found at Ashby St Mary in south-east Norfolk. Some sub-type A distribution appears to be centred on the Waveney valley in the south of the region (2.4.2).

The hoards have helped to establish that Norfolk Wolf B Stater die-groups 8, 16 and 18 were minted in parallel and ceased at about the same time. I attempt to illustrate this in Table 6.5. Each column in the table deals with one of these three die-groups, and the horizontal lines show the

*Table 6.4 Hoards including Norfolk Wolf B staters*

Type	Die-group	ASM	L	Be	Br	D	H II	H	Sh A	Sh B
Norfolk Wolf A								1		
Norfolk Wolf B A	1			2			1	1		
Norfolk Wolf B A	4							1		
Norfolk Wolf B A	8	34 (1)	12				3			
Norfolk Wolf B Ci	11			1				1	1	
Norfolk Wolf B Cii	16	9			(1)	2	30 (19)	15 (1)	32	(1)
Norfolk Wolf B D	17					1	1	1	2	
Norfolk Wolf B D	18				4	1 (1)	2	4	9	5 (1)
SS								3	30	
SQ									13	
SU									3	
LFQ									1	
<i>Total</i>		<i>44</i>	<i>12</i>	<i>3</i>	<i>5</i>	<i>5</i>	<i>56</i>	<i>28</i>	<i>91</i>	<i>7</i>

different hoards. In the boxes the reverse dies of the relevant die-group are each represented by the numeral '1', with those present in the hoard shown in black and the others in red. The reverse dies are represented in my assessment of their chronological order with the earliest on the left. Thus the Ashby St Mary hoard included an example, or examples, of the earliest reverse die in die-group 8 and three other dies, but not the final reverse die. Die-group 17 is not included in the table as it is very small, and stylistically closely related to die-group 18. The chronological ordering of dies was straightforward for die-groups 8 and 16, but more subjective for die-group 18. Plated coins, which are clearly based on particular dies, are shown in brackets.

Table 6.5 shows that Ashby St Mary included late dies of die-group 8 and the sixth from last die of die-group 16, suggesting that these two die-groups may have been produced in parallel. Likewise, Hunstanton II and Heacham both have late dies from die-groups 16 and 18, indicating that these two die-groups were probably produced in parallel. Although the evidence is more tenuous, Hoard D, Brettenham and Shernborne B (1) taken together, also suggest that the output of die-groups 16 and 18 were probably contemporaneous. Shernborne A closed during the Snettisham denominational coinage and contained a strong representation of late dies from die-groups 16 and 18, again suggesting the contemporaneity of these two die-groups.

Shernborne A postdates Norfolk Wolf B production, but except for Heacham, the other hoards shown in Table 6.5 close with late dies from at least one of the final Norfolk Wolf B die-groups. This implies that much hoarding took place at or near the end of Norfolk Wolf B production. Heacham has similar timing – it includes late Norfolk Wolf B dies and a few very early Snettisham Staters, suggesting closure just slightly after the transition to the denominational coinage. Few of the early and smaller Norfolk Wolf B die-groups have been recorded from hoards, implying that there was little hoarding activity whilst they were in production.

#### 6.4.3 Early local silver and mixed hoards

Known and likely hoards of silver coinage from the early local period are shown in Table 6.6. Plated coins are shown in brackets.

There are only three well-recorded hoards: Sculthorpe (6.4.2), Barham and Nettlestead. Barham and Nettlestead, which both contain Bury A and Bury C Units, were found within a few miles of each other, and possibly their deposition is related to the same unknown set of circumstances. Barham comprised two batches and two scattered coins, and the second batch included both Bury A and Bury C (Appx V.3.1).

Table 6.5 The reverse dies of the three late Norfolk Wolf B die-groups included in key hoards

Hoard	Die-group 16	Die-group 18	Die-group 8
ASM	11111111111111111111111111	111111111111	1111111
H II	11111111111111111111111111	111111111111	1111111
H	11111111111111111111111111	111111111111	1111111
L	11111111111111111111111111	111111111111	1111111
Br	111111111111(1)111111111111	111111111111	1111111
Sh B(1)	1(1)111111111111111111111111	111111111111	1111111
Hd D	11111111111111111111111111	111111111111	1111111
Sh A	11111111111111111111111111	111111111111	1111111

Table 6.6 Known and possible hoards with early local silver coinage

Hoard	Bury A	Bury C	Bury B	Large Flan A	Large Flan C	Other
Sculthorpe		4				GB E and Norfolk Wolf A Staters
Barham	2	6				Possible NT Quarter
Nettlestead	5	1				
Hunstanton II				1(1)	19(28)	Norfolk Wolf B Staters, see below
<i>Possible hoards</i>						
Santon Downham	2		1			Saham Toney Unit
Shernborne B	1		4	1	1	
Ken Hill	5		4		6	Bury D Unit

Information about Hunstanton II is somewhat confused and was obtained by a collector from a dealer (see Appx V.1.2). The silver attributed to the hoard includes a cohesive group of Large Flan C and Large Flan A Units. There was a full range of Large Flan C dies and it seems likely that the hoard also included ten or so Corieltavian Units. This silver was probably found with the Norfolk Wolf B Staters analysed in 6.4.2, which implies closure just before the end of Norfolk Wolf B Stater production. It seems likely that Hunstanton II closed at the end of the early local period, therefore an anomalous and contentious record which links three later Units with the hoard has been disregarded (see Appx V.1.2). Evidence of the three possible hoards listed at the end of Table 6.6 is somewhat tenuous. Santon Downham is based on information from a dealer, and the assumptions behind the other two were discussed in section 6.2.

These hoards provide general indications of relative chronology of the early local silver coinage. Sculthorpe indicates that Bury C is very early and is most likely contemporaneous with early Norfolk Wolf A Staters. Barham and Nettlestead indicate that Bury A and Bury C were likely to have been contemporaneous. Hunstanton II indicates that Large Flan C is later and likely to have been contemporaneous with late Norfolk Wolf B Stater production. The hoards demonstrate that hoarding of silver coinage was taking place in the early local period; there is no significant evidence of the subsequent hoarding of silver coinage until the Boudiccan Revolt.



Figure 6.2 Plated Large Flan C Unit from Hunstanton II



Figure 6.3 The reverses of plated Norfolk Wolf B Staters (all die 54) from Hunstanton II

Although evidence about 'Hunstanton II' is frustratingly vague it seems that this was a single hoard containing many Norfolk Wolf B Staters and Large Flan C Units and that a significant proportion of both were plated, examples of which are shown in Figure 6.2 and Figure 6.3. These plated coins are either struck from official dies or, more likely, from hubbed copies. The plated Norfolk Wolf B Staters from the hoard are silver in appearance; a metal test commissioned for this study revealed that this was because the plating contained 30% silver and only 6% gold (Appx III). An 'official' coin appearing to be from the same dies, in the Ashby St Mary hoard, is obviously golden in colour. This implies that these silver-plated Staters may not have been intended to deceive. They may have had a function which differed to that of the 'official' coinage.

#### 6.4.4 Hoards closing with uninscribed denominational coinage

All documented denominational period hoards prior to the Boudiccan revolt contain only Staters. They include the large Dallinghoo hoard (Talbot and Leins 2010), originally recorded as Wickham Market, and all are summarised in Table 6.7.

The earliest of these hoards is Runhall, which appears to have closed towards the end of the production of the Plouviez Stater. There are no known hoards which closed during the production of Irstead. Hoard A, Freckenham and Sustead closed close to the transition between Early Boar Horse and Boar Horse B Staters. These three hoards have similar content as can be seen in Table 6.8. This table represents each reverse die by the numeral '1' with those present in the hoard shown in black, the earliest dies being on the left of each box. Two hoards contain Boar Horse B Staters, a total of only three coins, which were struck from the very early dies A:3, B:2 and B:4. Die 1 seems to have been quickly abandoned after developing a flaw. The strike from die 4 is very early in its use, predating most strikes of die 3. Thus these three hoards seem to have closed at approximately the same time, possibly in response to the

Table 6.7 Denominational period hoards of Staters

Type	Runhall	'Hoard A'	Freckenham	Sustead	Dallinghoo	Little Saxham
Norfolk Wolf B	1 (plated)	0	0	0	0	0
Snettisham	3	0	0	0	5	0
Plouviez	5	1	8	1	55	0
Irstead		11	26	2	188	1
Early Boar Horse		18	49	5	221	0
Boar Horse B		0	2	1	366	1
Boar Horse C		0	0	0	0	5
Corieltavian		0	0	0	5	0
Total	9	30	85	9	840	7

Table 6.8 The reverse dies in the three hoards closing at the Early Boar Horse to Boar Horse B transition

Hoard	Early Boar Horse Stater dies		Boar Horse B Stater dies	
	Die-group 1	Die-group 2	Boar Horse B	Boar Horse B (A)
A	11111111	111111	1111111111111111	11
Freckenham	11111111	111111	1111111111111111	11
Sustead	11111111	111111	1111111111111111	11

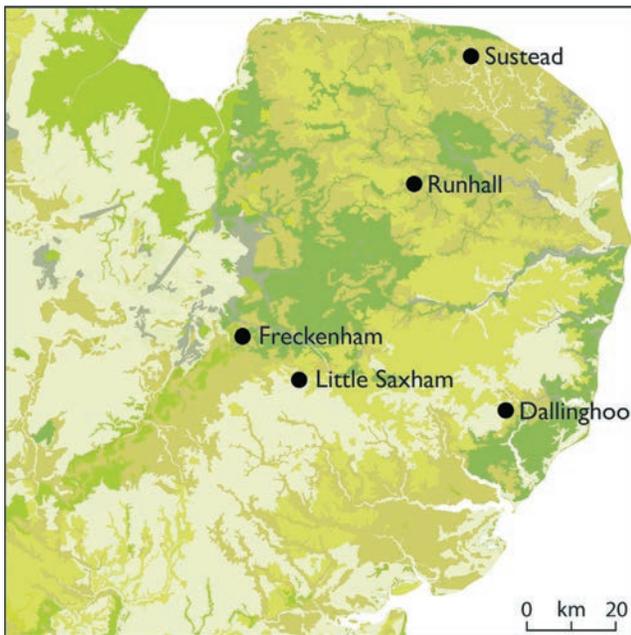


Figure 6.4 Distribution of hoards of gold denominational coinage

circumstances which brought about the change in coinage from Early Boar Horse to Boar Horse B.

The Dallinghoo hoard closed towards the end of Boar Horse B Stater production and omits only the final few dies of both Boar Horse B and sub-type Boar Horse B (A). Five of the seven coins in the Little Saxham hoard are Boar Horse C Staters, the subsequent Issue to Boar Horse B. The five are struck from a range of dies including D and F, which

are late obverse dies in the only two die-linked sequences of Boar Horse C Stater dies that have so far been identified. Thus it appears likely that Little Saxham closed towards the end of Boar Horse C Stater production.

Figure 6.4 shows the findspots of the five provenanced hoards, three of which are located towards the southern limits of Icenian coinage distribution. Ian Leins and I speculated that the deposition of these hoards might have been related to the rise to power of Cunobelin in the North Thames area (Talbot and Leins 2010). This is possible, but it is now apparent that the timing of each of the three hoards deposited in this area is different, and a further hoard discovered since that paper, albeit from a fourth point in time, has been found in the centre of the region.

The Dallinghoo hoard supported my hypothesis, developed prior to its discovery, for the ordering of denominational coinage between the Snettisham and Boar Horse B Issues. When examining Staters of this period I believe that the number of 'coins per reverse die' (CPRD) is a better indicator of relative age than the number of CPD, as the latter calculation includes obverse dies that sometimes saw excessive use (see glossary, Appx VII). Table 6.9 uses this measure and indicates the relative antiquity of Snettisham and Plouviez Staters and that Boar Horse B was the latest coinage in the hoard.

Unexpectedly, Dallinghoo has a higher CPRD for Irstead Staters than for Early Boar Horse, implying that Early Boar Horse is the earlier coinage. I believe that the reverse is the case. This is supported by weight analysis, which showed the Early Boar Horse Stater to be lighter than the Irstead Stater (Table 4.4), and by stylistic analysis, which linked the

end of Early Boar Horse to the early Boar Horse B Staters (Figs 3.5 and 3.6). Both Freckenham hoard and Hoard A also support my ordering; thus there is an unexplained bias in the Dallinghoo hoard towards the presence of Irstead Staters (Table 6.10).

The scale of Dallinghoo enables a meaningful analysis of its Boar Horse B Stater content, the latest type in the hoard. Table 6.11 shows the hoard has a much greater presence of the final dies of the type than earlier dies. This table not only shows that Dallinghoo hoard was biased towards recently produced coinage but also implies that the Boar Horse B Stater had been produced steadily over an extended period and not in a single burst of activity.

The earliest coins in the Dallinghoo hoard are five Snettisham Staters, four of which are die-linked; the fifth may also be die-linked but its reverse is previously unknown and its obverse unidentifiable. These die-links indicate that the Snettisham Staters may have been kept together between minting and deposition. The hoard also contained five uninscribed Corieltavian Staters, all varieties of the ‘South Ferriby’ type. These include three of the more unusual varieties, which implies that they may represent a number of separate coins coming from the neighbouring region over time, rather than a single group ‘imported’ together.

A key feature of these hoards is the consistency of their content. All 980 coins found in the six hoards summarised in Table 6.7 are Staters, and only one is plated. The only non-Icenian coins are the five Corieltavian Staters from Dallinghoo. The only coin which dates back to the early local period is the plated Stater from the earliest hoard, Runhall.

### 6.5 The hoards of late Icenian silver coinage

There have been many discoveries of hoards of late Icenian silver coinage, some of which also contain Roman Denarii. The hoards have been found throughout the region, as is shown in Figure 6.5, where well-evidenced hoards are recorded with a solid triangle; those in red solely comprise Late Iron Age coinage whereas those in blue have Roman content. The map shows that hoards from the fens, around Stonea, do not have Roman content, although Chadburn (2006) mentions a possible Icenian hoard, ‘Stonea III’, which may have contained Roman Denarii. With the possible exception of the fens there seems to be no geographic bias to the presence or absence of Roman coinage in late hoards.

Section 6.5.1 summarises a review of well-documented hoards which reveals their homogenous nature. It is followed by an analysis of the known Roman content of all late hoards. This has been important in establishing the dating of the closure of the hoards as well as providing other clues about the flows of Roman coinage into East Anglia. The final section 6.5.3 uses the results of the review of the late hoards to assess the relative chronology of mid- and late Icenian

Table 6.9 Average coins per reverse die within the Dallinghoo hoard (\*The count of Boar Horse B reverse dies excludes the three which postdate the closure of the hoard)

Type	CPRD
Snettisham	0.3
Plouviez	4.2
Irstead	17.1
Early Boar Horse	15.8
Boar Horse B*	28.2

Table 6.10 Comparison of CPRD in three relevant hoards

	Dallinghoo	Freckenham	Hoard A
Irstead	17.1	2.4	1.0
Early Boar Horse	15.8	3.5	1.3

Table 6.11 The relative presence of Boar Horse B Stater dies in Dallinghoo hoard

Boar Horse B Stater reverse dies	Number in hoard	Coins per die
1–4	49	12.2
5–8	84	21.0
9–12	202	50.5

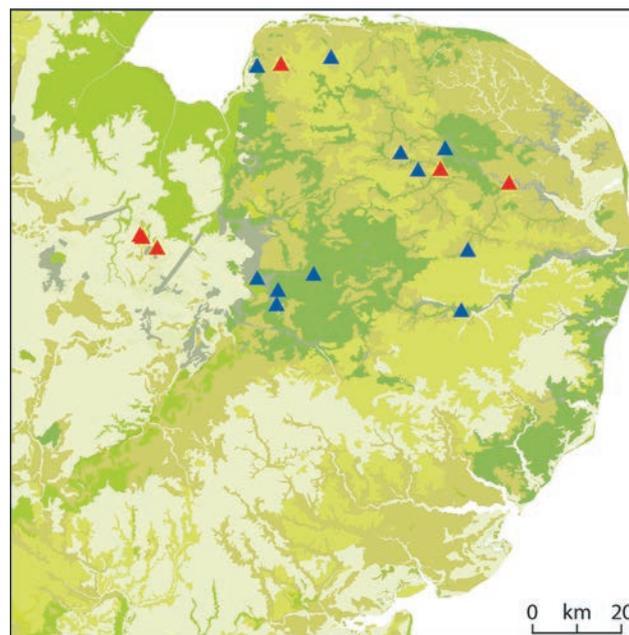


Figure 6.5 Distribution of hoards of late Icenian silver: comprised solely of Late Iron Age coinage (red) or inclusive of Roman content (blue)



ceased before the hoards were closed. All known obverse dies of Ece A, Ece B or Aesv/Saenv are represented in the late hoards, and the only known Ecen and Anted obverse dies not represented in the hoards are rare, unusual in appearance and probably plated. There are more examples of Late Face Horse obverse dies which are not known from hoards, but of these only two dies, FB and X, appear definitely official and could conceivably postdate others found in the hoards.

To further illustrate the homogeneity of the hoards, Table 6.15 shows the presence of a chronological sequence of obverse dies from Ecen die-group 1 in each hoard. The table omits five uncommon dies that probably had a short life (A, B, D, K and L) but includes the uncommon dies Q

and R, which were probably in use when production stopped. Those dies that are present in each hoard are shown in red. Not only do the late hoards contain the same Icenian types in broadly similar proportions, but they also contain similar dies.

The homogeneity of the hoards is strange, given that there appears to be a sub-regional focus to the ‘casual losses’ of some types and die-groups. This suggests that the revolt-period hoards were not simply extracted from coins circulating in the area local to the hoard.

I attempt to illustrate this in the two maps included in Figure 6.7. On the left is presented finds of coins from die-group 3 of Ece B and the right those of die-group 3 of Anted.

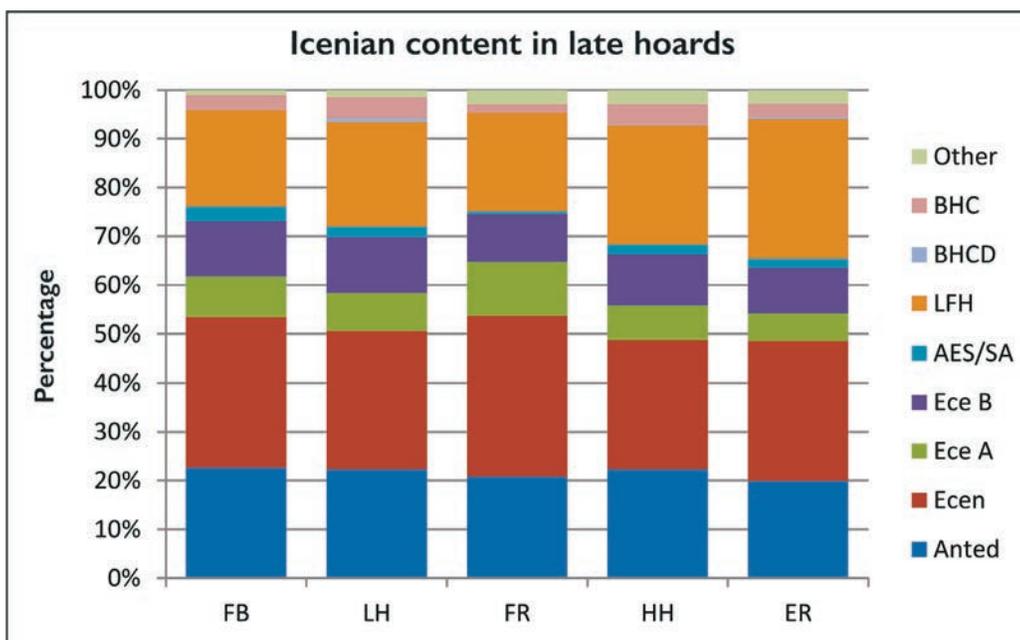


Figure 6.6 The Icenian content of the late hoards

Table 6.14 Number of coins from selected dies in the late hoards

	FB	LH	FR	HH	ER	Casual losses	Total known
Anted die L	9	4	1	9	8	10	85
Anted die N	20	10	5	4	1	7	90
Ecen die N	36	20	12	14	14	14	226
Ecen die P	14	6	5	4	6	9	103
Ecen die 33	6	7	1	2	2	2	35
Ecen die 38	21	4	3	6	4	9	110
Late Face Horse die 84	13	4	3	5	4	11	104
Late Face Horse die MC	4	1	0	4	0	0	29
Ece B die E	22	9	3	4	3	6	105
Ece A die G	22	14	4	9	2	10	119

Casual losses are shown by coloured stars, highlighting that finds of the Ece B die-group are mainly in the south-west of the region, whereas those of Anted are focused slightly further north. Each map also shows the location of the five hoards selected for study and the Forncett St Peter hoard; adjacent to the name of each hoard is the percentage of the Icenian content of the hoard composed of coins of the relevant die-group. Neither example shows any correlation between hoard content and the proximity of that hoard to the main area of distribution. In both cases the hoard containing the highest proportion of its content from these die-groups

Table 6.15 The presence of Ecen die-group 1 obverse dies in the five late hoards

Die	FB	LH	FR	HH	ER
<b>C</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>E</b>	<b>22</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>5</b>
<b>F</b>	<b>11</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>
G	4	0	0	0	5
H	5	6	0	3	3
<b>J</b>	<b>41</b>	<b>15</b>	<b>5</b>	<b>16</b>	<b>9</b>
<b>M</b>	<b>15</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>2</b>
<b>N</b>	<b>36</b>	<b>20</b>	<b>12</b>	<b>14</b>	<b>14</b>
<b>O</b>	<b>10</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>4</b>
<b>P</b>	<b>14</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>6</b>
Q	1	0	1	0	0
R	0	0	0	1	0

is Fring, which is outside the area in which relevant casual losses have been found.

### 6.5.2 Roman coinage in the hoards

The homogeneity of Icenian coinage in the hoards contrasts with the diversity of their Roman content. This varies between being a large part of the hoard – such as Scole, where Roman coinage is 23% of content by number of coins, almost 50% by weight and considerably more than half by silver content – and being entirely absent, such as in the Field Baulk hoard of 872 Icenian Units. The late hoards with documented Roman content are listed in Table 6.16, with a note of the latest Roman coin present; all are Denarii except the two Asses of Claudius in Santon Downham.

No Roman coinage postdating AD 60/61 is present in the hoards, and four hoards close with pre-coinage reform Denarii of Nero as their latest element, two of which are from AD 60/61 including Forncett, which is discussed below. This dating evidence, when considered alongside the homogenous Icenian content, indicates that the Icenian late hoards date to the period of the Boudiccan revolt, which Tacitus suggests took place late in AD 61. This timing is consistent with the pot containing the Field Baulk hoard which has been dated AD 60 to AD 70 (Jackson 1996).

The conclusion that the hoards relate to the Boudiccan Revolt is hardly surprising and was reached by Kent and Burnett (1984) and Chadburn (1990). It is, however, contra Creighton (1994) and other writers who have used his analysis. Creighton sought to demonstrate that there were compositional differences between the hoards that

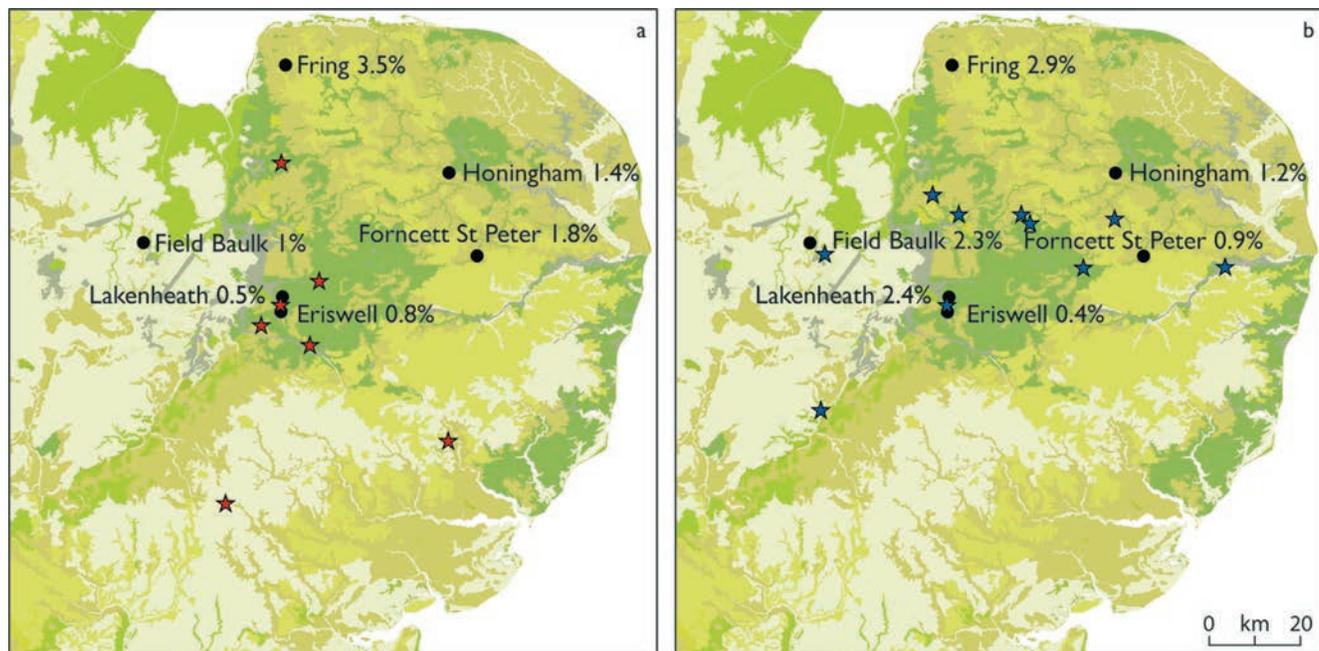


Figure 6.7 Distribution of casual losses compared to hoard content: a) Ece B die-group 3; b) Anted die-group 3

indicated differing dates of deposition. Creighton's findings do not accord with my results and a re-examination of the analysis supporting Creighton's 1994 paper found it to be flawed – this was discussed in section 1.6.

The Forncett hoard was found in 1996/7 and comprised 336 Icenian units and 45 Roman Denarii closing with Tiberius. The hoard was excluded from my detailed analysis as I could only find photographs of 112 of the Icenian coins, all being typical of a late hoard. I attempted to trace and photograph the Roman content of the hoard, most of which had been returned to a number of people involved in its discovery. With the help of different dealers I succeeded in tracing 22 of the Denarii, but with these were seven others which had allegedly been subsequently found on the site of the hoard. These included the Denarius of Nero shown in Figure 6.8 which is dated to AD 60/61 (Sutherland 1984, 151, no. 22). It is in excellent condition, but appears to show some circulation wear on the highest point of the obverse.

The association of this Denarius with the hoard cannot be proven and my information was indirect. However, there was no obvious motivation for misinformation, and probably more for the association to be denied. The wear on the coin supports AD 61 as the likely date of the revolt rather than the previous year as sometimes suggested.

An analysis of the Roman coins from the four hoards with the most Roman content is shown in Figure 6.9. The coins are split into twenty-year periods, and Imperial coinage is allocated pro rata to the periods falling within a particular reign; Republican coinage has been allocated to

periods based upon Crawford (1974). For comparison, the figure shows British finds of Republican and Julio-Claudian silver coinage from the records of the Portable Antiquities Scheme (PAS).

The age profile of the Roman coinage in each hoard, and PAS data for the country as a whole, is all broadly similar. The final forty years leading to the revolt produces exceptions, and it is more helpful to look at these by emperor. Table 6.17 lists the Roman Republican and Imperial coinage in the four hoards. The final column shows a notional distribution based on PAS data; it starts with the number of Republican coins in the hoards, and on the basis of this computes hypothetical numbers for each emperor based on the relevant ratios in the PAS data. Thus in the PAS data the ratio of the coins of Augustus to



Figure 6.8 Coin of Nero dated AD 60/61 from Boudiccan hoard now in Norwich Museum

Table 6.16 Roman coinage in late Icenian hoards

<i>Hoard</i>	<i>Latest Roman coin</i>	<i>Reference</i>	<i>All coins</i>	<i>Roman</i>
Scole	Nero AD 60/61	Burnett 1986	289	87
Eriswell	Nero AD 54/5	Kent 1984	327	72
Lakenheath	Caligula AD 34	Briscoe 1964	480	67
Joist Fen	Nero AD 57/58	PdeJ 232	unclear	unclear
Santon Downham	Claudius c. AD 41/44	Evans 1869 & PdeJ 239	107	2
Forncett	Nero AD 60/61	See below	381	45
Weston Longville	M Antony 32/31 BC	PdeJ 203	c. 300	3

Table 6.17 Roman Imperial coinage in the selected hoards (Portable Antiquities Scheme data from Leins 2011; \*The Denarius of Claudius is dated to AD 50–54)

	<i>Forncett</i>	<i>Lakenheath</i>	<i>Scole</i>	<i>Eriswell</i>	<i>Total</i>	<i>Notional PAS</i>
Republican	36	41	64	45	186	186
Augustus (31 BC–AD 14)	8	8	11	11	38	40
Tiberius (AD 14–37)	7	18	11	13	49	32
Gaius (AD 37–41)				1	1	4
Claudius (AD 41–54)				1*	1	6
Nero (from AD 54)	1		1	1	3	10

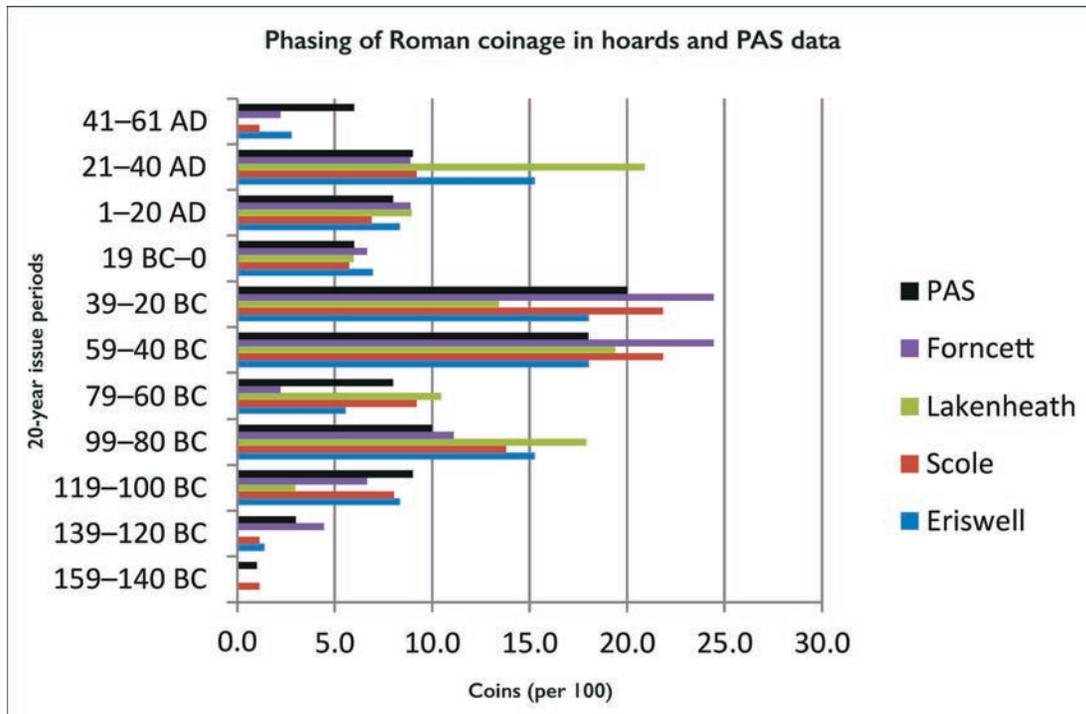


Figure 6.9 Phasing of Roman coinage in hoards in comparison to Portable Antiquities Scheme data (adapted from Leins 2011, 43)

Republican coins is 40:186, and so on. PAS data for Nero is time-apportioned to the date of the revolt; this somewhat overstates relevant PAS finds, as Nero's early coinage is rarer than his later coinage (Reece 2002, 15).

Taken together, Figure 6.9 and Table 6.17 reveal that the hoards contain less Roman coinage dating from the twenty years immediately prior to the revolt than the average PAS distribution of finds, with only four post-conquest coins. For the twenty years prior to this they are present in greater numbers than would be expected based on PAS data. This is because, overall, the hoards have approximately 50% more coins of Tiberius than would be expected based on PAS data (much of the excess relates to Lakenheath and Eriswell). Unfortunately, coins can only show the earliest possible date of their arrival, never the latest, but this analysis implies that the last major influx of Denarii into East Anglia was in the years leading up to the conquest. This is not altogether surprising in view of Tacitus's remarks that the Icenii had never fought against Rome (Annals 12.31). The four post-conquest coins in the hoards include two from AD 60/61, the date of the revolt, a coincidence which makes it appear likely that their presence is somehow connected to the events of the uprising.

There is no evidence of hoarding or other use of Icenian coinage post-dating the revolt, with the possible exception of a 'hoard' from Mattishall (Appx V.5.10) which closed with a single Denarius of Trajan from AD 114-17. The remaining 37 coins in the hoard are typical of a revolt-period hoard. Unfortunately the Denarius of Trajan cannot

be definitively linked to the other coins, and it could be a later stray. The absence of hoard evidence does not prove that Icenian coinage ceased to be used after the revolt, as Icenian hoarding was generally intermittent. However, I strongly suspect that after the revolt Icenian coinage either ceased to circulate, or its use was extremely restricted.

### 6.5.3 Relative chronology

In the absence of a die-study it is common to assess relative chronology for types in a hoard by assessing circulation wear and assuming that the most worn is the oldest; this has often been attempted for Icenian late hoards. I have examined the coins in the Lakenheath and Field Baulk hoards for this purpose, but found practically no signs of circulation wear. However many were struck from worn dies or were the result of weak strikes which left areas of the flan without an impression. The majority of the Late Face Horse, Anted, Ecen and Boar Horse C coinage in the two hoards show the residue of striking lustre (*stempelglanz*) indicating that the coins themselves were not worn. The Lakenheath coins had been lightly cleaned with a dilute acid, but this had not removed the lustre, which could also be seen below the oxidization on a few of the coins that were not cleaned.

The absence of circulation wear is supported by the following review of coins from the two longest continuous sequences of late Icenian coinage with a clearly defined chronology: Anted die-group 1 and Ecen die-group 1. Each die-group was divided into three chronologically ordered

subsets. Thus Anted 1 is known to be the earliest batch in Anted die-group 1, and Ecen 3 the last in Ecen die-group 1. Table 6.18 shows the mean weight for all known late hoard coins within each sequence (coins weighing less than a gram were excluded as they are likely to be damaged). The analysis implies that the earliest coins in these sequences had not suffered greater circulation wear than later coins. This evidence and the presence of striking lustre indicate that the late types included within the Boudican revolt hoards had not been subjected to coin circulation in any contemporary sense of the word.

In view of these results, the logical next step was to assess whether the hoard coins were less worn than casual losses. During the course of the die-study I realised that circulation wear was not commonly seen, so I examined as many specimens of coins for wear, thought to be casual losses, as were readily available from private collections. This resulted in my looking at approximately 250 specimens – none of which showed obvious circulation wear. Previous reports about Icenian coinage, particularly from hoards, often report wear from usage. This study has found that such reports usually relate to die wear.

Despite the lack of circulation wear the hoards provide an invaluable resource for assessing the relative chronology of much of the Icenian coinage using CPD or CPRD calculations. These statistics are discussed in Appendix VII

*Table 6.18 Average weight of coin sequences from the late hoards*

<i>Subset</i>	<i>Dies used as basis of subset</i>	<i>Number of coins in late hoards</i>	<i>Average weight (grams)</i>
Anted 1	A&B	60	1.197
Anted 2	C–F	121	1.201
Anted 3	H–L	199	1.190
Ecen 1	A–F	147	1.225
Ecen 2	G–M	256	1.211
Ecen 3	N–R	313	1.229

and work upon the reasonable, although not infallible, assumption that the content of a hoard is biased towards the most 'recently' minted coinage, which should thus have the highest CPD and CPRD numbers in the hoard. The unusual combination of hoards which postdate production, and the definitive relative chronology for several types of coinage provided by the die-study, enabled hypothetical and actual chronologies to be compared. Thus there was an opportunity to test the effectiveness of CPD and CPRD statistics in relation to these hoards.

I looked at three sequences with clear internal relative chronology: the two used in Table 6.18 and Ece B die-group 1. I was unable to use the large Late Face Horse die-group 19, as its internal chronology is not clear. Coins from the Bowl hoard were excluded as the sample may be biased. Table 6.19 shows that CPD and CPRD are accurate indicators of relative chronology; in all three examples the dies known to be the earliest have the lowest number of coins per die in the hoards. In the Ecen sequence there is an average of 8.4 examples of each early die, which increases to an average of 23.5 examples of each of the final dies in the sequence. A potential anomaly in the table is that there are fewer examples per die for the final batch of Anted Units than there are for the middle batch. This is because several of the last Anted reverse dies are rare: dies 21, 22, 25 and 26 are known from a total of only 18 examples. Production of die-group 1 of the Anted Unit probably ceased before these final dies had been used at normal production levels.

It is harder to prove that the CPD and CPRD calculations give such an accurate indication of relative chronology when comparing different types of Unit. One indication that they are reliable for this purpose is the similarity between the results for the earlier dies of both Anted and Ecen. I noted this in early attempts at these calculations, prior to which I had assumed that Anted pre-dated Ecen. The accuracy of the calculations became clear when I subsequently discovered two die links between Anted and Ecen. These are discussed in 3.4 and prove parallel production of the central sections of the main die-group of each type.

*Table 6.19 Statistics in respect of chronological subsets of Units*

<i>Subset</i>	<i>Dies used as basis of subset</i>	<i>Coins in late hoards</i>	<i>Obverse dies</i>	<i>Reverse dies</i>	<i>CPD</i>	<i>CPRD</i>
Anted 1	A & B	46	2	6.5	10.8	7.1
Anted 2	C–F	93	4	7	16.9	13.3
Anted 3	H–L	119	4	12.5	14.4	9.5
Ecen 1	A–F	105	6	12.5	11.4	8.4
Ecen 2	G–M	188	6	10.5	22.8	17.9
Ecen 3	N–R	188	5	8	28.9	23.5
EceB 1	A–C	55	3	6	12.2	9.2
EceB 2	D & E	112	2	8	22.4	14.0

A number of important conclusions can be drawn from Table 6.19 in light of the known chronology of dies for both Anted and Ecen and the Anted/Ecen die links:

- CPD and CPRD statistics provide a good indication of relative chronology, not just within a type, but also between similar types.
- The results vary significantly in accordance with proven chronological sequences, which implies that the types tested were produced steadily over an extended period. If they had been produced in a short burst of activity there would have been little difference between the relative presence of early and late dies in each sequence.
- The results indicate that coinage gradually entered a revolving pool of coinage and that the late hoards are made up of coinage extracted from that pool at a single point in time (although such a pool of coinage does not have to have been coinage in general circulation).
- The results are not consistent with the hoards being composed of large batches of coinage production periodically withheld from general circulation. In such a case there would be large numbers of coins of some of the earlier dies.

Whilst this evidence suggests that CPD and CPRD give a reliable indication of relative chronology, they need to be treated with caution. There is a risk of distortion, as the amount of coinage which a die can produce varies considerably. Some obverse dies continued to be used despite severe damage and a few until they were almost uniface. Distortion can also be caused by differing patterns of production with some types, such as Ece A, being minted in a single sequence probably from a single site, and others, such as Late Face Horse, having multiple die-groups probably representing production from many different sites. In the latter case dies are less likely to be used to the maximum extent, and thus their average output per die is likely to be lower than for types produced at a single site. Such distortion can be eradicated, to some extent, by comparing major die-groups of types, rather than types as a whole.

Table 6.20 shows CPD and CPRD statistics for the main types of Unit found in the late hoards. In theory, those with the highest results are likely to have been minted closest to the date of deposition of the hoards. Die-groups within a type comprising at least 100 known coins are also shown in addition to the type as a whole. Above the table are noted examples of unusually high die-usage, which elevate CPD and CPRD results.

The relative chronologies suggested by Table 6.20 are as expected for most types. Ecen, Ece A and Ece B are shown to be very late; Cani Dvoro and Boar Horse C are earlier; and Early Pattern Horse (A) and the Saham Toney Unit (STU)

are two of the earliest types to appear in the hoards. I believe that the Late Face Horse type continued later than is suggested by the statistics, which are depressed by the more dispersed organisation of production within Mint B. Late Face Horse was a large, complicated type which was struck using more dies than any other Icenian type, and probably produced over a longer period than other late types.

The Aesv and Saenv coinage has usually been thought to postdate Ece B, and to be one of the final Icenian issues (Hobbs 1996, 30; Van Arsdell 1989, 211–12). The CPD and CPRD statistics are ambiguous, suggesting that they postdate die-group 1 of Ece B, but pre-date die-group 2, although the latter may be distorted by high die usage. A further review of these Mint C types shows that, pro rata to coins in the late hoards, casual losses were higher for Aesv and Saenv than for Ece B. This implies that Aesv and Saenv may have had a longer period of circulation than Ece B. On the basis that circulation stopped after the revolt, Aesv and Saenv are thus earlier than Ece B. Such a scenario, or possibly parallel production, is supported by my discovery that the obverse die used to strike all known Aesv and Saenv Units was used in a worn state to strike an Ece B Unit (Figure 3.65).

All the evidence discussed in this section is summarised in Table 6.21 which provides an indicative chronology of the later Icenian Issues. The table shows a cluster of parallel late Issues, with the Boar Horse B, Boar Horse C, Early Pattern Horse (A) and Early Pattern Horse (B) being earlier.

## 6.6 Cessation of Icenian minting

Section 6.5 argued that the late hoards were deposited at the time of the Boudiccan Revolt, but left open the question of when the production of Icenian coinage ceased. There are two finds that provide clues: an Icenian Unit in the Hallaton hoards from Leicestershire and another Unit from a closed context at Fison Way in Thetford. These are discussed below together with a review of relevant data from the revolt-period hoards.

### 6.6.1 The Hallaton hoards

Multiple deposits of mainly Corieltavian coinage were found from 2001 onwards at Hallaton in Leicestershire (Score 2011). The Hallaton coin hoards fall into three groups: the ditch deposits, the helmet deposit and the entranceway deposits, and there is disagreement between Cottam (2006) and Leins (2007; 2011) as to their relative chronology. However, both agree that the latest hoards were deposited prior to the arrival of the Romans in the area.

One of these hoards, 75, contained an Icenian Ece A Unit (Fig. 6.10). The Unit was in a ‘closed’ context in the helmet deposit, which consisted of two hoards that were found with a Roman cavalry helmet. It was struck from

Table 6.20 CPD and CPRD of the major types of Units in the late hoards. High usage per obverse die: Aesv/Saenv. High usage per die generally: Ece B die-group 2, Anted die-group 2. High usage per reverse die: Anted die-group 6, Boar Horse B (A)

Type	Die-group	Total dies	CPD	CPRD
Ecen	1	48	19.9 (11.4–28.9)	15.4 (8.4–23.5)
	2	9	20.9	15.7
	3	7	21.1	18.5
	4	6	21.7	13.0
	All	84	19.5	14.9
Ece B	1	19	17.5 (12.2–22.4)	11.9 (9.2–14.0)
	2	5	29.6	24.7
	All	29	19.0	13.1
Aesv/Saenv	All	5	23.2	14.5
Ece A	All	18	21.0	17.2
Late Face Horse	5	16	5.9	5.4
	19	32	10.8	10.8
	All	209	5.2	4.8
Anted	1	37	13.9 (10.8–14.4)	9.9 (7.1–13.3)
	2	3	35.3	26.5
	6	12	16.2	32.3
	All	77	14.7	11.8
Cani Dvro	All	4	5.0	3.3
Boar Horse C	All	141	1.4	1.0
Early Pattern Horse (B)	All	33	1.2	1.0
Boar Horse B (A)	All	24	1.0	1.5
Boar Horse B	All	46	1.1	0.8
Early Pattern Horse (A)	All	89	0.1	0.1
STU	All	26	0.2	0.1

Table 6.21 Indicative chronology of Issues during the final periods of Icenian coinage

Possible dating	Phase	Mint A		Mint B	Mint C	Other
AD 5–AD 20	3	Early Boar Horse		Early Pattern Horse (A)	Early Pattern Horse (B)	
		Boar Horse B				
		Boar Horse C				
AD 20–AD 43/60	4	Anted	Ecen	Late Face Horse	Aesv/Saenv and EceB	EceA

very worn and damaged dies from the middle of the Ece A sequence. The coin itself looks fresh, and shows no obvious signs of circulation wear. Similar examples occur in all of the well-recorded late Icenian hoards, and the measures of relative chronology shown in Table 6.20 indicate that Ece A is one of the final Icenian coinages.

It is clear that the Corieltavian content of the helmet hoards closed prior to the entranceway deposits, as they do not contain the final types of the Corieltauvi which are present, and often plentiful, in the entranceway deposits. These final Corieltavian types, which are not present in the

helmet hoards, include Latison (or Tatisom) and Iisvprav (Cottam 2006, fig. 2; Leins 2007, appx 1). The later Avn Cost ‘issues’ 4 and 5 are also present in many of the entranceway deposits, yet are absent from the helmet deposits which cease at issue 3. There are no published die studies of these coinages, but it is clear from a brief review of Latison that it was a substantial coinage; I noted 12 obverse dies from a sample of 29 coins.

Like Icenian hoards, those from Hallaton also contain Roman coinage, the latest of which is dated to AD 41/42. The few Roman Imperial coins in the entranceway and



Figure 6.10 The Hallaton Ece A from dies D:5

helmet deposits are listed in Table 6.22. They accord with the likelihood that the helmet deposits closed before the entranceway hoards.

The above analysis implies that the helmet deposits were closed some time, probably a few years, prior to the conquest of the Corieltavi. Precise dates for the local conquest are unknown, but it can be assumed to be within a few years of AD 43. The Ece A Unit in hoard 75 must have been minted prior to this date, thus Ece A is likely to have been in production in the period prior to the conquest in East Anglia.

### 6.6.2 Fison Way, Thetford

Excavations at Fison Way in Thetford (Gregory 1991) recovered an Ecen Unit in a stratified deposit, as well as pellet moulds (4.7.1). Fison Way is a complex rectangular site which the excavators saw, at least in the last two of the three phases of its development, as likely to be an Icenian tribal centre largely related to ceremonial or religious practices. The excavators believed that the final demolition of the site took place in the aftermath of the Boudiccan revolt (Gregory 1991, 190). The site was then abandoned for some 200 years. They suggest that phases II and III were compressed into a relatively short period, phase II probably beginning in the AD 40s or 50s and phase III abruptly ending with the revolt.

The Ecen Unit was recovered from a grave in enclosure 25 alongside Early Roman pottery, a slingshot and a fragment of Puddingstone quern. The Unit is relatively early in the Ecen sequence, from obverse die G. The presence of the early Roman pottery in the grave (Gregory 1991, site reference 3097) provided the best dating evidence to place enclosure 25 in phase II. The pellet moulds were found with other metalworking debris around enclosure 23 – some 95% of the moulds in a ditch formed one side of the enclosure. Enclosure 23 is dated to phase II of the site, based upon the presence of early Roman ceramics.

The location of the pellet moulds was thought to provide evidence that the production of Icenian coinage continued after the conquest into the period of the client kingdoms (Gregory 1991, 196), but this conclusion seems somewhat

Table 6.22 Imperial Roman coinage from secure contexts at Hallaton

		Entranceway hoards	Helmet deposits
Augustus	27 BC–AD 14	1	7
Tiberius	AD 14–37	3	4
Gaius		-	-
Claudius	AD 41/42	1	-

tenuous. If the excavators are correct in attributing the abandonment of the site to the aftermath of the revolt, and grave 3097 to the penultimate phase of occupation, then it appears likely that the stratified Ecen Unit was produced some years before the revolt, but does not date it more precisely.

### 6.6.3 Summary, the cessation of minting

The Icenian revolt-period hoards have features which suggest that they were taken from a steadily revolving pool of coinage, which had been produced in an orderly way over an extended period. Hallaton provides important evidence because its hoards contained a late Icenian Unit, an Ece A, in a sealed pre-conquest deposit. Fison Way is less definitive, but yielded an Ecen Unit from a context which appears to have been sealed some years prior to the revolt.

Thus the dating evidence for the cessation of production is somewhat ambiguous. One of the final types, Ece A, was being produced pre-conquest, but the late hoards, deposited at least two decades later, have features of being extracted from a revolving pool of coinage. It is conceivable that production ceased at the date of the conquest in about AD 43 and that the hoards represent a pool of money that had been last enhanced by new production some 18 years previously. This seems unlikely, given that the hoards clearly reflect the internal chronology of later types of Unit (Table 6.19). I think that a more likely scenario is that Icenian coinage production continued after the conquest in a steady, orderly way and that there was no major surge in activity related to the revolt. This would explain the ‘normal’ profile of the late hoards.

If the production of Icenian coinage continued with little interruption after the Roman conquest and then ceased to be used after the Boudiccan revolt, this would account for the presence in the late hoards of certain die-groups of late Units which are extremely rare, if not unknown, as provenanced casual finds. These may be from the final batches of production before the revolt, which never entered general circulation to any significant degree. The best example is die-group 22 of the Late Face Horse Issue, with 44 examples known from the late hoards and only a single provenanced non-ward example; there are also a few small Late Face Horse die-groups with no non-ward provenances.

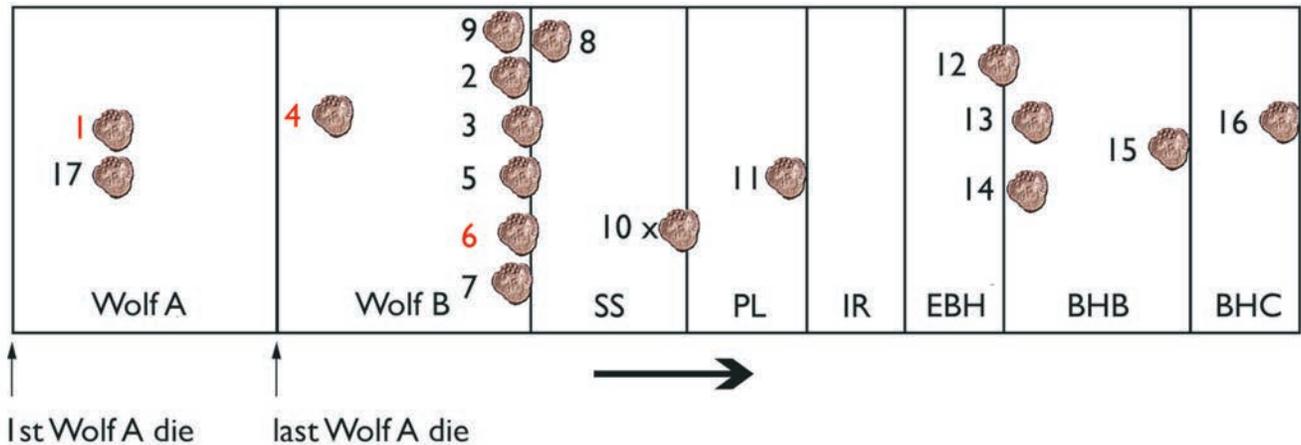


Figure 6.11 Stater hoard 'closing' dies plotted against type and die chronology. The hoards in this figure are: 1. Heacham II; 2. Ashby St Mary; 3. Lochdales; 4. Beccles; 5. Brettenham; 6. Hoard D; 7. Hunstanton II; 8. Heacham; 9. Shernborne B; 10. Shernborne A; 11. Runhall; 12. Hoard A; 13. Freckenham; 14. Sustead; 15. Dallinghoo; 16. Little Saxham; 17. Sculthorpe

### 6.7 Other later hoards

In 2002, the Scavo sub-type of the late local Ale Sca Unit was first seen (3.7). It seems likely that all, or almost all, of the 14 known coins emanate from a single hoard. I have been told by two dealers that the coins were found near Reepham in Norfolk. The single possible exception is allegedly from Watton.

Icenian and Roman coins have been found at Joist Fen, near Lakenheath, Suffolk, from the 1950s onwards (Appx V.5.8). Most have the features of being from a revolt-period hoard, but there are severe doubts about whether the finds come from a single deposit. They are particularly important because they include 11 of the rare late local Esv Prasto Units (3.7). An Esv Prasto Unit was allegedly found attached to a Roman Denarius, which indicates that they may well have formed part of a revolt-period hoard with other Icenian coinage.

### 6.8 Hoarding relative to chronology and minting of coinage

It became apparent during this study that Icenian hoards of coinage frequently closed at similar points in the cycle of coinage and that these correlate to the transition from one coinage type to another. This is illustrated schematically in Figure 6.11 which shows the production and hoarding of Staters. The various types are shown in chronological order from left to right; in the horizontal width allocated to each type I have attempted to reflect the number of dies used for each type. In the case of the Norfolk Wolf B Stater there were several mints issuing in parallel, so the width in that case reflects the largest mint. Each hoard is represented by a coin and is placed approximately where it closes in the chronological sequence of dies. The three hoards numbered in red consist of five or fewer coins, thus the estimated timing of their closure is likely to be less precise. The cross to the left of hoard 10, Shernborne A, represents the first

batch of coins found from this hoard. It is possible that these two batches were deposited separately. As discussed earlier in this chapter, Hunstanton II is assumed to have closed at the end of the early local period.

The largest incidence of Stater hoarding took place around the transition from the early local coinage to the first denominational Issue. This transition was marked by major changes in iconography from the Norfolk Wolf B Staters to the less ornate Snettisham Issue; it also saw the re-establishment of heavier, finer gold Staters after the debasement of the later Norfolk Wolf B Staters. There may have been an earlier horizon of hoarding at the end of the production of die-group 1 of the Norfolk Wolf A Stater, which was marked by a reduction in weight and probably gold content. Sculthorpe and probably Heacham II closed at this point.

All hoards of denominational period gold closed at, or near to, the transition from one type to another. Three hoards coincide approximately with the change from the Early Boar Horse coinage to Boar Horse B. This latter change saw a significant evolution in iconography with the transition to back-to-back crescents on the gold coinages of Mint A, and probably on the coinage of the other mints at about the same time.

Hoards of silver coinage are extremely rare with the exception of those dating from the Boudiccan revolt. Figure 6.12 plots hoards of Units against chronology. On this figure it is not possible to adjust the horizontal width of each band to reflect the number of dies, as many types overlapped and even within types different die-groups were sometimes minted in parallel.

Figure 6.12 shows that almost all well-recorded Icenian hoards of silver coinage postdate the production of Units, and there are many less well-recorded hoards that were also deposited at the same time. The only other hoarding horizon which may be postulated seems to date from late in the period when Bury A and Bury C were in production. Chronology

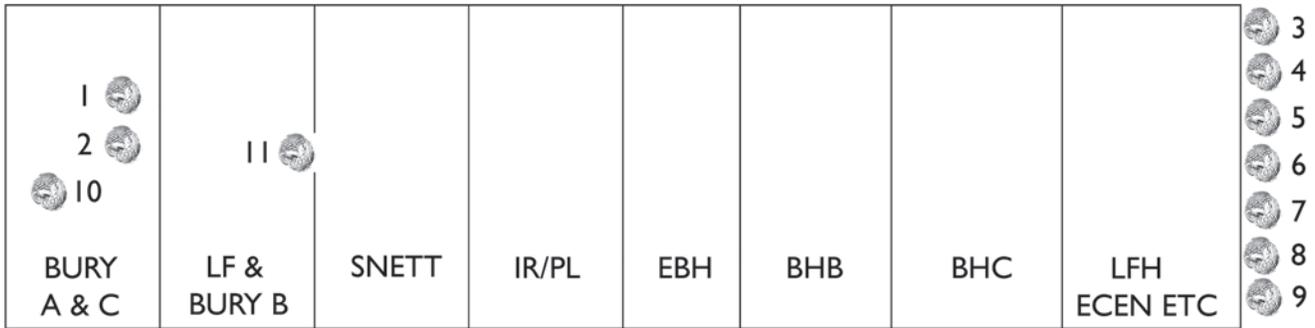


Figure 6.12 Hoards of silver Units with 'closing' dies plotted against type and die chronology. The hoards in this figure are: 1. Barham; 2. Nettlestead; 3. Field Baulk; 4. Lakenheath; 5. Fring; 6. Honingham; 7. Eriswell; 8. Bowl Hoard; 9. Forncett St Peter; 10. Sculthorpe; 11. Hunstanton II

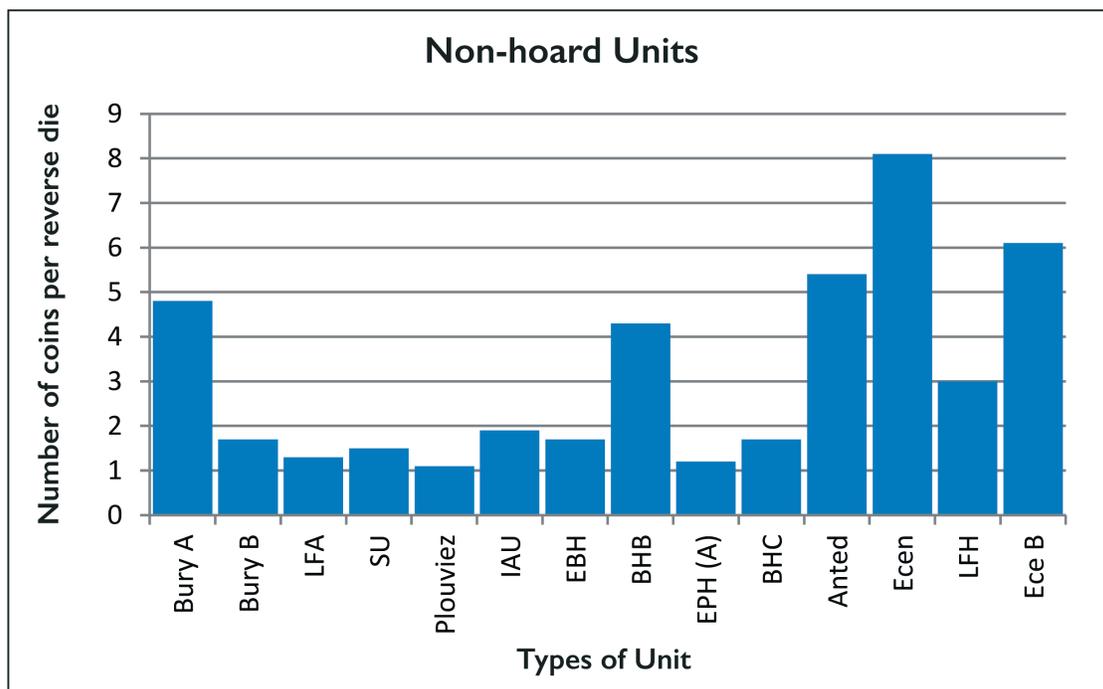


Figure 6.13 Coins per reverse die for non-hoard Units

is harder to assess in the early types, but Sculthorpe and Barham were probably deposited early and late, respectively, in the Bury C sequence and Nettlestead is likely to be late in Bury A. Hunstanton II included a full range of Large Flan C Units and appears likely to have closed at the end of the type. Suspicions regarding other alleged components of the hoard are discussed in Appendix V.1.2.

Both Figures 6.11 and 6.12 indicate that major episodes of hoarding were intermittent, but there have been many undeclared hoards and there are sure to be many hoards yet to be discovered. In an attempt to assess whether undeclared hoards change the picture, I have analysed coins recorded at the Celtic Coin Index without a provenance, many of which will have emanated from undisclosed hoards. Figure 6.13 examines whether undisclosed hoards affect particular periods of coinage by calculating the number of unprovenanced coins

for each of the main types of Unit and dividing the result by the number of known reverse dies for the type; this eradicates distortion caused by the differing scale of the coinages.

Figure 6.13 has similarities to Figure 6.12 in that the results for Bury A and most late Units have the highest CPRD; it conveys the impression that there are indeed additional undisclosed hoards that contained these types. The result for the Boar Horse B Unit is also elevated, raising the tantalising possibility that there may have been Unit hoards relating to the same period as the Dallinghoo hoard (Fig. 6.11). The table confirms the likely absence of hoards containing Early Pattern Horse (A) and Boar Horse C types. The level of un-provenanced recoveries of Late Face Horse Units per die is higher than most of the earlier coinages, but much lower than other late types. This result reflects other anomalies surrounding this coinage, and probably

Table 6.23 The Icenian denominational mix from sites and hoards

	<i>Brettenham</i>	<i>Saham Toney</i>	<i>Site X</i>	<i>Fincham</i>	<i>Late hoards</i>
Unit	66%	75%	73%	94%	100%
Half Unit	16%	16%	22%	1%	0%
Stater	5%	4%	0%	3%	0%
Quarter	13%	4%	4%	2%	0%

results from the type starting earlier than other late Units and being produced in many small die-groups, some at low production volume.

### 6.9 Site finds compared to hoards

Icenian coinage has been recovered from numerous locations in East Anglia, but there are few sites where there are reliable records of sufficient coins, which are not associated with hoards, to enable statistical analysis to be undertaken. Sites that meet these criteria are:

- *Brettenham* (53 coins) – dispersed Late Iron Age settlement site between Thetford and *Brettenham* (Davies 2008, 124–25).
- *Saham Toney* (383 coins) – a major Late Iron Age site which has never been thoroughly investigated but which has been extensively detected and fieldwalked, with Icenian and other material found over a wide area (Brown 1986). The records include the recent addition of 101 Late Iron Age coins representing an individual detectorist's finds from the site over an extended number of years.
- *Site X* (57 coins) – a site close to, and perhaps forming part of, *Saham Toney*. It has been searched by two detectorists on a consistent basis over at least 20 years and the coins represent all relevant recoveries of one of the two.
- *Fincham* (307 coins) – a prolific site actively detected over a long period, the detectorist having a good relationship with Norwich Castle Museum. It is thought by John Davies (pers. comm.) that this is a votive/ritual site. Philip de Jersey found reports of a total of 343 coins (PdeJ 180), but there are no detailed records of the additional coins.

Table 6.23 shows the denominational mix of coins from the sites and from the late hoards. It reveals that the hoards and *Fincham* are similar and that there is similarity between the other three sites. The similarity between *Fincham* and the late hoards supports the suspicion of John Davies that the *Fincham* recoveries are probably from a votive deposit.

All Icenian coins found in the five late hoards (examined in 6.5) were Units, with the single exception of an Anted Stater in *Lakenheath*, which also contained two Staters of

*Cunobelin*. Table 6.23 supports the idea that one of the functions of the Unit was associated with hoarding and ritual deposition, although in earlier periods it was the Stater that was usually hoarded (6.4). Half Units, on the other hand, are extremely rare in the late hoards, and there were none in the five well-recorded hoards presented in section 6.5. They are also rare at *Fincham*. This contrasts with the significant proportion of recoveries they comprise from the other sites and indicates that they were not associated with a depositional or ritual function.

The differences between the sites that appear to have more connection with the day-to-day issues of living – referred to hereon as 'everyday' sites – and *Fincham* and the late hoards is further illustrated in Figure 6.14. This plots the ratios of plated to official coins, non-Icenian bronze to Icenian Units, and Half Units to Units, with the former in each case being expressed as a percentage of the latter.

Figure 6.14 clearly illustrates that bronze coins and Half Units are features of 'everyday' sites and not selected deposits. The bronze coins are usually from the North Thames, but include those from other regions and the continent. Bronze coinage distribution has been examined in the south-east of England by Collis (1971, 79), who considered it to be absent from the countryside, and Haselgrove (1987, 106–14), who identified a clustered pattern of distribution close to what would be expected of 'primitive money and early cash'. This clustering in the south-east is probably similar to the distribution of bronze coins on these coin generating sites in East Anglia, which do not appear to be primarily votive.

Figure 6.14 also indicates that plated coinage – which represent forgeries of official coins – is a feature of 'everyday' sites and less so for 'ritual' sites and hoards. This result is to be expected if coinage was used for trading purposes, which would have taken place on these 'non-ritual' sites.

Bronze coins are the largest element of the finds of 'foreign' coinage on these Icenian sites, as can be seen from Table 6.24 which shows the numbers of non-Icenian coinage finds. It is likely that the occurrence of bronze coinage is underestimated in the analysis. They are usually found in poor condition and are not valuable or prized by metal detectorists; they are thus less likely to be recorded than silver or gold coins. This is illustrated in the case of *Saham Toney* where, through the meticulous recording of Robin Brown (1986, 51–53) whilst fieldwalking and metal

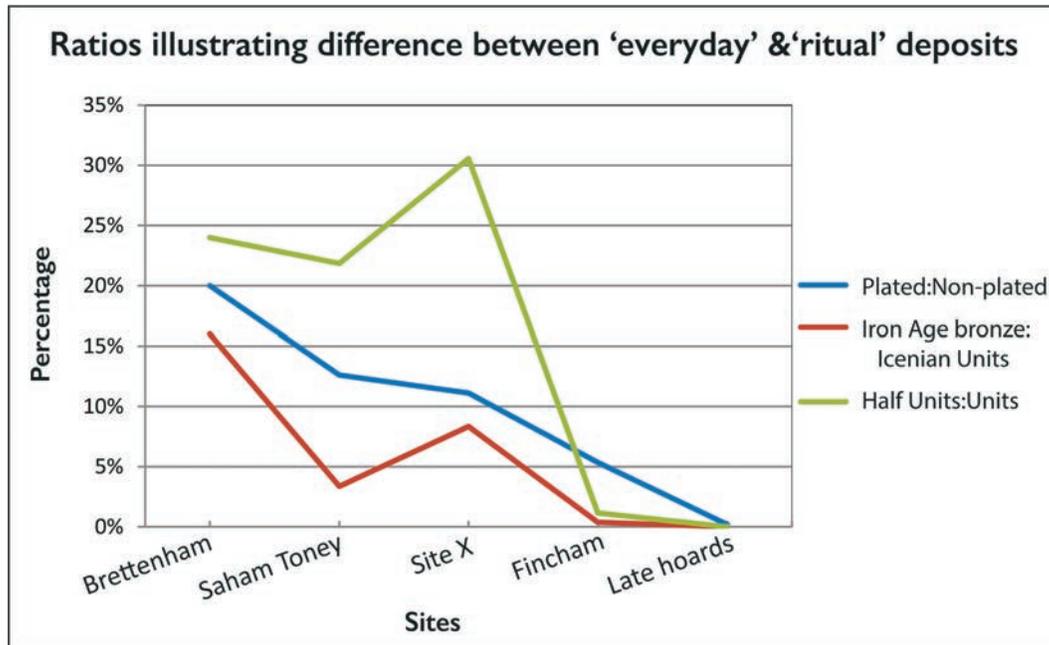


Figure 6.14 Finds of Half Units and bronze coins expressed as a percentage of Unit finds, and Plated coins as a percentage of Non-plated finds, for various sites and the late hoards

Table 6.24 Non-Icenian Iron Age coinage from selected Icenian sites

	Brettenham	Saham Toney	Site X	Fincham	Late hoards	Total
Bronze	4	8	3	1	0	16
Potin	0	3	0	0	0	3
Silver	2	8	2	2	0	14
Gold	1	3	0	3	2	9
Plated	0	4	0	0	0	4
<i>Total</i>	7	26	5	6	2	46

Table 6.25 Age profile of Units found at sites and in hoards with hypothetical profiles based on die numbers

Period	Brettenham	Saham Toney	Site X	Fincham	Late hoards	<i>Esty</i>	<i>Weighted</i>
Early local	8%	8%	3%	11%	0%	19%	14%
First denominational	28%	11%	14%	9%	0%	11%	8%
Mid-denominational	16%	28%	22%	22%	5%	31%	23%
Late denominational	48%	53%	61%	58%	95%	38%	55%
<i>Total</i>	100%	100%	100%	100%	100%	100%	100%

detecting, seven bronze Units were recorded alongside the 65 Icenian coins that he found. Icenian records for the site now total 354, but only one additional bronze Unit and three Potins have been recorded, suggesting that finds of bronze coinage have not been recorded.

The dating of the coins in site assemblages are shown in Table 6.25 alongside the dating of those in the late hoards discussed in 6.5.1. As expected, the dating of the late hoards

is generally later than the site finds, although the latter also have a bias towards later material. The relative absence of early coinage is noticeable on all sites, but seems unlikely to be solely caused by less production in earlier periods. The column in red marked 'Esty' shows the hypothetical proportion of dies used in each period, based upon the Esty formulae (4.2). The actual finds from the late denominational period are much higher than if they were driven by die

numbers alone, presumably because they contain dispersed hoards and coinage lost or abandoned during the turmoil of the Boudiccan revolt. The final column seeks to compensate for this and to normalise the other periods in relative terms by doubling the weighting of dies from the final period.

The results of the weighted model of distribution become much closer to the level of site finds for the final two periods, but higher than the proportion of actual finds in the early local period. Finds from the first denominational period are higher than is suggested by the weighted die numbers, with Brettenham having over three times the expected level, but this is based on a small sample.

This 'broad brush' experiment indicates that Icenian coinage that relates to the final period of coinage found on conjecturally 'everyday' sites include coins from dispersed hoards or other losses from the revolt-period. It also indicates that finds relating to the early local period are significantly lower than would be expected if they were

calculated pro rata to the number of dies used. It may be that the under-representation of early coinage is simply due to lower production volumes per die, but I feel a more likely explanation is that it reflects a change in the nature and usage of the coinage towards the end of the early local period and the subsequent adoption of a more monetary society.

### 6.10 The results from the large-scale mapping of the distribution of casual losses

In this section I examine the macro-distribution of the coinage. The distribution by type and, in some cases, die-group were examined in Chapters 2 and 3; these revealed many examples of sub-regional distribution for small types or die-groups of larger types. Most major types overall had a broadly similar pattern of distribution throughout Norfolk and North Suffolk. A consolidation of all non-hoard Icenian coinage is shown in the map in Figure 6.15,

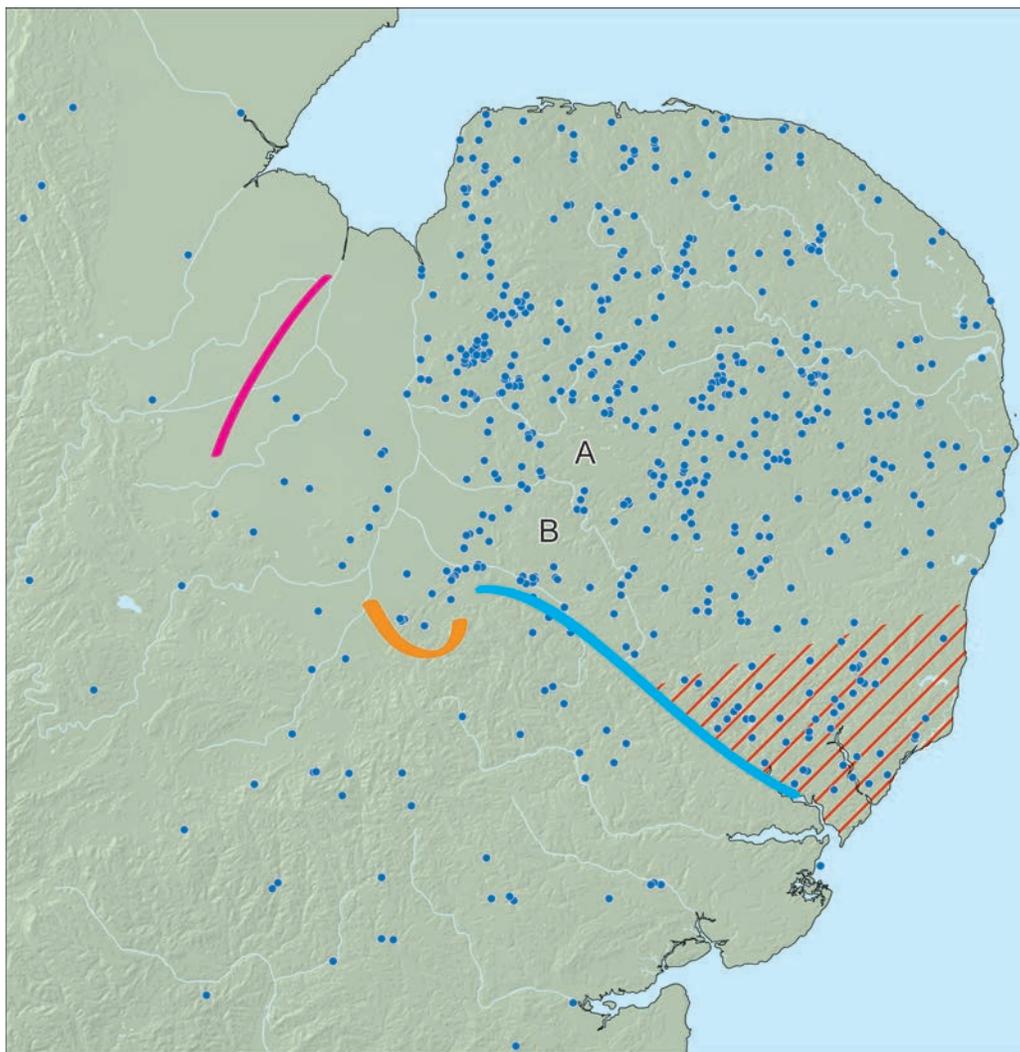


Figure 6.15 All provenanced non-hoard Icenian coin finds with coloured lines showing approximate boundaries of Icenian coin usage and areas of modern forest not metal detected (A and B)

which reveals the key areas of concentration. The areas without findspots, marked 'A' and 'B' on the map, are large areas of Forestry Commission plantations in Breckland where metal detecting is prohibited (Statutory Instrument 1982, No 648).

The map shows Icenian coin usage throughout Norfolk, north and central Suffolk and the eastern fens. The eastern boundary is in the fens to the west of Stonea (marked by a pink line), and the southern border of Icenian coinage appears to follow the Gipping and Lark corridor in central Suffolk (marked in blue), although it extends along the fen edge to the south of Mildenhall (marked in orange). The valleys of the Gipping and Lark almost form a continuum, and cultural differences between the north and the south of this valley continue into modern times (Williamson 2006, 28–30). As discussed below, Leins' (2012) work shows that the south-eastern corner of this area (hatched in red) is an area of overlap with North Thames coinage.

Figure 6.16 shows all coin finds overlaid on a map produced by Fraser Sturt (the dataset for which is discussed in Sturt *et al.* 2013) that shows the coastline at c. 2000 BP / c. AD 50. The map relates to the end of the time period included in his study and omits the build-up of peat that was taking place in the fens (Sturt pers. comm.). Nonetheless, the map clearly illustrates coinage distribution following the mineral soil at the fen edge and the fen-islands around and to the south of Stonea. This fen edge distribution probably reflects the use of solid mineral soil for settlement by

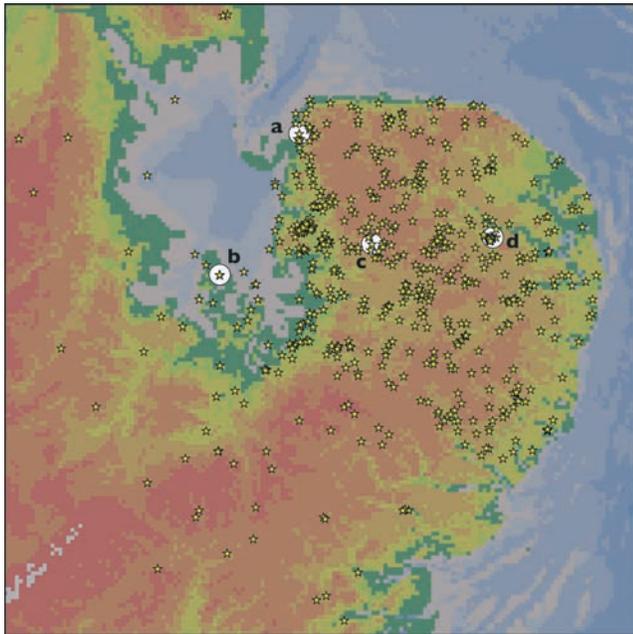


Figure 6.16 East Anglia in 2000 BP / c. AD 50 (© Dr Fraser Sturt) with finds of Icenian coinage in gold and the sites: a) Snettisham; b) Stonea; c) Saham Toney; d) Caister St Edmunds

the population who were exploiting the extensive natural resources of the undrained fenland. Figure 6.17 shows all recorded locations where Icenian coinage has been found in the United Kingdom, excluding coinage hoards and plated coins. The map confirms the coinages restricted East Anglian distribution and the limited number of finds in other regions.

Leins (2012, ch 4) conducted a study of the distribution patterns of the British Late Iron Age regional coinages and produced maps for each region showing the density of distribution. The regional coinages generally have clearly defined patterns of distribution, but there are areas of overlap. He found that North-Eastern coinage was found in East Anglia, mainly around the fen edge, but little seemed to move in the opposite direction. The North Thames coinage was also found on the fen edge, and its bronze is often found on Icenian sites (6.9). His maps show a defined boundary between the two coinages on the south-eastern border of East Anglia, with the exception of a significant area of cross-over in Suffolk in the Baylham/Coddenham area (Combetovium). This is shown in the extracts from Leins' maps in Figure 6.18.

Leins' work suggests that this overlap took place in all periods of Late Iron Age coinage production. The county archaeologist for Suffolk has argued that, when looking at whether sites in this area were culturally Icenian or Aylesford Swarling, 'you can't draw lines on a map' (J. Plouviez pers. comm.). The penetration of North Thames and North-Eastern coinage into the west of the region and the Saham Toney area are interesting but do not disturb the overwhelming dominance of Icenian coinage in these areas. The area around Baylham appears to be different, and neither North Thames nor Icenian coinage appear to have clear dominance. It is possible that the area was occupied by a social grouping with strong links to both regions.

I have compared the distribution of the early silver Units, Bury A, B and C, to that of the final types, Ecen, Anted and Late Face Horse (Figs 6.19). These maps reveal that there were no major changes in the pattern of distribution of silver coinage during the course of its hundred years or so of production. At all times there was a strong distribution around Breckland in the south-west of the region, in Suffolk, to the south and south-east of Coddenham, and along the fen edge south from Snettisham to Breckland, although finds here become much denser in the final period of coin production.

In all periods gold coinages appear to have a different distribution to silver. Gold is not concentrated on the fen edge, but is more generally spread over Norfolk, the Waveney valley and north-west Suffolk. There is proportionately more gold than silver found in eastern and north-eastern Norfolk, but the reverse is the case in mid-Suffolk. This pattern is clear in the finds of the first

denominational coinages (Snettisham to Early Boar Horse) shown in Figure 6.20.

Although there is a consistent overall difference between silver and gold, greater variation can often be seen between particular denominations of specific Issues. Examples include the Snettisham Issue, where the Quarter is focussed to the east of the Stater and Unit (Fig. 3.14), and the Boar Horse B Issue, where the differences are greatest between the Half Unit and the Quarter Stater (Fig. 3.25).

In later Issues, as gold ceased to be used to any significant extent, Units became more widely dispersed, but Half Unit distribution was still restricted (Fig. 6.21).

The differing distribution of Late Iron Age gold and silver coinages was noted by Leins (2012, 167–68) for several British Issues, including the Dubunnic coinage of Eisv. Haselgrove (1987) noted similar differences in the pattern

of distribution of south-eastern coinage of different metals. He found gold to be more evenly distributed and bronze more clustered, with silver in between the two (Haselgrove 1987, 66–68, 106–14).

It is clear that within an Issue the distribution of coins struck from gold varies from those struck from silver, and the two denominations of silver are likely to have different distributions from each other, as are probably the two denominations in gold. These differences occur even if the various denominations appear to have been struck at the same site. Haselgrove (1987) saw the clustering of bronze as evidence of an early market use for the low value coinages. In an analysis that does not necessarily contradict this, Leins (2012, 169) speculated that such differences might relate to different mechanisms through which gold and silver travelled and different relationships between issuers and recipients. My findings

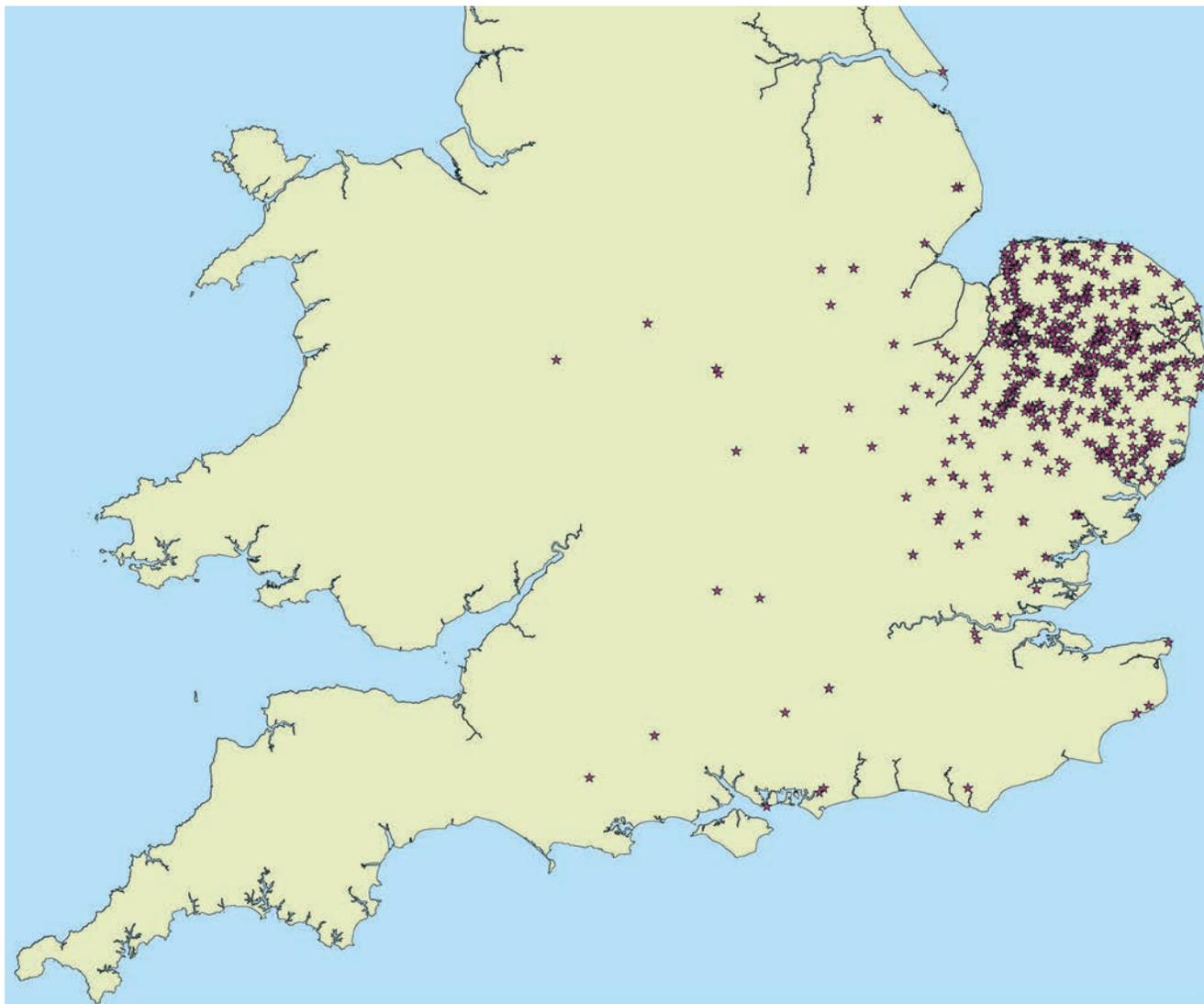


Figure 6.17 All recorded UK finds of Icenian coinage

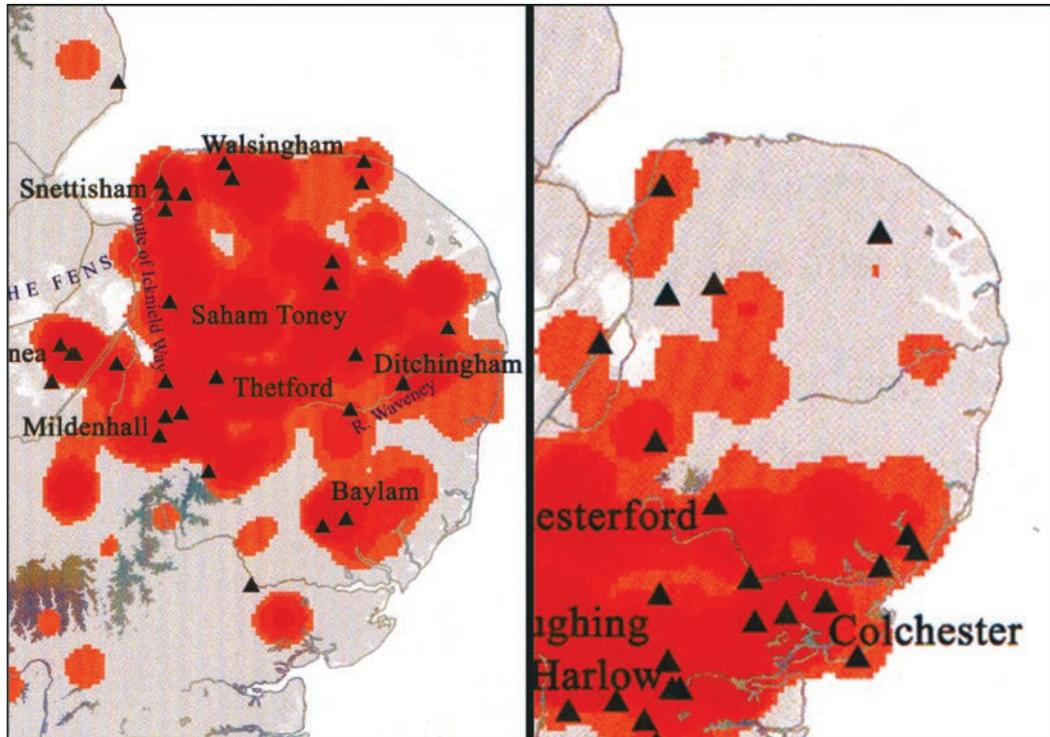


Figure 6.18 Overlap of East Anglian and Eastern Late Iron Age coinage distribution (© Ian Leins)

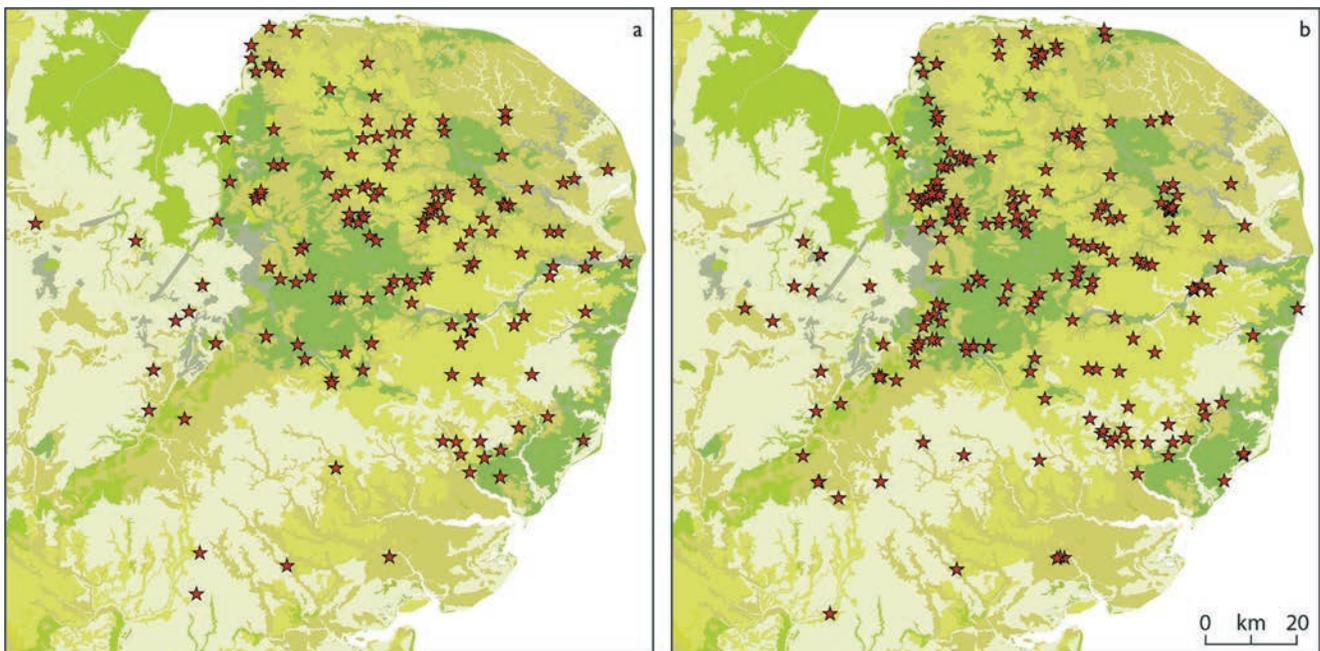


Figure 6.19 Comparison between distribution of: a) Bury Units; b) Ecen, Anted and Late Face Horse Units

for East Anglia are similar to those of Haselgrove and Leins and indicate to me that lower denominations predominantly had a local usage, whereas gold was much more widespread.

### 6.11 The location of coinage within the landscape

This book does not include a study of the location of coinage finds within the landscape. Hutcheson (2004) examined the location of Late Iron Age coinage hoards as part of her study

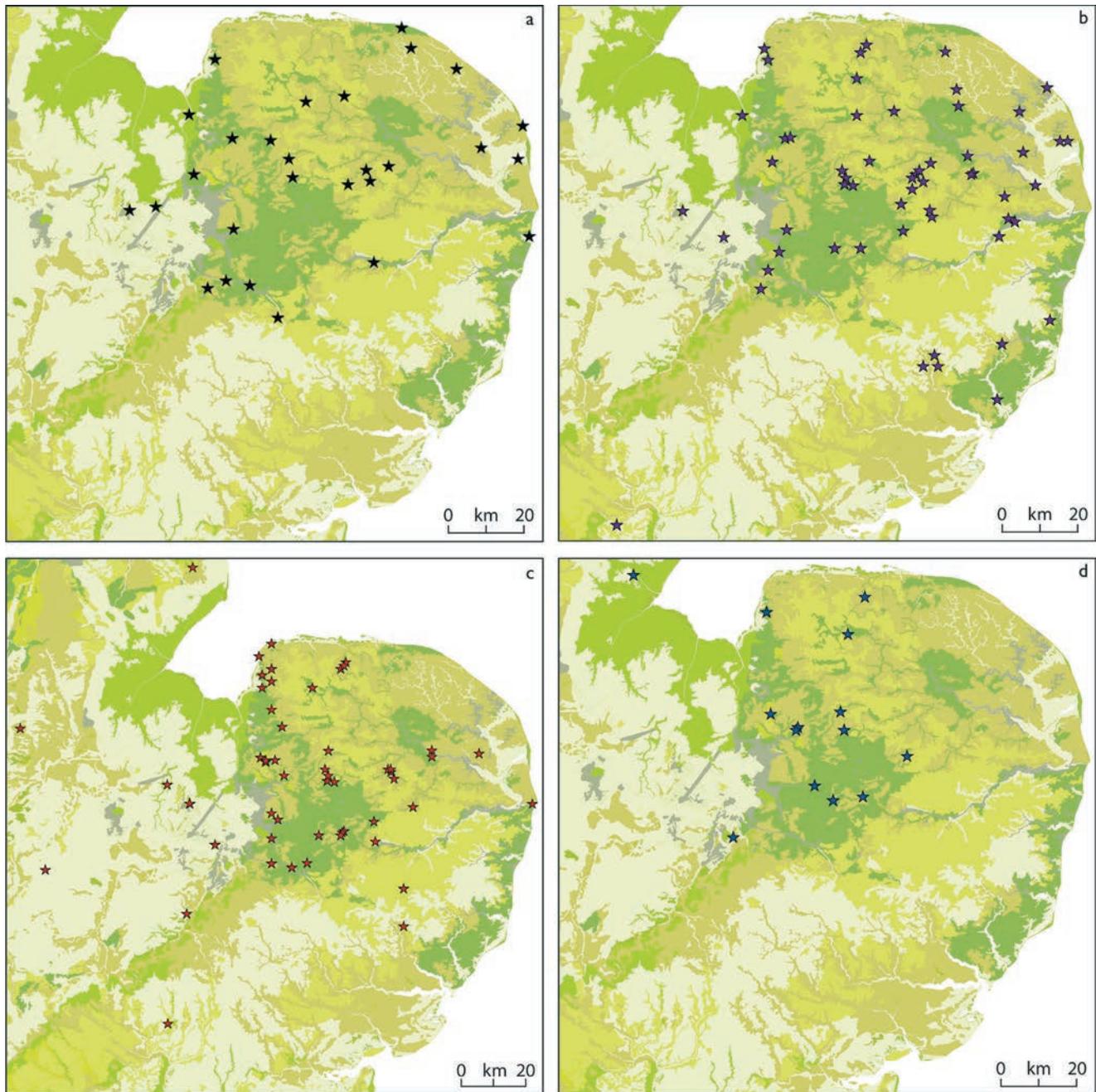


Figure 6.20 Distribution in the first denominational period from Mint group A: a) Staters; b) Quarter Staters; c) Units; d) Fractional Units

of metalwork in Norfolk which also included torcs and horse equipment. She concluded that the deposition of hoards in the landscape was an ongoing and potentially votive practice (Hutcheson 2004, 95) and that there were a range of places in the landscape that were suitable for deposition. Preferred places may have changed with time. The earlier coinage hoards appeared to be in more remote sites, but the later revolt hoards were more frequently found in proximity to other Late Iron Age material and settlements. Her work revealed no clear

preferred type of location – many hoards were close to water, others were on high spots, and a few were close to known routeways. Interestingly, none of the hoards that she examined were close to earlier monuments in the landscape (Hutcheson 2004, 49–59). Fraser Hunter (1997) also found that hoards were deposited in a variety of site types in his study of Late Iron Age hoarding in northern Britain and Scotland.

Chadburn (2006) re-examined the distribution of Late Iron Age hoards in the entire region. She noted that most

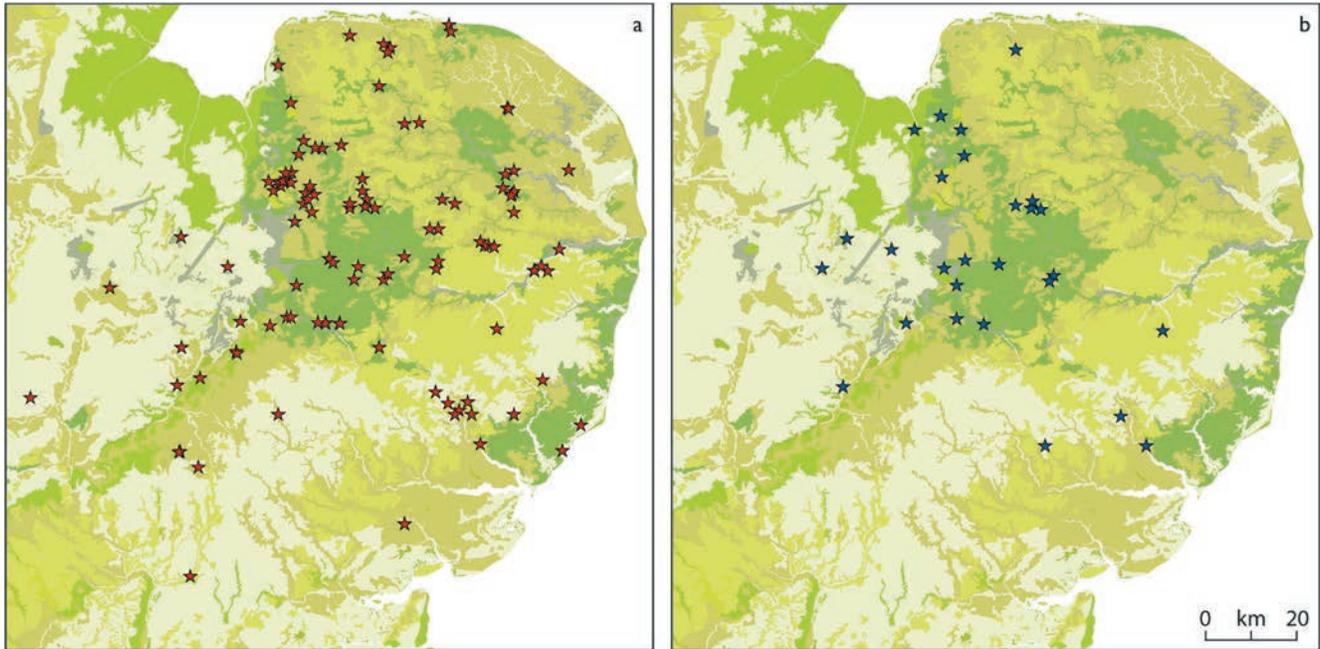


Figure 6.21 Distribution of the Ecen Issue: a) Unit; b) Half Unit

hoards were within a kilometre or two of major rivers and others close to minor rivers. However, she also noted that many hoards were buried relatively near to settlements which in turn were, unsurprisingly, close to rivers (Chadburn 2006, 330–58). She observed that few hoards were found on land over 50m above sea level or were truly coastal (Chadburn 2006, 339–40).

## 6.12 Summary

The finds from Ken Hill, Snettisham and nearby Shernborne, appear to comprise a number of separate deposits. Some of these were already known as hoards, but I have identified other likely groupings. Snettisham was a special and important site during the Late Iron Age. Periodic hoarding on Ken Hill was a practice that continued from the deposition of torcs and metalwork of the pre-coinage era through to the Boudiccan revolt. It appears that the Icenian coinage deposits found at Shernborne have similar features to those from Ken Hill, but there is no evidence of deposition from the earliest periods of coinage. A feature of both sites is the scarcity of pre-conquest Roman coinage.

Much of this chapter has been devoted to an examination of coin hoards including those found at the Snettisham sites. Hoards of Icenian coinage are shown to be formulaic, most hoards according with the following rules:

- Non-local content is unusual in gold hoards
- Plated coinage is rare
- They are biased towards the most recently minted material

- Silver was rarely hoarded except in the early local period and during the Boudiccan revolt
- Non-Icenian Late Iron Age silver coinage is absent from revolt-period silver hoards, but Roman coinage is often present
- Gold hoards are composed of only Staters and silver hoards of only Units
- Hoards which contain Icenian coinage exclude jewellery and similar valuables
- Icenian coinage in hoards does not have circulation wear.

The few hoards that are different include the poorly recorded Hunstanton II and Shernborne A, both from the Snettisham area, and a very early hoard from Sculthorpe which contained both silver and gold coinage. It is also possible that the vast Bowl Hoard contained gold and non-Icenian coinage, although statistically it appears to have been dominated by late Icenian Units (Appx V.1.1).

The examination of hoards in conjunction with the die-study has resulted in the unexpected finding that coinage hoarding was intermittent and usually coincided with a change from one Issue to another. I have also found that the largest episodes of hoarding coincided with the most radical changes in coinage: the replacement of the early local types of Stater by the first denominational coinage and the more widespread introduction of the back-to-back crescent motif. Thus it seems likely that the circumstances that brought about the change of coinage type also caused the hoards to be deposited.

The study of these hoards has also shed light on relative chronologies, deposition and minting of coinages. The late

hoards of Icenian silver either postdate coinage production, or mark the point at which it ceased. Roman coinage, which is present in a number of hoards, has provided evidence that the late hoards were deposited at the time of the Boudiccan Revolt. This coinage was excluded from hoards until the Boudiccan revolt, despite its probable role as the raw material for the production of early silver (4.4.2).

The uniformity of Icenian coinage in hoards appears to differ from the practise in some other regions; the Hallaton Hoards included both Units and Half Units in an overall ratio of approximately 2:1. The desire for homogeneity in the late hoards may have caused the exclusion of types of Unit, such as *Ali Sca* and *Esv Prasto*, which had a lower target weight than most late Units. Both of these types were probably produced in the two decades before the conquest and, unless deliberately excluded, would have been expected to occur in limited numbers in the hoards.

I have tried to find out the point at which the minting of Icenian coinage ceased, but have found little definitive evidence. The best clue was provided by a Hallaton hoard which showed that *Ece A* was being produced before the conquest. I have inferred from this evidence, and the mix of the late hoards, that Icenian coinage probably continued seamlessly after the conquest until the revolt. The revolt-period hoards have provided much evidence about the relative dating and organisation of the mid- and later coinages.

Comparing the hoard assemblages to those found on other types of sites is also revealing. The finds from a small number of sites where there have been multiple finds of Icenian coinage fall into two types: those where finds of Half Units, plated coinage and non-Icenian bronze are scarce and those where their numbers are high relative to finds of Icenian Units. The likely ritual sites of Ken Hill, Shernborne and Fincham fall into the former category and Saham Toney and others into the latter. These coinage types are largely absent in hoards, with the exception of the plated coinage in the unusual hoard, Hunstanton II.

And the distributions of the coinages further elucidate the contexts and movements of Icenian coinage. Leins has shown that there is generally more penetration of adjacent coinages into East Anglia than vice versa. My own research indicates that, at least in part, this may be caused by the use of North Thames bronze coinage on Icenian sites. The area of distribution of Icenian coinage does not appear to change during the hundred years or of its production.

Different denominations of Icenian coinage have differing patterns of distribution: Half Units are less dispersed than Units and both Staters and Quarter Staters are the most dispersed of all. This is likely to be related to the different uses of the differing denominations. Some late types of Unit, or their die-groups, had predominantly sub-regional distribution patterns. These patterns are not reflected in the late hoards which appear to have broadly the same mix

of Icenian content irrespective of where they are found. Although I have not carried out a study of the location of finds within the landscape, other research has found that hoards are located in a variety of locations. Proximity to water is a feature of many, but not all finds.

### 6.13 Conclusions

In order to make sense of coinage finds I have analysed coins found in multi-coin hoards separately from those found individually or scattered across a location, which I have loosely called casual losses. The division between these two categories is somewhat arbitrary, but has proved useful in practice.

The analysis of multi-coin hoards has generated much new data, leading to the key revelation that hoarding was an intermittent, not a continuous, practice. I have also found that hoards are carefully selected and exclude types of coin that commonly occur as casual losses.

The analysis of casual losses has revealed the sub-regional focus of many types or die-groups of coinage. I have found that the sites thought most likely to be ritual in nature generate similar types of coins to hoards. Other sites yield large numbers of the types of coins which are largely excluded from hoards. This implies that hoards are votive in nature and conversely that many coins found as casual losses are probably not votive deposits.

In analysing hoards I have found that the closure of hoards often coincides with a change of coinage type. This could imply that such hoards are simply the disposal of a redundant medium. I do not believe that this is the case as all of the hoarded coins contain gold or silver and often earlier finer examples, and many hoards also contain a few coins struck from the early dies of the next Issue (Table 6.8), which are clearly not redundant.

Another possible explanation for the link between hoards and new coinage types is that all Stater types were produced in a short burst of activity, followed by an extended gap before the next type was produced. In such circumstances most hoards would then be deposited in the gap between types. This is not the case, as hoards frequently include very early dies of the new type, or omit the last few dies of the old type. This suggests that there was a gradual transition between Issues. The analysis of the Boar Horse B Stater content of the Dallinghoo hoard, and late Units in the revolt hoards, show coinage production was gradual and not in single bursts of activity.

A question commonly asked about hoards is whether they represent an exceptional period of deposition or an exceptional period of failure to recover. It is clearly impossible to know what was deposited and removed in antiquity. What is clear is that the hoards were carefully selected for deposition, and those that remain were those deposited at a time of transition in the coinage. It is

conceivable that there were many other hoards deposited at other times and later removed, with those remaining left for the same reasons that caused the change of coinage type. This scenario is most unlikely, but it would not invalidate the conclusions that can be drawn from the hoards.

Some unusual features of the coinage need to be taken into account. Firstly, circulation wear is hard to find on any Icenian coinage, unlike the Roman coins found in the late hoards which are often much worn. This is despite the Icenian coinage in most hoards being biased towards the most recently minted coinage, suggesting that it comes

from a revolving pool. It seems that Icenian coinage was not commonly transported/used in ways that would cause significant abrasion. Secondly, it is not immediately apparent why Roman silver coinage was thought suitable for inclusion in the revolt period hoards, when other valuables were not, and Roman coinage is not usually found in earlier votive contexts. Finally, it is noteworthy that early local period coinage constitutes a markedly lower proportion of Units found on the sites examined than would be expected based on the number of dies used in their manufacture (6.9).

# Chapter 7

## Conclusions

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### 7.1 Introduction

This final chapter examines some of the main findings of this study of Icenian coinage and draws some overall conclusions. It starts with a review of some of the perceived features of the organisational structure of Late Iron Age society generally and then specifically in East Anglia. I look at how the perception of ancient economies has been changing and how views about the use of Late Iron Age coinage became established following the debates of the 1970s. I then look at more recent developments in thinking about the use of ancient coinage and ideas about how coinage entered circulation. Following this is a summary of the key findings outlined in earlier chapters which pulls all the evidence together in an effort to consider what Icenian coinage was and why it was produced. I will look at whether or not the coinage was produced episodically before considering its likely impact upon short-term exchange cycles and long-term belief systems. I will also comment upon the question of who issued the coinage and endeavour to make some observations on both likely organisational structures in Late Iron Age East Anglia and possible linkages between the coinage and historical events. Finally, I reflect on the relationship between the Icenii and Rome.

Many writers on Late Iron Age tribal society have assumed that this period saw the widespread growth of hierarchical pyramid-shaped organisational structures, typically surmounted by a king, and that this is evidenced by the development of coinage. Interesting alternative organisational structures have been proposed by Hill (2011), who has looked at segmentary societies defined in Africa in the 1940s that largely lack central authority, with power being shared between households, clans or internal segments. Distinctions of status were of minor importance, villages ran their own affairs, and there were relationships and mutual obligations with neighbouring villages; internal conflict was usually resolved by a group splitting.

Hill (2011) identifies many features from the Middle and Late Iron Age archaeological record which suggest that

similar non-triangular organisational models may have been relevant in Britain. These include:

- The lack of settlement hierarchies
- Weak evidence for an elite
- Few luxuries
- The predominance of agriculture, even where there is some other economic specialisation
- Less evidence of martial activity than in other periods
- Emphasis on small societies with extensive social networks.

Hill (2011, 255–57) speculates about the possibility of Councils and Assemblies in such structures to deal with shared resources.

### 7.2 The situation in East Anglia

The form of social and political organisation within Late Iron Age East Anglia is unknown, although there are well-known Roman post-conquest references to the client king Prasutagus, whose death ultimately led to the Boudiccan revolt. Clearly the existence of a post-conquest king does not mean that a similar role existed before the conquest; such a position would have suited the Romans. If it was not there already, they may well have insisted upon its creation in order to facilitate their control of the area.

Many scholars consider British Late Iron Age coinage to be a manifestation of, and evidence for, a hierarchical form of social organisation. Creighton (2000), for example, sees the images of horses and man on Late Iron Age British coins of precious metal as enshrining the concept of the right to rule. He perceives gold coinage in particular as related to torcs and a symbol of kingship (Creighton 2000, 26 and 31).

Based on my study of coinage in East Anglia I am not sure that these interpretations are correct. Before addressing this further it would be worthwhile to look briefly at the history of ancient economies and money and return to the key findings of this study.

### 7.3 Ancient economies and their coinage

For many years the understanding of the nature of ancient economies and coinage was strongly influenced by the work of economic historians Karl Polanyi (1957) and Moses Finley (1973). Polanyi had a very negative view about the importance of market pricing in the ancient world. Whilst he did not deny its existence, he was somewhat extreme in his opinions about the relative unimportance of trade, and of the lack of influence of supply and demand upon pricing. Finley argued along similar lines and was convinced about the absence of sophisticated economic activity in the ancient world. As their work became widely known it became unfashionable to think of coinage as having a monetary role in a market economy.

In recent years there has been a move away from the views of Polanyi and Finley as new research has revealed that ancient economies were active and sophisticated. There is also a growing understanding of the importance of money in some of the ancient economies. There is more awareness of the development of banking in Greece, and possibly Assyria, in the 1st millennium BC, which is indicative of the importance of trade and the desire to generate profit. It is clear that, for the major empires, this trade was facilitated by the use of some form of ‘money’ and by banking at varying levels of sophistication.

In Babylon the money was not coin but silver, which was accurately measured and subject to quality controls (Bedford 2007; Van der Spek 2007). Family firms involved in trade developed into quasi banks, making short-term loans of silver. The Bible makes a number of references to secured lending (e.g. Deuteronomy 24:6; Leviticus 25). Van der Spek (2007, 418) considers the Babylonians to be familiar with paper or clay money, and cites an example whereby the holder was able to exchange a document for a defined sum on presentation (he also refers to two other examples). These may be exceptional, but they clearly suggest a high level of financial sophistication in this large trading empire, which included the Phoenician coastal cities.

It is clear that by the 4th century BC Athens had also developed sophisticated banking organisations. Cohen (1992) identified how the bankers (*trapezai*) extended their roles far beyond money changing to play a key role in the economy and to facilitate trade. He argued that by allowing depositors to use their deposits to support credit guarantees, they effectively increased the money supply without the need for additional silver coinage. Gabrielsen (2005, 156–57) went even further, suggesting a more complex and broader market for the provision of credit that included wealthy individuals, certain sanctuaries and cities themselves.

Not surprisingly it appears that late Republican Rome also had a developed credit market with private entrepreneurs (*publicani*) having close links to the state and becoming the equivalent of banks (Harris 2007, 520). Loans were extremely common and ownership of debt a standard part of

the assets of the wealthy; there is also evidence suggesting the use of paper to settle very large transactions and the trading of debt (Harris 2007, 521–22; Morley 2007, 587).

So far this new research has had little impact upon academic consideration of the purposes of Late Iron Age British coinage, which is still commonly thought to have been used either for military purposes or for forms of prestige gift exchange. The growing body of evidence about the complexity and sophistication of ancient economies includes nothing that can be directly related to East Anglia. However, East Anglia has a long coastline broken by a number of rivers – this lends itself to trade. As the land was ideal for farming, clearly iron and copper were needed. That precious metals were desirable is seen in the torc deposits at Snettisham, and the probable use of Roman Republican Denarii as a raw material for Icenian coinage. Although the inhabitants do not appear to have sought the luxury Roman goods which have left their traces in the archaeological record of the south-east, I believe that it is logical to assume that East Anglia was an active participant in ancient trading patterns.

### 7.4 The use of coinage in Late Iron Age Britain

To ask what was Iron Age coinage would have seemed nonsensical to many earlier numismatists. They considered that it was simply money used, in a modern sense, for market transactions (see Rodwell 1976). They saw its introduction into Britain as being related to invasions from the continent, following the work of Brooke (1933) and Allen (1960).

In the 1970s, Late Iron Age coinage studies in Britain were dramatically impacted by changes which had been taking place in archaeological discourses: the alternative models for economic activity such as redistribution and gift exchange found in tribal societies, the doubts arising from the work of Finley and Polanyi about the existence of ancient economies, and Clark’s (1966) challenge to the invasion hypothesis. These parallel developments were introduced to British Iron Age numismatics by the young archaeologist John Collis (1971), who started the process with a short paper that suggested:

- Numismatists had tried too hard to match the introduction of coinage to invasions or settlement, and the spread of later coinages to political or military activity. He outlined an alternative scenario where coinage simply spread by familiarity from one ‘system’ to another.
- Minting does not have to have been issued by a central territorially-based power structure, there being a number of scenarios for the minting of coinage including ‘uncontrolled’ minting by individuals or small groups in a loose organisational structure.
- With the possible exception of bronze, coinage was not money in a conventional sense (this was strongly influenced by Polanyi).

This paper led to strong exchanges with Rodwell who defended the linkage of coinage to invasions and historical events and coin usage to market type transactions. Rodwell was opposed by Collis (1981), Hodder (1979) and Haselgrove (1979), the latter being particularly influential in a paper, quoting extensively from Polanyi, which argued that silver and gold coinage in Iron Age Britain is consistent with payments and value storage in a pre-existing prestige sphere. However, silver losses on peripheral coin-using area settlement sites, and the use of potin and bronze in the south-east, suggested to Haselgrove (1979, 205–06) that low value coinages were used to buy subsistence goods without there being a fully commercial economy.

After this extended debate it became unfashionable to view Iron Age coinage as money in the modern sense of the word, or to seek to tie issues of Late Iron Age coinage to historical events. These changing perspectives somewhat overshadowed the work of Scheers, whose 1972 paper linked Gallo-Belgic E Staters and other contemporary coinages to the Gallic Wars.

In recent years there have been challenges to the post-1970s orthodoxies, an example being a recent work by Roymans (2012) on continental hoards and the Roman conquest in which he pleads for open-mindedness in relation to historical association. Sills (2003, 330–33) has also argued strongly in support of Scheers' work on Gallic War coinages, pointing out the absence of later Gallo-Belgic E classes from British hoards and hypothesising that this absence is associated with Caesar's invasion of Britain.

Since the arguments of the 1970s there has been no radical change in thinking about British Iron Age coinage. The invasion theories remain unfashionable and there remain strong differences of opinion about whether early coinage production or deposition can be related to historical events. In relation to East Anglian coinage, in addition to uncertainty about the purpose of the coinage, these differences have impacted views about the likely timing of the start of coinage and the likelihood of there being a direct relationship between the late hoards of Icenian coins and the Boudiccan revolt.

Because of the doubts which have been engendered about the presence or otherwise of an ancient economy, and the anthropological study of societies with complex cultures which often involve gift exchange in one form or another, it has generally been thought unlikely that the use of coinage by the tribal societies of Western Europe in the Late Iron Age would have been related to a market driven economy. I am not convinced by these arguments.

### **7.5 Developments in thinking about the early use of coinage**

Outside of Late Iron Age British numismatics there has been ongoing research which needs to be taken into account in assessing the purpose of Icenian coinage.

The first coins seem likely to have been used in Lydia in the 7th century BC and soon spread to the Greek islands and then the mainland. Seaford (2004) argues that the introduction of coinage into Greece led to major changes in society:

- Commodities and assets started to be reckoned, and thought of, in units of account based on the coins.
- It became possible for skilled individuals to accumulate large quantities of money through trade irrespective of birth.
- It began to appear that everything could be bought or sold or at least ascribed a value.
- The gathering of money becoming an objective in itself.

Seaford argues that the introduction of money brought about a move away from the importance of gift, and the old redistributive society changed to a model much more focussed around the individual and the pursuit of money. He suggests that the introduction of money and the consequent ability to attribute a 'number' to practically everything brought about massive change in Greek society including its literature and philosophy.

Bloch and Parry (1989) have carried out a study about how various societies throughout the world deal with their encounter with, in the most part, state-issued currencies. They stress the importance of understanding the culture of each society in order to understand how money is viewed, but show that the systems all make ideological space in which individual acquisition is legitimate or even laudable (Bloch and Parry 1989, 26). They found that the coinage was generally used within what they term the short-term exchange cycle, which is concerned with the arena of individual competition without necessarily producing radical changes to the long-term social or cosmic order. Bloch and Parry (1989, 29) suggest that the idea of a 'great divide' between monetary and pre-monetary society is a form of historical falsification.

Bloch and Parry's (1989, 25) work challenges the notion that non-monetary societies have to have an embedded economic structure which discountenances the individual pursuit of self-gain and accords primacy to collective goals over those of the individual. The work of Seaford and Bloch and Parry are reconcilable as, in the latter's terms, Seaford has noted that the use of coinage in the short-term exchange cycle has brought about change in the operation of the long-term cycle, examples of which are also given by Bloch and Parry. Also, the studies by Bloch and Parry concern societies which are encountering coinage produced elsewhere, whereas by the time coinage is being produced within a society some changes to the long-term cycle are perhaps inevitable.

Many studies about the purpose of ancient coinage focus on how it entered circulation. A common view is that the major reason for the production of ancient coinage was to

meet the expenses of the state and in particular its military commitments (Crawford 1970; Callataÿ 2000). Howgego (1990) concluded that it was unsatisfactory to link all minting to the expenses of the state and suggested other reasons for minting, such as the maintenance of good quality coinage in circulation, facilitation of external trade, and the generation of profit driven by the difference between face value and metal content. Although not always explicit in these studies of Greek or Roman coinage, the authors appear to assume that the coinage will subsequently be used for economic purposes.

Nash (1987, 16–17) concluded that ‘Celtic’ familiarity with coinage derived from the payment of gold coins to Celtic mercenaries in Macedon, Syracuse and elsewhere. These were the prototypes for the continental Celtic gold coinages; she assumed that the use of coinage spread amongst the Celts primarily in the context of their own military relationships (1987, 16). Nash (1987, 17) observed that these peoples only struck their own coinage when deprived of the supply of gold as payment for mercenaries. Sills (2003, 3) went further by concluding that ‘Celtic gold coins were not produced continuously as a consequence of broad social developments, but episodically, in response to particular events’. Wigg-Wolf (2011) follows Nash and Sills in seeing the continental Celtic coinage as deriving from mercenary pay, and sees its production in the sphere of the martial and political interests of an elite. He believes that the later appearance of individual names on the coinage confirmed that individual members of elites were responsible for the issue of coinage, rather than tribes (Wigg-Wolf 2011, 304–05).

As I will discuss later, I find that the ideas of Bloch and Parry and Seaford resonate with my findings in respect of East Anglian coinage. Bloch and Parry’s findings are relevant to the period before indigenous production, when most societies have the capability to absorb the impact of externally generated coinage without destroying the most important long-term elements of their culture. The work of Seaford applies to the period after local production starts, when production will affect day-to-day living, and potentially start to change longer-term cycles and ways of operating. I believe that some of these changes can be seen in East Anglia, including the increasing evidence for a market economy. However, even with increasing monetisation, not all belief systems or aspects of culture are changed.

I doubt that most Icenian coinage was produced primarily for military purposes, and do not believe that most was produced episodically. Later in this chapter I will explore alternative scenarios, including some of those suggested by Howgego (1990).

### 7.6 Pre-Icenian coinage in the region and an overview of Icenian coinage

Before production of coinage started in East Anglia it is clear that at least some elements of East Anglian society

were familiar with coinage. Gallo-Belgic coinage provided the prototypes for most early Icenian types. The only Gallo-Belgic type to have been found in quantity in East Anglia are the first three classes of the Gallo-Belgic E Stater and its related Quarter Stater, which are thought to have been produced during the Gallic Wars (2.2.1). Their arrival is likely to be related to the Gallic War and may have been received in compensation for the region’s support for the Gallo-Belgic tribes. Caesar alludes to Britain supplying both manpower and more general supplies (*The Gallic War* 4.20). In common with elsewhere in England, the later classes of Gallo-Belgic E are not found in East Anglia. The first Icenian coinage may have been struck using this coinage as a raw material, some doubts about this remain due to differences in tin content, although this is based on a single test (4.4.1).

British Potins, which predate both Gallo-Belgic E and local coinage production, have been found in the region (2.2.2). Unfortunately little is known about the use of this early coinage, and whilst it adds to the general picture of familiarity with coinage, it has little in common with Icenian coinage and seems unlikely to have been a major factor in the commencement of local production.

Roman Republican coinage is also found in East Anglia and was the prototype for one of the earliest silver Units, Bury C. Republican coinage is a major component of many Boudiccan revolt-period hoards, but there are no early hoards of this coinage. It has been found on Late Iron Age sites in the region, but there is no certainty that such finds entered the region prior to the conquest. Pre-conquest Roman coinage is not usually found in Icenian ritual contexts, and it seems likely that such exclusion is deliberate. Despite the lack of direct evidence, I strongly suspect that this coinage was familiar in East Anglia prior to the conquest and would likely have been a major part of the raw material for much early Icenian silver coinage (4.4.2).

The first coinage produced specifically for East Anglia seems likely to have been the Ingoldisthorpe Stater and Quarter Stater. These were probably minted in the North Thames area alongside, and sharing the obverse dies with, the Westerham Stater which circulated in that area. This coinage was probably minted using recycled Gallo-Belgic E Staters and was superseded by the first coinage produced in East Anglia, the British Norfolk Wolf A, followed shortly thereafter by the earliest silver coinages.

I have termed the first forty years or so of Icenian coinage ‘the early local period’. Coinage was generally more local than in later periods and the various types were not uniform in their production and distribution characteristics; different coinages were produced in parallel. Some silver types, such as Large Flan B, were struck in low volumes and generally used very locally. Others, and the gold, were larger issues with a wider distribution. Some of the larger coinages were predominantly struck at a single location but others were struck at several locations.

The final years of the early local period, which probably ended during the decade 20 BC to 10 BC, appears to have been a period of major change. It is likely that gold had become very scarce, as increasing amounts of copper were being added to the Norfolk Wolf B Staters until the gold content had been reduced from some 30% to as little as 10%. Towards the end of this period is the largest Icenian incidence of hoarding of gold coinage (6.4.2).

The first denominational period followed; this is marked by the introduction of a full denominational coinage of gold and silver, the Snettisham Issue. The gold content was re-instated almost to the levels of Norfolk Wolf A Staters (Figure 4.7). Staters never again became heavily debased. The designs of the old gold coinage were abandoned, but the silver coinage shows continuity of design from earlier types, although with a lower target weight and smaller flans.

At first there were at most two main mints in operation, Mint A producing the Snettisham and subsequent Issues, and probably Mint C producing the Saham Toney Issue (3.2). There appears to have been a period of stability for possibly 20 years or so after the start of denominational coinage, and adjustments to the weight of the Staters coincided with new Issues of coinage (4.3.1).

In the first decade of the new millennium there was another period of change in the region, which was also marked by the hoarding of Staters and the transition from Early Boar Horse to the Boar Horse B Issues, the first coinage of what I have termed the mid-denominational period (6.4.4). This transition saw the introduction of the back-to-back crescents symbol onto the Staters of Mint A. The symbol was probably introduced onto the coinage of Mints A and C simultaneously, but Mint B may have started operating somewhat earlier; it used the symbol on all denominations. The symbol became the major feature of most subsequent Icenian coinages with the major exception of the final Mint B Issue, Late Face Horse.

The introduction of back-to-back crescents reveals a strong link to North Thames coinage, where its longstanding use significantly predated its widespread adoption in East Anglian (5.5). The symbol was used on all Stater dies of the Boar Horse B coinage and on the rare closing dies of the previous Stater, Early Boar Horse. One of the North Thames inscribed coinages bearing back-to-back crescents is that of Dubnovellaunus, and a further connection to Dubnovellaunus is seen on the Quarter Stater of the Boar Horse B Issue (3.4.5). This is the only Icenian coinage to use a trefoil symbol on its reverse, a symbol also used on coinage of Dubnovellaunus, and a rare obverse die is identical to one of Dubnovellaunus. The coinage of Cunobelin, which superseded Dubnovellaunus, rarely used the crescents symbol.

After the transition from Early Boar Horse to Boar Horse B, imagery became much more tightly controlled with little variation in the designs used on the dies of a type, and less

hidden imagery, giving the appearance of ‘mass production’ (5.10). During the mid-denominational period there was little hoarding and some large Issues of coinage, such as Early Pattern Horse (A) and Boar Horse C, have low survival rates (3.5.1). Coinage was once again issued from multiple locations and individual types were generally much larger than in early local period, although a few smaller local types were also minted. After the Boar Horse B Issue the supply of gold for coinage dried up; although more silver was minted, it did not compensate for the decline in gold (4.6), and the silver coinage itself became highly debased (4.4.2).

The final denominational period saw the introduction of Inscriptions on the output of two of the three mints alongside the continued use of the back-to-back crescent symbol; the large Late Face Horse Issue of Units bore neither an inscription nor back-to-back crescents. It appears most likely that the production of Icenian coinage continued after the Roman conquest and up until the revolt in AD 60/61 (6.6.3).

## 7.7 Icenian coinage production

The minting of Icenian coinage was very tightly controlled. Considerable importance was attached to precision in achieving a target weight, and much care was taken over the precious metal content of the coinage.

The best example of weight control encountered during the study was in respect of a die-linked sequence of Late Face Horse Units from the late hoards where 77% of the 314 known coins fall within a weight range of 0.1g (4.3.4). Gold was also manufactured to fine weight tolerances; the best example of a Stater is Boar Horse C, where over 70% of the sample of 34 fell within a weight range of 0.09g (4.3.1).

Metal content was carefully controlled, but it was clearly difficult to achieve precise alloy mixes. Test results of the gold coinage show a reasonable consistency of gold content, with standard deviations usually ranging from 5% to 10% of average gold content (Table 4.16); there is greater variation in the copper and silver, but modern testing cannot accurately measure the composition of these two elements in an alloy. Early silver coinage had a consistently high silver content, but from the mid-denominational period it became debased and the precise mix is not measurable. It is most likely that the silver content was reduced to approximately 50% (4.4.2).

There is an exception to the strict control of the weight and metal content of Icenian coinage; both were lost for the final productions of the Norfolk Wolf B Stater at the end of the early local period. Control was re-established with the Snettisham Stater, the first denominational Issue. This reinstated the gold content almost to the level of the earlier Norfolk Wolf A Staters. It subsequently stayed reasonably constant, although the copper content gradually increased at the expense of silver, giving the coinage a redder appearance (4.4.1).

From the earliest types, Icenian coinage was produced with two denominations each of both gold and silver, and with a clearly defined weight ratio between the types in each metal. There were no stylistic links between gold and silver until the denominational coinage, but there was a relationship between the weight of a Stater and that of a Unit (Table 4.21). There may also have been a relationship between the precious metal content of the gold and silver coinage, but if so, it was not maintained during the production of the Norfolk Wolf B Stater and the final debased silver coinages (Table 4.21).

When coinage started in East Anglia, gold coinage was initially produced at one or possibly two locations; the number of locations grew with the Norfolk Wolf B Stater (2.4). Silver coinage is likely to have started with two or three sites producing coins, but within a few years several locations were producing coinage often in small volume (2.5). With the advent of the first denominational coinage, the number of sites producing coinage probably dropped, and most of the production was by a single mint. Ultimately three main mints were each producing coinage (3.2) and one, Mint A, was minting the Anted and Ecen types in parallel, although Anted may have ceased before Ecen (3.4, 3.4.7 and 3.4.8). Throughout all periods it seems likely that small volumes of sub-regional types continued to be produced (3.7).

The three main mints appear to have minted coinage from more than one site, but each used their standard imagery for each location. These conclusions are based on distribution analysis; there have been only three reliable finds of East Anglian Late Iron Age mint debris, all in the form of pellet moulds (4.7). The lack of finds probably reflects the lack of excavation of major Late Iron Age sites in East Anglia. A few additional sites have yielded unstruck gold blanks, but these are less indicative of minting activity; they are impossible to date and probably represented portable value, notwithstanding the absence of striking (4.7.1).

An assessment of the precious metal used in producing the coinage highlighted a dramatic decline in the use of gold during the mid- and later denominational periods, and silver usage did not make up for the decline in gold. Despite uncertainties about the exact duration of the different periods it is clear that the 'value' of coinage production declined significantly in the last decades of coinage production, a decline that probably started in the first decade of the 1st millennium (4.5–4.6).

Throughout the entire period of Icenian coinage production, and for all denominations, the coinage was subject to forgery by the production of plated copies. The level of copying increased during the mid- and final denominational periods, after the introduction of back-to-back crescents, probably *c.* AD 5 (4.8). All known plated coinage appears designed to deceive (4.8), with the possible exception of some silver-plated copies of the Norfolk Wolf

B Stater, probably all from a single hoard, which may have been produced for votive purposes (6.4.3).

### 7.8 Icenian coinage imagery and inscriptions

The earliest Icenian silver coinages of the early local period used predominantly Gallo-Belgic and Roman types as prototypes but changed the 'artistic language' to conform to a local aesthetic (5.4.1 and 5.10). Many scholars have seen this change as a process of simplification and degeneration; throughout this book I have argued the opposite – the process is one of increasing complexity and interest, usually by adding hidden imagery similar to that used on other artefacts. Considerable skill and effort was involved in creating these hidden images that could only be seen with effort, and possibly only by the initiated.

The Units of this period always carried a face on the obverse and a horse on the reverse but, subject to these constraints, there was regular die to die variation within each type. Two factors point to the involvement of mobile moneyers in die and coinage production:

- Some of the dies appear to be produced by the same hand as those seen in other regions, and carry some common iconography (5.8).
- Some of the most complex and sophisticated silver types, such as Bury D and Bury F, were produced on a very small scale and sub-regionally (Figs 5.12 and 5.15; Table 2.6).

The obverses of the early gold coinages are closely related to their Gallo-Belgic prototypes. The reverses have no obvious prototype. They appear to depict a complex narrative, involving what is thought to be a wolf or a large dog, seen on no other coinages with the exception of a small issue of North-Eastern Units (5.3).

There are a number of features of the early coinage that may have a cosmological or religious interpretation such as the human head and eyes (5.4.1), the wolf narrative (5.3), the horse (5.4.2), and possible solar and stellar imagery (5.4.3). The human head is seen on every early Unit and Stater and, with the face, is the focus of the hidden imagery on the silver coinage. The use of the ubiquitous horse in the creation of hidden faces and its association with astronomical imagery has potential religious connotations, whether as part of an illustration of a myth or as an object of veneration in its own right.

There was a radical change in imagery with the introduction of denominational coinage *c.* 15 BC. The Gallo-Belgic styled obverses and the narrative reverses of the gold coinage were abandoned, the obverses of the gold coinage became more symmetrical, and the reverse dies of each denomination of an Issue were linked by the use of similar imagery. From the mid-denominational

period (c. 5 AD), imagery on all dies of each type of coin was usually standardised, even when production was from multiple sites. At the same time, the designs became less complex, with little emphasis on hidden imagery, and the back-to-back crescent motif became widely used, eventually becoming a key image on most, but not all, coinages (5.5).

Later still, around AD 25, script was introduced, and coinages with different inscriptions and an uninscribed Issue were minted in parallel (5.7). In one case at least two types with different inscriptions, Anted and Ecen, were produced in parallel by the same mint. The later denominational Issues were often large, but there were also a number of smaller, probably local, types. One of the smaller coinages, Esv Prasto, includes a probable reference to a moneyer (5.7). Howgego (2013, 19, 35) speculates that the introduction of writing was a key development in adopting Roman ways of doing things including the use of coinage as money, but in East Anglia the introduction of inscriptions does not appear to coincide with other discernible changes to the production or usage of coinage.

Alongside Units bearing back-to-back crescents on the obverse was Late Face Horse, an Issue which had a head on its obverse. Unlike the heads of the earlier periods these appear to be images of a decapitated head or a mask. The eyes appear blank – there is no neck or shoulders illustrated and a concave line links the chin to the rear of the skull on each of the 96 known obverse dies (5.4.1 and Appx I.43–8).

The major later Icenian coinages carry none of the Augustan imagery seen on the Late Iron Age coinage of other regions (5.6). Although there are a number of different inscriptions, there are no references to kingship, with the possible exception of an isolated ‘R’ shown on one die of the relatively small issue, Ali Sca (5.7).

It appears most likely from the sequences of coinage, the apparent parallel production from a single site, and other evidence that the most common inscriptions Anted, Ecen, Ece, Aesv and Saenv represent names rather than places or titles.

### 7.9 The disposition of Icenian coinage

Icenian coinage of all periods is found in a similar area of northern East Anglia; the work of Leins (2012) showed there is generally more penetration of adjacent coinages into East Anglia than vice versa. Within the region the different denominations of Icenian coinage have differing patterns of distribution, Half Units are less dispersed than Units, and both Staters and Quarter Staters are the most dispersed of all (6.10).

The majority of known coins emanate from hoards, but I have shown that Icenian coinage was not hoarded continuously as is sometimes thought. Silver coinage only seems to have been hoarded in the early local period and at the time of the Boudiccan Revolt; even at these times

the hoards do not include Half Units. Gold coinage seems to have been hoarded at, or close to, specific times, which usually coincided with the transition from one Issue of coinage to another. The most active periods of hoarding of gold coinage were at the end of the early local period (c. 15 BC) and at the transition between Early Boar Horse and Boar Horse B (c. AD 5), when back-to-back crescents were introduced into the coinage of Mint A. Staters were hoarded, but rarely Quarter Staters. Most hoards are predominantly composed of carefully selected genuine coins of a single denomination (6.8; Table 6.4, 6.4.3 and 6.5.1).

The hoards relating to the revolt are relatively homogenous in their mix of Icenian coinage; they include coins from types or die-groups of types which appear to have sub-regional distributions for casual losses (6.5.1, including Fig. 6.7). This implies that the hoards may have come from some form of central pool. Some hoards contain Roman Denarii, usually the only non-Icenian coinage present. The link between hoards and the revolt has been confirmed by two of these Roman Denarii dating to AD 60/61 (6.5.2).

The Icenian Units in the hoards of the revolt period do not have circulation wear, yet hoard content is biased towards the most recently minted coinage, as if they come from a revolving pool of coinage. Icenian gold and silver coinage is rarely seen with extreme circulation wear, unlike the Roman coins found in the hoards, which are usually worn (6.5.3).

Four sites with multiple finds of Icenian coins were examined, three of which were found to have a different profile to Icenian hoards in that they generate significant proportions of Half Units, plated coinage and non-Icenian bronze coins. These types of coins have a much reduced presence on three likely ritual sites, Fincham, Ken Hill and Shernborne, although early Potins occur on Ken Hill and Shernborne which are both in the Snettisham area (6.9).

Early local silver coinage is under-represented on sites, based on the number of dies used in its manufacture. Factors causing this could include lower production volumes per die, a move towards larger and more developed sites during the Late Iron Age after the production of some of the early coinages, and the increasing monetary use for coinage after the introduction of denominational groupings, leading to greater casual losses (6.9).

### 7.10 What was Icenian coinage?

The evidence that I have extracted strongly suggests that all Icenian coinage was intended to be used as money. By this I mean that it was designed to be used as a means of payment, for the storage of wealth and as a standard of value; these criteria are based on those of Haselgrove (1979, 202) which follow from the work of Polanyi. The definition of money is contentious and there has been much discussion about the purpose of Late Iron Age coinages; various criteria have been described which seek to separate coinage which

functioned as money from other types of coinage, assuming that the latter ever existed. The features of Icenian coinage that make it clear that it functioned as money include:

- Linked denominations initially between coins of the same metal, with links between silver and gold becoming overt at the beginning of the denominational period.
- Tightly controlled and standardised weight
- Controlled and standardised precious metal content
- Relatively stable imagery for each type of coin
- Forgery of the coinage throughout its issue.

Early Icenian coinage followed the continental Gallo-Belgic coinages in seeming to lack obvious symbols of an ‘authority’ which would provide some assurance of authenticity, as is seen on Greek and Roman coinage. Researchers have seen the stamp of authenticity as being important if coinage has a fiduciary element (e.g. Von Reden 2002, 157–58). The consistency of the major design elements may have fulfilled this role and provided re-assurance that the object was genuine and had a specific value.

The Gallo-Belgic style of obverse on the early gold coinage may in part be an attempt to assume and replicate some of the credibility of the prototype coinage, although the Gallo-Belgic Stater most common within East Anglia, Gallo-Belgic E, had a practically blank obverse. The wolf reverses of the gold coinage are, with the exception of a rare Corieltavian Unit, specific to East Anglia. They appear to depict a narrative, and it is possible that this was something that would have had a local resonance and inspired confidence.

The major design elements of the early local period Units are a head and a horse, and it is probable that one of the reasons for the ubiquity of these images is to give Units monetary credibility. The hollow star and diamond shape used on certain early local silver such as LFA and Bury B (5.4.3) may be a direct reference to the issuer of the coinage and hence his credibility. The importance attached to seemingly minor symbols on the coinage is demonstrated by the effort put into changing them on the dies of certain Bury C Units (5.4.3).

With the denominational coinage the imagery became much more stable, and consistency was introduced between gold and silver coinages. All subsequent reverses depicted a horse. The back-to-back crescents, which were increasingly used on obverses, may have provided a symbol which played some part in the generation of confidence and the assurance of authenticity. It appears that with the denominational coinages consistency and stability gradually took over from the desire for artistic creativity in the coinage (5.9).

Much of the later denominational coinage was inscribed, thus providing an obvious potential sign of authority, although whose name is borne by the coinage is not obvious and is discussed below.

Having established that Icenian coinage was money, in the terms described, enables questions to be addressed about why the coinage was issued, who was responsible for its issuance and for consideration to be given as to the form of social organisation which prevailed in Late Iron Age East Anglia.

### **7.11 Was the coinage produced episodically for military or other events?**

Most Icenian coinage does not generally appear to have been produced in the intensive bursts of activity that would be expected if the coinage was for military purposes, or primarily produced in reaction to specific or episodic events.

By comparing hoard analyses with known chronological sequences of dies it has been possible to show that the final Icenian silver coinages were issued over an extended period, there being generally far more coins per die of the latest coins present in hoards than there were for earlier coins in the same sequence (Table 6.19). A similar analysis of the latest coinage in the large Dallinghoo hoard, the Boar Horse B Stater, showed that the hoard was biased towards the most recently minted coins and that the Boar Horse B Stater had been produced over an extended period (Table 6.11).

Most coinage appears to have been struck in an orderly way using only one obverse die at a time. There are a few examples where it appears that two or more obverse dies were being used together. The most obvious examples of this are the Early Norfolk Wolf A Staters, Bury A Units and the Late Face Horse Units from die-group 19 (Appx I.2, I.9 and I.46). Excessive use of a single obverse die may also be indicative of intense activity, an extreme example of which is Norfolk Wolf B Stater die-group 16 (I.6).

My assessment of the evidence is that most minting was orderly and well-controlled, and the same type was often issued from more than one location. Many types of early silver were quite small and local, whilst the later coinages were generally larger, often having several die-groups being produced in parallel. At the same time there were still examples of smaller local production. The few types which appear to have been produced in a hurry are associated with actual or possible periods of hoarding activity, suggesting that some minting may be related to unusual circumstances.

### **7.12 The impact of Icenian coinage on society – short-term exchange cycles**

My interpretation of the evidence presented in this study is that it reveals a society that had encountered coinage in various forms over an extended period and which adopted coinage in the middle of the 1st century BC. That coinage had a monetary role, not just as a store of value and to make payments, but either immediately or soon thereafter

as a standard of value. The evidence suggests that over the hundred years or so of coinage production, Icenian society became increasingly monetised.

Whilst it is clear that there were extensive contemporary trading networks operating across Europe in the Late Iron Age, there is no clear evidence about how British tribal groups such as the Iceni were impacted. However, in view of the scale of this trading, the obvious benefits from participation, and the ready access to the sea (and hence trade routes), it would appear unwise to assume that traders were not present, and that Icenian society was unsuitable for the early adoption of a monetary economy.

Precisely how coinage was used within short-term exchange cycles is not known, but it is clear that its role grew. Symptoms of this include denominational coinage, the standardisation of imagery, the increasing use of Half Units and the increase in plated coinage over the period of issue, as assessed by the number of plated relative to official dies (4.8). The increase in plated coinage is particularly marked for plated copies of Half Units. None are known from the early local period, but by the final period of coinage there are almost half as many plated as official dies known.

The denominations of Icenian coinage have differing patterns of distribution, with Half Units less dispersed than Units, and both Staters and Quarter Staters being the most dispersed of all (6.10). This suggests varying uses for the denominations, with the smallest silver being used for local transactions, and gold used for larger transactions with more distant parties, which may well include uses related to longer-term belief cycles. Leins (2012, 169) noticed a similar pattern in other regions which he thought may reflect different relationships between issuers and recipients.

The lack of Icenian bronze coins must have excluded coinage from very small day-to-day transactions. The smallest Icenian denomination was the silver Half Unit which had a target weight of approximately 0.6g for most of the period of minting. The Late Iron Age North Thames area had a bronze coinage with typical weights of 1 to 3g (Van Arsdell 1989). If the relative values of these metals in Rome (Sutherland 1984, 3) were to be relevant, it would suggest that the smallest Icenian denomination was perhaps equivalent to approximately 13 Bronze coins of 2g each. Even factoring in the later debasement of Icenian silver, the Half Unit was still equivalent to some 6 or 7 Bronze Units.

The lack of very low-value denominations implies that coinage may not have been used for very small transactions in the way that it may have been in the North Thames area. This need not infer a lack of monetization, since the monetized economy of the Middle-Ages had the silver penny as its lowest official denomination, which was frequently heavier than a Unit.

I have found hints that as the monetary economy developed, North Thames bronze coinage may have become acceptable in East Anglia. Analysis of site finds (6.9) implies

that Late Iron Age bronze coinage found in East Anglia may be understated in numismatic records. Bronze coins are often worn, damaged and hard to identify and this, combined with their minimal modern commercial worth, means that they are treated with disdain, and may well be disregarded by metal detectorists. Nonetheless it is clear that bronze coinage never had the major monetary role that it seems to have had in North Thames.

Although coinage was used as money in a form of monetary economy in East Anglia, it was not used in the way that we use money today, or indeed in the way that the Romans used money. Throughout this study remarkably few examples of coinage have been seen which display any significant signs of circulation wear, and the coins in the Boudiccan revolt-period hoards are clearly unworn (6.5.3). Previous reports about Icenian hoards often commented upon coinage wear, but I have found that this is usually die wear (Fig. 7.1).

A typical example of what is often thought to be circulation wear is shown in Figure 7.1; an examination of the illustrations of all other known examples of this obverse die reveals that the flattened area on the obverse is likely to be the result of the die being worn when the coin was struck. Similar flatness is seen on strikes which pair the obverse with the reverse in Figure 7.1 and with later reverse dies. It is not seen on the 15 examples where the obverse die is paired with an earlier reverse die.

Both Roman Republican Denarii and early Gallo-Belgic gold is found in East Anglia with clear and substantial circulation wear, although it is impossible to know if this was suffered within East Anglia. Icenian coinage does not appear to have been used or transported in a way that caused it to suffer significant abrasive damage. There was clearly movement of coins, as is shown by hoard assemblages, the general spread of coins from the same dies, and by the differential distribution of different denominations. The lack of wear may be due to some form of fabric or other protection afforded to coinage, or to it being rarely transported; observations by Leins (pers. comm.) in respect of the many coins that he handled at the British Museum suggest that this lack of wear may be a common feature of Late Iron Age British coinage.



Figure 7.1 Ecen Half Unit with a 'worn' obverse (left)

I suspect that the lack of Icenian coinage wear is connected to the absence of very small denominations. These features suggest that at a domestic or settlement level coinage was pooled and was not used for day-to-day necessities. The group would have been responsible for the production of basic needs for subsistence which would have been shared. Coinage was used in larger transactions on behalf of the group and thus would not have been transported on a day-to-day basis.

### 7.13 The impact of coinage on Icenian society – long-term belief systems

There are a few clues about how coinage was used within long-term belief and social systems and whether it brought about change in those systems. Hutcheson (2004) proposed that the practice of burying metalwork in the ground in East Anglia was a continuous, if mutable tradition. She saw the deposition of torcs, horse equipment and coinage as part of the same practice: the material changed but the essential practice remained the same (Hutcheson 2004, 92–93). I have found that the coinage used for such deposits was carefully selected and generally did not include Half Units and plated coinage; the latter types were also largely absent from Ken Hill in Snettisham and Fincham, which are thought to be sites of ritual focus. The marked contrast between such coinage and that found on more ‘everyday’ sites, such as Saham Toney, strongly suggests that Hutcheson is correct and that the selected coinage was being used in the context of longer-term belief systems.

My analysis of large-scale coin hoarding in East Anglia has found that deposition was intermittent and that silver coinage was rarely hoarded, except at the time of the Boudiccan revolt. Prior to the revolt the Icenian Stater was the preferred denomination for hoards, which contained minimal amounts of any other denomination or regional coinage. Despite the acceptability of certain Icenian coinage in votive deposits, I have found no evidence that any type of Icenian coinage was produced specifically for votive purposes. In any event it appears unlikely that a denominational coinage would have been specifically produced for such a purpose, as it would have been linked to Half Units, which are clearly excluded from any such role.

I suspect that, in the early local period, coinage did play a role within the longer-term social order, and perhaps for some types of coinage this was its most important role. The imagery or art on these coins holds clues as to what some of these roles may be.

The early types of coin, particularly those in silver, varied from die to die and were very complex, often containing many hidden images. It is possible that this coinage was used to spread a religious message and served to enhance the power and reputation of those initiates who could decipher the hidden imagery and other symbols. However, I think

it unlikely that these were the primary purposes for the production of the coinage, as the use of hidden imagery is a feature of Late Iron Age art more generally. This aspect of numismatic art should be seen as part of a wider linkage between functional objects and belief systems.

The uniqueness of the early coins was enhanced by their being struck from dies much bigger than the flan; no two coins were exactly the same (1.5). These attributes conflict with those beneficial to coins in a market economy, where standardisation will help to make types of coinage more familiar and individual coins more acceptable.

The most complex and sophisticated types, such as Bury F, were produced from few dies and were sub-regional. Nonetheless, these types had the same standard major elements of imagery as other types, and their weight was similar. They were clearly designed to have a ‘monetary’ role in addition to any other functions. The dies for some of these coins seem likely to have been produced for local ‘clients’ by moneyers who operated in different regions.

The attributes of uniqueness and the small-scale production of some early types could be appropriate to a society where gift exchange is a cultural norm. This is seen in studies of the Kula ring where important shells have names and known histories (Munn 1986, 106–08). Gell’s (1998) observations may also be relevant to the production of these beautiful coins which were made in limited numbers. He considered art to be an extension of a person involved in its creation and to have agency; by this he means that art is intended to help achieve the objectives of that person when it is encountered by others. It is easy to see how the complex imagery on early coins could be intended to influence those who possess them, although to what end is not readily apparent. It could be simply the enhancement of the prestige of the person who arranged for the coins to be made.

In his work on the power of images, Freedberg (1989, chapter 8) discusses the huge impact of the first printed pictures which gave wide access to hyper-realistic images for Christian meditation. The importance attached to early Icenian coinages could have been as impactful—these almost certainly carried the first mass-produced images in a precious metal that had been made in East Anglia. They were able to carry much greater detail than cast objects and were likely to have been highly prized because of their imagery.

I suspect that in these early small issues of coinage we are seeing a transition in Icenian society. The concept of money, in terms of assigning a number to objects, was becoming accepted, but also one could associate one’s personality to objects, by way of unique designs, and use the coins in the way that prestige gifts would have been used. Some of the small-scale early types may not have been primarily intended for day-to-day commercial usage. It is easy to see how a gift of one of these early coins would have been perceived as impressive and important.

The changes to the imagery after the start of denominational coinage suggest that any such uses were becoming less important. The coins were becoming standardised with simplified imagery, moving away from the ‘uniqueness’ which makes them suitable to be viewed as art intended to have agency, as described by Gell. The key message that is given by the imagery on the larger Issues of denominational coinage is one of conformity; it appears that the issuers are trying to promote confidence in the coinage, in an economic sense. Political and religious messages may be included, but these appear to be subsidiary to the main purpose of the coinage. The adoption of more standardised imagery need not imply a change to underlying long-term Icenian belief systems – and I suspect that it does not – but rather that the commercial importance of the coinage became overwhelming. It may then have been seen as less suitable for incorporation into long-term social structures.

#### 7.14 Who issued the coinage?

In view of the introduction of script I will look first at who is likely to have been responsible for the issue of the later coinages. Clues are provided by the sequences of Anted and Ecen which were produced in parallel. The main sequences of each type are linked by two ‘mules’, therefore it is likely that they were minted in close physical proximity, but with care taken to keep production apart. Other than the inscriptions, and the immediately surrounding decorative detail, the reverses of each type look very similar and weight, metal content and obverse imagery are indistinguishable. Both types have additional die-groups of production that differ from the main die-groups in their distribution.

The importance attached to separating Anted and Ecen Units, notwithstanding the likely proximity of production, may indicate that those responsible for production did not own the product, or at least did not own both product types. This implies that minting was the provision of a service, as it probably was in the early days of Icenian coinage when travelling moneyers seem likely to have converted metal to coinage on behalf of the owner of the metal. It is possible that this early structure was the model followed throughout the entirety of the coinage.

If this is correct, who were the clients who wished silver and copper to be converted into coinage bearing the names Anted and Ecen? Both types have a broadly similar distribution, and are thus unlikely to represent the output of different sub-regional groupings or hierarchies such as pagi. Nonetheless, the names carried by the otherwise almost identical coinages were clearly viewed as being extremely important.

My analysis of inscribed coinage indicates that the names carried by the major late Icenian coinages refer to people rather than places, positions or groupings. Similar conclusions were reached by Wigg-Wolf (2011, 305), in

looking at Gaulish inscribed coinage, who assumed that the names represented individual members of ‘Gallic elites’. There can be little doubt that those named on the Icenian coinage considered that they belonged to an elite, but in what capacity they issued the coinage is a more challenging question. The overlapping distribution and parallel production of coinage does not suggest to me that the coinage was issued by hierarchical leaders of different factions of society. I think that the features of the coinage make it much more likely to have been issued by traders, or organisations involved in commercial activity, and that it was issued for trading purposes. This does not exclude the possibility that those named on the coinage may have had other roles within tribal society.

Howgego (1990) referred to the possibility of less centrally controlled minting in the ancient world, where precious metal objects could be freely converted to coinage as was often the case in the Middle Ages or in the Arab world. I suspect that Icenian coinage is closer to this model than to centrally controlled production to meet state expenditure. However, there was clearly some degree of centralised control or agreement, which ensured consistency of weight and imagery in respect of the different types of coinage minted in parallel.

If traders were to have produced some or all of the coinage, this may account for some of the Late Iron Age coinages of different regions which carry identical or very similar names. Dubunnic coinage carries the name of Anted and Eisv, the latter being very similar to the Icenian Aesv and Esv Prasto, as is the inscription Iisv Prasv seen on North-Eastern coinage. The possibility that the Dubunnic Anted may refer to a trader is countered to some extent by its additional retrograde inscription of ‘RIGV’ or possibly ‘RICV’ below the Anted inscription. The suffix or prefix Ric or Rig is usually interpreted as corresponding to ‘king’, following Evans and others, although Evans (1967, 243–45) also mentions ‘powerful’ as being an alternative meaning.

There are no Icenian inscriptions that clearly claim kingship, and it is uncertain whether the Dubunnic inscription does so either. The possibility that traders were responsible for the issue of the later Icenian coinage, and that those traders were not necessarily the operators of the mints, provides potential explanations for other unusual features of the coinage. Some of these are otherwise very hard to rationalise:

- The parallel minting and overlapping distributions of differently inscribed types.
- Types being issued in more than one location, with the same iconography and inscriptions if appropriate.
- Inscribed coinage and the uninscribed Late Face Horse coinage being minted in parallel.
- Anted and Ecen Staters sharing obverse dies.

- The possible existence of supra-regional commercial mints and trading issuers of coinage may account for some of the major stylistic similarities across regions, such as the boar on Corieltavian coinage and its similarity to that on the Boar Horse B Unit.

The Early Local coinage includes a range of types with different features. Some, such as Bury B, Large Flan C and Large Flan A, have many features in common with the later inscribed coinages. These may well have been struck by traders for trading purposes, whilst smaller coinages such as Bury F are much more like prestige objects for purely local usage.

Some of the largest issues, such as the first die-group of the Norfolk Wolf A Stater and the main die-group of the Bury A Unit show signs of intense minting activity, both being issued in significant volume from a single site. These die-groups are two of the few Icenian coinages whose die chain shows signs of the intense activity described by Nash and Sills, in the context of coinage being produced in response to a crisis.

Die-group 1 of the Norfolk Wolf A Stater represents a major usage of gold which probably coincided with the Gallic Wars, from which it is thought flowed the Gallo-Belgic E Staters that may have been its source of alloy. As this die-group was produced at approximately the same time as the invasions of Kent, it is tempting to see this, the first Icenian coinage, as an ‘emergency’ minting somehow connected to the resistance to Caesar, or to the annual tribute which he demanded of Britain after the second invasion (*The Gallic War* 5.22).

Such thinking is evocative of that which led to Collis’ assault on preconceived ideas in the 1970s, but this particular link to invasion is not entirely speculative. In any event it seems almost certain that the actions of Caesar stopped the flow of Staters to Britain and that this is most likely to have been, in some way, a trigger for the start of local coinage production.

### 7.15 The social organisational structure of the Iceni

John Davies (1999), the Chief Curator for the Norfolk Museums and Archaeology Service, has observed that the Iron Age archaeological evidence of the county reveals strong sub-regional patterns which suggest social and political diversity. This diversity is to some extent reflected in this study, which found no evidence of rigid centralised organisational structures. For the hundred years or so of coinage there were small local productions of coinage alongside larger ones which reached a much larger geographic area. Alongside this variety and apparent flexibility there were also clear signs of coordination such as the standardisation of weights and major elements of imagery, and the adoption of denominational coinage.

The flatter organisational structures suggested by Hill would fit well with the evidence yielded by the coinage, particularly if there had been some form of Council or Assembly. This could have dealt with strategic decisions about minting such as the weight, purity and major elements of imagery. Individual decisions about detailed design could then have been taken locally. These organisational structures also accord with the evidence suggesting coinage was not used on a day-to-day basis for subsistence, with basic necessities being provided communally.

It is also possible that the features seen in the coinage could have arisen in a hierarchical structure which chose not to take direct responsibility for the conversion of precious metal into coinage, but established rules for ‘weights and measures’. What is clear from the coinage is that the linkage between Late Iron Age coinage and political power or kingship, as perceived by Creighton (2000) and others, does not appear to be appropriate in Late Iron Age East Anglia.

### 7.16 Links between the coinage and historical events

Although I believe that the coinage is generally more closely related to trading than to politics, there are four points in time when more wide ranging events can be perceived in the coinage (Table 7.1).

The first is the linkage between the Gallic Wars and the start of Icenian coinage, which has already been discussed above.

The second is that the end of the early local period and the start of denominational coinage *c.* 15 BC was clearly a period of radical change; the Norfolk Wolf B Stater had become increasingly debased and at the end of this coinage there is a major hoarding horizon. A new gold coinage was introduced with close stylistic links to that of the North Thames. These events give the impression of political pressure or change, but there are no real clues as to what actually happened. It would be interesting to establish if similar changes took place in other regions or whether this was purely an East Anglian phenomenon. If more widespread, it may reflect changes taking place in Gaul and the increasing influence of Rome.

Table 7.1 Points of radical change in the coinage

Approximate date	Manifestation on coinage	Hoarding horizon
15 BC	The start of denominational coinage	Yes
AD 5	Introduction of back-to-back crescents	Yes
AD 60/61	The end of coinage	Yes

The third major period of change about AD 5 provides rather more clues as to its cause. These imply a link between political change in the North Thames area and the widespread adoption of back-to-back crescents in East Anglia. The adoption of this iconography, previously more commonly used in the North Thames area, coincided with a major hoarding horizon and the introduction of Boar Horse B, a new coinage Issue. The Boar Horse B Quarter Stater has stylistic links to the coinage of Dubnovellaunus in the North Thames and Kent. Dubnovellaunus may be the 'king' recorded as Dumnobellaunus sending a supplication to Augustus (*Res Gestae* 32). In a 2005 paper, De Jersey gives a summary of the latest numismatic evidence concerning Dubnovellaunus. He accepts arguments that this name, which appears on North Thames and Kentish coinage, refers to the same person. De Jersey speculates that Dubnovellaunus had a short reign in the eastern part of the North Thames area, probably expanding from Kent *c.* 5 BC–AD 0 and conceding power to Cunobelin sometime around AD 10, perhaps the time of the approach to Augustus.

Despite the Icenian stylistic links to Dubnovellaunus, there is little evidence of further change and turmoil as a result of Cunobelin assuming kingship of the entire North Thames area, and there are few elements of Icenian imagery which could be associated with him. It appears unlikely that the widespread Icenian adoption of North Thames imagery would have been undertaken lightly, but it is equally unlikely that this reflected military conquest. Dubnovellaunus's name was never inscribed on East Anglian coinage and the imagery continued in East Anglia after the succession of Cunobelin in North Thames.

The final event is the Boudiccan revolt which resulted in the deposition of numerous hoards, and brought about the end of minting and probably the cessation of the use of the coinage. Some coins deposited in AD 60/61 will be the result of individual trauma and tragedy around the revolt and its aftermath. The uniformity of the main hoards suggests to me that there is a votive element to their deposition, perhaps being offerings coming from the dispersal of a centralised pool of coinage. It is impossible to know whether or not these hoards were intended to be later recovered.

The evidence suggests that minting continued after both the conquest of AD 43 and the revolt against disarmament and its suppression in AD 47. Neither of these dramatic events appears directly detectable in the numismatic record. There is a tenuous possible link to the conquest in my analysis of the Roman coinage in the revolt-period hoards: these contain more coinage of Tiberius than would be expected based upon finds of such coinage across the country as a whole, and proportionately less of his successors (6.5.2). Could this be the residue of payments prior to the conquest which ensured Icenian support for Rome?

### 7.17 What is Icenian coinage?

Whilst the evidence indicates that the coinage was always intended to be money and was increasingly used for internal trade, I do not believe that there is a single answer to the question 'what is Icenian coinage?'. The die-study and subsequent research have shown that coinage was multi-faceted in its uses and that its function evolved with time as society adapted to the use of money. The study has shown that the coinage was suitable for:

- The storage of wealth
- The settlement of religious and political obligations
- Prestige gifts (early types)
- The portrayal of mystical and secret imagery interpretable by initiates (early types)
- Demonstration of political allegiance (later coinages)
- Trading (all types)
- Demonstration of the strength of traders or trading organisations (later types)

My overall conclusions are that Icenian coinage started following the cessation of the flow of coinage from Gaul during the Gallic Wars. The main purpose of very first types may have been connected to Caesar's invasions of Britain. From the start the coinage was used as money and facilitated trade, but it was also used to enable local communities or powerful individuals to enhance their prestige. As coinage developed, its production became increasingly driven by commercial imperatives and by traders, who probably commissioned and organised the production of the later coinages.

There are two features of the coinage which appear to be at odds with its monetary role. Somehow its physical treatment did not involve abrasion, as unlike contemporary Roman coinage it generally lacks circulation wear. There is also an absence of very small denominations. Despite these findings I think that the evidence of its monetary role is clear, but what is also clear is that its use as money was not how we would use money today. It was probably held as a pooled resource by small groups and not typically used for subsistence purchases of small value.

### 7.18 Reflections

This book is the culmination of a long study which has used coinage to gain insights into a British tribal society. Its foundations were the die-study and the development of the hypothesis for the organisation and chronology of the coinage. The die-study benefitted from high sample sizes for most periods and denominations. Whilst I am very confident about the 'big picture' presented by the hypothesis, I suspect that some transitions from type to type or from period to period may not have been as neat as I have portrayed them.

I started my numismatic study of the region with what I thought was its earliest type, the Norfolk Wolf A Stater. As the study continued I became intrigued by the earlier Ingoldisthorpe Stater and Quarter Stater; these types are included in the die-study and are discussed in Chapter 2. The Stater is minted in the North Thames area, seemingly for use in East Anglia, and on balance I have concluded that the related Quarter Stater was also probably minted outside East Anglia. I continue to have doubts about this conclusion; in any event I suspect that future finds of these two types will provide further insights into the very early years of coinage in East Anglia.

Like many studies into ancient material culture, I have found my subject matter to have been sophisticated and complex. There is potential for much further study of Icenian society using the results of the die-study, addressing issues such as the precise locations of finds in the landscape and the nature of the trade that was facilitated by the use of coinage.

Throughout this study I have found few overt indicators of what must have been the growing influence of Rome within

Britain. Those that are encountered become noteworthy, such as the prototype to Bury C (Figure 5.10), the Republican and Imperial Denarii in the revolt-period hoards (6.5.2), the Latin inscription and Greco-Roman styled imagery on the Esv Prasto Unit (5.6 and 5.7) and the possibility that the silver in Icenian coinage came from Denarii (4.4.2). What is probably more noteworthy is the shortage of such evidence. Perhaps part of the answer for this lies in my analysis of the coinage finds at Snettisham, where I was surprised at the lack of early Roman coinage, despite the presence of Greek coinage and coinage from other Late Iron Age regions (6.2.1). I have a strong suspicion that the Romans were acceptable, or necessary, as trading partners and military allies; but were not considered acceptable from a cultural or religious standpoint.

The information that I felt most in need of, when concluding this study, was a similar study of a neighbouring region. I think that when such a study has been completed, its detailed comparison with this will significantly enhance the value of both.

## References

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### Abbreviations

BAR British Archaeological Reports

BNJ *British Numismatic Journal*

JRS *Journal of Roman Studies*

NC *The Numismatic Chronicle*

OJA *Oxford Journal of Archaeology*

PPS *Proceedings of the Prehistoric Society*

SNC *Spink Numismatic Circular*

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# Appendix I

## The die-study

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What follows is the photographic record of the die-study. Every die found during the course of this study is illustrated; the types of coinage follow the order in which they are discussed in Chapters 2 and 3. The images are reproduced at a scale of approximately 1.2:1. The following conventions were used:

1. Obverse dies are identified by a letter, and reverse dies by a number. Those that were found after the completion of the die-study are identified in red; all others are in black.
2. A black line joining an obverse and a reverse die indicates that the two are die-linked; the number of known coins with that die combination is shown next to the line in red.
3. If the die-link only became known after the close of the die-study the line is shown in red.
4. If a die-link is likely, but not certain, it is shown by a dashed line.
5. Where only one die can be identified because of the poor condition of the other die, the word 'poor' is written in red next to the identified die followed by the number of such examples.
6. Brockages are noted in red next to the relevant die.

The numbering and lettering of dies generally follows the estimated chronological order of dies. Where the chronology is unclear this is noted. Illustrations of the then-known dies of early Units, other than for Bury C, were previously published (Talbot 2006) and, other than for Bury C, the die references from that publication have been retained. This has caused the numbering or lettering of subsequently discovered dies to be out of sequence, but they have been entered into the die charts in their appropriate place and they can be readily identified. This affects Bury A, Bury B, Large Flan B, Large Flan C and the Snettisham Unit.

An index of the plates that comprise Appendix I is provided below.

### Index of plates

- I.1 Ingoldisthorpe
- I.2–8 Early local period Staters and Quarter Staters
  - I.2–3 Norfolk Wolf A Stater and Quarter Stater
  - I.4–7 Norfolk Wolf B Staters of the four sub-types
  - I.8 Examples of plated Norfolk Wolf B Staters
- I.9–14 Early local period Units
  - I.9 Bury A, E and F
  - I.10 Bury C, D, G and H
  - I.11 Bury B
  - I.12 Large Flan A
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  - I.14 Large Flan B
- I.15 Early Half Units – Bury Pallas, Butterfly and Face Horse, Large Flan B, Snettisham and Plouviez
- I.16 Early small issues – Large Flan D Unit and Large Flan Quarter Stater, Bury Quarter Stater and Spiral Unit
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  - I.20 Plouviez Stater
  - I.21 Plouviez Unit
  - I.22 Irstead Stater
  - I.23 Irstead Quarter Stater, Unit and Half Unit
  - I.24 Early Boar Horse Stater
  - I.25 Early Boar Horse Unit and Half Unit
  - I.26 Boar Horse B Stater
  - I.27 Boar Horse B Unit
  - I.28 Boar Horse B (A) Unit and Half Unit, Boar Horse B Quarter Stater and Half Unit
  - I.29 Boar Horse C Stater, Quarter Stater and Half Unit
  - I.30–1 Boar Horse C Unit

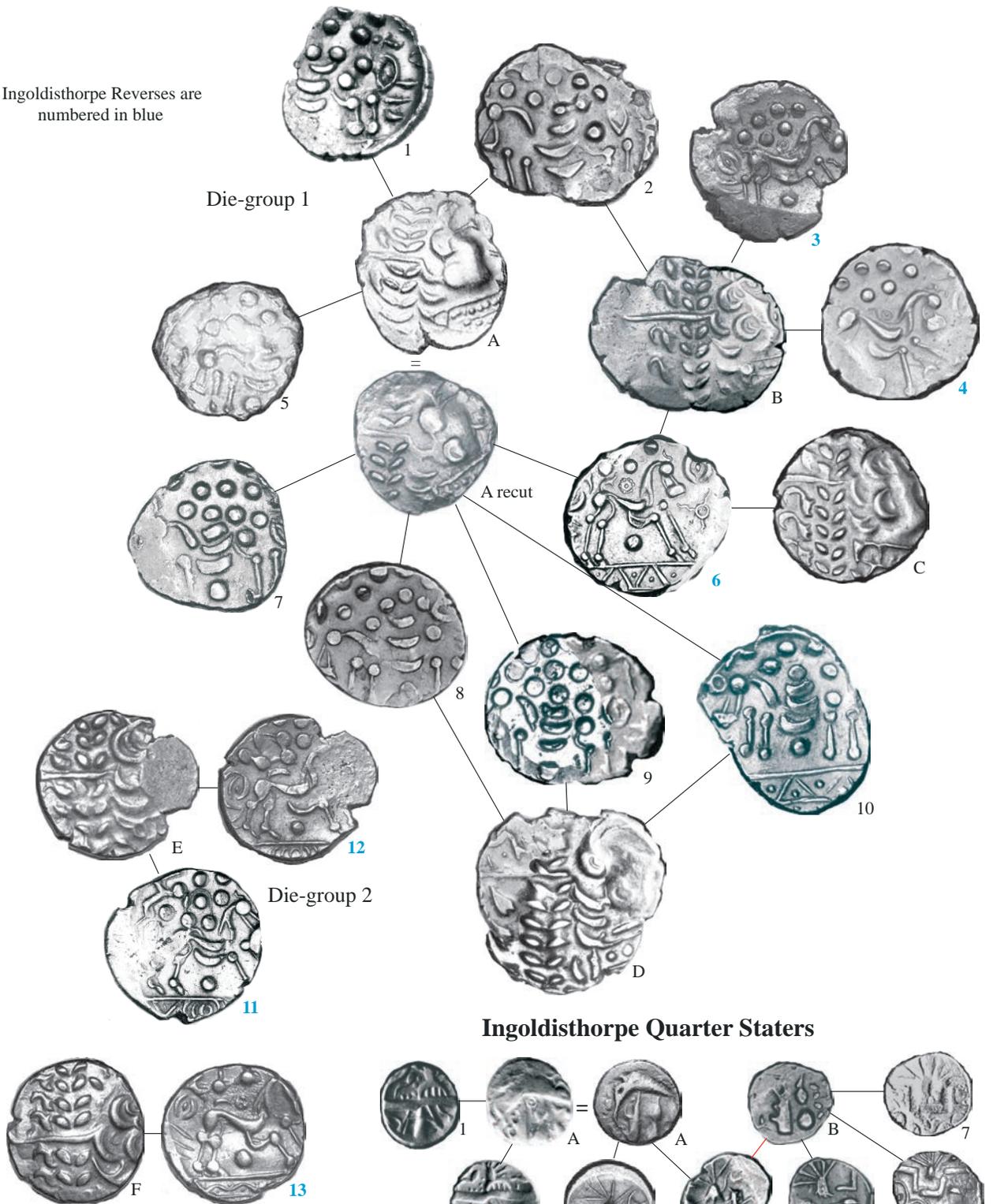
- 
- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>I.32 Boar Horse C Unit and Cani Dvro</li> <li>I.33 Anted, Ecen and Ece Stater, Antedio Unit and Half Unit and Anted Half Unit</li> <li>I.34–5 Anted Unit</li> <li>I.35 Anted unusual and plated Units</li> <li>I.37–8 Ecen Unit</li> <li>I.39 Ecen plated Units</li> <li>I.40 Ecen Half Unit</li> <li>I.41–8 Denominational coinage of Mint B</li> <li>I.41 Early Pattern Horse (A) Unit</li> <li>I.42 Early Pattern Horse (A) Unit, Half Unit and Stater</li> <li>I.43–7 Late Face Horse Unit</li> <li>I.48 Late Face Horse plated and unusual Units</li> </ul> | <ul style="list-style-type: none"> <li>I.49–51 Denominational coinage of Mint C</li> <li>I.49 Saham Toney Unit, Quarter Stater and Half Unit</li> <li>I.50 Early Pattern Horse (B) Unit, Half Unit, Quarter Stater and Stater</li> <li>I.51 Aesv, Saenv and Ece B Units</li> <li>I.52–3 Later local coinage</li> <li>I.52 Ece A Unit</li> <li>I.53 Ale Sca and Esv Prasto Units, Mildenhall Half Unit and Quarter Stater and uncertain types</li> </ul> <p>Photographic images of coins in the die-study are used with the permission of the Celtic Coin Index, Oxford University.</p> |
|---|--|

x1.4

### British A and the Ingoldisthorpe Stater

Appendix I.1

Ingoldisthorpe Reverses are numbered in blue



Quarter Stater die link B:4 is post-close, with die 4 appearing recut.

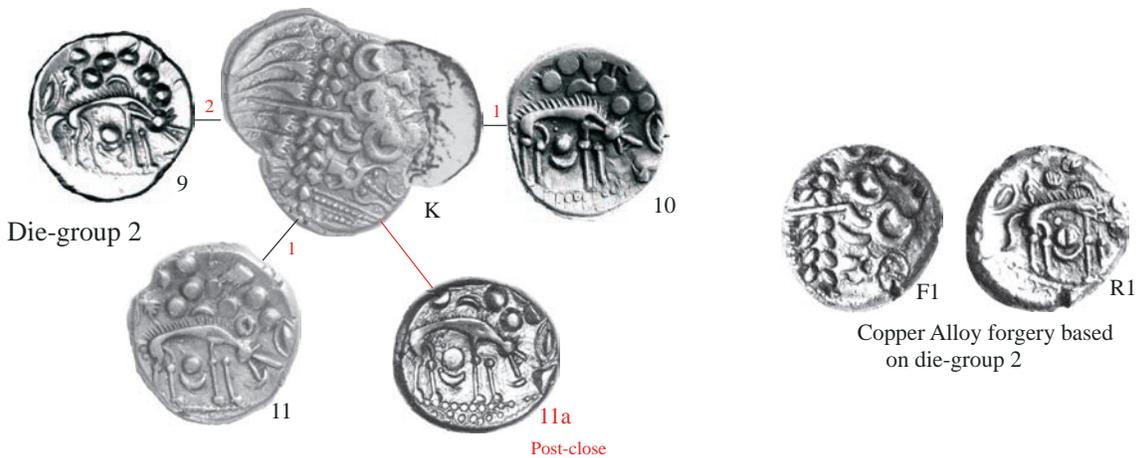
x1.4

### Norfolk Wolf A

Appendix I.2



The layout and referencing of this die-group is not in strict chronological sequence, the earliest obverse dies appear to be A,B and J and the earliest reverses 7, 8, 1a and 1. Die H is likely to be the final obverse die.



x1.4

### Norfolk Wolf A continued

Appendix I.3

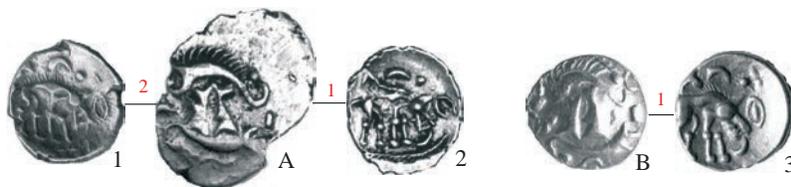
Die-group 3



Die-group 4



### Norfolk Wolf A Quarter Stater

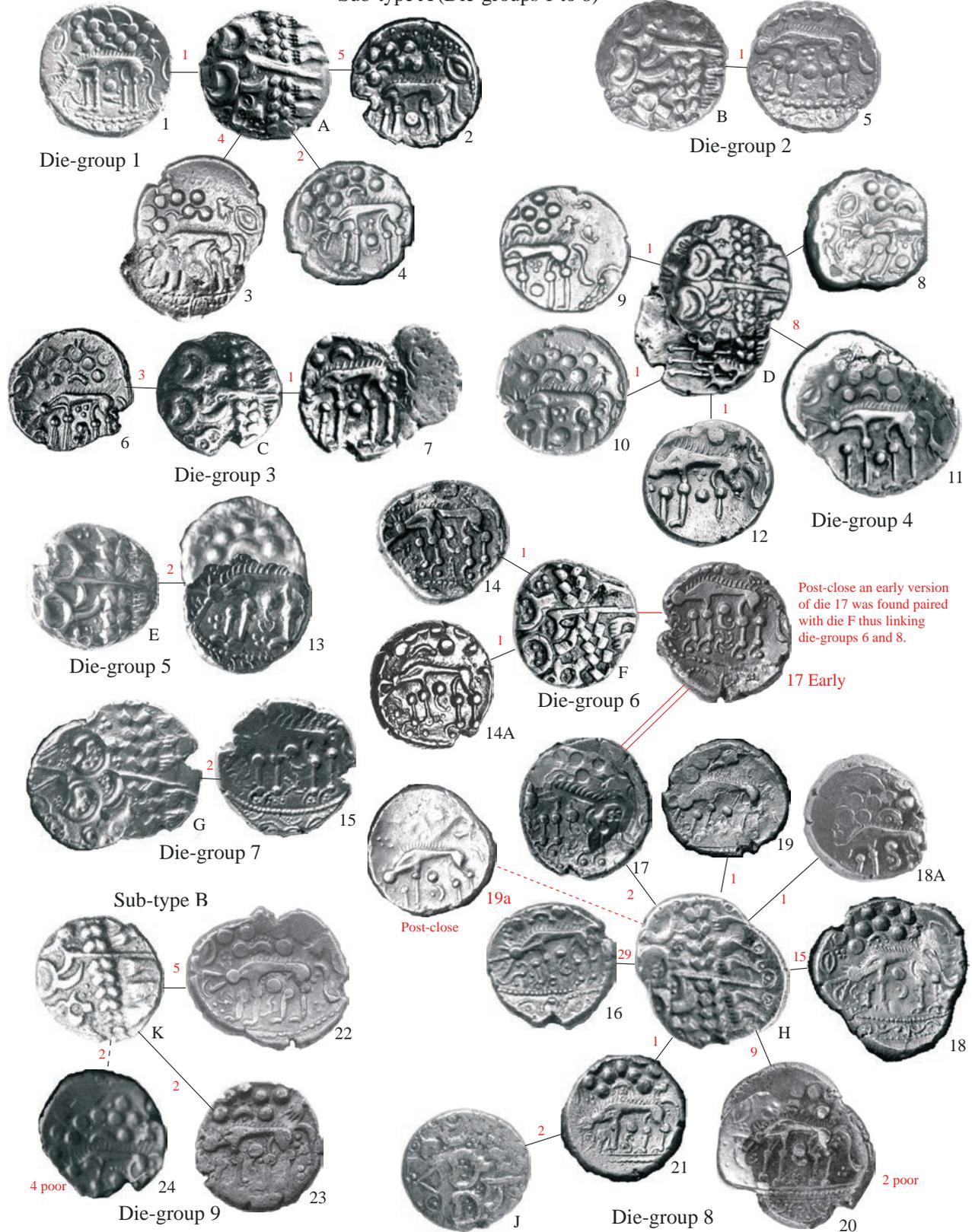


x1.4

### Norfolk Wolf B Sub-types A and B

Appendix I.4

#### Sub-type A (Die-groups 1 to 8)



x1.4

### Norfolk Wolf B Sub-type Ci

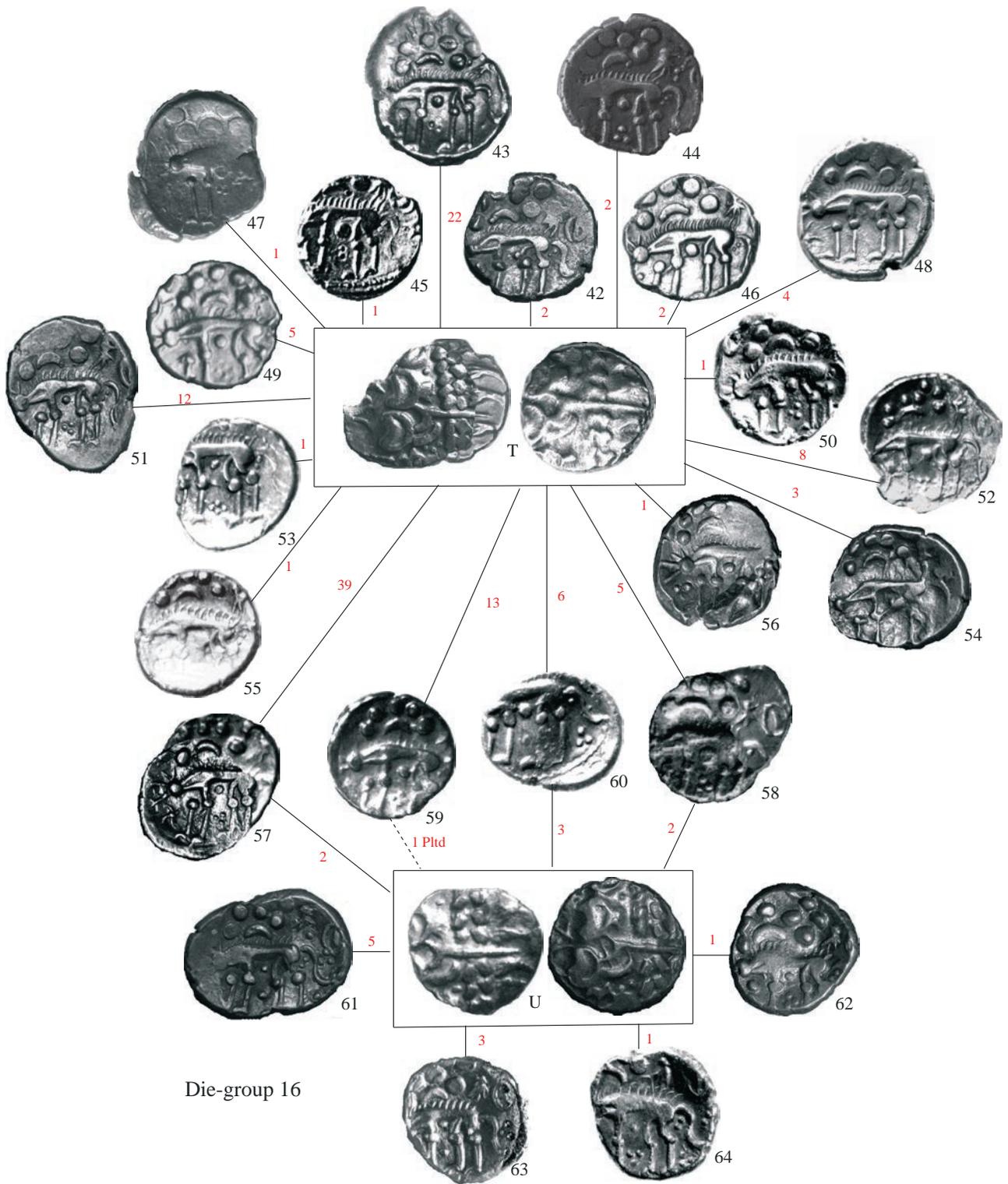
Appendix I.5



x1.4

### Norfolk Wolf B Sub-type Cii

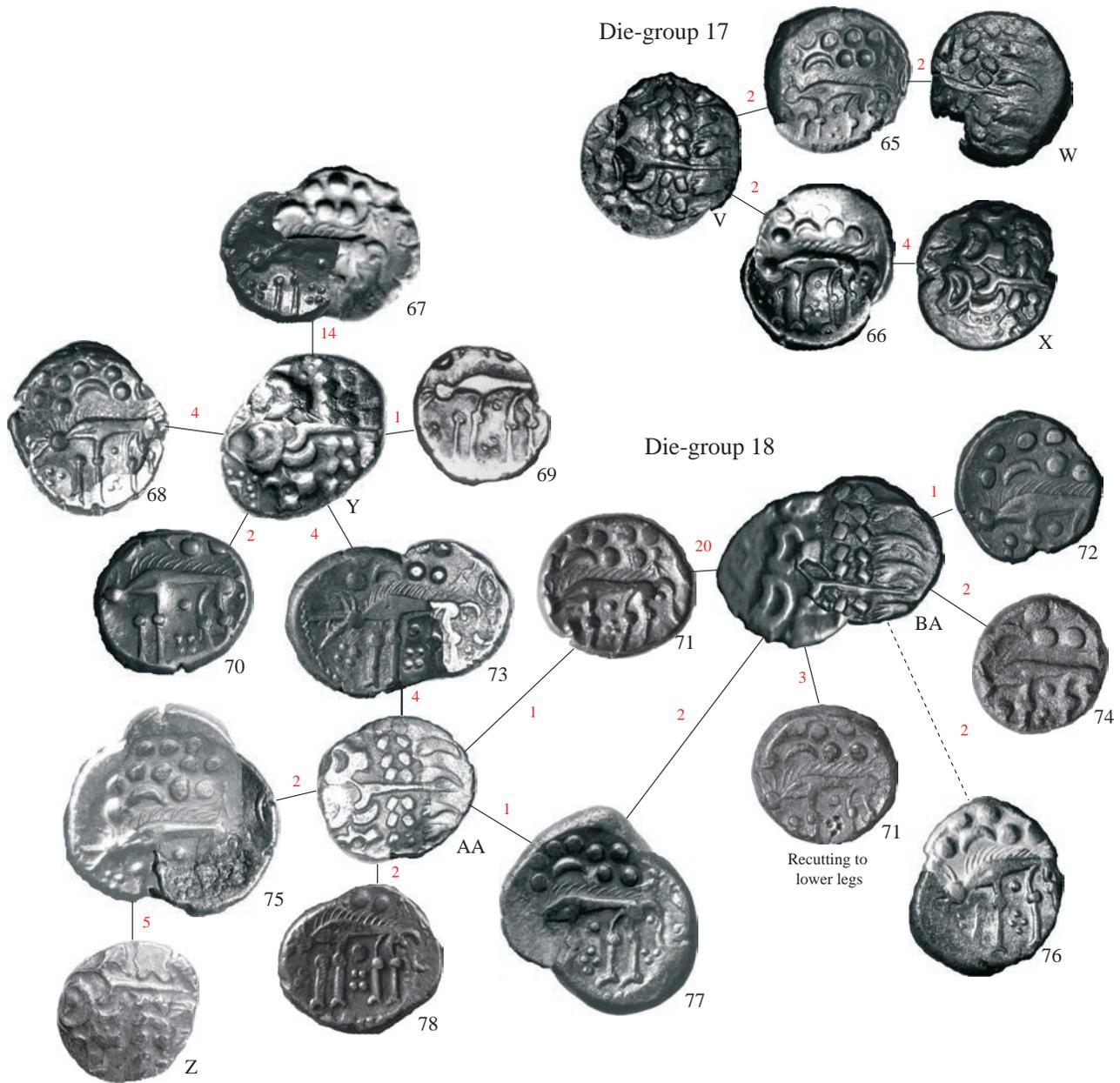
Appendix I.6



x1.4

### Norfolk Wolf B Sub-type D

Appendix I.7



### Norfolk Wolf B new Sub-type

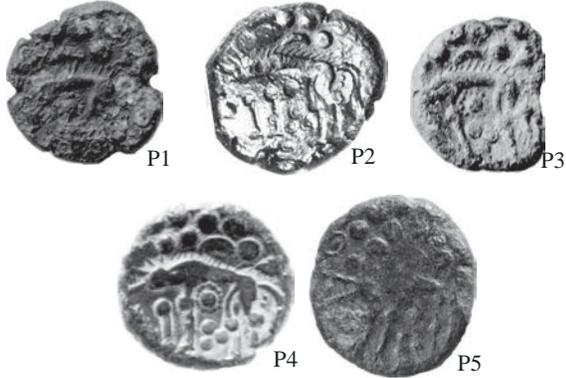


x1.4

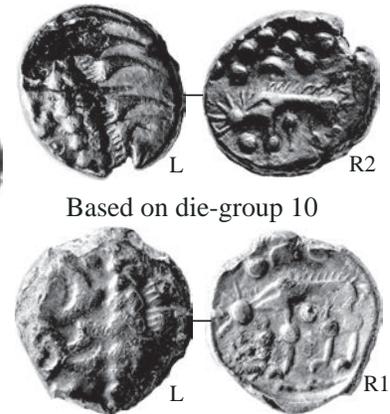
### Examples of plated Norfolk Wolf B Staters

Appendix I.8

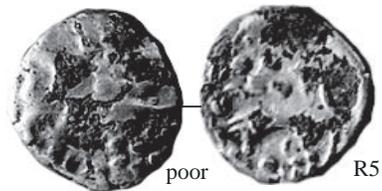
Based on Sub-type B die-group 9



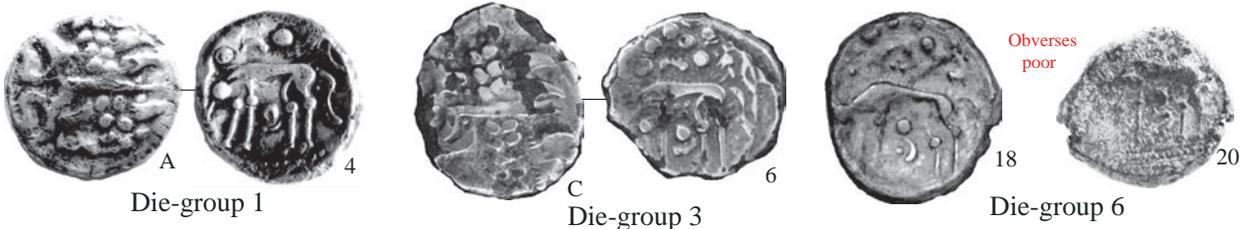
Based on die-group 10



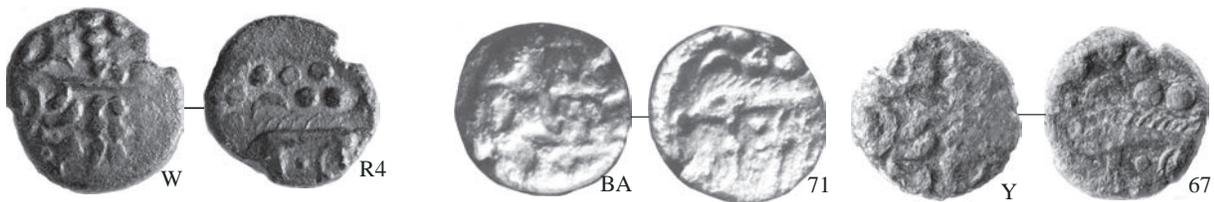
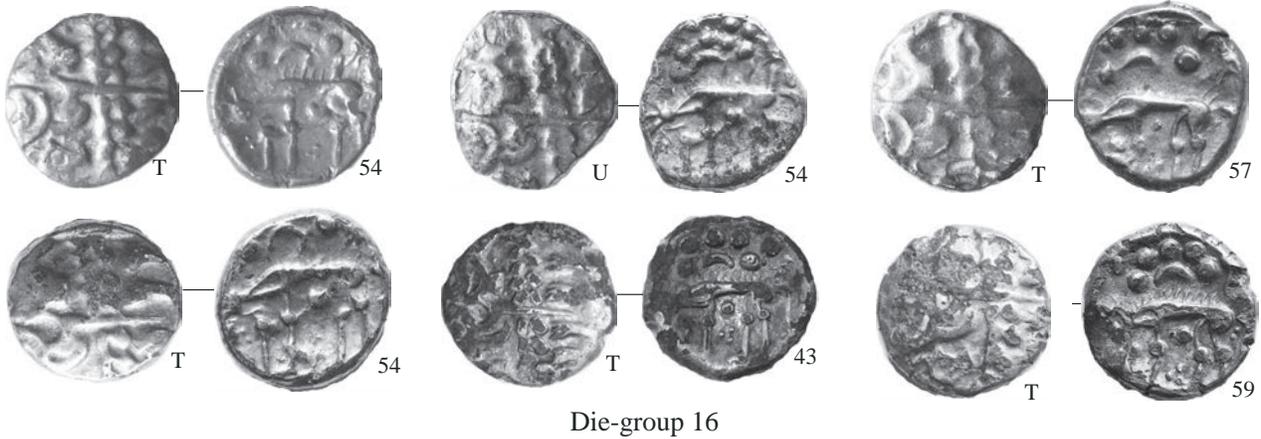
Based on sub-type D



### Examples of plated "official" dies



Obverses poor

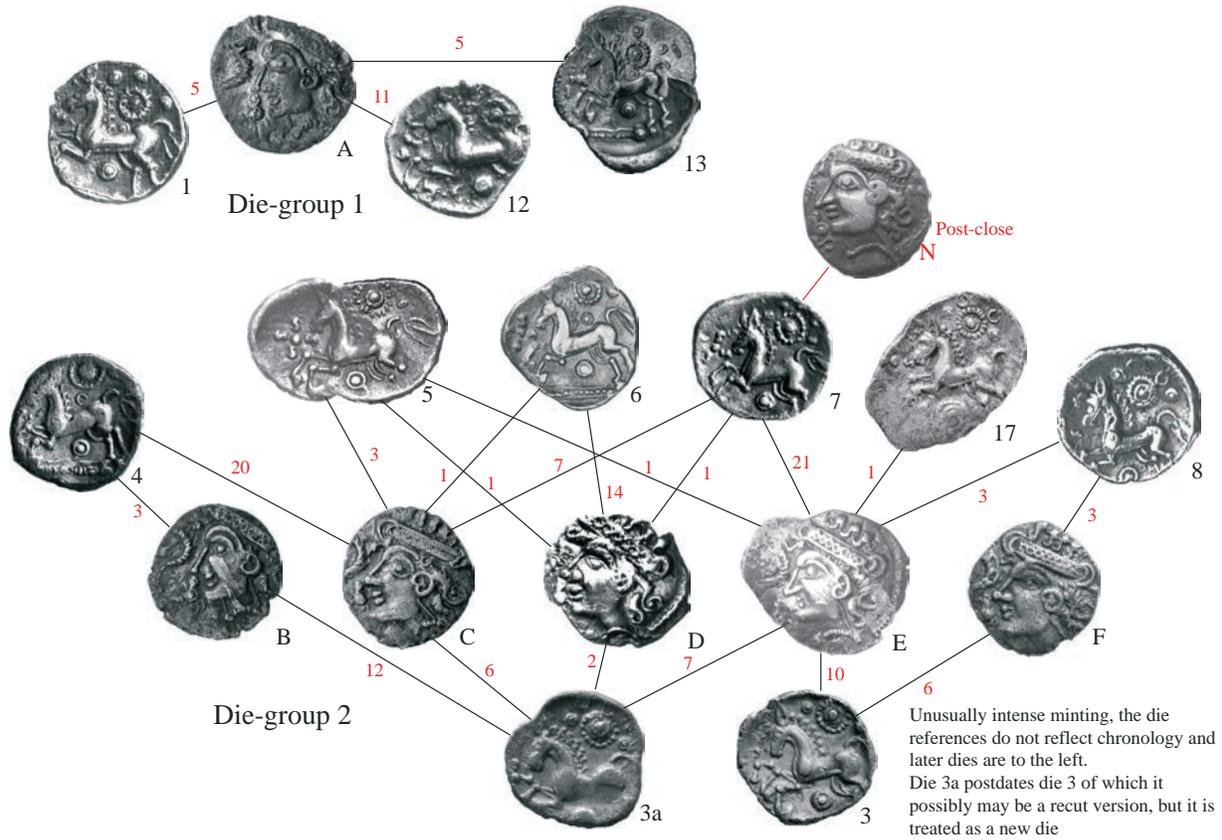


Die-group 18 (possibly including debased official coins)

x1.4

### Bury A

Appendix I.9



Unusually intense minting, the die references do not reflect chronology and later dies are to the left.  
 Die 3a postdates die 3 of which it possibly may be a recut version, but it is treated as a new die



### Bury E



### Bury F

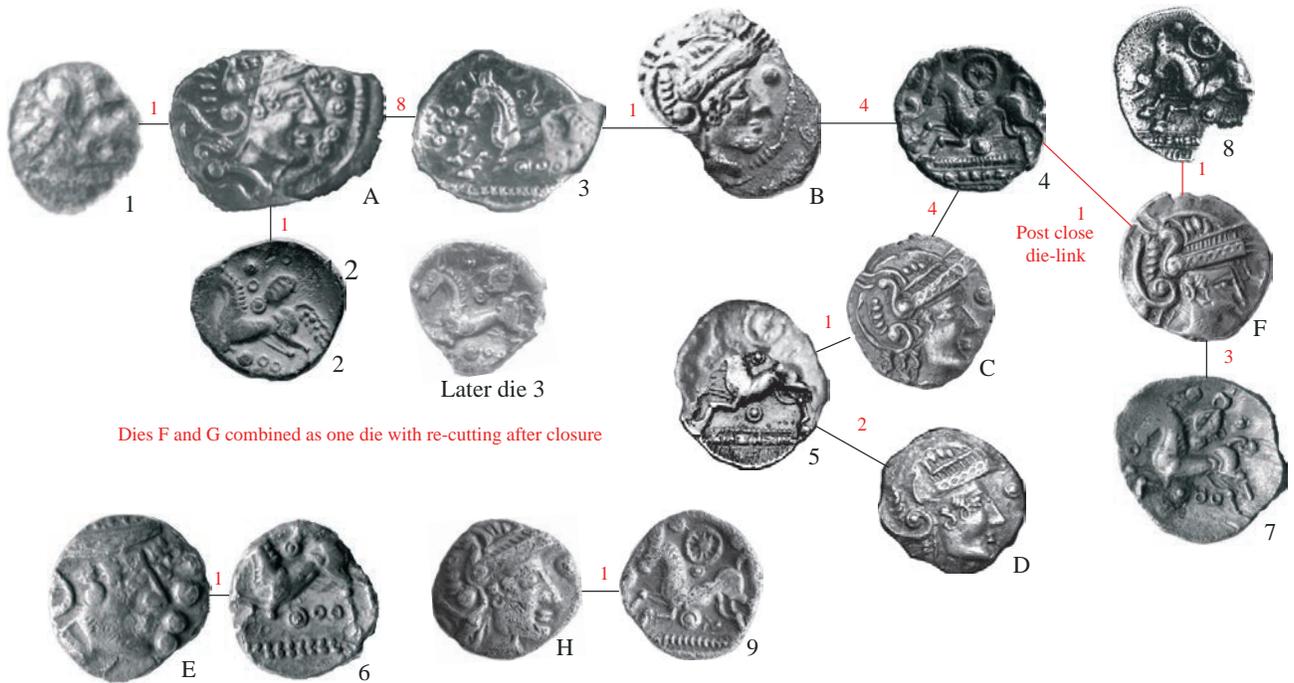


x1.4

### Bury C

Appendix I.10

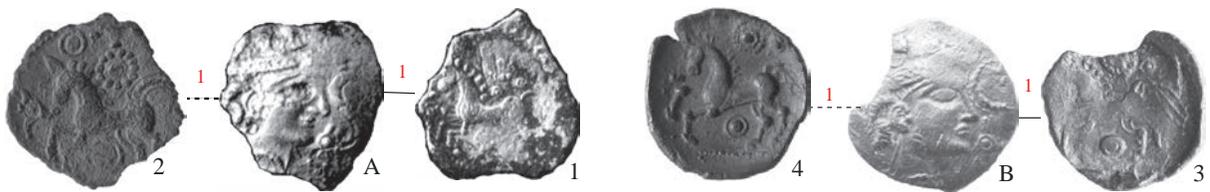
#### Sub-type 1



#### Sub-type 2



### Bury H

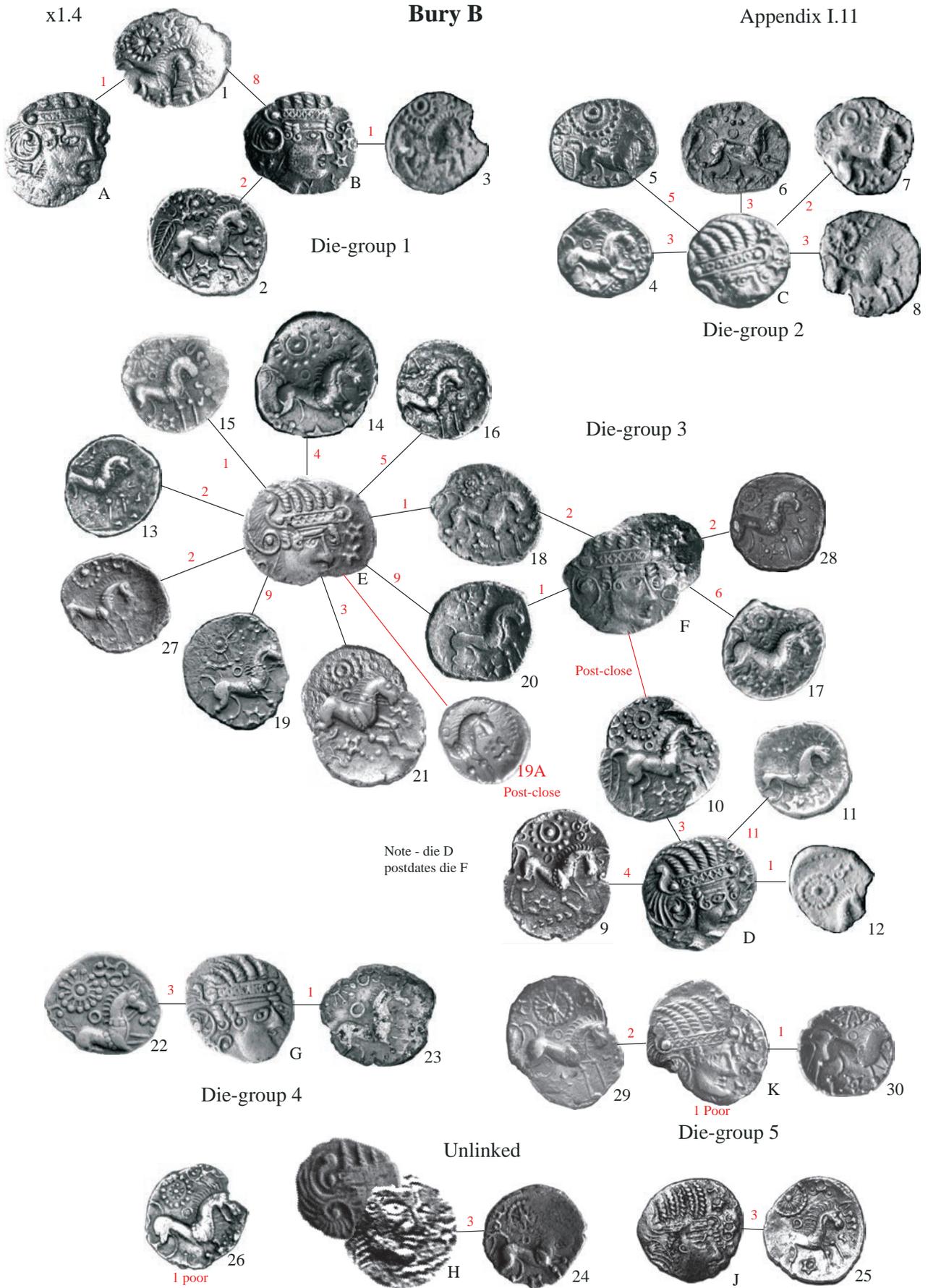


### Bury D



### Bury G



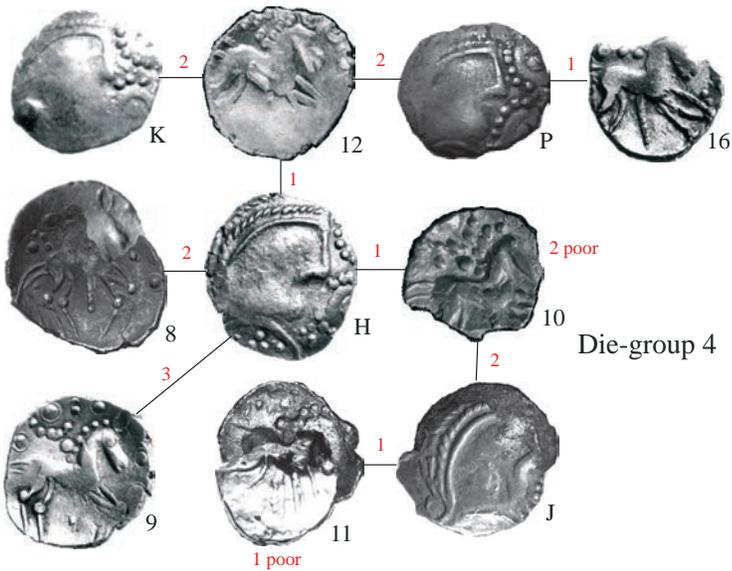
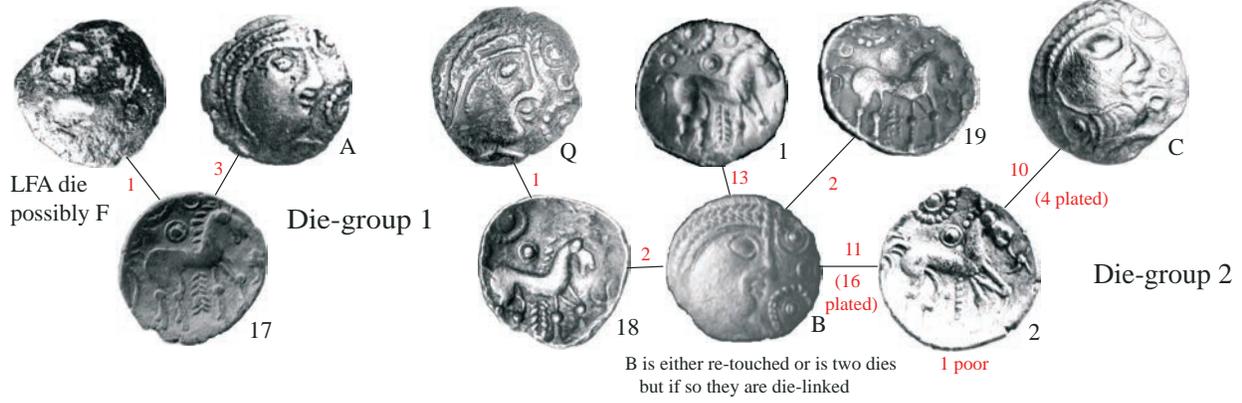




x1.4

### Large Flan C

Appendix I.13



x1.4

### Large Flan B

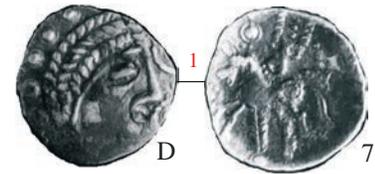
Appendix I.14



Sub-type 1



Sub-type 11



Sub-type 111



Post-close - Unit with previously unknown dies probably related to Large Flan B

x1.4

### Early Half Units

Appendix I.15

#### Bury Pallas and subsequent Snettisham and Plouviez

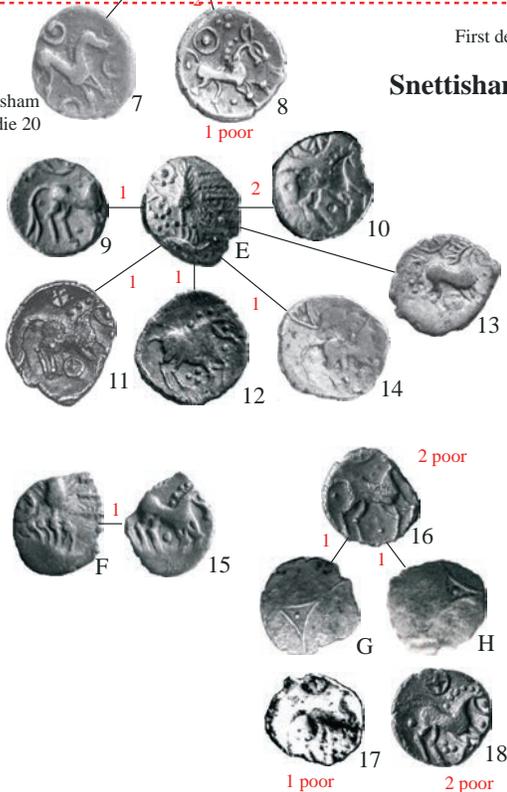


Early local coinage

First denominational coinage

Snettisham  
Unit die 20

#### Snettisham and Plouviez



Reverses 17 & 18 die-linked to  
unidentified triangle obverse

#### Bury Butterfly



#### Bury Face Horse



#### Large Flan B



x1.4

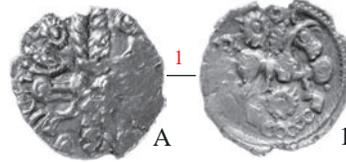
### Early Local Small Issues

Appendix I.16

#### Large Flan Quarter Stater



#### Bury Quarter Stater



#### Large Flan D Unit



#### Spiral Unit



#### Unidentified possibly East Anglian

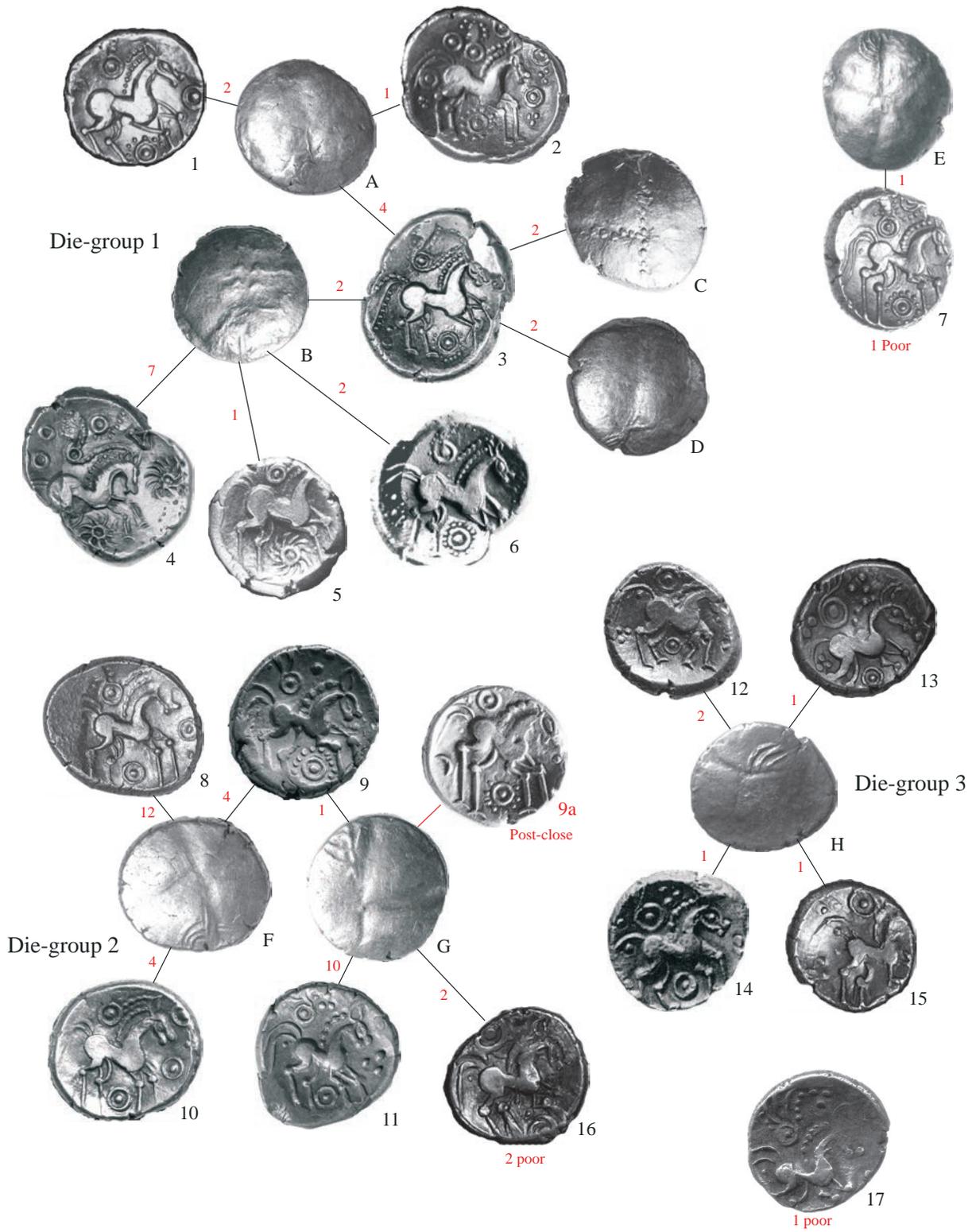


1.11g from Snettisham

x1.4

### Snettisham Stater

Appendix I.17



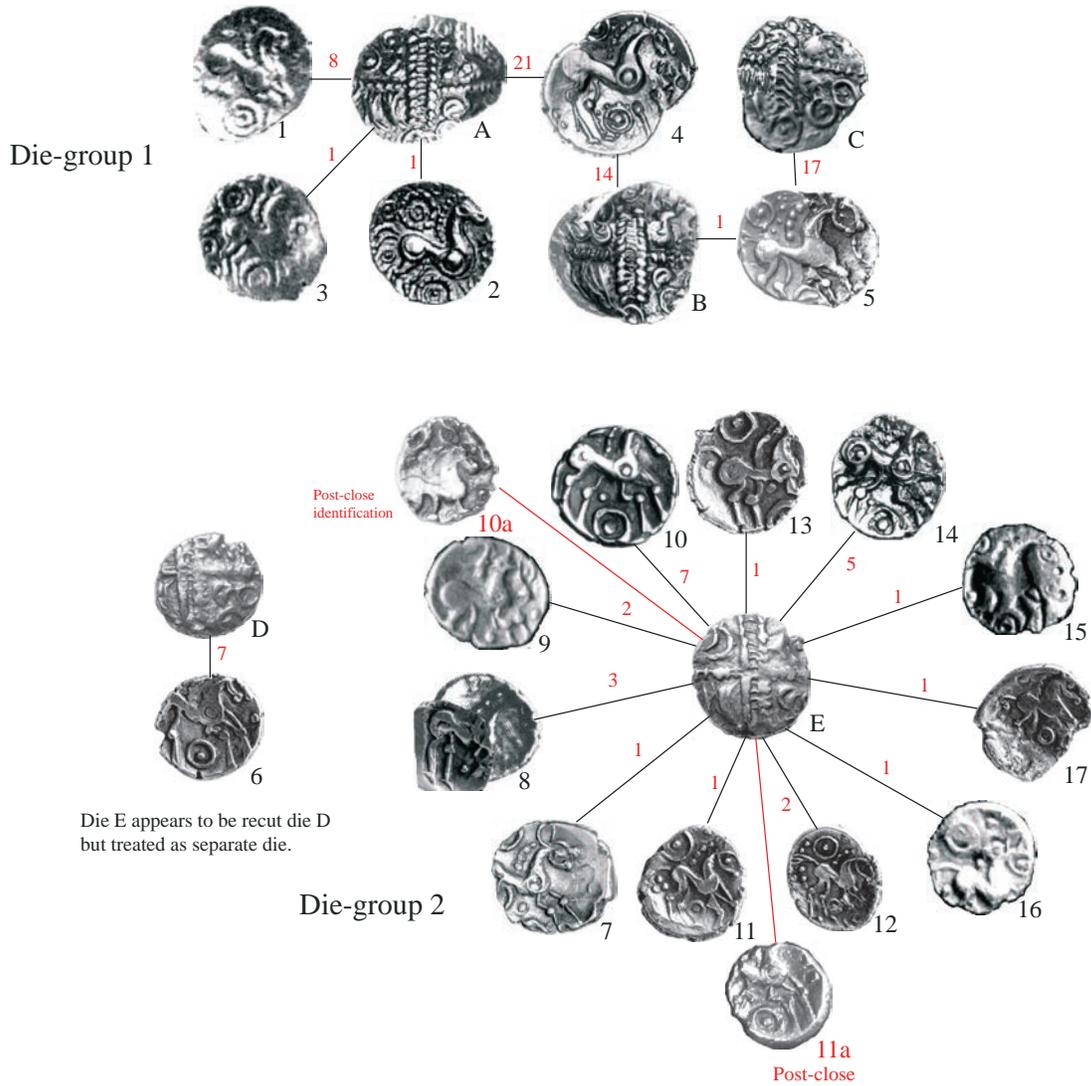
x1.4

### Early Snettisham Quarter Stater

Appendix I.18



### Snettisham Quarter Stater

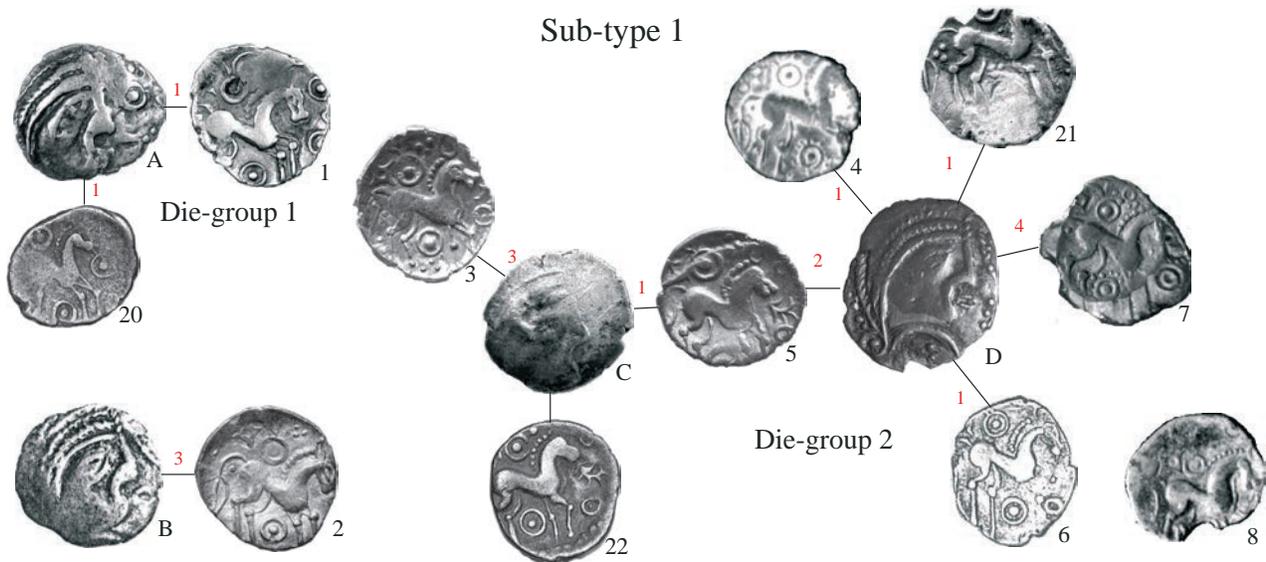


x1.4

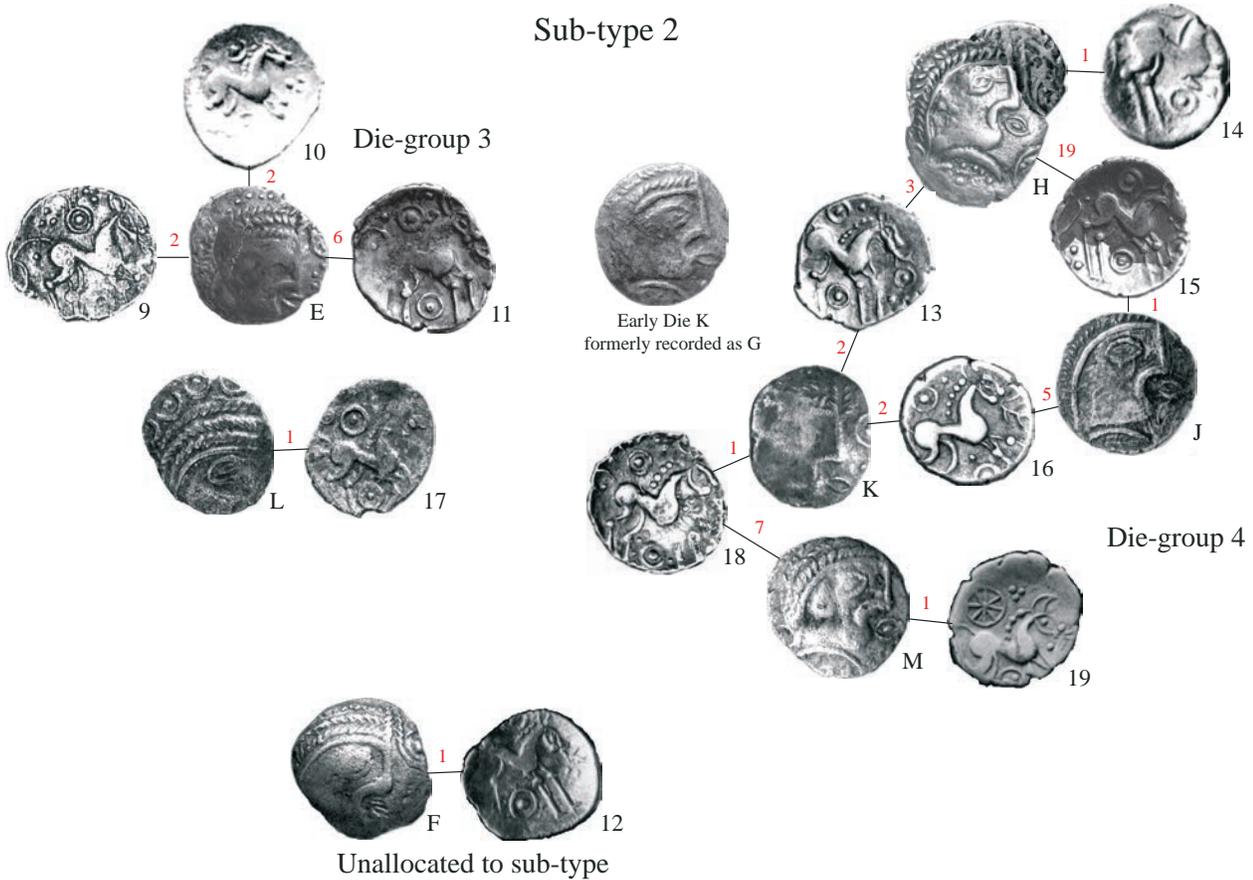
Snettisham Unit

Appendix I.19

Sub-type 1



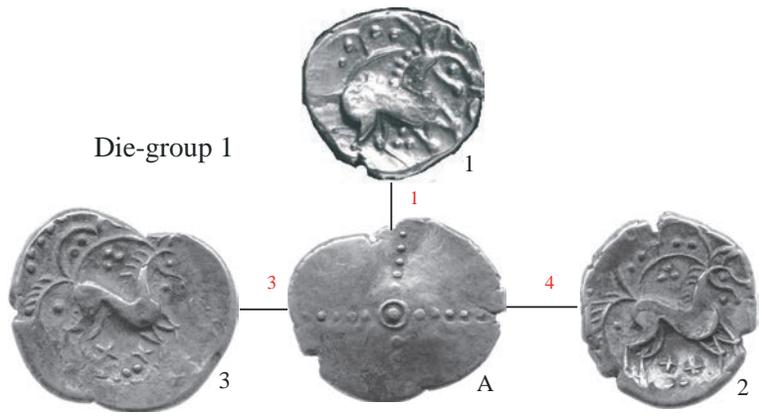
Sub-type 2



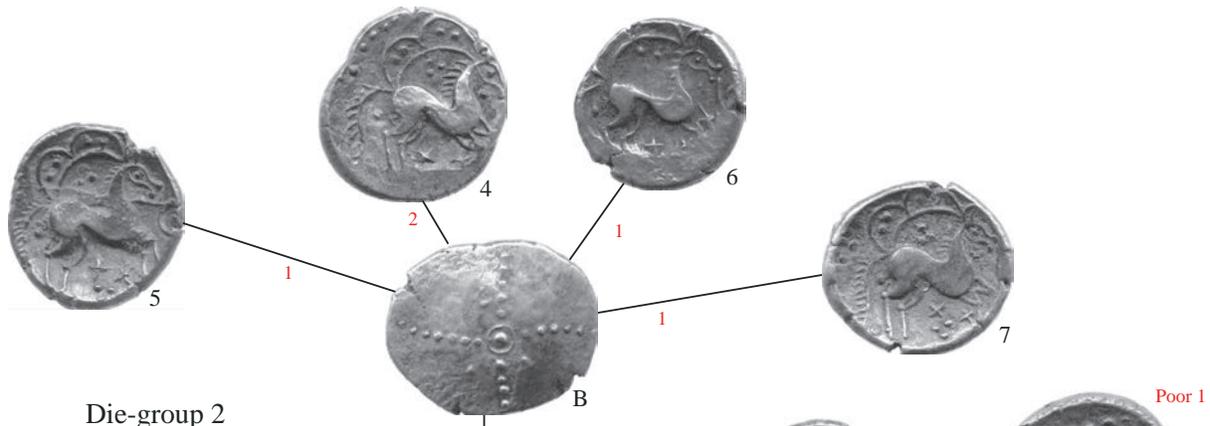
x1.4

### Plouviez Stater

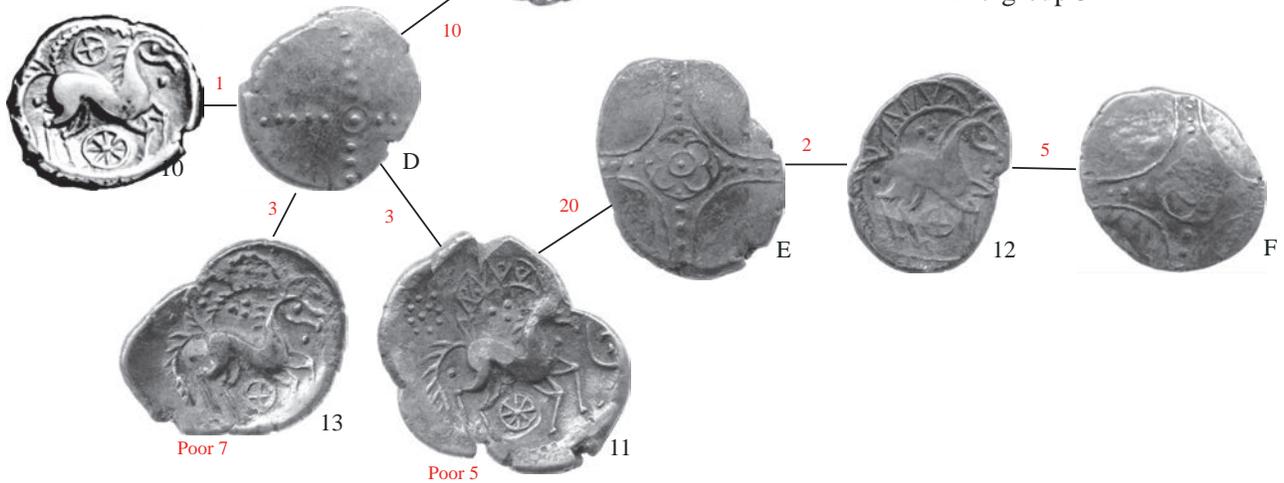
Appendix I.20



Despite similarities die 4 does not appear to be die 3 with re-working



Die-group 2



x1.4

### Plouviez Unit

Appendix I.21



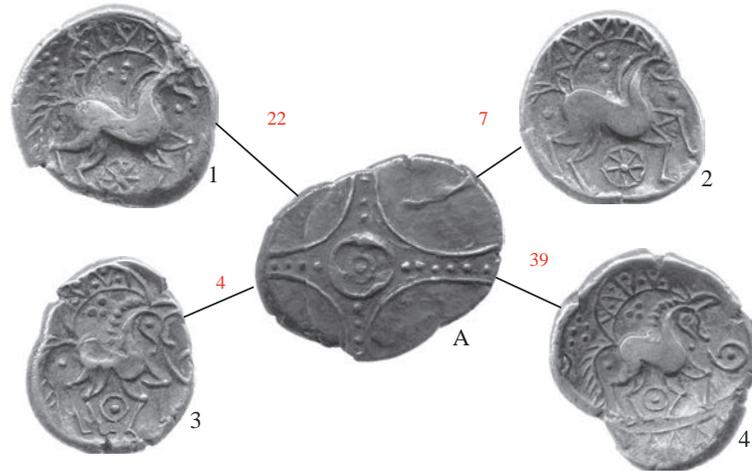
Many examples in poor condition and obverses are hard to separate, many additional dies and links likely

x1.4

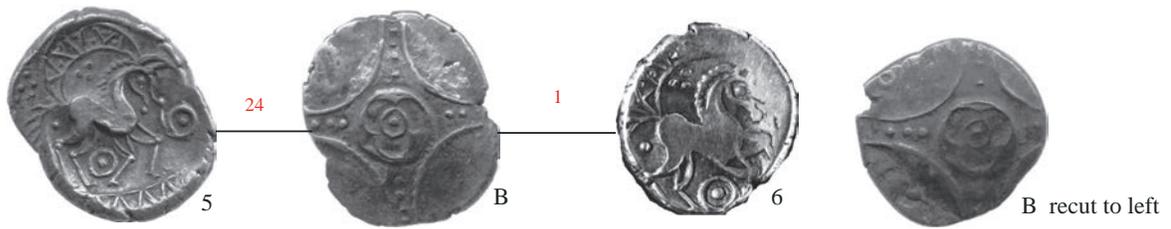
**Irstead Stater**

Appendix I.22

Die-group 1



Die-group 2



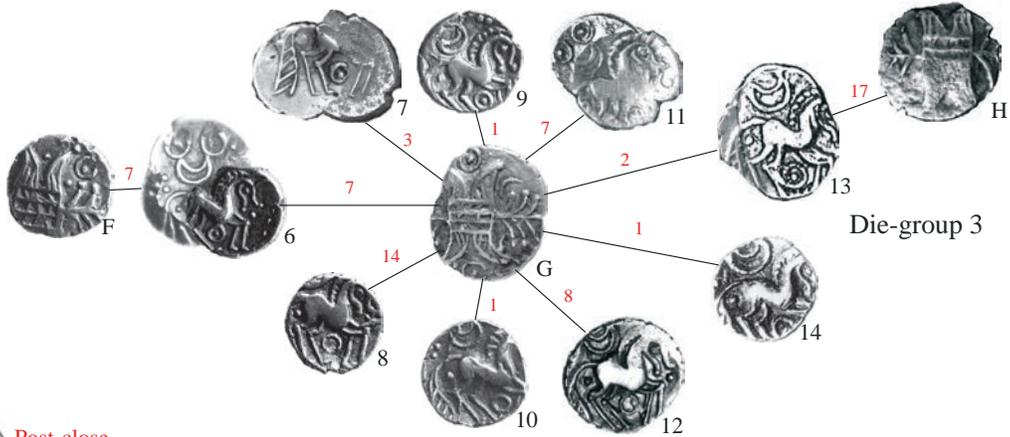
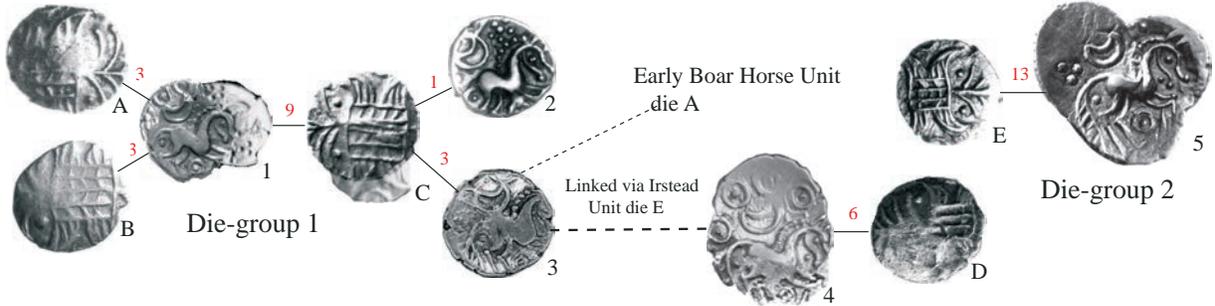
Die-group 3



x1.4

### Irstead Quarter Stater

Appendix I.23



### Irstead Unit



### Irstead Half Unit



x1.4

### Early Boar Horse Stater

Appendix I.24

Die-group I



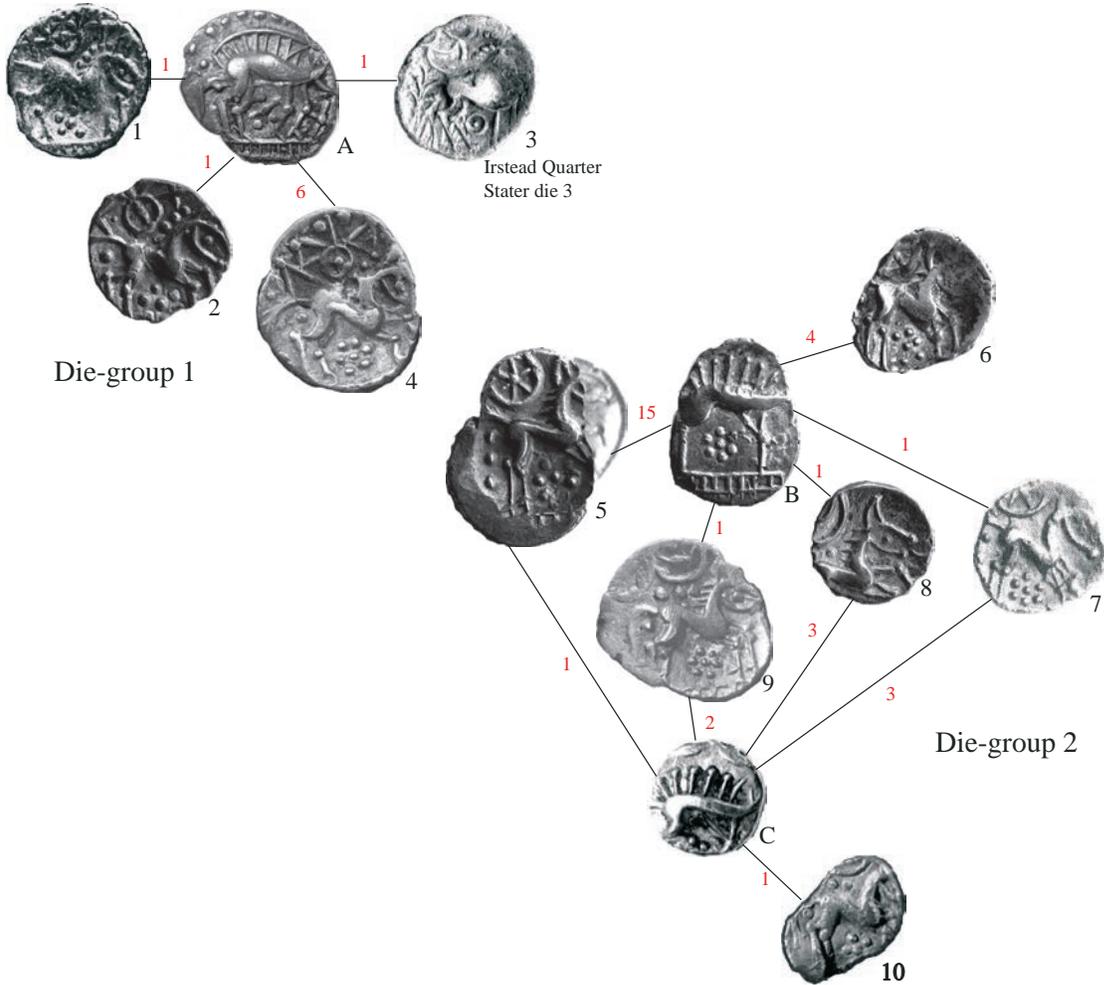
Die-group 2



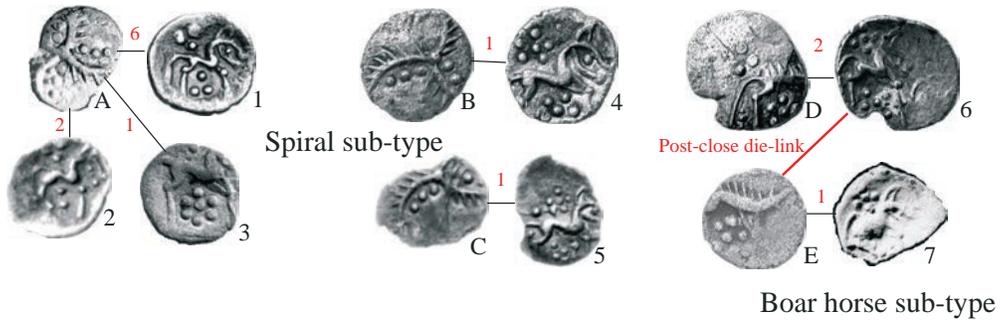
x1.4

### Early Boar Horse Unit

Appendix I.25



### Early Boar Horse Half Unit

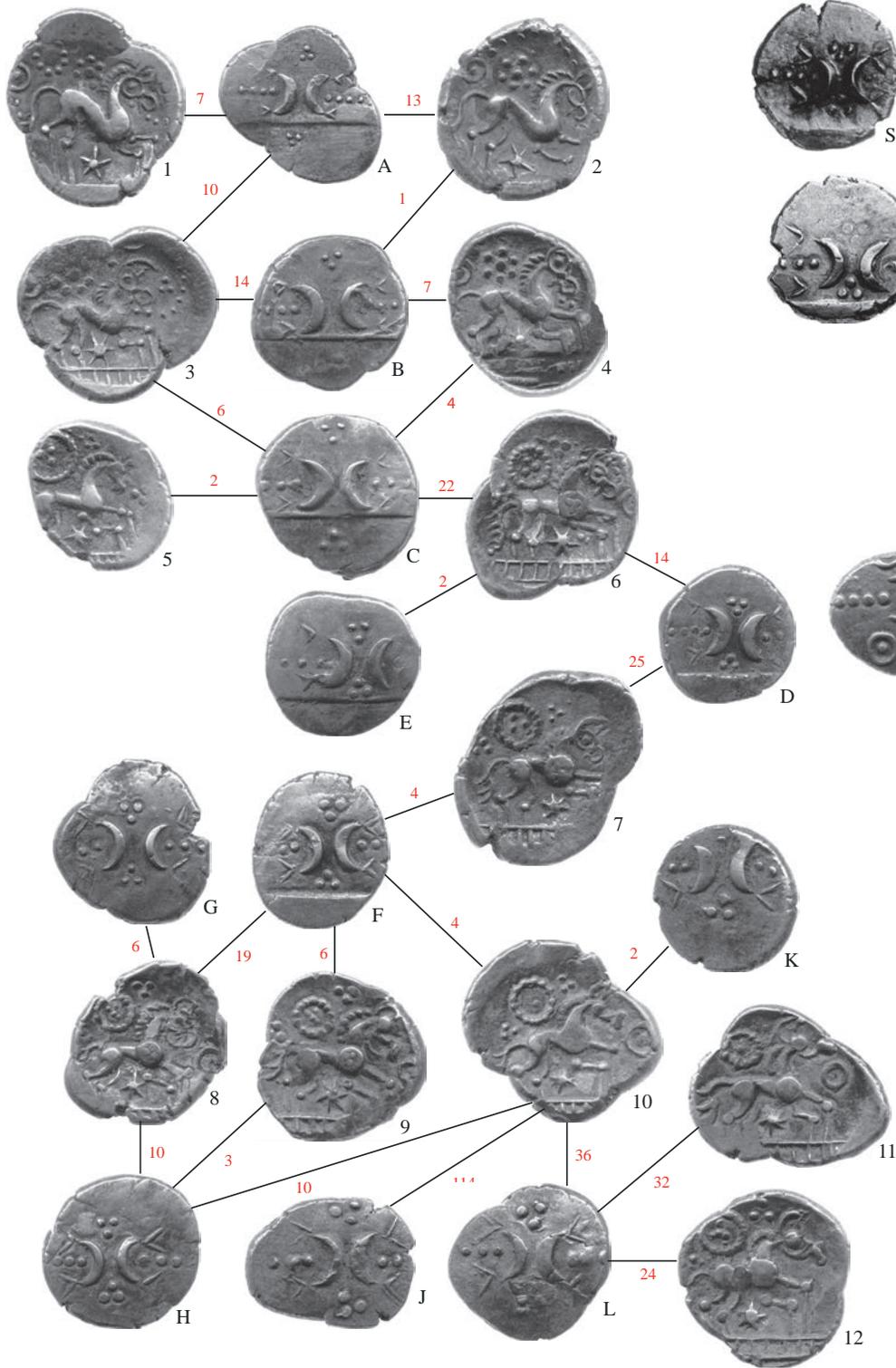


x1.4

### Boar Horse B Stater

Appendix I.26

Die-group I



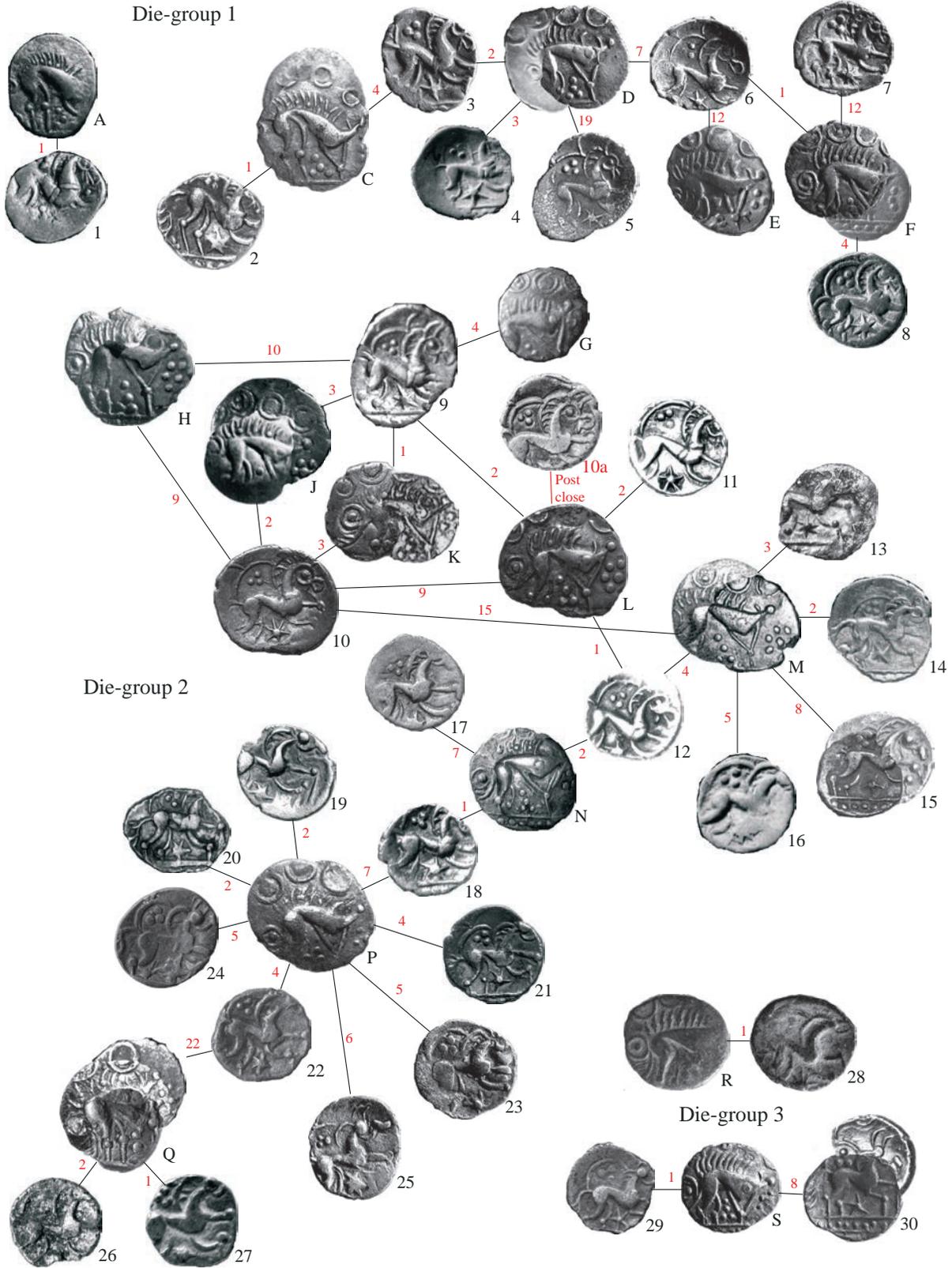
### Boar Horse B (A)



x1.4

### Boar Horse B Unit

Appendix I.27



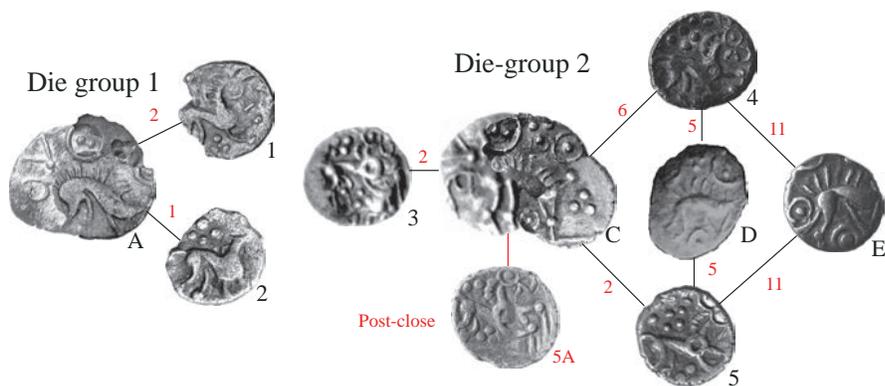
x1.4

### Boar Horse B (A) Unit

Appendix I.28



### Boar Horse B Half Unit



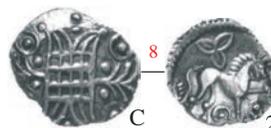
### Boar Horse B (A) Half Unit



### Boar Horse B Quarter Stater



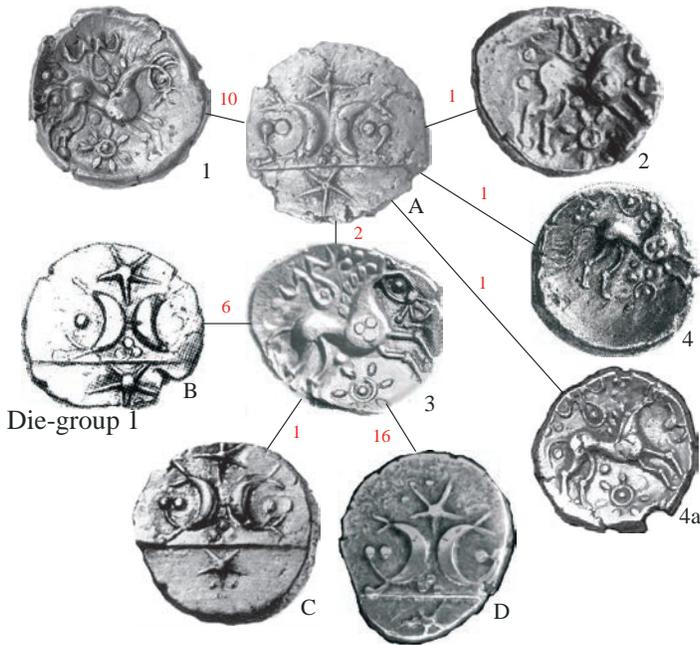
### Boar Horse B (A) Quarter Stater



x1.4

### Boar Horse C Stater

Appendix I.29



Die-group 1

Example of false Boar Horse C Stater



H  
post-close

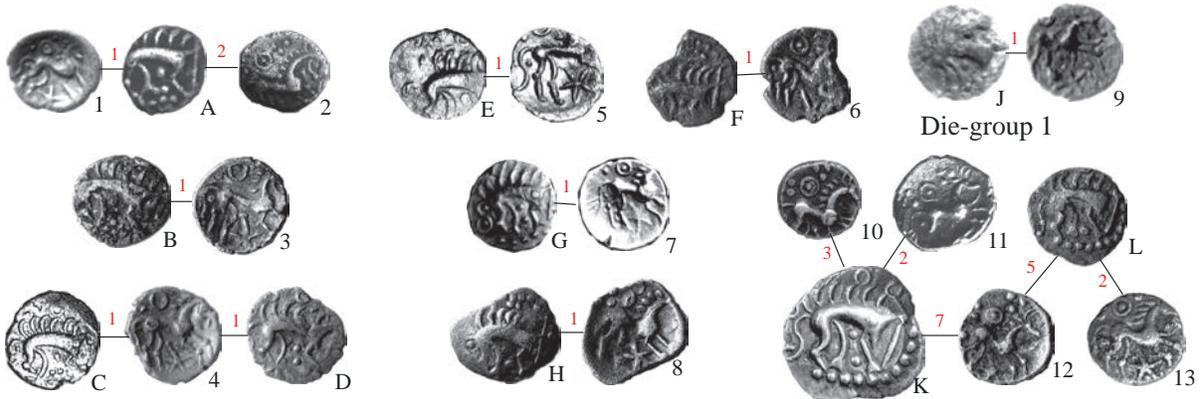
Die-group 2



### Boar Horse C Quarter Stater



### Boar Horse C Half Units



Die-group 1

x1.4

### Boar Horse C Unit

Appendix I.30

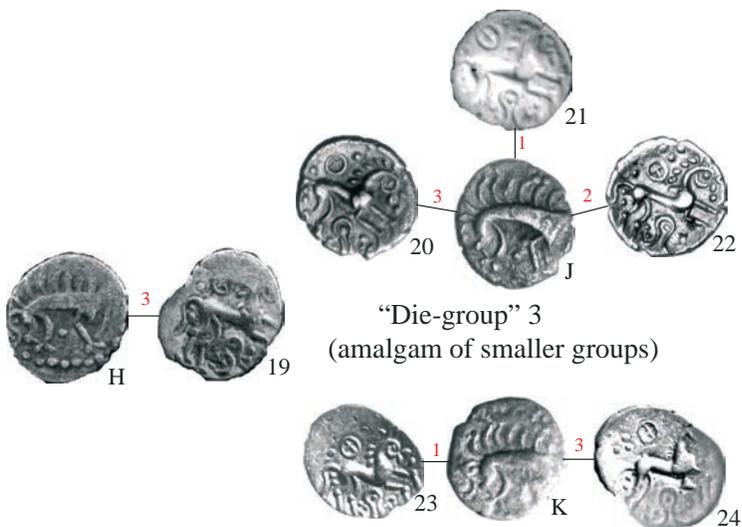
Die-group 1



Die-group 2



“Die-group” 3  
(amalgam of smaller groups)



Die-group 4



Die-group 5



x1.4

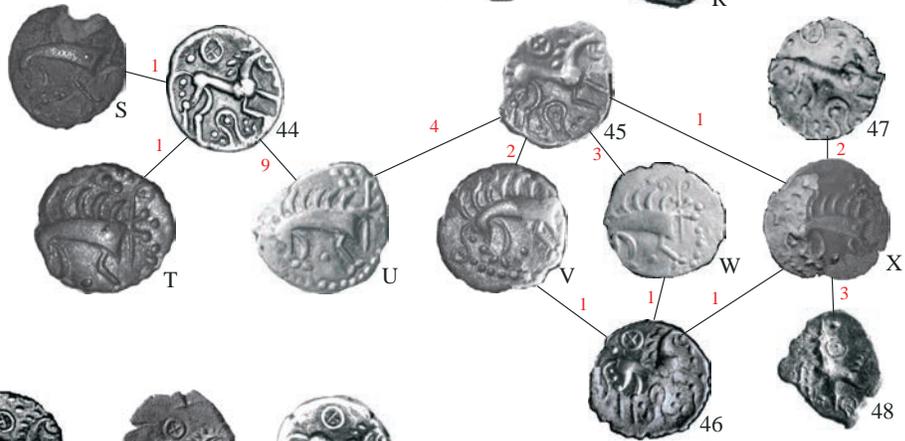
Boar Horse C Unit continued

Appendix I.31

Die-group 6



Die-group 7



Die-group 8



Die-group 9



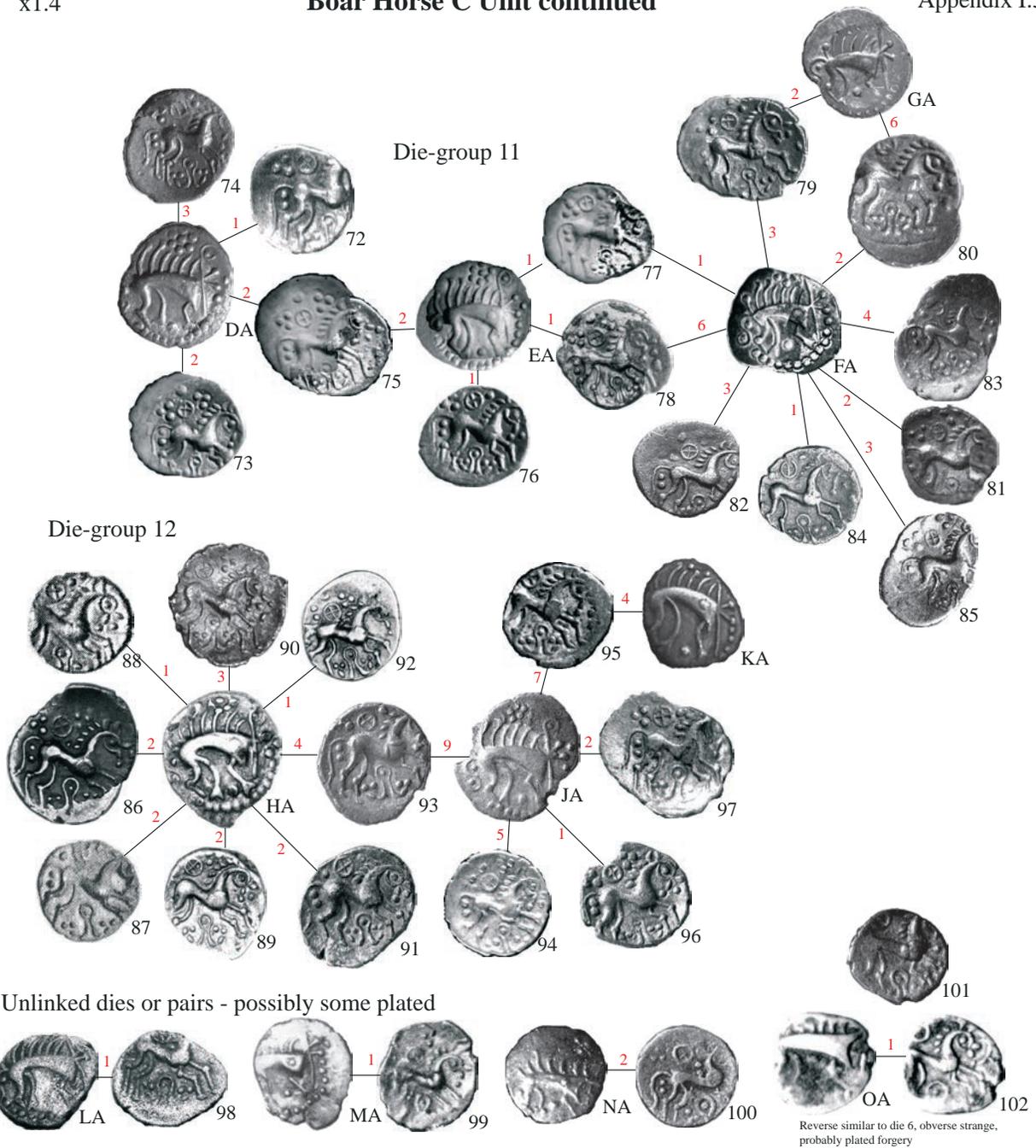
Die-group 10



x1.4

### Boar Horse C Unit continued

Appendix I.32



### Canis Dvros Unit



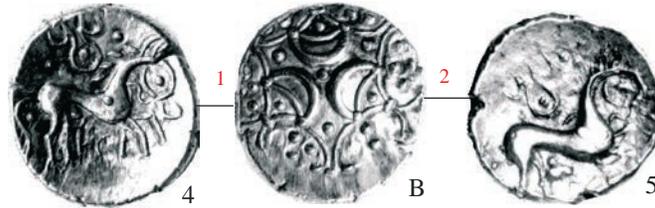
x1.4

### Anted and Ecen Stater

Appendix I.33



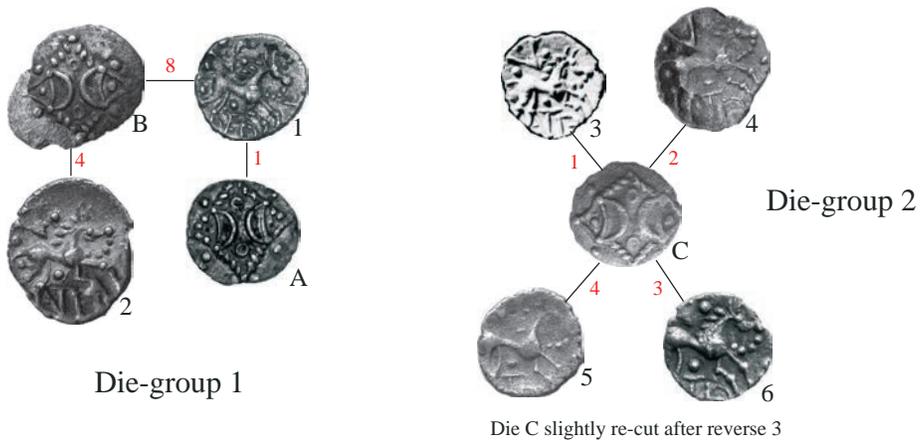
### Ece Stater



### Antedio SIA Unit and Half Unit



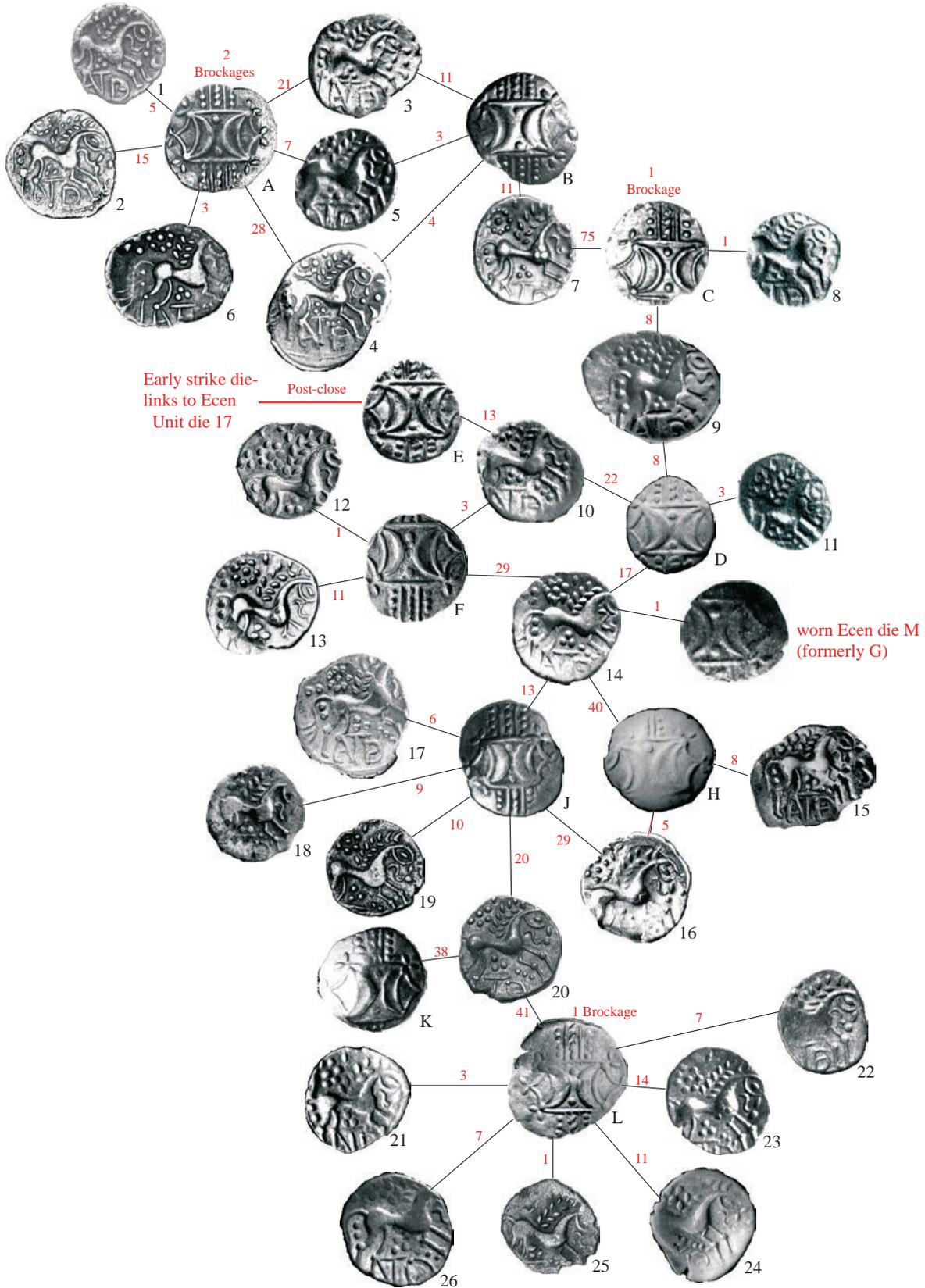
### Anted Half Unit



x1.4

### Anted Unit die-group 1

Appendix I.34



x1.4

Anted Unit continued

Appendix I.35

Die-group 2



Die-group 4



Die-group 3

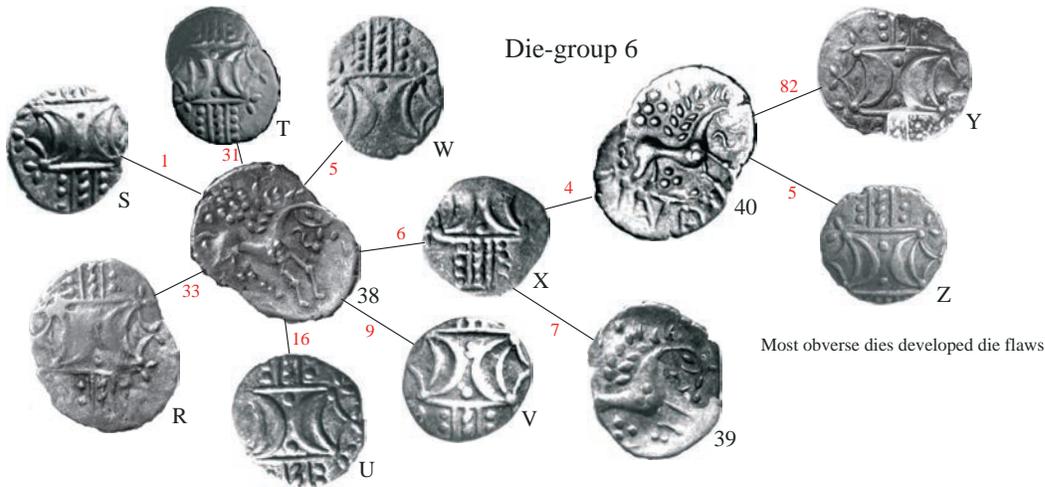


The outer bands of die N were re-worked

Die-group 5



Die-group 6



Die-group 7



x1.4

### Anted unusual and plated Units

Appendix I.36

Unusual dies assumed to be plated



Definitely plated



Reverse possibly has letter C below horse - see SIA type



Dies R21 to R27 are all single examples with obverses in poor condition





x1.4

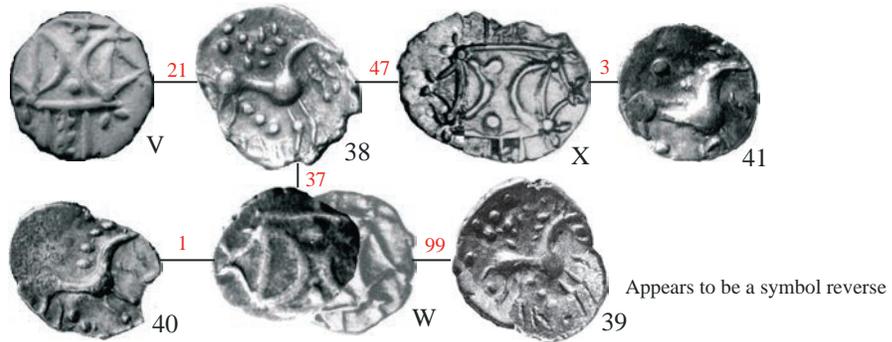
### Ecen Unit continued

Appendix I.38

Die-group 2



Die-group 3



Die-group 4 (symbol)



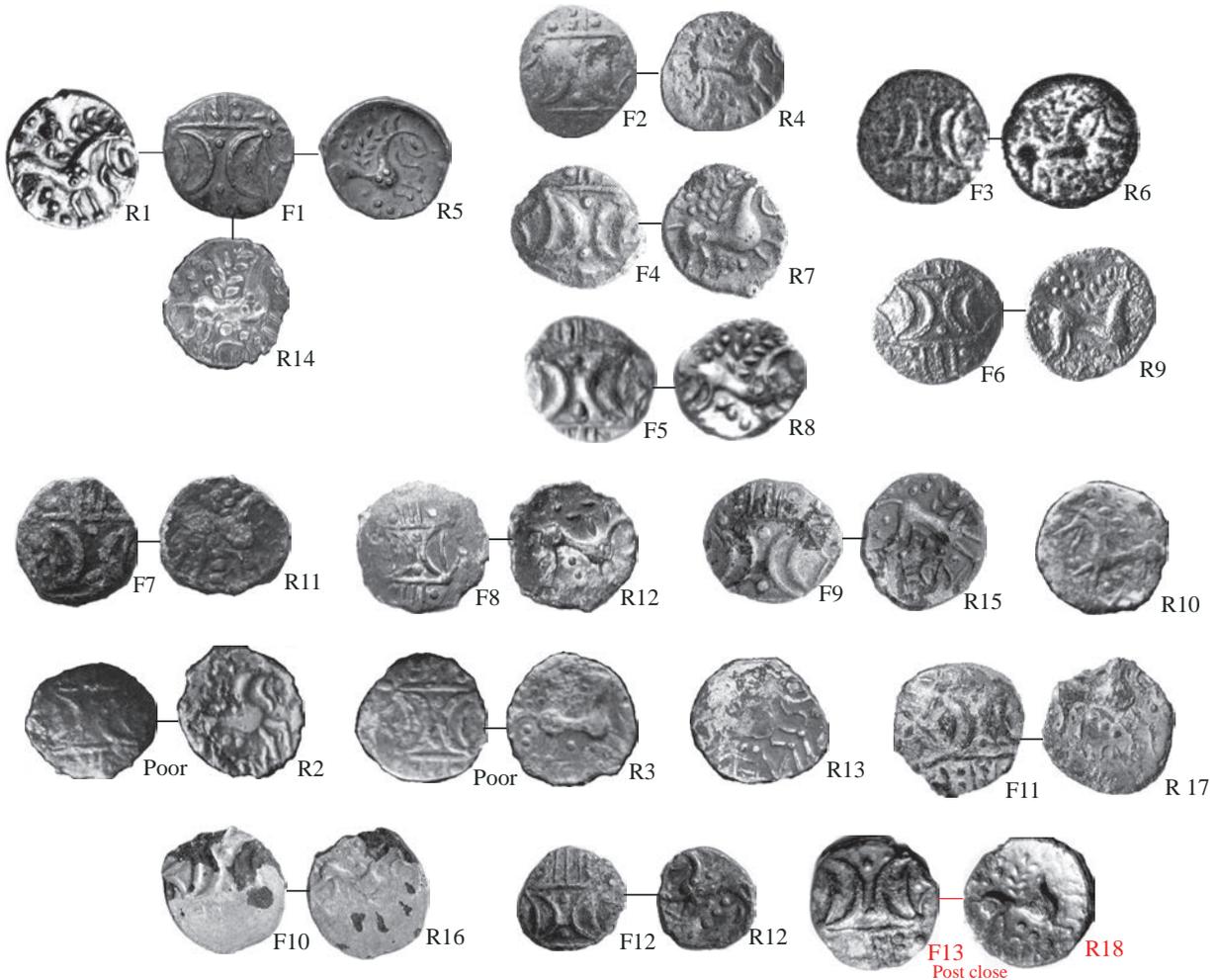
Die-group 5 (symbol)



x1.4

### Ecen plated Units

Appendix I.39



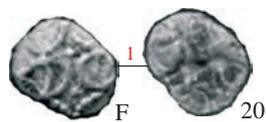
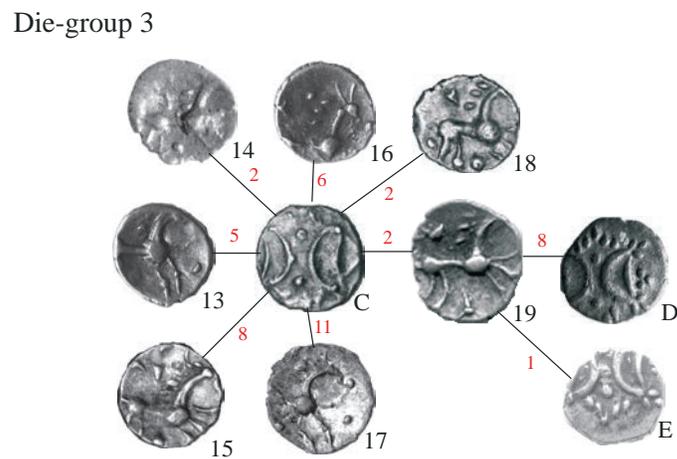
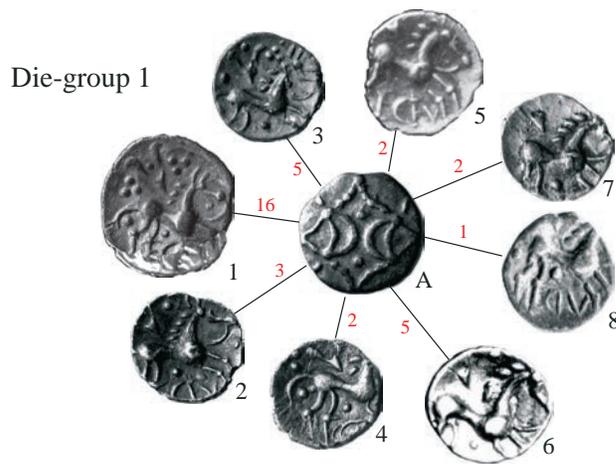
Unusual dies - assumed to be plated but some may be small local issues



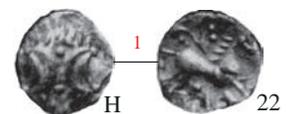
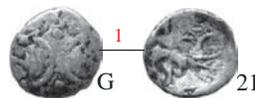
x1.4

### Ecen Half Unit

Appendix I.40



Possibly plated, similar to B 11



x1.4

Early Pattern Horse (A) Unit

Appendix I.41

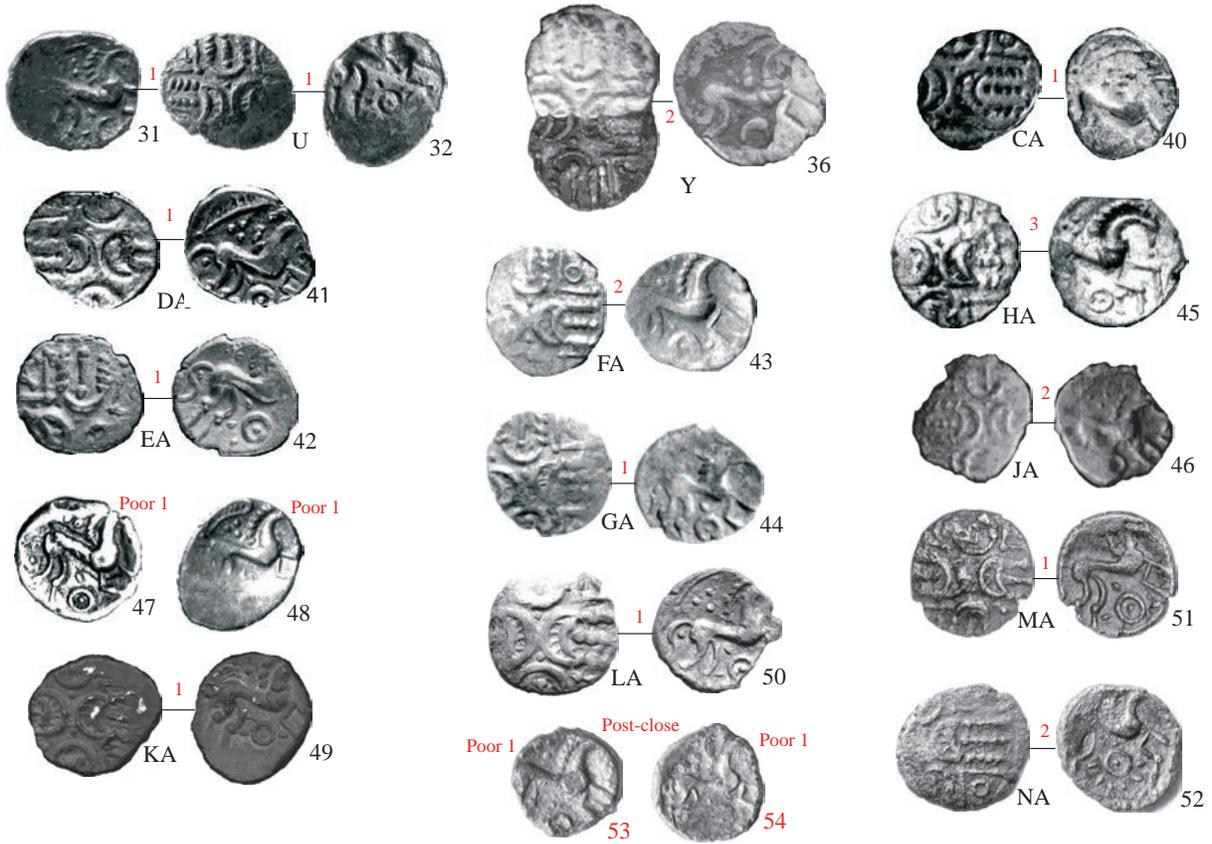


The chronology of the above die-chain is unresolved

x1.4

### Early Pattern Horse (A) Unit continued

Appendix I.42



### Early Pattern Horse (A) Half Unit



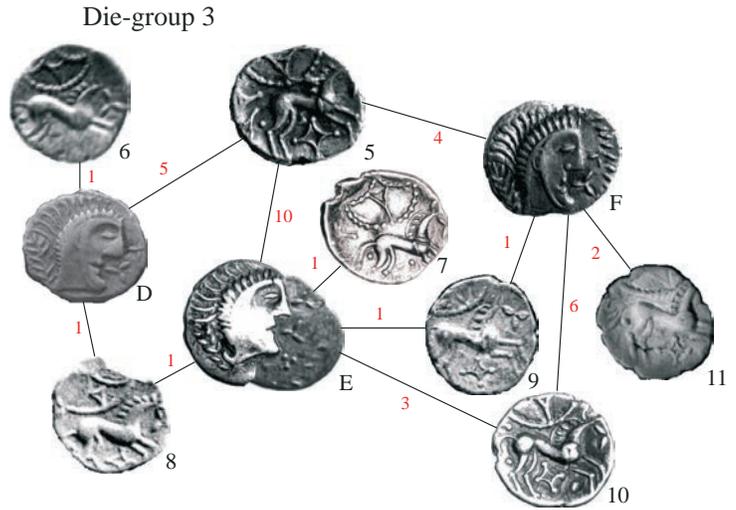
### Early Pattern Horse (A) Stater



x1.4

Late Face Horse Unit sub-set 1

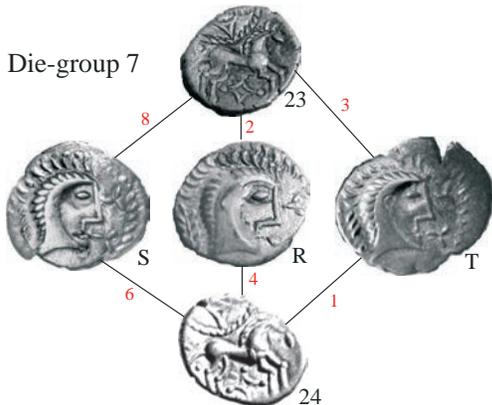
Appendix 1.43



Dies A & C are very similar but the semi-circular eye socket in A is diagnostic. The eye disappears in late strikes of both dies.



Die J may be a later version of die H with the hair and other detail recut



x1.4

Late Face Horse Unit sub-set 2

Appendix 1.44

Die-group 10



Dies 32 and 40 are very similar but with differences of detail, they may be reworked versions of same die.

Die-group 11



Dies 36 and 37 are similar but with differences of detail such as the "privvy mark". Could be due to hubbing of horses body or re-working of die.

Die-group 12



Die-group 13



Die-group 14

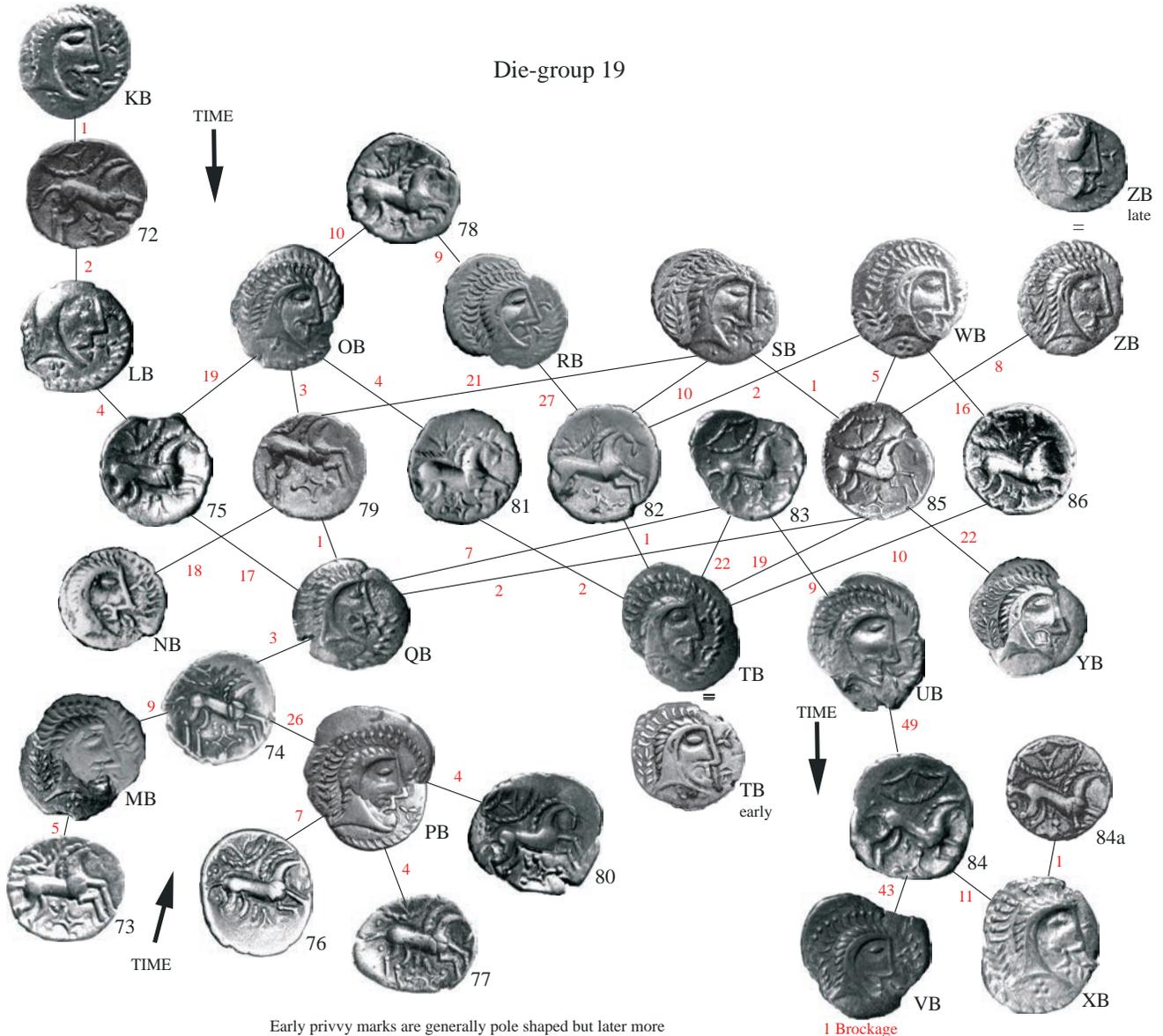




x1.4

### Late Face Horse Unit sub-set 3

Appendix 1.46



Early privvy marks are generally pole shaped but later more like a pile of saucers.

Many dies appear to be cut by same person such as WB,ZB,VB&RB. Other groups are 83,85&84; UB&SB and QB&NB.

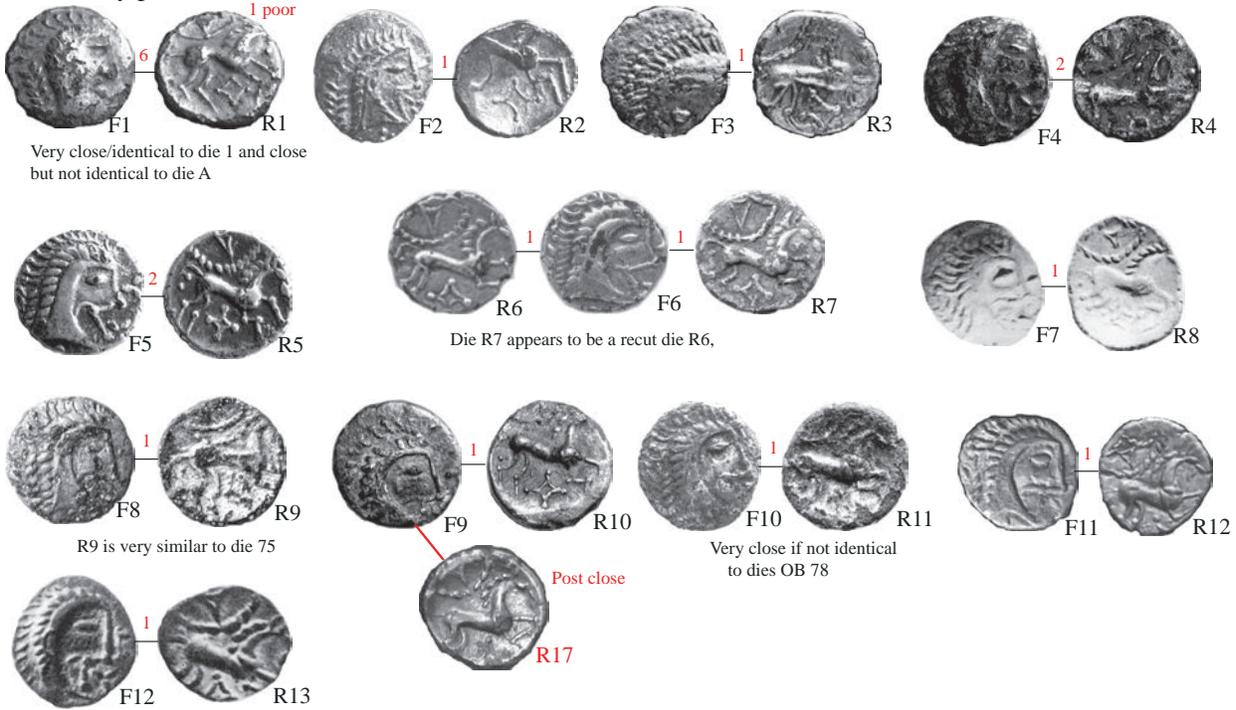


x1.4

### Late Face Horse plated Units

Appendix 1.48

#### Definitely plated



#### Assumed to be plated



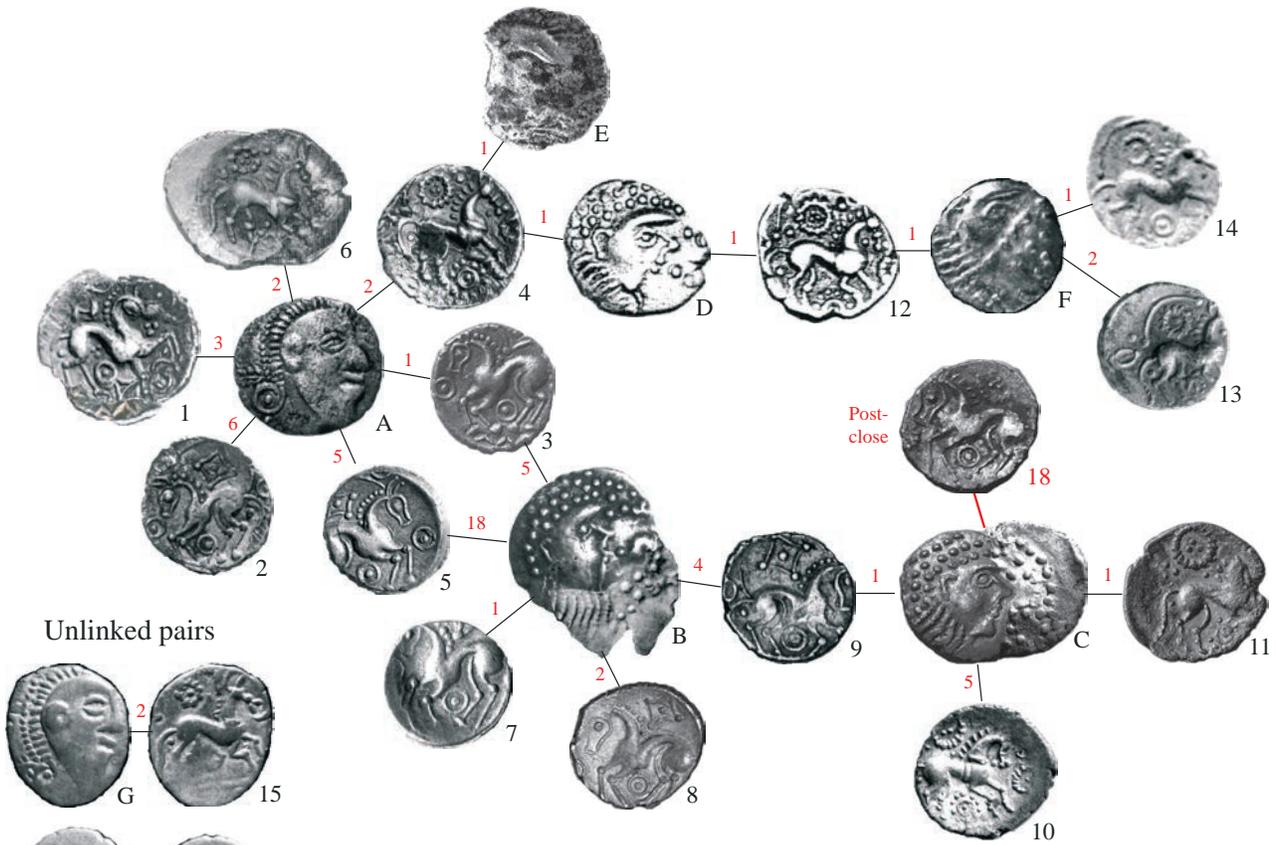
#### Unusual pairs including Iron Age plated coins and possibly modern forgeries



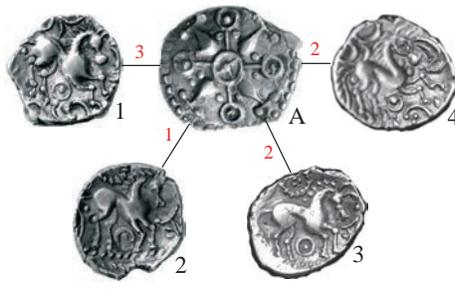
x1.4

### Saham Toney Unit

Appendix I.49



### Saham Toney Quarter Stater



### Saham Toney Half Unit



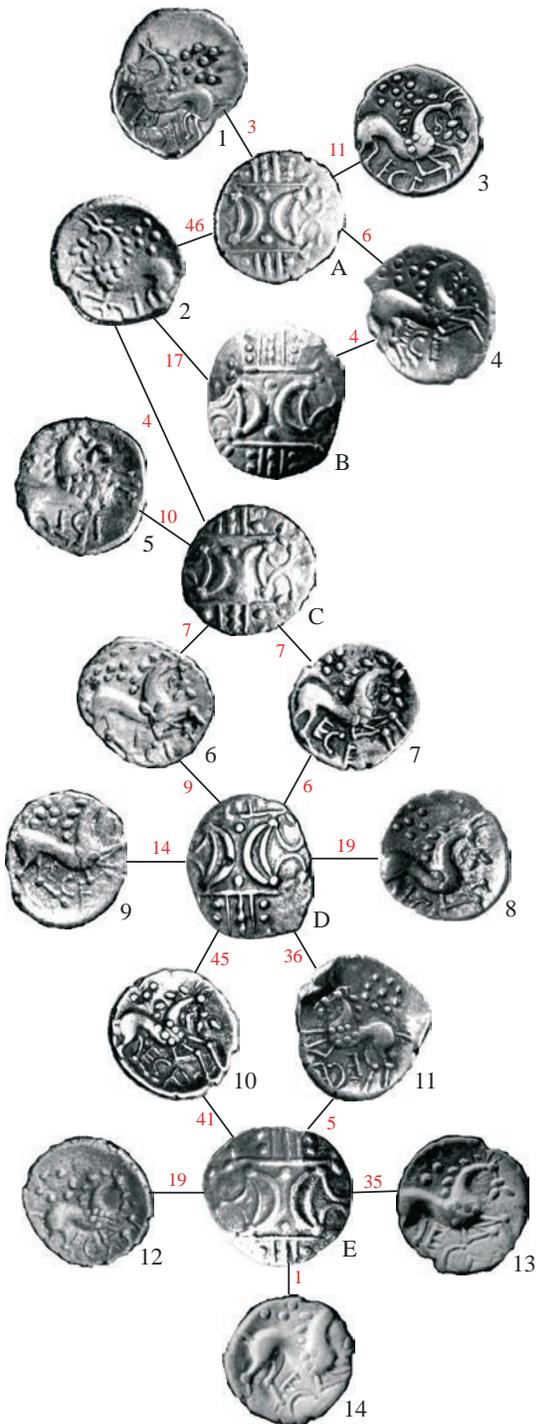


x1.4

Aesv, Saenv & Ece B Units

Appendix I.51

Die-group 1

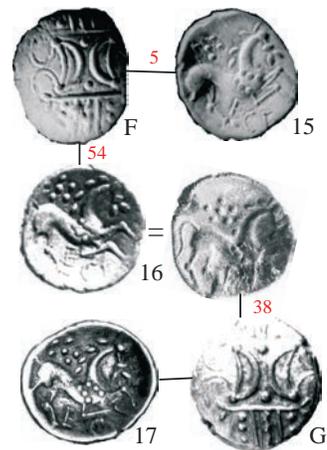


Die-group 4 Aesv & Saenv



Die sA die-links to Ecen die 1 via 95 1958 probably a hubbed forgery

Die-group 2



Die-group 3

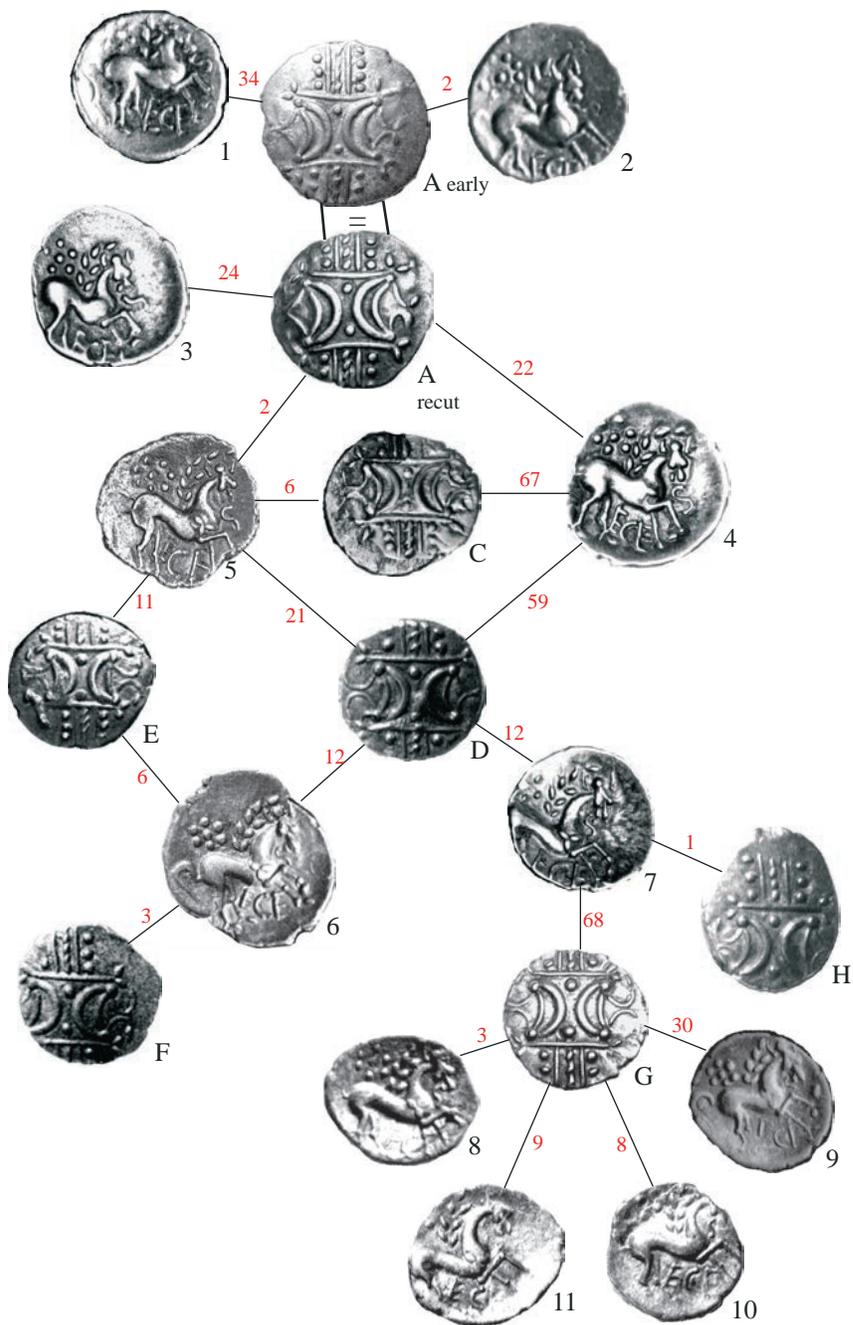


All coins in this die-group are deeply dished

x1.4

### Ece A Unit

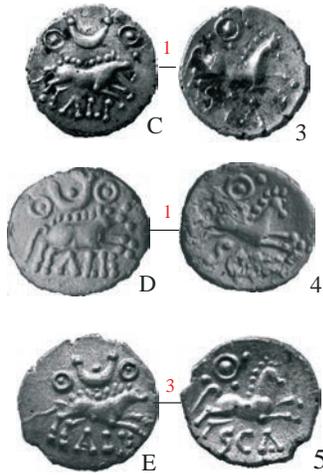
Appendix I.52



x1.4

### Ale Sca Unit

Appendix I.53



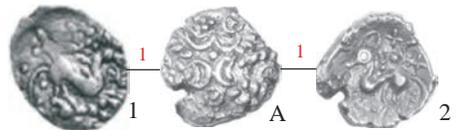
### Esv Prasto Unit



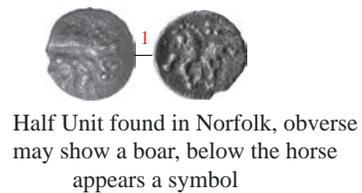
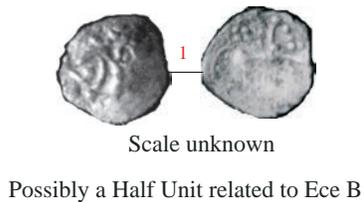
### Mildenhall Half Unit



### Mildenhall Quarter Stater



### Uncertain coins likely to be later Icenian



## Appendix II

### Metal analysis of silver coinage

Appendix II includes the results of all known metal analysis of Icenian silver coinage followed by a number of tests that have been undertaken on the core and plate of plated

coinage. There is a key to the sources of the test results at the end of the appendix. The results for debased silver are problematic as discussed in 4.4.2.

#### *Appendix II*

<i>Database</i>	<i>Type</i>	<i>Dies</i>	<i>Source</i>	<i>Cu</i>	<i>Other</i>	<i>Tin</i>	<i>Ag</i>	<i>Bi</i>	<i>Pb</i>	<i>Au</i>	<i>Bullion</i>
01 0294	Bury A	B:3a	MD 75	5.8	0.2	0.0	92.9	0.1	0.6	0.4	94.0
02 0241	Bury A	C:4	MD 79	2.2	0.1	0.0	97.2	0.1	0.5	0.0	97.8
87 0577	Bury A	E:3	MD 1	0.3	0.2	0.0	97.2	0.1	2.2	0.0	99.5
J698	Bury C	E:5	MD 74	3.1	0.1	0.0	95.8	0.0	0.5	0.5	96.8
J616	Bury B	C:8	MD 85	3.3	0.1	0.0	95.8	0.0	0.4	0.3	96.6
01 0296	Bury B	D:11	MD 76	6.9	0.4	1.2	90.0	0.1	0.8	0.6	91.5
02 0200	Bury B	E:19	MD 80	6.9	0.6	2.3	88.8	0.1	1.2	0.1	90.2
J474	Bury B	E:19	MD 86	4.2	0.1	0.0	94.8	0.1	0.5	0.3	95.7
NM 02	Large Flan A	PA:F1	MD 33	25.3	0.4	0.0	73.0	0.0	0.9	0.4	74.3
J756	Large Flan A	D:6	MD 81	3.1	0.1	0.0	95.6	0.1	0.7	0.4	96.9
NM 03	Large Flan A	F:13	MD 36	3.8	0.1	0.0	95.2	0.1	0.5	0.3	96.0
J845	Large Flan C	B:1	MD 83	4.3	0.1	0.0	94.6	0.1	0.5	0.4	95.6
01 0290	Large Flan C	E:4	MD 82	4.3	0.1	0.0	94.5	0.1	0.7	0.4	95.7
99 0212	Large Flan C	E:5	MD 20	11.5	0.2	0.0	87.8	0.0	0.2	0.3	88.4
NM F11	Large Flan C	J:10	MD 57	9.5	0.2	0.0	88.9	0.1	0.8	0.5	90.4
99 0213	Large Flan C	K:12	MD 23	5.8	0.1	0.7	92.6	0.0	0.4	0.3	93.4
92 0846	Large Flan C	P:16	MD 78	1.4	0.1	0.0	97.8	0.1	0.6	0.0	98.5
99 0214	SU	H:15	MD 17	6.4	0.4	0.9	90.2	0.1	1.0	0.9	92.2
NM 05	SU	H:15	MD 42	17.3	0.4	0.0	81.8	0.0	0.3	0.1	82.3
NM 06	SU	M:18	MD 45	7.0	0.3	1.7	89.9	0.0	0.5	0.5	90.9
NM 01	PLU	A:1	MD 27	44.2	0.3	0.8	53.8	0.1	0.5	0.3	54.7
NM 07	IAU	A:1	MD 46	5.1	0.3	0.1	93.6	0.1	0.5	0.4	94.5
NM 04	STU	B:5	MD 40	30.1	1.1	0.0	67.3	0.1	1.3	0.1	68.8
99 0211	STU	B:8	MD 25	6.1	0.4	0.0	92.5	0.0	0.3	0.6	93.5
J849	STU	C:10	MD 77	2.6	0.0	0.0	96.3	0.0	0.3	0.6	97.3
NM 09	STU	G:15	MD 41	31.5	0.2	1.8	65.0	0.0	0.5	0.8	66.4

*(Continued)*

## Appendix II (Continued)

<i>Database</i>	<i>Type</i>	<i>Dies</i>	<i>Source</i>	<i>Cu</i>	<i>Other</i>	<i>Tin</i>	<i>Ag</i>	<i>Bi</i>	<i>Pb</i>	<i>Au</i>	<i>Bullion</i>
NM F6	Early Boar Horse	B:5	MD 52	15.9	0.2	0.1	82.8	0.0	0.4	0.5	83.7
99 0234	Early Boar Horse	B:5	MD 15	6.6	0.3	0.4	91.6	0.1	0.6	0.5	92.7
J774	Ali Sca	F:6	PN 2007	7.3	0.2	0.0	91.6	0.0	0.5	0.3	92.5
99 0620	Early Pattern Horse A	N:21	PN 2007	36.3	0.3	1.8	60.9	0.0	0.3	0.3	61.5
95 2908	Early Pattern Horse A	S:30	PN 2007	57.6	0.6	2.1	39.2	0.0	0.4	0.2	39.7
99 0219	Early Pattern Horse A	T:30	MD 24	27.6	0.5	2.2	69.2	0.1	0.3	0.3	69.8
61 0651	Early Pattern Horse A	BA:39	MD 14	20.0	0.4	0.3	78.9	0.2	0.2	0.1	79.3
99 0221	Early Pattern Horse B	B:9	MD 28	17.1	0.3	0.0	82.3	0.0	0.3	0.0	82.7
99 0220	Early Pattern Horse B	C:9	MD 26	6.5	0.4	5.0	87.5	0.1	0.5	0.0	88.1
82 0538	Early Pattern Horse B	H:16	PNc515	9.8	0.3	0.5	88.8	0.0	0.3	0.4	89.5
90 0784	Early Pattern Horse B	F:14	PNaga59	5.4	0.1	0.0	93.4	0.0	0.4	0.4	94.2
86 0096	BHA	C:2	PNc550	4.9	0.2	2.4	91.9	0.0	0.4	0.2	92.5
Meg37	BHA	H:4	MD 37	4.4	0.6	0.0	94.2	0.1	0.7	0.0	95.0
Meg43	BHA	H:5	MD 43	18.6	0.3	0.0	80.5	0.0	0.5	0.1	81.2
99 0204	Boar Horse B	D:5	MD 16	6.8	0.3	0.1	91.8	0.1	0.5	0.4	92.8
82 0514	Boar Horse B	F:7	PN c512	5.2	0.3	0.1	93.2	0.0	0.7	0.5	94.4
99 0202	Boar Horse B	G:9	MD 22	10.8	0.2	0.1	88.1	0.0	0.5	0.3	88.9
99 0203	Boar Horse B	L:10	MD 19	8.2	0.4	0.0	90.9	0.0	0.2	0.3	91.5
NM F9	Boar Horse B	M:13	MD 55	4.8	0.5	0.0	93.7	0.0	0.3	0.7	94.7
NM F7	Boar Horse B	M:15	MD 53	16.8	0.5	0.0	81.9	0.0	0.5	0.4	82.7
J685	Boar Horse C	G:25	MD 91	36.7	0.8	0.6	61.1	0.0	0.4	0.4	62.0
J548	Boar Horse C	K:32	MD 90	39.4	0.2	0.0	59.2	0.0	0.8	0.4	60.4
99 0207	Boar Horse C	X:58	MD 29	22.9	0.4	0.6	74.9	0.1	0.7	0.4	76.1
66 0342	Boar Horse C	NA:92	PNage21	27.8	0.8	3.4	67.4	0.0	0.3	0.2	68.0
82 0526	Boar Horse C half	C:5	PNc544	8.6	2.5	0.0	87.0	0.0	1.7	0.3	88.9
J127	BHCD	A:1	MD 88	22.3	0.3	0.0	76.9	0.0	0.3	0.2	77.4
82 0578	BHCD	A:2	PNc522	35.6	0.2	0.0	62.7	0.0	0.3	0.3	63.3
Meg47	BH CD	A:3	MD 47	12.0	0.3	0.2	86.8	0.1	0.4	0.3	87.6
61 0811	Late Face Horse	C:4	MD 3	18.2	0.5	2.3	78.2	0.0	0.4	0.4	79.0
J212	Late Face Horse	F:5	MD 99	54.8	0.2	1.2	43.1	0.0	0.3	0.3	43.8
66 0350	Late Face Horse	F:9	PNage17	51.8	0.4	1.6	45.6	0.0	0.5	0.2	46.3
J436	Late Face Horse	M:18	MD 95	11.7	1.7	2.0	84.1	0.0	0.2	0.2	84.6
J717	Late Face Horse	LA:40	MD 92	67.6	0.2	0.2	31.5	0.0	0.2	0.2	31.9
J210	Late Face Horse	NA:43	MD 97	38.7	0.4	1.3	58.9	0.1	0.4	0.3	59.6
Meg38	Late Face Horse	ZA:55	MD 38	37.2	0.6	2.5	58.9	0.1	0.4	0.4	59.7
J584	Late Face Horse	ZA:55	MD 101	8.5	0.1	1.4	89.2	0.1	0.4	0.3	90.0
82 0533	Late Face Horse	BB:64	PNc513	26.4	1.2	1.4	70.0	0.0	0.4	0.6	70.9
66 0349	Late Face Horse	CB:64	PNage18	41.9	0.6	2.8	54.2	0.0	0.4	0.1	54.7
61 0802	Late Face Horse	QB:75	MD 5	30.7	0.3	1.4	67.0	0.0	0.5	0.1	67.6
66 0345	Late Face Horse	QB:75	PNage19	39.4	0.6	0.0	59.4	0.0	0.4	0.2	60.0
Meg59	Late Face Horse	QB:85	MD 59	21.5	0.7	2.4	74.7	0.0	0.4	0.3	75.4
66 0352	Late Face Horse	SB:79	PNage20	47.4	0.7	1.6	49.6	0.0	0.4	0.3	50.3

(Continued)

## Appendix II (Continued)

<i>Database</i>	<i>Type</i>	<i>Dies</i>	<i>Source</i>	<i>Cu</i>	<i>Other</i>	<i>Tin</i>	<i>Ag</i>	<i>Bi</i>	<i>Pb</i>	<i>Au</i>	<i>Bullion</i>
66 0347	Late Face Horse	WB:85	PNagc16	34.8	0.3	5.0	55.7	0.0	0.2	0.4	56.3
J712	Late Face Horse	CC:90	MD 94	8.6	0.4	3.0	87.1	0.0	0.7	0.2	88.0
Meg58	Late Face Horse	DC:92	MD 58	27.1	0.5	0.6	70.4	0.0	1.0	0.3	71.7
61 0807	Late Face Horse	EC:93	MD 9	14.7	0.7	2.0	81.7	0.0	0.6	0.3	82.6
61 0803	Late Face Horse	GC 93	MD 4	9.2	0.4	2.3	87.0	0.0	0.9	0.2	88.2
61 0805	Late Face Horse	KC:97	MD 6	9.0	0.5	1.9	87.6	0.0	0.8	0.3	88.7
61 0804	Late Face Horse	KC:97	MD 10	9.6	0.8	2.8	85.6	0.0	0.9	0.3	86.8
Meg64	Anted	A:3	MD 64	24.5	0.4	0.1	74.3	0.1	0.4	0.2	75.0
66 0366	Anted	A:4	PNagc12	53.0	0.3	1.2	44.9	0.1	0.4	0.2	45.6
J1007	Anted	A:6	MD84	4.5	0.1	0.0	93.8	0.1	1.0	0.5	95.4
61 1059	Anted	B:7	MD 12	12.8	0.6	1.1	84.8	0.1	0.5	0.2	85.6
MD 44	Anted	C:7	MD 44	46.7	0.1	0.0	52.6	0.0	0.3	0.3	53.1
MD 62	Anted	D:14	MD 62	19.7	0.1	0.4	78.5	0.0	0.2	1.0	79.7
61 1170	Anted	H:14	MD 11	37.5	0.4	0.0	61.3	0.1	0.4	0.3	62.1
66 0362	Anted	L:21	PNagc11	51.1	0.6	0.0	48.0	0.1	0.2	0.1	48.4
J368	Anted	M:28	MD 102	59.8	0.8	0.2	38.5	0.0	0.3	0.3	39.1
67 0463	Anted	M:27	PNc517	27.8	0.3	0.0	71.0	0.0	0.5	0.3	71.8
82 0555	Anted	M:27	PNc518	58.8	0.2	0.9	39.8	0.0	0.1	0.1	40.0
Meg 60	Anted	N:29	MD 60	25.9	0.4	0.0	72.8	0.0	0.5	0.3	73.6
Meg 61	Anted	N:32	MD 61	24.3	0.7	0.0	74.4	0.0	0.2	0.4	75.0
66 0363	Anted	P:35	PNagc9	53.6	0.2	0.0	45.5	0.1	0.2	0.3	46.1
82 0551	Anted	Q:37	PNc519	43.0	0.3	1.4	54.7	0.0	0.5	0.0	55.2
Meg 66	Ecen	E:12	MD 66	13.9	0.5	0.0	84.7	0.0	0.5	0.4	85.6
61 1256	Ecen	E:12	MD 7	46.4	0.2	0.7	52.0	0.0	0.4	0.2	52.7
66 0371	Ecen	G:12	PNagc4	58.2	0.4	0.3	40.3	0.1	0.5	0.2	41.1
Meg 34	Ecen	H:14	MD 34	24.5	0.5	0.4	73.8	0.0	0.5	0.3	74.6
Meg 67	Ecen	J:17	MD 67	6.0	0.2	0.0	93.1	0.0	0.2	0.5	93.8
99 0247	Ecen	J:18	MD 18	7.4	0.3	0.6	90.2	0.0	1.2	0.3	91.7
01 0684	Ecen	J:18	PN 2007	27.3	0.2	0.6	70.7	0.0	0.8	0.2	71.8
66 0372	Ecen	vwd:23	PNagc5	55.9	0.4	0.7	42.4	0.0	0.4	0.3	43.1
66 0370	Ecen	M:23	PNagc1	47.3	0.5	0.3	50.7	0.1	0.6	0.2	51.6
66 0369	Ecen	N:24	PNagc26	36.7	0.2	2.3	59.9	0.0	0.5	0.4	60.8
Meg 69	Ecen	N:21	MD 69	39.1	0.8	0.0	59.2	0.0	0.4	0.4	60.1
Meg 65	Ecen	N:26	MD 65	24.1	0.4	0.0	74.7	0.0	0.3	0.5	75.5
Meg 39	Ecen	N:27	MD 39	27.2	0.3	1.1	70.5	0.0	0.5	0.3	71.4
61 1206	Ecen	P:29	MD 8	26.1	0.3	0.9	71.8	0.0	0.6	0.3	72.7
Meg 68	Ecen	U:34	MD 68	5.7	0.8	0.1	91.7	0.0	0.7	1.0	93.4
99 0238	Ecen	U:34	MD 30	15.8	0.2	0.5	82.3	0.0	0.6	0.5	83.4
Meg 13	Ecen	V:38	MD 13	5.2	0.6	1.0	92.1	0.1	0.7	0.4	93.2
66 0381	Ecen	W:39	PNagc10	44.8	0.2	0.4	53.8	0.1	0.4	0.4	54.6
66 0359	Ecen	W:39	PNagc14	19.5	0.3	0.9	77.4	0.0	0.7	0.3	78.4
66 0367	Ecen	Y:45	PNagc6	56.5	0.3	0.1	43.2	0.0	0.1	0.3	43.6

(Continued)

## Appendix II (Continued)

<i>Database</i>	<i>Type</i>	<i>Dies</i>	<i>Source</i>	<i>Cu</i>	<i>Other</i>	<i>Tin</i>	<i>Ag</i>	<i>Bi</i>	<i>Pb</i>	<i>Au</i>	<i>Bullion</i>
J791	Ecen	Y:45	MD 98	28.9	0.4	0.7	69.3	0.0	0.2	0.4	69.9
66 0360	Ecen Hf	C:15	PNage13	39.0	0.5	0.0	60.1	0.0	0.1	0.3	60.5
82 0566	Ece A	B:3	PNc521	48.6	0.2	0.6	49.9	0.0	0.4	0.3	50.6
Meg 70	Ece A	D:4	MD 70	29.9	0.3	0.0	69.1	0.0	0.1	0.6	69.8
J138	Ece A	G:7	MD 87	49.1	0.6	1.4	48.1	0.0	0.6	0.2	48.9
66 0380	Saenv	A:1	PNage8	58.8	0.4	0.4	40.0	0.0	0.2	0.2	40.4
J129	Saenv	A:1	MD 89	60.0	0.3	0.7	38.5	0.0	0.2	0.4	39.1
86 0098	Aesv	A:3	PNc555	31.9	0.5	0.6	65.9	0.0	0.7	0.4	67.0
Meg 73	Aesv	A:3	MD 73	31.3	0.3	0.0	67.6	0.0	0.5	0.3	68.5
Meg 35	Ece B	D 10	MD 35	13.2	0.7	1.7	82.2	0.0	1.8	0.5	84.5
66 0378	Ece B	E:13	PNage7	41.2	0.2	0.3	57.7	0.0	0.3	0.3	58.3
J867	Ece B	F:16	MD 93	17.5	0.4	0.6	80.3	0.0	0.8	0.3	81.5
Meg 72	Ece B	G:16	MD 72	46.2	0.5	0.0	52.8	0.0	0.3	0.2	53.4
Meg 100	Ece B	G:17	MD 71	22.1	0.4	0.0	76.5	0.1	0.7	0.3	77.5
J866	Ece B	H:18	MD 100	10.8	0.6	1.6	85.1	0.1	1.6	0.3	87.0
99 0206	Boar Horse C	Poor	MD 31	21.4	0.5	1.0	76.1	0.0	0.8	0.3	77.2
BMC3451	BHA	B:1	MRC	56.0		1.5	42.0				
BMC3452	BHA	M:6	MRC	56.0			43.0		0.6		
BMC3459	Boar Horse B	M:10	MRC	49.0			51.0				
BMC3467	Boar Horse B	Q:22	MRC	48.0			52.0				
BMC3499	Boar Horse C	CA:71	MRC	54.0			46.0				
BMC3503	Boar Horse C	N:51	MRC	48.0		5.8	46.0				
BMC3521	BHCD	A:1	MRC	49.0			51.0				
BMC3570	Late Face Horse	M:19	MRC	49.0			51.0				
BMC3581	Late Face Horse	R:24	MRC	51.0		1.5	48.0			0.4	
BMC3585	Late Face Horse	P:22	MRC	49.0		1.4	50.0				
BMC3599	Late Face Horse	P:22	MRC	49.0		1.5	50.0		0.5		
BMC3606	Late Face Horse	ZA:55	MRC	48.0		3.8	48.0		0.4	0.4	
BMC3607	Late Face Horse	ZA:55	MRC	45.0		0.8	54.0		0.4		
BMC3625	Late Face Horse	EA:37	MRC	53.0			47.0				
BMC3630	Late Face Horse	Y:34	MRC	50.0			50.0		0.4		
BMC3633	Late Face Horse	BB:64	MRC	41.0		0.7	59.0				
BMC3637	Late Face Horse	RA:47	MRC	51.0		1.6	47.0				
BMC3661	Late Face Horse	CC:90	MRC	49.0		1.6	49.0		0.5		
BMC3766	Early Pattern Horse A	FA:42	MRC	62.0		4.9	33.0		0.4		
BMC3771	Early Pattern Horse B	J:16	MRC	52.0			48.0				
BMC3809	Anted	N:32	MRC	59.0			41.0				
BMC3820	Anted	M:27	MRC	54.0		0.4	46.0				
BMC3858	Anted	AA:45	MRC	58.0			42.0				
BMC3883	Anted	L:26	MRC	52.0		0.8	47.0				
BMC4057	Ecen	E:12	MRC	52.0			48.0				
BMC4135	Ecen	E:15	MRC	50.0		0.6	49.0		0.4		

(Continued)

## Appendix II (Continued)

<i>Database</i>	<i>Type</i>	<i>Dies</i>	<i>Source</i>	<i>Cu</i>	<i>Other</i>	<i>Tin</i>	<i>Ag</i>	<i>Bi</i>	<i>Pb</i>	<i>Au</i>	<i>Bullion</i>
BMC4223	Ecen	L:24	MRC	52.0		0.6	47.0		0.6	0.5	
BMC4280	Ecen	Y:40	MRC	50.0		0.7	49.0		0.4		
BMC4315	Ecen	Z:45	MRC	52.0		0.7	47.0			0.4	
BMC4316	Ecen	Z:45	MRC	58.0		0.4	42.0			0.3	
BMC4343	Ecen	Poor	MRC	40.0			60.0		0.4		
BMC4384	Ece A	E:5	MRC	51.0			49.0				
BMC4392	Ece A	G:7	MRC	48.0		0.7	51.0		0.5		
BMC4493	Ece B	H:18	MRC	55.0		0.6	44.0				
BMC4496	Ece B	E:12	MRC	54.0			46.0				
BMC4527	Ece B	D:11	MRC	52.0		0.5	47.0			0.5	
BMC4531	Ece B	D:11	MRC	52.0			48.0				
BMC4552	Saenv	A:1	MRC	52.0		0.5	47.0		0.4		
BMC4554	Saenv	A:2	MRC	56.0		0.7	43.0			0.4	
BMC4562	Aesv	A:3	MRC	52.0			48.0				
BMC4565	Aesv	A:3	MRC	49.0		0.6	50.0				
<i>Plated</i>											
82 0552	Anted	N:31	PNc516	11.7		0.2	87.0	0.1	0.4	0.3	87.8
99 0210	BH FU	plated	MD 32	97.3	0.6	0.0	0.4	0.0	1.6	0.0	2.1
NM F8	Early Boar Horse FU	F1:R1	MD 54	38.0	0.4	0.0	60.6	0.0	0.7	0.3	61.6
NM F10	SU core	H:15	MD 56	98.3	0.7	0.8	0.2	0.0	0.0	0.0	0.3
Meg63	Anted		MD 63	35.0	0.9	0.8	62.2	0.1	0.8	0.2	63.3
BMC3760	Late Face Horse plate	F8:R8	MRC	62.0			38.0				
BMC3760	Late Face Horse core	F8:R8	MRC	98.0		2.0	0.0				
BMC4282	Ecen core		MRC	98.0			2.0				
BMC4344	Ecen plate	F2:R4	MRC	61.0		2.2	37.0				
BMC4344	Ecen core	F2:R4	MRC	96.0		3.3	1.0				

*Sources of data*

MD—Dennis 2005, appx C. Certain transposition errors in Dennis's printed thesis have been corrected

PN 2007—Northover 2007 tests undertaken for author (pers. comm.)

PN c/a/agc—Northover 1992

## Appendix III

### Metal analysis of gold coinage

Appendix III includes the results of all known metal analysis of gold coinage followed by a key to the sources of the test results.

*Appendix III*

<i>Database</i>	<i>Type</i>	<i>Die- group</i>	<i>Source</i>	<i>Dies</i>	<i>Au</i>	<i>Ag</i>	<i>Cu</i>	<i>Tin</i>
98 1201	Norfolk Wolf A	1	PN 2007	E 1	55.2	34.7	9.7	0.17
69 0539	Norfolk Wolf A	5	MRC 909	M 13	39.9	43.9	15.5	0.30
69 0543	Norfolk Wolf A	5	MRC 909	M 13	41.5	41.4	16.9	<0.2
69 0541	Norfolk Wolf A	5	MRC 910	P 21	38.4	45.5	16.1	<0.2
67 0357	Norfolk Wolf A	5	PN 1992	M 14	39.4	45.5	14.9	0.00
<i>Average</i>	<i>Norfolk Wolf A</i>	<i>5</i>			<i>39.8</i>	<i>44.1</i>	<i>15.9</i>	
69 0544	Norfolk Wolf B	A 1	MRC 334	A 2	30.5	47.0	22.1	0.20
01 0283	Norfolk Wolf B	A 4	PN 2007	D 11	31.5	43.9	24.2	0.30
69 0545	Norfolk Wolf B	C 10	MRC 387	L 27	26.1	46.1	27.7	<0.2
VA 1	Norfolk Wolf B	C 16	PN 1992	T 43	22.9	44.7	32.1	0.00
97 0072	Norfolk Wolf B	C 16	BMC218	T 46	16.0	42.0	40.0	
97 0081	Norfolk Wolf B	C 16	BMC228	T 51	17.0	27.0	52.0	
97 0108	Norfolk Wolf B	C 16	BMC255	T 56	10.0	36.0	52.0	
97 0090	Norfolk Wolf B	C 16	BMC237	T 57	14.0	41.0	44.0	
97 0097	Norfolk Wolf B	C 16	BMC244	T 57	14.0	38.0	45.0	
97 0106	Norfolk Wolf B	C 16	BMC253	U 58	13.0	39.0	45.0	
97 0076	Norfolk Wolf B	C 16	BMC222	U 61	17.0	43.0	37.0	
97 0075	Norfolk Wolf B	C 16	BMC221	U 61	12.0	37.0	47.0	
08 8917	Norfolk Wolf B	C 16	PN 2007	U 63	15.9	35.3	46.5	1.69
94 0188	Norfolk Wolf B	C 16	JD	Vwd64	29.0	52.0	14.0	5.00
<i>Average</i>	<i>Norfolk Wolf B</i>	<i>C 16</i>			<i>16.4</i>	<i>39.5</i>	<i>41.3</i>	
97 0112	Norfolk Wolf B	D 17	BMC259	W 65	15.0	28.0	51.0	
97 0111	Norfolk Wolf B	D 17	BMC258	X 66	13.0	24.0	57.0	
97 0116	Norfolk Wolf B	D 18	BMC263	Y 68	20.0	31.0	41.0	
97 0122	Norfolk Wolf B	D 18	BMC269	AA 71	10.0	28.0	57.0	

(Continued)

## Appendix III (Continued)

<i>Database</i>	<i>Type</i>	<i>Die- group</i>	<i>Source</i>	<i>Dies</i>	<i>Au</i>	<i>Ag</i>	<i>Cu</i>	<i>Tin</i>
97 0125	Norfolk Wolf B	D 18	BMC272	AA 72	13.0	29.0	52.0	
97 0113	Norfolk Wolf B	D 18	BMC260	BA 71	11.0	30.0	53.0	
<i>Average</i>	<i>Norfolk Wolf B</i>	<i>D</i>			<i>13.7</i>	<i>28.3</i>	<i>51.8</i>	
96 2703	SS	1	BMC3353	B 4	36.0	39.0	21.0	
96 2705	SS	1	BMC3355	B 4	35.0	35.0	28.0	
96 2707	SS	1	BMC3357	C 3	36.0	33.0	28.0	
96 2709	SS	1	BMC3359	D 3	39.0	30.0	27.0	
96 2712	SS	2	BMC3362	vwd 9	39.0	31.0	29.0	
96 2716	SS	2	BMC3366	F 8	39.0	33.0	27.0	
96 2721	SS	2	BMC3371	F 8	38.0	27.0	34.0	
68 0954	SS	2	BMC3375	G 11	40.0	31.0	27.0	
96 2726	SS	2	BMC3377	vwd 11	31.0	24.0	43.0	
96 2728	SS	2	BMC3379	G 11	39.0	35.0	24.0	
96 2732	SS	3	BMC3383	H 13	37.0	24.0	39.0	
96 2711	SS	other	BMC3361	vwd 7	39.0	35.0	24.0	
<i>Average</i>	<i>SS</i>				<i>37.3</i>	<i>31.4</i>	<i>29.3</i>	
96 2746	Early SQ		BMC3435	B 2	40.0	38.0	19.0	
96 2733	SQ	1	BMC3420	A 1	39.0	36.0	22.0	
96 2734	SQ	1	BMC3421	A 3	40.0	34.0	24.0	
96 2735	SQ	1	BMC3422	A 4	37.0	31.0	32.0	
96 2739	SQ	1	BMC3426	A 4	37.0	32.0	30.0	
BMC 3429	SQ	1	BMC3429	C 5	37.0	37.0	24.0	
96 2743	SQ	1	BMC3431	C 5	38.0	31.0	28.0	
<i>Average</i>					<i>38.0</i>	<i>33.5</i>	<i>26.7</i>	
96 1847	SQ	2	BMC3433	E 14	29.0	22.0	45.0	
68 1001	PS	2	MRC 194	poor 11	36.2	29.5	33.8	0.50
68 1003	PS	2	MRC 191	poor 13	34.0	30.8	34.9	0.30
68 1002	PS	2	MRC 190	D 13	34.9	29.9	34.1	1.10
68 0979	PS	2	MRC 199	E 12	40.6	10.9	47.8	0.30
<i>Average</i>	<i>PS</i>	<i>2</i>			<i>36.4</i>	<i>25.3</i>	<i>37.7</i>	
68 1005	PS	1	MRC 189	A 1	38.3	29.3	31.0	1.40
<i>Average</i>	<i>PS</i>				<i>36.8</i>	<i>26.1</i>	<i>36.3</i>	
68 0977	Irstead	1	MRC 198	A 2	41.0	24.8	33.9	0.30
68 0980	Irstead	1	MRC 197	A 4	41.4	19.3	39.1	0.20
<i>Average</i>	<i>Irstead</i>	<i>1</i>			<i>41.2</i>	<i>22.1</i>	<i>36.5</i>	
68 0983	Irstead	2	MRC 196	B 5	39.5	20.3	40.0	0.20
68 0978	Irstead	2	MRC 195	B 5	39.1	18.1	42.7	<0.1
<i>Average</i>	<i>Irstead</i>	<i>2</i>			<i>39.3</i>	<i>19.2</i>	<i>41.4</i>	
68 0976	Irstead	3	BMC3396	D 7	33.0	24.0	43.0	
68 0981	Irstead	3	MRC 201	E 10	40.0	20.8	38.9	<0.2
<i>Average</i>	<i>Irstead</i>	<i>3</i>			<i>36.5</i>	<i>22.4</i>	<i>41.0</i>	
<i>Average</i>	<i>Irstead</i>				<i>39.0</i>	<i>21.2</i>	<i>39.6</i>	

(Continued)

## Appendix III (Continued)

<i>Database</i>	<i>Type</i>	<i>Die- group</i>	<i>Source</i>	<i>Dies</i>	<i>Au</i>	<i>Ag</i>	<i>Cu</i>	<i>Tin</i>
02 0240	Irstead Q	2	PN 2007	E 5	39.5	19.7	40.7	0.00
68 0990	Early Boar Horse	1	MRC 207	A 3	41.3	20.1	38.2	0.30
68 0999	Early Boar Horse	1	MRC 212	A 8	34.0	21.9	43.2	0.70
68 0995	Early Boar Horse	1	MRC 213	A 8	38.4	22.1	38.5	1.00
68 0997	Early Boar Horse	1	BMC3413	A 5	43.0	18.0	40.0	
68 0993	Early Boar Horse	1	BMC3416	A 4	48.0	35.0	17.0	
68 0991	Early Boar Horse	1	MRC 209	A 4	32.0	21.5	44.8	1.50
68 0992	Early Boar Horse	1	MRC 210	A 6	38.9	22.2	38.6	0.30
68 0998	Early Boar Horse	1	MRC 211	A 6	38.3	24.5	36.8	0.40
<i>Average</i>	<i>Early Boar Horse</i>	<i>1</i>			<i>39.2</i>	<i>23.2</i>	<i>37.1</i>	
68 0987	Early Boar Horse	2	MRC 204	B 11	31.5	24.8	43.2	0.50
68 0988	Early Boar Horse	2	MRC 202	B 9	38.1	25.0	35.4	1.30
68 0985	Early Boar Horse	2	MRC 203	B 12	33.2	25.1	40.7	0.90
68 0986	Early Boar Horse	2	MRC 205	B 14	38.9	23.6	37.4	<0.1
<i>Average</i>	<i>Early Boar Horse</i>	<i>2</i>			<i>35.4</i>	<i>24.6</i>	<i>39.2</i>	
<i>Average</i>					<i>38.0</i>	<i>23.7</i>	<i>37.8</i>	
61 0433	Boar Horse B	1	BMC3389	A 3	35.0	29.0	36.0	
68 0975	Boar Horse B	1	MRC 184	C 6	36.7	15.3	48.0	0.10
68 0974	Boar Horse B	3	MRC 186	J 10	36.8	13.7	46.1	3.30
68 0973	Boar Horse B	5	MRC 188	M 13	39.1	15.9	45.0	<0.1
<i>Average</i>	<i>Boar Horse B</i>				<i>36.9</i>	<i>18.5</i>	<i>43.8</i>	
J541	Boar Horse B Q		PN 2007	A 1	38.0	19.6	42.0	0.11
68 0969	Boar Horse C	1	BMC 385	A 1	34.0	22.0	44.0	
68 1221	Anted St		MRC 280	A 1	33.9	16.0	49.7	0.40
			<i>Plated</i>					
95 0372	Norfolk Wolf B Plate		PN 2007		6.0	30.0	62.2	1.14
95 0372	Norfolk Wolf B Core		PN 2007		0.1	0.2	97.9	1.16

*Sources of data*

PN 1992–Northover 1992

PN 2007–Northover 2007 tests undertaken for author (pers. comm.)

MRC–Cowell 1992

BMC–Hobbs 1996

JD–Information from John Davies at Norwich Museum (pers. comm.)

## Appendix IV

### Statistical summary of die-study and Esty estimates of die numbers

Appendix IV provides an overall summary of the 10,190 official and plated coins examined during the die-study, dividing them into types and showing the number of obverse

and reverse dies for each type. The appendix includes estimates of original die numbers per type based on the Esty formula (4.2).

#### Appendix IV

Period & Type	Den.	Official coins			Esty estimates		Plated coins		
		No.	Obv.	Rev.	Obv.	Rev.	No.	Obv.	Rev.
Norfolk Wolf A	S	114	14	24	19	32	2	2	1
Norfolk Wolf B	S	396	26	80	27	101	67	10	24
Wolf Q	QS	4	2	3	3	8			
Bury A	U	172	12	17	13	18	9	3	4
Bury C	U	43	9	11	13	24			
Bury H	U	4	2	4					
Bury B	U	117	10	30	11	35	2	2	2
Bury D	U	15	2	5	2	5			
Bury E*	U	4	4	2	4	2			
Bury F*	U	2	1	2	1	2			
Bury G*	U	2	1	2	1	2			
Large Flan A	U	77	10	27	12	39	3	1	1
Large Flan B I*, II & III	U	21	5	11	6	18			
Large Flan C	U	123	16	19	17	21	32	9	4
Mildenhall*	HU	2		1		1			
Bury and Large Flan B	HU	20	9	14	12	31			
Spiral*	U	1	1	1	1	1			
Bury*	QS	1	1	1	1	1			
Large Flan*	QS	2	1	1	1	1			
Mildenhall *	QS	2	1	2	1	2			
<b>Early local period</b>		<b>1122</b>	<b>127</b>	<b>257</b>	<b>145</b>	<b>344</b>	<b>115</b>	<b>27</b>	<b>36</b>
Snettisham	S	76	8	17	9	21	2	1	2
Early Snettisham	QS	8	3	3	5	5			
Snettisham	QS	101	5	17	5	23			

(Continued)

## Appendix IV (Continued)

Period & Type	Den.	Official coins			Esty estimates		Plated coins		
		No.	Obv.	Rev.	Obv.	Rev.	No.	Obv.	Rev.
Snettisham	U	82	11	22	12	31	1	1	1
Snettisham	HU	15	4	10	7	25			
Plouviez	S	76	6	13	6	17			
Plouviez	U	25	6	12	8	20			
Large Flan D	U	9	3	5	2	10			
Irstead	S	242	7	11	7	12	2	1	2
Irstead	QS	115	8	14	8	17	1	1	1
Irstead	U	45	5	10	5	13			
Irstead	HU	3	2	2	4	4			
Early Boar Horse	S	333	4	14	5	14			
Early Boar Horse	U	44	3	10	3	13			
Early Boar Horse	HU	16	5	7	8	12	2	2	1
Saham Toney	QS	8	1	4	1	5	1	1	1
Saham Toney	U	69	9	17	11	20	1	1	1
<b>First den. period</b>		<b>1267</b>	<b>90</b>	<b>188</b>	<b>106</b>	<b>262</b>	<b>10</b>	<b>8</b>	<b>9</b>
Boar Horse B	S	441	17	16	19	17	13	7	9
Boar Horse B	QS	55	3	2	3	2	2	2	2
Boar Horse B	U	265	16	30	17	32	16	10	11
Boar Horse B	HU	56	4	5	4	5	6	6	5
Boar Horse B (A)	U	65	16	8	21	9	3	1	2
Boar Horse B (A)	HU	13	1	2	1	2			
BHC S	S	51	7	11	8	15	8	6	7
Boar Horse C	QS	7	2	2	2	2			
Boar Horse C	U	435	39	102	42	121	20	11	14
Boar Horse C	HU	39	11	13	19	19			
BHCD	U	48	1	3	1	3	1	1	1
Early Pattern Horse A	S	2	1	1	1	1	4	4	4
Early Pattern Horse A	U	133	37	52	50	81	5	2	2
Early Pattern Horse A	HU	12	8	9	22	30			
Early Pattern Horse B*	S	1	1	1	1	1			
Early Pattern Horse B	QS	5	1	3	1	7			
Early Pattern Horse B	U	133	12	21	12	23	10	5	7
Early Pattern Horse B	HU	12	2	4	2	5	3	3	3
<b>Mid-denomin. period</b>		<b>1773</b>	<b>179</b>	<b>285</b>	<b>226</b>	<b>375</b>	<b>91</b>	<b>58</b>	<b>67</b>
Anted/Ecen	S	24	2	5	2	7	4	2	3
Anted	U	1164	27	45	28	47	46	26	32
Anted	HU	27	3	6	4	7	10	5	6
Anted SIA*	U	1	1	1	1	1			
Anted SIA*	HU	1	1	1	1	1			
Ecen	U	1452	23	41	26	51	38	18	25
Symbol	U	126	2	7					
Ecen	HU	131	8	22	10	24	8	4	4

(Continued)

## Appendix IV (Continued)

Period & Type	Den.	Official coins			Esty estimates		Plated coins		
		No.	Obv.	Rev.	Obv.	Rev.	No.	Obv.	Rev.
Late Face Horse	U	1373	83	99	87	108	42	26	30
Aesv/Saenv	U	144	1	4	1	4			
Ece B	U	579	8	21	8	22	6	3	5
<b>Final coinages</b>		<b>5022</b>	<b>159</b>	<b>252</b>	<b>168</b>	<b>272</b>	<b>154</b>	<b>84</b>	<b>105</b>
Ece A	U	409	7	11	9	11			
Ale Sca	U	23	7	7	11	10	1	1	1
Esv Prasto	U	17	3	5	4	8			
Rare	HU	5	5	5	5	5			
<b>Later local</b>		<b>454</b>	<b>22</b>	<b>28</b>	<b>29</b>	<b>34</b>	<b>1</b>	<b>1</b>	<b>1</b>
<i>Total Icenian</i>		9638	577	1010	674	1287	371	178	218
Ingoldisthorpe	QS	22							
British A	S	127							
Plated		373							
Other		30							
<i>Database Total</i>		10190							

*Other includes modern forgeries, non-Icenian and unidentified coins. \*Excluded from the Esty calculation as there are less than six known coins.*

# Appendix V

## Hoard

This appendix supplements the information on hoards given in Chapter 6. I have not duplicated the comprehensive information given by Philip de Jersey (2014) in *Coin Hoards in Iron Age Britain*, but give additional information and interpretation in respect of some of the more important hoards and more comprehensive information on those which postdate de Jersey's volume.

Section V.1 discusses the hoards and site-finds made at Ken Hill in Snettisham and the nearby site of Shernborne. Following this are sections on coinage hoards of early Icenian gold, early silver, denominational period uninscribed gold and finally the late silver of the revolt period. The latter includes a few notes on each of the hoards which I have selected for in-depth study; these partly duplicate de Jersey. The appendix ends with section 6 which is composed of brief notes on important hoards which are too poorly recorded to have been analysed in detail within this study.

### ***V.1 Hoards and finds from Ken Hill and Shernborne in the Snettisham area***

#### ***V.1.1 The Bowl Hoard 1990/1991 (PdeJ 196.6; Stead 1998, 147)***

The 'Bowl Hoard' was a vast assemblage of Icenian coinage which was found together with material from neighbouring tribes in a silver bowl at Ken Hill. The find caused a flood of Icenian material onto the market and many coins which were hitherto great rarities, such as Cani Dvro Units and Anted Staters, were subsequently seen regularly. Stead (1998, 147) recounts the theft of this vast hoard by 'nighthawks', and its subsequent dispersal.

The 1135 coins from the hoard which were borrowed and recorded at the Celtic Coin Index are largely late Units which are similar to those in revolt-period hoards. Unfortunately, statistical analysis of this sample is problematic, as it was selected to be shown to a collector and is almost certainly biased. Table V.1 compares the mix of the 1133 Icenian coins in the sample with the average for the five late hoards analysed in Chapter 6. Much of the sample is similar to the

hoard average, but with more Late Face Horse Units, fewer than expected Anted Units and Aesv/Saenv Units, and no Cani Dvro Units. The two latter types had probably been removed from the coins lent to the collector and he may have been thought more likely to purchase Late Face Horse than other later types.

Gold coinage thought to be from the hoard included six Snettisham Staters but none of the later Plouviez, Irstead or Early Boar Horse Staters. There were 18 Boar Horse B Staters, 20 Boar Horse C Staters and 21 Anted, Ecen or Ece Staters. The Snettisham Staters appear to be an anomaly in what seems to be an assemblage of later Icenian coinage. Two North Thames Whaddon Chase Staters, also thought to be from the hoard, are also earlier than most of the contents. Quarter Staters from the hoard include examples from the Snettisham Issue onwards, with the largest component relating to the Boar Horse B and Boar Horse C Issues.

The gold content allegedly included North Thames Cunobelin Staters and Corieltavian Vep Corf Staters. The

*Table V.1 Comparison of coins from Bowl hoard with average late hoard mix*

<i>Type</i>	<i>No. coins</i>	<i>Mix of hoard</i>	<i>Hoard average</i>
Ecen	316	27.9%	29.40%
Ece A	87	7.7%	7.92%
Ece B	114	10.1%	10.48%
Aesv/Saenv	3	0.3%	1.97%
Late Face Horse	363	32%	22.88%
Anted	155	13.7%	21.66%
Cani Dvro	0	0%	0.30%
Boar Horse C	47	4.1%	3.18%
Early Pattern Horse B	12	1.1%	0.67%
Earlier	35	3.1%	1.38%
Other	1	0.1%	0.16%
Iceni	1133	100%	100%

hoard also appears to have contained many Corieltavian Units and Half Units, including coins of the final Corieltavian types Latison and Iisyprasv. De Jersey has traced 159 Corieltavian Units which appear to emanate from the hoard, and two Corieltavian Staters (PdeJ 196.6) but only a single North Thames Unit. There is a possibility that the records of non-Icenian coinage are biased towards the Corieltauvi because of efforts made to record information by Geoff Cottam, an expert in North-Eastern coinage.

The overview of the Icenian silver coins known to be from the hoard in Table V.1 implies that its silver content is similar to that expected in a revolt period hoard; it is heavily biased towards the final Issues, such as Late Face Horse, Ecen and Anted, with a reasonably strong presence of Boar Horse C and fewer earlier types.

The gold coinage which is likely to be from the hoard has a broadly similar profile to the Units, after allowing for the reduced minting of gold towards the end of coinage. There are no Staters reported to have been included from the large Irstead and Early Boar Horse Issues, despite the anomalous presence of a few earlier Snettisham Staters.

#### *V.1.2 Snettisham Hunstanton II (PdeJ 196.7; Chadburn 2006, hoard 45)*

This hoard, discovered in the early 1990s, consisted of 56 Norfolk Wolf Staters and a number of Units. Most information about the hoard derives from a collector who borrowed the Staters from a dealer and photographed them for the Celtic Coin Index; he later recorded an additional 52 Units from the hoard. The collector was informed by the dealer handling the coins that they were not from the Bowl Hoard, coins from which were with dealers at the same time. Chadburn was also told that this hoard was distinct from the Bowl Hoard but that it was found near to it 'in the treeline'; in addition to the 56 Staters, there were up to 100 other Iron Age coins, including at least 10 Corieltavian Units.

*Table V.2 Snettisham Hunstanton II*

<i>Type</i>	<i>Staters recorded 1995</i>	<i>Units recorded in 1996</i>	<i>Total</i>
Norfolk Wolf B A 1	1		1
Norfolk Wolf B A 8	3		3
Norfolk Wolf B C 16	30 (19)		30(19)
Norfolk Wolf B D	3		3
Large Flan A		1(1)	1(1)
Large Flan C		19(28)	19(28)
SU		2	2
IAU		1	1
<i>Total</i>	<i>56</i>	<i>52</i>	<i>108</i>

The hoard does not appear to be part of the Bowl Hoard as its Staters and most of its Units each form a cohesive group from the early local period. There is a strong likelihood that this hoard also came from Ken Hill, as it seems to have been found by the same finders of that hoard and was handled by the same dealers (Chadburn 2006). The coins recorded by the collector as being from the hoard are summarised in Table V.2; those known to be plated are shown in brackets in the analysis but are included in the totals.

The integrity of the data about this hoard, and indeed whether the Units and Staters were found in the same deposit, relies upon information received from a dealer whose motives may have been questionable. This was a time when there was much official concern about the disappearance of the Bowl Hoard. Chadburn records that 56 Staters, allegedly from Hunstanton II, were impounded at Heathrow Airport, but, subsequently, found not to be Treasure Trove (a specific term defined by English common law, which now falls under the Treasure Act 1996).

Whilst the 56 Staters appear well attested, the accuracy of the information about the Units is harder to assess. Chadburn recorded that 70 of the 100 Units were her type 'Early Face-Horse 1', which is my LFA, whereas the collector only recorded two of these, and 47 of the 52 Units which he recorded were Large Flan C. Chadburn makes no reference to the presence of three later Snettisham and Irstead Units in the hoard which were recorded by the collector. I strongly suspect that most, if not all, of the 49 Large Flan A and Large Flan C Units were from the same hoard, as all are broadly contemporaneous, and there are unusually large proportions of plated examples for each type. The plated coins are either struck from official dies, or from dies that very carefully replicate specific dies without showing obvious signs of hubbing. In many cases it has been difficult to separate plated coins from official examples, and my records of the latter may still include coins which testing would reveal to be plated.

The Units which are alleged to be from the hoard are listed in Table V.3. The Large Flan C Units include a full range of dies. The two Snettisham Units and an Irstead Unit, which were alleged to be from the hoard, appear anomalous. The Snettisham Issue postdates Large Flan C and Irstead is later still; these do not appear to fit with the rest of the alleged Icenian content of the hoard. I think it unlikely that these Units came from the hoard, particularly as Chadburn had no record of these types being present. It is possible that these three coins were added by a dealer to make the group more interesting to a potential buyer, or that the group represents more than one deposit at Ken Hill; unfortunately more information about this 'hoard' is now unlikely to emerge.

De Jersey has also encountered difficulties in attempting to identify the silver which relates to the hoard and listed another 10 silver coins as possibly originating from it.

Table V.3 Units allegedly from Snettisham Hunstanton II

Type	No. coins	Dies	Comments
Large Flan A	2	H:15 plus plated PA:F1	Late LFA dies
Large Flan C	47	19 coins from B,E,G,H,K,L:1,2,4,5,6,7,9,10,12,13,19 and 28 plated coins	A wide selection of official dies – most plated dies relate to B or C:2
SU	2	J&K:16	
IAU	1	B:2	

Table V.4 Dersingham Bypass hoard: coins recorded at the Celtic Coin Index

Type	No. coins	Dies	Comments
Norfolk Wolf B Stater sub-type Cii die-group 16	2	T:57 and U:63	Late dies
Snettisham Quarter Staters	7	4 × A:4, B:4, C:5 and E:14	Full range
Irstead Unit	1	E:6	

Table V.5 Shernborne A hoard

Type	Batch 1 no. coins	Batch 1 dies	Batch 2 no. coins	Batch 2 dies
Norfolk Wolf B Ci die-group 11	1	N:28		
Norfolk Wolf B Cii die-group 16	18	T,U: 1,52,54,57,58,61	14	T,U:51,54,56,57,58,60,61,62
Norfolk Wolf B D die-group 17	1	W:65	1	X:66
Norfolk Wolf B D die-group 18	6	Y,AA,BA:68,70,71,73	3	AA,BA:71,72,75
SS die-group 1	4	B,C:3,4	5	A,B,D:1,2,3,4
SS die-group 2	8	F,G:8,9,11,16	10	F,G:8,9,10,11
SS pair E:7	1	poor:7		
SS die-group 3			2	H:13,15
Early SQ			1	B:2
SQ	3	A,B:1,4	10	A,B,C,D,E:3,4,5,6,9,10A
SU	1	H:15	2	E:10 and H:15
Total	43		48	

### V.1.3 The Dersingham Bypass hoard (PdeJ 196.8, Chadburn 2006, hoard 40)

This possible hoard was pieced together by Amanda Chadburn (2006) from information given by collectors in the early 1990s, and the evidence is even more tenuous than for Snettisham Hunstanton II. Recorded coins thought to be from the hoard are listed in Table V.4, although Chadburn was told that there were a further three or four Norfolk Wolf B Staters which were not traced.

There are similarities to the alleged content of Snettisham Hunstanton II, which also had Norfolk Wolf B Staters from the same die-group, content from the Snettisham Issue, and also allegedly a single Irstead Unit with which it closed. Chadburn considered the possibility that both were the same hoard, but she was told by two sources that it was a small separate hoard. The coins making up each of the three types in the hoard appear to be cohesive, but the hoard as a whole does not, and like Hunstanton II, looks to be either

a constructed assemblage or a group of separate deposits from Ken Hill.

### V.1.4 Shernborne A (PdeJ 195)

This hoard was recovered in two batches over two or three years, from a focussed area in the field (Table V.5). The content of the batches are very similar, but the latest coins are from the Snettisham Issue, and the Snettisham Quarter Staters and Staters in batch 1 appear to close earlier than those in batch 2. The die-groups of the Snettisham Stater appear to follow a chronological sequence, and there are no coins from the final die-group 3 in batch 1, whereas there are two in batch 2. Similarly, and more convincingly, there are only three Snettisham Quarter Staters in batch 1, which are all very early, whereas later dies are included in batch 2. The final seven Snettisham Quarter Stater reverse dies were not present – some of these were probably minted as part of the ensuing Plouviez Issue.

Table V.6 Quarter Staters from Shernborne B

Type of Quarter Stater	No. coins	Dies
Snettisham	12	A:1,A:2,A:4,B:4,B:4,C:5,C:5,C:5,D:6,E:10,E:11A,E:14
Irstead	8	B:1,E:5,F:6,G:8,G:8,G:8,G:13,H:13
Boar Horse B	2	A:1,B:1

### V.1.5 Shernborne B

Fifty identifiable coins emerged in three batches in 2014 from a rectangular area of some 170m × 200m in the same field as the earlier hoard, but some 250m to the west. The coins range from very early Icenian through to early post-conquest Roman coinage; the finds are clearly not a single hoard, and appear to include separate deposits covering a period from, say, 40–30 BC through to the post-conquest period.

The coins likely to come from discrete deposits are:

- 5 Norfolk Wolf B Staters from die-group 18 of sub-type D, one each from dies Y:67 and Z:75, and three from dies BA:71. There are also 2 plated Staters, one of which is clearly based on a die-group 18 die, and the other is from, or based on, die T:43 from die-group 16 of sub-type C. This group is similar to the Brettenham hoard, which also comprised ‘official’ coins from die-group 18 and a plated Stater from die-group 16. A plated North-Eastern South Ferriby Stater may also belong to this group.
- The unusual group of Quarter Staters shown in Table V.6. The 22 Quarter Staters include an example from every Snettisham obverse die and many from subsequent periods of Mint A Quarter Stater production.
- The group of early Units shown in (Table V.7). These may all be from a single deposit although the most obviously cohesive element is the four Bury B Units, two of which are die linked.

The remaining material comprises 8 later Icenian Units, which do not appear to be from a single deposit, a Boar Horse B Stater and Roman Republican Denarius, 2 post-conquest Denarii from AD 69 and a late 1st century Roman bronze of Nerva.

## V.2 Hoards that are predominantly composed of Norfolk Wolf A and B Staters

### V.2.1 Sculthorpe

Found in 2015, this hoard postdates de Jersey’s corpus. The hoard contained 11 Norfolk Wolf A Staters, 9 Gallo-Belgic E Staters and 4 Bury C Units, the latter being extremely corroded. It is uncommon to find a mixture of denominations in a hoard, but Andrew Rogerson (pers. comm.) of Norfolk Archaeology Service confirmed that all 24 coins were found within a 5m wide area and that the four corroded Units were ‘100% mixed in’ with the Staters.

Table V.7 Early local silver from Shernborne B

Type	No. coins	Dies
Bury A	1	D:7
Bury B	4	B:1,D:9,D:11,F:18
Large Flan A	1	C:3A
Large Flan C	1	C:2

The Norfolk Wolf A Staters were from dies C:1, D:1 (2), F:4 (3), F:5, G:5, H:6 and J:1 (2) with weights in grams 6.2, 6.16, 6.23, 6.16, 6.21, 6.28, 6.15, 6.15, 6.12, 5.99 and 6.2 respectively. Eight of the Gallo-Belgic Es are from classes 2 or 3, with the following weights in grams: 6.16, 6.16, 6.19, 6.21, 6.21, 6.21, 6.22 and 6.26. The class of the heaviest Gallo-Belgic E, weighing 6.34g, was not determined. The four Bury C Units were all badly corroded, but at least three, possibly all, appear to be struck from reverse die 3. Weights in grams are 0.92, 1.21, 1.26 and 1.26.

### V.2.2 Heacham II (not in de Jersey)

I have identified two Norfolk Wolf A Staters and a Gallo-Belgic E Stater, which appear to have been found over a period at the same location in the Heacham area. Other Staters, mainly Gallo-Belgic Es, are said to have been found at the same undisclosed site. Both Norfolk Wolf As are from die-group 1 dies D:1 and H:25, and the Gallo-Belgic E appears to be from class 1 or possibly early class 2.

### V.2.3 Hoard M (not in de Jersey)

Five Norfolk Wolf A Staters have been identified as being from a hoard of six coins alleged to have been found in the Snettisham area, c. 2002. These are identified in the database as 02CL2, 02CL3, 03 1148, 04 0535 and 02 VH3. All are die-linked and from die-group 5 dies N, P, 19 and 22.

### V.2.4 Hoard N (not in de Jersey)

Four Norfolk Wolf A Staters were on the market in 2009; they were all from die-group 5 dies M:14 (in database as TX 4–7).

### V.2.5 Ashby St Mary hoard (postdates de Jersey)

This hoard contained 44 Norfolk Wolf B Staters, including one which is plated, and was discovered in 2013 by metal detectorists in two separate batches, thought to be some 30m apart; the exact distance is uncertain as an accurate

GPS measurement was only made of the second site (Adrian Marsden pers. comm.).

When combined, the official coins from the batches form two tightly die linked sequences, the majority from die-group 8 of sub-type B and the remainder from die-group 16 of sub-type C. The latter is spread across a greater number of reverse dies, but there is only one obverse die represented from each die-group. The hoard contained a new reverse die (18A) from die-group 8 and only the second known example of die 44 from die-group 16. An analysis of the hoard content is in Table V.8. The two batches are broadly similar, although, proportionately, batch 1 has more of the later coins from die-group 8 and batch 2, more die-group 16 coins.

The coin recorded as plated is either highly debased or a core. The obverse die used to strike this coin is unidentifiable, but the reverse appears to be from die 20 with no obvious signs of it being hubbed.

The relative chronology of dies from die-group 8 is clarified by the die-study, and they are numbered in chronological order. The coins from this hoard reveal how later strikes showed a decline in average weight, as shown in Table V.9 (the statistics exclude two broken coins and the plated coin).

Table V.8 Analysis of Ashby St Mary hoard

Norfolk Wolf B Dies	Batch 1	Batch 2	Total
H 16	5	14	19
H 18	4	5	9
H 18A	0	1	1
H 20	3	2	5
<i>Sub-total – die-group 8</i>	<i>12</i>	<i>22</i>	<i>34</i>
T 43	0	3	3
T 44	0	1	1
T 48	0	1	1
T 54	0	1	1
T 57	1	1	2
T 59	0	1	1
<i>Sub-total – die-group 16</i>	<i>1</i>	<i>8</i>	<i>9</i>
Plated (poor:20)	0	1	1
<i>Total</i>	<i>13</i>	<i>31</i>	<i>44</i>

Table V.9 Average weight of Norfolk Wolf B die-combinations from die-group 8

Die combination	Sample size	Average weight (grams)
F : 16	17	5.53
F : 18	9	5.06
F : 20	4	4.95

### V.2.6 Lochdales 2007 hoard (PdeJ 305)

This is a group of closely die-linked Norfolk Wolf B Staters from dies H and J and 18, 19, 20 and 21 of die-group 8, which were sold at a Lochdales auction in 2007.

### V.2.7 Beccles (not in de Jersey)

I understand that the three Norfolk Wolf B Staters in Table V.10 were found at the same site a few miles outside Beccles.

### V.2.8 Brettenham (PdeJ 175, part)

The four Norfolk Wolf B Staters in Table V.11 were recorded from Brettenham in 1986 and 1987; the three official Staters are die-linked. This group appears to be a small hoard.

### V.2.9 Hoard D (not in de Jersey)

Table V.12 lists a group of five Norfolk Wolf B Staters recorded at the Celtic Coin Index in 1995 and 1996 which are thought to be from a hoard; there is no information as to provenance.

### V.2.10 Heacham (PdeJ 185)

This is an important hoard of 28 Staters found from 1991 to 1996 (Table V.13). The hoard is predominantly composed of Norfolk Wolf B Staters from sub-type Cii (die-group 16) and sub-type D (die-groups 17 and 18). The sub-type Cii content is weighted towards the end of the die-group; there are no examples in the hoard of the earliest nine dies, and the sample includes the last reverse die of the die-group. The

Table V.10 Beccles hoard

Reference	Weight	Norfolk Wolf B Die-group	Dies
05 0230	Unknown	1	A:3
05 0768	Unknown	11	N:28
1257	5.86g	1	A:4

Table V.11 Likely Brettenham hoard

Reference	Weight (grams)	Die-group	Dies
86 0202	4.47	18	BA:76
86 0204	5.34	18	Poor:77
87 0524	Unknown	18	BA:71
86 0200	4.21	Plated – as 16	(T:54)

Table V.12 Hoard D

Reference	Weight	Die-group	Dies
95 3158	Unknown	17	V:65
95 3159	Unknown	16	Poor:51
95 3160	Unknown	16	Poor:63
96 1623	Unknown	18	BA:71
96 1624	Unknown	Recorded as plated but looks like die-group 18	poor

content from die-group 18 is more evenly spread but also includes an example from the last reverse die. The earlier content in the hoard comprises three early Norfolk Wolf B Staters and a Norfolk Wolf A Stater. The hoard includes three Snettisham Staters struck by very early dies of that type, indicating that the hoard closed shortly after the transition from Norfolk Wolf B to the Snettisham type.

### V.3 Early local silver hoards

#### V.3.1 Barham 'Hoard' (PdeJ 225)

This group was found scattered in a large field between 1990 and 1996 (De Jersey and Newman 1997), with a further record from 2003 (Table V.14). There is no certainty that the Bury Units are a single deposit as they were found in two batches and two single finds over a four-hectare area, with each of the two batches being found scattered within an area of one hectare. The association of North Thames Quarter Stater with the Bury coins is only described as 'possible', although it is probably contemporary with the Icenian coins.

#### V.3.2 Nettlestead Hoard (PdeJ 236)

The four coins from Nettlestead are from a similar period to those found at Barham, except that Bury A predominates in this group rather than Bury C (Table V.15).

Table V.13 Heacham hoard

Type of Stater	Die-group	No. coins	Dies
Norfolk Wolf A	1	1	H:6
Norfolk Wolf B A	1 and 4	2	A:3 and D:11
Norfolk Wolf B Ci	11	1	M:28
Norfolk Wolf B Cii	16	15	T,U:51,57,60,64
Norfolk Wolf B D	17	1	X:66
Norfolk Wolf B D	18	4	Y,AA,BA: 67,71,73,77
Norfolk Wolf B Plated	Similar to 16	1	F1:R6
Snettisham	1	3	A:1&3

Table V.14 Barham Hoard

Type	No.	Dies	Batch 1	Batch 2	Separate
Bury A die-group 2	2	C:4, E:3a		C:4	E:3a
Bury C die-group 2	2	C:11, F:4	C:11		F:4
Bury C die-group 3	4	2 × H:7, 2 × H:8	H:7, H:8	H:7, H:8	
NT Quarter Stater	1	ABC 2231	ABC 2231		

#### V.3.3 Santon Downham (not in de Jersey)

This hoard (Table V.16) was found as a result of forestry operations near Santon Downham, according to information from the trade.

It is possible that a Saham Toney Unit from dies B:3 may emanate from the same find, although this type is likely to be significantly later than the Bury types.

### V.4 Hoards of uninscribed denominational gold coinage

#### V.4.1 Runhall (postdates de Jersey)

There were two batches of Staters found in 2014, and further finds are likely to be made (Table V.17). This small hoard appears to close towards the end of production of the Plouviez Stater. The first three dies are not included and there are three Snettisham Staters, all from the later die-groups of that type. The hoard could be interpreted as suggesting an overlap between late Snettisham and early Plouviez, but numbers of coins are very low.

#### V.4.2 Hoard A (PdeJ 198 as 'Swaffham' hoard)

A hoard of over 50 Staters was supposedly found in the mid-1990s (Philip de Jersey pers. comm. and other anonymous sources) and dispersed without being declared. The Celtic Coin Index recorded 30 coins which appeared in the trade at this time, and are likely to be from this hoard. These include a full range of Irstead Staters and 10 of the 14 Early Boar Horse reverse dies, including the very late die 14 in

Table V.15 Nettlestead hoard

Type	No. coins	Dies	Comments
Bury A die-group 1	1	A:13	
Bury A main die-group	4	D:6, E:7(2), F:3	die-linked
Bury C	1	C:3	

Table V.16 Possible hoard from Santon Downham

Type	No. coins	Dies
Bury A unlinked pair	2	J:11
Bury C	1	B:2
Bury B	1	E:21

Table V.17 Runhall hoard

Type of Stater	Die-group	No. coins	Dies
Norfolk Wolf B plated	Based on die-group 1	1	Similar to dies A:4
SS	2 & 3	3	F:8 and poor:15
Plouviez	Not applicable	5	B,C,D:4,9,11,13

combination with the scarce obverse die C. No Boar Horse B Staters were recorded from the hoard. De Jersey discusses the potential locations for the hoard, which were rumoured to have been Thetford or Swaffham; he identifies another 14 Icenian Staters that may be from the hoard (none of which would change its profile). He also discusses rumours that it included Staters of Addedomarus of which there were unusual numbers on the market at the same time as Hoard A, although there was no evidence that they were from the same source. It is possible that the attempt to link the North Thames Staters to Hoard A may have been an attempt to divert attention from a second undeclared hoard.

#### V.4.3 Freckenham (PdeJ 230)

This hoard was first described by Montagu in 1886, the year after its reported discovery. Initial reports suggested that it comprised 84 coins, and while Montagu only catalogued that number, he thought that the actual total may have exceeded 90.

My database includes 52 coins which emanate from the hoard. Montagu's excellent descriptions of the coins enabled Leins (Talbot and Leins 2011) to use my die-charts to allocate those coins that can no longer be traced to a small number of possible dies of specific types.

Early Boar Horse Staters dominate the hoard with nine of the 14 known reverse dies represented in the 28 coins of which there is a photographic record. Montagu did not

Table V.18 Dallinghoo hoard content as a percentage of total known examples

Type	Previous no. known	No. in Dallinghoo hoard	Dallinghoo as % of total known coins
Snettisham	69	5	7%
Plouviez	21	55	72%
Irstead	55	188	77%
Early Boar Horse	112	221	66%
Boar Horse B	88	366	81%
Boar Horse C	50	0	0%
Total	395	835	68%

describe the distinctive obverse dies C and D in his thorough written observations on the varieties in the hoard, and neither they nor the final Early Boar Horse reverse dies 13 and 14 are represented amongst those coins for which there is a photographic record. The early Boar Horse B Stater dies A:3 and B:4 are the only examples of the type to have been traced to the hoard, the B:4 being a very early strike from die B predating most B:3 strikes. Die 1 is scarce, seeming to have developed an early flaw at the base of the rear foreleg.

The presence of early Boar Horse B Staters and the absence of the final Early Boar Horse dies implies that there may have been a short overlap in the production of these two types. This appears unlikely in view of the content of 'Hoard A' and Sustead: both include die 14 of Early Boar Horse, but only a single, very early, Boar Horse B Stater from dies B:2 between the two hoards.

#### V.4.4 Sustead (previously known as North Norfolk) – PdeJ 197

This hoard is an accumulation of nine Staters found at Sustead in North Norfolk that seems likely to be a scattered hoard. The small group of Staters has a similar profile to Hoard A and Freckenham with Early Boar Horse being the dominant type. The hoard closes with a single Boar Horse B Stater from the early dies B:2, and also includes a late Early Boar Horse Stater from dies B:14. Two further Staters were recorded from the village in 2011 (Early Boar Horse dies B:12 and Plouviez dies E:11), these may be from the same hoard, but would not significantly change its profile.

#### V.4.5 Dallinghoo (originally recorded as Wickham Market) – PdeJ 227

The hoard found in 2008 was reported by Talbot and Leins (2010), its 840 Staters making it the largest fully recorded hoard of British Iron Age gold coinage found in modern times. The hoard vastly increased the number of known Icenian Staters from this period of coinage but for most types resulted in the discovery of modest numbers of few new dies, as Tables V.18 and V.19, taken from the 2010 paper, illustrate.

The hoard appears to have closed shortly before the end of the production of the Boar Horse B Stater and prior to the introduction of Boar Horse C. The final Boar Horse B

Table V.19 Numbers of known dies showing the modest impact of the Dallinghoo hoard

Type	Total known dies		Dies represented in Dallinghoo		Dies unique to Dallinghoo		Dies missing from Dallinghoo	
	Obv.	Rev.	Obv.	Rev.	Obv.	Rev.	Obv.	Rev.
Snettisham	8	17	2	4	0	1	6	13
Plouviez	6	13	6	11	2	4	0	2
Irstead	7	11	7	10	0	1	0	1
Early Boar Horse	4	14	4	14	1	0	0	0
Boar Horse B	17	16	14	13	3	2	3	3
Total	42	71	33	52	6	8	9	19

Stater dies R and S, and 15 and 16, are omitted from the hoard as are Q and 14, which are the final dies of sub-type Boar Horse B (A). All known Early Boar Horse dies were represented in the hoard, as were all but one of the known Irstead dies. The single Irstead die missing is die 6; this is known from only one example and was probably short-lived.

The hoard included five uninscribed Corieltavian Staters. All are varieties of the so-called 'Ferriby' type, but include a number of the more unusual sub-types within this coinage. One is of Van Arsdell's (1989) 'Sunflower type' (ABC 1737), probably one of the earliest of the Ferriby types. There are two regular Ferriby Staters (ABC 1743), one of the 'Wheel Type' (ABC 1749) and one of Van Arsdell's 'Transitional type three' Staters (ABC 1752).

#### *V.4.6 Little Saxham – PdeJ 235*

A scattered group of seven Staters was found by a metal detectorist near Little Saxham in Suffolk between January 1990 and May 1996. There were two other coins found, an Irstead Quarter Stater and an Anted Unit, but these were distant from the nearest Stater and are likely to be unconnected to the other coins. The single Irstead Stater in the group is from late dies E:9 and the only Boar Horse B Stater in the group is from dies J:10, which is towards the end of the main Boar Horse B sequence. The remaining coins are all Boar Horse C Staters, making this the last of the known uninscribed Stater hoards to close.

### ***V.5 The late hoards of silver coinage***

The late hoards selected for detailed analysis are listed below together with brief notes on the circumstances of discovery.

#### *V.5.1 Field Baulk (PdeJ 20)*

Found with a globular Iron Age beaker container by a farmer near to March, Cambridgeshire, were 872 Icenian Units. The hoard was discovered in 1982, and the pot has been dated to AD 60–70 (Potter 1996, 45–48). There are no unusual types in the hoard, which is the largest of the late hoards to have been fully recorded.

#### *V.5.2 Lakenheath (Briscoe 1959; PdeJ 234)*

These coins were found in a 'pre-invasion' style pot in 1959; although certain coins were found outside of the pot, these appear to have spilt from an earlier breakage. The hoard contained 410 Icenian Units (there are minor inconsistencies in previous accounts of the number of Units). In addition to the Units there was an Anted Stater and two Cunobelin Staters of Classic A type (Allen 1975, 135 and 143, pl. V). The hoard included 41 Republican Denarii, the earliest of which was issued in 102 BC, and 26 imperial coins, the latest of which were two coins of Caligula, both from AD 34.

#### *V.5.3 Fring (Chadburn 1990; PdeJ 182)*

These coins were found in 1990 by a metal detectorist after 'sub-soiling'; the coins are clearly from a single deposit, and were found with the remains of a wheel-made cup or bowl of a 'Belgic' style, similar to others found in Roman assemblages in Norfolk, and also with fragments of textile. The original find of 153 Icenian Units has increased to 173 as a result of subsequent recoveries from the same findspot. De Jersey records a further three batches of coins totalling 28 Units, of which there are no photographic records; these have not been included in my detailed analysis.

#### *V.5.4 Honingham (Clarke 1957; PdeJ 186)*

This hoard was originally contained in a small pot which seems likely to have been broken during the first deep ploughing of the land in 1953. The base of the pot, still containing 100 coins, was discovered the following year by the farmer hoeing his sugar-beet; the balance of the hoard and some of the pot was found, subsequently, in the topsoil. The pot was identified as a well-known type of butt-beaker dated in the 1950s to AD 10–61. There are records of 344 Icenian Units from the hoard, including three coins found on the site in 1988 and 1989. In addition to the usual late Icenian Units, the hoard contained a Saham Toney Unit.

#### *V.5.5 Eriswell (Kent and Burnett 1984; PdeJ 228)*

A mixed hoard of 255 Icenian coins, 45 Republican Denarii and 27 Imperial Denarii were found on a building site in Suffolk in 1972. The latest Imperial Denarius is of Nero, from AD 54–55. Kent and Burnett (1984) considered the condition of the latest Icenian to be worse than the latest Roman, suggesting that the minting of Icenian coinage ceased well before the revolt of AD 60. However, from a review of photographs of the hoard the Icenian coins appear uncirculated.

#### *V.5.6 Scole (Burnett 1986; PdeJ 193)*

This was a mixed hoard of 202 Icenian coins, 49 Republican and 38 Imperial Denarii found on a building site at Scole, Norfolk, in 1982/3. The latest Denarius was a coin of Nero of AD 60 or 61. Initially 142 coins were recovered, and the remainder were found nearby or extracted from the builder's spoil heap. It appeared, from plotting the locations of each find, that the Icenian and the Roman coins had been well mixed. The hoard was dispersed after examination at the British Museum, and there is no full photographic record of its contents.

#### *V.5.7 Forncett St Peter (Chadburn 2006; PdeJ 181)*

The Forncett hoard was found in 1996/7 and was recorded as comprising 336 Icenian units and 45 Roman Denarii from the Republic to Emperor Tiberius. The hoard has not been included in my detailed analysis, as I only found

photographs of 112 of the Icenian coins, and therefore could not carry out a comprehensive die-study. The 112 coins appeared to be typical of a late hoard, with the earliest coin being a Snettisham Unit (CCI 00 0519). There is confusion over the number and precise identification of the Icenian coins, as the hoard was disclaimed and returned to its finders before it was fully recorded. Later recoveries of Roman coins from the site are discussed in 6.5.2.

#### V.5.8 Joist Fen (Briscoe 1964; PdeJ 232)

A scattered group of Icenian and some Roman coins were recovered over an extended period from the late 1950s. Philip de Jersey notes the confusion over the total number of coins that have emerged from Joist Fen. Forty-one Icenian coins are recorded in the Celtic Coin Index, and Allen (1970, 18) recorded 34 Roman coins. Combining de Jersey's research at the Fitzwilliam Museum with a few extra records that I have found in the papers of the collector Henry Mossop has increased the number of identifiable Icenian coins to 65, but de Jersey's work indicates that many additional unrecorded coins were found. There is no certainty that these coins either came from a single hoard or even that they were found on the same fen island (Briscoe 1964, 124). Briscoe records that at the Treasure Trove inquest they were described as a 'collection of strays' and that certain of the coins were recovered from farm workers who had found them in previous years.

The Icenian coins are particularly important because they include the only Esv Prasto coins known to have been found in association with other coins, and also because the latest

Roman Denarius is from the reign of Nero dated AD 57–58 (PdeJ 232).

Despite the uncertainties, it is clear that at least some of the coins are from a mixed Icenian and Roman hoard, as Briscoe notes that one of the Icenian coins was found attached to a Roman Denarius. It seems likely that the very rare Esv Prasto coins, of which 11 were eventually recovered, were from a single deposit which must have contained at least some of the Roman coinage. De Jersey refers to a statement by a Mr Morley, who metal detected the area into the 1980s, that an Esv Prasto Unit had been found attached to a Denarius of Juba. It is unclear, however, if these are the same two coins referred to by Briscoe. Despite the intense metal detecting of sites in East Anglia, this single group still accounts for 65% of all known Esv Prasto coins.

There are two elements of the Joist Fen assemblage which are not found in other Boudiccan revolt hoards: the Esv Prasto Units and at least six Half Units. The former have never been found in another such hoard and the only well-recorded hoard example of the latter are two Half Units amongst the 350 coins in the Wimblington hoard. The remaining Icenian coins are similar to the content of typical revolt-period hoards as shown in Table V.20; the column to the extreme right shows the mix of the Joist Fen coins, excluding the Esv Prasto Units and the Half Units, and the column just to the left, the mix of an average hoard.

The Denarius of Nero implies that the Joist Fen hoard, or hoards, was deposited at the time of the Boudiccan revolt. The Esv Prasto Unit apparently having been attached to a Denarius implies that the Esv Prasto Units were part of a single hoard with the other Units, although it is conceivable that there were several hoards close together as found at Hallaton (Score 2011). The additional anomaly of the Half Units adds further confusion to the picture, and I suspect that these were stray finds; one of the Half Units is from the Boar Horse B Issue and may be the earliest coin present.

Table V.20 Comparison of Joist fen coins to average hoard content

Type	Joist Fen coins	%	Hoard Average	JF adjusted
Ecen	15	23.1%	29.40%	31.3%
Ece A	3	4.6%	7.92%	6.3%
Ece B	7	10.8%	10.48%	14.6%
AES/SA	1	1.5%	1.97%	2.1%
Late Face Horse	9	13.9%	22.88%	18.8%
Anted	8	12.3%	21.66%	16.7%
BHCD	1	1.5%	0.30%	2.1%
Boar Horse C	2	3.1%	3.18%	4.2%
Early Pattern Horse B	1	1.5%	0.67%	2.1%
Earlier	1	1.5%	1.38%	2.1%
Esv Prasto	11	16.9%		
BH Half	1	1.5%		
PH Half	5	7.7%		
Other			0.16%	
Iceni	65	100%	100%	100%

#### V.5.9 General Observations

Although the Fornsett, Joist Fen and the Bowl Hoards could not be included in the statistical study, I examined available coins which all included examples struck from very late dies (see Table V.21). This implies that these hoards all closed after coinage production ceased and that they probably date to the Boudiccan revolt.

#### V.5.10 Mattishall (PdeJ 188)

An interesting group of coins was found from 2009–10 at Mattishall in Norfolk. The group consisted of 15 Icenian Units and 23 Denarii. The Roman coins would be typical of the Roman content of revolt-period hoards, closing with a Denarius of Claudius from AD 51–52, if it were not for a Denarius of Trajan AD 114–17 which was found with them (Portable Antiquities Scheme reference NMS-62D0F5). The related notes said that the distribution of the finds suggested a single scattered hoard, but discussions with

Norfolk Archaeology Service (pers. comm.) confirmed that the Denarius of Trajan cannot be definitively associated with the other coins and could be a stray. The Icenian coins are shown in Table V.22 with the average content of late hoards.

Mattishall does not appear typical of a revolt hoard: it has too few Anted Units and too many Ece A and Ece B Units, but the difference is of limited statistical significance because of the small sample size.

## V.6 Other Hoards

What follows are brief notes on other hoards that might have provided further useful information if comprehensive records were available.

### V.6.1 Norton sub-course (PdeJ 190)

One hundred and thirteen Denarii closing with Claudius AD 41–42, 2 Icenian Units, Boar Horse C and Ecen, and an unidentifiable bronze coin. The coins were found in a very disturbed state and it is not possible to be sure that the Iron Age coins are associated with the Denarii.

### V.6.2 Weston Longville (PdeJ 203)

A poorly recorded hoard found in the 19th century of some 200–300 Icenian coins and 3 Republican Denarii the latest of which is 32–33 BC. The 53 identifiable coins from the hoard are all late Icenian issues typical of revolt-period hoards.

### V.6.3 West Runton (PdeJ 204)

Two or possibly three Irstead and Early Boar Horse Staters from what may be a larger hoard found following a cliff fall in c. 1994.

### V.6.4 Eye, Suffolk (PdeJ 229)

Sixty-five coins listed by De Jersey include 8 Bury A's as well as 5 Large Flan A's and a range of later material, including late Units typical of a revolt-period hoard. The coins include 3 Cunobelin Bronze Units and 2 Roman coins

Table V.21 The presence of late dies in partially documented major hoards

Late dies/hoard		Bowl	Forngett	Joist Fen
Type	Die	Present	Present	Present
Ecen	P	Yes	Yes	
Symbol	Y	Yes	Yes	
Ecen 2	U	Yes	Yes	
Ece A	G	Yes	Yes	
Ece B	E	Yes	Yes (hd B)	Yes
Aesv/Sae	A	Yes	Yes	Yes
Late Face Horse	84	Yes	Yes (hd B)	Yes
Anted	L	Yes	Yes	

(a Republican Denarius and an As of Augustus). The coins do not appear to be a single hoard and, as de Jersey suggests, this assemblage has more of the features of a complex settlement site, possibly including two or more small hoards.

### V.6.5 Santon Downham (PdeJ 239)

A typical revolt-period hoard originally consisting of 107 late Icenian coins, of which De Jersey has traced 53. The earliest is a Boar Horse B Unit and the hoard also contained 2 Asses of Claudius, AD 41–4.

### V.6.6 March (PdeJ 18)

Forty to 50 Icenian coins found in an 'earthen vessel' in about 1838. This has all the features of a revolt-period hoard although few coins can be traced. The earliest coin in the hoard seems to have been a rare Large Flan D Unit (CCI 68 1096), now in the British Museum.

### V.6.7 Wimblington (PdeJ 23)

Some 300–50 coins found c. 1904, of which 54 can now be identified. The coins are generally typical of a revolt-period hoard, with the earliest coins being a Snettisham Unit and an Irstead Unit; an unusual feature of the hoard is that it contained 2 Ecen Half Units.

### V.6.8 Littleport or Apes Hall (PdeJ 17)

An unusual record of c. 86 coins from an undeclared hoard including mid- and late Icenian Units, 6 Icenian Half Units, 33 North-Eastern uninscribed Units and Half Units, 4 Cunobelin Staters, 1 Cunobelin Bronze and 17 Denarii to Tiberius c. AD 35. Highly unlikely to be a single hoard, and probably includes a site assemblage.

Table V.22 The mixes of Mattishall, North Creek and an average late hoard

	Mattishall	mix	Hoard Average	North Creek	mix
Ecen	5	33.3%	29.40%	8	21.6%
Ece A	2	13.3%	7.92%	5	13.5%
Ece B	3	20%	10.48%	3	8.1%
AES/SA			1.97%		
Late Face Horse	2	13.3%	22.88%	11	29.7%
Anted	1	6.7%	21.66%	2	5.4%
BHCD			0.30%	1	2.7%
Boar Horse C	1	6.7%	3.18%	5	13.5%
Early Pattern Horse B			0.67%	1	2.7%
Earlier	1	6.7%	1.38%	1	2.7%
Other			0.16%		
Iceni	15	100%	100%	37	100%

# Appendix VI

## Concordance

Appendix VI provides a concordance between the names of each type of Icenian coin discussed in this book and the three most recent reference works on Late Iron Age

British coinage which are listed more fully at the end of the appendix.

### Appendix VI

<i>Talbot</i>	<i>Den.</i>	<i>ABC</i>	<i>VA</i>	<i>BMC</i>
<i>Den.=denomination; S, QS, U, HU=Stater, Quarter Stater, Unit or Half Unit</i>				
Ingoldisthorpe	S	2421, 2424		
Ingoldisthorpe	QS	2448		
Norfolk Wolf A	S	1393	610-1	212-16
Norfolk Wolf A	QS	1459		
Norfolk Wolf B	S	1396, 1399	610-2 and 3	217-78
Bury A	U	1495	80	3524-7
Bury C	U	1498		3528-32
Bury B	U	1501		3533-5
Bury D	U	1516		
Bury E	U	1519		
Bury F	U	1513	81	
Bury G	U	1528		
Bury H	U	-		
Bury Pallas	HU	1597		
Bury face horse	HU	1504		
Bury Butterfly	HU	1594		
Large Flan A	U	1522		3548-9
Large Flan C	U	1525		3550-1
Large Flan B I	U	1510		
Large Flan B II	U			
Large Flan B III	U	1507		387
Large Flan B	HU			
Large Flan	QS	1468		
Large Flan D	U	1540, 1543	665-1	3536, 3537, 3547
Bury	QS			

(Continued)

## Appendix VI (Continued)

<i>Talbot</i>	<i>Den.</i>	<i>ABC</i>	<i>VA</i>	<i>BMC</i>
Mildenhall	QS	1486, 1489		370
Mildenhall	HU			
Spiral	U			
Snettisham	S	1402, 1405, 1408, 1411	1505-1	3353-83
Early Snettisham	QS	1465		3435
Snettisham	QS	1462		3422-34
Snettisham	U	1531	665-7, 665-9	3541-5
Snettisham & Plouviez	HU	1603, 1618		3789
Plouviez	S	1414, 1417, 1420	624	3390-5, 3399
Plouviez	U			3539, 3546
Irstead	S	1423	626-1	3396-8, 3400-4
Irstead	QS	1480		3437-8
Irstead A	U	1534, 1537	665-3	3538
Irstead	HU			
Early Boar Horse	S	1426, 1429, 1432, 1435, 1438	626-4, 62-67, 626-9, 626-12	3405-19
Early Boar Horse	U	1570, 1573		3440-4
Early Boar Horse	HU	1615		3787-8
Boar Horse B I	S	1444, 1447	620-7, 620-9	3386-9
Boar Horse B II	S	1441	620-1	3384-5
Boar Horse B	QS	1471, 1474	628	3436
Boar Horse B	U	1579	657	3455-72
Boar Horse B	HU	1621		3513-6
Boar Horse B (A)	U	1576	655	3445-54
Boar Horse B (A)	HU	1612	681	3777-8
Boar Horse C	S	1450	620-4	3385
Boar Horse C	QS	1477		
Boar Horse C	U	1582, 1585	659	3473-511
Boar Horse C	HU	1624	661	3517-20
Canl Dvro	U	1630	663	3521-3
Anted SIA	U	1633		4581
Anted SIA	HU	1636		
Anted	S	1639	705	3790
Anted	U	1642, 1645	710, 711, 715	3791-4027
Anted	HU	1648	720	4028-31
Ecen	S	1651, 1654		4032
Ecen	U	1657, 1672, 1675	730, 734, 740	4033-296
Ecen - symbol	U	1678, 1681	750, 752	4297-338
Ecen	HU	1684, 1687, 1690, 1693, 1696	736, 742, 683	4216-7, 3781-4
Early Pattern Horse A	S	1456		
Early Pattern Horse A	U	1588	679	3763-6
Early Pattern Horse A	HU	1627		3779-80

(Continued)

*Appendix VI (Continued)*

<i>Talbot</i>	<i>Den.</i>	<i>ABC</i>	<i>VA</i>	<i>BMC</i>
Late Face Horse	U	1564, 1567	790-1, 792-1, 794-1	3556-62
Saham Toney	QS	1492		
Saham Toney	U	1546, 1549, 1552, 1555, 1558, 1561	665-5,	3552-5
Saham Toney	HU			
Early Pattern Horse B	S	1453		
Early Pattern Horse B	QS	1483		369
Early Pattern Horse B	U	1591	675	3767-74
Early Pattern Horse B	HU	1606		3256-7
Aesv	U	1702	775	4558-72
Saenv	U	1699	770	4540-57
Ece B	U	1663, 1666, 1669	762, 764, 766	4431-9
Ece A	U	1660	760	4348-430
Ale Sca	U	1705, 1708	996	4576
Esv Prasto	U	1711	780	4577-80

*References*

ABC-Cottam and others 2010

VA-Van Arsdell 1989

BMC-Hobbs 1996

# Appendix VII

## Glossary

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### *Casual losses*

These are coins that have a recorded findspot but which do not appear to be from a hoard. Coins falling into this category may include those from unidentified dispersed hoards and deliberate deposits or offerings of a single coin.

### *CCI*

The Celtic Coin Index held at the Institute of Archaeology, Oxford University. More information about this database can be found at: <http://www.celticcoins.ca/>.

### *CPD*

The number of *coins per die*. This measure is used to provide comparative data on different types within a sample, often a hoard, for the purposes of assessing relative chronology. It is usually computed by dividing the total number of coins of a particular type in a sample by the average number of all known official obverse and reverse dies for the type. Meaningful results rest upon the reasonable, although not infallible, assumption that the content of a hoard is biased towards the most recently minted coinage. Thus, types with a higher CPD would *prima facie* be assumed to be more recent than those with a lower CPD.

In computing the CPD the denominator can be either the average of all known dies or the average of only those dies found in the sample. Both have advantages and disadvantages. Using only the dies found in the sample reduces distortion caused by the hoard closing part way through the production of a type and potential distortion caused by forged dies being thought to be official. It is less useful at comparing older types within a hoard, as the measure can never fall below one. Unless otherwise stated, calculations within this book use total dies as a denominator rather than the number of different dies appearing within the sample. Computations of CPD can also be made for the individual die-groups making up a type, or even for subsets of a die-group, and these can be valuable in assessing the relative chronology of different die-groups. I have also used the calculation of CPD to give relative measures of

how common particular types, or subsets of types, are in my database as a whole relative to the numbers originally in issue.

Caution needs to be taken in interpreting results, as distortion may be caused by differing methods of organising production. Types produced in high volume from a single site are likely to have higher numbers of coins per die in a sample than a contemporary type produced in the same total volume from multiple sites using different dies at each site. Distortion may also arise if production of a type stopped when the dies being used had been newly introduced, although the statistical impact of such an event is likely to be small for a larger type struck from many dies.

### *CPRD*

The number of *coins per reverse die*. This is a measure similar to CPD, but which uses the total number of reverse dies only, as the denominator. This limits distortion which could result from exceptionally prolonged use of particular obverse dies. This occasionally happened as in the case of the Early Boar Horse Stater, where both die A and die B were used until they were very worn and flawed; die A was struck with eight different reverse dies and die B with six. The longevity of the Early Boar Horse obverse dies contrasts with earlier and later Stater types, the Irstead Stater, for example, being struck from seven obverse dies and only 11 reverses. In view of these differences, CPRD is useful in analysing hoards of early denominational Staters.

### *Denominations*

The Icenian coinage consisted of: two denominations struck in gold alloy, the modern, generally accepted names for which are Staters and Quarter Staters, and two denominations struck in silver alloy, the modern names for which are Units and Half Units. Several other Late Iron Age regional coinages were struck using only the same metals and denominations such as those commonly attributed to the Dobunni and the Corieltauvi. Other areas had additional denominations of bronze.

The highest value coin, the Stater, was struck throughout the period of Icenian coinage production, although much less frequently towards the end of the coinage. The Quarter Stater was generally produced in smaller volumes than its corresponding Stater. The Unit was produced in all periods, and was minted in large numbers. The Half Unit was produced less frequently than the Unit, and in lower volumes.

### *Die-group*

This is a term that I have used to give an identity to a die-linked chain of dies with sufficient samples to justify its examination as a subset of the particular type of coinage. A type is usually composed of a number of die-groups and, possibly, a few unlinked pairs of dies.

### *East Anglia*

The area of northern East Anglia in which coinage attributed to the Iceni is found. See section 1.4.

### *Findspot*

A findspot is recorded for 7254 of the coins in my database, of which 5392 are recorded as emanating from hoards. The 1862 remaining coins are those which have been used to determine patterns of distribution; the hoard coins are less useful in this regard as there are relatively few separate locations, and during the course of this study it has been established that the late hoards of Units are relatively homogenous in Icenian content irrespective of place of discovery.

Most of the records of non-hoard findspots are from the Celtic Coin Index, and record only the parish in which the coin was found. In many cases this information was obtained by the keeper of the Celtic Coin Index from the finder, typically a metal detectorist, after some persuasion. Finders are often reluctant to reveal locational information for a variety of reasons, including a desire to conceal productive sites from rivals. Detailed grid references are uncommon, but where available they have been used.

Certain dealers, such as Chris Rudd and Mike Vosper, have in the past been assiduous in trying to record provenances which were then provided to the Celtic Coin Index, or published in their catalogues. In recent years, the fear that this information may put them at risk of being implicated in unauthorised detecting has led to a decline in the flow of such data.

I have been very fortunate because the Museum and Archaeology services in Norfolk and Suffolk have been at the forefront in developing a good relationship with responsible metal detectorists. This has resulted in the collection of much data regarding findspots, including many cases where precise information is available; many of these records are included on the Portable Antiquities Scheme

database (<https://finds.org.uk/>). During my research, I have added many records of findspots as a result of my own dialogue with dealers and detectorists; in most cases this is limited to the parish in which coin was found.

There is a risk that some of the data on coinage distribution are incorrect and that detectorists have given misleading provenances to their finds in order to fool competitors or to cover up trespass or criminal activity. A former detectorist has helped me to correct misleading provenances given to the former well-known collector Henry Mossop and recorded by him with the Celtic Coin Index. Mossop was an active detectorist, and was allegedly given the misleading location of Cherry Hinton for many coins actually emanating from Saham Toney to avoid him seeking to detect the site himself.

There are almost certain to be inaccuracies within the recorded findspots, but it appears that the overall picture presented by the data is reasonable. This can be seen by the distinctive sub-regional distributions revealed for a number of coinages. Inaccurate provenances may explain some of the occasional unexpected locations for types which are otherwise restricted in their distribution.

Unless otherwise stated, plated coins are not included in distribution maps as these may not be typical of the distribution of the coinage being forged.

### *Iceni*

The attribution of a single tribal designation to the whole of the Iron Age East Anglian coinage is highly unlikely to reflect what would have been the position on the ground during the coin issuing period. Nonetheless, in accordance with common usage I use the term Icenian to describe the distinctive Late Iron Age coins which are specific to East Anglia.

### *North Thames*

The region, which includes Essex and southern Suffolk, where coinage often attributed to the Catuvellauni and the Trinovantes is found. In many publications the region is referred to as Eastern (e.g. Hobbs 1996; Leins 2012). Leins (2012) provides the most comprehensive recent mapping of the region based on coinage distribution.

### *Official coinage*

Coins which are not plated, and which are not intended to deceive.

### *South Thames*

The area where the coinage often attributed to the Atrebates and Regni is found (Leins 2012).

### *Sub-type*

See *Type*.

*Type*

I use the term 'type' for a group of coins of the same denomination, which appears to have been produced by the same organisation and which appear likely to have been intended to be used interchangeably. Usually they have common elements to their obverse and reverse designs which distinguish them from other types. Within a type there may be differing designs on, say, the obverse, as long as

these are used interchangeably with a common design, or designs, on the reverse. With rare exceptions, individual dies are not used on more than one type. If there is consistent stylistic variation between die-groups, or groups of die-groups, of a type I have called them *sub-types*, provided that this will aid the study of the coinage. Such divisions have helped to make sense of types such as the large and complex issue of Norfolk Wolf B Staters.