

THE  
CRUCIFORM  
BROOCH  
AND  
ANGLO-SAXON  
ENGLAND

TOBY F. MARTIN

Anglo-Saxon Studies 25

THE CRUCIFORM BROOCH AND  
ANGLO-SAXON ENGLAND

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THE CRUCIFORM BROOCH AND  
ANGLO-SAXON ENGLAND

Toby F. Martin

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*For my parents  
Lynne and Philip Martin*

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# Contents

List of Illustrations	viii
Preface	xiv
Acknowledgements	xv
1 The Anglian Brooch <i>par excellence</i>	1
2 A New Typology for Cruciform Brooches	12
3 Building a Chronological Framework	90
4 Cycles of Exchange and Production	129
5 Migrants, Angles and Petty Kings	161
6 Bearers of Tradition	191
7 Cruciform Brooches, Anglo-Saxon England and Beyond	233
Appendix 1 Cruciform Brooches by Type	239
Appendix 2 Cruciform Brooches by Location	297
Appendix 3 A Guide to Fragment Classification	311
Bibliography	315
Index	335

# Illustrations

## *Plates*

The plate section is positioned at the end of the volume.

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- 24 Type 3.3.2 (reproduced with permission from the Ashmolean Museum, Oxford)
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- 28 Type 4.2.1 (reproduced with permission from Rutland County Museum; 2 reproduced with permission from the Ashmolean Museum, University of Oxford)
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- 30 Type 4.6.2 (reproduced with permission of Nottingham City Museums and Galleries)
- 31 Type 4.2.7 (© Trustees of the British Museum, reproduced with permission)
- 32 Group 4, unclassified (© Trustees of the British Museum, reproduced with permission)
- 33 Kentish types 1.2, 1.3 and 2.1 (1 and 3 © Trustees of the British Museum, reproduced with permission; 2 reproduced courtesy of North Lincolnshire Museums Service)
- 34 Possible imports (1 © National Museums Liverpool: World Museum; 2 and 3 © Trustees of the British Museum, reproduced with permission)
- 35 Brooches with attachment loops (1 reproduced courtesy of North Lincolnshire Museum Service; 2 reproduced with permission from Cambridge University Museum of Archaeology and Anthropology; 3 reproduced courtesy of Kettering Borough Council: The Manor House Museum)
- 36 Examples of repair (1 reproduced with permission from Cambridge University Museum of Archaeology and Anthropology; 2 and 3 © Trustees of the British Museum, reproduced with permission)
- 37 Examples of repair (both reproduced with permission from Cambridge University Museum of Archaeology and Anthropology)
- 38 Examples of repair (both reproduced with permission from Cambridge University Museum of Archaeology and Anthropology)
- 39 Examples of repair (1 and 2 reproduced with permission from Cambridge University Museum of Archaeology and Anthropology; 3 reproduced courtesy of North Lincolnshire Museum Service)
- 40 Examples of repair (1 reproduced with permission from St Edmundsbury Heritage Services; 2 reproduced with permission from Oxford Museums Resource Centre)

- 41 Examples of customisation (1 reproduced courtesy of The Collection: Art and Archaeology in Lincolnshire; 2 reproduced with permission from the Ashmolean Museum, University of Oxford)
- 42 Lead fragments (all reproduced with permission from the Portable Antiquities Scheme under a Creative Commons BY-SA licence)

### *Figures*

An asterisk before the page number indicates the facing page.

All illustrative material by the author, unless otherwise stated.

1	Distribution of all 2,075 cruciform brooches	2
2	Kernel density analysis of all 2,075 cruciform brooches	3
3	Obverse, reverse and profile of a typical cruciform brooch (photo by the author, reproduced with permission from the Ashmolean Museum, University of Oxford)	4
4	Cruciform brooch component nomenclature	13
5	Group 1 components	21
6	Group 1 correspondence analysis	*22
7	Types 1.1.1 and 1.1.2	23
8	Types 1.2.1 and 1.2.2	25
9	Group 2 components	29
10	Group 2 correspondence analysis	*30
11	Types 2.1.1 and 2.1.2	32
12	Types 2.1.3 and 2.1.4	33
13	Types 2.2.1 and 2.2.2	36
14	Types 2.2.3 and 2.2.4	38
15	Group 3 components	39
16	Group 3 correspondence analysis	*42
17	Enlarged correspondence analysis of group 3	*43
18	Types 3.0.1 and 3.0.2	44
19	Types 3.1.1 and 3.1.2	46
20	Types 3.2.1 and 3.2.2	48
21	Types 3.2.3 and 3.2.4	50
22	Types 3.2.5 and 3.2.6	52
23	Types 3.2.7 and 3.2.8	54
24	Types 3.2.9 and 3.2.10	56
25	Types 3.3.1 and 3.3.2	58
26	Types 3.4.1 and 3.4.2	59
27	Types 3.4.3 and 3.4.4	61
28	Type 3.4.5 and sub-group 3.5	63
29	Group 4 components	66

30	Group 4 correspondence analysis	*68
31	Types 4.1.1 and 4.1.2	69
32	Types 4.1.3 and 4.2.1	71
33	Types 4.3.1 and 4.3.2	73
34	Types 4.4.1 and 4.5.1	75
35	Types 4.6.1 and 4.6.2	76
36	Types 4.7.1 and 4.7.2	78
37	Kentish types 1.1, 1.2 and 1.3	82
38	Kentish types 2.1 and 2.2	84
39	Annotated correspondence analysis object plot	96
40	Correspondence analysis variable plot	99
41	The rivet and plate repair technique	134
42	Use-adaptation (1 photo by the author, reproduced courtesy of North Lincolnshire Museum Service; 2 photo by the author, reproduced with permission from Cambridge University Museum of Archaeology and Anthropology; 3 and 4 photos by the author, © Trustees of the British Museum, reproduced with permission)	138
43	Notch, line and facet decoration (1 reproduced with permission from the Portable Antiquities Scheme under a Creative Commons BY-SA licence; 2 photo by the author, reproduced with permission from St Edmundsbury Heritage Services)	149
44	Punchmark types found on cruciform brooches	152
45	Major Style I motifs found on cruciform brooches	155
46	Degeneration of Style I	157
47	Kernel density analysis of all 980 stray find-spots	166
48	Kernel density analysis of all 135 find-spots for cruciform brooches excavated from known cemeteries	167
49	Kernel density analysis of all 227 phase A cruciform brooches	169
50	Kernel density analysis of all 1572 phase B cruciform brooches	170
51	Kernel density analysis of all 105 phase C cruciform brooches	171
52	Typical feminine garments fastened by brooches	194
53	Biological sex profiles of 139 individuals inhumed with cruciform brooches	212
54	Biological sex profiles of forty-two individuals cremated with cruciform brooches	212
55	Fine biological age profiles of individuals buried with cruciform brooches	216
56	Comparing biological age profiles	216

57	Comparing biological age profiles	217
58	Plan of the cemetery at Empingham II, Rutland.	227

### Tables

1	Quantification of the corpus	10
2	The broad classifications used for the seriation of brooch components	94
3	A sorted matrix of types derived from the seriation curve	98
4	List of grave-associated cruciform brooch types	100
5	Seriation of grave-associated cruciform brooch types	102
6	Comparing rates of deposition of cruciform brooch groups between inhumation and cremation	106
7	Small long brooches, annular brooches, wrist-clasps and girdle-hangers	107
8	Relative frequencies of small long brooches, annular brooches and wrist-clasps between the two halves of group 4	109
9	Concordance between Brugmann's bead phases and cruciform brooch groups	111
10	The relative phasing of cruciform brooch types	112
11	Correspondence between Reichstein's and the present author's typology and chronology	120
12	Final relative and absolute dates	128
13	Frequencies of punchmarks	153
14	Frequencies of Style I motifs	156
15	Osteological age categories	210
16	Cemeteries with corresponding osteological data	211
17	Typical proportions of early Anglo-Saxon graves containing cruciform brooches	224

## Preface

This book is the result of two principal aims. The first was to provide a useful reference guide outlining practical matters such as typology, chronology, types of decoration, geographical parameters, usage as a part of dress, and the nature of the archaeological contexts in which cruciform brooches occur. The second aim was to couch each and every one of these observations, traditionally presented as worthwhile in their own right, in terms of their social significance. I decided that if it was of no social import, it was not to be included in the book. However, I soon found almost every such detail to have some bearing on early Anglo-Saxon society and over the course of my writing the greatest challenge became not the recognition of social significance, but the linking of all these aspects together into a coherent narrative, which I hope will become evident through the thematic progression of the book. Though this is not how specialist studies of artefact types have traditionally progressed, this seems to me now to be a useful model.

During the last few years, it has been a privilege to work under the inherited advice and knowledge of so many of our discipline's founders and major protagonists, including Haakon Schetelig, Nils Åberg, Edward Thurlow Leeds and many other highly influential scholars whose work has touched upon the seemingly ubiquitous cruciform brooch. Research on Anglo-Saxon cruciform brooches has historically not progressed easily, with Edward Thurlow Leeds and Hayo Vierck both sadly never completing their accounts. It was also a loss to the discipline that Catherine Mortimer never published her doctoral thesis on the subject, which must be among the most cited unpublished works in early Anglo-Saxon archaeology. I wrote this book sorely aware of the shadows all these esteemed scholars cast. I hope that finally seeing something substantial published on cruciform brooches might have been, or still yet might be, a satisfaction to them, given their direct contribution to many of its themes and all of its subject matter.

My ambition with this book was that its reader, be they crouched in some sodden field in East Anglia wiping the mud from a cruciform brooch, in the space of some museum gallery, or in the aisles of an archaeological store, would see not just a particular class in Åberg's, Leeds', Reichstein's, Mortimer's or, heaven forbid, Martin's typology, but early Anglo-Saxon England itself. Observing that ancient jewellery, they might imagine something of workshops, gift exchanges, migrations, ethnicity, kingdom formation, or the relationships between men and women, adults and children. In short, I hope that this book might afford them some connection with the women who once wore these items. I do not wish to set out an authoritative, bullet-pointed list of what cruciform brooches meant, but to reinspire scholarly interest in these objects that have fascinated archaeologists since the nineteenth century. My success in this endeavour is for your judgement.

## Acknowledgements

For their academic support from the very start I would principally like to thank Dawn Hadley and John Moreland. My research has also benefited enormously from the critical input and encouragement of Catherine Hills. For the book itself I owe my greatest debts to John Hines whose experience and expertise in this area of archaeology have been particularly beneficial.

This research would not have been possible without the help of many museum staff. More than sixty collections contributed to the work included in this book and as such there are too many individuals to mention by name here. Those who gave substantial amounts of their time to making available large quantities of material include (in no particular order): Rose Nicholson (North Lincolnshire), Eleanor Standley (Ashmolean Museum), Sonja Marzinzik and Virginia Smithson (British Museum), Paula Gentil (Hull and East Riding), Antony Lee (Lincoln Collection), Lorraine Cornwell (Oakham) and Anne Taylor (Cambridge University). Many others facilitated shorter visits to their collections and all of these institutions (and more) are listed in Appendix 1. I remain grateful to all of them. Correspondence with additional museums, as well as with Heritage Environment Records and the Portable Antiquities Scheme, has been substantial and highly beneficial to the work contained here. I am also very grateful for a grant from the Aurelius Charitable Trust, without which the quantity of images contained herein would not have been possible. Additionally, I would like to thank Ian Cartwright at the Institute of Archaeology, University of Oxford, for the permission to use his fine photography as a cover image as well as for the time he took to produce it for me.

During this research I have often relied upon the support of friends and colleagues, most of whom have rarely failed to feign some kind of interest in brooches. Failing that, they have reminded me that there are sometimes more important things in life. To Kirsty Squires, whose insight into all things osteological has also been invaluable, I perhaps owe the greatest debt in terms of companionship and support. However, this book could not have been written without the abiding support of two people in particular and the distractions offered by their ever-ebullient labrador, whose walks freed me from my desk and provided many opportunities for contemplation. I would like to extend my deepest gratitude to my parents, to whom this book is dedicated. I will always be grateful for what they have done.



# 1

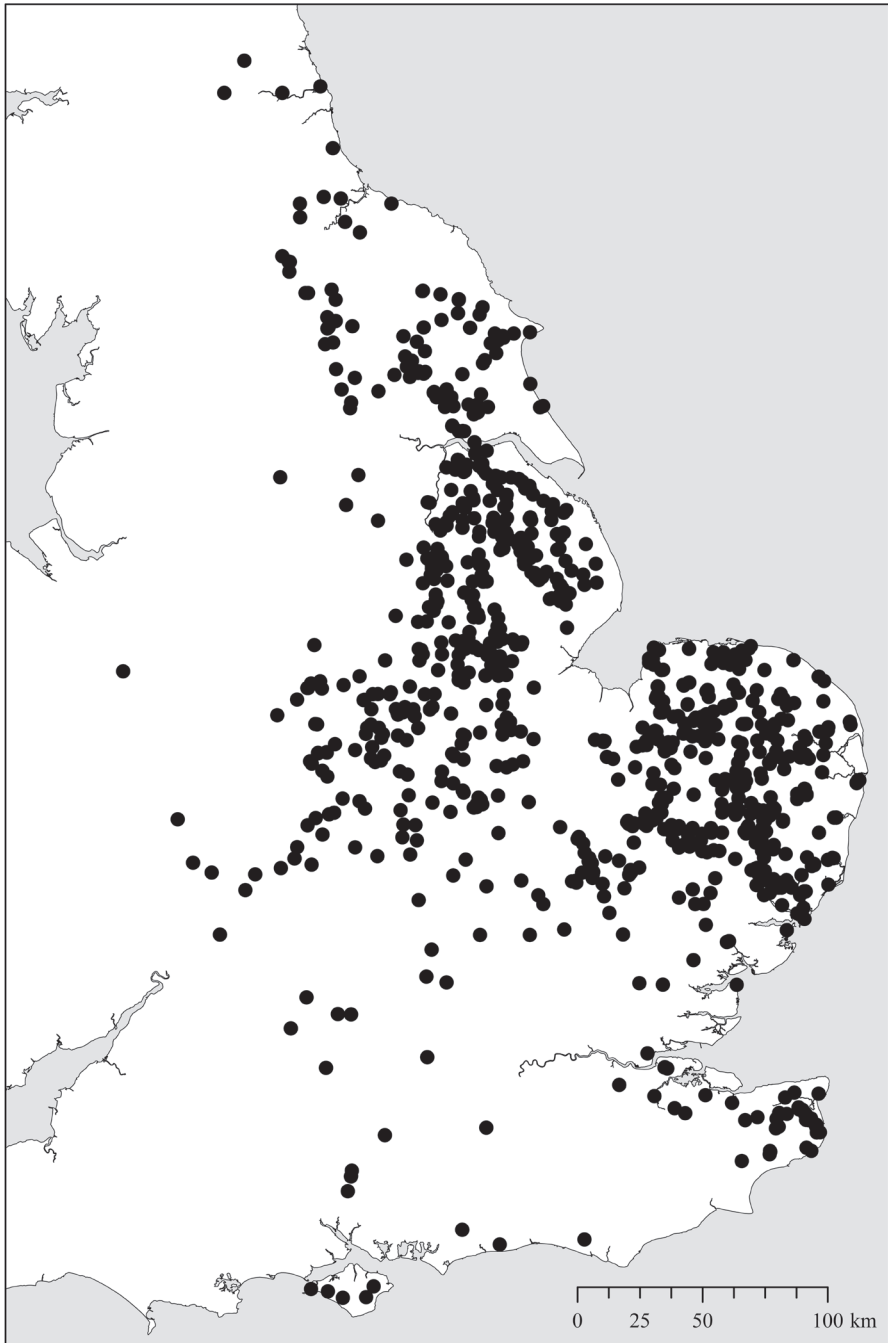
## The Anglian Brooch *par excellence*

Almost exactly a century ago Edward Thurlow Leeds, in what might justifiably be called the founding work of early Anglo-Saxon archaeology, described the cruciform brooch as the 'Anglian brooch *par excellence*'.<sup>1</sup> It was the distribution of cruciform brooches in the eastern half of England along with their appearance here following the fall of Roman Britain that inspired Leeds to make such a grand statement (Figures 1 and 2). The Anglian cultural zone, which is represented not just by cruciform brooches but by a few other types of jewellery, was a persevering material phenomenon in the region for most of the fifth and sixth centuries AD. The historical significance of this particular locality was echoed two centuries later in Bede's *Historia Ecclesiastica Gentis Anglorum*, which stated that this region was the one settled by migrants from Angulus in modern-day Schleswig-Holstein, northern Germany. Of course, our understanding of the term 'Anglian' has changed considerably since Bede's and even Leeds' accounts. Cruciform brooches no longer represent a distinct group of migrants who arrived on these shores from northern Germany along with the Saxons and Jutes, dressed in the distinctive jewellery of their homelands. This is an unrealistically simplified account resembling an origin myth more than it does actual processes of migration and identity formation. Nor can we be quite so quick to imply that earlier Germanic mercenaries, brought to these shores by the British tyrant Vortigern to defend against their invading cousins, decorated their wives with cruciform brooches, whether they were of native or Germanic stock.<sup>2</sup> Even so, Leeds' turn of phrase still holds a resonance we would be injudicious to discard. Cruciform brooches have become iconic of eastern Anglo-Saxon England and their relative abundance makes them fundamental to understanding regional identity in this period, whatever the name we decide to give it. Thanks also to their elaborate decoration and high numbers of incidences in recorded grave contexts, cruciform brooches are archaeological objects *par excellence* for being an exceptionally rich source of social and cultural information.

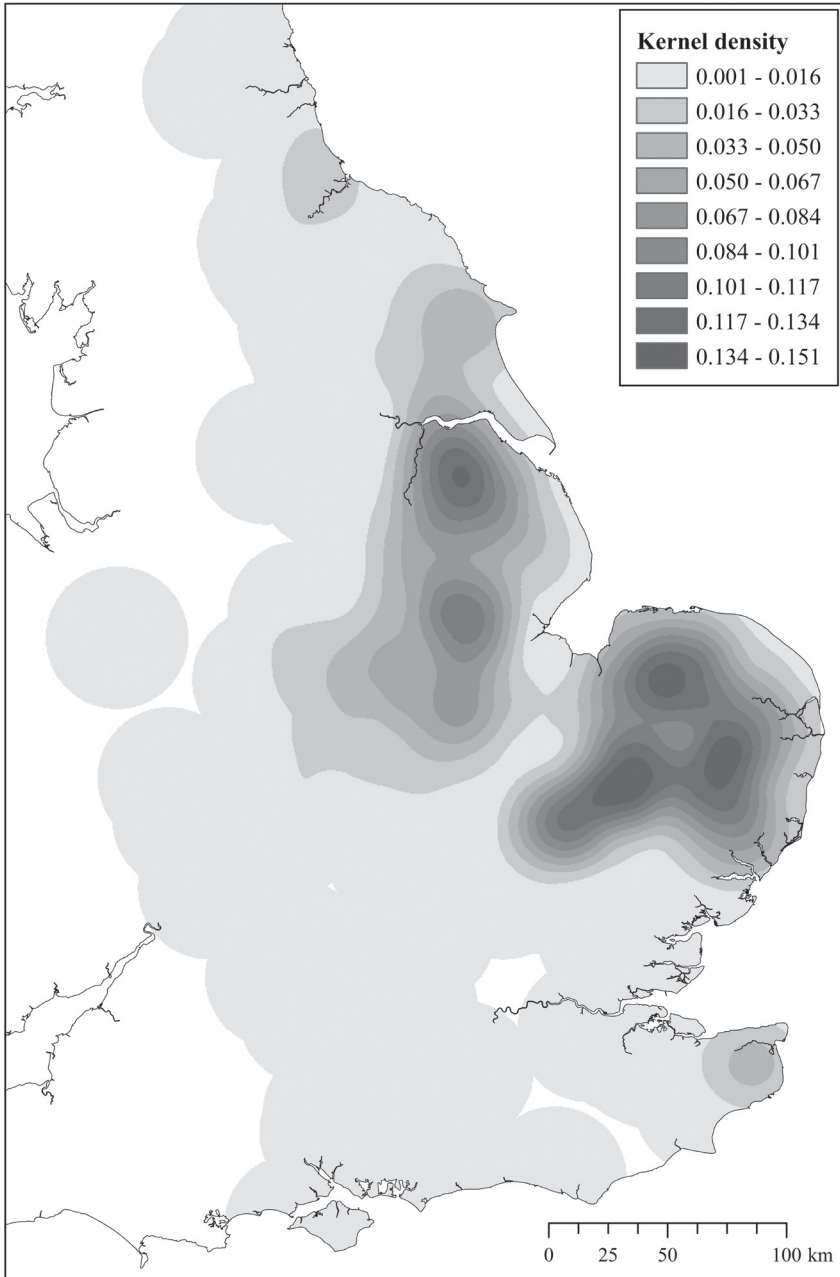
To an eye unaccustomed to the jewellery of this era, cruciform brooches make for a strange and somewhat alien sight (Figure 3). Though most who regard

<sup>1</sup> Leeds 1913, 76.

<sup>2</sup> Collingwood and Myres 1936, 394–5; Kirk and Leeds 1954, 75.

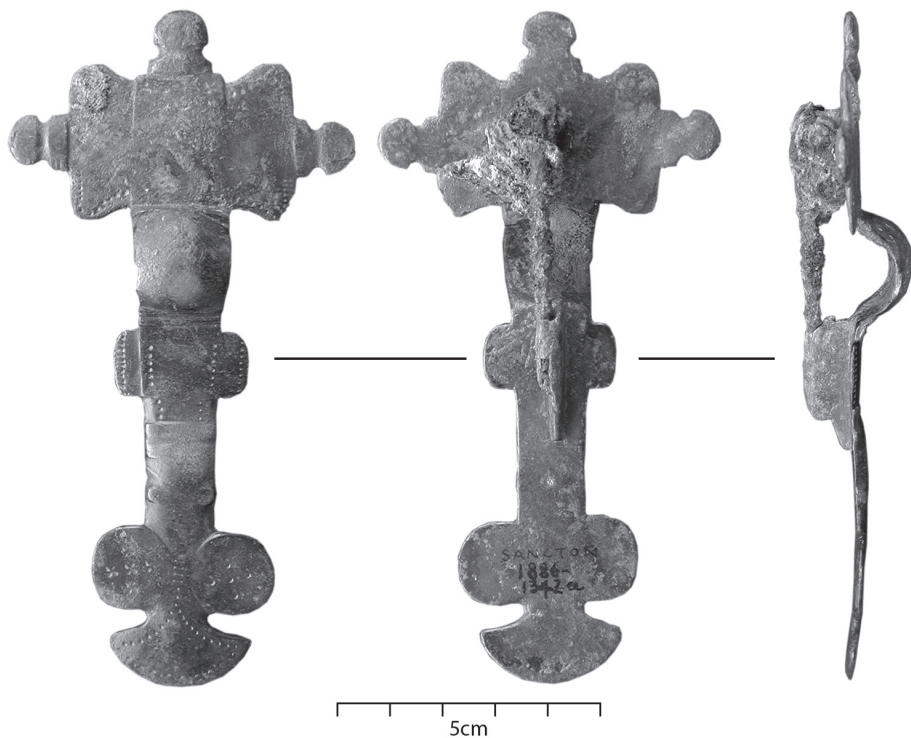


**Figure 1.** Distribution of all 2,075 cruciform brooches.



**Figure 2.** Kernel density analysis of all 2,075 cruciform brooches. The kernel density was calculated using a search radius of 30 km, taking numbers of brooches from each site into account. The numerical values correspond to cruciform brooches per square kilometre.

cruciform brooches find them impressive, these are not items that conform to our classically trained sense of beauty. Rather, they represent an apex of barbarous, Iron Age style incubated beyond the Roman Empire, if under the considerable influence of its latest products. The name 'cruciform brooch' reflects the shape of their head-plate, which owes its form to the placement of three knobs, positioned on its three external sides. The head-plate itself is often very broad and strangely undecorated for the artistic products of this period, perhaps to create a reflective, flashing surface no longer evident due to the characteristic emerald patina of weathered copper alloy. On the reverse of the head-plate is the sprung iron pin mechanism, with an axis sometimes held in place by the side-knobs. Just as often, however, as in the case of the brooch in Figure 3, the side-knobs were vestigial and purely decorative, owing only their inheritance to this original function. Below the head-plate lies a bow that defines cruciform brooches as a sub-class of bow brooch, whose arch provided a space to accommodate the bunched up folds of the garment the brooch pinned. Below the bow sits a small catch-plate, which has on its reverse the catch itself, a folded clasp that holds the iron pin in place when the



**Figure 3.** Obverse, reverse and profile of a typical cruciform brooch from Sancton, Yorkshire (#707).

brooch is closed. Finally, there is the decorative foot. The foot comprises the most intriguing element of cruciform brooches, being moulded in the form of an animal or human head, often a curious hybrid between the two, with large bulging eyes, bulbous or elaborately scrolled nostrils, and even sometimes curled moustaches.

While the subject of this book is the Anglo-Saxon series of cruciform brooches, they were also worn in the Netherlands, northern Germany and Scandinavia, being particularly popular in western Norway and originating almost simultaneously across this substantial area of north-west Europe in the first part of the fifth century. The use of cruciform brooches seems to cease first in northern Germany before the end of that century, followed by its cessation in Frisia, most of Scandinavia and then western Norway. For some reason, evidently related to their specific significance to the inhabitants in eastern England, it is the Anglo-Saxon series that persevered the longest, right to the end of the Migration Period in the second half of the sixth century.

Cruciform brooches are important artefacts for several reasons. Their stylistic development over time from small, simple pins to large and complex plate-like objects saturated in complex ornamentation makes them ideally suited to typological classification. Indeed, cruciform brooches are a textbook case in the study of material cultural evolution. Because this progression took place over a relatively short period, and because they occur in an abundance of graves with associated material, cruciform brooches are fundamental to our understanding of Anglo-Saxon and even European chronology. They are also one of very few artefact types solidly datable to the earlier part of the fifth century. This long period of use and relatively reliable chronology permits a holistic examination of almost the entire span of the fifth and sixth centuries AD, a period in which we see an empire collapse, widespread migration, the formation of new ethnic groups and the first glimpses of emergent kingdoms. Not only do cruciform brooches provide a frame of chronological reference for these era-defining events (and indeed were their witnesses), but they also provide a window onto the social and above all material processes behind them. In other words, if we see material culture as intimately involved in social processes rather than just their passive reflections, then it should be possible to trace not just how cruciform brooches reflected processes like the formation of ethnic groups and kingdoms, but how they were integral to them. The fact that cruciform brooches were relatively common items, whose sight must have been a frequent one adorning the costumes of certain women in eastern England, makes the present endeavour of considerable importance to understanding the social and material setting of the fifth and sixth centuries. Therefore, this book is not just concerned with understanding a particular type of brooch. Rather, I want to show how an in-depth comprehension of a single artefact type has implications for understanding the social and cultural development of Anglo-Saxon England itself.

*Archaeological and Historical Context*

In north-west Europe, both within and beyond the bounds of the rapidly fading Roman world, brooches carried important meanings. As a Mediterranean culture of cities, forts, markets and roads dwindled in the west, a predominantly northern culture of exuberant personal display was on the rise. The early medieval transition at the start of the fifth century is therefore where we leave the archaeology of statehood, monumental architecture and complex economies behind to trace the material vestiges of chiefdoms, farmsteads and the gifting of precious items between important women and men, perhaps even petty kings and queens. Although this change of scale in terms of settlement, social structure and economy marks a diminishing of overall complexity, these societies are no less intriguing. Nor does it mean that we have to study this material on a small scale. Of all the surviving artefacts from the fifth and sixth centuries AD – which is indeed a vast horde of pots, pendants, buckles, buckets, beads, swords, spears and shields – brooches are among the most abundant and for many, they are the most impressive. We have at our disposal thousands of brooches of diverse types, which, taken *en masse*, permit a detailed investigation of the deep structure of society. Among these, cruciform brooches are second only to the magnificent square-headed brooches in terms of their size and decorative elaboration, though by no means in terms of their numbers. Brooches may well be relatively small, personal items in comparison to the imperial infrastructure and edifices of Rome, but the miniature, cast in the right light, can reveal just as much as the footprint of a mighty city. Of course, ‘miniature’ is not a suitable term to describe the more elaborate brooches of this period. They were often massive, heavy items, featuring complex, crowded, glittering decoration, worn with great woollen and linen cloaks, gowns and dresses. Worn on the upper torso, they were often accompanied by festoons of coloured beads, glittering pendants and wrist-clasps, along with items dangling from a girdle such as purses, knives, keys and other paraphernalia. All in all, these were impressive, ostentatious costumes.

The fifth and sixth centuries, lying between the alleged order of Roman Britain and Christian Anglo-Saxon England, are popularly characterised as the darkest of Dark Ages. This, however, is the result of historical obfuscation. In contrast, the archaeology of this period, since its recognition in the early explorations of antiquarians, is very rich indeed and has always been characterised by its abundance of bright and elaborate material culture. Whilst not to a classical taste, considerable artistic achievement has long been obvious in Anglo-Saxon decorative metalwork.<sup>3</sup> Within these early products, we see not only the vestiges of Roman Britain but also the germ of Anglo-Saxon England. In fact, the ancestry of the cruciform brooch’s predecessors, the generic bow brooch, stretches much further back as far as the Bronze Age. However, it was only in the late pre-Roman Iron Age that a sudden intensification in brooch use occurred, in terms of both

<sup>3</sup> Faussett 1856, xx; Baldwin Brown 1915, 3.

sheer numbers and decorative complexity. As such, the first centuries BC and AD represent a revolution in conceptions of individual personhood, perhaps due to escalating concentrations of power among elite individuals in La Tène Europe as well as within the expanding Roman Empire.<sup>4</sup> In this emergent social context, conspicuously demonstrating access to prestigious, dress-related accoutrements assumed a new importance. The later, larger cruciform brooches of the sixth century AD are perhaps therefore most helpfully understood as the last gasps of a hybridised Roman and barbarian Iron Age social apparatus for constructing identity and hierarchy rather than the beginnings of a new medieval one. The final gasps maybe, but bow brooches themselves were to go out with a bang. Few of their predecessors were as impressive as the colossal brooches of the fifth and sixth centuries. Lying at the terminal end of this grand ancestry and having gone through centuries of stylistic elaboration, most cruciform brooches were not especially practical objects. They ranged from plainly ornamented items with a strange, bestial visage emerging from one end through to thin, flattened surfaces left completely plain or crowded with extraordinary animal art. It is difficult at first to imagine that those latest, massive planate objects had humble origins in the ferrous safety pin-like fibula of pre-Roman and Roman Iron Age Europe. Because cruciform brooches were an integral part of this ancient narrative of dress in the *longue durée*, a better understanding of them benefits our knowledge of cultural processes that are far grander in scope than just the stylistic development of a brooch form; they help us understand the Roman to medieval transition in Britain, and the internal and external barbarian forces that acted upon it.

### *Past Work on Cruciform Brooches*<sup>5</sup>

As an elaborate, widespread and abundant object class, cruciform brooches have seen substantial research since the nineteenth century. They commonly appeared in the accounts of nineteenth-century antiquarians, who occasionally referred to them as 'long brooches'.<sup>6</sup> This could be taken as a generic term for all bow brooches, and it is where our term for the cruciform brooch's diminutive cousin, the 'small' long brooch, originates. Precisely when the term 'cruciform brooch' was coined is not known, but it was certainly standard terminology by the mid-nineteenth century, when John Yonge Akerman and Charles Roach Smith refer to them as such, albeit not entirely consistently.<sup>7</sup> Cruciform brooches featured

<sup>4</sup> For an introduction, see Hill 1995, 85.

<sup>5</sup> The history of research on cruciform brooches has been recounted many times before and will not be repeated in detail here. For an up to date and especially detailed account see Hills and Lucy 2013, 29–31.

<sup>6</sup> Reginald A. Smith, in fact, made a point of insisting on this term, see Smith 1908, 66.

<sup>7</sup> Akerman 1855, 15, 17, 40, but see also 36, 37 where cruciform brooches are simple 'fibula'. Roach Smith 1868, 158, 215, 218 also refers several times to 'cruciform fibula'. Reginald Smith's account (1908, 66) perhaps implies that the term originated among Scandinavian archaeologists. The

substantially in the early accounts of Scandinavian and German archaeologists including Oscar Montelius, Jens Worsaae, Ingvald Undset, Hans Hildebrand, Sophus Müller, Oscar Almgren and Bernhard Salin, but the first dedicated publication was by Haakon Schetelig.<sup>8</sup> Although Schetelig's account focused largely on the Norwegian brooches, Anglo-Saxon examples were also considered. In the main, Schetelig's work was an unabashed descriptive summary of stylistic variation. Being a product of its time, in a discipline whose major purpose was to trace cultural history, the main interpretative significances of Schetelig's account concern the long-standing debate concerning the mixed Roman and Germanic ancestry of cruciform brooches alongside the uneven shades of cultural influence between northern Germany, Norway, Denmark and England. In 1926 Nils Åberg's typology provided the first formal classification of the Anglo-Saxon cruciform brooch.<sup>9</sup> Because Åberg's account was buried within a book on several other artefact types, his treatment was cursory and never really did justice to this stylistically complex artefact type. Nevertheless, it is in major part thanks to the simplicity of his typology that it is still widely used today, despite its classificatory insufficiencies and woefully outdated chronology. Edward Thurlow Leeds recognised the inadequate simplicity of Åberg's typology and responded by devising a complex classification of the latest 'florid' forms. Although Leeds never produced a comprehensive account, Michael Pocock published his work posthumously.<sup>10</sup> Again, this article was mainly concerned with typology. It offered only a little historical context, largely concerning the expansion of these late forms, which Leeds saw as fundamentally East Anglian, in the Midlands. Leeds interpreted this as archaeological evidence for the East Anglian king Raedwald's supremacy over Mercia, which can no longer be upheld due to substantial changes in our understanding of early Anglo-Saxon chronology. Cruciform brooches went out of use long before these historical events took place.

While Leeds only dealt with the latest forms, the earlier part of the Anglo-Saxon series was reclassified from Åberg's system by Joachim Reichstein.<sup>11</sup> Reichstein's work on the German and Scandinavian brooches in the same volume was comprehensive, but his treatment of the English series was based on a small sample limited to the earlier types, contemporary with those from overseas.<sup>12</sup> Though only partial and at times impenetrable, Reichstein's work was a substantial improvement on the preceding accounts and it is still a valuable resource.

term had certainly been endorsed a couple of years earlier by Haakon Schetelig, a prominent Norwegian archaeologist who made it the title of his monograph of these items.

<sup>8</sup> Schetelig 1906.

<sup>9</sup> Åberg 1926, 28–56.

<sup>10</sup> Leeds and Pocock 1971.

<sup>11</sup> Reichstein 1975.

<sup>12</sup> For critical comments see Dickinson 1978, 337. It should be noted that Reichstein's work on the Anglo-Saxon series was intentionally truncated as he was aware Hayo Vierck was simultaneously working on the English material, an account which was never published in full (though see Vierck 1977).

However, its publication in German means that it has never received widespread use among Anglophone scholars. Like the work of Schetelig, Åberg and Leeds, Reichstein's account was mainly concerned with typology and chronology. The only comprehensive account of cruciform brooches that has contributed substantially to our knowledge beyond these practical concerns is Catherine Mortimer's doctoral thesis.<sup>13</sup> Mortimer provided a typology and chronology which, despite its lack of publication, has seen relatively widespread citation. Additionally, the thesis was also the very first comprehensive metallurgical investigation of non-ferrous metalwork for Anglo-Saxon England. Mortimer's typology was robust, but thanks largely to the recent work of the Portable Antiquities Scheme in recording metal-detected finds taken into private collections, known numbers of cruciform brooches have almost quadrupled since, bringing to light a number of new types and providing justification for a rethinking of the typology. The metallurgical aspects of Mortimer's work, however, provide an excellent companion to the social interpretations that lie at the core of this book and they are still exceptional in their scope and detail. Less comprehensive but still valuable work on the cruciform brooch exists elsewhere, often as a contributing element of a wider study. For instance, cruciform brooches play a crucial role in John Hines' work on Migration Period chronology.<sup>14</sup> Additionally, Johanna Bode's investigation of the cruciform brooches from Schmalstede, a cremation cemetery in Schleswig-Holstein, provides a prototype for the kind of typological analysis presented in the next chapter.<sup>15</sup>

The substantial existing work on cruciform brooches therefore provides an excellent basis for the present book, but beyond the traditional typological and chronological concerns, there is little published of an interpretative nature. Moreover, much of the foregoing scholarship is outdated, unpublished or only partial. As such, a thorough assessment of cruciform brooches, going well beyond the necessary concerns of typology, is long overdue.

### *A New Corpus of Anglo-Saxon Cruciform Brooches*

At the heart of this book is a new corpus of cruciform brooches gathered between the years 2008 and 2013 from first-hand examination of material in English museums, published sources and the online database of the Portable Antiquities Scheme.<sup>16</sup> In total, the sample comprises records for 2,075 cruciform brooches, in

<sup>13</sup> Mortimer 1990.

<sup>14</sup> See especially Hines 1984, 244–53.

<sup>15</sup> Bode 1998, 23–69.

<sup>16</sup> Although Heritage Environment Records (HERs) have been consulted to link published sites to the appropriate records in the database where possible, HERs were not generally visited to examine images not published elsewhere. Hence, there is a substantial number of cruciform brooches awaiting examination in HERs, particularly in Norfolk, which has been uniquely thorough among the English counties for collecting records of metal-detected brooches since the 1970s, a practice that was only rolled out nationwide from 1997 through the work of the Portable

varying degrees of fragmentation and completeness (see Table 1).<sup>17</sup> The corpus was closed to new finds at the end of October 2013 and the inclusion of brooches from the Portable Antiquities Scheme database up to this date was comprehensive, though doubtlessly a small number evaded recording due to misidentification on the database.<sup>18</sup> All archaeological museums in England were contacted and where the brooches could be made available they were visited, though I am sure many cruciform brooches remain in some collections unidentified or mistaken for some other type. While only a fraction of these 2,075 brooches are illustrated in this book, various pressures combine to make the physical publication of whole corpora expensive and difficult. As such, this book is accompanied by an electronic companion dataset hosted online by the Archaeological Data Service.<sup>19</sup> Each brooch has been assigned a corpus number that is searchable in this catalogue. Additionally, Appendices 1 and 2 at the back of this book include lists of finds sorted by type and by county, where the reader might also be redirected to published images of these brooches. Note that this book and the accompanying catalogue use the historic counties of England throughout, not the modern ones.

**Table 1.** Quantification of the corpus.

<i>Source</i>	<i>Complete</i>	<i>Fragmentary</i>	<i>Total</i>
Museum/Publication	599	339	938
Portable Antiquities Scheme	72	1,065	1,137
Total	671	1,404	2,075

Antiquities Scheme. For that reason, the inclusion of this sample would have skewed the data somewhat toward Norfolk. Nevertheless, it remains a valuable dataset that would be well worth compiling in the future. Despite this slight shortcoming, the sample of over 2,000 brooches is easily sufficient and representative for the task at hand, being among the largest ever assembled for this period.

<sup>17</sup> 'Complete' is defined here by the presence of at least one of each element of the following: head-plate knobs, head-plate, bow, catch-plate/lappets, foot (see below for definitions of these components, pp. 12–13). Hence, a brooch with only a single top-knob but missing its side-knobs is still counted as complete as in most cases these three elements match. While fragmentary knobs, head-plates, catch-plates and feet were included, fragments comprising just bows were not as they may originate from a number of different bow brooches.

<sup>18</sup> An entire survey of over 22,000 objects dated to the 'Early Medieval Period' (defined by the scheme as AD 410–1066) was necessary due to the inconsistent classification of these items on the Portable Antiquities Scheme database, meaning that more specific searches yield inconsistent results.

<sup>19</sup> This dataset is available on the Archaeology Data Service website at <http://dx.doi.org/10.5284/1028833>, DOI 10.5284/1028833.

### *Conclusion*

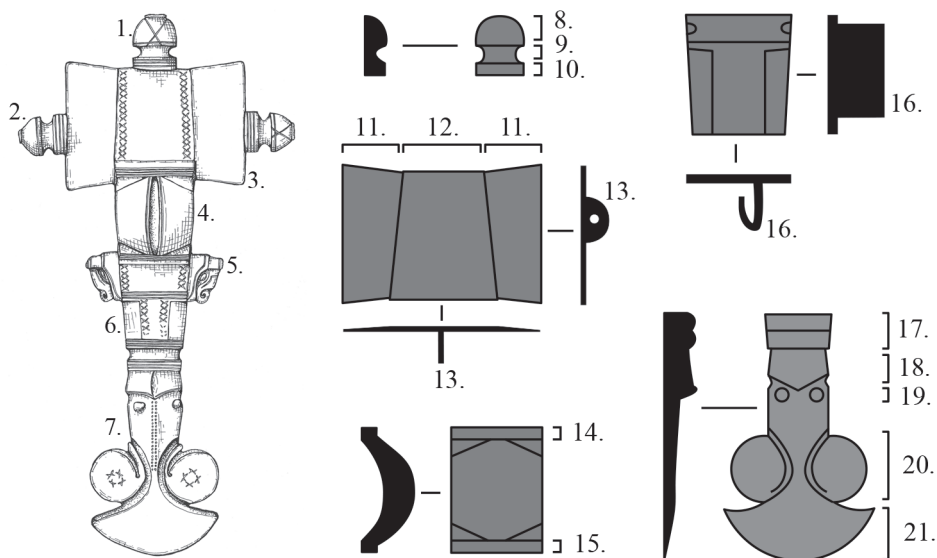
Cruciform brooches are among the most abundant and important examples of decorative early Anglo-Saxon material culture. They are often the standout objects from cemetery excavations, they dominate the early medieval records on the Portable Antiquities Scheme database and they are frequent display pieces in museums throughout England. Despite this prominence, beyond attributing to them a sense of Anglian-ness (whatever that might mean), few have contemplated the social meanings of this particular series of brooches and as yet no substantial answers have been offered. Cruciform brooches were obviously important objects in early Anglo-Saxon society. Their abundance in cemeteries and the apparent investment of raw materials and skill into their production indicate that they were of considerable social value. Presumably, they were an everyday sight on the clothing of particular women in eastern England. This restriction to the eastern half of the country is obviously key and their use as part of feminine dress also provokes questions concerning the intersection of regional identity with gender. Despite this obvious potential, the cruciform brooch is yet to be investigated as a material symbol involved in important processes of identity construction for a substantial sector of society through the early Anglo-Saxon Period. Consequently, there is still much that we do not know about cruciform brooches. We do not know much about who wore them and we can certainly refine our knowledge of precisely where and when. Fundamentally, we do not know the significances of these items to the women whose daily routine involved fastening their clothes with them. Nor do we know what kind of associations were evoked in the minds of observers, including husbands, children, the wider community and even contacts from further afield, perhaps even as far as northern Germany and Scandinavia, where close relatives of the Anglo-Saxon cruciform brooch series were in common use. This book hopes to provide some answers to these questions as well as provoke further ones concerning the relationship between people and things in post-Roman Europe.

## A New Typology for Cruciform Brooches

The earliest cruciform brooches did not already contain the sum components of their future development awaiting stylistic elaboration. Although they were small and plain they did, however, contain many elements that proved remarkably resilient to change and remained part of cruciform brooch design from start to finish. The definitive cruciform brooch arrangement of a head-plate with three knobs and a foot decorated with an animal or human mask is one such feature that persevered. However, additional elements were invented *de novo* on the cruciform brooch along the way. Furthermore, cruciform brooches exchanged stylistic features with a host of other decorative metalwork, most obviously great square-headed brooches, small long brooches, girdle-hangers and wrist-clasps, with which they shared numerous decorative elements and presumably were produced in the same workshops, by the same craftspeople. This kind of cross-fertilisation between artefact types is at its most obvious among a small number of hybrid brooches, which sit between the major series and are no more part of one than they are of the other. Hybrids between great square-headed and cruciform brooches, for instance, will be encountered below. However, such true amalgams are very rare. Indeed, their scarcity helps confirm the transferability of our modern categorisations of these types backward into the Anglo-Saxon past. Some aspects, however, really were interchanged freely between the major types. For instance, Salin's Style I, a pan-European repertoire of complex chip-carved animal and human motifs, features on many cruciform brooches. Its presence demonstrates that they were part of a larger stylistic world that extended to most of Europe, linking objects as diverse as brooches, buckles, drinking horns, shield bosses and horse harnesses into a single system of material symbols.<sup>1</sup> Of course, by obtaining and wearing such stylistically related objects, their owners also drew links between each other.

These multiple and aggregated stylistic influences are expressed variously and even independently on the different components of cruciform brooches. Cruciform brooches divide into the five major components illustrated in Figure 4: head-plate knobs (consisting of a top-knob and two side-knobs), head-plates, bows, catch-plates and feet. These attributes divide further into their constituent

<sup>1</sup> Salin 1904; Haseloff 1981.



**Figure 4.** Cruciform brooch component nomenclature: 1. top-knob; 2. side-knob; 3. head-plate; 4. bow; 5. lappet; 6. catch-plate; 7. foot; 8. dome; 9. waist; 10. base; 11. wing; 12. central panel; 13. lug; 14. step up; 15. step down; 16. catch; 17. collar; 18. brow; 19. eyes; 20. nostrils; 21. terminal.

parts. Most head-plate knobs possess a dome, a waist and a base. Head-plates nearly always have a central panel and two lateral wings, with one or two lugs on the reverse for securing the spring axis and pin. Bows have a small rectangular step-up or -down where they meet the head-plate or catch-plate respectively, often decorated with notches and lines. Catch-plates, also generally decorated with notches, facets and lines, can possess lateral projections called lappets, and always have a curved catch on their reverse to hold the pin. The ribbed element at the top of the foot where it joins the catch-plate is called the collar. Below this there is an animal or human mask whose brow, eyes and nostrils could be executed in a number of ways. The foot's purely decorative nature made it especially malleable to different ornamental forms. On many examples, a flaring terminal projects from the base of the foot, which again could assume a variety of shapes, from a curved crescent form, to a broad spatulate chisel shape. All of these components ('attributes') could therefore assume a number of different forms ('attribute states'), which were subject to influences from within and beyond the cruciform brooch series. The sheer number of these components and their possible forms belies the massive variation of which cruciform brooches were capable.

This composite structure is an integral aspect to the typology presented below as it permits a more holistic, polythetic consideration of the types.<sup>2</sup>

Failure to incorporate this composite structure was a weakness in the pre-existing typologies. The linearity of Schetelig's, Åberg's and Leeds' classificatory systems gave the impression that there was a single thread of cruciform brooch development running through the series, occasionally branching, but for the most part heading in a single direction, with new forms rapidly replacing old ones. This oversimplification contributed to a persistent indecision over where to draw the line between Åberg's groups III and IV: brooches that feature spiralled nostrils without and with lappets respectively.<sup>3</sup> Because the earliest cruciform brooches lacked the lappets that are present on the obviously later forms there was an assumption that all those brooches without these projections were probably earlier. However, the sum components of most of these brooches suggest that there is no great difference between many members of Åberg's groups III and IV at all. The present typology acknowledges this similarity by its reduction of the traditional five major groups of cruciform brooches down to four.

Reichstein's decision not to consider cruciform brooches as composite objects led to his typology's exclusion of many examples.<sup>4</sup> Instead of a comprehensive typology, Reichstein presented a small number of tightly defined, isolated forms and a large number of *Einzelformen*. These examples were purportedly unique, but a closer analysis reveals their obvious relation to his other types. Because Reichstein did not acknowledge the intermixing of attributes between them, they remained unclassified. Although little explanation of the classificatory system is provided, it seems that the validity of Reichstein's types depended on their members possessing consistently associated, if not identical, components. Though virtually identical brooches become more common toward end of the cruciform brooch series, pairs that are not found together in the same grave, fastening the same article of clothing, are extremely rare.<sup>5</sup> Hence, a typology that treats cruciform brooches as composite artefacts provides a much more comprehensive classificatory system more sympathetic to their underlying design structure.

Conceptualising cruciform brooches as composite objects not only provides a more accurate and useful system, but it is also eminently suitable for approaching these artefacts as material symbols. Since the 1980s, archaeological theory, heavily influenced by structuralism, has employed a linguistic metaphor for

<sup>2</sup> Typologies based on a consideration of multiple components are termed 'polythetic' in the theoretical literature, as opposed to 'monothetic' approaches that select a single diagnostic attribute to define a type (see Adams and Adams 1991, 355).

<sup>3</sup> Åberg (1926, 42) drew an absolute line between these types, which was somewhat complicated by Leeds' (1945, 69) and later Pocock's (Leeds and Pocock 1971, 15, 26–9) adjustments. Mortimer (1990, 108) returned to a system closer to Åberg's by separating brooches with and without lappets into her groups C and D.

<sup>4</sup> For critique on this point see Dickinson 1978, 337; Bode 1998, 24.

<sup>5</sup> Nevertheless, if the corpus continues to grow at its current rate, identical or nearly identical series of brooches are likely to become far more numerous.

understanding material symbolism.<sup>6</sup> This theory holds that objects are deeply involved in symbolic communication and they provide a means of experiencing, ordering, and indeed changing, the world.<sup>7</sup> Metaphorically speaking, the range of material forms provides the vocabulary and their relation through style makes the symbolic communication meaningful by providing the equivalent of a syntax or grammatical structure. Cruciform brooches, as composite objects, consist of multiple symbols corresponding to each of their various attributes – the head-plate, the bow, the foot and so on – which only make sense together within the stylistic system. Just as different words in a sentence must conform to grammatical rules, the states of the various cruciform brooch attributes conform to the operating principles of their style. While the combination of attribute states on a single brooch was relatively free and fluid, as we shall see below, tendencies toward particular combinations are definitely observable. An important aim of the present typology is to uncover some of the conventions of cruciform brooch style and in so doing enhance our understanding of how these objects operated as material symbols.

Nevertheless, principles of style do not constitute unbreakable rules. Indeed, their transgression provides the driving force for typological development itself. Cruciform brooches did not endure as unchanging material symbols through the diverse social contexts that produced them. A cruciform brooch produced in the early fifth-century post-Roman milieu of eastern England most likely had a very different meaning to one produced a century later at a time when proto-kingdoms were beginning to crystallise. But this is abundantly clear from their obviously divergent forms, even regardless of context. The meaning of cruciform brooches must have adapted between types and over time. The fluidity, complexity and dynamism of their stylistic conventions reflect this. ‘The’ cruciform brooch in the title of this book is therefore perhaps something of a misnomer: cruciform brooches were likely to have been many different things along the course of their development. Furthermore, if straightforward rules of style existed that could be applied to the whole series, Schetelig and Åberg had all the tools and knowledge they needed to build a typology that would still be fit for purpose today. But there were no rules. There is no hidden formula awaiting discovery through a revelatory method. The supposed problem of classifying cruciform brooches authoritatively will exist for as long as there is a belief in an underlying, rigid, coherent logic in cruciform brooch design. While acknowledging the fallacy of that particular endeavour, we should still be able to detect tendencies toward particular component combinations among some, if not all, types. But rather than envisioning types as distinct groups of identical items, or associated examples held together by some golden rule, each type is more accurately envisaged as a

<sup>6</sup> Hodder 1986; Tilley 1999. Specifically on dress see also Eco 1973 and for Anglo-Saxon jewellery Dickinson 1991, 39–40.

<sup>7</sup> On this idea in particular I am influenced by Gosden 2005’s discussion of late Iron Age material culture.

fuzzy cloud with a set of consistently designed brooches at its centre, becoming less defined and even merging with neighbouring types at its edges. This fuzzy cloud concept reflects the organic, fluid processes of copying alongside innovation by which cruciform brooches seemingly developed.

### *A Reflexive Methodology for Typological Classification*

Creating and explaining classifications of material culture is rarely a straightforward process. This is because typologies tidy subconscious, often messy and primarily visual patterning into a deliberate, systematic and generally verbal account. To be useful and indeed usable, typologies also have to delineate a continuum of social variation into discrete, bounded units: a process that is ultimately more creative than it is deductive. The tools that archaeologists use to do this are often complex and occasionally, in the case of intuitive reasoning, inexplicable. Consequently, the methods that form the basis of a typology require plain and clear presentation. The typology presented below was a product of intuitive judgement and statistical analysis in equal measure informed over several years' examination of the stylistic range of cruciform brooches. Incremental and reflexive feedback between these methods was fundamental. The application of statistical methods to classifying material culture frequently runs the risk of reifying a chosen method into an authoritative solution. Therefore, rather than just exhibiting the finished product, the presentation of this typology will initially provide a statistical analysis, followed by descriptive accounts of the types. This mode of presentation represents an effort to reflect the actual process of classification in a straightforward and above all honest manner as a justified process rather than an assertion.

Theoretical debates concerning typological methodology have been running for decades without resolution.<sup>8</sup> But in terms of practice, there are by now clearly observable trends away from intuitive techniques toward more quantified and often statistical accounts. Style, however, is a highly subjective variable. A degree of qualified, intuitive judgement based on the accumulated knowledge of the specialist is inevitable and probably even fundamental to the accuracy and utility of any typology. At the point of data input, for instance, the practitioner chooses variables according to their perceived significance, which among other things might be chronological, functional, technical or iconographic. Because my account conceptualises cruciform brooches as material symbols, the attributes chosen below tend to avoid technical and functional categories, favouring instead decorative aspects that have little to do with practicality or construction. My primary classification of cruciform brooch attributes into their ascribed states means that these statistical analyses, though their graphs and numbers make them appear objective, inevitably have their basis in subjective reasoning, followed by experimentation

<sup>8</sup> For summaries, see Dannel 1986; Adams and Adams 1991.

according to what seemed to work and what did not. Subjectivity, however, is not a byword for imprecise or unjustified. In cases like these, knowledge of the range of material forms, gained over years of examining the material is a hard-won and valuable resource. The material was not approached blindly, but with some preconceptions of what factors might be chronologically, regionally or socially significant, whilst also keeping an eye on what might make a practical typology for future researchers. In what follows, statistical analyses do not replace the human practitioner. Instead, they provide a sounding board for further exploring intuitive judgement.

Different kinds of variation in material culture affect the differential suitability of statistical techniques. A number of precedents exist for the statistical analysis of early Anglo-Saxon typology.<sup>9</sup> In the case of cruciform brooches, correspondence analysis provides a particularly effective method for graphically illustrating the kind of typology that will be outlined below. Additionally, this method has previously proved successful with a sample from a wider area of north-west Europe examined by Johanna Bode.<sup>10</sup> However, Bode classified cruciform brooches only at the level of their attributes and did not aim to provide a system to deal with whole brooches. Indeed, the intention was to seriate rather than classify cruciform brooches. This was useful enough for Bode's objectives, but has less utility beyond them. Correspondence analysis itself is a multivariate statistical technique for revealing the presence or absence of structure in data. As such, it identifies interrelatedness between variables or the lack thereof by calculating relative measures of similarity between cases on a number of axes of variation. These axes provide scales of difference, with the examples at one end being most dissimilar overall from those at the other. While the first axis summarises most of the variation, correspondence analysis can calculate any number of axes that account for progressively less and less of the overall difference. It is usually the first two axes of variation that are plotted against each other to create a scatter of points that can be examined for clusters. Closely related cases on both axes of variation lie either in clusters or in lines that emanate from point zero on both axes. Unlike statistical techniques that force the data into preformed categories according to particular criteria, correspondence analysis requires a human practitioner to understand why certain cases cluster by examining the sets of variables they share. Hence, a gradually dispersing cluster on a correspondence analysis plot represents a tightly related group of objects becoming less consistent at its margins and even merging with other groups. Correspondence analysis therefore provides the opportunity to test the fuzzy cloud concept of types outlined above

<sup>9</sup> E.g. Dickinson 1993a, 14–15; Hines 1997, 4–7; Suzuki 2008, 29–30.

<sup>10</sup> Bode 1998, 23–68. Mette Palm and John Pind (1992, 61–6) were the first to apply this method to cruciform brooches, albeit in terms of chronology rather than typology. Unfortunately, a very small sample and an imprecise methodology compromised their results (Hines 1992; Høilund Nielsen 1997, 79).

with quantified, albeit ultimately subjective, data.<sup>11</sup> The correspondence analyses illustrated below were all executed using Torsten Madsen's CAPCA add-in (version 2.1.1) running in Microsoft Excel 2007.<sup>12</sup> In all the plots illustrated below, the first axis of variation is always plotted horizontally and the second axis vertically.

In order to have maximum utility, as well as to provide an impression of interrelatedness, this typology has a hierarchical structure. The primary level of classification divides the whole corpus into four major groups. Detailed definitions and illustrations of these groups will be provided below as each is addressed. Summarily, group 1 contains small, plain and narrow brooches, usually with a top-knob that is fully round in section, unlike those of the rest of the series which tend to have flat or even concave reverses. Group 2 consists of broader, generally larger, but still simple brooches with laterally expanded head-plates. Group 3 brooches have expanded feet, generally with large terminals. Additionally, group 3 catch-plates frequently, though not always, possess lappets. Group 4 brooches are much larger, very elaborately decorated and are best defined by their large, flat head-plate knobs covered in Style I ornament. The secondary level of classification further divides these groups into sub-groups. The criteria for division into sub-groups vary, but all sub-groups essentially provide a reflexive means of illustrating relationships between loosely related clusters of types. Division into types provides the third and final level of classification.<sup>13</sup> The diagnostic feature for all the types is a specific foot form. Although this was partly a decision based on creating a practical and consistent typology, the correspondence analyses demonstrate that particular foot forms were indeed often associated with related sets of attribute states, although not consistently enough to provide concrete, polythetic definitions, which was precisely the problem that Reichstein encountered among his *Einzelformen*. The naming of types reflects their hierarchical position within sub-groups and groups. Hence, 'type 4.3.2' refers to the second type of brooch in the third sub-group of group 4. This hierarchical structure not only makes interrelationships between types explicit, but it also permits even fragmentary examples assignation to at least a group if not a sub-group or type. While the typology was constructed with the classification of fragments in mind and is indeed largely successful in this enterprise, Appendix 3 provides a labelling system for fragments so small that they evade even the most general level of classification at the group level. For ease of use and memorability, each type has also been assigned a

<sup>11</sup> The analyses presented below included only complete examples, which numbered 671 (see Table 1). Because the analysis measures the ratios of co-occurrences of the same attribute states, the inclusion of incomplete examples would not have been useful. Therefore fragmentary examples were classified only once the typological structure was in place.

<sup>12</sup> This is freely available for download at <http://www.archaeoinfo.dk> (last accessed March 2014).

<sup>13</sup> It is however possible to delve into some types further to find sets of particularly close parallels – a task perhaps for a future enterprise and one that will become increasingly rewarding as the corpus expands.

name corresponding to the find-spots of key examples.<sup>14</sup> A couple of types share their name with Reichstein's labelling system. This is deliberate and these few instances will be highlighted as the account progresses. Beyond this division into four groups an additional series of Kentish brooches, defined quite apart from the principal series, is also provided. In the following account, each type is illustrated by a line drawing in the main text. To complement these illustrations, the plates at the back of the book have been selected to provide further photographed instances of each type.

### *Group 1 Cruciform Brooches*

Group 1 cruciform brooches are small, narrow and plain. They generally have a top-knob that is fully round in section.<sup>15</sup> On their reverses, group 1 brooches only ever have one lug for the attachment of the spring axis. They often have very long catches that extend from the base of the bow all the way down the foot, occasionally taking the form of an enclosed box not encountered elsewhere in the Anglo-Saxon cruciform brooch series. Brooches belonging to group 1 have obvious parallels in Germany, the Netherlands, Denmark, Norway and Sweden. While they are relatively few in number (192 examples), they are highly important because they represent both the origin of the series and some of the few items from post-Roman Britain that can be confidently assigned to the earlier part of the fifth century.

These origins have been subject to debate for more than a century. For the archaeologists of the late nineteenth and early twentieth century, whether cruciform brooches had origins among Germanic, Roman or even proto-Slavic material culture had fundamental implications for the perceived cultural heritage of Germanic peoples. The obvious candidate for a cruciform brooch prototype has long been the Roman crossbow brooch.<sup>16</sup> After all, it was a common type of brooch in fourth-century Europe, widely distributed outside the Empire. Crossbow brooches not only share their three head-plate knobs with cruciform brooches, but the faceting, notching and linear decoration that often appears on their feet is also found on the earliest cruciform brooches and on the catch-plates of much of the series thereafter (as well as on the feet of the equally early supporting-arm brooches or *Stützarmfibeln*, see below, pp. 148–150).<sup>17</sup> However, the earliest cruciform brooches were also part of a wider Iron Age bow brooch tradition, ultimately

<sup>14</sup> I avoid the use of the term 'prototype' here intentionally for its chronological connotations, but such key examples might be seen to lie at the very centre of the cloud of intra-type variation.

<sup>15</sup> This is not always the case. Four members of group 1 have half-round top-knobs, from Beachamwell (#79), Claxby (#110, Plate 2.4), Sleaford (#140, grave 66, Pl. 3.2) and Spong Hill (#184, cremation 1168).

<sup>16</sup> Bendixen, Undset and Müller were among the first supporters of this theory, as was Schetelig (see Schetelig 1906, 8).

<sup>17</sup> On crossbow brooches either side of the frontier, see Pröttel 1991.

originating in La Tène brooches with feet that were folded back toward the bow in order to form a catch for the pin, which remained in use beyond the frontier through the Roman Iron Age.<sup>18</sup> This is what led a number of early scholars to identify a series of brooches from the Black Sea coast, in what is now Ukraine, as the true prototypes of cruciform brooches, brought to Scandinavia via a speculative migration around AD 200.<sup>19</sup> However, these brooches with a returned foot were in fact common throughout much of Europe, which led others to claim an exclusively Germanic origin for cruciform brooches.<sup>20</sup> Predictably therefore, identifying the cultural heritage of cruciform brooches has long been as much a case of drawing arbitrary lines between very closely related or even continuous brooch forms and pre-supposed cultural groupings.

Nevertheless, a key step along the way to the origin of the cruciform brooch series as it is defined here undoubtedly involved slightly earlier items known as Nydam brooches, named for their occurrence in that substantial late Roman Iron Age bog deposit of southern Jutland. Because the transition between Nydam and cruciform brooches has become synonymous with the transition between the late Roman and Migration Periods in northern Europe, the type definitions have become crucial not just to brooch nomenclature, but also to the definition of the Migration Period itself. While Reichstein included what are more accurately described as Nydam brooches in the cruciform brooch series, most now agree that Nydam brooches are more usefully defined as a series unto themselves. The crucial difference is that while cruciform brooches possess a square head-plate covering the spring axis and surmounted by a top-knob, the top-knob of Nydam brooches is joined to the bow only by a narrow spar, so that the spring axis is clearly visible.<sup>21</sup> The example from Dorchester on Thames is still the only confirmed occurrence of a complete Nydam brooch in Britain, 140 years after its excavation in 1874.<sup>22</sup> Due to their incompleteness or somewhat more robust character than most Nydam brooches, the possible examples from Mildenhall (#5), Nassington (#6, grave 17) and Preston St Mary (#66) have been included in the present corpus, though their presence here might be seen as borderline. The only other possible English Nydam brooch is from Spong Hill (#73, cremation 2197),

<sup>18</sup> The original highly influential work on these and other late Roman Iron Age brooches in northern Europe was Almgren 1897. Godłowski 1970 is also important here for central Europe.

<sup>19</sup> Smith 1908, 66.

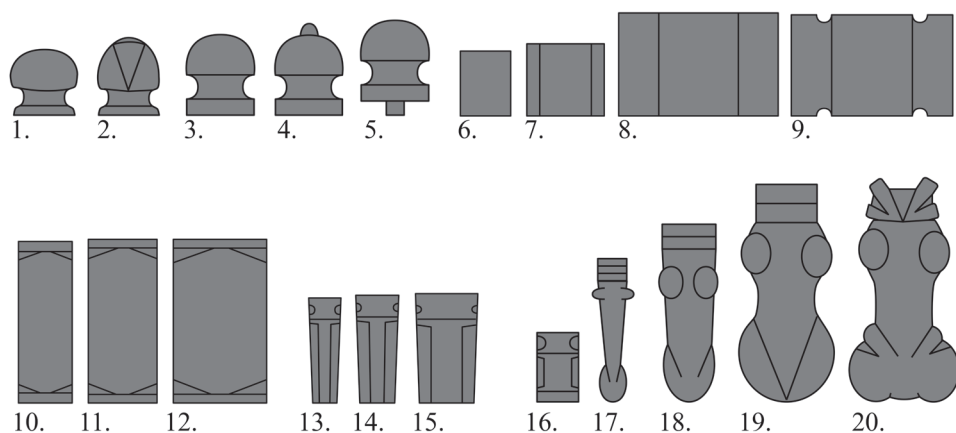
<sup>20</sup> E.g. Hildebrand, Almgren and Salin (see Schetelig 1906, 8; Schetelig and Falk 1937, 200).

<sup>21</sup> The key distinction therefore is that when looked at from above, the cruciform brooch head-plate has a T-shaped section formed by the plate and the perpendicular lug, which the Nydam brooch lacks. This distinction was asserted by Slomann (1977, 62), following Sternqvist (1961) and Lund Hansen (1970) and hinted at even earlier by Schetelig in 1910 (see Engevik 2008, 20–1 for more detail). Nydam brooches are also sometimes known as Dorchester brooches. According to Bemann (1993) and Rau (2010), Dorchester brooches more accurately belong to variant 6 of the Nydam series.

<sup>22</sup> Kirk and Leeds 1954.

though its excavator has recently confirmed this fragmented example as closer to the cruciform brooch series.<sup>23</sup>

Figure 5 illustrates the twenty attributes identified among group 1 cruciform brooches. Cruciform brooches of group 1 divide into four distinct types by their foot form. These types belong to two sub-groups, defined by the general proportions of the brooch as either narrow (sub-group 1.1) or slightly broader (sub-group 1.2). The difference between these sub-groups is also expressed in the form of the top-knob, which is either small and irregular with a rounded waist in sub-group



**Figure 5.** Group 1 components (not to scale).

1.1 (typically Figure 5.1, or the brooches on Plate 1) or slightly larger and more evenly cast with a crisply defined waist in sub-group 1.2 (typically Figure 5.3, e.g. Plates 2 and 3). A rare polyhedral or faceted dome occurs in thirteen instances (Figure 5.2), and an even rarer top-knob with a small protrusion occurs in two instances (Figure 5.4). The top-knob with a tab (Figure 5.5) is restricted solely to the Kentish series among group 1 brooches, but becomes common later in the principal series. It is relatively unusual to find side-knobs preserved on any of these brooches as they were always cast separately and were therefore easily lost. In the eighteen instances where they survive they match the style of the top-knob. Head-plates divide into four types: with no wings, very narrow wings, broader wings and notched wings (Figures 5.6–9). The last of these is again unique to the Kentish series. Group 1 bows tend to be either narrow, similarly narrow but with a bulging apex or a broader rectangular shape (Figures 5.10 and 11). Catch-plates follow a similar pattern of being narrow and tapering toward their base,

<sup>23</sup> Hills and Lucy 2013, 31.

rectangular or square (Figures 5.13–15). These are all difficult shapes to define accurately, so the relative proportion obtained by dividing the length of bows and catch-plates by their widths supplies a classificatory criterion, which was used to define narrow, medium and broad categories of each.<sup>24</sup> The four varieties of foot, which define each of the main types, include a plain tongue decorated with notches and lines (type 1.1.1, Figure 5.16), a long, narrow animal head with joined nostrils (type 1.1.2, Figure 5.17), a broader animal head with joined nostrils (type 1.2.1, Figure 5.18) and an even stouter animal head with more clearly defined and generally separated lentoid nostrils (type 1.2.2, Figure 5.19). Finally, there is a Kentish group 1 foot, the first in the series to feature comma-shaped nostrils, and the only one to possess schematic ears (Figure 5.20). For the time being, only the main series will be addressed. I will discuss the Kentish series last of all in this chapter.

Of the 192 examples belonging to group 1, only sixty-nine were complete or otherwise suitable for correspondence analysis. The Kentish brooches were excluded as they are too few and will be treated separately below. Additionally, single occurrences of particular variables were also removed, to avoid skewing the result. This led to the exclusion of a single brooch from Barrow upon Soar (#102), which possesses the only instance of a top-knob with a small protrusion (Figure 5.4) on a complete brooch. This left a total of sixteen usable attribute states. Although the distinctions between these group 1 attributes are very subtle compared to the other groups, and many of them are more to do with proportions than the presence of a diagnostic feature, a correspondence analysis of these attributes indicates they have surprising salience (Figure 6). The horizontal axis separates the two major clusters with sub-group 1.1 at its positive (right) end and sub-group 1.2 at the negative (left). Within the sub-group 1.2 spread, there is some very good separation between types 1.2.1 and 1.2.2 on the vertical axis. Within the sub-group 1.1 cluster, however, there is very little separation between the types, which suggests that unlike types 1.2.1 and 1.2.2, types 1.1.1 and 1.1.2 share attributes indiscriminately. As a result, distinction between these types is only possible by prioritising the foot as a diagnostic feature, which in this case is fully justified given that one is zoomorphic and the other is geometric. According to the absolute contributions of each variable to the position of each brooch on the plot, it is the small, irregular top-knob and head-plate without wings that control most of the variation on the horizontal axis, which helps to explain the good separation between the sub-groups. Overall, however, bow and catch-plate proportions do not contribute substantially to either axis, meaning

<sup>24</sup> The three categories of each were arrived at by measuring all instances at their widest points and locating apparently natural breaks in the series. For bows, the defining proportions were greater than 2.75 for the narrowest, between 2.00 and 2.74 for the medium ones, and less than 2.00 for the broadest. For the catch-plates these proportions were greater than 3.00, between 2.00 and 2.99, and less than 2.00.

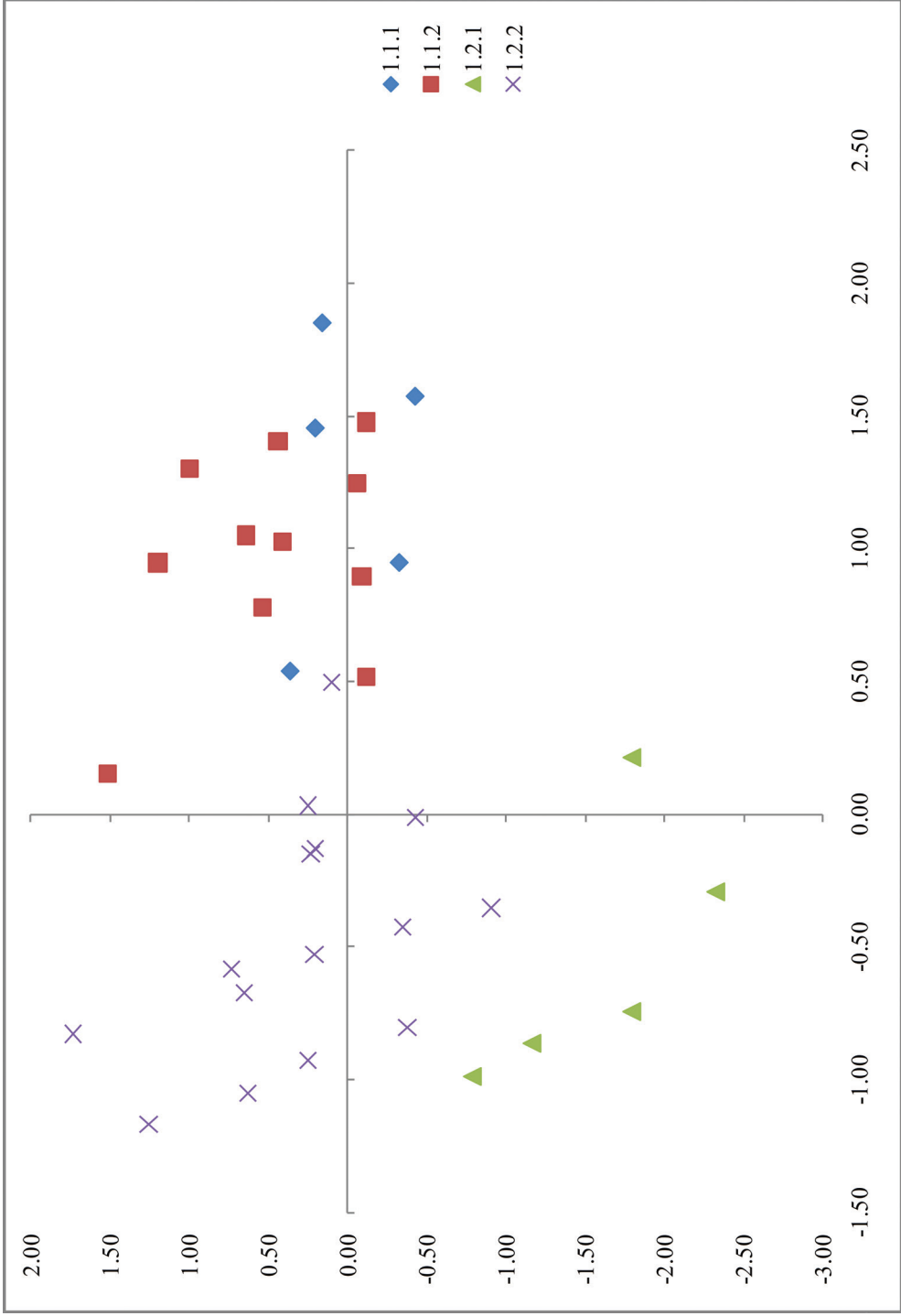
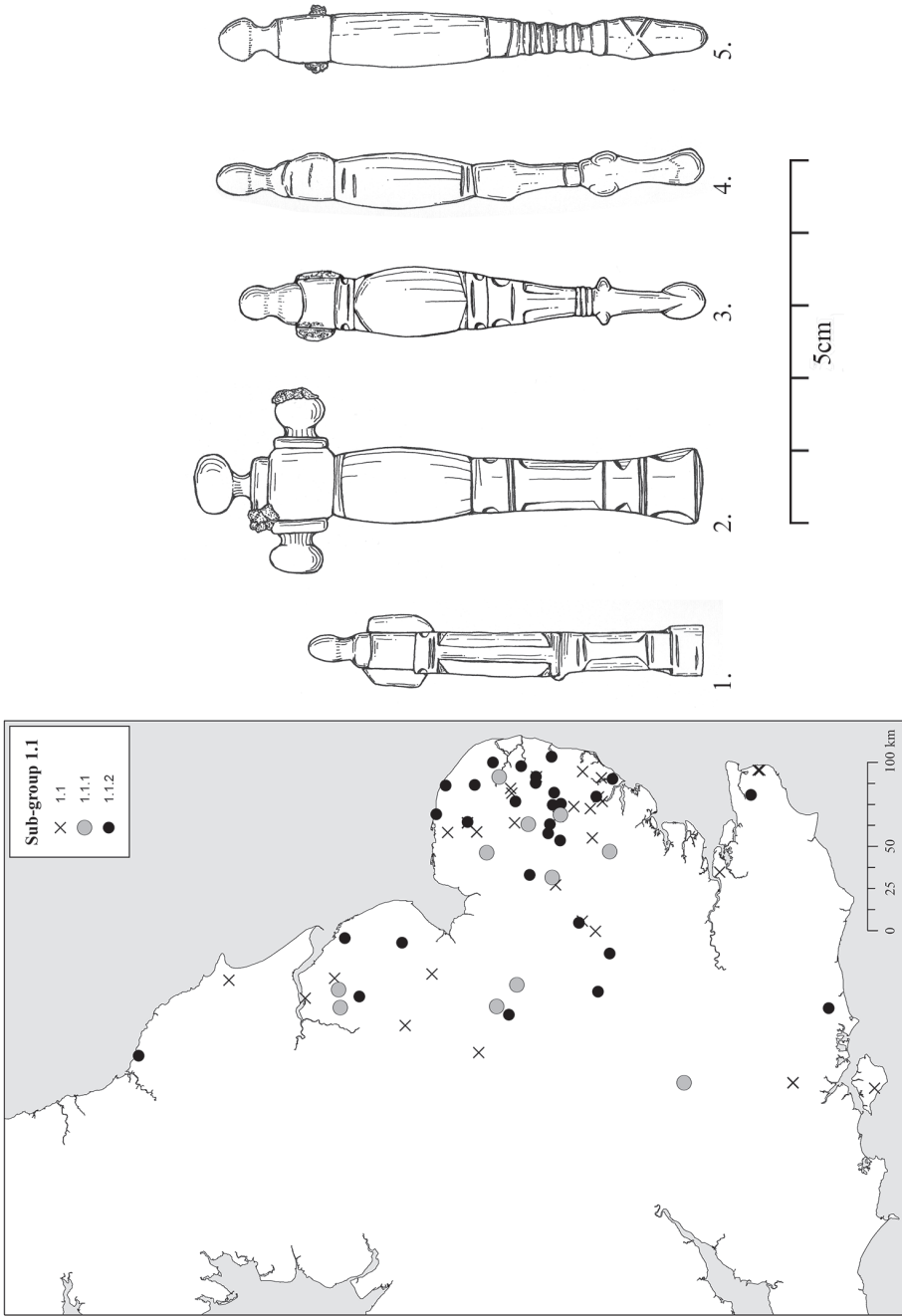


Figure 6. Group 1 correspondence analysis.



**Figure 7.** 1. #7 North Kelsey, Lincolnshire (1.1.1); 2. #2 grave 9, Cleatham (1.1.1); 3. #35 St John's College, Cambridge (1.1.2); 4. #36 St John's College, Cambridge (1.1.2); 5. #22 Glentham, Lincolnshire (1.1.2).