The Early Anglo-Saxon Brooch

A temporal and spatial investigation of Portable Antiquities Scheme Early Anglo-Saxon brooches and how they shed light on the invasion debate.

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A thesis submitted in fulfilment of the requirements for the degree of Masters of Archaeology and Heritage Management (MAHM).

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March 2022

Declaration

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

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Abstract

Up until the early twenty first century, archaeologists, historians and literary scholars had a common and almost entirely uncontested understanding of the origins of the Early Anglo-Saxon period; that people from cultural groups across northern Europe invaded Britain and formed a new cultural group, known as the Anglo-Saxons. This view was supported firstly by literary and linguistic evidence of the development of a new, Germanic language (English) and new literary tradition. Secondly archaeological evidence of a change in material culture supported this view. Thirdly it was supported by the historical accounts of the period left by the Anglo-Saxons themselves and those they invaded, such as Gildas' *De Excidio et Conquestu Britanniae* (c. 500), (On the Ruin and Conquest of Britain), Bede's *Historia ecclesiastica gentis Anglorum* (731CE), (The Ecclesiastical History of the English People), and the *Anglo-Saxon Chronicle.*

However, over the last decades archaeologists have questioned this account, favouring a model of slow immigration in which people from the Continent joined existing cultural groups in Britain. This change was partly driven by the absence of known grave pits as the result of invasion conflicts and partly because developments in theoretical approaches have increasingly emphasised the fact that a change in material culture might simply reflect a change in trade patterns and should not be confused with cultural identity. Early twenty first century aDNA (ancient DNA) and isotopic studies also seemed to suggest that there was not a significant change in the genetic makeup of the population of Britain at the time. In the last, three years however, the slow immigration model has been challenged by new aDNA and isotopic studies. While this challenge still supports elements of slower immigration model, it moves away from entirely removing the idea of a large-scale invasion. This thesis contributes to the ongoing discussion of this issue by considering an under-investigated body of evidence, Anglo-Saxon brooches from Portable Antiquities Scheme (PAS) data. Because Anglo-Saxon brooch types correspond to types associated with specific Continental cultural groups, their regional distribution may indicate 'cultural zones' if it is supported by other types of evidence.

This research will primarily focus on the spatial and temporal disposition and frequency of brooches from the early Anglo-Saxon period (410-600 CE) to investigate their significance in relation to the invasion debate. The PAS brooches have been divided into two data sets (410-500 CE and 500-600 CE) for the purpose of comparison against each other. This allows for the tracking the changes of spatial distribution during the early and late Early

Anglo-Saxon period. The analysis conducted for this these found that these brooches broadly fit typologically within their expected geographical areas, supporting an idea of cultural zones and a culturally divided migration. The data also shows a majority of Anglian-associated brooches (as opposed to Saxon or Jutish-associated brooches) in the earlier dataset (410-500 CE) that become less common (while remaining a majority) in the later (500-600 CE) dataset. PAS data has been used exclusively, and while this is a limitation of the study, the data does encompasses the whole study area rather than being limited to areas in which professional archaeological excavations have taken place. The author of this work suggests that the pattern of brooch distribution seen within this data could be explained by a migration model characterised by multiple waves of migration, with earlier waves dominated by Angles, it also sides against models of a wholly smaller migration, while supporting newer models (Gretzinger et al 2022 and Leggett et al 2022) generally larger scale regionally complex migration.

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Introduction

Studying the Early Anglo-Saxon (410CE-600CE) period is complicated by limited and problematic evidence. Unlike both later and earlier periods, which are well documented, and from which survive a wide range of physical and textual evidence, the Early Anglo-Saxon period suffered from significant attrition. The limited extant literary and documentary evidence only survives in manuscripts copied centuries later, making the texts hard to date precisely. The soil composition and dampness in most parts of south-eastern England have poor to fair preservation capacity, with many of the areas with poor preservation capacity along the coasts in areas where much of the earliest activity of this period would have taken place (Kibblewhite et al. 2015:256). The issue is compounded by the fact that much Anglo-Saxon material culture was created using organic materials. The Anglo-Saxons primarily built in wood, not stone, so that the only archaeological trace is often post holes in the soil. Although other material evidence is present (e.g., ceramics), it is usually dwarfed by the quantity of early Roman ceramics in the same area (Higham 2013:91–95). Unlike earlier sites such as the Neolithic Stonehenge and the Roman baths at Bath, or the later sites like Westminster Abbey, few Early Anglo-Saxon sites have survived. This problem is compounded by later periods having built over most Early Anglo-Saxon sites. Instead, a useful starting point for examining cultural trends may be artefacts, such as the focus of this thesis, brooches. Brooches are the most frequently occurring artefacts from the Early Anglo-Saxon period (Martin 2015:6–7), also allow for analysis of regionally distinct typology making them ideal for a study in which contextual data is often missing.

Inevitably, many aspects of the Early Anglo-Saxon period are contested. Perhaps the most significant debate in the last decade has been around the question of the 'adventus saxonici' (the coming of the Saxons), sometimes referred to as the Anglo-Saxon invasion. By the early sixth century, there is evidence that an early form of English, Old English, was the primary language spoken in many communities in England (Oliver 2002:14–15). Since Old English is a Germanic language, which shows little influence from Latin and even less from Celtic languages (Smith 2007:90–91), the question is, how did it come to be spoken in places that Romano-Celtic groups had dominated? There is no evidence of Old

English being spoken on the Continent, so it most likely developed in Britain as the result of speakers from various Germanic language groups developing a mutually comprehensible compromise language (Smith 2007:90–91). So, how did a Germanic language become dominant in England?

Contemporary histories, such as *Gildas' De Excidio et Conquestu Britanniae* (c. 500), (On the Ruin and Conquest of Britain) and Bede's *Historia Ecclesiastica Gentis Anglorum* (731CE) (The Ecclesiastical History of the English People) relate that a number of Germanic groups invaded Britain, possibly at the request of the Romano-British warlord, Vortigern. These accounts seemed to fit with a shift in material culture and had been commonly accepted as accurate. However, in the last decade, this idea has been challenged by archaeologists (see Arnold 1984; James, 1979; Lucy 1998, 2000, 2002; Oosthuizen 2019) due at least in part to a rejection of the idea that certain types of artefacts can be attributed to particular cultural groups. Within this thesis research suggesting that, on closer analysis, brooches may be an indicator of cultural identity and social origin will be presented.

Unlike many aspects of Anglo-Saxon material culture, brooches survive well and have been found in significant numbers across the Early Anglo-Saxon settlement areas. This thesis will focus primarily on the spatial and temporal disposition and frequency of different brooches from the Early Anglo-Saxon period (410 CE-600 CE) and a possible explanation for the data compiled within is addressed. The data, as already acknowledged, is problematic, partial, and open to multiple interpretations. Nevertheless, the interpretation offered in this thesis contributes to the debate and offers another possibility for consideration. This study has a secondary aim of assessing how reliable the Portable Antiquities Scheme (PAS) data is as a source material for analysing cultural distribution. The data used is primarily taken from the PAS and adds to the ongoing debate about whether a program, such as the PAS, brings benefit or confusion to the interpretation of artefacts and the periods in question.

The PAS mentioned above is a system by which heritage that is found outside of a professional archaeological context can be recorded. For the most part this consists of metal detectorists finds (Portable Antiquities Scheme 2021). While it provides an opportunity for recording and researching artefacts that would have almost certainly been lost without it, it does have issues. It does nothing to

protect those artefacts, with almost all returned to the finder. Its recording is inconsistent and includes errors which have to be acknowledged when using the data it contains. This will be explored further in a later section, but it is important to acknowledge these flaws before continuing to discuss this data.

After retrieving the PAS data, it has been divided into two main data sets, one between 410-500 CE and one between 500-600 CE based on the dates provided by the PAS. As a majority of PAS data lacks any method by which it can be contextually dated, these dates are primarily based on the typology of the brooches in question. The date range of both sets encompasses the entire Early Anglo-Saxon period. The first, 410-500 CE, covers the likely initiation of the migration. It begins at the date the Gallic Chronicle gives for Saxon attacks on the British provinces in 410 (Casey and Jones 1988:379) and covers the date Bede gives for the arrival of the first Angles/ Saxons in 449 CE. This first half of the Early Anglo-Saxon period provides insight into the earliest and first migrations of Anglo-Saxons into Britain. Before this period, Britain was defined by Roman rule, after being annexed into the Roman Empire in 43 CE (Shotter 2004:6). The second half of the Early Anglo-Saxon period is 500-600 CE, which leads into the middle Anglo-Saxon period and the formation of the seven Anglo-Saxon Kingdoms of England (Yorke 1997: 9–15).

1.1 Question

The primary aim is to answer the question: what can the temporal/ spatial distribution and frequency of different brooch types, from PAS data, reveal about the cultural makeup of the Anglo-Saxon migration?

1.2 Aims

- Investigate the temporal and spatial distribution of Anglo-Saxon brooches in the Portable Antiquities Scheme.
- Suggest possible explanations for patterns in the distribution and frequency of brooches.
- Investigate what the Portable Antiquities Scheme can contribute to the study of the Early Anglo-Saxon period and add to the ongoing discussion about the program's efficacy.

- Assess the reliability and pitfalls of using Portable Antiquities Scheme data as source material for analysing cultural distribution.

1.3 Significance

This thesis contributes to one of the most important debates in the archaeology of the Early Anglo-Saxon period: how did Anglo-Saxon culture come to develop into English? It also contributes to a broader theoretical debate on the relationship between cultural artefacts and culture/ethnicity. It contributes to analysing a topic well-researched on a more specific smaller scale. While many scholars have approached the topic of Anglo-Saxon brooches focusing on an individual type, and analysing individual types of brooches singularly, this research addresses all of the main Early Anglo-Saxon brooches (contained in PAS data). This will allow a broad view assisted by modern GIS spatial analysis technologies. While the main focus of this project is the Anglo-Saxon brooches, it is innovative in using interdisciplinary evidence. As such, it can also show the strengths of including linguistic information when investigating periods in which the surviving material culture is limited.

Finally, the PAS is a program by which the community can contribute to studying historical periods. It provides a system through which metal detectorists across the UK can submit their findings for inclusion within the scheme. However, the discussion about its effectiveness is ongoing. As a side effect of using only PAS data in this project, this thesis is ideally positioned to contribute to this ongoing discussion by analysing what information is retained and lost through community archaeology outside of a supervised project.

Literature Review

This section will be dedicated to discussing the literature on the Early Anglo-Saxon Period. First, an acknowledgement and an explanation of the current debate around the terminology used to describe the people and period this thesis focuses on, specifically the term 'Anglo-Saxon', which has been much contested and debated in recent years in both academia and in the wider public discourse. Secondly, the historical changes in the scholarly understanding of the Early Anglo-Saxon period will be traced. This is a complex web of different and contrasting models and theories that have changed a number of times, as such the discussion has been broken into a number of phases that will be explored chronologically below. Initially each section will be explaining the theory of the phase, then exploring the challenges and problems with those theories. The review will then focus on the specific material evidence this thesis primarily uses, the Anglo-Saxon brooches, and a review of each of the main categories of brooch found within the data will be conducted. Finally, this section concludes with a review of the PAS, examining it for its value and risks as a source for accurate analysis of material culture.

2.1 Nomenclature

There is some contention about the use of the nomenclature "Anglo-Saxon" or "Anglo-Saxon Period" (approx. 410 CE to 1100 CE) and "Early Anglo-Saxon Period" (approx. 410 CE - 600 CE) in current academic debate. Primarily, the issues raised with the term are the racial overtones it carries (Rambaran-Olm 2019). The term became popular in the eighteenth and nineteenth centuries as historians looked for an overarching term to cover the 'Germanic' migrants that became synonymous with parts of England during this period. However, some suggest that the first use of the term comes from Alfred in his claims to rule over all kingdoms (Holland 2019). Rambaran-Olm (2019) argues that between the eighteenth and nineteenth century uses and now, the racist meaning has "become the most dominant usage of the term" (Rambaran-Olm 2019). This debate focuses most on the modern-day racist usages of the term (Holland 2019, Overholt 2019, and Rambaran-Olm 2019). However, scholars have also objected to the nomenclature on other grounds, primarily that it makes generalisations about the people it claims to describe and only recognises two cultures when in fact the term is used to refer to a diverse group.

On the one hand, the abandonment of a term or symbol based purely on its adoption by racist movements can be seen as allowing that group to 'win'. The author of this work would argue that, in most cases, education on the non-racist uses of these symbols and terms is the best way to combat this. Allowing these terms and symbols to fall from their correct non-racist uses only cements them within the racist lexicon. It is also important to note that the commonly offered alternative, the 'early English' period holds its problems. It suggests that the 'English' can be linked closely to the Anglo-Saxons, a viewpoint that oversimplifies a narrative of many varied invasions and migrations. With all of the above considered, and academics still split on the issue, the following work will continue to use the 'Anglo-Saxon period' to describe the epoch this thesis is based within and 'Anglo-Saxon' to describe the Germanic migrants.

2.2 Migration Period of Early Anglo-Saxon History

The next part of this section compares three key perspectives on the Early Anglo-Saxon period. The first of these perspectives will be the medieval histories, the second, early genetic investigations, and finally, the debate between a smaller or larger migration. After explaining the main theories that characterised each of these phases, contemporaneous opposition to these views will also be explored. This will begin with an examination of the early medieval accounts of the invasion, Gildas' *De Excidio et Conquestu Britanniae* (c. 500), (On the Ruin and Conquest of Britain), Bede's *Historia Ecclesiastica Gentis Anglorum* (731CE), (The Ecclesiastical History of the English People), and the Anglo-Saxon Chronicle, and the challenges that have been raised by scholars to these medieval histories. Then the early archaeological attempts at analysing modern and contemporary genetic information will be discussed, alongside the challenges that have been raised .Finally a review is made of the ongoing debate between models of a small or larger-scale migration including the modern attempts at re-investigating the period as a whole.

Gildas, Bede, and the Anglo-Saxon Chronicle

Up until the last few decades, our understanding of the Anglo-Saxons was largely based on the account found in near-contemporary sources, especially Gildas' *De Excidio et Conquestu Britanniae* (c. 500) (On the Ruin and Conquest of Britain)

and Bede's *Historia ecclesiastica gentis Anglorum* (731CE) (The Ecclesiastical History of the English People). The earliest of these writers, Gildas, was a Romano-British monk, so his account of the Adventus is written from the perspective of those dispossessed. Gildas writes that with the councillors' support, Vortigern (king of Britons as noted by Gildas and Bede) invites the Saxons (Saxones) to England to protect it against the frequent incursions of Picts (Picti) and Scots (Scoti). He describes the action as sealing 'its [the kingdom's] doom by inviting in among them (like wolves into the sheepfold, the fierce and impious Saxons … Nothing was ever so pernicious to our country, nothing was ever so unlucky.[1]' As with all medieval sources, it is not clear how specifically Gildas is using the names of cultural groups (Angle, Saxon, and Jute). In particular, it seems that 'Saxons' refers broadly to groups from the Continent. The next account is written by Bede, an English monk, and so this account is told from the perspective of the newly dominant social group. His account of these events is strikingly similar to that of Gildas, except on two points. First, he stresses that it was either the Saxons or the Angles that Vortigern invited, and second, this contingent came in three longships and was granted land in the east of England. Bede also gives a date range for this initial invitation by associating it with the reign of Emperor Marcian, who Bede mentions became emperor in 449 and ruled for seven years. Both accounts then agree that, after defeating the Picts and Scots, the Angles/Saxons sent a message home, which resulted in more warriors sailing to England. Bede adds:

> 'These new-comers were from… the Saxons, Angles, and Jutes. From the Jutes are descended the people of Kent and the Isle of Wight and those provinces of the West Saxons opposite the Isle of Wight … From the Saxons … came the East, South and West Saxons. And from the Angles … are descended the East and Middle Angles, the Mercians, all the Northumbrian stock.[2]"

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[1] Quotation of Gildas 23 comes from Giles, J.A. 2010 On the Ruin of Britain (*de Excidio Britanniae)*. Wokingham, Dodo Press.

[1] Quotation of Bede 1.15 comes from Sherley-Price, L. 1990 Ecclesiastical history of the English people: with Bede's letter to Egbert and Cuthbert's letter on the death of Bede Rev. London: Penguin Books.

[2] Quotation of Bede 1.15 comes from Sherley-Price, L. 1990 Ecclesiastical history of the English people: with Bede's letter to Egbert and Cuthbert's letter on the death of Bede Rev. London: Penguin Books.

This can be shown in the map in Fig. 2.2.1 below.
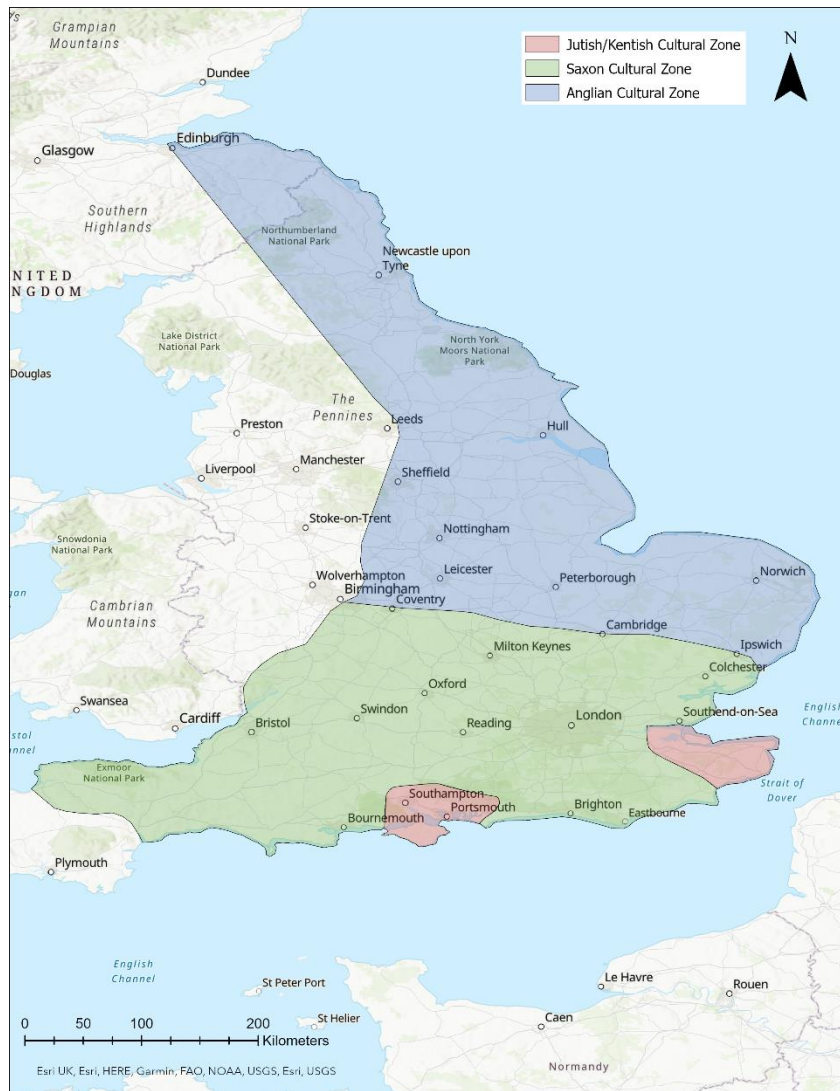
Fig. 2.2.1 Settlements of Angles, Saxons and Jutes in Britain as per Bede's account (Map by L. Ricketts)

Gildas and Bede then both frame the Anglo-Saxon migrants as the aggressors, noting a demand for more supplies under the threat of violence. Bede mentions an alliance between the Anglo-Saxons and the Picts they had initially come to fight. In Bede's words, the Anglo-Saxons then conquered "nearly all of the doomed island", with survivors either enslaved or fled, yet this is not where the account ends. Both accounts then tell of a victory over the Anglo-Saxons at Badon Hill by the Britons which is placed forty-four years after the original landing of the Anglo-Saxons. Gildas then notes that England continued to face internal strife. Gildas mentions how many areas lay in ruins and were never reinhabited like they once were. He continues that the Britons did not preach their faith to those Anglo-Saxons who remained, this suggests that despite the victory the

Britons achieved under Ambrosius Aurelianus, it was not total, and some Anglo-Saxons remained.

The Anglo-Saxon Chronicle, a ninth century text, which was copied and iterated upon by several scribes, generally agrees with accounts of Gildas and Bede. However, it does provide more information about dates, dating the arrival of the first force asked to fight the Britons in 449 CE. It follows by listing a series of conflicts between different Anglo-Saxon leaders and the Britons. Notably, it does not mention the Roman Ambrosius Aurelianus or any substantial victory for the Britons over the Anglo-Saxons. Instead, it frames the Anglo-Saxon conquest of the parts of England they would eventually control as a series of battles, each slowly bringing more territory under Anglo-Saxon control.

Between the three sources (Gildas, Bede and the *ASC)* there are several points in common. Firstly, the date of initial arrival of the Saxons or Angles are very similar between all three with a suggested date somewhere between 449-456 CE (449 CE from the *ASC*). Secondly, the Anglo-Saxons comprised not only the Angles and the Saxons but also the Jutes. Thirdly, Bede's account suggests the Angles, Saxons and Jutes occupied distinct regions (the Angles in Northumbria, East Anglia and Mercia, the Saxons south of England, and the Jutish areas around the Isle of Wight and Kent). Fourthly, the initial area which the Anglo-Saxons occupied is suggested to be part of East Anglia or Kent. Finally, a violent conflict is suggested between the Anglo-Saxons and the Britons. However, at the close of this violent conflict, neither side held total sway, with portions of the land divided, as mentioned above, between the different Anglo-Saxon groups and the Britons. This basic model of an Anglo-Saxon invasion was largely accepted by archaeologists, not least because it is supported by the development of a new, Germanic language (English) in Britain, and it matches a shift in the material culture in the fifth and sixth centuries, particularly an increase in Germanic-style grave goods, including ceramics, brooches, and other dress accoutrements (Glassman 2017:1611, Homans 1957:37–39, Jones and Casey 1998, Leeds and Harden 1956, Stenton 1970).

Despite this general acceptance by scholars there have always been some criticism of the models developed mostly from these medieval histories. These criticisms to the contemporary histories mentioned above start with Gildas and continue to include Bede's work. Oosthuizen summarises the challenges to

Gildas' account in her 2019 work "The Emergence of the English", in which she notes, "his book was never intended as a history. It is a polemical treatise illustrated with events to support moralizing points" (Oosthuizen 2019:22). It is essential to consider why and for whom Gildas' wrote his account of the Anglo-Saxon migration. Bede's account of the period is based heavily on Gildas' earlier account; while it does build on Gildas' work, providing dates for some events that Gildas' failed to date, these dates have been attacked by scholars such as Sims-Williams. Sims-Williams (1983) states that "Bede's chronology is simply a valiant attempt to interpret Gildas and has no independent value whatsoever" (Sims-Williams 1983:21). This leaves Bede's account of the period with its own issues, based on a work that itself has faced criticism from scholars, with dates that have been equally criticised.

An Archaeological Reinvestigation

Attempts have been made to corroborate these histories through various archaeological methods. This archaeological reinvestigation can be characterised by two main competing viewpoints. The first, that no invasion happened, with arguments made that either an invasion is the wrong model to understand the migration that did take place, or that no migration happened at all. The second, being that an invasion (a sudden mass migration supported by coordinated large scale attacks) did happen. The next section of this review will address the first of these viewpoints.

Despite the challenges to the contemporary histories addressed above, the material culture of the period does display a sudden shift from the Roman-style material culture to a more Germanic style. This shift is evident in the change in style between Roman and Anglo-Saxon brooches (Higham and Ryan 2013:70). While attempts to simplistically assign change in material culture to change in identity do need to be critically assessed, this does not mean they should be discarded entirely. This is especially true with new research on the Early Anglo-Saxon period beginning to turn the discussion back towards that of a change in identity. While this change could support Gildas' and Bede's version of events, and suggests the occurrence of sudden mass migration, scholars such as Oosthuizen (2019) suggests that a simpler shift in fashion as the importance of Roman culture lessened could also explain the change (Oosthuizen 2019:30). Oosthuizen and other scholars (such as Arnold 1984; James, 1979; Lucy 1998,

2000, 2002) have furthered this argument by suggesting that was no significant Germanic migration, instead proposing models of Romano-British continuation. Lucy is critical of using migration to view any change in material culture. Instead, they address the limits to which ethnicity can be taken from material assemblages (Lucy 200:133–139). Lucy continues to argue that these changes are more reflective of community identity and a move away from Roman styles. Oosthuizen argues that:

"...there must be growing doubt about conventional beliefs regarding the character and importance of post-Roman immigration into Britain: specifically, that it can be assumed largely to have originated in north-west Europe, to have been numerically significant, was characterized by a specific cultural identity, and to have had a formative impact on local communities. (Oosthuizen 2019:41)."

Whilst these arguments are interesting and do raise good points about regional differences, and community identity, they fail in a broader sense to explain the emergence of English as a language. As noted by Martin J. Ryan (2011), linguistic evidence is an important consideration for this period and cannot be ignored. English emerged in Britain sometime in the fifth or sixth century (Oliver 2002:14–15). The English language is a descendant of Ingvaeonic (West Germanic) languages, developing from mixing different Germanic languages in Britain (DeCamp 1958; Smith 2007:89–90). From this, it is apparent that at least some predecessors of English did make their way across the channel and into England, as it became the dominant language. The most obvious path for this is that, as described by Gildas and Bede, the Angles, Saxons, and Jutes (who, alongside the Frisians, make up the Ingvaeonic-speaking peoples) migrated from their continental homelands to England. It also seems clear from the linguistic evidence that there was not much cooperation between the Latin and Celtic-speaking Britons (Hustwit 2014:36) and the English-speaking Anglo-Saxons, as this would have resulted in a much more significant influence from Latin and Celtic in English (Baugh and Cable 1993:68,74–75).

Linguistic evidence also interestingly sides with models favouring a large scale migration over a smaller scale migration as the English-speaking peoples must have come across in large enough numbers to survive without the aforementioned cooperation. The development of English also suggests that the group of migrants were linguistically diverse enough to create a distinctive new

language instead of a new dialect of a single language from the continent (Smith 2007:90). While there must have been a high level of linguistic diversity, there must also be a high level of contact between these diverse peoples to allow for the creation of this new language.

Early Genetic Investigation

While the emergence of English as the dominant language in England is a compelling argument to support the occurrence of an Anglo-Saxon migration, it is important not to stop there. Further lines of evidence need to be sought to support the linguistic evidence. Due to the impermanent nature of much of the physical or documentary evidence from the Early Anglo-Saxon period, recent studies have started to use more scientific archaeological methods. Early attempts to use contemporary genetic material from burials failed due to degradation (Hedges et al. 1993), leading to investigations primarily focusing on the analysis of current genetic data from modern populations (Bradman et al. 2002, and Capelli et al. 2003). These studies mostly concluded that a large-scale replacement of population took place during the Early Anglo-Saxon period, with Capelli et al. (2003) suggesting the idea of genetic mixing between the British and the Anglo-Saxons due to the presence of a haplotype in some English genetic samples, and its complete absence in Irish, Welsh and Scottish samples. Bradman et al. (2002) looked at Y chromosome haplotypes. They concluded similarly, with the pattern represented in their data best explained by a large-scale migration, even going as far as to attribute fifty to a hundred percent of the gene pool to Anglo-Saxon Y chromosomes (Bradman et al. 2002:1018). However, this series of early genetic testing was limited by the technology available at the time, generally based on either blood times, or only the X and Y chromosomes, whereas newer technologies have allowed for fuller analysis of genomes.

These studies are problematic; recent research has argued against uncritical attribution of modern DNA to ancient sources from the same area. Geary and Veeramah (2016) argue that all modern Europeans share hundreds of common ancestors in the last three thousand years and that tracking a single link through those ancestors is unlikely to provide any helpful information without placing too much emphasis on what is only a single line (Geary and Veeramah 2016:69-70). If the analysis of only modern DNA has as many problems as Geary and

Veeramah (2016) relate above, it is essential to return to the study of contemporary genetic material to supplement and support any conclusions. More recently, attempts have been made to return to the analysis of contemporary genetic evidence (Clarke et al. 2016 and Hughes et al. 2013). Despite their disagreements on specific details and interpretations, all of these studies conclude that there was an Anglo-Saxon migration. While it seems clear that migration, to some extent, did take place during the Early Anglo-Saxon period, debate exists around the details of this migration. The two sides of this debate can be simplified into the arguments for a small-scale migration and those for a large-scale migration. While these early attempts at analysing genetic evidence did not side conclusively with either side of this debate, further research taking advantage of advancements within the field of genetic research will be addressed below.

Small-Scale Migration

The argument for a small-scale migration initially centred around the idea of replacing the 'elite' ruling class with the Anglo-Saxons while leaving the majority of the population. This 'elite' replacement model can be seen as early as Hines (1984) and Arnold (1984) but is also suggested and supported by other scholars (Härke 2003, 2011; Härke et al. 2006; Higham 1992). This model suggests that the migration occurred as several smaller-scale 'elites' moved into Britain and established themselves in a dominant position above the Britons. This idea is not without precedent as it is seen later in English history with the invasion of the Normans in 1066 (Thomas 2003:1–7). This research has opened a back-and-forth debate around apartheid-like social structures (Härke et al. 2006, Pattison 2008, and Pattison 2011), Härke et al. (2006) put forward the suggestion that the high degree of continental male ancestry (as argued by Bradman et al. (2002) in which fifty to a hundred percent of ancestry is attributed to continental) can be explained through an apartheid-like structure in Early Anglo-Saxon Britain where Britons were at an economic and legal disadvantage compared to the smaller group of Early Anglo-Saxons. However, some have disagreed, with Pattison (2008) noting that this explanation ignores the possibility that Germanic people had been arriving in Britain prior to the Early Anglo-Saxon period, specifically calling attention to the arrival of Germanic Roman soldiers. The suggestion of an apartheid-like ban on interbreeding between Anglo-Saxons and Britons also contrasts against evidence put forward by more modern studies of contemporary

and modern genetics by Clarke et al. (2016) in which a modern sample set is compared with ancient genomes based on rare, shared alleles. Using material taken from cemeteries at Oakington, which showed a genetically and culturally mixed Anglo-Saxon community. Individuals from the cemetery showing recent migration, native British ancestry, and an individual of mixed decent, with all graves showing burial practices that are very similar to each other. Interestingly it is the native Briton who had the 'wealthiest' grave and one of the individuals with genetic signs suggestive of recent migration with no grave goods at all (Clarke et al. 2016:6–7).While a smaller-scale migration could be possible, the idea of a smaller-scale 'elite' replacement migration also seems not to fit with the lack of archaeological evidence of conflict, as it would not seem possible for this 'elite' replacement without serious conflict. This is supported by Leggett et al. (2022) in which they find no difference in the funerary treatment in Berinsfield cemetery between those found with a local and nonlocal isotope (Leggett et al. 2022: 29). In a model where the migrants are the 'elite' it is expected that the continental migrants found within a mixed burial context should be the 'wealthiest'. All together it seems that the idea of a total wide reaching 'elite' replacement can be discarded.

Yet the replacement of the 'elite' is not the only way a smaller-scale migration could have occurred. The idea of smaller incoming groups assimilating into the broader population is also suggested (Oousthizen 2019:120), with broader ideas of a smaller migration being supported by an isotopic analysis of Anglo-Saxon burials in Berinsfield (Hughes et al. 2013). While this study does not suggest a model by which the Anglo-Saxons came to England, it does suggest that most individuals at the Berinsfield cemetery in Oxfordshire from between 450-500 CE, were local-born Romano-British, with only one showing evidence of continental immigration. However, this idea of broad assimilation of the Anglo-Saxon migrants by the Britons suggested by Oousthizen, and more broadly a smaller scale migration still does not seem to account for the adoption of the Germanic descendant English language. A smaller migration would clearly result in some level of linguistic contribution by the Britons, which is not what the linguistic evidence suggests. Despite some localised archaeological evidence of integration of the two populations, it would seem the idea of a small-scale migration does not fit the overall picture of linguistic evidence.

Large-Scale Migration

If both the ideas of little to no Germanic influence and a smaller migration do not fit with the picture the majority of the evidence provides, then we are left with the idea of a larger migration. Alongside the two early investigations into contemporary genetic material mentioned earlier (Bradman et al. 2002 and Capelli et al. 2003), more recent genetic and biological studies also conclude on the side of a large-scale replacement. Plomp et al. (2021) used shape-based cranial analysis, comparing crania found in pre-invasion Denmark and those found in post-invasion Britain from the sites of Breedon-on-hill, Brandon, Burwell, Buckland, and Eriswell. This analysis showed that the number of North-Western Continental Germans in England during the Early Anglo-Saxon period was relatively high (between approx. 67% and 75%) but that this percentage throughout the middle Anglo-Saxon period decreased (approx. 30-50%) (Plomp et al. 2021). The arguments for a large-scale migration have been pushed back into the fore this year by a study from Gretzingeret al. (2022). A broad range of evidence is covered, including both contemporary and modern sources, finding numerous contemporary individuals with only continental ancestry. They continue to say, "our combined genetic and archaeological analysis point to a complex, regionally contingent migration with partial integration that was probably dependant on the fortunes of specific families and their individual members" (Gretzinger et al. 2022:118). Gretzinger et al. (2022) notes that continental northern European ancestry is very common in central and eastern England during the early medieval period, but less so in the south, and entirely absent in Ireland (noting that only one site in Ireland was tested) (Gretzinger et al. 2022:114). This research does show a distinct similarity between the Anglo-Saxons in England and sites in northern Germany and Denmark (Gretzinger et al 2022:115). It also suggests an extended migration duration, starting from the later Roman periods through the Middle Anglo-Saxon period. This argument is also supported by Leggett et al. 2022, who agree the migration was likely more complex than a singular model can account for, with regional and chronological differences. This work also supports the conclusions above that both the idea of little to no Germanic influence and the elite replacement model are not supported by current evidence (Leggett 2022:27).

The most recent studies using the most up-to-date methodology conclude in favour of a complex but larger-scale migration. While the complex nature of this

migration stops short of saying one side of this debate is exclusively correct, as some regions exhibit evidence of a smaller-scale migration with partial integration. The modern isotopic and aDNA research does show signs of a broader large-scale migration. One thing that most recent research conclusively excludes is the small-scale 'elite' replacement model. This section of the review does highlight the complex and ever-changing nature of scholarship on this Early Anglo-Saxon period. While now the clearest image of this would seem to be that put forward by Gretzinger et al. (2022), it may happen that this changes as more evidence and modern practices are revealed.

2.3 Brooches

The brooch is one example of the Anglo-Saxon material culture that survives well in the archaeological record and can provide a fascinating insight into the period as a whole. The brooch is the most abundant within the archaeological record of the Early Anglo-Saxon period (Martin 2015:6–7). This could be because, although often artfully decorated, brooches are fundamentally functional items. For example, they act as dress fasteners, and many early examples of brooch types are fairly undecorated (Bruns 2003:44). Despite this, it has been argued that the art on these brooches acts as a form of communication (Hodder 1990: 44, Suzuki 2000:85), or a form of indication of social status (Suzuki 2000:92), or religious belief (Bruns 2003:44). Even without additional contextual information, many brooches are distinctive and can be easily associated with particular cultural groups. This makes brooches an ideal artefact for analysis of cultural movements, even when, as is the case for most of the brooches used in this project, they lack contextual information.

Although it is broadly the distribution (spatially and temporarily) that will be the focus of this thesis in its assessment of brooches, it is noteworthy that this is not the only information provided by brooches. As seen in Isbell (2015), an artistic analysis of the geometrical design and creation of disc brooches is provided, and suggestions are made about how the design aspects can inform us not only about the creation of these brooches but also about Anglo-Saxon society as a whole. In Martin (2015), a detailed study of cruciform brooches and their distribution spatially and temporarily is undertaken. It attempts to answer questions about identity in the period and the exchange/use of these brooches. Martin's research follows a trend in the study of Anglo-Saxon brooches to

categorise and study singular brooch types, as seen in Leeds's (1945) analysis of small long brooches. Hines' (1997) corpus on great square-head brooches, and Baker's (2013) work on annular brooches. This thesis instead attempts to take a broader analysis of these brooches.

This thesis assesses several different brooches. Each of these brooches will be addressed in greater detail in the data section, including:

- Cruciform
  - The central head-plate is flanked and topped by extrusions and generally left undecorated; beneath the head-plate is the decorative foot. (Martin 2015:4).
- Small-long
  - Generally, these brooches mirror the style of the larger brooches found in the area, but are smaller in size than those brooches (Leeds 1945)
- Square-head (Anglo-Saxon and Kentish)
  - This brooch is characterised by a generally intricately designed large square-head piece. (Hines 1997).
- Saucer (Applied and Cast)
  - It has a circular appearance and can show a variety of different designs on the front plate (Mirrington 2020:65-66 and Rogers 2007:114–121).
- Button
  - A smaller version of the saucer brooch often depicting a stylised moustachioed face (Hirst and Clark 2009:483, Mirrington 2020:66)
- Disc (Saxon and Kentish)
  - A round brooch generally with circular designs on the front plate, generally smaller than saucer brooches.
- Annular (Penannular and Quiot)
  - A circular ring with a hollowed centre (Rogers 2007:114–121).
- Equal-arm (supporting-arm)
  - This brooch is characterised by a symmetrical head and footplate are generally trapezoidal in shape (Hines 1984:254).
- Radiate-head

○ Defined by its circular or semi-circular headplate, with a number of small circular protuberances around the outside of the headplate (Rogers 2007:114–121).

Top row left to right.

Fig. 2.3.1 Cruciform: museum of London collection number 754819001

Fig. 2.3.2 Small-long: Rutland County Museum Small Long OS115

Fig. 2.3.3 Square-head: British museum asset number 37018001

Fig. 2.3.4 Saucer: British museum 199936001

Bottom row left to right.

Fig. 2.3.5 Button: British museum 212444001

Fig. 2.3.6 Disc: British museum disc brooch 32952001

Fig. 2.3.7 Annular: Rutland County Museum OS10

Fig. 2.3.8 Equal-arm: brooch museum of London collection number 739237001

Fig. 2.3.9 Radiate-head: radiate British museum 34911001.

Cultural Zones

The different groups that made up the invasion tended to be concentrated in different areas which are referring to as 'cultural zones'. These zones are representative of where the different groups that made up the Anglo-Saxons are located upon their arrival in England according to the near-contemporary accounts. Some scholars recently have disputed the idea that cultural boundaries can be assigned during this Early Anglo-Saxon period (see Harland 2017:137). While it is necessary to critically assess any assumptions of simplistic

connections between changes in material culture, to a change of cultural groups without further supporting evidence, in the light of more recent studies that support the 'invasion' model (see Gretzinger et al. 2022, and Leggett et al. 2022), these connections also cannot be discarded out of hand.

These cultural zones have been reconstructed from a number of sources. Contemporary histories have contributed to the reconstruction of these cultural zones (Martin 2015:1), primarily Bede's work, in which he attributes different regions of Britain to the different Anglo-Saxon groups: the Jutes to Kent, and the areas around the Isle of Wight, the Saxons to east, west, and south, and the Angles to Mercia and Northumbria. Regional differences in Old English dialects as reflected in manuscripts may also help to assign an area to a cultural group (DeCamp 1958).

Differences in burial practices can also suggest a regionally diverse initial migration, as explored in Gretzinger et al. (2022) the burial practices of those individuals of continental European ancestry vary between cemeteries in different regions. The clearest example of this noted within Gretzinger et al. (2022) is the difference between the Dover Buckland and Apple Down cemeteries, with Dover Buckland in Kent to the East and Apple Down in Saxon associated land in the west of Southeast England. While both of these cemeteries include people of both continental and local ancestry, levels of integration of these are very different. Dover Buckland shows a very intertwined genetic history with mixing of continental and local ancestry all buried in near each other and in a similar style, and Apple Down showing very distinctively separated burials (Gretzinger et al. 2022:144–155). While does not prove which specific people settled in these regions it does clearly show that those of continental ancestry may not part of a homogenous group. This is where the grave goods themselves can help to make a distinction. Different grave goods, including brooch types, are generally associated with the different groups that made up the Anglo-Saxons (Bayliss et al. 2013:19 and Martin 2015:1). While it is too simplistic to say that a particular broad type can be only associated with that group, certain types of brooch can be traced from the continental homeland to the assumed end point of these groups migration (the cultural zones) (Smith 2007:97). These include saucer brooches to the Saxons in the lower Rhine (the traditional Saxon homeland) and in southeast England and the Thames valley (Mirrington 2020:65–66). Square-head brooches can be traced back to Denmark/Greenland and around Kent (Wilson 1971:42–

43). Cruciform and annular brooches are generally considered to be Anglian and are chiefly found in Eastern Britain (Martin 2015:2).

2.4 Portable Antiquities Scheme

All of the temporal and spatial brooch data that will be used below, has been taken from the Portable Antiquities Scheme (PAS), as such it is important to address what the scheme is and what, if any, are its shortcomings with respect to cultural mapping. The PAS is a project run by the British Museum and Amgueddfa Cymru (Museum Wales) to record artefacts found by the general public throughout England and Wales. The digital record kept by the PAS is an invaluable resource for the study of the region, and more specifically for this project, the study of early Anglo-Saxon brooches. It includes information such as location data, images, short descriptions, classification and date ranges.

The history of the PAS begins in 1997 with the Treasure Act 1996 which sought to bring regularisation and protection to those artefacts found by metal detecting. While this act was a good first step, the scope of what was considered 'treasure' was extremely limited, notably excluding anything without more than 10% of precious metal content. Shortly afterwards, in order to cover the artefacts not covered by the treasure act 1996, pilot projects were initiated. In 2003 these projects were expanded to include all of England and Wales and not just the six regions the original pilot covered. Finally, in 2007, the PAS was transferred to the British Museum and began to take on the form it holds today (Portable Antiquities Scheme 2021). The discussion related to this topic beyond this section will focus on the data recorded by the PAS, and while a discussion around the quality of information recorded by the PAS is important, there is also an element of efficacy that needs to be discussed, especially when the PAS's data is used as heavily as it is here, and when the majority of the artefacts analysed in this thesis are not protected as part of the Treasure Act 1996. The bronze alloy brooches contain less than the required percentage of precious metal. To best show this point, at the time of writing (August 2022), one of the artefacts contained within the dataset is up for sale on eBay, with the fact it is a PAS recorded find being part of the description, even including the PAS artefact number.

While the PAS is a fantastic resource for recording artefacts that are found outside professional archaeological investigations, it is still important to address

any of its possible shortcomings. In his 2010 paper, *The Portable Antiquities Scheme and the Treasure Act: Protecting the Archaeology of England and Wales?* David J. W. Gill addresses the difference in the number of metal detectorists and finds in different regions of England and Wales. The numbers (0.6 finds in Northeast England to 1 per member in Wales) suggest that either there are a good number of metal detectorist club members in certain areas that find nothing, or that many finds remain unreported (Gill 2010:2–3). The possibility that many finds go unreported is of concern to the integrity of the dataset as a whole. As previously mentioned, some brooches recorded in the PAS are up for sale as they are not protected under the Treasure Act (1996). Even for those finds that are covered by the Treasure Act, there is the possibility that more profit could be gained on an individual basis by not reporting these finds. It is possible that the number of brooches, for example, great square-head brooch (as this is a brooch often more found to be gilded or containing precious material), could be considerably larger than what the scheme reports as there could be a financial incentive to not report these more valuable finds. This could skew the data in many ways, for example seeming to show a greater use of less ostentatious and therefore valuable brooches, such as the Small-long or annular brooches, in areas outside the coverage of the Treasure Act.

The discussion surrounding the PAS and, more broadly, about protective legislation is far from being solved. Different views have been taken on this topic (see Austin 2010, Bland 2013, Hardy 2017, and Gill 2010) with arguments ranging from the destruction of archaeological context, promotion and almost glorification of the gains of illicit sale, to being able to provide the responsible metal detectorists with a way to record finds and the loss of information that could arise if harsher regulations were in place. Further review into this discussion is an important one and shown in Hardy (2017), where comparisons are drawn between heritage laws in the UK and other countries with either harsher, or more lenient protection laws in place. In closing, Hardy (2017) states:

> "Comparing activity across the permissive, restrictive and prohibitive regulatory environments of Australia, Austria, Flanders and elsewhere in Belgium, Canada, Denmark, England and Wales, Ireland, the Netherlands, New Zealand, Northern Ireland, Scotland, and the United States, restrictive and prohibitive regulation appear to be more effective, insofar as there is less overall loss of archaeological evidence. The

implementation and observation of effective regulation will also contribute to confidence-building between heritage professionals and metal detectorists, which will reinforce ethical behaviour and thus further advance historical understanding (Hardy 2017:43)."

As mentioned above the debate on this topic is far from closed. Although it is undeniable that archaeological evidence is as Hardy (2017) mentions, lost when these artefacts are removed from their original context without proper documentation, they remain valuable and worth of analysis as long as the underlying protentional for flaws or incomplete data is considered, as this thesis will later investigate.

Methods

3.1 Data

Individual Brooch Types

Cruciform

The cruciform brooch takes its name from the headpiece's distinctive shape, as seen in Fig. 2.4.1. The central head-plate is flanked and topped by extrusions and generally left undecorated; beneath the head-plate is the decorative foot. (Martin 2015:4). The main body of work which covers the cruciform brooch is Martin (2015) *The cruciform brooch and Anglo-Saxon England*. These brooches were generally worn either in pairs at the chest or shoulders or singularly across the chest (Rogers 2007:114–121).

Fig. 3.1.1 Find NLM-EA6056 taken from PAS records depicting an example of a cast copper cruciform brooch.

Although it is far too simple to say that a brooch can be specifically and singularly assigned to a single cultural group, they are found within what Toby Martin (2015) calls an 'Anglian cultural zone', which generally matches the area Bede ascribes to the Angles. Although found throughout Anglo-Saxon Britain, the high density of cruciform brooches found within this Anglian cultural zone is noteworthy. The direct typological predecessor to the cruciform brooch would seem to be the German Nydam brooch, which transitioned to an early form of cruciform brooch throughout the change between the late Roman and Migration period of northern Europe (Martin 2015:20). Some of these early cruciform brooches (Martin type 1.1.1 Empingham, Martin type 1.1.2 St John's) are described as being virtually indistinguishable from brooches found in Germany, Norway, Denmark, Sweden and the Netherlands. While like most other brooches, cruciform brooches are most likely to be made of copper alloy, they are second most likely brooch to be made of silver only beaten by the disc brooch (Baker 2013:352).

Small-Long

The small-long brooch appears to be fairly widespread throughout Anglo-Saxon England, tending to mirror the style of whatever larger brooch is found in the region (for example in the areas where cruciform brooches are common, there are more small-long brooches with a cruciform style head plate. Where great square-head brooches are common, more square-head small-long brooches appear (Rogers 2007:119)). These brooches were generally worn either in pairs at the chest or shoulders or singularly across the chest (Rogers 2007:114–121).

Fig. 3.1.2 Find NLM-21F205 taken from PAS records depicting an example of a cast copper small-long brooch fragment.

The definitive work on small-long brooches is Leeds (1945), which, although it started as a study of small-long brooches, grew into a much broader study entitled *The distribution of the Angles and the Saxons archaeologically considered.* Despite being referred to as the cruciform brooches' "diminutive cousin" (Martin 2015:7), they are one of the only brooches that exceed the numbers of cruciform brooches in Anglo-Saxon England (Baker 2013:377). While they appear in Scandinavia, Holsten and Friesland, the quantities are heavily skewed towards the Anglian regions in western England (Åberg, 1926, 57 and Rogers 2007:119). Despite this, the small-long brooch has not been as well studied and analysed as its larger, more intricate cousins (Baker 2013:377). It seems strange, as a lot of the small-long brooches date early within the Early Anglo-Saxon period, that there are few continental comparisons. Leeds notes that this could be due to the practice of cremation on the continent (Leeds 1945:5). Yet it could be more practical concerns that show large quantities of these brooches in the Early Anglo-Saxon period. These brooches were mainly smaller than their cousins, and perhaps during the migration, people had to be selective of what could accompany them. However, out of all the brooches included within this thesis, it is the small-long brooch that could stand to gain the most from further study.

Square-head

This brooch is characterised by a generally intricately designed large square-head piece. They were generally worn mostly singularly on the upper chest (Rogers 2007:114–121). Hines (1997) is the definitive work on the Anglo-Saxon range of these square-head brooches. This work creates a typology for these brooches by dividing them into 25 separate groups (Hines 1997:17-198). These 25 groups are then divided into three different phases (1, 2, 3) with distribution maps provided for each (Hines 1997:201). Finally, Hines proceeds to address other finds found within the context of great square-head brooches and continental comparisons, and suggests possible dates for these phases across 475 - 570 CE, with phase 1 at approximately 475-520, phase 2 to approximately 510 - 550CE, and phase 3 to as early as 525-570 with some notable overlay present between phases (Hines 1997:221–279).

Fig. 3.1.3 Find NLM-9D1C60 taken from PAS records depicting an example of a copper alloy Great Square-head Brooch.

The great square-head brooch, more than any other, is as an object of wealth, commonly found within grave settings with other high-status objects (Rogers 2007:119). Over 75% of great square-head brooches were gilded, with many examples also silvered and heavily decorated (Baker 2013:367). They have typological connections to Scandinavia, Denmark/Greenland, and Anglian and Saxon areas of England (Hines 1997:1), with specific types attributed to Kent (Hines 1984:7, Wilson 1971:42–43). These are commonly broken into three separate categories: continental; Anglo-Saxon (that cover specifically the Anglian and Saxon Brooches), and Kentish great square-head brooch (Hines 1997:1). The square-head brooch also has two Jutish sub types, a Kentish style and the continental style. The Jutish style is linked closely with the brooches found within Jutland, including zoomorphic designs with inlaid garnets. The continental style was used for many of the smaller examples, it has been suggested that although these two different types may have been made in the same workshops, they were probably made by different smiths (Rogers 2012:120).

Saucer

The saucer brooch is often found in the south of England, the upper Thames valley, and the lower Rhine (the continental Saxon homeland) (Mirrington 2020:65–66). The saucer brooch, which was often gilded (Baker 2013:143), is generally considered the largest and most high-status of the Saxon associated brooches. It has a circular appearance and can show a variety of different

designs on the front plate and was generally worn in pairs on the shoulders (Rogers 2007:114–121).

Fig. 3.1.4 Find WAW-6FC378 taken from PAS, a typical example of a saucer brooch.

These brooches generally came in two types, cast and applied. Cast saucer brooches were, as the name implies, a single piece of cast metal, whereas the applied brooches were a front and back plate, with the front generally gilded and the back undecorated and of non-valuable metal (Mirrington 2020:65–66). Although generally assumed, like many of the brooches mentioned here, to have faded in popularity after the Migration Period, archaeological evidence shows continuing use in higher status graves later into the sixth or seventh centuries in the form of pairs of large saucer brooches (Rogers 2007:114).

Button

A smaller version of the saucer brooch was used until the mid-sixth century (Hirst and Clark 2009:483), also Saxon-associated, known as a button brooch. Instead of the wide variety of styles on the larger saucer brooch, they often depict a stylised moustachioed face (Mirrington 2020:66). These brooches were generally worn with smaller examples as a singular on the chest, larger examples in pairs on the shoulders (Rogers 2007:114–121).

Fig. 3.1.5 Find PUBLIC-61770D taken from PAS records depicting an example of a cast copper alloy and gilded button brooch.

Disc

Unlike the saucer brooch mentioned above, the disc brooch does not come from a clear continental predecessor (Leeds:1945:49, Mirrington 2020 66–67). Instead, it would seem to be an insular development from within "the Anglo-Saxon jewellery-casket" (Leeds 1945:45). These brooches were generally worn singularly at the throat or chest (Rogers 2007:114–121).It is possible that the disc brooch was developed internally as a cheaper alternative to the often-gilded saucer brooch. However, in Baker's analysis of the metallic makeup of finds, she identified the disc brooch as on par with the cruciform brooch in the frequency of silver artefacts (Baker 2013:353).

Fig. 3.1.6 Find WILT-4CAF6B taken from PAS records depicting an example of an incomplete disc brooch.

The distribution of these brooches contrasts directly with the annular brooches (Leeds 1945:49), which will be discussed below, and as such is considered the Saxon version of the annular brooch (Baker 2013:353). The main body of disc brooches is attributed to the Saxons, and there is a subtype of Kentish disc brooches, including Kentish keystone brooches. These have a circular design surrounded by inlaid garnets like the Jutish square-head brooch and are generally outlined with a gilded rim. Kentish plated disc brooches, which are similar to the applied saucer brooches, are made in two halves: a front and back plate. They have a similar rim to the keystone, but with a central setting which is surrounded by the ornamentation of circular and triangular patterns. The final Kentish type is the Kentish composite disc brooch. The largest of the three subtypes, again composed of a front and back plate, generally in gold and heavily ornamented (Rogers 2012: 115–116).

Annular

Annular brooches, often worn as a fastener of female dress, as mentioned above, serve as an Anglian version of the Saxon disc brooch (Baker 2013:353). A typology for annular brooches is established by Jocelyn Baker in her thesis 2013, built upon earlier work; this typology breaks them into two broad groups, Type F and G, with further subgroups within (Baker 2013:330). These brooches were generally worn as pairs on the shoulders, with larger examples sometimes singularly at the waist or chest (Rogers 2007:114–121).

Fig. 3.1.7 Find NMS-64B646 taken from PAS records depicting an example of a Copper alloy annular brooch.

Within this typology, Baker notes that different types of annular brooch are generally found in different regions, but these regional patterns do not seem to

fall outside of Anglian contexts. (Baker 2013:334). The regional variations are unlikely to have occurred in an individual workshops and may have been the result of regional variations in designs and methods (Baker 2013:336). The annular brooch also shares similarities with both the quoit and penannular type of brooches, with quoit generally predating the Early Anglo-Saxon period. With penannular brooches popular within British and Celtic regions throughout the Romano-British period and the Early Anglo-Saxon period. Generally penannular brooches are smaller in size than annular brooches (Baker 2013:358,366). These brooches also differ in the material with annular brooches more often made from cheaper materials (iron/lead) (Baker 2013:352).

Equal-Arm and Supporting Arm Brooch

The equal-arm and supporting arm brooches are the penultimate brooch to be addressed here. The equal-arm brooches seem to have come out of Roman military fashion and art, where the Romans generally used the style as belt buckles; it was transformed by the inhabitants of Northwest Germany into brooches. The brooches normally have a floral or geometric design (Bruns 2003:4). They were originally created by a chip carving method, again probably derived from Romans, although the Germans made use of silver, where the Romans did not (Bruns 2003:11). These brooches were worn singularly, generally accompanied with other brooches at the shoulder (Rogers 2007:114–121).

Fig. 3.1.8 Find IOW-08DCB1 taken from PAS records depicting an example of an incomplete equal-arm brooch.

Unlike the other brooches explored here, the equal-arm and supporting arm brooches seem to be only briefly used both in Anglo-Saxon England, and within its continental homeland. The equal-arm brooches emerge in northwest Germany between the Elbe and Weser Rivers (Bruns 2003:1 and Rogers 2007:121), which pre-migration places them within Saxon land. Despite this geographical link Bruns (2003) argues against the schema that would refer to the brooches as "Saxon Style" as in (Suzuki 2000) arguing that there is a lack of conclusive evidence (Bruns 2003:32). Bruns (2003) goes on to suggest a possible reason why the equal arm brooch style developed purely between the Elbe and Weser rivers. Bruns argues it can be said that this region provided more men to fight in the roman army. That is why a style common to Roman belt buckles came back to this region more than others (Bruns 2003:42). Hines (1984) makes mention of Anglian equal-arm brooches. Directly calling out features as symmetry on the upper surface of both the footplate and headplate. They share similar dimensions, and the foot and headplate are generally trapezoidal in shape (Hines 1984:254).

When discussing the predecessor of the equal-arm brooches, Bruns (2003) mentions that the trapezoidal shape is "not unusual for supporting arm brooches" (Bruns 2003:15). Two arguments to explain the different types of equal-arm brooch that show up are then put forward, the first by Plettke (1921), Bohme (1974), and Roeder (1930), that the smaller varieties are mostly a chronological predecessor to the larger varieties. The second by Genrich (1952) that most of the supporting arm brooches were concurrent, with a geographical difference between the two. Bruns (2003) creates a diagram showing overlapping time periods, supporting the suggestion that there is a geographical rather than a directly chronological difference between brooch subtypes. This geographical difference in the continental locations of the equal-arm brooch is interesting when discussing the idea raised above by Hines (1984) of an Anglian equal-arm brooch. Of the subtypes Bruns (2003) identifies, (Seraing, Dosemoor, Nesse, Hannover, Sahlenburg, Wehden, Daudieck, Nesse 2, Mucking, Berinsfield and Mecklenburg), the Seraing, Dosemoor, subtypes that show both foot and head plate being the most visibly trapezoidal. Both types are mainly found in the North and West of the Elbe and Wesser rivers region. Which would be the area closest

to the Angles. While this at first seems to support the argument put forward by Hines, of a version of the equal-arm brooch that could be attributed to the Angles it is important to note that the English spacing of these brooches identified by Bruns does not have such a clear separation in spread. Considering the above, equal, and supporting arm brooches will be placed with Saxon style brooches. While it is not outside the scope of possibility like other brooches talked about above that different subtypes could be attributed to other groups, the fact that as a whole the continental finds for these brooches are contained within what is traditionally considered Saxon lands is compelling evidence.

Radiate-head Brooch

The final brooch is the radiate-head brooch, another interesting case. Often referred to as a Frankish radiate-head brooch and as such has a strong continental connection. Defined by its circular or semi-circular headplate, with a number of small circular protuberances around the outside of the headplate. These brooches were generally worn either in pairs at the chest or shoulders or singularly across the chest (Rogers 2007:114–121). Most of the radiate-head brooches in the Anglo-Saxon archaeological record are of a type which indicated they are imports from northern France that have been adopted into local fashions (Rogers 2012:121). Despite this, a brooch that appears to be unfinished has been found in Oxfordshire, and manufacture is known to have taken place in Kent (Bolick et al. 1993:147).

Fig. 3.1.9 Find NMS-C5EBB3: a gilt copper continental radiate-head brooch.

Collection and Processing

This study makes use of data from the PAS. This specific data was selected as it represents a substantial collection of Anglo-Saxon brooches, providing a wide-reaching dataset from all areas of England and even Wales. It is also not limited to areas where professional archaeological excavations have taken place. Further research outside the scope of this project would be needed to synthesis the results of this comprehensive study of PAS data with the wider evidence base from archaeological excavations. This further research itself would be able to provide a good comparison of what archaeological data is lost by the schemes collection process. However, the PAS data provides a substantial starting point for further research. This analysis also allows an assessment of the efficacy of the PAS. Critique of the scheme notwithstanding, the actual data they collect is an invaluable source of information about the artefacts they collect. As mentioned above, the brooch data from the PAS relies on the general public and numerous finds liaison officers to collect and collate its data. Due to the divided nature of this process, the raw data is poorly unified with different artefacts recorded with different levels of detail and with no standardisation between those

recordings. For example, a cruciform brooch might be recorded as something as simple as just a cruciform brooch or as detailed as Martin type *x*. This leads to a need for a level of data processing before it is usable in a project like this. This data processing included unifying classification schema into a simplistic classification to allow for mapping and grouping all subtypes of brooch together.

The brooch location data is taken from the PAS in two sets, divided in order to provide to be able to contrast the first half of the Early Anglo-Saxon period and the latter half. The first dataset uses the advanced inbuilt search option to filter the artefacts recorded by the PAS by object type: BROOCH, and a date range between 410-500 CE. This filtered down to 533 results. The second dataset is sorted by object type: BROOCH but with a date range that includes 500-600 CE, which yields significantly larger 1876 results. These results need to be filtered again to include only results in which the type could be identified, removing some fragmentary or uncertain results, taking 410-500 CE down to 517 results (491 with location data) and 500-600 CE down to 1711 (1575 with location data). The datasets were edited to simplify the categories and unify naming schema, in order to allow the mapping of the data. Two tables were produced to show the numbers of each brooch type for each of the time frames we have been working with so far; these can be seen in Table 4.1.1 (410-500 CE) and Table 4.1.2 (500-600 CE).

A third dataset was also collected at this point. It was hoped that this would allow a comparison with brooch typology and distribution at the start of the Middle Anglo-Saxon period. This follows a similar process; object type: BROOCH, again with a different date range moving forward to 600-700 CE and giving only 40 results. This data, unlike the two others previously discussed, was not mapped due to the scarcity of results, although it is still referenced as a point of discussion.

One important consideration when working with this data is, due to the lack of contextual information that the method of collection provides the dates included have to be considered carefully. Within this thesis a number of dates, or date ranges are mentioned in association with brooches.

Mapping

A series of maps was created so that the data from these points could be compared. Using ArcGIS Pro and an XY table-to-point tool, the first two datasets were plotted on a map of England. This resulted in the maps shown in Fig. 4.2.1 and Fig. 4.2.2, respectively. This broader dataset was then separated into each individual brooch type, allowing for a more specific analysis of where each brooch is concentrated. Finally, the map shown in Fig. 2.2.1 Settlements of Angles, Saxons, and Jutes in Britain about 600 was created. It used the account of Bede. This allowed the creation of the map from Fig. 2.2.1. The cultural zones shown on this map, and the locations of the separated brooches, then allowed for the spatial analysis of which brooches fell within which cultural zones.

Results

4.1 Brooch Data

Table 4.1.1 Number of brooches in the PAS record divided by type (410-500 CE).

	Count	Percentages
Annular/ Penannular	7	1.3%
Button	2	0.4%
Cruciform	325	59.5%
Equal-arm	39	7.1%
Saucer	3	0.6%
Small-Long	135	24.7%
Square-head	1	0.2%
Radiate-head	1	0.2%
Other	33	6%

Table 4.1.2 Number of brooches in the PAS record divided by type (500-600 CE).

	Count	Percentages
Annular/ Penannular	102	6%
Button	17	1%
Cruciform	735	43%
Equal-arm	15	0.9%
Saucer	29	1.7%
Small-Long	355	20.7%
Square-head	325	19%
Radiate-head	50	2.9%
Disc	45	2.6%
Other	38	2.2%

Annular/Penannular

Table 4.1.3 Annular/penannular brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	4	97
Saxon Zone	2	2
Jute/ Kentish Zone	0	0
British	0	0

Button

Table 4.1.4 Button brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	0	0
Saxon Zone	2	9
Jute/ Kentish Zone	0	8
British	0	0

Cruciform

Table 4.1.5 Cruciform brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	277	635
Saxon Zone	11	28
Jute/ Kentish Zone	21	3
British	0	2

Equal-arm

Table 4.1.6 Equal-arm brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	23	2
Saxon Zone	11	7
Jute/ Kentish Zone	3	6
British	1	0

Saucer

Table 4.1.7 Saucer brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	2	3
Saxon Zone	0	23
Jute/ Kentish Zone	0	2
British	0	0

Small-long

Table 4.1.8 Small-long brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	125	286
Saxon Zone	7	52
Jute/ Kentish Zone	0	2
British	0	0

Square-head

Table 4.1.9 Square-head brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	1	205
Saxon Zone	0	59
Jute/ Kentish Zone	0	44
British	0	4

Disc

Table 4.1.10 Disc brooches with location data broken down between cultural zones.

	500-600 CE
Anglian Zone	16
Saxon Zone	14
Jute/ Kentish Zone	15
British	0

Radiate-head

Table 4.1.11 Radiate-head brooches with location data broken down between cultural zones.

	410-500 CE	500-600 CE
Anglian Zone	0	20
Saxon Zone	0	10
Jute/ Kentish Zone	1	20
British	0	1

600-700 CE Brooch data

The small 600- 700 CE dataset only includes 40 results. Including examples of annular, disc, cruciform, quoit, small-long and square-head brooches.

Table 4.1.12 600 - 700 CE brooch numbers.

	Annular	Disc	Quoit	Cruciform	Square-head	Small-long	Other
Count	12	10	1	3	2	1	11

4.2 Maps
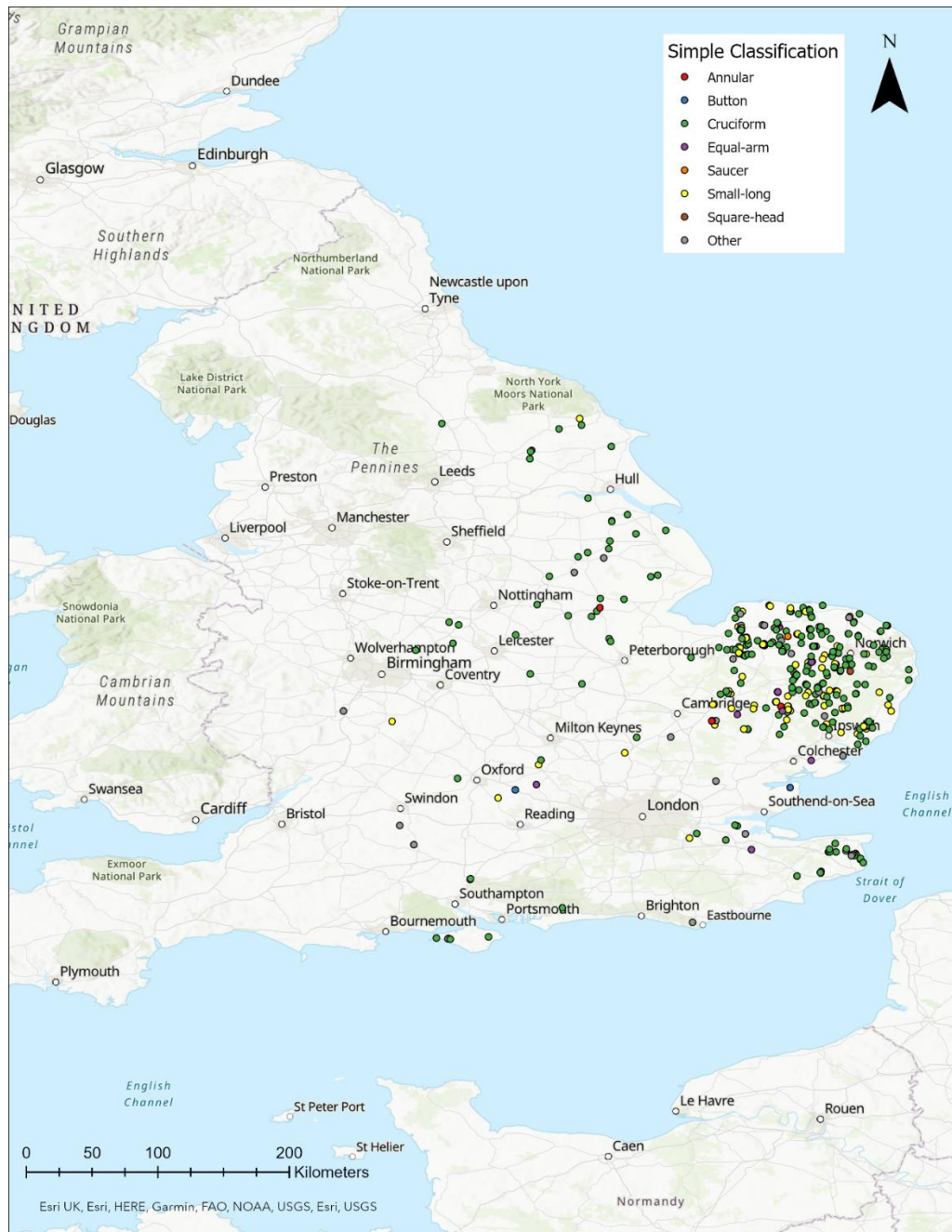
Fig. 4.2.1: Brooches from PAS data from between 410-500CE (Map by L. Ricketts).
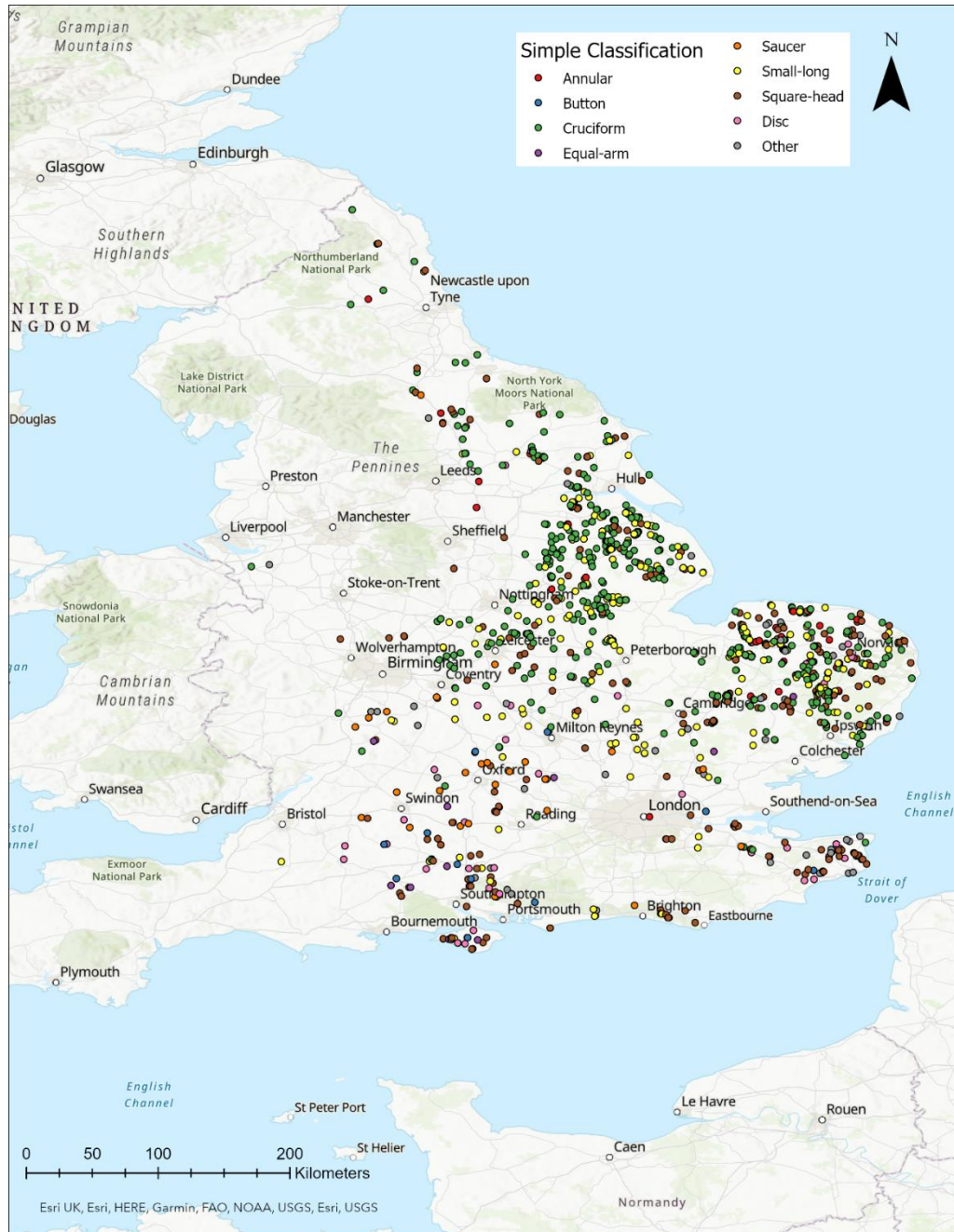
Fig. 4.2.2: Brooches from PAS data from between 500-600 CE (Map by L. Ricketts).

4.3 Location

One of the key data points the PAS is good at providing is location, with 92% of brooches recorded in the scheme including location data. The brooches from the earlier dataset (410-500 CE) show an original hotspot in what would become East Anglia, as shown in Fig. 4.1.1. It is also clear from this that there was an abundance of Anglian cruciform, and small-long brooches compared to other

types. With cruciform brooches making up 59.5% of the PAS record, and small-long brooches making up 24.7%. In the later 500-600 CE dataset the spread of the brooches is significantly broader, extending well out of East Anglia. Again, while making up a lower percentage, in this data there is an abundance of cruciform (43%) and small-long (20.7%) brooches, with the number of square-head brooches increasing from under 1% to 19%. Using the ideas established in the previous sections on the cultural identity of these brooches, the below tables were created this leaves the brooches found within the 410-500 CE (Table 4.3.1) and 500-600 CE (Table 4.3.2) PAS records to be divided as below.

Table 4.3.1: Table showing the numbers of culturally assignable brooches from 410-500 CE, divided into their cultural groups.

	Anglian (Small-long, cruciform, Annular)	Saxon (Saucer, Disc, Button, Equal-arm)	Other (or not culturally assignable)
Number of brooches	447	42	2
Percentages	91%	8.6%	.4%

Table 4.3.2: Table showing the numbers of culturally assignable brooches from 500-600 CE, divided into their cultural groups.

	Anglian (Small-long, cruciform, Annular)	Saxon (Saucer, Disc, Button, Equal-Arm)	Other (or not culturally assignable)
Number of brooches	1107	105	363
Percentages	69.8%	6.2%	24%

Discussion

The brooch data from the two main datasets (410-500 CE and 500-600 CE), reveal interesting patterns within both their temporal and spatial spread. Alongside this, the discussions already begun earlier in this work about the linguistic evidence of the period and, more broadly, the efficacy of PAS data will be addressed within this section. For ease of reading, this discussion will be divided, beginning with the discussion of the spatial spread of the brooch contained in both primary datasets. Then, the temporal aspect of this work, finally moving on to the sub questions of linguistic and PAS data.

5.1 Spatial Spread and Cultural Zones

One of the main points that can be drawn from this data is how well the brooches from within the PAS data fit with our current understanding of where they should be located. From this, it can be seen that the cultural zone map created from Bede's account of the migration (Fig. 2.2.1) is actually fairly accurate. Of the total 2066 brooches contained within the two primary datasets, only eight fall outside of the Anglo-Saxon cultural zones. The furthest of these brooches are 76kms outside of the Anglo-Saxon cultural zones, with a second nearby, a third 36kms outside, and the remaining five within 8kms. This could also be suggestive that the amount of trade that happened between the early Anglo-Saxons and the British cultural zone is fairly low. This idea fits within the picture provided by the development of Old English, as Old English also shows signs of little to no interaction between the Native Britons and the Anglo-Saxons during this period.

On a smaller scale, it is interesting to note that, while expected, the PAS data continues to support the assumptions created from a professional archaeological investigation in regard to the Anglian, Saxon and Kentish/Jutish cultural zones. Despite broadly fitting within the zones we would expect, there are some variations between the 410-500 CE data and the 500-600 CE data. It seems that all brooch types concentrate in East Anglia in the 410-500 CE dataset. With 432 out of 491 brooches within the Anglian cultural zone, even including a majority of brooches that would conventionally be considered Saxon. This matches the idea that the original point of entry into Britain for the Anglo-Saxons was the East Anglian coast or at the very least East Anglia is one of the first areas fully settled by the Anglo-Saxons. Another interesting note is that despite the disparity in size,

the number of brooches between the Jute/Kentish and Saxon zones is fairly similar in the period 410-500 CE, with 27 brooches in the Saxon cultural zone and 25 in the Jute/Kentish zone. This disparity could suggest an initial migration point in Kent.

Anglian

The first set of brooches examined in detail here is the Anglian associated brooches. There are 447 brooches of types identified as Anglian, regardless of location, are present within the 410-500 CE data. When this is narrowed down to the brooches that are found within that cultural zone regardless of type, that number decreases to 432. In the later 500-600 CE data, there are 1107 brooches of Anglian types across Britain. In comparison, there are 1264 brooches located within that Anglian cultural zone. Each of these brooches will now be addressed individually.
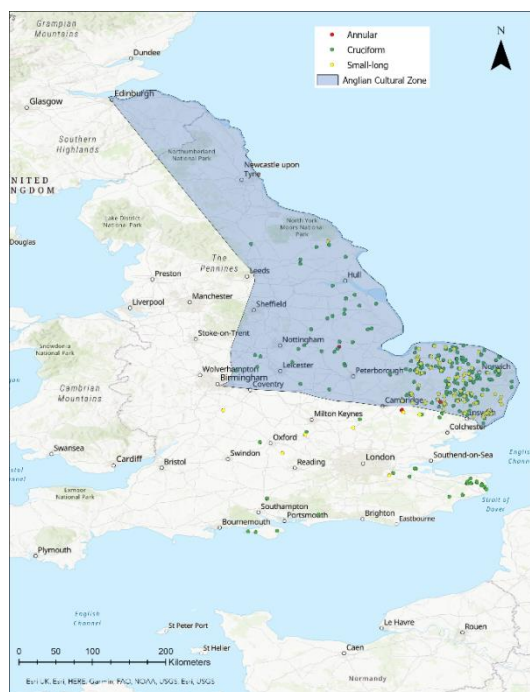
Fig.5.1.1 Anglian brooches 410-500 CE   Fig 5.1.2 Anglian brooches 500-600 CE
(Map by L. Ricketts).   (Map by L. Ricketts).

Small-long

The small-long brooch is the first of the Anglian associated brooches to be discussed. The data within both sets continue to agree with the assigning of small-long brooches to the Anglian cultural zone, with 125 of the 132 410-500 CE brooches within the Anglian zone and 286 of the 340 500-600 CE brooches

within the Anglian zone. Only a single brooch has been assigned a date that could span the entire 410-500 CE range of the initial dataset, with another between 420-475 CE. The majority (92) of the results sit within the last half of the time period 450-480/500, with 40 between right at the end between 475/480-500 CE. Interestingly a single brooch is dated at exactly 500 CE, although there is no note of where this date has come from. The period 500-600 CE had 328 brooches that could have come from any point within the entire range. It only has 17 brooches from the first half of the century and only three that are dated specifically within the latter half of the century. The date ranges are broad for most of these brooches showing that this type of brooch is hard to date to a tighter range without contextual information.

Cruciform

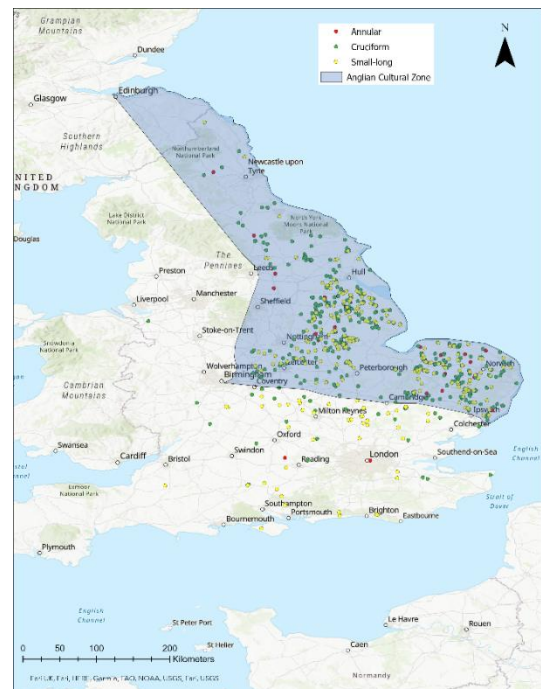The cruciform brooch is another type that fits within the expected spatial pattern, with 277 of the 309 brooches from the 410-500 CE set within the Anglian cultural zone. With 635 of the 668 brooches from the 500-600 CE set. For cruciform brooches 32 sit within the entire range of the earlier dataset. With 21 brooches within the first half of the century, with the majority, 164, within the latter half between 450-500 CE. The 500-600 CE has 507 brooches that span the entire range. There are 117 within the first half of the century and 37 within the latter half. Again, in the later dataset, the majority of cruciform brooches are dated to the entire range, showing it may be difficult to narrow down the range of these later-period brooches.

Annular

For the 410-500 CE dataset, 4 of the 6 brooches are located within the Anglian zone. The 500-600 CE is similar, with 97 of the 99 brooches within the Anglian cultural zone. Of the 7 annular or penannular brooches present within the 410-500 CE dataset, there is only 1 penannular brooch, which the PAS defines as indicative of an early style, continuing the evidence of a British Celtic presence into the Early Anglo-Saxon period. The 6 annular brooches, each mostly intact, all of these brooches have been dated to the later part of this period, 470/80-500 CE. An increase in these types of brooches from 1.3% to 6% is seen between the 410-500 CE and 500-600 CE. Of those brooches, 5 are penannular, continuing to suggest the continuance of British Celtic culture. All but one of these penannular brooches suggested dating covers the entire range of 500-600 CE, with the last being 500 - 550 CE. In the later dataset, 44 could sit within the

entire 500-600 CE range. With 9, within the 500-570/75 CE range. Forty-five, within 500-550 CE, and 3 within 500-525/30 CE.

Summary

Each of the Anglian brooches fit well within the expected Anglian cultural zone. Most of the brooches that are narrowed down to a more specific range fall within a middle ground of the two datasets. The period between 450-550 contains a majority of brooches that are more specific than simply the entire range. The number of brooches that are not narrowed down clearly shows how difficult it is to give a specific date range without contextual evidence. The brooches that are narrowed down differ from the Saxon brooches that are narrowed down, with the Anglian brooches having been assigned by the PAS to a distinctly earlier time frame. The Anglian and Saxon brooches from the first dataset both lean towards the 450-500 CE range. The latter dataset shows a difference, in which the Anglian brooches trend towards the earlier part of the date range 500-550 CE, while, as will be discussed below, the Saxon brooches favour the later 550-600 CE date range.

Saxon

For Saxon brooches, 44 brooches of Saxon type are identified within the first 410-500 CE dataset. Where 33 brooches are found within the Saxon cultural zone, but interestingly out of the 33 brooches in the Saxon zone, over half are of Anglian types. With the 500-600 CE dataset, 106 Saxon type brooches appear, whereas 213 are found within the Saxon cultural zone, with 82 Anglian brooches. Each of the Saxon brooch types will be discussed below.

Fig. 5.1.3 Saxon brooches 410-500 CE (Map by L. Ricketts).

Fig. 5.1.4 Saxon brooches 500-600 CE (Map by L. Ricketts).

Within the Saxon cultural zone, there is an interesting border around London and the majority of the Thames basin where no brooches have been recovered in the earlier dataset, while in the latter, they begin to appear. In Homans (1957) he suggests that the Thames basin would have been the easiest path into England, and the lack of usage could be because of a Romano-British stronghold in London. While this does fit with the passage again previously mentioned above from Anglo-Saxon Chronicle (Giles and Ingram 1912:76), and the significance of Londinium in Roman Britain. It is not the only answer to why no broaches appear in the area, another will be explored later in this section.

Saucer

The saucer is the first Saxon-associated brooch to be discussed. It, like most, starts out in the Anglian zone, with only 2 from the earlier dataset in the Anglian zone, then shifts heavily in the 500-600 CE dataset, with 23 of the 28 brooches found within the Saxon cultural zone. All of the brooches from the 410-500 CE set fall within the last half of the century. A majority (26) of the latter (500-600 CE) dataset have dates that span the entire range, only 1 within the first half of the century and 2 within the latter half.

Disc

Disc brooches only appear within the latter 500-600 CE dataset, and, unlike the other brooches discussed they are spread fairly evenly between the three cultural zones, with 16, 14, and 15 found in the Anglian, Saxon and Jutish zones, respectively. A significant number, 32 of the disc brooches, are assigned dates that could be from almost any point of the century, with only 2 from the first half of the century and 11 from the latter half.

Button

Button brooches appear only within the Saxon cultural zone in the initial dataset, while in the 500-600 CE dataset, they are split almost evenly between the Saxon Jute/ Kentish areas. One of the button brooches from the 410-500 CE range is assigned to a date between 425-475 CE and the other is assigned a date from the latter half of the century 450-500 CE. Of the brooches in this set 4 brooches from the 500-600 CE set could be from any point from the century, twelve from the first half of the century, and only one from the second half. Based on the dates assigned above, the button brooch can be more confidently assigned to a narrower time frame without contextual information.

Equal-Arm

Equal-arm brooches show an interesting pattern within this data, which challenges the previous assertions of inclusion in the Saxon style of the brooch. During the 410-500 CE dataset, these brooches are already well-spread and, like most brooches within the dataset, are heavily concentrated in East Anglia. In the second data set, 500-600, this distribution shifts south but seems to concentrate not within the Saxon cultural zone but within the Jute/Kentish cultural zones. This could challenge the decision made earlier within this work that these brooches are Saxon at all. When assessing the equal-armed brooches with the added context of the PAS data, it seems these brooches may in fact be a Jutish brooch. However, this conflicts with the location on the continent where this type of brooch originally developed. Almost all of the 410-500 CE equal-arm brooches have their assigned date ranges restricted partially, with only two spanning the entire range, with another twenty-seven spanning most of that range but restricted by 10-25 years on either side. There are two brooches that fall within the first half of the century and eight within the latter half.

Summary

The Saxon cultural zone is much less clear cut than its Anglian counterpart. Even discounting the trend for earlier brooches to be found within the Anglian cultural zone regardless of their cultural assignment, some of the brooches fall outside of the Saxon zone even in the later data, with only the saucer brooch clearly being held within the Saxon cultural zone. The Saxon brooches also differ from the Anglian brooches in terms of where the restricted date ranges within the 500-600 CE fall. Whereas the restricted Anglian brooches fall within the first half of the range, the restricted Saxon brooches seem to fall more in the latter half of the range, with the notable expection of the button brooch.

Other

There is an interesting trend between the two datasets for the dominance of Anglian brooches shown in the first (410-500 CE) to lessen in the later (500-600 CE) data. As mentioned in the discussion about the Anglian cultural zone, the 410-500 CE dataset is very heavily skewed towards Anglian brooches and the Anglian cultural zone (88% Anglian to 1% Saxon). While the 500-600 CE dataset shows a decrease in Anglian brooches from 91% to 69.8 %, and a decrease in Saxon brooches from 8.6% to 6.2%. Obviously, this data still shows a major dominance of Anglian type brooches, but later into the middle and late Early Anglo-Saxon periods, the dominance of Mercia and Wessex (a kingdom that encompasses the Saxon cultural zone) begins to increase. This suggests (although research of a broader scope would be needed to confirm) that this decreasing trend of Anglian cultural material would continue. The largest change within the data is the increase of brooches of a type that are not wholly assumed to belong to either group. With the category broadly labelled as Other increasing from .4% to 24%. One part of this is the presence of Frankish radiate-head brooches.

The radiate-head brooch, commonly associated with the Franks back on the continent, splits itself fairly evenly between Anglian and Jute/Kentish zones, with 20 brooches found in each. Slightly fewer of the brooches are found within the Saxon zone, with half that number, ten brooches. There is a noteworthy stylistic difference between the radiate-head brooches found within Kent and those found outside of it. The brooches contained within the Anglian and Saxon zones, and even the Jutish zone near the Isle of Man, are fairly varied. Yet each complete

sample within Kent is of a singular design, with a semi-circular headplate, a narrower central section and a triangular foot. The notes from within the PAS denote this design as continental but also mention it might have connections to production in Kent (MacGregor and Bolick 1993:147). Due to the concentrated nature of this particular design of radiate-head brooch, it is more likely this subtype being produced within Kent. The remainder of the radiate-head brooches from outside Kent is too heavily varied to make a judgement about whether or not they are examples of imported brooches or even imitations of the continental styles.

Another reason for this increase in 'Other' brooches is the increase of great square-head brooches. The one great square-head brooch that appears within the 450 - 500 CE dataset, may be dated incorrectly. It is identified as a Hines (1997) type XX, which is within phase 3, which appears to be correct but is then listed as 480 - 500 in PAS records. As mentioned above, the earliest start date Hines (1997) provides for Phase 3, and therefore type XX is 525, which would place this brooch within the second data set. The description of the brooch does notably provide a data range that disagrees with the listed PAS record at 450-525 CE. Although this does come close, Hines's proposed date range for this brooch type with its upper limit, it still dips lower than Hines type XX should. As there is no mention of this brooch being found with any other relative dating material, a more accurate date range for this brooch as 525 - 570 to be more in line with Hines's (1997) dating. This error illustrates wider issues with the classification and correctness of the data within the PAS data which will be addressed later. The square-head brooch is the type which sees the greatest increase between the 410-500 CE dataset and the 500-600 CE dataset, with an increase of (as discussed above) what should be zero brooches found within the earlier set, and 325 brooches being found within the latter group. The square-head brooch is an interesting case within the study of brooches, with subtypes associated with each group. It is possible that this brooch would have the most cause to be spread evenly between the different cultural zones, yet these brooches are still heavily concentrated within the Anglian cultural zone, with 205 of the 312 brooches from the 500-600 CE set. The subtypes within the set of square-head brooches are fairly well contained within the expected zones. The Anglian and Saxon subtypes from Hines are mostly within the Anglian and Saxon cultural zones, and the Kentish style brooches within Kent. With 79 of the 90

brooches from the 500-600 CE dataset found within the Jutish and Kentish cultural zone are brooches with clear Kentish subtypes.

5.2 Waves of Migration

As clearly shown within the earlier 410-500 CE dataset, brooches that are generally considered to be Anglian (cruciform, small-long and annular) make up a large majority of brooches found from this time period. This is due, in part, to the migration of the Anglo-Saxon people happening over a number of waves and encompassed a culturally diverse yet dominated (at least at first) by a large number of Angles. That those later waves included more cultural diversity. Although this is not an idea discussed much within previous research on this topic, it is one that is at least partially supported by one of the most recent publications that cover the topic, which suggest a more gradual regionally complex migration. It is a theory that fits the overall shape of one of the numerous gaps that plague the puzzle that is this time period.

Firstly, as previously mentioned, it is an theory that fits the data used throughout this project, data that shows an abundance of Anglian brooches during the early part of the period. An abundance that, despite remaining in the later dataset (500-600 CE) is decreasing in favour of a broader range of brooches. Even inside this majority, as has been discussed above, the Anglian brooches seem to favour the earlier parts of the date ranges, suggesting the possibility that the first wave included more Angle than others or at least more people who would eventually be associated with Anglian cultural material. This could also suggest another reason why the Thames basin area lacks brooches in the 410-500 CE dataset. The Saxons that would come to inhabit this area simply had not arrived in Britain yet. Although this is more of an additional reason instead of replacing the idea of a Romano-British stronghold in London. Whether that hold-out was one of cultural practices that would see less Germanic material deposited or a physical block to Anglo-Saxons moving into that area is unclear. Yet as mentioned above, the data from this project does align with the hole in Germanic cultural material in the Thames basin region. The conundrum of the equal-arm brooches seeming misplacement within our data could also see a possible answer within this theory. During later waves of migration, it is possible that Saxons, attempting to land closer to the lands their kin had already begun to inhabit the area, moved in through Kent instead of East Anglia, bringing with

them a style of brooch which could have been adopted by the residents they passed through.

As a whole, this theory supports the idea that the different groups that made up the Anglo-Saxons were still culturally divided at the time of their migration and not, as suggested by Wilson (1971), an already partially culturally homogenous group. It also supports the idea of a larger scale migration, while the migration taking place in smaller waves could explain the lack of major signs of conflict between the Anglo-Saxons and the Britons. The Britons already been displaced could also explain the lack of evidence for conflict. Gildas suggests that Britain's population density may have also been low at the time. He calls attention to how many areas of Britain lay in ruins after the Anglo-Saxon initial attack and were never reinhabited like they once were. Although, Gildas' direct telling of events should not be taken at face value, it is not unreasonable to suggest that the idea of Britain in ruins came from his own experience of his environment. If population density at this time were low, it would allow for this slower displacement.

5.3 600-700 CE dataset

The latest and final of the datasets created for this thesis is the 600-700 CE dataset. It is interesting for the same reason it has not seen much use until this point, the simple scarcity of brooches. Only 40 brooches appear within the dataset. Although it was originally created with the intention of continuing the assessment of whether or not the dominance of Anglian cultural material continued later into the Early Anglo-Saxon period, it sits now as an interesting side note. However, it raises the question of why so few brooches are recorded for this later time period? While outside the scope of this project, it would be an interesting comparison between these few PAS-recorded artefacts and artefacts belonging to this time period from professional archaeological excavation. In hope this may help us understand whether the lack of brooches within this last dataset a bias is created by dating these brooches only by type.

5.4 The Efficacy of Portable Antiquities Scheme Data

The experience of using Portable Antiquities Scheme (PAS) data throughout this project has raised some issues. Firstly, it is noteworthy that without the PAS providing a method by which community members can report finds, many of

these finds would simply go unrecorded. The simple fact of this thesis' existence proves the value this scheme can provide to the study of historical material culture. Conversely, an overall lack of unified schema, quality control, or consistency in the quality of descriptions and images can make using this data difficult and can lead to a misrepresentation of data. Each of these issues will be explored below.

The first problem with this form of scheme, and its promotion, is the complete loss of context of any artefact found through unsupervised, unregulated removal. To find, and remove an artefact from its surroundings, destroys the site that contained that artefact. Recording a site to preserve as much of the context surrounding the artefact is not only necessary but vital to the understanding of the site and artefact. Even the PAS website notes that one of its aims is to raise 'awareness of the importance of recording archaeological finds in their context' (Portable Antiquities Scheme 2021). Yet despite this aim, almost none of the finds recorded show any recording of context outside of geolocation data. This is, of course, a side effect of allowing its basically unregulated collection via metal detectorists and members of the general public. Of course, the other side of this is that many of the finds are listed as having come from highly disturbed sites, such as agricultural land that would have been ploughed. It is likely that many of these finds from disturbed land would have already lost much, if not all, of their contextual information, and as such, not much is lost with this form of recovery. It could be said in these instances that the PAS and those of the general public who engage with it have saved these artefacts from further destruction.

Without this context, dating of these artefacts must come from the typological analysis. In many cases, including many of the artefacts used throughout this thesis, this is highly effective. Many of the brooches include well-defined subtypes, which correspond to a well-defined date range. However, here we encounter another issue within the PAS, the lack of unified schema or quality control. There were multiple occasions the same sub-type of brooch was listed with different date ranges, with no mention of any other dating methodology used to arrive at that different date range. Also, many artefacts were listed with incorrect details, either typed incorrectly, dated incorrectly (again, without any mention of different dating methodology, it must be assumed these were dated using their type/ subtype), or even inconsistencies between the written description of the brooch and the information provided within the PAS. In one

case, a brooch was typed as an (annular) or quoit brooch, although when looking at the photos and written description of the brooch, it is clearly a great square-head brooch. In another, a brooch was correctly dated in the written description but incorrectly dated within the information the scheme uses to place the artefact within a search. Much work was needed to unify the naming schema used within brooches of the same type. A cruciform brooch could be listed as simply as 'cruciform' or as detailed as 'Martin type x cruciform'.

Finally, there is a seemingly equal number of well-referenced, well-written descriptions and singular line descriptions that provide little to no information. All of the above show a singular lack of unified standards and quality control throughout the scheme. While some information can be provided by artefacts contained within the PAS themselves. The data in the PAS must be used carefully, with acknowledgement and consideration of its flaws. In fact, the PAS is a very good system for encouraging community archaeology and engagement between a community and its history.

The scheme is a necessary system for a country that allows metal detecting on known and unrecorded archaeological sites unless they have been legally designated (in the case of the UK as Scheduled Monuments), it does have its flaws. Experience of both the PAS, a very open system, and a more restrictive system in Australia's heritage listings are well summarised by the closing statements of Hardy (2017), that a more "restrictive and prohibitive regulation appear to be more effective, insofar as there is less overall loss of archaeological evidence (Hard 2017:43)". Also, that "effective regulation will also contribute to confidence-building between heritage professionals and metal detectorists (Hardy 2017:43). That this increase in oversight and education would likely not decrease the number of people willing to conduct metal detecting but could increase the amount of contextual information these artefacts have. On top of this, the PAS would seem to require a higher level of standardisation and quality control. This would, of course, require more support and funding for the project, but considering the recent changes to the treasure act (Museums Association 2023) this does not seem as unlikely as it once did. In all, despite the critique levelled against the scheme, it is a net positive for the study of the artefacts and time periods it records, and with some changes, it could likely fix many of its outstanding issues.

Conclusion

The data used throughout this project paints an interesting picture of the Early Anglo-Saxon period, highlighting a number of key features. It seems clear from the 410-500 CE dataset that the initial point of entry to England for the Anglo-Saxons is East Anglia, or Kent (Hills 2016:20). At the least it can be said that East Anglia was one of the places in Britain to face significant migration, with a significant percentage of these early brooches within East Anglia. This does support ideas raised by Bede and Gildas' about the initial wave of Anglo-Saxon migrants who were given land in the East. It also seems possible that a secondary entry point could have been through Kent, with a number of brooches concentrated in the small coastal region. The 500-600 CE dataset spreads the brooches across the entirety of the three separate cultural zones (see Fig. 2.2.1.). The brooches within this later dataset roughly fit within the cultural zones expected of them. The clear definition of these cultural zones suggests that the Anglo-Saxons were still at least materially culturally divided at the time they moved across from the continent. A view supported by the development of the English language post migration. It is also interesting to look at what extent the data examined above agrees with Bede's account of the Anglo-Saxon arrival in England with brooches generally fitting within the regions Bede assigns to the individual groups, especially in the case of the Angles and the Saxons.

It also seems clear that there is a dominance of Anglian cultural material, especially in the earlier dataset, which decreases in that later dataset. A change that can be explained by the possibility of separate waves of migration. With later waves likely to have consisted of an ever more culturally diverse group of people, thus explaining the decreasing dominance of the Anglian cultural material. As a whole this data supports the idea of a complex, and regionally different model of migration, that at least begins in East Anglia/Kent. While there is other explanations posited for why Anglo-Saxon style brooches appear within the archaeological record the fact that the locations of these brooches generally do fit within what we expect from the cultural zone's associated with the Anglo-Saxon heavily suggests that some form of migration did take place. If these brooches appeared in Britain via trade or the adoption of Germanic fashions by Britons it would be expected that the type would be more widespread, and less concentrated in the specific cultural zones.

Further Research

The work presented here suggests a number of avenues for future research. Firstly, a continuation of this research later into the mid and late Early Anglo-Saxon periods would be of interest in order to see if the trend of decreasing Anglian dominance continues, as later histories show a growing of Mercian (Kirby 1991) and then West Saxon (Yorke 132-142) power, this Anglian material culture should continue to fall from use. Expanding the scope of this research to include those brooches recorded by a more professional archaeology excavation would also be interesting. This would also confirm whether or not the PAS data is biased towards these earlier periods by virtue of dating by type alone. It would also be an interesting comparison to see if the professionally excavated artefacts agree with the conclusions from the PAS. This sort of comparison may also be able to add to the discussion around the efficacy of the PAS.

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