



Ferguson, Natasha. (2013)
*Biting the bullet: the role of hobbyist metal detecting within battlefield
archaeology*. Internet archaeology, 33.

DOI: 10.11141/ia.33.3

<http://repository.nms.ac.uk/1027>

Deposited on: 7 January 2014

Biting the Bullet: The role of hobbyist metal detecting within battlefield archaeology

Natasha Ferguson

Centre for Battlefield Archaeology, University of Glasgow

Keywords

Battlefield, battle-related artefacts, conflict archaeology, heritage management, hobbyist metal detecting, negative impact positive contribution

Abstract

In the UK battlefields are becoming more frequently associated with the label 'heritage at risk'. As the concept of battlefield and conflict archaeology has evolved, so too has the recognition that battlefields are dynamic, yet fragile, archaeological landscapes in need of protection. The tangible evidence of battle is primarily identified by distributions of artefacts held within the topsoil, such as lead projectiles, weapon fragments or buttons torn from clothing; debris strewn in the heat of battle. Much of the battlefield therefore remains as a faint footprint, and where it survives, may provide valuable information, if recorded accurately.

The unrecorded removal of artefacts from battlefields and other sites of conflict is a key issue in the management and conservation of this unique archaeological heritage. With a particular focus on current doctoral research, this paper aims to address the role of metal detecting in the UK as an important factor in this equation, having both a positive and negative impact to battlefield archaeology. Furthermore it will also consider the nature of metal detecting on UK battlefields; the perceived value of battle related artefacts; the quality of information available for the recording of material from such sites, and what may co-operatively be achieved.

1. Introduction

Over the last 30 years the discipline of battlefield archaeology, or conflict archaeology as it is more accurately known, has been closely associated with one tool – the metal detector. The ability of a metal detector to accurately pin-point the location of individual metal objects in the topsoil has played a central role in the development of methodological approaches to the investigation of battlefields as archaeological sites. Inevitably, this direction has resulted in a unique relationship between battlefield archaeologists and those who participate in metal detecting as a hobby. Battlefield archaeology as a discipline has worked extensively with metal detectorists, and has arguably achieved more than any other area of archaeology in the UK, with the exception of the Portable Antiquities

Scheme and Treasure Trove, in developing relations and encouraging dialogue. Rather than being consigned to the spoil heaps as a nod to community engagement – where they can do little damage – metal detectorists have played key roles alongside archaeologists within battlefield surveys. This relationship is, however, complex and often contradictory in nature. The methodological approach of battlefield archaeology regularly requires the experienced assistance of metal detectorists in order to effectively recover and record artefact material from sites of conflict for the purposes of understanding their character and form. Yet, over the last decade questions have arisen relating to the impact of metal detecting activity on sites of conflict in the UK. Addressing these issues requires striking a balance between recognising the right of those to conduct responsible metal detecting as a hobby and the need to protect battlefields as archaeologically sensitive landscapes.

Although increasing development and intensive agricultural practices may be regarded as a significant factor in the erosion of battlefield heritage, so too can the unrecorded removal of battle-related artefacts through the activities of hobbyist metal detecting (Foard 2008, 241; English Heritage 2012¹). This view has been prompted by events such as the large scale metal detecting rally held in 2003 on an area of the English Civil War battlefield of Marston Moor, 1644. The rally involved over 300 participants and it was estimated that between 300 and 3000 unrecorded artefacts relating to the battlefield had been removed from the site (Sutherland 2004). Added to this are the thousands of battle-related artefacts on sale on the internet auction site eBay, many of which appear to have originated from both known and previously unknown sites of conflict across the UK (Ferguson 2012a). It is this kind of activity which lies at the core of frictions between battlefield archaeologists and metal detectorists.

It would, however, be disingenuous to focus entirely on the negative impact of hobbyist metal detecting on battlefield archaeology when it is clear that a number of individuals within the hobby have significantly contributed to our knowledge of sites of conflict through systematic and responsible metal detecting. We must also, however, not be over cautious in asking difficult questions at the risk of threatening good relations. Questions such as, are we encouraging activity by involving hobbyist metal detectorists in battlefield archaeology projects on battlefields, or teaching recording skills? Should we be looking to ban all metal detecting on sites of conflict, or is it enough to build awareness of their fragile nature?

Drawing on results and case studies from the author's doctoral research (Ferguson forthcoming), this paper will explore the role of hobbyist metal detecting within battlefield archaeology, with an equal focus on both the negative and positive contributions of the hobby as a whole. The purpose of this paper is not to divide the hobby in two as the process of impacting or contributing are not mutually exclusive. Instead it will aim to consider the nature and extent of hobbyist metal detecting on UK battlefields and understand the motivations behind such activity. It will also consider the value placed on battle-related material by metal detectorists, and how this view may be influenced by the archaeologists own inconsistent approach to valuing this important battlefield heritage. Firstly, it is perhaps necessary to reflect on the terminology in relation to battlefield archaeology and the activity of hobbyist metal detecting in the UK, as it forms the basis of much of the discussion throughout this paper.

¹ <http://www.english-heritage.org.uk/caring/heritage-at-risk/types/registered-battlefields-at-risk/>

2. Battlefields as archaeological sites

The archaeological signature of battlefields, and other sites of conflict such as skirmish sites, sieges, encampments and training grounds, is often largely defined in the landscape as scatters of artefactual material suspended in the topsoil (Pollard 2009). Such scatters represent the debris of conflict; intensive volleys of bullets, weapons broken in hand to hand combat, fittings torn from clothing and items of personal value dropped or damaged. Detailed analysis of artefacts within the recovered assemblage is an important part of the interpretation process, for example the morphology of a musket ball may reveal valuable information ranging from the types of firearms used, to identifying practices such as modification of the projectile to inflict greater damage to the target (Plate 1). However, it is the spatial relationship between these artefacts which often holds the key to understanding the dynamics of how the conflict was fought with the pattern of artefact distributions defining the nature and extent of the site in the landscape. Dense concentrations of material such as musket balls, pistol balls and fragments of weaponry indicate areas of close engagement, most likely occurring at the front line of attack. Equally, thin spreads and trails of material may identify areas of rout where an army has broken and fled across the battlefield. Gathering such evidence accurately is crucial in forming an understanding of the conflict, because, as ephemeral events, lasting only hours if not minutes, they may only remain as faint archaeological footprints sensitive to disturbances such as topsoil removal or the unrecorded recovery of artefacts.

An interesting illustration of how well these spatial relationships may be preserved in the ploughsoil and the importance of recording them accurately may be found in an artefact scatter of battle-related material recorded by metal detectorist Jon Pettet on the battlefield of Sedgemoor (1685) in Somerset (Figure 1). The Battle of Sedgemoor was a short lived rebellion led by the Duke of Monmouth, the illegitimate son of Charles II, against his uncle James II who had recently ascended the throne. Monmouth gathered an army of peasants and artisans; no match for a well-trained and seasoned Royalist army. In an area north of the Chedzoy New Cut, Pettet recorded a large volume of canister shot – musket balls contained within a canister and fired from a cannon. Not only were the projectiles themselves significant, representing rare examples which had fused together under the intense pressure and heat built up in the barrel during firing (Birkbeck pers. comm. 2008), but as their spread had been accurately recorded and plotted it was possible to identify where the Royalist artillery had been located on the battlefield and the direction of fire. Furthermore, the positioning of this spread directly corresponded to another scatter of canister shot recorded during a developer led archaeological evaluation of the battlefield for the construction of a sewerage pipeline (Foard 2009, 10). This evidence suggests that the Royalist artillery had been moved north towards the Rebel line during the latter stages of the battle, possibly to break stubborn blocks of Rebel infantry which had resisted earlier cavalry attacks (Ferguson 2012).

The significance of artefact distributions and their movement in the ploughsoil are now better understood, as represented in the publication of heritage policy documents by English Heritage, including [*Managing Lithic Scatters*](#)

(Schofield 2000, 5) and [‘Our Portable Past’](#) (English Heritage 2006, 2). Statutory protection, may in rare circumstances be afforded to lithic scatters if considered to be of archaeological interest. Battlefields on the other hand cannot at the present time be offered legal protection under the Ancient Monuments and Archaeological Areas Act, 1979. They can however be highlighted within the planning process as sites of national importance if featured within either the [English Heritage Battlefield Register](#) (1995), the [Historic Scotland Inventory of Battlefields](#) (2011) or the forthcoming Welsh and Irish registers. The registers provide a solid platform with which to promote battlefields as nationally significant heritage and to raise awareness of the threats to its underlying archaeology. This raises the question of whether it is appropriate to allow hobbyist metal detecting on registered battlefields, a question which has featured frequently within recent debates regarding the future scope of the registers.

3. Defining metal detecting as an activity

The activity of metal detecting may be associated with a myriad of terms, all of which reflect the different ways people perceive and interact with it, whether from a social, academic or professional standpoint. Throughout this paper the author will highlight terms such as looter, treasure hunter, hobbyist, volunteer and professional, all of which are used on a regular basis in both positive and negative lights to describe metal detecting activity. As shall be demonstrated in the examples presented in this paper’s discussion, failure to recognise the complexities of metal detecting as an activity and its propensity to transform and adapt itself may in certain circumstances have direct consequences on our ability to effectively manage battlefield heritage in the UK.

The term ‘treasure hunter’ was in common use in the UK before the 1980s, however it is now regarded a derogatory term synonymous with looter, as accentuated in heritage protests such as the STOP! campaign organised by the Council for British Archaeology (CBA) in the 1980s (Addyman 2009, 53). In many quarters the term is used to generate the perception that metal detectorists search only for valuable objects to sell rather than pursuing an interest in, or contributing to, an understanding of the past. Although finding objects with the aim of selling them may be the motivation for a minority of metal detectorists, the vast majority regard the activity as a hobby which they undertake in their spare time.

Research carried out by Stebbins (1992), which aimed to map the dynamics of work and leisure, provides a robust framework with which to understand the motivations of those who engage with metal detecting. Stebbins describes a hobby as a leisure pursuit and one which ‘bears no resemblance to ordinary working roles’ (1992, 10). He goes on to identify those who practice a hobby to be ‘serious about and committed to their endeavours, even though they feel neither a social necessity nor a personal obligation to engage with them’ (1992, 11). This provides an apt definition of the activity of metal detecting and one which the metal detecting community recognises, with Trevor Austin, General Secretary of the NCMD, describing it as a ‘legitimate recreational hobby’ (2009, 119). The vast majority of those who metal detect choose to do so out of an interest in history and archaeology; to socialise and to keep active. Other uses of a metal detector occurring outwith the hobby i.e. the looting of archaeological

sites deliberately for the purpose of later sale of recovered artefacts, may be described as *nighthawking* and represents illegal activity ([English Heritage 2010](#); [Campbell & Thomas 2012](#)). The description of metal detecting as a hobby should not be regarded as demeaning, as it does not reflect negatively on the level of skill and expertise which may be achieved by individuals, or the time and effort given over to it; they are, as Stebbins highlights, ‘serious’ and ‘committed’. Hobbyist metal detecting, together with martial arts training, dog showing and bird watching, may be further understood as ‘serious leisure’, defined by Stebbins as

“the systematic pursuit of an amateur, hobbyist or volunteer activity that is sufficiently substantial and interesting for the participant to find a career there in the acquisition and expression of its special skills and knowledge”

(Stebbins 1992: 3).

‘Serious leisure’ recognises that although hobbyist metal detecting may be a rewarding and enjoyable experience with ‘durable benefits’ such as social interaction, personal enhancement and knowledge, it requires a great deal of personal effort and perseverance. This includes travelling long distances to events, money on equipment and spending time in the wet and cold, sometimes with little gain. The need to communicate with external bodies such as archaeologists and landowners may also be regarded as a stressful experience leading to anxiety about further interaction. Interestingly, ‘serious leisure’ also recognises that pursuits of this nature generate a ‘unique ethos’ developing into broad sub-cultures with their own exclusive events, values and traditions with which they identify strongly; metal detectorists often define themselves as a ‘community’. Metal detecting as a hobby is therefore ‘identity intensive’, and may in some circumstances eclipse the ‘real world’ experiences of family and work (Gillespie et al 2002, 286).

‘Serious leisure’ allows for us to explore in detail the nuances and complexities of engaging with a hobby like metal detecting. Importantly, it allows us to understand the motivations of those who engage with it by appreciating the level of time and effort invested, as well as identifying sources of stress and frustration. For example, when engaging metal detectorists as skilled volunteers within battlefield archaeology projects an alternative approach is required, as when assisting in a metal detector survey they are often required to adapt, and in many cases alter, current modes of practice; modes which are defined within a recreational or hobbyist environment and are therefore personal to the individual. Imposing margins, such as working in transects or using ‘all metal’ settings to pick up iron signals, may become a potential cause of conflict if it is not understood or accepted why such adaptations are necessary, particularly as it must be done within an environment they are already familiar with (i.e. recovering artefacts suspended in the ploughsoil). The need for archaeological supervision and a robust methodological framework may be regarded as restrictive and unnecessary, especially as many metal detectorists feel that they can achieve the same, if not improved, results without it. This idea can be further compounded if the project aims are not adequately explained or if members of the metal detecting team feel excluded from the decision making process. At a more personal level there may also be the perception that their recreational activity has been transformed beyond their control into something unrecognisable as a hobby and importantly as a source of enjoyment into which is invested time and effort. Essentially, both archaeologists

and metal detectorists are interacting with the same resource, but often with contrasting aims, motivations and methods.

The issues raised here may apply to any form of interaction between hobbyist metal detectorists and those within the heritage sector. In particular the formation of heritage policies, however necessary and important, are regarded as restrictive or threatening to the survival of their hobby. The ability, therefore, to achieve effective mutual co-operation is dependent on a shared appreciation of the knowledge and skills each party can contribute; a balance often requiring constant mitigation and compromise.

4. A brief history of the relationship between battlefield archaeology and hobbyist metal detecting

Archaeological interest in the physical remains of battle, in the UK at least, did not surface until the early 1970s. This was in part due to the lack of recognition of battlefields, and other sites of conflict, as archaeological landscapes, coupled with a poor understanding, or even acknowledgement, of the artefact distributions which so often characterise them, possibly due to an absence of stratified deposits (Freeman 2001, 5). It does appear, therefore, that at this early stage in our understanding of the archaeological potential of battlefields, the recovery of material culture of conflict fell primarily within the domain of hobbyist metal detectorists and not archaeologists. This does not mean to suggest however that this would have had an entirely negative effect, as Foard acknowledges:

“The metal detector is a very valuable archaeological tool, but like many tools it can be used in a constructive or destructive manner, depending on the intentions and the knowledge of the user”

(Foard 1995, 19).

We may lack the ability, beyond the anecdotal evidence or anonymous boxes of musket balls, to fully assess the scale of erosion of battlefield sites during these first forays of metal detecting. There are however several known examples of hobbyist metal detectorists from the 1970s onwards who have focused their interest and skills on the investigation of sites of conflict and therefore helped to enhance their recognition as archaeological sites. For example Dr Glenn Foard’s research on the battlefield of Naseby (1645) in 1995 was based on the initial work of innovative metal detectorists who had intensively covered the area and plotted their finds. Unfortunately, in this case the artefacts were not individually bagged meaning the distribution plots they created did not correspond spatially to the recovered assemblage (Foard 1995, 19). Archaeological fieldwork conducted on the battlefield of Edgehill (1642), Warwickshire by Dr Tony Pollard and Neil Oliver as part of the *Two Men and a Trench* BBC television series, and further research undertaken again by Foard for the Battlefields Trust, were supported by a series of surveys carried out by a Captain Scott in 1979. Scott, who was stationed at a

Ministry of Defence (MOD) ammunition depot located on the site of the English Civil War battlefield of Edgehill recovered a large assemblage of lead projectiles, and other battle-related artefacts by metal detecting fields earmarked for an extension (Pollard & Oliver 2003, 111). Each artefact was accurately plotted on an Ordnance Survey map providing important evidence within the core area of the battlefield, later destroyed by an expansion of the depot (Foard 2005; Pollard 2009, 183). Another military service man, Major Tony Clunn is acknowledged for his discovery of material relating to the Roman battle of the Teutoburg Forest, Kalkriese, whilst based in Germany in 1988. His recovery of artefacts such as lead sling shot, a key signature artefact of Roman warfare, initiated a major excavation programme and the foundation of a museum on the site (Clunn 2005). This military connection to the beginnings of hobbyist metal detecting is interesting, although not surprising considering the purpose of its invention as a portable device was for the detection of land mines during World War II – a function it continues to fulfil today, albeit in a more advanced manner.

These are particularly positive examples where the work of an individual has gone on to form the basis of further research, which in turn has contributed to the development of battlefield archaeology as a relevant and dynamic subject. However, due to the ill feeling felt between metal detectorists and archaeologists from the 1970s onwards (Thomas 2009), the potential role of the metal detector as an essential tool for the archaeological investigation of battlefields was initially ignored. The first systematic archaeological study of a UK battlefield, which took place on the Battle of Marston Moor (1644), adopted a field walking approach to recover battle related artefacts rather than the use of metal detectors, no doubt a conscious decision made by the project directors. Between 1973 and 1979 several hundred lead projectiles and hundreds of other signature artefacts of conflict were recovered and mapped across an area of 10kmsq (Harrington 2004, 84). The efficient recovery of artefacts was later helped by the assistance of local metal detectorists led by Paul Roberts. This project had the potential to fundamentally shape the interpretation of the battle, offering new insights into how both armies moved and fought across the landscape. Unfortunately the project, which also demonstrated the potential of utilising the skills of metal detectorists within battlefield archaeology, failed to make the necessary impact as the results were not published by Newman and Roberts until 2003.

Across the Atlantic the picture was very different. In the USA professional archaeology projects were, although in isolation, using metal detectors from the 1950s to recover artefact distributions from Civil War battlefields and forts (Scott and McFeaters 2010, 6). The ground-breaking approach of Scott and Fox during their investigations of the Battle of Little Big Horn (1876) in 1984 emphasised the importance of a systematic methodological approach and the role of skilled metal detectorists (Scott, et al 1989). This was to greatly influence the first real burgeoning of battlefield archaeology as an archaeological discipline in the UK. The mid 1990s were marked by projects such as the Towton Battlefield Archaeological Survey Project by Tim Sutherland with the assistance of metal detectorist Simon Richardson in 1996 (Fiorato et al 2000); as well as the founding of the Battlefields Trust in 1992 and the formation of the English Heritage Register of Historic Battlefields in 1994, both in response to the realisation that threats such as rapid urban expansion were causing irreversible damage to battlefield landscapes (Foard 1995). This momentum continued in 2000 which saw the first archaeological

investigation of a Scottish battlefield at Culloden, Inverness as part of the Two Men in a Trench series. With a remit to investigate the battlefields of Britain, this pioneering series not only placed battlefield archaeology in the public spotlight, it highlighted the important contribution made by skilled metal detectorists to the success of battlefield projects.

This relationship, born out of mutual respect and equal working conditions, continued across a number of projects led by the Centre for Battlefield Archaeology across Scotland (Plate 2), including several more seasons of work at Culloden, together with Sherrifmuir (Pollard 2006), Fort William (Pollard 2007), Prestonpans (Pollard and Ferguson 2009) and Philiphaugh (Ferguson 2012). In relation to developer-led projects such as Sherrifmuir - Pollard ensured that for the first time in the UK metal detectorists assisting within these projects were paid a wage equivalent to that of an archaeologist carrying out the same task (Pollard 2009, 188). Incorporating metal detectorists into the project team was mutually beneficial. For the metal detectorists the wage was not only a fair reflection of their input into the project, something which could not easily be replicated by professional battlefield archaeologists without time and money spent on training, but more importantly, it allowed them to assist without loss of earnings or using annual leave. This is a factor often overlooked by many archaeologists when engaging with volunteers (Pollard pers. comm. 2011).

This appraisal has touched on the more optimistic aspects of the role of metal detecting within battlefield archaeology and the contribution many hobbyist metal detectorists, either working on their own or within archaeological projects, have made to the development of battlefield archaeology as a discipline. Some may sceptically view this relationship as a marriage of convenience; both are necessary, yet often uncomfortable bedfellows. The author would have sympathy with this argument having worked closely and successfully with hobbyist metal detectorists on several battlefield projects, but at the same time continuing to remain highly critical of irresponsible metal detecting activity that has severely impacted on the archaeological survival of many sites of conflict across the UK. Drawing on results from the author's recent doctoral research the next section will explore the nature and extent of metal detecting activity and to what degree it may be regarded as having a negative impact on battlefield heritage. The discussion will focus more closely on outlining why this negative activity occurs and how hobbyist metal detectorists may perceive, value and interact with battlefields and their associated material culture. The paper will then go on to revisit the positive contribution hobbyist metal detectorists have made to battlefield archaeology.

5.0 Battlefields as heritage at risk – what role does hobbyist metal detecting play?

5.1 *The extent of metal detecting activity on sites of conflict*

It is difficult to ascertain a true reflection of the extent of hobbyist metal detecting on sites of conflict due to the fact that most detecting activity is conducted on a small scale and will likely leave little trace. We must therefore look to other sources of information such as interviews, anecdotal evidence, the media – including specialist metal detecting magazines and appearances in newspapers; online metal detecting forums, together with data collected

from the [Portable Antiquities Scheme](#) in England and Wales, [Treasure Trove in Scotland](#) and the Historic Environment Record. Whilst it is not the intention of the author to present the full results of this research until analysis is complete it is necessary to provide a representative sample, a taster, in order to illustrate the degree to which metal detecting activity has occurred on sites of conflict across the UK. One significant, and unexpected, source of data came from the auction website eBay which became the focus of a two year monitoring programme initiated by the author in 2007 as part of on-going doctoral research. This programme of monitoring identified a surprising range of sites of conflict, from battlefields to firing ranges, and a significant volume of related material available for sale.

5.1.1 Assessing the impact: monitoring sales of battle-related objects on eBay

The monitoring of eBay required a daily log of all sales from the UK containing battle related material. The majority of sale lots contained no information relating to the origin of the material or how it had been collected, however a significant proportion did make specific reference to sites and metal detecting activity. There are obvious caveats regarding the quality and reliability of this data, all of which have been outlined in the author's research (Ferguson forthcoming), however, it does serve to highlight the volume of battle related material in the system and identify potential areas of activity. Over 6,000 battle related artefacts were recorded over a two year period on eBay, including 5100 musket balls and 60 cannon balls. Also represented within the group were other signatures of conflict, such as powder flask tops, musket fragments, military buttons and badges (Figure 2). Lots generally comprised an average of 3 – 10 projectiles, with one lot from Colchester offering for sale a staggering 800 musket balls, presumably collected from a number of sites over an extended period.

Overall, 26 sites of conflict could positively be identified within the dataset (i.e. site name and metal detecting referenced in the selling description), including 12 battlefields, 5 siege sites, 4 encampments, 3 skirmish sites and 1 firing range (Figure 3). The level of metal detecting activity on each site was established by noting the number separate individuals advertising lots, together with the total volume of material, creating a range from low to very high activity. Very high metal detecting activity was highlighted on prominent English Civil War sites such as the Battle of Newbury, West Berkshire and the Siege of Pontefract, West Yorkshire, as well as high levels of activity at the Siege of Newark, Nottinghamshire, and medium levels on the battlefield of Edgehill. In terms of the significance of these sites it is worth noting that not only are all the battlefields featured within this dataset registered², the majority of siege sites, such as Basing House, are comprised of protected scheduled areas. Although smaller in scale the skirmish and encampment sites are no less significant as many represent previously unknown sites of conflict. Here a fine line between contribution and impact may be drawn: although this data has highlighted the potential discovery of unknown sites, it has not been possible in the majority of cases to identify exactly where these sites are, or gauge their current condition within the archaeological record.

² Registered with the English Heritage Battlefield Register and the Historic Scotland Inventory of Battlefields

5.2 Hobbyist metal detecting activity as an impact on battlefield archaeology

Mapping the extent of metal detecting activity and assessing the volume of unrecorded material removed from sites of conflict is vital in forming an accurate impression of the current state of preservation of battlefield heritage, and importantly, identifying sites potentially at risk. Gathering this evidence is only the first step, as the key lies in our ability to understand the nature of this impact, as well as the motivations that drive it. Only then can appropriate and durable heritage management strategies be put in place to reduce the negative impact of hobbyist metal detecting activity.

First we must ask, what do we consider to be negatively impacting metal detecting activity? During the course of her research the author has identified four key attributes observed within hobbyist metal detecting which contribute a negative impact to battlefield heritage. They are: a lack of awareness or recognition of the significance of artefact scatters and the spatial relationships which define them; not recognising certain artefacts as potential signatures of conflict; deliberate searching i.e. relic hunting for battle related artefacts, including rallies; and when battle related material is considered as background noise in the search for objects of more ‘intrinsic value’. So as not to create an artificial impression of the nature of these attributes we shall draw on examples from three case studies to illustrate these points; the battles of Sedgemoor (1685) in Somerset, Prestonpans (1745), East Lothian and Philiphaugh (1645), Scottish Borders.

5.2.1 Recognising the significance of artefact scatters

There is little doubt that the unrecorded removal of artefacts from sites of conflict lies at the heart of impacting activity. The wholesale removal of artefacts from sites of conflict by metal detecting activity results in the gradual erosion of the artefact scatters which define the archaeological character of the battlefield. A box full of musket balls may indicate that some form of military activity has occurred the area, however, without the corresponding distribution map detailing the position of each artefact that box of musket balls holds relatively little archaeological value (Plate 3). This is a picture recognised across many battlefields in the UK, including the Battle of Sedgemoor (Plate 4). Here Pettet, whom we met earlier, has had several encounters with metal detectorists who he refers to with unreserved scorn as ‘treasure hunters’. This is due to the damage he believes they have done to the battlefield because, as he states, they ‘don’t care about recording or filling in holes they have dug’ (Pettet pers. comm. 2009). He estimates that between 2007 and 2009, at least seven metal detectorists have visited the battlefield and that approximately 500 musket balls have been removed unrecorded and placed in pockets, plastic tubs and even buckets. Pettet has even observed one regular visitor, recovering a significant number of musket balls from a core area of the battlefield, to only later place them in a spaghetti jar. He is said to have later used them at a charity function for a ‘guess how many in the jar’ competition.

In the vast majority of cases, this activity should not be viewed universally as malicious damage but simply as a failure to recognise that an artefact held within the ploughsoil may be spatially interconnected with other artefacts. This apparent lack of awareness of the presence of artefact scatters may be due in part to the fact that battlefields are not predominately visible within the landscape, unlike many archaeological sites which are defined

by upstanding remains. Therefore unlike removing stones from a chambered cairn, removing artefacts from a battlefield can be difficult to quantify if it is not visually apparent as an impact. Added to this is a focus within hobbyist metal detecting on the *individual artefact* rather than considering the potential of it forming part of a *wider assemblage* of material. The rationale behind artefacts as isolated finds may stem from the assumption, also shared by many archaeologists, that the ploughsoil represents a turbulent environment in which artefacts are highly mobile and therefore should be considered as ‘stray finds’; in this scenario logic dictates that the object itself must hold more value than the find spot. This impression of the ploughsoil as a rolling ocean is inaccurate, as although movement does occur, research carried out within the ploughsoil horizon has demonstrated that the movement of artefacts is more likely to be vertical than horizontal, a result further compounded by the successful analysis of battle related artefact distributions (Haselgrove 1985; Pollard 2009: 194).

5.2.2 *Recognising the material culture of conflict*

Battlefields, and other sites of conflict, are further put at risk when battle-related artefacts are not recognised as significant objects, particularly if the artefacts have the potential to mark the presence of previously unknown sites of conflict. The perception of musket balls as ‘common finds’ may be true to some extent as the odd musket ball may often form part of the average metal detecting assemblage, but when does ‘common’ become ‘significant’? As Foard notes within a guidance document produced on behalf of the Battlefields Trust for the recording of lead projectiles:

‘metal detecting finds of more than a handful of bullets may represent the first information to identify and accurately locate such sites. It is therefore suggested that where approximately 50 or more bullets are reported from any one site, and with any collection which is accompanied by one or more powder box caps, the Battlefields Trust be asked to advise on the discovery’

(Foard 2009, 3).

Although this guidance is valuable in highlighting archaeological interest in scatters of battle-related objects, especially to metal detectorists³, the figure of ‘approximately 50’ is misleading as in the author’s experience far fewer battle related objects are required to highlight the presence of a site. The point of discovery rests on the diligence of the finder to recognise the significance of an artefact scatter, and not an arbitrary volume of specific artefacts. For instance, the author directed a small metal detector survey on an area due to be excavated as part of an archaeological investigation at Forteviot, Perth & Kinross⁴. Within an area of 40m x 10m the survey recovered 10 musket balls and 5 modern Enfield bullets; a high volume considering the size of the area surveyed. However,

³ The author has noted it being posted and discussed on a number of occasions within metal detector forums.

⁴ As it was a scheduled area Historic Scotland requested that a metal detector survey take place prior to excavation to recover any potential artefacts in the topsoil. This demonstrates the progressive attitude, not only towards the use of metal detectors within archaeological survey, but also towards the importance of archaeology contained within the ploughsoil.

the significance of the scatter was dismissed by one volunteer metal detectorist simply because they were in his opinion 'commonly found'.

In the context of the battlefield, artefacts such as musket balls, pistol balls and cannonballs may be readily recognised as conflict-related artefacts and as we have seen may be highly valued as such. However, what archaeologists consider as 'signature artefacts' expands beyond the lead projectile and may include a range of objects including fragments of weaponry, broken accoutrements and clothing. Such objects are often small and unassuming and can easily be cast aside as meaningless if not identified as battle related. An example of this occurred during a rally which took place on the Battle of Prestonpans, East Lothian in October 2009. The rally was jointly organised by two prominent metal detecting clubs in the central belt of Scotland and attracted approximately 37 people. The battlefield features within the Historic Scotland Inventory of Battlefields and the area where the rally was to take place had previously been identified as having high archaeological potential for battle-related finds. However, against the recommendations of the Local Authority Archaeologist, the [Treasure Trove Unit](#), [Historic Scotland](#) and the [Centre for Battlefield Archaeology](#) (CBA) who were at the time conducting an archaeological investigation of the battlefield, the organisers decided to go ahead with the event. In discussions between the organisers, the CBA and Treasure Trove it was agreed that each artefact should be individually bagged and given an approximate National Grid Reference. Lead projectiles, chiefly musket balls, would be recorded more accurately using a hand held GPS unit. A report written by the organisers concluded that,

'with the exception of the high proportion of musket balls and the few military buttons, the vast majority of the finds from this outing were pieces of metallic detritus which were no different from what would be expected from any average fields..... There were no 'hot spots' identifiable that might justify a more detailed survey or archaeological excavation, and it is considered unlikely that further metal detecting surveys of this area will produce a significantly different pattern of results unless a very intensive large-scale survey is undertaken'

(Hackett 2009, 2).

It is important to note in the first instance that the author attended the rally as an observer and was generally impressed by the level of effort the organisers had put into recording artefacts, albeit reluctantly in the initial phase of negotiations. However, their interpretation of the assemblage and its distribution contains fundamental errors regarding the nature of battlefield archaeology. Firstly, when the assemblage was analysed by the author and Stuart Campbell of Treasure Trove a number of significant battle related objects were identified, including the brass top of a ram-rod; ram-rod holder; copper-alloy flint holder; the fragment of a trigger guard from a pistol; a possible Grenadier match case; a piece of canister shot, and a piece of grapeshot (Plate 5); all of which were recorded with a 6 figure grid reference which places an object anywhere within 500 sqm². In contrast, all objects recovered within archaeological surveys directed by the author are recorded to sub-centimetre accuracy. Furthermore the significance of the artefact distribution, including potential lines of engagement which pushed the location of the battlefield 500m further to the East (Figure 4), had been misinterpreted as meaningless scatters of material by the organisers (Pollard and Ferguson 2009, 54). The saving grace was that all the artefacts had been individually bagged and recorded, as without this precaution much of this information could very easily have been lost completely (Plate 6). Metal detecting activity still occurs on the battlefield, including a recently found cannon

ball. All objects have been claimed as 'Treasure Trove' and will be allocated to the East Lothian Museum Service. This case represents an important example in supporting the argument for discouraging metal detecting on sites of conflict, as although the lead projectiles may be collected there is still a risk that important signature artefacts will be disregarded or misidentified.

5.2.3 *Rallies and Relic collection*

Organised metal detecting rallies represent a significant threat to battlefield heritage. With numbers of participating metal detectorists ranging between 30 to 300 and all searching within a relatively small area, they have the capacity to remove large volumes of unrecorded artefacts. Several rallies have taken place on battlefields in the UK over the last 10 years, including Marston Moor, Newbury, Nantwich (Foard 2008, 242) and another close to the site of the Battle of Naseby at Kettering, Northamptonshire as recorded within the Portable Antiquities Scheme (PAS) database⁵. Overall there have been few rallies in Scotland, although the trend is growing. Recent events on battlefields include a rally within the vicinity of Bannockburn, Stirlingshire in 2007 and at Prestonpans, the impact of which has been discussed above. In the 1970s two rallies were organised by the Dundee Club on the battles of Killiecrankie, Perth and Kinross, and Culloden, Highland; as the latter is in the ownership of the National Trust for Scotland it is now afforded some protection from metal detecting activity, although unfortunately Killiecrankie falls short of inclusion within the Cairngorm National Park boundary by several hundred metres. At Killiecrankie, approximately 60 metal detectorists who were delighted to find, 'a great many musket balls and cannon ball fragments', as well as other objects including buttons and horseshoes (Smith 2005, 58).

Musket balls, as spherical lead pieces, may not be considered of any value in isolation. In some circumstances, however, their historical link to a famous conflict will make battle-related objects desirable as collectable items as we have seen from the ready sales of projectiles on eBay. Indeed on one visit by the author to the Battle of Sedgemoor in April 2009, a metal detectorist was spotted within the vicinity of the Memorial Field. When approached to enquire what he was doing, he replied that he was looking for, 'musket balls, but especially a cannon ball' This issue has been ever present in the US where Civil War relics are in demand, with some 'relic hunters' prepared to risk heavy fines and even a jail sentence to recover artefacts from battlefields protected by National Park status (Keen 2009; Ferguson 2012)⁶. Dealers in Civil War relics may also be found in significant numbers selling their goods on the edge of the battlefield for those who wish to purchase a souvenir of their visit (Plate 7), although this had been an issue long before the arrival of metal detectors (Bannerman 1973). Even in the 19th century, as it is in the 21st century, this practice was regarded very much as theft, and possibly to a higher degree the desecration of a sacred space. In the UK the discovery of the Staffordshire Hoard in 2009 combined with an economic recession profiled metal detecting as an opportunity to 'get rich quick', with articles about the hobby even appearing in the *Financial Times*. Here battlefields are included as potential sites, together with hillforts,

⁵ Find ID: NARC-D8D492

⁶ http://www.usatoday.com/news/nation/2008-01023looting_N.htm

deserted villages and Roman towns (Watson 2008). Perhaps more concerning was a *Daily Record* article which highlighted the Battle of Culloden on a map entitled '*Where to dig up a fortune in Scotland*' (Figure 5) (McQueen 2009, 21). In this light not only is an increase in activity on sites of conflict a potential threat, but with it an expectation that objects of more intrinsic value than lead bullets are waiting to be discovered on battlefields across the country.

5.2.4 Battlefield material as 'background noise'

Battle-related artefacts may evoke the imagination with their potentially gruesome history, but for others they may be regarded as a 'nuisance' if occurring in large numbers. For example a metal detectorist searching the in the vicinity of the Denbigh Castle, besieged in 1646, declared that, 'coming home with a bucket full of musket balls was a day wasted' (Anon 2009). Another metal detectorist complains on an online forum that one field he regularly searches on has 'produced 1000s of muskie balls and I do mean thousands...cheesed off with them'.. Both have ignored the possibility that finding large volumes of musket balls may be significant; clearly he was focused in his search for artefacts with greater 'intrinsic value' which in this case was medieval objects, a problem shared by other sites of conflict which form part of multi-period sites. The Battle of Philiphaugh for example shares the landscape with an Early Historic settlement and a possible Roman site which together form a 'honey trap' for metal detectorists. The battle-related material therefore becomes 'background noise', or hedge-fodder as I have often heard musket balls referred to because they are not considered worth keeping after a day's metal detecting. This was certainly a contributing factor to the significant erosion of the battlefield archaeology at Philiphaugh.

5.2.5 Case study: Mitigating the impact – The Battle of Philiphaugh

Although marked as a battle of national significance within the Historic Scotland Inventory of Battlefields, the Battle of Philiphaugh, fought on the outskirts of Selkirk, Scottish Borders in 1645, also represents an important case study to illustrate potential level of impact that may result from decades of unchecked metal detecting activity. However every dark cloud has, as they say, a silver lining as the project offered an opportunity to implement working strategies with the aim of mitigating further impact on an already seriously damaged site. Before discussing these strategies it is necessary to provide some background to the site and the project.

Previous desk-based assessments of the battlefield had identified little in the way of metal detecting activity on the site, except for the odd forays by the Estate gamekeeper. This, together with low impact from development due to its rural location, identified Philiphaugh as a relatively well preserved battlefield with a high archaeological potential in the form of artefact scatters (Foard 2005, 7). The actual condition of the battlefield, however, only came to light during a recent community archaeology project directed by the author in 2011. The reality, however, was very different: it became clear through the course of the project that the battlefield had been intensively metal detected by a number of individuals from the local area over a 30 year period. A programme of systematic metal detecting survey recovered very little in the way of battle related artefacts, with only one scatter of pistol balls identified. This was in contrast to the large volume of material reported to the author over the

course of the project by local metal detectorists, including an assemblage of 50 musket balls and 25 pistol balls recovered by one individual. To accompany the assemblage, and at the request of the author, he also produced a rough sketch map based on where he remembers finding lead projectiles in significant concentrations (Figure 6). This map at the very least helped to identify what could have been the core area of the battlefield (Ferguson 2011, 17). With this evidence in mind the author came to the unfortunate conclusion that intensive and prolonged activity of hobbyist metal detectorists had significantly impacted the archaeological integrity of the battlefield landscape. The erosion of existing artefact scatters through the unrecorded removal of battle related scatters had occurred to such an extent that it is possible only a fraction of the battlefield has survived. In total seven metal detectorists from the local area came forward with information relating to activity on the battlefield, but few had retained the material they had recovered or could report exactly where it had been found; all were invited to take part in the project.

Throughout the project metal detectorists who had volunteered to take part were encouraged to participate in all aspects of fieldwork, including excavation of a ditch which may have been used as a defensive feature during the battle. Skills such as artefact identification and analysis, map reading and use of a hand-held GPS unit were all introduced and supported by a series of workshops and hand outs (Plate 8). As the project progressed so too did their knowledge and awareness of the battlefield as a significant archaeological site. Some even became frustrated about their past activity on the battlefield with one volunteer metal detectorist commenting during the survey that if he had known how important the site was he wouldn't have come near the place. It is important to acknowledge that those who had previously metal detected on the site and ultimately impacted on its survival did not do so as a malicious act of vandalism or looting, but due to a lack of understanding of how the battlefield existed in the archaeological record. As the site is recognised as nationally significant within the Historic Scotland Inventory of Battlefields (Historic Scotland 2012), the author strongly recommended that any further hobbyist metal detecting on the site would be inappropriate without an archaeological survey and therefore should be restricted by the landowner. Recruiting local metal detectorists was an important step in this process as their engagement with the project invoked a strong sense of stewardship towards the battlefield which is necessary to ensure future protection of the site – members of the original team remain watchful for any unsolicited activity on the site. Those who have decided to continue metal detecting the fringes of the battlefield have ensured to record their finds and report them to the author, who now works in the Treasure Trove Unit (Plate 9).

6. Acknowledging the contribution of hobbyist metal detecting to battlefield archaeology

We have already discussed the valuable contribution made by hobbyist metal detectorists as skilled volunteers within archaeological projects, however another contribution they can make to battlefield archaeology is the

discovery, and recording of, previously unknown sites of conflict. Through her research, and work at the Treasure Trove Unit, the author has come into contact with a number of individuals who have taken great pains to record and report their discoveries. In Scotland three notable examples include a potential skirmish site or training ground near Loch Leven, Perth & Kinross; a skirmish site near Doune Castle, Stirling; and an extensive assemblage of military material relating to activity associated with Fort George, Highland. The potential scope of reporting such material is reflected in research carried out by Stuart Campbell on the material culture of 18th – 19th century military, including the social meaning articulated on military buttons (Campbell 2012).

In England the PAS database and the HER contain a number of intriguing cases related to material recovered by metal detecting activity which appear to mark the presence of previously unknown sites of conflict. As well as this we may include Pettet at Sedgemoor who has successfully mapped Wade's rout; several skirmish sites and training grounds discovered by Peter Twinn; the discovery of skirmish activity related to the infamous Dutch invasion in 1667 of Languard Fort, Suffolk; and the discovery of a significant military activity associated with the Battle of Lostwithiel, 1644 in Cornwall by John Andrews. A distinctive aspect of the latter two is the desire to take their discoveries further as projects involving local societies and archaeologists. Tom Lucking, who recently recovered conflict related material when detecting in fields near Languard Fort has expressed an interest in setting up a project to investigate the site further and has successfully encouraged support from the local archaeology society and other members of the community. Although the author has also been providing some support, Lucking's inspiration to set up a project came from online discussions with John Andrews.

6.1 Case study: *They Tywardreath Battlefield Project*

In 2008 Andrews contacted the author with information regarding an assemblage of artefacts he had recovered in fields surrounding the village of Tywardreath, Cornwall. The significance of the assemblage quickly became apparent: at the time of writing it included over 2000 artefacts, the vast majority of which were clear signatures of mid-17th century warfare including musket balls, cannon balls, bandolier caps and contemporary buckles and buttons (Plate 10). Crucially, Andrews had from an early stage individually recorded and bagged each artefact using a GPS. In addition he inputted the co-ordinates into a Google Earth programme to create a distribution map which shows the wide spread of material across several fields (Figure 7). As each artefact was uniquely identifiable it was possible to cross reference the location data with the material which allowed the author to accurately analyse and interpret the distribution with the some degree of confidence. Importantly for the heritage management of this site, its existence as an artefact scatter has been noted within the Historic Environment Register of Cornwall, which has already highlighted the need for an archaeological evaluation prior to development near the site.

Over the last three years Andrews has continued to investigate the area, with the assistance of a carefully selected team of local metal detectorists from Cornwall. Andrews' work, which he has named the Tywardreath Battlefield Project, has attracted interest from other parties including the Cornwall Archaeological Society and has

received much local support. Under the banner of this project he has done much within the local community to inspire interest in Tywardreath's previously unknown Civil War history by organising events including a hugely successful re-enactment with the Sealed Knot which once again saw 17th century soldiers marching through the village streets. He now aims to generate funding for a small museum within the village and, with the assistance of the author, publish a book on his findings. This work by Andrews represents a significant contribution to our understanding of English Civil War activity in Cornwall, and for the first time places Tywardreath very much at the centre of the conflict. What makes this case more remarkable was that Andrews not only recognised the archaeological potential of the site, but shared his discoveries for the benefit the local community.

As we have already seen, hobbyist metal detectorists have made a valuable contribution to the development of battlefield archaeology as a discipline, in some cases recognising the potential of scatters of conflict-related material long before archaeologists came on the scene. But as with impacting activity, the ability to individually record artefacts and recognise their potential lies at the core of what may be considered a positive contribution. However it is not always easy to distinguish a clear line between impact and contribution, as often those with the best intentions may unwittingly damage a site they had aimed to investigate, for example when Pettet first began his initial work on Sedgemoor he did not make the connection between the artefact and its findspot. Therefore although he had plotted its position it was not possible to correlate that information with the artefact in question. Another metal detectorist, who discovered artefacts relating to a possible skirmish site in Shadingfield, Suffolk and contacted the author after reading her article in *The Searcher* magazine (Ferguson 2010), was clearly troubled by the thought that he may have damaged the site by not properly recording his finds. He has subsequently bought a hand-held GPS device and is now recording his finds and reporting them to the PAS.

7. Conclusion

In the contribution made by hobbyist metal detectorists we cannot underestimate the importance of the supporting role played by those within the heritage sector to encourage the recording and reporting their finds. However, although the discovery of previously unknown sites may be regarded as a contribution we cannot afford to be complacent when dealing with the issue of irresponsible metal detecting activity on battlefield sites. As demonstrated by activity on sites such as Philiphaugh and Sedgemoor the indiscriminate removal of artefacts has caused irreparable damage to the archaeological fabric of these battlefields; sites we consider to be of national importance. The scale of negatively impacting metal detecting activity on registered battlefields across the UK not only undermines their status as sites of historical and archaeological importance but also sends a mixed message to the metal detecting community on how we should value and protect this heritage. Drawing from the evidence presented here I feel there is enough weight behind the argument to restrict metal detecting activity on battlefields listed within the English Heritage Register for Battlefields and the Historic Scotland Inventory of Battlefields. An outright ban may represent a draconian measure, however, some form of licensing system, as proposed by Foard within his doctoral thesis (Foard 2008), is required. A system similar to the granting of consent for investigations on Scheduled monuments, which requires application, rigorous research aims and subsequent reporting of results

would be effective. This system would at the very least ensure accurate recording and reporting of all recovered material, as well as the ability to monitor the level of activity on such sites. Although registered battlefields may be afforded some protection, how may we begin to the thousands of other sites of conflict which pepper the British Isles? As has been demonstrated at Philiphaugh impacting activity does not need to be an endemic feature of hobbyist metal detecting. Refusing to work with metal detectorists will accomplish little, nor will dividing them into neat categories of good and bad – contributor versus destructive treasure hunter. Changing attitudes and practices through collaborative work is a far more rewarding and durable process and should be regarded as an opportunity to inform and engage with metal detectorists to encourage a greater level of understanding of the fragile nature of battlefields as archaeological sites. I believe this strategy represents the most enduring path to ensure the survival of battlefield heritage.

Acknowledgements

First I would like to thank Suzie Thomas and Stuart Campbell for their support, as well as the opportunity to speak at the Newcastle conference and publish elements of my doctoral research in this special issue . Special thanks also to those I have worked with who have contributed a great deal to my research, they include: John Andrews, Jon Pettet, Tom Lucking, Mick Brown and Jock Graham. Thanks should also go to James Crombie, David Booth and Steven Hunt. I would also like to thank my doctoral supervisor Dr Tony Pollard for his continual support and for sharing his thoughts on metal detecting.

Bibliography

- Addyman, P.V 2009 Before the Portable Antiquities Scheme, in Thomas S.E and P. Stone (eds) *Metal Detecting and Archaeology*, Boydell Press: Woodbridge pp 63 – 87
- Austin, T 2009 Building Bridges between Metal Detectorists and Archaeologists, in Thomas S.E and P. Stone (eds) *Metal Detecting and Archaeology*, Boydell Press: Woodbridge pp 119 - 124
- Bailey, G 2001 Troubled Times: Part 2, in *Treasure Hunting*, Greenlight Press pp 37 - 40
- Bannerman, C.S 1973 *The Story of Bannerman Island, Hudson River, New York*, Bannerman and Sons: New York
- Campbell, S. 2012 Defence and Defensibility: The Material Culture of the Volunteer Movement in Scotland, 1794-1815
- Clunn, T. 2005 The Quest For the Lost Roman Legions: Discovering the Varus Battlefield. Savas Beattie
- Ferguson, N.N. 2012 *The Battle of Philiphaugh Community Archaeology Project: Final Report*. Centre for Battlefield Archaeology: University of Glasgow
- Ferguson, N.N 2009 CSI: Cornwall – Investigating a Battlefield, in *The Searcher* pp 27-29 Greenlight Press.
- Ferguson, N.N (forthcoming) *Assessing the negative impact and positive contribution of hobbyist metal detecting to battlefield*

archaeology. PhD thesis: University of Glasgow

Fiorato, V. Boylston, A. and C. Knusel (eds) 2000 *Red Roses: The Archaeology of a Mass Grave from the Battle of Townton, AD 1461*. Oxbow Books

Foard, G 1995 *Nasby: The Decisive Campaign*. Pen & Sword.

Foard, G 2008 *Integrating Documentary and Archaeological Evidence in the Investigation of Battles: A Case Study from Seventeenth-Century England*. Unpublished PhD thesis. University of East Anglia

Foard, G 2009 The Bullets, in Place, C. 2009 *Land to the north of Westonzoyleland Sewage Treatment Works, Westonzoyleland, Somerset. An Archaeological Programme of Works: Metal Detecting survey (Phase2) and Watching Brief*. Context One Archaeological Services Ltd.

Freeman, P 2001 Introduction: issues concerning the archaeology of battlefields, in P. Freeman, A. Pollard (eds.), *Fields of Conflict: Progress and Prospect in Battlefield Archaeology*, BAR International Series 958 pp 1 -10

Gillespie, D. L, Leffler and E. Lerner 2002 If it weren't for my hobby, I'd have a life: dog sports, serious leisure, and boundary negotiations, in *Leisure Studies vol. 21* pp 285 - 384

Hackett, A 2009 *Scottish Detector Club and Scottish Artefact Recovery Group Report on the Joint Outing: Prestonpans 18th October 2009*. Unpublished Report

Harrington, P 2004 *English Civil War Archaeology*. BT Batsford

Haselgrove, C 1985 Inference from ploughsoil artefact samples, in *Archaeology from the Ploughsoil: studies in the collection and interpretation of field survey data*, C Haselgrove, M Millet and I Smith (eds), Dept of Archaeology and Prehistory, University of Sheffield

McQueen, C. 2009 There's Gold in Them Thar Hills, in *Daily Record*: 26 September 2009 pp 20 - 21

Newman, P.R; Roberts, P.R. (2003). *Marston Moor 1644: The Battle of the Five Armies*. Pickering: Blackthorn

Pollard, T and N. Oliver 2003 *Two Men in a Trench II: Unlocking the secrets of British Battlefields*. Penguin Press.

Pollard, T. 2009 'The Rust of Time': Metal Detecting and Battlefield Archaeology, Thomas S.E and P. Stone (eds) *Metal Detecting and Archaeology*, Boydell Press: Woodbridge pp 181 - 202

Pollard, T. 2006 The Battle of Sheriffmuir, 1715: Data Structure Report. GUARD: University of Glasgow

Pollard, T. 2007 The Fort William and Inverlochy Community Archaeology Project: Final Report. GUARD. University of Glasgow

Pollard, T and N. Ferguson 2009 *The Battle of Prestonpans Community Project: Final Report*. GUARD: University of Glasgow

Scott, D. D and A. P McFeaters 2011 The Archaeology of Historic Battlefields: A History and Theoretical Development in Conflict Archaeology, in *Journal of Archaeological Research, Vol 19, No. 1*, 103-132

Scott, D.D, Fox, R.A Jnr, Connor, M.A, and D. Harmon 1989 *Archaeological Perspectives on the Battle of the Little Bighorn*. University of Oklahoma Press, N.

Smith, T 2005 Detector Surveys of Battlefield Sites – Part 2: Battlefields we have tried to track down, in *Treasure*

Hunting, January issue. Greenlight Press

Stebbins, R. A. 1992 *Amateurs, Professionals, and Serious Leisure*. McGill-Queen's University Press

Sutherland, T 2004 Topsoil: key battlefield layer, in *British Archaeology*, Issue 79. Council for British Archaeology

Thomas, S 2009 [*The relationships between archaeologists and metal detector users in England and Wales: Impact on the past and implication for the future*](#). Unpublished PhD thesis.

Online sources:

Campbell, S and S. Thomas 2012 Encyclopaedia: 'Nighthawk'
<http://traffickingculture.org/encyclopedia/terminology/nighthawking/>
Last viewed: 23 September 2012

English Heritage 2012 *Registered Battlefields*
<http://www.english-heritage.org.uk/caring/listing/battlefields/>
Last viewed: 31 March 2012

English Heritage 2006 *Our Portable Past*
www.english-heritage.org.uk/upload/pdf/Our-Portable-Past.pdf
Last viewed: 14 April 2012

English Heritage: Registered Battlefields at Risk
<http://www.english-heritage.org.uk/caring/heritage-at-risk/types/registered-battlefields-at-risk/>
Last viewed: 14 April 2012
Foard, G. 2009 *Guidance on Recording Lead Bullets from Early Modern Battlefields*
http://www.heritagescience.ac.uk/Research_Projects/projects/Projectposters/Conservation_of_Battlefield_Archaeology_project_report_-_Appendix_3
Last viewed: 20 January 2012

Foard, G. 2005 *Philiphhaugh*. The Battlefields Trust
<http://www.battlefieldstrust.com/media/647.pdf>
Last viewed 14 November 2012

Historic Scotland 2012 *Inventory of Battlefields*
<http://www.historic-scotland.gov.uk/index/heritage/battlefields.htm>
Last viewed 31 March 2012

English Heritage 2010 *The Nighthawking Survey*
<http://www.helm.org.uk/upload/pdf/Nighthawking-survey3.pdf>
Last viewed 31 March 2012

Keen, J 2008 *National Parks Robbed of Heritage*. USA Today
http://www.usatoday.com/news/nation/2008-01023looting_N.htm
Last viewed: 10 February 2009

Schofield, J. 2000 *Managing Lithic Scatters*: Archaeological guidance for planning authorities and developers. English Heritage
<http://www.helm.org.uk/upload/pdf/Managing-Lithic-Scatters.pdf?1331948355>
Last viewed: 14 April 2012

Other Sources

Anonymous 2010 Telephone interview regarding sale of musket balls on eBay said to be from the Siege of Denbigh – 15 May 2009

Pollard, T. 2011 Personal Communication – Archaeologists engaging with volunteer metal detectorists.

