

## Original Study

## Open Access

Michael Lewis\*

# A Detectorist's Utopia? Archaeology and Metal-Detecting in England and Wales

DOI 10.1515/opar-2016-0009

Received March 4, 2016; accepted August 19, 2016

**Abstract:** Archaeologists in England and Wales have a long tradition of liaising with metal-detectorists, particularly following the reform of Treasure law and advent of the Portable Antiquities Scheme - a project to record archaeological finds discovered by the public. Although this process of dialogue has been seen by most as productive and mutually beneficial, there still remain issues that divide archaeologists and detectorists. This paper will highlight some of these with a view to possible solutions.

**Keywords:** archaeology; metal-detecting; heritage protection; best practice; treasure, museum acquisition

Anecdotal evidence suggests that metal-detectorists from elsewhere in Europe envy the situation in Great Britain,<sup>1</sup> where metal-detecting is legal and (mostly) tolerated, and 'the law' favours the rights of the individual (albeit landowners, rather than finders) over 'the state' regarding the ownership of material culture (Addyman & Brodie 2002, 179).<sup>2</sup> Therefore, it might be said that British detectorists (particularly those in England and Wales) have never had it so good, especially when compared with those in many other parts of Europe - not that all finders necessarily see it that way.

It should be noted at the outset, that the laws across the United Kingdom vary, and henceforth this paper will only consider metal-detecting in England and Wales; two countries which share the same legislation, though the administration of the law varies due to the devolved nature of government.<sup>3</sup>

Were it not for the Portable Antiquities Scheme (PAS), a project to record archaeological finds discovered by the public, then the situation in England and Wales might be more like that of other parts of Europe, where many archaeologists are less sympathetic towards metal-detecting, especially hobby detecting (i.e., detecting outside an archaeological remit). As on the continent, the advent of metal-detecting in the 1970s was seen by most British archaeologists as a threat to the historic environment, and one that needed to be controlled. 'STOP' (Stop Taking Our Past: the campaign against Treasure Hunting), launched in 1980, attempted to persuade the UK government to ban metal-detecting, but ultimately failed. The consequence was long-term animosity on both sides (Addyman & Brodie 2002, 179; Bland 2005b, 259), which eventually led to compromise. Looking back, many have suggested that the detecting community was most effective at winning the battle of public and political opinion (Bland 2005a, 441; Thomas 2012a, 77): indeed, the Home Office response to archaeologists requesting bye-laws to control metal-detecting on local council

<sup>1</sup> Great Britain consists of England, Scotland and Wales, whereas the United Kingdom also includes Northern Ireland. The Isle of Man, Bailiwick of Guernsey and the Bailiwick of Jersey are not part of the United Kingdom, but are crown dependencies; that is to say 'self-governing possessions' of the UK crown. All have their own Treasure laws.

<sup>2</sup> This is mostly on the basis of 'common law', that is to say case law or precedent, rather than written law.

<sup>3</sup> In England the Portable Antiquities Scheme and Treasure Act are managed and administered (respectively) through the British Museum, whereas in Wales the lead is the National Museum Wales (see Lodwick 2008, 107).

**Article note:** This article is a part of Topical Issue on Aspects of Non-professional Metal Detecting in Europe.

**\*Corresponding author: Michael Lewis**, British Museum, London, United Kingdom, E-mail: mlew@britishmuseum.org

land suggests the Government was tiresome of the issue, with officials referring to existing legislation to deal with ‘damage’ (the Criminal Damage Act 1971) and requiring archaeologists to ‘consult’ with local metal-detecting groups before tinkering with local law (Elder 1980, 137; Thomas 2012b, 48). Here it is unnecessary to revisit the early approaches made by archaeologists towards metal-detectorists since the history is adequately discussed elsewhere (Bland 2005b; Thomas 2012a; 2012b), but independent initiatives to engage with metal-detectorists, particularly in East Anglia (see Green & Gregory 1978), demonstrate the inability or unwillingness of archaeologists (at a national level) to reach a consensus on how to deal with the ‘problem’ of uncontrolled metal-detecting when it first arose. Whatever the ethical issues, or the public and political opinions thereof, it is apparent that the laws of England and Wales did not favour the protection of archaeology (and the perceived threat to it from metal-detecting) above individual property rights and the associated liberties of ownership.<sup>4</sup>

More significant than the STOP campaign, in terms of ensuring certain detector finds ended up in public collections, was the Treasure Act 1996. Legislators of the Act drew experience from the Antiquities Bill 1981 (also known as the Abinger Bill), which recognised the shortcomings of the Common Law of Treasure Trove in ensuring that the most important archaeological objects discovered by the public (that is to say non-archaeologists) were acquired by museums (Hanworth 1995, 174; Bland 2005b; 1996). For a find to be Treasure Trove, it had to have been deposited with the intention of recovery. However, understanding ancient motivations for deposition is not necessarily straightforward (see Thomas 2008, 156-7). Even the famous Sutton Hoo Anglo-Saxon treasure was deemed ‘not Treasure’ at a coroner’s inquest on the basis that those who buried it did not intend to recover it, though initially there were moves to challenge this verdict (Evans 1986, 96). Fortunately, in this case the landowner, Mrs Edith Pretty, generously donated the find (now housed at the British Museum) to the nation. Whereas the Antiquities Bill 1981 was never enacted, due to the lack of parliamentary time to take it forward, and the notorious ‘wrecking’ of such private members’ bills by some MPs (Thomas 2012b, 51),<sup>5</sup> the Treasure Bill 1994<sup>6</sup> had more success, largely thanks to ‘the great energy’ of its sponsor, the Earl of Perth (Bland 1996, 24-6; 2009, 63), but more crucially because it had Government support. The Treasure Act 1996 became law on 24 September 1997.

The new Act was not universally supported (Bland 2005a, 442), either by archaeologists (since it was limited in scope) or detectorists (as it took away some traditional rights to ownership of Treasure in favour of landowners),<sup>7</sup> but it did ensure a clear legal definition of Treasure and extended the scope (significantly) of what is Treasure (Bland 2005b 262-3).<sup>8</sup> In the first year of the Act (1998) 201 items were reported Treasure (compared to an annual average of about 25 under Treasure Trove; Bland 2008, 67). This grew to 806 cases ten years later (2008), and 1040 last year (2015) (Lewis 2016a, forthcoming). In total, therefore, over 10,530 Treasure finds have been reported since the Treasure Act became law, of which 37% have been acquired by 215 museums across England and Wales (Lewis 2015b). Significant recent finds reported, which would not have been Treasure under the old law, include a gold cup from Ringlemere, Kent (PAS-BE40C2; Needham et al. 2006), an assemblage of Iron Age cauldrons from Chisledon, Wiltshire (Baldwin & Joy 2016), and a silver boar badge from the Battle of Bosworth (1485) associated with Richard III (LEIC-A6C834; Bate & Thornton 2012, 104-5).

<sup>4</sup> Most recently reflected in The Law of Property Act 1925, which makes it clear that “‘Land’, includes land of any tenure, and mines and minerals, whether or not held apart from the surface, buildings or parts of buildings (whether the division is horizontal, vertical or made in any other way) and other corporeal hereditaments’ (205 (1) (ix)).

<sup>5</sup> See for example the early debates of Richard Allan’s Dealing in Cultural Property (Offences) Bill: <http://hansard.millbanksystems.com/commons/2003/jul/04/meaning-of-tainted-cultural-object>

<sup>6</sup> The name of the Treasure Act 1996, before it was enacted.

<sup>7</sup> Under Treasure Trove, only the finder had rights to a reward (not the landowner). In the case of Sutton Hoo, since the find was ‘not Treasure’, it belonged to the landowner, Mrs Pretty; she also instigated the discovery, by sponsoring the archaeological excavation of burial mounds on her estate.

<sup>8</sup> For a definition of the Treasure Act 1996 see <http://www.legislation.gov.uk/ukpga/1996/24/contents>. Also refer to the Treasure Act Code of Practice 2002: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/77532/Treasure-Act1996CodeofPractice2ndRevision.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/77532/Treasure-Act1996CodeofPractice2ndRevision.pdf)



**Fig.1:** The Ringlemere Cup, which was reported Treasure to the author when he was Finds Liaison Officer for Kent.

Although the passing of the Treasure Act was clearly a success in terms of enabling museums to acquire greater numbers of archaeological treasures, it was readily apparent it could only be part of a more holistic approach to dealing with the perceived problems associated with hobby metal-detecting. The Treasure Trove system in Scotland - where all archaeological finds are Treasure and therefore must be reported by law - is often considered superior to the system in England and Wales (Bland 2008, 79; Sheridan 1995; Campbell 2013, 2:2), albeit under-resourced (Normand 2003, 61;<sup>9</sup> Saville 2008, 96). However, given the extent of metal-detecting in England (in particular) and Wales, enormous resources would be needed to process all public finds as Treasure (Bland 2008, 79): in 2015 the number was 82,272 PAS finds versus 1,040 cases of Treasure, though some Treasure cases include multiple items (Lewis 2016a, forthcoming). In England and Wales, therefore, the solution was to compliment the Treasure Act with a voluntary scheme to encourage the reporting of archaeological finds found by the public (see DNH 1996; also Bland 2005b, 271-2) - a project which became known as the Portable Antiquities Scheme (PAS).

In December 1996 the Government announced that funding would be provided for six pilot projects,<sup>10</sup> starting in September 1997, to be overseen by the Department of Culture, Media and Sport (DCMS; formerly the Department for National Heritage, DNH) and administered by the Museums and Galleries Commission (later Resource and then the Museums, Libraries and Archives Council. During its first year the PAS recorded over 13,500 finds (Bland 1999a, 4); most as paper records. In 1999 the Heritage Lottery Fund (HLF) funding led to a further five pilot schemes,<sup>11</sup> whilst the DCMS continued to cover the costs of the initial pilot areas. Funding was also sought for a national scheme across England and Wales (see Bland 2005b, 271-5), which was achieved in 2003: the HLF funded this for three years, with the Government directly funding the scheme from April 2006, and then (in England only) the British Museum's grant-in-aid from April 2014.<sup>12</sup> In its first full year as a national scheme (2003/4), the PAS recorded 47,099 items (Lewis 2004, 3). Further, the 21

<sup>9</sup> The Normand Review of Treasure Trove (in Scotland) recommended for 'the appointment and use of liaison officers' in Scotland, 'analogous to the Portable Antiquities Scheme in England and Wales...'.  
<sup>10</sup> These were established in Kent, Norfolk, North Lincolnshire, the North West, the West Midlands and Yorkshire.

<sup>11</sup> Established in Dorset and Somerset, Hampshire, Northamptonshire, Suffolk and Wales.

<sup>12</sup> In Wales the PAS is jointly funded by *Amgueddfa Cymru* – National Museum Wales (AC-NMW), CyMAL and CADW, and administered by AC-NMW (see also Lodwick 2008, 107).

new areas reported an average five-fold increase in Treasure finds (Bland 2005a, 444; Bland 2005b, 263- 5; Lewis 2010, 8 & xi), demonstrating the usefulness of the PAS for reminding finders of their legal obligations also. Currently, 38 locally based Finds Liaison Officers (FLOs) are funded through the PAS, supported by a small Central Unit based at the British Museum and a team of five National Finds Advisers (object period specialists), as well as interns and volunteers (Lewis 2015a).

## 1 Tensions

In England and Wales, relations between archaeologists and the metal-detecting community are mostly amicable, although underlying tensions are still apparent - even after almost 20 years of liaison (Thomas 2012a, 76-7). Although there are archaeologists who believe that metal-detecting should be banned or heavily regulated, as well as detectorists who are little interested in working with heritage professions (see Austin 2008, 122), there is a general consensus that (within the existing legal framework in England and Wales) it is best that archaeologists and metal-detectorists continue to work together to find common-ground (see Addyman 1995, 169; Dawson & Lewis 2004; Richards & Naylor 2008, 178; Winkley 2016b, 198). Even so, most archaeologists would like metal-detectorists to become more archaeologically-minded in their approach while searching for material culture. For many detectorists, however, their activities are purely a hobby, and as such should be fun, perhaps impulsive. Natasha Ferguson (2013, 3.1) explores the nuances of 'serious' hobbyists who straddle the divide, which is a reminder that the detecting community is 'a wide church'. Nonetheless, metal-detecting only has a useful role in archaeology if it is undertaken responsibly; that is to say that the activity adds to knowledge with practice that causes minimal damage to archaeology. The objective of liaison, therefore, must be to ensure that metal-detecting has maximum benefit to archaeology, but in an environment that enables public participation in the past, in its widest sense.

The remainder of this paper will explore some of the 'outstanding issues' that present challenges to the future of archaeological liaison with the detecting community in the UK, and present some possible solutions.

## 2 Is It Worth It?

The aims of the PAS are clear (Lewis 2015b, 2). These are to:

- record archaeological finds to advance archaeological knowledge;
- promote best archaeological practice;
- raise awareness of the importance of recording archaeological finds;
- increase public participation in professional archaeology;
- support museum acquisitions of archaeological finds.

Although the PAS does not prioritise its aims, stakeholders in the project will have clear views on which aims are most important, and this will necessarily influence the nature of those partnerships. Many public bodies, for example, view public engagement as the most important aspect of the PAS; especially given their funding mostly derives from public taxation. But for most archaeologists the fundamental importance of the PAS is that it logs archaeological finds that might not otherwise be recorded in order to advance knowledge. On the other hand, for many in the detecting community the PAS legitimises their hobby, whether they record finds or not. Of course these perspectives on the PAS are not mutually exclusive but enable it to be many things for many people.

The uniqueness of the PAS is that its data is generated through the discoveries of ordinary people - not professional archaeologists - meaning that the public is transforming our knowledge of the past. This is community archaeology in its truest sense. The immediacy of the PAS is not lost on those that ultimately fund it. Ed Vaizey, Minister for Culture 2010-16, recently said of the PAS: 'I love this scheme and the romantic feeling of discovering these treasures hidden under the ground for hundreds, thousands of years' (DCMS tweet 10/12/15).

To date (15/7/16) the PAS has recorded 1,195,565 objects on its online database ([www.finds.org.uk](http://www.finds.org.uk)), where they are available for all to see. This data is used in many ways, but most importantly as a resource for professional archaeologists and researchers to better understand the historic environment. In the last decade or so, PAS data have transformed the way archaeologists regard and use detector finds data. These advances recognise the inherent limitations of the data (Robbins 2014), as well as the archaeology of the plough-zone more generally: see for example Steve Trow's and Vince Holyoak's (2014) study of the wider impact of agriculture on archaeology. The plough-zone was once 'machined-off' or 'surface stripped' to get to the 'proper' archaeology below (Addyman & Brodie 2002, 180), but now it is understood to be a crucial layer, not only for understanding (and protecting) underlying archaeology, but also as a source for understanding the historic landscape in its widest sense, including the geo-spatial relationship between finds types within it (see Richards & Haldenby 2010; Worrell *et al* 2010). PAS data has been used in at least 455 research projects, including 20 pieces of large-scale research and 95 PhDs (Lewis 2015a, 12). Among the PhD studies have been Collaborative Doctoral Awards, including those of Tom Brindle (2014) and Philippa Walton (2012), who have used PAS data to better understand Roman Britain. Important current projects include; *Crisis or Continuity: hoarding in Iron Age and Roman Britain*,<sup>13</sup> which has a particular focus on the deposition of hoards in the 3rd-century AD; and *EngLald*,<sup>14</sup> which is using PAS and other data to analyse change in the English landscape between c.1500 BC and AD 1086. Also of note are the genesis of a project to better understand medieval trade and commerce through detector finds (Oksanen & Lewis 2015; Lewis 2016b),<sup>15</sup> and a CDA on metal-work of the Norman Conquest 1066.<sup>16</sup>

As noted above, the PAS has steadily seen an increase in the number of finds being recorded, from 13,500 paper records in the first full year of the PAS, to 47,099 in the first full year after the PAS was extended to the whole of England and Wales, to 82,272 in 2015. In recent years the number of finds has more-or-less plateaued, with the average for the last five years being 89,668. Although the numbers of finds recorded by the PAS is impressive, the Scheme's FLOs, interns and volunteers are unable to record everything that is found. In general-terms, the FLOs are selective in what they log on the PAS database, attempting to record all objects from the earliest periods of time and being selective for items of more recent date, especially those produced industrially, particularly from about 1540 to present. PAS data for 2015 shows that 38.9% of the finds are Roman, followed by 24.6% being post-medieval period, and 23.11% medieval in date (Lewis 2016a, forthcoming).

The problem of how to sample archaeological data is not unique to the PAS, though the Scheme is not totally in control of any sampling methodologies it applies, especially as finder's will have already selected what they choose to record. That said the biases in PAS data have been much more thoroughly explored than other datasets (see Robbins 2014). It is not possible to apply a single methodology to all parts of England and Wales, given differences in topography, land use, and settlement (both ancient and modern). Invariably finders (in most cases that is detectorists) will make their own decisions on what they share for recording, mostly based on their own perceptions of the archaeological value of the find: there is an understandable bias among finders towards older and more complete items (Robbins 2014, 34-6). In cases where finders do not wish to, or cannot,<sup>17</sup> disclose precise findspot information (at least to 100m<sup>2</sup>, but ideally 10m<sup>2</sup>),<sup>18</sup> the FLO is asked to consider how useful that information will be to archaeology: usually it will be less so.<sup>19</sup> In addition, FLOs will use their local knowledge of the archaeology of their county and research of its material culture to best gauge which finds to record or not. The issue that torments many FLOs (and indeed encourages them to work long hours) is that if they do not record a particular item, in all probability it will never be recorded and thus will never contribute to knowledge. This highlights a general

<sup>13</sup> See [www.le.ac.uk/departments/archaeology/projects/hoarding-in-iron-age-and-roman-britain](http://www.le.ac.uk/departments/archaeology/projects/hoarding-in-iron-age-and-roman-britain).

<sup>14</sup> See [www.oerc.ox.ac.uk/projects/englald](http://www.oerc.ox.ac.uk/projects/englald).

<sup>15</sup> See <https://medievalmarketsites.wordpress.com>.

<sup>16</sup> See [http://www.britishmuseum.org/research/research\\_projects/all\\_current\\_projects/collaborative\\_doctoral\\_awards/conquest\\_and\\_continuity.aspx](http://www.britishmuseum.org/research/research_projects/all_current_projects/collaborative_doctoral_awards/conquest_and_continuity.aspx)

<sup>17</sup> This might be because they have forgotten exactly where they found an item, rather than intentional.

<sup>18</sup> That is to say at least a 6-figure National Grid Reference, or ideally an 8-figure National Grid Reference.

<sup>19</sup> See *Finds Liaison Officers (FLOs) and Their Work* (in general): [www.finds.org.uk/getinvolved/guides/pressures](http://www.finds.org.uk/getinvolved/guides/pressures)

problem with hobby metal-detecting: although most finders are happy to record their finds and give as much information about the findspot as they can, they are often not particularly proactive in recording these finds. Whether a find is recorded or not, therefore relies largely on the efforts of the FLOs to make contact with finders.

### 3 Best Practice

In 2006 a *Code of Practice for Responsible Metal Detecting in England and Wales* was endorsed by the main archaeological, metal-detecting and landowner organisations represented on the Portable Antiquities Advisory Group.<sup>20</sup> In the context of the past history of uneasy relations between archaeologists and metal-detectorists, the *Code* is clearly an ‘achievement’ (Thomas 2012, 54). However, the *Code* is probably not as robust as many archaeologists would like it to be, and it may be a little bit too firm for the liking of many detectorists used to searching without let or hindrance. A few extracts from the *Code* serve to illustrate the point. Clause 5 states ‘being responsible means... wherever possible working on ground that has already been disturbed (such as ploughed land or that which has formerly been ploughed), and only within the depth of ploughing...’ Here then there is clear advice that digging beneath the plough-zone and on pasture is potentially damaging to archaeology, but the *Code* does not condemn it explicitly. Likewise, Clause 9 says ‘being responsible means... reporting any finds to the relevant landowner/occupier and (with the agreement of the landowner/occupier) to the Portable Antiquities Scheme, so the information can be passed into the local Historic Environment Record’. Although the *Code* says both the County Land and Business Association and the National Farmers Union (both members of the Portable Antiquities Advisory Group) ‘support the reporting of finds’, there is potential for finders to withhold items from recording based on their perceptions or knowledge of the landowners wishes, even if this is to the detriment of archaeology. As part of the PAS Strategy 2020 the *Code* is being reviewed; a process which has the support of the detecting community, as well as the other organisations represented on the Portable Antiquities Advisory Group. As it stands the *Code* is a big step forward in encouraging best practice, and its agreement was a major success for archaeologists and detectorists keen for closer cooperation.

In practice, the *Code* has few sanctions. Detecting is not licenced, and the national detecting organisations (the National Council for Metal Detecting and the Federation of Independent Detectorists) do not seem keen to make following this code a condition of membership: self-regulation, though itself not necessary a perfect solution (see Mackenzie & Green 2009) would be a powerful message to archaeologists who see detectorists little more than treasure hunters. Furthermore, there is also very little information about how many detectorists follow the *Code*, although most would describe themselves as responsible (whether that is based on their understanding of the *Code* or not).

Whatever the willingness of detectorists to prove themselves responsible, or not, the *Code* is gradually being adopted by other bodies as part of their commitment to the stewardship and management of the historic environment. For example, detectorists now require a permit to search on the foreshore owned by the Crown Estate and the Port of London Authority.<sup>21</sup> In the case of the former, there is a specific requirement for detectorists to follow the 2006 *Code*, whilst on the Thames foreshore finders must agree to certain conditions (PLA Permit) which includes reporting ‘all objects of archaeological or historical interest’ to the PAS or Museum of London (where the London FLO is based). In addition the Crown Estate is now also funding a project to record marine finds found by the public (notably fisherman and divers) - the

<sup>20</sup> This includes the Arts Council England, Association of Local Government Archaeologists, British Museum, Council for British Archaeology, Country Land and Business Association, Department for Culture, Media & Sport, Federation of Independent Detectorists, Historic England, National Council for Metal Detecting, National Farmers Union, National Museum Wales, Natural England, Royal Commission on the Ancient & Historic Monuments of Wales, Society of Museum Archaeologists & University College London.

<sup>21</sup> See <http://www.thecrownestate.co.uk/coastal/metal-detecting/> and <https://www.pla.co.uk/Environment/Metal-Detecting-and-Digging-on-the-Thames-Foreshore>.

Marine Antiquities Scheme, following the example of PAS and existing marine protocols.<sup>22</sup> Furthermore, finders searching on land under Countryside Stewardship are required to follow the *Code* (see *Countryside Stewardship Manual*, sec. 8:13).<sup>23</sup> Although the *Code* is difficult to enforce, any proven wrongdoing could lead to permissions being revoked and possible civil or legal prosecution.

Licensing has seemed attractive to those that wish to police metal-detecting, invariably members of the archaeological community, and could make the 2006 *Code* robust. Ironically it was during the STOP campaign that the Home Office ceased the requirement for metal-detectors to be licensed, under the Wireless and Telegraphy Act 1949. Both the imaginatively named DIG (The Detector Information Group), which represented the pro-detecting lobby, and members of the STOP campaign, saw this as a victory. DIG viewed the ceasing of licensing as a reinstatement of lost liberties, whilst STOP saw the action as marking the loss of official (Government) recognition for the hobby (Thomas 2012, 51). Likewise, some local authorities (such as Leicestershire County Council and Surrey County Council) have permit schemes for detecting on council-owned land, but few individual detectorists have applied for these, probably because the council maintains ownership of any finds discovered, which is at odds with detectorists who wish to keep what they find (this is discussed below).

An important issue raised in the *Code* (clause 11) suggests finders 'seeking expert help if you discover something large below the ploughsoil, or a concentration of finds or unusual material'. The *Code* tries to reassure finders that 'reporting the find does not change your rights of discovery, but will result in far more archaeological evidence being discovered'. This advice follows the *Treasure Act Code of Practice* (2002, sec. 78) which states that 'If a finder does not remove the whole of a find from the ground but reports it, thus affording the opportunity for the archaeological excavation or investigation of the remainder of the find, the original finder will normally be eligible for a reward for the whole find...' There have been a number of instances where the finders of important discoveries have stopped to allow archaeological excavation, as in the case of a hoard of 52,503 Roman coins found at Frome, Somerset (Moorhead *et al.* 2010), and an extremely important assemblage of coins of Alfred the Great of Wessex and Ceolwulf II of Mercia found with Viking Age jewellery (Williams & Naylor 2016, forthcoming). In both instances archaeological excavation allowed experts to better understand the context of discovery, which would have otherwise been lost. In the case of the Frome Hoard, this has led to a major Arts and Humanities Research Council-funded project to investigate hoarded metalwork in the Roman period (noted above).

Even so, there are too many occasions when detectorists fully or substantially excavate a find alone, as in the case of the near Lewes (Smith *et al.* 2015) and Staffordshire Hoards (Leahy & Bland 2009). In both cases, retrospective fieldwork took place revealing further archaeological information, but it would have been preferable if both were fully excavated by archaeologists. In most instances, two factors explain the tendency of finders to completely excavate their finds. First, is when finders become over excited at the moment of discovery and dig without properly thinking out the process. Second, they may have concerns about how to secure the site if the find is left alone. Both are understandable (though not necessarily justified) actions, greatly manifested by the fact that such discoveries are often made by individuals alone in open country or out of normal working hours. Although FLOs try to make themselves available, and are usually contactable by mobile telephone, invariably there are times when contact is not possible. In the case of the Watlington Hoard, the Oxfordshire FLO was abroad, but fortunately the excavation was handled by the Surrey & East Berkshire FLO, David Williams. Resourcing even small scale excavations can be tricky and occasionally it has been the case that other local archaeologists have not been keen to deal with such finds because of the potential difficulties - both morally and practically. Greatly needed therefore is '999' (112) hotline for finds reporting, as well as resources for emergency excavation: this issue of how best to respond to significant discoveries has been flagged as part of the PAS Strategy (Lewis 2015b, 6).

<sup>22</sup> See <http://www.wessexarch.co.uk/projects/marine/bmapa/index.html>

<sup>23</sup> <https://www.gov.uk/guidance/countryside-stewardship-manual>

## 4 Should All Finds be in a Museum?

Archaeologists, generally speaking, are less interested in objects for their own sake and more interested in what these objects tell us about the past. For the purpose of most archaeological studies, artifacts are simply pieces of evidence used to understand the past. In contrast, and again in general terms, metal-detectorists are more likely to be object-led in their investigations (Winkley 2016b, 113-5 & 124). This variance is probably best explained by the *modus operandi* of both groups. Nowadays archaeological excavation in Britain is mostly development-led, and therefore a reaction to potential damage to archaeology. Although there are also university-led excavations, and those managed by local archaeology groups, these are less common, and usually investigate a single site for several seasons of survey and excavation. Detecting, on the other hand, is almost entirely prospective. Although detectorists may research the archaeological potential of land they have permission to search (*ibid.* 158), these surveys are usually not likely to be controlled: that is to say sites will not be gridded, survey will unsystematic, and the time searching the site, or part thereof, will vary. These archaeological techniques seem to be completely at variance with one another, but that need not be the case.

It is possible to see a situation in the not-too-far-off future where individual archaeologists and detectorists commonly work together to explore the archaeological potential of land under cultivation, as opposed to just using detecting as part of controlled archaeological fieldwork; see for example work at Cottam by Dave Haldenby and Julian Richards (2009). One of the greatest benefits of metal-detecting (like field-walking) is the possibility to explore the countryside and reveal previously unknown sites of archaeological interest which would not be normally found through conventional archaeological survey, assuming archaeologists had a desire to investigate the countryside this way. Simply put, since agriculture (not detecting) is responsible for the destruction of most archaeological sites (see Darvill & Fulton 1998), metal-detecting can be a useful tool to measure that impact and rescue surface finds and those in the plough-zone from destruction, if undertaken responsibly.

Whatever archaeologists might think about detectorists and metal-detecting, it might be argued that there is no such thing as ‘preservation in situ’ in cultivated plough-soil. The damage of ploughing (and manuring) work cumulatively to damage the archaeological potential of land, by causing not only damage to material culture but also by causing erosion resulting in deeper ploughing (pers. comm. Deckers 2016). An oddity of the Archaeological Monuments and Areas Act 1979 is that although metal-detecting is not permitted on Scheduled Monuments without consent of Historic England (in England) or Cadw (in Wales), certain activities might still continue, including ploughing: see Ancient Monuments (Class Consents) Order 1994.<sup>24</sup> Therefore there are instances of ploughing being allowed to further damage archaeological sites of national interest, but the recovery of finds at risk (through metal-detecting) is illegal. Surely, here is an opportunity for archaeologists and detectorists to work together for the common good?

Such liaison is evident in other areas of archaeological practice, as will be the case in other European countries, even those which regulate metal-detecting more fully. Increasingly it is common for archaeologists to welcome detectorists on site as part of archaeological fieldwork. It is well known that metal small finds can be missed during archaeological excavation, even allowing for careful sieving (see Addyman 2008, 57). Therefore detectors can be a welcome tool to capture crucial dating evidence. In the past, detectorists were often confined to the ‘spoil-heap’, where unless the removed soil is deposited carefully, the immediate context of any finds recovered is lost. Increasingly detectorists have been used as part of the pre-excavation survey work, and even during excavation itself to identify likely findspots that can be flagged and excavated archaeologically. Likewise, for (most types of) battlefield archaeology, metal-detectors are a crucial tool used also by archaeologists (Cornelison & Smith 2008; Pollard 2008, 191-5 & 200; Foard & Morris 2012, 26-30). Related to this, are the skills needed to use a metal-detector. Not all detectorists are effective at using a metal-detector, and therefore careful vetting is needed to ensure those most suitable to archaeological fieldwork are taken on site. Conversely, there is little use in giving archaeologists a detector and assuming he or she will be able to use it effectively. Metal-detecting is a skill that develops through time, with experience.

<sup>24</sup> <http://www.legislation.gov.uk/uksi/1994/1381/schedule/made>



That is not to say that archaeologists could not, or should not, learn to use metal-detectors, though from the perspective of efficiency and economy of effort it makes best sense to involve experienced detectorists (whether they be archaeologists or not) in professional archaeology

Outside archaeological fieldwork, it is probably fair to say that most detectorists search to find objects, rather than to identify new sites or build knowledge (see Dobat & Jensen and Thomas, both this volume, for views on what motivates detectorists). This is not to say that they are necessarily motivated by money, or do not have a genuine interest in the past, but identifying potential sites of archaeological interest is (in most cases) incidental, or at least a secondary activity. That said, there is evidence many detectorists have general (though varied) interest in the history of the landscape they detect (Winkley 2016a, 3-4 & 14-15; 2016b, 182-4). While detectorists, when asked, do not mention this as their primary motivation (Winkley 2016b, 109-11), it is apparent that they will not spend unnecessary time on 'barren land', preferring to rework hotspots or identify finds concentrations (Robbins 2014, 72). Interest in the finds recovered will vary from individual to individual, but those finds most treasured will be precious metal, medieval or earlier in date, and mostly complete. It is an aspiration for archaeologists that detectorists take care to bag finds whilst in the field and record the findspot thereof (see 2006 Code, clause 7), but the reality is that few (though increasing in number) do this, preferring to recollect findspots post-search (PAS database). The PAS is committed to encouraging finders to detect in accordance with best practice, and this has been identified as an issue that needs addressing further in the PAS Strategy (Lewis 2015b, 6). As a result it is likely the Code will be modified to reflect changing expectations of finders, and further efforts will be made to encourage as many detectorists to follow its definition of best practice.

Most detectorists, in common with archaeologists, recognise the importance of museums in educating the public about their past. Whereas archaeologists have a common belief that such material should be in museums, whether displayed or not (see SMA Constitution),<sup>25</sup> many detectorists will prefer to hold onto the items they find, at least for a time. Under English Law the landowner will have best title to the objects found, but many finders will have (at least) verbal agreements with landowners about the future ownership of any discoveries. Antiquities dealers, and online markets, such as eBay, provide an outlet for unwanted detector finds, even items of apparently low value. It is doubtful many have been offered to museums first. Perhaps there is an assumption that museums will only acquire important items covered by the Treasure Act (see below) and are not interested in non-Treasure finds; which is not the case. Ultimately many detectorists are well aware of the financial value of their finds and therefore are unlikely to give them up without financial compensation, and/or prefer to sell them quickly without the bother of the necessary bureaucracy through museum acquisition.

## 5 Not in it for the Money

Although most consider the Treasure Act to have been successful (see Bland 2005a, 443), it might be argued that it has further fostered within the consciousness of detectorists the notion that they should be financially rewarded for their discoveries; which happens if the items are acquired by a museum. Conversely, the Treasure Act is clear that archaeologists should not expect any financial reward for their efforts,<sup>26</sup> though what constitutes 'an archaeologist' (in England at least) is clearly somewhat vague. Professional archaeologists are paid for their work whereas detectorists are not. Further, the Government has always been keen to ensure compliance under the Act through lessening the attractiveness of black-market sales, hence the logic behind the payment of a finder's reward. The payment of rewards, nonetheless, plays into the hands of archaeologists who are (often mistakenly) convinced that detectorists are primarily motivated by money.

<sup>25</sup> This says: 'To campaign for the preservation of archaeological and historical sites and the associated finds from there as an irreplaceable cultural resource...' (SMA Constitution: 4.7).

<sup>26</sup> The *Treasure Act Code of Practice* (para 81) states that 'rewards will not be payable when the find is made by an archaeologist or anyone engaged on an archaeological excavation or investigation'.

As noted above, not all detectorists will sell their finds (Winkley 2016b, 126). Indeed many ‘curate’ their own collection (and some do it well), finding enjoyment in having a personal collection, so they can re-live the excitement of discovery with friends and family and share the opportunity of handling ancient objects. Others will offer their finds to museums. Though it is probably right that many will expect some financial settlement, but others will donate. The Treasure Act enables finders and landowners to waive their right to a reward and some have done so, though mostly for low value items: in 2013, 166 parties waived their right to a reward in 119 Treasure cases of a total 308 acquired by museums (Parol & Richardson 2015, 11; Lewis 2015a, 4). Experience shows that where finders have a relationship with a local museum, the likelihood that they will donate finds significantly increases. Examples of such donations are highlighted in the PAS annual reports (see for example, Lewis 2015a, 15). However, the reality is that archaeological finds do have a financial value and most people, especially those less well off, find it hard to decline the money. Detectorists are no different to landowners in this respect, and maybe if archaeologists were permitted a reward they would not refuse one either.

As part of the Treasure process, finds are valued by independent experts within the trade, and these values are then considered by the independent Treasure Valuation Committee. This committee recommends a final value for the find, which is approved by the Secretary of State for Culture, Media & Sport. The process allows finders to challenge values and commission their own valuations. Seldom do finders challenge values perceived as too high, but then neither do museums challenge what might be seen as too low. The process is designed to be fair (and seen to be fair), but the ‘negotiations’ over value do lead to complaints and resentment. Finders, in particular, might complain about the slowness of the process (which may be prolonged though appeals they make) and a perception that the committee is purposefully suppressing the value, though it has no interest to do so. Simpler, though arguably more autocratic, is the process of *Danefæ* in Denmark (Madsen *et al.* 2010),<sup>27</sup> where values are decided by a museum-based committee; see also Saville (2008, 88) regarding the payment of rewards in Scotland. Surprisingly, there is no evidence that there is significant underreporting in those countries as a result compared with England and Wales, suggesting reward values do not necessarily impact on reporting.

Nonetheless ascribing a value to archaeology presents an ethical problem for archaeologists, exacerbated by the fact that archaeology is underfunded, and increasingly so due to Government and local authority spending cuts, especially following the 2008-13 recession. The Government’s long overdue review of the Treasure Act Code of Practice (now expected by the end of 2016) offers potential for reworking guidance, though this is unlikely to consider the issue of rewards. The reality, instead, is that less finds that is current will be acquired by local museums, who will be necessarily selective in what they seek to acquire. More should be done, therefore, to publicly recognise finders (and landowners) who forego a reward in the interest of important finds ending up in museums for all to enjoy. Currently it is the case in England that those who waive their right to a Treasure reward receive a certificate from the Minister for Culture. A further issue (not explored here since it is complex, but worthy of contemplation) is that if, as it seems, museums do not want all the objects detectorists find, then what should happen to those finds? Is it acceptable for people to own material culture, especially if it is not wanted by a museum (for a discussion of private ownership of the past see Robson, Treadwell & Gosden 2006)?

## 6 Summary

England and Wales could well be described as a detectorist’s utopia, when compared with many other parts of Europe. There can be little doubt, nonetheless, that the PAS and Treasure Act have made a significant and positive impact on Britain’s archaeological knowledge, in a large part due to the efforts of detectorists wishing to act more responsibly. Enormous knowledge has been gained from encouraging detectorists to record their finds with PAS, and due to the reform of Treasure law many more items have been acquired by museums. However, the status quo need not remain, and it is possible for detectorists and archaeologists to

<sup>27</sup> See also <http://natmus.dk/salg-og-ydelser/museumsfaglige-ydelser/danefae/>

work together even more closely, for common good. The *Code of Practice for Responsible Metal Detecting in England and Wales* could be reformed to provide a benchmark for best practice, to ensure metal-detecting furthers public interest and involvement in archaeology, whilst ensuring that underlying archaeology is protected and the most important items of material culture are preserved in museums. It seems nonsensical to pigeon hole people based on the tools they use (detector or trowel). More important is how that tool is used, and whether the individual using it wishes to learn and add to knowledge about the past, or not.

The decision is not 'theirs' or 'ours', but that of 'us', collectively...

## Bibliography

- Addyman, P. V. (1995). 'Treasure Trove, Treasure Hunting and the Quest for a Portable Antiquities Act', in K. W. Tubb (Ed.), *Antiquities Trade or Betrayed: legal, ethical and conservation issues* (London: Archetype/UKIC), 163-172.
- Addyman, P. (2008). 'Before the Portable Antiquities Scheme', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 51-61.
- Addyman, P. & Brodie, N. (2002). 'Metal-detecting in Britain: catastrophe or compromise?', in N. Brodie & K. W. Tubb (Eds.), *Illicit Antiquities: the theft of culture and the extinction of archaeology* (London: Routledge), 179-84.
- Austin, T. (2008). 'Building Bridges Between Metal Detectorists and Archaeologists', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 119-23.
- Bate, J. & Thornton, D. (2012). 'Shakespeare: staging the world' (London: British Museum Press).
- Baldwin, A. & Joy, J. (2016). *A Celtic Feast: the Iron Age cauldrons from Chiseldon, Wiltshire* (London: British Museum Press).
- Bland, R. (1996). 'Treasure Trove and the Case for Reform', *Art Antiquity and Law* 1:1, 11-26. Bland, R. (1999a) (Ed.). *Portable Antiquities Annual Report 1997-98* (London: DCMS).
- Bland, R. (1999b). 'The Treasure Act and Portable Antiquities Scheme: a progress report', *Art, Antiquity and Law* 4:3, 191-2003.
- Bland, R. (2005a). 'A Pragmatic Approach to the Problem of Portable Antiquities: the experience of England and Wales', *Antiquity* 79, 440-7.
- Bland, R. (2005b). 'Rescuing Our Neglected Heritage: the evolution of the Government's Policy on Portable Antiquities in England and Wales', *Cultural Trends* 14 (4): 56, 257-97.
- Bland, R. (2008). 'The Development and Future of the Treasure Act and Portable Antiquities Scheme', in S. Thomas & P. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 63-85.
- Brindle, T. (2014). *The Portable Antiquities Scheme and Roman Britain*, British Museum Research Publication 195 (London: British Museum Press).
- Campbell, S. (2003). 'Metal Detecting, Collecting and Portable Antiquities: Scottish and British Perspectives', *Internet Archaeology* 33; <http://dx.doi.org/10.11141/ia.331.1>
- Code (2016). – *Code of Practice for Responsible Metal Detecting in England and Wales*.
- Cornelison, J. E. & Smith, G. S. (2008). 'Archaeology, Metal Detecting, and the Development of Battlefield Archaeology in the United States', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 33-49.
- Darvill, T. & Fulton, A. (1998). *The Monuments at Risk Survey of England 1995* (Bournemouth & London: Bournemouth University & English Heritage).
- Dawson, D. & Lewis, M. (2004). 'The Portable Antiquities Scheme: recording the past', in A. G. Lange (eds.) *Reference Collections: foundations for future archaeology* (Amersfoort, ROB), 93-101.
- DNH (1996). – *Portable Antiquities: a discussion document* (London: Department of National Heritage).
- Elder, J. (1980). 'Metal Detectors Menace', *District Councils Review*, June/July 1980, 137. Evans, A. C. (1986). *The Sutton Hoo Ship Burial* (London: British Museum Press).
- Ferguson, N. (2013). 'Biting the Bullet: the role of hobbyist metal detecting within battlefield archaeology', *Internet Archaeology* 33. <http://dx.doi.org/10.11141/ia.33.3>.
- Foard, G. & Morris, R. (2012). *The Archaeology of English Battlefields: conflict in the pre-industrial landscape*, CBA Research Report 168 (York: Council for British Archaeology).
- Green, B. & Gregory, T. (1978). 'An Initiative on the Use of Metal-detectors in Norfolk', *Museums Journal* 4, 161-2.
- Haldenby, D. & Richards, J. D. (2009). 'Settlement Shift at Cottam, East Riding of Yorkshire, and the Chronology of Anglo-Saxon Copper-alloy Pins', *Medieval Archaeology* 53, 309-15.
- Hanworth, R. (1995). 'Treasure Trove: new approaches to antiquities legislation', in K. W. Tubb (Ed.), *Antiquities Trade or Betrayed: legal, ethical and conservation issues* (London: Archetype/UKIC), 173- 5.
- Leahy, K. & Bland, R. (2009). *The Staffordshire Hoard* (London: British Museum Press). Lewis, M. (2004) (Ed.). *Portable Antiquities Scheme Annual Report 2003/04* (London: MLA).

- Lewis, M. (2013). 'Pilgrim Signs of St Margaret of Antioch: some thoughts on their spatial distribution', in J. Naylor (ed.), 'Portable Antiquities Scheme', *Medieval Archaeology* 57, 280-3.
- Lewis, M. (2015a) (Ed.). *Portable Antiquities Scheme Annual Report 2014* (London: British Museum).
- Lewis, M. (2015b). *Treasuring Our Past: Portable Antiquities & Treasure Strategy 2020* (London: British Museum).
- Lewis, M. (2015c). 'Les émaux religieux de Limoges découverts en Angleterre', *Cahiers Landarc*, 11 (2015), 1-59.
- Lewis, M. (2016a, forthcoming) (Ed.). *Portable Antiquities Scheme Annual Report 2015* (London: British Museum).
- Lewis, M. (2016b). 'The Artefactual Evidence for the Urbanisation of Medieval England: understanding the contribution of metal finds recorded through the Portable Antiquities Scheme', in B. Jervis, L. G. Broderick & I. Grau Sologestoa (Eds.), *Objects, Environment, and Everyday Life in Medieval Europe* (Turnhout: Brepols), 157-85.
- Lewis, M. (2016c). 'Papal Bullae', in J. Naylor (Ed.), 'Portable Antiquities Scheme', *Medieval Archaeology* 59, 305-9.
- Lewis, M. & Richardson, I. (2010) (Ed.). *Portable Antiquities & Treasure Annual Report 2008* (London: British Museum).
- Lodwick, M. (2008). 'Metal-Detecting and Archaeology in Wales', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 107-18.
- Mackenzie, S. & Green, P. (2009) (Eds.). *Criminology and Archaeology: studies in looted antiquities* (Oxford: Hart Publishing).
- Madsen, A. P. K. et al. (2010). *Danefæ: skate fra den Danske muld* (Copenhagen: Nationalmuseet/Gyldendal).
- Moorhead, S., Booth, A. & Bland, R. (2010). *The Frome Hoard* (London: British Museum Press).
- Needham, S., Parfitt, K. & Varndell, G. (2006). *The Ringlemere Cup: precious cups and the beginning of the Channel Bronze Age*, British Museum Research Publications 163 (London: British Museum).
- Normand, A. C. (2003). *Review of Treasure Trove Arrangements in Scotland* (Edinburgh: Scottish Executive).
- Oksanen, E. & Lewis, M. (2015). 'Medieval Markets and Portable Antiquities Scheme Data', *Medieval Settlement Research* 30, 54-9.
- Parol, J. & Richardson, I. (2015). *Treasure Act Annual Report 2013* (London: British Museum).
- PLA Permit – *Permit to Search the Thames Foreshore* (London: Port of London Authority/The Crown Estate).
- Pollard, T. (2008). 'The Rust of Time: metal-detecting and battlefield archaeology', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 181-202.
- Richards, J. D. & Naylor, J. D. (2008). 'The Real Value of Buried Treasure. VASLE: the Viking and Anglo-Saxon Landscape and Economy Project', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 167-79.
- Richards, J. D. & Haldenby, D. (2010). 'Charting the Effects of Plough Damage Using Metal-detected Assemblages', *Antiquity* 84, 1151-62.
- Robbins, K. (2014). *Portable Antiquities Scheme: a guide for researchers* (London: PAS).
- Robson, E., Treadwell, L. & Gosden, C. (2006) (Eds.). *Who Owns Objects?* (Oxford: Oxbow).
- Saville, A. (2008). 'Treasure Trove and Metal Detecting in Scotland', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 87-98.
- SMA Constitution – *Society for Museum Archaeology Constitution*.
- Sheldon, H. (1995). 'The Lure of Loot: an example or two', in K. W. Tubb (Ed.) *Antiquities Trade or Betrayed: legal, ethical and conservation issues* (London: Archetype/UKIC), 176-80.
- Sheridan, A. (1995). 'Portable Antiquities Legislation in Scotland: what is it, and how well does it work?', in K. W. Tubb (Ed.), *Antiquities Trade or Betrayed: legal, ethical and conservation issues* (London: Archetype/UKIC), 193-203.
- Smith, S., O' Connor, E., Chestnutt, C. & Kaminski, J. (2015). *The 'near Lewes' Middle Bronze Age Hoard, LEWSA 2014.3*. Lewes: Sussex Archaeological Society.
- Thomas, S. (2008). 'Wanborough revisited: the rights and wrongs of treasure trove law in England and Wales', in S. Thomas & P. G. Stone (Eds.), *Metal Detecting and Archaeology: the relationships between archaeologists and metal detector users* (Woodbridge: The Boydell Press), 153-65.
- Thomas, S. (2012a). 'Archaeologists and Metal-detector Users in England and Wales; past, present and future', in R. Skeates, C. McDavid & J. Carman (Eds.), *The Oxford Handbook of Public Archaeology* (Oxford: Oxford University Press), 60-81.
- Thomas, S. (2012b). 'How STOP started: early approaches to the metal detecting community by archaeologists and others', in G. Moshenska & S. Dhanjal (Eds.), *Community Archaeology: theories, methods, practices* (Oxford: Oxbow), 42-57.
- Thomas, S. (2012c). 'Searching for Answers: a survey of metal-detector users in the UK', *International Journal of Heritage Studies* 18 (1), 49-64.
- Treasure Act Code of Practice (2008) – *The Treasure Act 1996 Code of Practice (2nd Revision): England and Wales* (London: DCMS).
- Trow, S. & Holyoak, V. (2014). 'The Erosion of Archaeology: the impact of ploughing in England', in E. Meylemans, J. Poesen & I. In't Ven (Eds.), *The Archaeology of Erosion, the Erosion of Archaeology; Proceedings of the Brussels Conference, Relicta Monografieën* 9, 55-62.
- Williams, G. & Naylor, J. (forthcoming). *Watlington Viking Hoard* (Oxford: Ashmolean Museum).
- Winkley, F. (2016a). 'The Phenomenology of Metal Detecting: insights from a unique type of landscape experience', *Papers from the Institute of Archaeology* 25(2): 13, 1-15. <http://dx.doi.org/10.5334/pia.496>

- Winkley, F. M. B. (2016b). *More than Treasure Hunting: the motivations and practices of metal detectorists and their attitudes to landscape*, unpublished PhD thesis (London: University College London).
- Walton, P. (2012). *Rethinking Roman Britain: coinage and archaeology*, Moneta Monograph 137 (Wetteren: Moneta).
- Worrell, S., Egan, G., Naylor, J., Leahy, K. & Lewis, M. (2010). *A Decade of Discovery: proceedings of the Portable Antiquities Scheme conference 2007*, *British Archaeological Reports (British Series) 520* (Oxford: Archaeopress).