

## **WHAT HAVE METAL-DETECTORISTS EVER DONE FOR US? DISCOVERING BRONZE AGE GOLD IN ENGLAND AND WALES**

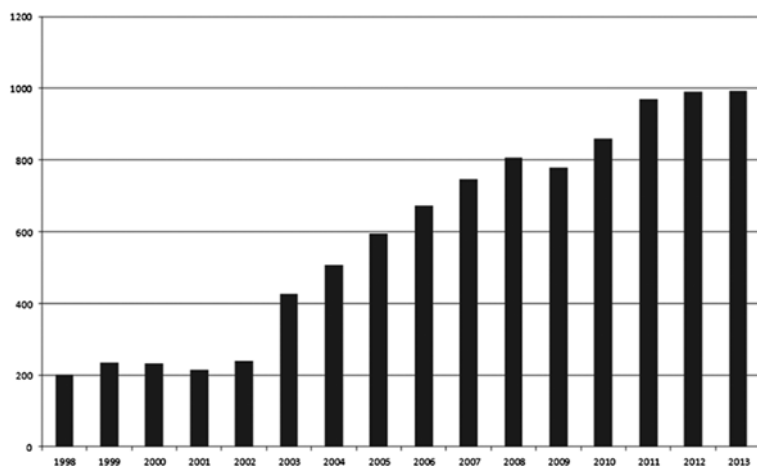
In the last three decades, England and Wales have experienced a dramatic rise in developer-funded archaeological fieldwork, with over 27,000 field evaluations occurring between 1991 and 2007 in England alone. The scale of this activity reflects broader patterns across North-West Europe (Bradley et al. 2012). Less well-known is the increase in discoveries made by metal-detectorists in England and Wales. This rise is particularly noticeable since the implementation of the Treasure Act (1996 amended 2002) and the Portable Antiquities Scheme (PAS) ([www.finds.org.uk](http://www.finds.org.uk)), which was piloted in 1997 and subsequently expanded across England and Wales in 2003 (Bland 2005).

Archaeologists have only slowly started to realise the research potential of the thousands of new finds generated each year by metal-detectorists, and most attention has been limited to those working in or with museums. This stands in contrast to numismatists, who quickly harnessed this data for numerous projects (e. g. Leins 2008; Bland/Loriot 2010; Walton 2012). This slowness by archaeologists stems from a traditional and often strong antipathy towards metal-detecting (see Oxford Archaeology 2009; Thomas/Stone 2009; Gill 2010 and replies; Compagnon 2011; Campbell/Thomas 2013). In addition, there is also a relative lack of interest or expertise in material culture in many British university departments. The consequence of this hostility is that, with the notable exception of coins, there has been little appreciation of the potential impact of metal-detected finds to the understanding of the past, especially when compared to developer-funded archaeology. This situation is changing, but only slowly. Recent projects have examined the representativeness of the PAS data (Robbins 2013), as well as its contribution to Iron Age Celtic art (Garrow/Gosden 2012) as well as Roman and early medieval activity (Richards/Naylor/Holas-Clark 2009; Brindle 2014; see also papers in Worrell et al. 2010). However, with the exception of Iron Age Celtic art (c. 300 BC-AD 100) (Garrow/Gosden 2012), there is an absence of any comprehensive and comparative analysis of the contribution of metal-detecting to our understanding of a major prehistoric material or object group.

The purpose of this paper is to analyse the impact of the Treasure Act (1996) on the reporting of discoveries of Bronze Age (c. 2500-800 BC) gold objects in England and Wales. These finds are primarily, though not exclusively, made by metal-detectorists. Our selection of Bronze Age gold as a case study is deliberate. Gold objects are highly visible, preserve exceptionally well and, due to their contemporary value, have always attracted scholarly and public interest. Even when the artefacts have been sold or melted, records frequently survive (Eogan 1994, 2-8). The continuing interest in Bronze Age gold shown by scholars, collectors and museums, as well as national and local authorities, has allowed us to reconstruct a relatively comprehensive database of its discovery. This has permitted us to investigate similarities and differences in its finding, distribution, chronology, and typology. It also offers the opportunity to examine the cumulative impact on the understanding of the Bronze Age.

### **TREASURE TROVE, TREASURE ACT, AND THE PORTABLE ANTIQUITIES SCHEME**

The Treasure Act (1996) came into force in 1997. It applies to England, Wales, and Northern Ireland, but not Scotland, the Channel Islands, or the Isle of Man. It obliges the finder of an object which is legally consid-



**Fig. 1** Number of all Treasure Trove cases (1990-1996) and Treasure Act cases (1997-2013) in England, Wales and Northern Ireland between 1990 and 2013. – (Illustration B. Roberts).

ered Treasure to notify the coroner for the district in which the object came to light. This must be done within 14 days of discovery. The government then conducts an inquest to determine if the object constitutes Treasure or not. When making their decision, the government receives advice in the form of a report prepared by the national museum. If an object is declared Treasure, the coroner will determine any reward due and who it is to be paid to (usually it is divided between the landowner and finder). The coroner receives advice on the size of rewards from the independent Treasure Valuation Committee.

The Treasure Act replaced the common law of Treasure Trove, which dated back to the Middle Ages. Under Treasure Trove, only objects of silver and gold which had been deliberately buried with the intention of subsequent recovery, and whose original owners or heirs were unknown, were classed as Treasure Trove and became the property of the Crown (Bland 2009). In the context of Bronze Age gold, the implication was that single finds were often treated as casual losses and therefore were not deemed Treasure Trove. Consequently, objects such as gold penannular rings, which are almost always discovered singly, were either ignored or returned to the finder (Varndell 2001). Under the Treasure Act (1996) the definition of Treasure was extended to:

- a) all objects, other than coins, at least 300 years old, with at least 10 % of gold or silver;
- b) groups of two or more coins from the same find, provided they are at least 300 years old (if they have less than 10 % of gold or silver there must be at least ten coins).

All objects found in association were also defined as Treasure. In 2003, the Treasure Act was extended to include prehistoric base-metal deposits of two or more artefacts (e. g. Bronze Age bronze hoards). The Treasure Act applies to finds made on land and on the foreshore (the beaches and river banks exposed at low tide). Underwater discoveries in the United Kingdom are covered by the Protection of Wrecks Act (1973) and must be reported to the Receiver of Wreck ([www.gov.uk/wreck-and-salvage-law](http://www.gov.uk/wreck-and-salvage-law); 15.8.2014). All reported Treasure finds have been catalogued and published in the Treasure Annual Reports since 1997. The number of Treasure cases between 1990 and 2013 is shown in **figure 1**, and the impact of the Treasure Act (1996) and the Treasure Act (2002) amendment (encompassing prehistoric base-metal hoards) is clear from the jump in cases in 1998 and 2003.

In 1997, to coincide with the introduction of the Treasure Act (1996), the PAS was created to record all archaeological objects – not just those classified as Treasure – found by members of the public (Dobinson/Denison 1995; see Addyman 2009). It started as a recording programme in six pilot regions. In 2001, the PAS added a website with a basic online database. In 2003, the PAS was expanded across all regions of

England and Wales, with 36 regional representatives, 6 national specialists/co-ordinators, and 6 support posts. Funding was provided with a Heritage Lottery Fund (HLF) grant. In 2009-2010, the PAS database was substantially redesigned, aiding data entry and use by the public. This leads to a sharp increase in the number of users and the finds recorded ([www.finds.org.uk](http://www.finds.org.uk); Pett 2010). By August 2014, nearly 1,000,000 objects had been recorded on the database. The Treasure Act (1996; 2002) cases are currently being added to this database. Reports of Bronze Age gold discoveries are now accessible, although to access find-spots is restricted for most users.

## **METAL-DETECTING**

Metal-detecting is legal in England and Wales, providing it is not done in a scheduled archaeological site and the landowner gives permission. While the highly-publicised discovery of spectacular finds such as the Anglo-Saxon hoard from Lichfield (Staffordshire, West Midlands; Leahy et al. 2011), and the subsequent large rewards, can give the impression that the primary goal of metal-detectorists is »buried treasure« and »making it rich«, a recent survey of metal-detectorists demonstrated a complex diversity of motivations and activities. For instance, »interest in the past« rather than money was the motivation of the majority, and one-third had collaborated with archaeologists (Thomas 2011b; see also Thomas 2012).

In 1980, the archaeological establishment in Britain launched a largely negative campaign against all metal-detecting, not simply the illegal detecting on scheduled archaeological sites. The campaign ignored the positive results of engagement as in Norfolk (East Anglia; Gregory 1983) and subsequently failed for several reasons, including the lack of widespread political support and an arguably more effective campaign by metal-detectorists (Bland 2005; Thomas 2011a). The relative numbers of both groups are worth considering. In 2006, there were an estimated at 12,000-14,000 individuals practicing metal-detecting in England and Wales (Thomas 2011b, 59), compared with 6865 professional archaeologists in the entire United Kingdom in 2007/2008 (Aitchison/Edwards 2008, 11). Since 2008, there has been a substantial contraction in commercial archaeology, with only 4792 professional archaeologists recorded in 2012 (Aitchison/Rocks-Macqueen 2013). In the same period, though, is highly probable that the number of people metal-detecting has actually increased.

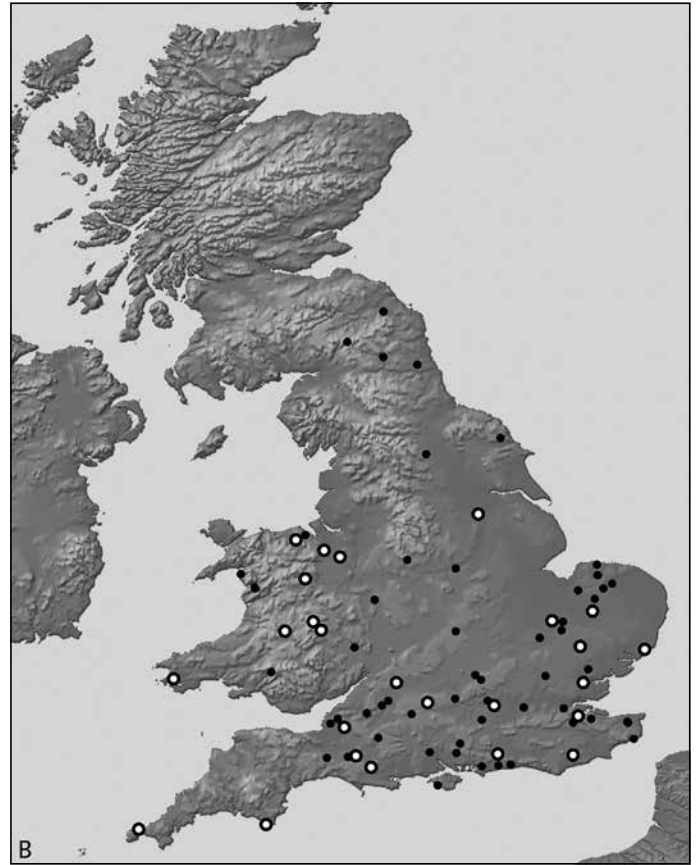
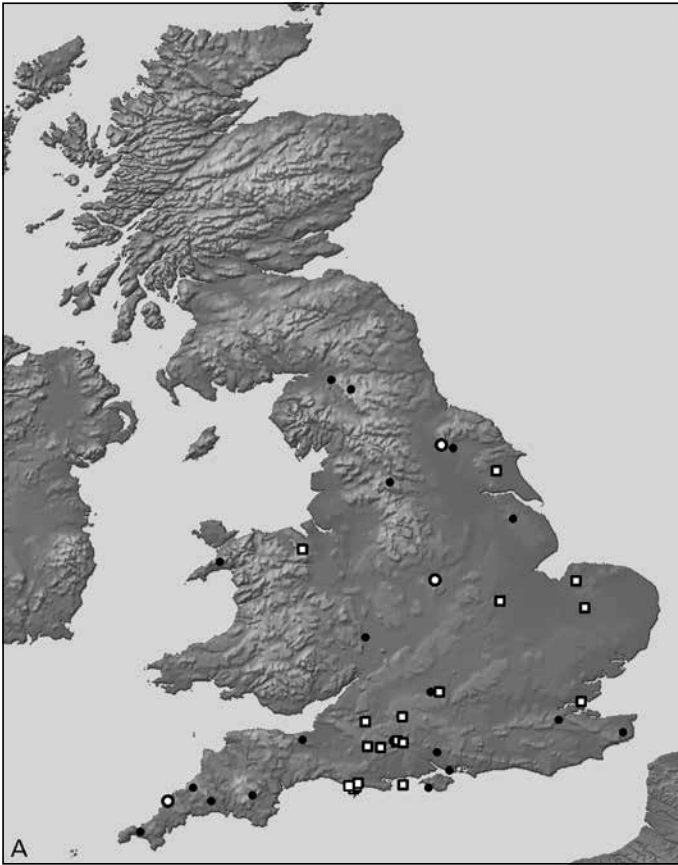
The Treasure Act (1996; 2002) and the PAS should therefore be seen as a pragmatic solution to the differing goals of archaeologists and metal-detectorists. It generates valuable archaeological information, by obliging finders to report their discoveries, while acknowledging that metal-detecting is a legal and popular activity, and one that would now prove impractical to stop. It also creates positive incentives for reporting discoveries, and removes much of the attractiveness of selling antiquities illegally.

## **DATA COLLECTION**

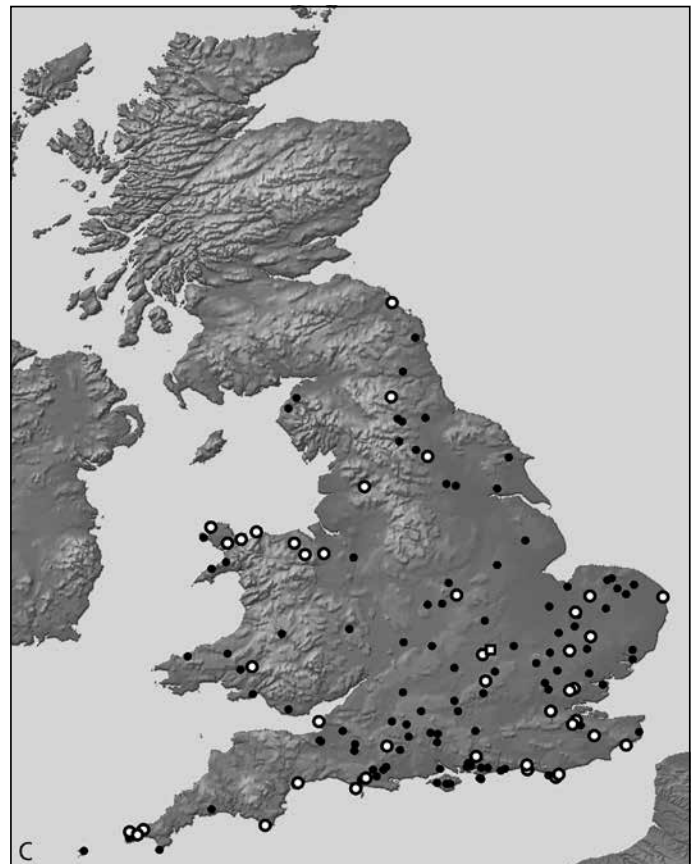
To assess the impact of the Treasure Act (1996), we constructed a comprehensive database of all known of Bronze Age gold objects in England and Wales. Fortunately, ongoing scholarly interest had led to the publication of many definitive papers in the last 50 years on specific gold types (see bibliography in Murgia/Melkonian/Roberts 2014), as well as two large syntheses with catalogues by J. J. Taylor (1980, although data collection ceased in 1973) and G. Eogan (1994). In addition, we consulted the British Museum archives for relevant Treasure Trove cases, annual reports and rejected cases dating from 1953-1996. We incorporated all individual relevant case reports for finds made under the Treasure Act (1996) until the end of 2010.

	1740-1799	1800-1849	1850-1899	1900-1949	1950-1972	1973-1996	1997-2010	no date	total
<b>A: total find-spots</b>									
number of find-spots discovered	3	50	54	51	37	52	120	4	371
rate of find-spots discovered per year	0.05	1.00	1.08	1.02	1.54	2.26	8.57	–	–
<b>B: total objects</b>									
number of objects discovered	13	115	84	85	61	77	290	7	732
rate of objects discovered per year	0.22	2.30	1.68	1.70	2.54	3.35	20.71	–	–
<b>C: number of find-spots by region</b>									
North-East	0	1	2	5	0	0	2	10	10
North-West	0	2	0	0	1	2	1	6	6
Yorkshire & Humberside	0	0	5	6	3	0	8	22	22
East Midlands	0	0	3	2	1	3	7	16	16
West Midlands	1	1	1	1	2	0	6	12	12
East Anglia	0	11	5	6	10	13	20	65	65
South-East	0	8	18	17	7	13	35	98	98
South-West	1	20	14	11	5	15	26	92	92
Wales	1	7	5	3	7	6	13	38	38
no location	4	0	1	0	1	0	2	8	8
<b>D: number of objects by region</b>									
North-East	0	1	3	5	0	0	7	0	16
North-West	0	3	0	0	2	2	1	0	8
Yorkshire & Humberside	0	0	5	8	3	0	9	0	25
East Midlands	0	0	3	2	1	4	8	0	18
West Midlands	1	1	1	1	2	0	6	0	12
East Anglia	0	17	9	7	19	20	26	4	102
South-East	0	24	24	38	14	14	84	1	199
South-West	1	60	26	21	6	20	121	0	255
Wales	11	9	12	3	13	17	26	2	93
no location	0	0	1	0	1	0	2	0	4
<b>E: number of find-spots discovered by phase</b>									
EBA	1	9	11	9	4	3	13	0	50
MBA	2	23	13	14	13	12	33	2	112
LBA	0	18	30	27	19	36	69	2	201
imprecise or no phase	4	0	0	1	1	1	1	0	8
<b>F: find-spots discovered per year by phase</b>									
EBA	0.02	0.18	0.22	0.18	0.17	0.13	0.93		
MBA	0.03	0.46	0.26	0.28	0.54	0.52	2.36		
LBA	0.00	0.36	0.60	0.54	0.79	1.57	4.93		

**Tab. 1** The number of find-spots and objects discovered in England and Wales, rate of discovery, sorted by date of discovery, region, and Bronze Age phase. – EBA: Early Bronze Age; MBA: Middle Bronze Age; LBA: Late Bronze Age.



**Fig. 2** Find-spot locations with hoards (○), burials (□) and single finds (●) distinguished: **A** Chalcolithic /Early Bronze Age (c. 2500-1500 BC). – **B** Middle Bronze Age (c. 1500-1100 BC). – **C** Late Bronze Age (c. 1100-800 BC). – (Maps R. Wiseman).



Where possible, we checked primary references, images, and drawings for each reported object, and excluded artefacts which were unidentifiable or had been wrongly attributed to the Bronze Age.

The result was a database of 732 Bronze Age gold objects come to light at 371 find-spots<sup>1</sup>. The database records each artefact (sub-)type, date of discovery, provenance, and any known contextual details. To evaluate the impact of metal-detecting and the Treasure Act (1996), we explored the chronology of objects, date and rate of discovery, and region of find-spots (tab. 1A-F). We also identified gold artefacts accompanying burials, in hoards, or as single finds (fig. 2A-C).

## BRONZE AGE GOLD DISCOVERIES IN ENGLAND AND WALES

Reports of Bronze Age gold discoveries in England and Wales can usefully be divided into three phases. The earliest phase, 1740-1973, encompasses the earliest finds until the end of the pre-metal-detecting era. Although metal-detectors had been available in Britain in the 1960s, we chose 1973 as the end of this phase because that year was the first time the Council for British Archaeology (CBA) officially recorded the issue of metal-detecting as an emerging issue concerning archaeology (Addyman 2009). The second phase, 1974-1996, covers the period where metal-detecting was being practised but finds were still covered by the old Treasure Trove law. The final phase, 1997-2010, is the period in which the Treasure Act (1996) was implemented in England and Wales, and finders were obliged to report Bronze Age gold finds.

Looking across these three phases, there is a clear trend. The number of sites where Bronze Age gold has come to light since 1973 represents nearly 47% of the 371 discoveries made since records began over 250 years ago (**tab. 1A**). However, while metal-detectors were widely available in 1973-1996, they contributed to only 16% of all discoveries – all made under the old Treasure Trove law. By contrast, 31% of all findings occurred in 1997-2010: the 13 years following the introduction of the Treasure Act (1996). If the number of gold objects, rather than the discoveries, is counted, the increase is about the same: nearly 33% of the 732 artefacts from England and Wales were found and reported in 1997-2010 (**tab. 1B**).

The location of the gold discoveries throughout the three phases allows the overall number of findings through time to be broken down spatially (**tab. 1E**). This reveals that, with the exception of north-west England, the average number of Bronze Age gold discoveries per year in England and Wales increased during 1997-2010. The largest increases are in the three southern regions of England. This is partially due to the higher number of practicing metal-detectorists in southern England. However, the relatively high numbers of pre-metal-detecting discoveries in these three southern regions imply there was a more intensive practice of depositing gold objects there during the Bronze Age.

It is important to stress who has made these discoveries. Only 17 of the 371 findings were made during archaeological excavations. These famously include two basket-shaped ornaments from the Chalcolithic Amesbury Archer Beaker burial (Wiltshire) in south-west England in 2002 (Needham 2011) and two gold cylindrical armrings from the Early Bronze Age barrow at Lockington (Leicestershire, East Midlands) in 1994 (Needham 2000b). However, although developer-funded archaeology expanded enormously after 1990, following the introduction of Planning Policy Guidance 16 (PPG 16), it has contributed less than 5% of all Bronze Age gold findings. The role of archaeologists has tended to be in surveying and excavating a find-spot after its discovery by a metal-detectorist. Despite the absence of any formal funding for such activity, since the Treasure Act (1996) became law, it has become relatively common for find-spots to be archaeologically investigated for any remaining objects or associated features dating to the Bronze Age. In most cases, all that excavation reveals is the pit in which the object or objects were placed. Such was the context of the Middle Bronze Age Crow Down hoard from Berkshire, south-east England (Varndell et al. 2007). Occasionally though, archaeological excavations reveal substantially more. In the case of the Early Bronze Age Ringlemere Gold Cup found in Kent, south-east England (cf. **fig. 3**), fieldwork revealed an earlier Late Neolithic henge and a pit/post horseshoe monument, into which the Early Bronze Age barrow and gold cup were placed (Needham/Parfitt/Varndell 2006; Parfitt/Needham 2012). At Llanmaes (Vale of Glamorgan, Wales) two Late Bronze Age gold ornaments were discovered by archaeologists who were investigating a reported bronze assemblage. This, in turn, led to a major research excavation of a Late Bronze Age/Early Iron Age settlement and midden (Gwilt/Lodwick 2009).

The overwhelming majority of Bronze Age gold discoveries found in England and Wales have been made by farm labourers and other ground workers, antiquarian excavators, and metal-detectorists – not professional

archaeologists. The consequence is that the vast majority of the objects come to light during the 18<sup>th</sup> and 19<sup>th</sup> centuries have only a recorded find-spot with little further information regarding the archaeological context or the discovery. Occasionally, reconstructions of the context of gold deposition can be attempted, as with the spectacular Early Bronze Age burials from Bush Barrow, south-west England (Needham/Woodward/Lawson 2010), or Mold, north Wales (Needham 2012). However, many details have been lost or, as is frequently apparent from recent excavations of Middle and Late Bronze Age gold find-spots, the context of deposition of these later objects may have been no more than a simple pit. During the first half of the 20<sup>th</sup> century, reporting of Bronze Age gold discoveries in England and Wales increased, probably due to the intensification of agriculture, expansion of urban development, and wider appreciation of the importance of prehistoric gold antiquities. When the discoveries for 1951-1996 are added together, there is a higher-than-expected increase. Perhaps this is due to the advent of deep ploughing, which can bring more-deeply-buried objects closer to the surface, and so make them more likely to be found using metal-detectors.

## **DISCOVERING BRONZE AGE GOLD OBJECTS IN ENGLAND AND WALES**

The Bronze Age gold objects of Britain can be divided typologically into three chronological phases: Chalcolithic/Early Bronze Age (c. 2500-1500 BC); Middle Bronze Age (c. 1500-1100 BC); and Late Bronze Age (c. 1100-800 BC) (cf. **fig. 2**). It is feasible to date some object types to within two or three centuries using well-established metalwork phasing, calibrated with radiocarbon dates (e.g. Needham 2000a; Roberts/Uckelmann/Brandherm 2013). It is also possible to identify the gold technology involved in the manufacture of several object types.

### **Chalcolithic/Early Bronze Age**

The Chalcolithic/Early Bronze Age (c. 2500-1500 BC) phase of gold-working in England and Wales used sheet metal-working techniques to produce objects such as basket-shaped ornaments, discs, lunulae, diamond-shaped plaques, beads, pendant and gold button covers, armlets, rivet caps of bracers, stud caps of maces, cups, and one cape (see Eogan 1994, 13-41). The gold artefacts from this period represent a clear minority of the Bronze Age corpus of reported discoveries and objects. The legal protection of Bronze Age burial monuments such as barrows and cairns from metal-detectorists since at least the Ancient Monuments and Archaeological Areas Act (1979) would have prevented the excavation of many, but not all, gold artefacts from this period by metal-detectorists. Although the quantities of Early Bronze Age gold objects are small, the average number of reported discoveries has accelerated dramatically over time. The average number of find-spots reported per year during 1974-1996 is slightly down on 1740-1973; but over seven times higher during 1997-2010.

Important finds since the Treasure Act (1996) came into force include the discovery of only the second Early Bronze Age gold cup at Ringlemere (**fig. 3**). The finding of this object has been instrumental in reassessing coastal and cross-Channel connections (Needham/Parfitt/Varndell 2006; Parfitt/Needham 2012).

### **Middle Bronze Age**

The Middle Bronze Age (c. 1500-1100 BC) phase of gold-working in England and Wales used twisted bars and ribbons to produce neck ornaments such as torcs, as well as bracelets and composite rings (see Eogan 1994, 42-79).



**Fig. 3** The Ringlemere Cup (Kent, south-east England); British Museum. – (Photo Trustees of the British Museum).

As with Early Bronze Age finds, the average number of reported discoveries increases over time. The rate of reported discoveries per year in 1974-1996 is double that of 1740-1973; with the introduction of the Treasure Act (1996), the average rate quadruples again.

The sharp increase in the number of objects reported in the final 13-year period is due, in part, to the discovery of three large fragmentary hoards at Fittleworth (Sussex, south-east England) in 1995/1996 (Murgia/Melkonian/Roberts 2014, 2.14.1-42), Priddy (Somerset, south-west England) in 2005 (Minnitt/Payne 2012) and Poulton (Gloucestershire, south-west England) in 2004 (Treasure Annual Report 2004, 26-33). One important consequence of these findings is that the high level of typologically unidentifiable object fragments within these two hoards tentatively suggests a Middle Bronze Age date range for the many of the 107 comparable unidentifiable gold object fragments. These came to light singly in England and Wales and are thought to date from the Bronze Age on the basis of composition and/or form.

The discovery of a hoard near Burton (Wrexham, Wales) by three metal-detectorists in 2004 produced two new object types: a biconical pendant (also later found in south-east England), and a wire-twisted multiple-stranded bracelet (Treasure Annual Report 2004, 198f.; **fig. 4**). Two similar bracelets were recently found together with 354 gold, copper, tin and bronze artefacts at ongoing investigations into the shipwreck site of Salcombe, off the southern coast of Devon (south-west England), but were covered by the Receiver of Wreck (Roberts/Veysey 2011; Needham/Parham/Frieman 2013).

### Late Bronze Age

The Late Bronze Age (c. 1100-800 BC) phase of gold-working in England and Wales is still characterised by bar- and sheet-working techniques, but new techniques can also be identified, such as gold-plating, gold-inlaying, soldering, wire-working, and the widespread creation of hollow-bodied objects. These gold-working techniques are mainly used to produce neck-rings such as torcs, pendants, a diverse range of penannular rings (including lock-rings and »sleeve« fasteners), and bracelets (including so-called dress fasteners) (Eogan 1994, 80-108).

Gold objects dating to the Late Bronze Age in England and Wales represent the majority of reported discoveries and – with the exception of 1997-2010 where several substantial Middle Bronze Age gold hoards skewed the numbers – the number of artefacts. The average rate of reported discoveries per year in 1974-1996 is nearly five times that of 1740-1973; with the introduction of the Treasure Act (1996), the average rate is over twelve times that of 1740-1973.

This increase in 1997-2010 was heavily driven by the discovery of single finds rather than hoards: in particular, there was a substantial increase in the number of penannular rings (a total of 49). Before the implemen-





**Fig. 4** The Burton hoard (Wrexham, Wales). Three years later, a biconical bead and wire fragment were also found in the same location; National Museum of Wales. – (Photo PAS, The British Museum).

tation of the Treasure Act (1996), these objects would not have been categorised as Treasure and, even if they had been reported to the government, would normally have been returned to the finder. Amongst the important Late Bronze Age finds in 1997-2010 was the discovery by two metal-detectorists of a hoard of two massive torcs, three penannular bracelets, and a bronze fragment associated with a ceramic vessel. Its findings in 2000 near Milton Keynes (Berkshire, south-east England) provided two rare and spectacular examples of the massive gold torcs come to light thinly distributed throughout Atlantic Europe (fig. 5; Treasure Annual Report 2000, 13 f.; Armbruster/Louboutin 2004).

## DISCUSSION

### What has been found?

For over two centuries, Bronze Age gold objects in England and Wales have been consistently and overwhelmingly discovered by members of the public rather than by archaeologists. The introduction of



**Fig. 5** The Milton Keynes hoard (Berkshire, south-east England); British Museum. – (Photo Trustees of the British Museum).

metal-detecting led to a sharp increase in findings from the 1970s. However, the introduction of the Treasure Act (1996) (which legally compelled as well as rewarded metal-detectorists), combined with an improved PAS reporting and liaison network, has had by far the greatest impact on improving reporting rates. By making the disclosure of finds the normal – and indeed the most attractive – way of behaving for the majority of metal-detectorists, those who obtain, hide, or sell objects illegally become marginalised. One third of the 371 Bronze Age gold discoveries and 732 Bronze Age gold objects in England and Wales have been found within this legal framework in only 13 years – a far higher rate of discovery and reporting than in the previous 250 years. Rare, spectacular and iconic artefacts have been recovered, as well as several entirely new object types.

### **What is the archaeological and financial cost?**

The primary accusation against the current system in England and Wales is that it permits the uncontrolled destruction of previously unknown archaeological sites. On those occasions when archaeological excavations are carried out, they are usually done after the finder has already removed the objects from the ground – although, as we have noted earlier, archaeological excavations can lead to the discovery of further finds. The charge of destruction has to be balanced against the results of excavations done to date. When new find-spots have been unearthed, the majority lack associated features beyond the pit the gold objects were placed, suggesting they were deposited away from contemporary sites, such as roundhouses, enclosures, field-systems, cremation burials, and burnt mounds. This has been recently demonstrated for mainly bronze hoards in south-east England (Yates/Bradley 2010). Whether this is due to the past reality of deposition or the finding of objects on agricultural land, where several decades of intensive farming has effectively destroyed much of the archaeology, is perhaps still up for debate. Excavations by archaeologists are obviously far more preferable, but they rarely discover Bronze Age gold. In summary, while there is obviously a threat that some archaeological information might be being lost, the threat posed by metal-detectorists in this instance could be relatively limited. Metal-detectorists are still far more careful and informed, especially under the current collaborative system in England and Wales, than farmers and labourers were in the 18<sup>th</sup>-mid 20<sup>th</sup> centuries, especially with regards to provenance.

Another criticism of the current framework is the costs it generates. The Treasure Act (1996) allows the government to determine any reward for the discovery of Treasure, up to the full market value of the object. Occasionally, the independent valuation of an artefact or hoard by the Treasure Valuation Committee can be high and debates continue concerning valuation inflation. The cost ranges from £ 250,000 in the case of the Ringlemere Cup (cf. **fig. 3**) to around £ 300 for a simple penannular ring. If a museum wishes to acquire an object, it invariably needs the help of charities to raise the money. Major sources, apart from public appeals, have been the Art Fund ([www.artfund.org/](http://www.artfund.org/); 15.8.2014), the V&A Purchase Grant Fund ([www.vam.ac.uk/content/articles/p/purchase-grant-fund/](http://www.vam.ac.uk/content/articles/p/purchase-grant-fund/); 15.8.2014) and the Goldsmiths' Company ([www.thegoldsmiths.co.uk/](http://www.thegoldsmiths.co.uk/); 15.8.2014). If the money cannot be raised, and no other museum steps in, then the object is disclaimed to the finder as their property (although this is rare for Bronze Age gold). Some critics charge that this money could be better spent on professional archaeology. This appears attractive, but is not realistic. None of these charitable bodies gives money to conduct archaeological fieldwork or publication. While several funds do award money to museums for projects beyond new acquisitions, archaeology in England and Wales that is not classified as Treasure tends to play a relatively small role in favourable decisions.

### **European comparisons**

It is difficult to compare the number of reported discoveries of Bronze Age gold in England and Wales with other European countries, as there is little accurate data available. However, two to three findings per country each year is typical. Comparisons are also difficult because of legislative differences across Europe on:

- a) owning a metal-detector;
- b) using a metal-detector;
- c) using a metal-detector on private or public land;
- d) conducting excavations;
- e) the ownership of archaeological material.

There are also variations in the environmental and archaeological circumstances in which Bronze Age gold objects are found.

While many archaeologists advocate banning or heavy restrictions of metal-detecting, this is not always as desirable as they assume. A recent survey from Austria – which has banned any excavation of archaeological material except by university archaeology graduates – has seen an exceptionally sharp fall in archaeological finds being reported to the authorities (Karl 2011). While it is unlikely that the system used in England and Wales would have been attempted in Austria, the difference in reporting rates shows how the British system represents a pragmatic solution to the widespread presence of metal-detecting, in a way that benefits archaeological understandings of the Bronze Age. In addition, two recent surveys analysing the impact of different metal-detecting legislation and usage upon archaeology in Denmark (Dobat 2013) and Norway (Rasmussen 2014) also strongly support an inclusive and pragmatic approach (see also Fincham 2008; Huth 2013).

### **What has been gained?**

This leaves the question of what is being gained from the discovery of new Bronze Age gold objects in England and Wales, under the current legislation. Whether the Ringlemere Cup (cf. **fig. 3**) or the Burton hoard (cf. **fig. 4**), the finding of ancient gold stimulates huge media and public interest in the prehistoric past and

generates substantial visitor numbers for the acquiring or exhibiting museum (e.g. Hobbs 2003). The archaeological impact of new gold finds has stimulated:

- new fieldwork and research into important new sites, such as Ringlemere (Needham/Parfitt/Varndell 2006; Parfitt/Needham 2012);
- new analyses of gold-working technology, such as with penannular rings (Meeks/Craddock/Needham 2008) and lock-rings (La Niece/Cartwright 2009);
- renewed discussions of gold deposition and gold weight measurements as at Rossett (Wrexham, Wales; Gwilt et al. 2005);
- discussion of regional and inter-regional connections through the transmission of gold metal, object types and manufacturing/decorative techniques, as recently demonstrated for ornaments in Middle and Late Bronze Age Britain (e.g. Roberts 2007; A. Davis 2012).

The impact of metal-detecting, the Treasure Act (1996), and the PAS on the discovery of Bronze Age bronze objects has been examined only at an object type (e.g. A. Davis 2012; R. Davis 2012), site (Roberts et al. in print) or a regional level (Doshi 2010; Yates/Bradley 2010). Given that bronze is even more fundamental to archaeologists when exploring issues in the Bronze Age such as chronology, regionality, cross-Channel connections, warfare, craft production, and ritual, such a project demonstrates exceptional promise. The creation of a comprehensive database of Bronze Age bronze metalwork is currently being undertaken on the PAS database using crowd-sourcing (see [www.microplasts.org](http://www.microplasts.org); 23.11.2014).

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## Note

1) When compiling the numbers in **tab. 1**, we had to resolve several ambiguities. We excluded 107 undiagnostic items, including 46 discovered in the period 1997-2010, leaving a total of 732 gold objects discovered at 371 find-spots. If the date of discovery was vague – »before 1985«, »17<sup>th</sup> century« or similar – we categorised its discovery as »no date«. This affected seven objects at four find-spots. If the date crossed our chronological categories – »1996-1997« for example, thereby placing it in both the 1974-1996 and 1997-2010 categories – we placed its date of discovery in the more recent category. This saw three

objects being assigned to our most recent chronological phase of discovery (1997-2010). If the chronological period was unknown or broad – e.g. »MBA/LBA« – we classified the object as »imprecise« or »no phase«. If the location was recorded only by county or country, we classified it as »no location«. The single object discovered in »London« was incorporated with those found in the »South-East«, and all Welsh regions have been combined into a single figure for »Wales«. Finally, the maps in **fig. 2A-C** show only those find-spots where the parish, town, or map reference were known.

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## Zusammenfassung / Abstract / Résumé

### Was haben die Sondengänger denn für uns getan?

#### Entdeckungen von Gold der Bronzezeit in England und Wales

Dieser Artikel diskutiert den Einfluss der Sondengängerei und seiner rechtlichen Rahmenbedingungen auf die Meldung von bronzezeitlichen Goldfunden in England und Wales zwischen 1740 und 2010. In dem nur 13 Jahre umfassenden Zeitabschnitt nach der Erlassung des Treasure Act (1996) ließ sich ein wesentlicher Anstieg an Fundmeldungen von Goldobjekten in England und Wales beobachten: Ein Drittel aller bekannten Gold führenden Fundstellen und Funde der Bronzezeit wurden in dieser kurzen Zeit entdeckt. Fast alle dieser Artefakte wurden von Mitgliedern der Öffentlichkeit geborgen: hauptsächlich von Sondengängern. Archäologische Fachleute haben weniger als 5 % der Gold führenden Fundstellen und Funde der Bronzezeit entdeckt – trotz des schnellen Anstiegs der Verursachergrabungen in England und Wales in demselben Zeitabschnitt. Wir glauben, dass die gesetzlichen Auflagen für die Sondengänger durch den Treasure Act (1996) eine pragmatische Lösung für die unterschiedlichen Ziele von Sondengängern und Archäologen sind, da u. a. auch wertvolle archäologische Funde und Informationen generiert werden, die ansonsten verloren wären. Eine weitere Konsequenz ist, dass nun ein viel höherer Anteil an Fundstellen durch Archäologen untersucht wird als in den Jahren vor der Anwendung des Treasure Act (1996). Die weitreichenden Ergebnisse für die Forschung werden erst langsam ausgeschöpft.

### **What have metal-detectorists ever done for us? Discovering Bronze Age gold in England and Wales**

This paper discusses the impact of metal-detecting and legal frameworks on the reporting of Bronze Age gold discoveries in England and Wales between 1740 and 2010. The 13-year period after the introduction of the Treasure Act (1996) saw a major increase in the reporting of gold finds in England and Wales: one third of all known Bronze Age gold sites and objects were discovered in this short time. Almost all of these findings were made by members of the public: chiefly metal-detectorists. Professional archaeologists have discovered less than 5 % of Bronze Age gold sites or objects, despite the rapid expansion of developer-funded archaeology in England and Wales during the same period. We believe the legal obligations imposed on metal-detectorists by the Treasure Act (1996) are a pragmatic solution to the differing goals of metal-detectorists and archaeologists, while also generating valuable archaeological materials and information that would otherwise be lost. It has also led to a far higher proportion of find-spots being investigated by archaeologists than in the years before the implementation of the Treasure Act (1996). The immense research implications are only gradually being explored.

### **Qu'ont fait les détecteurs de métaux pour nous? La découverte de l'or de l'âge du Bronze en Angleterre et au pays de Galles**

Cet article discute de l'impact de l'usage des détecteurs de métaux et de leur cadre légal au niveau de la connaissance des découvertes d'or de l'âge du Bronze en Angleterre et au pays de Galles entre 1740 et 2010. Les 13 années qui ont suivi l'introduction du Treasure Act (1996) ont vu une augmentation substantielle du nombre d'objets en or en Angleterre et au pays de Galles: le tiers de tous les sites et objets en or datés de l'âge du Bronze a été mis au jour dans ce court laps de temps. Presque toutes ces découvertes ont été faites par des particuliers utilisant un détecteur de métaux, moins de 5 % des objets ou sites contenant de l'or de l'âge du Bronze ont été le fait d'archéologues professionnels, malgré le développement rapide de l'archéologie préventive en Angleterre et au pays de Galles sur cette même période. Nous croyons que les obligations légales imposées aux détectoristes par le Treasure Act (1996) sont une solution pragmatique aux différents objectifs des archéologues et des détectoristes, et qu'ils génèrent une information archéologique de valeur qui serait perdue sinon. Ceci a également amené à une meilleure observation des lieux de découverte de trésors par les archéologues qu'avant la mise en place du Treasure Act (1996). Les immenses implications de ces découvertes pour la recherche n'en sont qu'au début de leur exploitation.

Traduction: L. Bernard

### *Schlüsselwörter / Keywords / Mots clés*

Großbritannien / England / Wales / Bronzezeit / Gold / Metallsonden / Revolution

Great Britain / England / Wales / Bronze Age / gold / metal-detecting / revolution

Grande Bretagne / Angleterre / pays de Galles / âge du Bronze / or / détecteur de métaux / révolution

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