

Between Rescue and Research: An Evaluation after 30 Years of Liberal Metal Detecting in Archaeological Research and Heritage Practice in Denmark

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Since the early 1980s, metal detector surveying conducted by amateur archaeologists has contributed significantly to archaeological research and heritage practice in Denmark. Here, metal detecting has always been legal, and official stakeholders pursue a liberal model, focusing on cooperation and inclusion rather than confrontation and criminalization. Like no other surveying method since the invention of the shovel, the metal detector has contributed to increasing enormously the amount of data and sites from metal-rich periods. Virtually all of the spectacular and ground-breaking discoveries of the past decades are owed to metal detectors in the hands of amateur archaeologists. And it is these finds and sites that today constitute one of the very foci of archaeological research. This article provides an overview of the current status of liberal metal detector archaeology in Denmark 30 years after its inception, and attempts to identify the reasons why this popular hobby never developed into the problem it has become in other parts of the world. It concludes that the success of the liberal model in Denmark is the result of a very complex interplay of legislative, historical, cultural, and social factors. On this basis, it is discussed whether the Danish experience can be used as a source of inspiration in the necessary progression towards a new legal agenda for responsible metal detector archaeology.

Keywords: Metal detector, metal finds, surveying methods, heritage practice, protection laws, citizen-based research, Bronze Age, Iron Age, Medieval Period

INTRODUCTION

Illegal metal detecting constitutes a severe threat to cultural heritage in many European countries as well as an ethical dilemma for archaeologists. The problems are manifold: prehistoric and historic sites from metal-rich periods are systematically plundered; archaeological excavations receive unwelcome night-time visitors who empty the context of its metal content; and battlefields of more recent periods are haunted by metal detectorists hunting for

relics from the great wars. The antiquities procured by such illegal searches rarely reach the light of day and certainly not the records of the official heritage management agencies or research institutions. Accompanied only by limited information—if any at all—on contexts and location, these antiquities will always remain blind sources.

On the other hand, we have many well-known finds brought about by illegal and legal metal detectorists alike. Single antiquities or big assemblages that do make

their way to the public: finds like the Nebra sky disk, the Staffordshire Hoard or the recent Jersey coin treasure. These finds not only intrigue millions with their story of adventure and ancient mystery and riches, they also contribute new knowledge, even though, in the many illicit cases, a great deal of information is lost due to the circumstances of their discovery. To this, one must add the enormous media attention on such finds, which has made metal detector finds a central element in the public promotion of archaeology. This is the ethical dilemma for many archaeologists: for although the metal detector may pose a potential threat, it has also become an important source of scientific knowledge, public legitimization, and popular recognition.

Both as a hobby or professional occupation, metal detecting is growing in popularity and profitability. For some, this is about the sheer desire to hold a piece of history, be it the distant and mystic past of Roman or Celtic civilizations or the ever-so-present terror in the trenches of the two World Wars. For others, it is about cold cash, and just a brief review of auction forums on the Internet clearly demonstrates the scale of the financial interests involved (on the motivations of metal detectorists in general, see Garrison, 2009; Henriksen, 2011b; Thomas, 2012).

Until now, a sceptical attitude towards amateur metal detectorists in many European countries has prompted a refusal of cooperation with amateur practitioners or even attempts to legally ban the unauthorised use of metal detectors in archaeological surveys by non-professionals. This is not so in Denmark. According to the Danish Museum Law (LBK nr 1505), the use of metal detectors is legal, except on or within two meters from protected heritage monuments and sites. From the very beginning of metal detector archaeology in the late 1970s, the

archaeological establishment and legislators decided to pursue a liberal model based on cooperation and inclusion rather than confrontation and criminalization (Olsen, 1984; Petersen, 1991). Since then, metal detecting has developed into a popular hobby practiced mainly by amateur archaeologists, as in many other countries worldwide (including those banning or criminalizing metal detecting by non-professionals). Today—30 years later—amateur metal detecting in Denmark is not only generally evaluated as a great success, but it has also had profound implications for archaeological heritage practice and research.

In this study, I will provide a status update after 30 years of liberal metal detector archaeology in Denmark and attempt to identify the reasons why this popular hobby in Denmark never developed into the problem it has become in other parts of the world. I will also ask the obvious question: whether the Danish experience can be used elsewhere as a model and a source of inspiration in the necessary work towards a new legal agenda for metal detector archaeology.

THE DANISH EXPERIENCE

The effect of the metal detector on the sheer quantity of material source data, and hence the understanding of Iron Age and early medieval societies in particular, cannot be underestimated. Like no other surveying method, the metal detector has contributed to a profound increase in the amount of data and sites from the metal-rich periods, mainly the Bronze Age, the Iron Age, and the medieval periods. Virtually all the spectacular and groundbreaking discoveries of the past decades are due to metal detectors in the hands of amateur archaeologists. Artefacts that were considered exceptional or unique 20 years



Figure 1. Metal detector survey as part of the 'Kongens Borge' research project at the Viking Age ring fortress at Aggersborg in 2009. More than 30 amateur metal detectorists from different detector associations participated in the survey for two days.

Photo: Andres Dobat, Aarhus University

ago now have hundreds of example of each type. And many of the sites that have been discovered via metal detector surveying constitute the very foci of archaeological research today (see below for examples).

Similar to the development in the UK, it is especially within Danish settlement archaeology that the metal detector has demonstrated its potential as a means of providing new data. An illustrative example is the discovery of the Gudme complex on the island of Funen in the early 1980s, the early days of the detector boom. Since the nineteenth century, the Gudme area had a special status in Danish archaeology, with its dense concentration of treasure finds and single gold objects from the Migration period (Thrane, 1994).

The initial detector surveys at Gudme, which were conducted by two local unemployed citizens, did result in the discovery

of not only additional gold treasures, but also countless spectacular artefacts, such as complete and fragmented pieces of dress accessories, coins and hack-silver, scrap metal and so forth from the plough-soil horizon. Scattered around the modern village of Gudme, the finds indicated a huge settlement area with a continuous occupation spanning over more than a millennium, from the Pre-Roman Iron Age and well into the late Viking Age (first century BC to eleventh century AD) (Figure 1). Later, large-scale excavations conducted by the local museums (Odense Bys Museer, and Svendborg and Omegns Museum) and the Danish National Museum resulted in the documentation of the architectural elements of the settlement, consisting of several farms with longhouses and smaller buildings, as well as a massive hall building from the Roman Iron Age in the very centre of the

distribution of metal finds. In the course of these investigations, the metal detector finds could be demonstrated to relate to the underlying features and the functional structure of the site (Petersen, 1994; Sørensen, 1994, 2000) (Figure 5).

Today, after many years of continuous metal detector surveying and excavations, Gudme is an icon of Danish archaeology and the many thousands of individual finds tell the vivid story of a chiefly elite residing on the shores of a sacral lake, with far-reaching international connections and political alliances, gathering around them specialised craftsmen and a military retinue (for a summary of the significance of the Gudme site, see Hedeager, 2001; Randsborg, 2007; Jørgensen, 2011).

The discovery of Gudme foreshadowed the discovery of many sites by metal detectors in the following decades. As late as the 1970s, the evidence of early medieval settlements was limited to fewer than twenty localities. Today, the number of sites with metal finds indicating settlement activity or regular settlements from this period can be counted in several hundreds, exposing a settlement landscape of hitherto unexpected density and complexity: aristocratic residences such as Tissø on Sealand or Sorte Muld on Bornholm; rural settlements and manors; specialised production places with evidence of a broad range of craft activities; and landing-places and smaller market centres in the coastal regions (Näsman, 1991; Ulriksen, 1994; Fabech, 1999; Henriksen, 2000; Jørgensen, 2003; Christiansen, 2008; Adamsen, 2009) (Figures 6 and 7).

The large number of sites that have been and are still being discovered has radically changed our understanding of the socio-political constitution of Scandinavian societies in the first millennium and the medieval period. Today, these sites discovered by metal detectors constitute a

focus of archaeological research into these periods, and whether it is the question of the evolution of early towns, religious transitions, trade and exchange, patterns of supra-regional contacts or military organization, the sites and material discovered by metal detectors are one of the key sources for respective studies (see, for example: Fabech & Ringtved, 1995; Stjernquist & Larsson, 1998; Henriksen, 2002; Jørgensen, 2003; Skre, 2007; Moesgaard, 2009; Baastrup, 2012).

Not only within the field of Iron Age and medieval settlement have metal detectors in the hands of passionate amateurs contributed new knowledge. Many single finds of bronze or gold, for example, have significantly broadened our picture of the material world and deposition practices in the Bronze Age (Jensen & Runge, 2008; Henriksen, 2011a; Hansen & Henriksen, 2012) (Figure 4). And the rise in the number of coin finds, especially from the early medieval period onwards, has paved the way for new possibilities in the study of the development of monetary systems (Grinder-Hansen, 2000; Horsnæs, 2002; Moesgård, 2002; Mäkeler, 2003). In addition, the metal detector has led to new research areas, such as battlefield archaeology (Olsen, 2009).

Today, amateur metal detecting in Denmark is deeply rooted in cultural heritage practice. As a surveying tool, the discovery of countless archaeological sites by amateur metal detectorists has helped to identify sites that otherwise would have been in danger of destruction from construction activity. Amateur metal detectorists are key voluntary personnel on rescue and research excavations alike, emptying the plough horizon of metal artefacts prior to excavations (Rasmussen, 2007; Nielsen, 2008; Hansen & Henriksen, 2012). The incorporation of amateur detectorists has proven necessary not least due to the fact that they, in terms of

experience and knowledge, generally are far superior to archaeologically trained museum staff.

As was the case in Gudme, the experience from these investigations has demonstrated the fact that even though metal detector finds from plough horizons cannot be related to specific contexts, their spatial distribution pattern nevertheless adds meaningful information to the structures unearthed below the plough soil, allowing the structural or organizational aspects of a given site and even individual buildings to be assessed (Jensen, 1992; Jørgensen, 2000, 2011; Helgesson, 2004; Henriksen, 2010).

For many metal finds and metal find-complexes (all categories included) still remaining *in situ*, the discovery by an amateur detectorist is the only chance of preservation. The increasingly acidic rain and the increasing use of chemical fertilizers are beginning to affect artefacts in the plough-soil. Furthermore, intensive agricultural activity is increasingly destroying *in situ* find contexts, such as graves or hoards (Asingh, 2001; Jørgensen, 2001). In the light of these threats, metal detector archaeology is the only chance of rescuing these artefacts from irrecoverable destruction.

PRECONDITIONS FOR THE DANISH EXPERIENCE

The contribution of the metal detector to Danish archaeology has turned out to be substantial and generally positive. But why did metal detector archaeology in Denmark not become the problem it has developed into in many other countries worldwide? Numerous official stakeholders of cultural heritage management in Denmark did in fact utter such concerns in the early days, anticipating the large-scale destruction of cultural heritage by ruthless treasure hunters (Fischer,

1983; see also Nielsen & Petersen, 1993). The reason why things turned out differently is complex, and the answer to the above question has to be sought in very different domains.

Legal basis

The legal foundation of metal detector archaeology in Denmark is the Treasure Act (the *danefæ* [treasure trove] regulation in section 30 [1] of the Museum Law). Dating back to the thirteenth century, the law covers certain, mainly metal, finds: 'artefacts and coins from the past which have been found in Denmark and which nobody can rightly claim to be his property are considered *danefæ*, as long as they are made of precious material or are of special cultural-historical value' (Museumsloven, 2006). In broad terms and as far as metal objects are concerned, all artefacts made of gold or silver that are older than one hundred years, bronze and lead, as well as iron weapons or tools from prehistoric periods or the Middle Ages, fall within this category.

According to the Danish Museum Law, such objects rightly belong to the state and must be delivered to the Danish National Museum. In practice, finds are normally delivered to one of the many local museums, which forward them to the National Museum (Section 30 [2] of the Museum Law). The state compensates the finder with a certain sum. The amount is determined by the National Museum, based on the find's material value and rarity, as well as on the care taken by the finder during the recovery of the find (Section 30 [3] of the museum law). In contrast to the situation in many other European countries with treasure trove legislation, the Danish *danefæ* regulations have never included compensation to land-owners. (For general comments on the

Museum law, see Axboe *et al.*, 2010; Moesgaard *et al.*, 2010.)

From the very beginning of metal detector archaeology, the Treasure Act of the Danish Museum Law has played a crucial role, ensuring that the majority of the many thousands of finds uncovered by amateur detectorists did in fact make it into the inventory lists of both local museums and the National Museum. And with its emphasis on the finder's caution during recovery, it has also ensured that the objects are accompanied by essential contextual data, such as find location and relation to other finds.

The Danish museum landscape

Denmark, in comparison with most other European countries, has a relatively high number of archaeological museums. Besides the National Museum, there are more than thirty museums with archaeological departments and administrative responsibility for the archaeological heritage in a given district (Iversen & Nielsen, 1993). This decentralized structure has always been the basis for a close interaction between museum staff and society, and the short distance from museums to the field in simple spatial terms has enabled the establishment of close bonds between professional staff and amateur metal detectorists.

Even though the majority are of more recent date, these local museums have their ideological roots in the National Romantic Movement of the nineteenth century—a movement that emphasised regional and, in particular, rural history as the main basis for national identity in Denmark (Kristiansen, 1981; Adriansen, 2003). Even today, much of the financial support for these institutions typically comes from local sources in the form of private funding and municipal support.

The activities of these museums, ranging from contract archaeology to communication and research, often feature prominently in the local press. Based on this background, archaeological museums in Denmark are not only generally well embedded in their local political and social context, but they are also seen as authorities in the broad field of public archaeology.

To this, one must add the generally high level of generalized trust in society and, in particular, trust in official institutions—a distinct and quantifiable feature that distinguishes Danish society in comparison with many other societies on a global scale (Bjørnskov *et al.*, 2011). Just like any other public institution, archaeological museums profit from this prevalent attitude and are generally perceived as highly trustworthy. Since it is seen as an expression of social trust and responsibility to hand in identified or unidentified objects to the local museum, the legal regulations of the Treasure Act can be seen as a formal framework for a commonly accepted practice.

The archaeological museums have succeeded in establishing a general understanding of metal detector archaeology as necessarily based on mutual cooperation between detectorists and museums. In practice, this cooperation on the part of the museums typically involves, among other things: identification and processing of finds; forwarding finds to the National Museums; supplying information on potential find-spots and cartographic material; instructing detectorists on the handling of finds and on documentation standards; and arranging large-scale detector rallies. The latter are seen as a natural extension of the good cooperation between detectorists, and the results often feed directly into research projects or surveying programs (see, for example, Horsnæs & Ingvardson, 2010;

Henriksen, 2011b; Hansen & Henriksen, 2012). Last but not least, one important service provided by the museums is the promotion of the finds—together with the proud finders—in local or even national media.

In exchange for the museums' involvement the metal detectorists provide their finds and contextual data as a basis for research, as an important tool of heritage management and as a source of public attention. Many amateur metal detectorists participate in surveying campaigns or excavations, and hence contribute to the management of archaeological heritage. In this way, metal detector archaeology—despite being practiced by amateurs—is a highly integrated part of the museums' research activities and their obligations within cultural heritage management. The expertise of Danish metal detectorists has even been applied by research institutions outside Denmark—for example, during the recent archaeological investigations in Uppåkra, southern Sweden (Paulsson, 1999), or Hedeby, northern Germany (von Carnap-Bornheim & Hilberg, 2012).

The archaeological material and surveying parameters

The clear majority of the treasure troves registered at the National Museum in the last decades were either bronze, lead, or silver artefacts (Figure 3), whereas gold objects have only played a minor role (only approximately 1 per cent of the finds for which compensation is paid under the *danefø* regulation are gold objects; P.V. Petersen, personal communication, 2012). On this basis, any precious metal artefact found through metal detecting in Danish soil is usually the result of many hours of single-minded persistence. Being a metal detectorist in Denmark simply demands considerable patience and personal commitment. Even

though great finds have proven possible, as the many spectacular discoveries of gold and silver treasures or exceptional single finds clearly illustrate, they are comparably rare (Figure 2). Although a small group of highly active metal detectorists in especially profitable regions (Bornholm and, to some degree, also Funen and Sealand) can gain up to several thousand Danish kroner every year on average in compensation paid under the Treasure Act legislation, these compensations rarely outweigh the investment of man hours (especially in the light of the average wage or even social security benefits in Denmark).

Another important parameter is the nature of the contextual background of detector finds in Denmark. As in most European countries, virtually all treasure troves are found in the plough horizon of cultivated fields, or fields that have been under the plough at least at some point in more recent history. The finds can thus be expected to have already been detached from their original context (at least in cases where the ground penetration of the respective detector is not more than 30 cm), which naturally does not mean that they cannot be used as highly informative sources for the interpretation of underlying features (Jensen, 1992; Jørgensen, 2000; Helgesson, 2004; Henriksen, 2010) (Figure 5). (However, this situation is about to change with the on-going technological development towards metal detectors with ground-penetrating capacity beyond the average plough soil horizon.) The greater part of the Danish landmass is characterized by intensive agricultural activity and there are hardly any ruin sites or settlements with intact occupation layers. Only in the relatively few areas with intact prehistoric surfaces (forests, heaths, moors, dunes, and the like) can we expect possible finds to be in danger of being removed from their original context. Due to dense vegetation, however, these



Figure 2. Migration period gold bracteate board from the Gudme settlement complex on the Island of Funen.

Photo: National Museum of Denmark

areas tend to represent difficult terrain for metal detector surveying.

In effect, the relatively small proportion of precious metal in average metal detector find assemblages renders inefficient any attempt at profit-motivated treasure hunting (at least for the great majority of practitioners), and can thus be seen as a crucial factor for the positive development of metal detector archaeology in Denmark. In this respect, the situation in Denmark certainly differs when compared to archaeological sites in the Mediterranean region

belonging to Greek or Roman civilizations, where far more precious metal was circulating in society. The potential danger of metal finds being removed from their original contexts, resulting in the loss of irreplaceable information, is low due to the nature of the typical Danish heritage sites.

The metal detectorists

The number of metal detectorists in Denmark is difficult to access. Around



Figure 3. Selection of bronze artefacts (dress accessories and other implements) from different periods (ranging from the Bronze Age to the Medieval period) found on sites around Kerteminde in the north-eastern part of Funen, Denmark. The collection is representative of an average assemblage of so-called 'danefæ' (treasure trove), i.e. finds for which financial compensation is paid to the finder by the state (length of the fibula button right: 6.2 cm).

Photo: Østfyns Museer, Kerteminde, Denmark

700 people are registered as members in local or national associations (H. Christensen, personal communication, 2012). An estimated figure of active users can be obtained from the Danish National Museum's count of *danefæ* transfers. In 2011, the museum's pre-historic department and the department for coins and medals paid *danefæ* compensation to a total of 202 individuals (a small percentage was paid for artefacts found without metal detector). Hence, one must estimate at least 200 highly active metal detectorists in Denmark and an unknown number of less active (or less lucky) practitioners in the field. As non-professionals, these people continue a long tradition of amateur (in the positive sense of the word) archaeology in Denmark. Since the institutionalisation of archaeological research and museums, the active participation and inclusion of often highly

engaged amateurs in museum practice has been characteristic of Danish archaeology (Lyngbak, 1993).

Many of the detectorists are organized in one or several local and national associations (examples include the *Bornholmske amatørarkæologer*, *Harja*, *Tellus*, and *Thy-Mors Detektorforening*). These associations regularly cooperate with local museums and other research institutions in surveying projects or in the context of excavations. An example is the 'Thy rally', a large-scale surveying project covering various sites in different parts of the country, organized by the *Thy-Mors Detektorforening* in cooperation with the local museums and relevant landowners. This is an annual event that regularly attracts close to one hundred detectorists from all over Denmark (Horsnæs & Ingvarsson, 2010).



Figure 4. Bronze Age toggles found during metal detector investigations around the Voldtofte burial mound complex in southwest Funen, Denmark, organized by Odense City Museums in cooperation with the Harja and Tellus amateur metal detector associations.

Photo: Asger Kjærgaard, Odense Bys Museer

The amateur detectorists' surveying areas tend to be either large areas or certain archaeological sites in the vicinity of their respective places of residence. A trend observed by museum curators more recently is the establishment of fixed 'claims': one or a group of detectorists reach an informal gentlemen's agreement with a given landowner to provide exclusive surveying rights in exchange for a share of a possible *danefø* compensation. Metal detecting has thus developed along similar lines to hunting grounds on the continent or in Scandinavia. This close personal connection incites the individual metal detectorists (and the respective landowners) to monitor 'their' personal surveying areas.

According to the statutes of, for example, the *Thy-Mors Detektorforening*, the individual members commit themselves

'to abide by the treasure-trove regulations of the museum law' and 'to find and conserve Danish cultural heritage as a resource to obtain further knowledge of Danish cultural history' (Thy-morsdetektor, 2012).

The majority of metal detectorists in Denmark are characterized by a highly professional attitude towards their hobby. Individual finds are positioned with GPS coordinates, the spatial extent of surveying is mapped or documented via GPS tracking systems, specific sites are surveyed continuously, and the finds are presented and discussed on Internet platforms (e.g. Detecting People, 2012), and, most importantly, all finds are handed over to the local museums. Many amateur archaeologists take obvious pride in their affiliation with the local museum, often referring to it as a partner or even 'employer'.

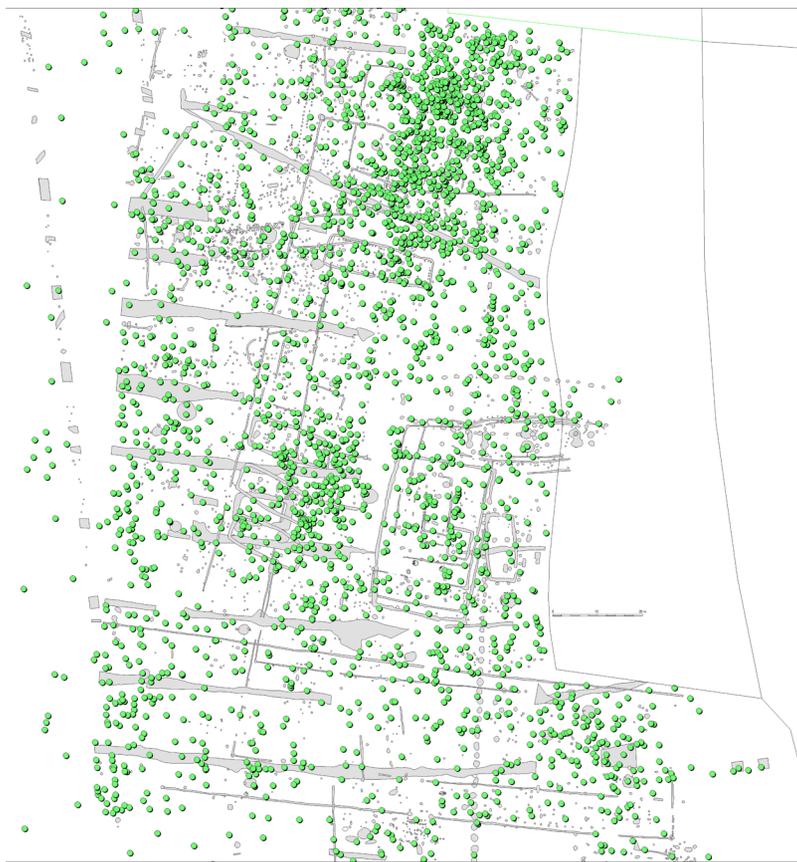


Figure 5. Metal detector finds and the underlying structural features of the early medieval settlement at Tissø on Sealand, Denmark. Map orientated towards north.

Data and drawing: Lars Jørgensen, Danish National Museum

The various associations fulfil an important function as an institutional link between detectorists and museums or other research institutions. As a social and cultural context, they also provide an additional contribution, shaping a positive culture and professional attitude around metal detecting as a hobby. The emphasis of the *Thy-Mors Detektorforening* statutes (mentioned above) illustrates the association's educational role, in particular as regards novices, for whom such associations often serve as the introduction to the field.

Finally, just like many other popular hobbies, metal detectorists are partly driven by a competitive spirit. As 'trophy

rooms', the various internet platforms also serve to satisfy the very human desire for sharing successful experiences with peers or the public. The 'trophy factor' is certainly one of the reasons why metal detecting in Denmark has been characterized by transparency from the start.

Key to understanding the generally high moral attitude of Danish metal detectorists and the perception of metal detecting as contributing to cultural history is the widespread and profound historical consciousness found in Danish society. Archaeological and historical journals or television shows are surprisingly popular, and there is a general acceptance of the

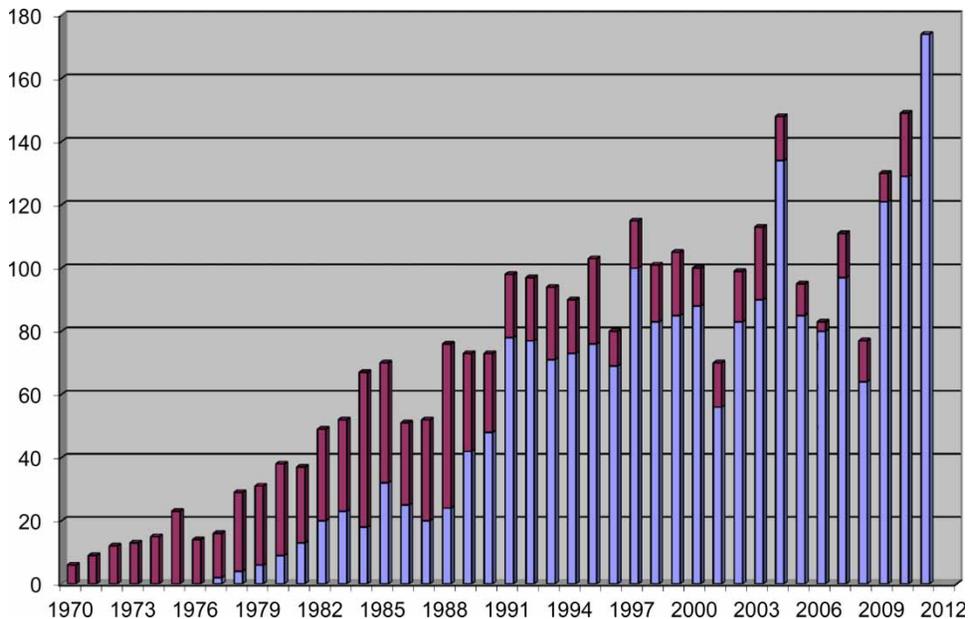


Figure 6. Growth of the number of find-spots that have produced danefæ finds discovered either with (blue) or without (red) metal detectors in Denmark during the period 1970–2011. The great majority of the non-metal detector danefæ finds are of stone, amber or glass (the decline between 2006 and 2008 is to be explained by administrative issues and does not mirror the actual situation).

Source: Mogens Bo Henriksen, Odense Bys Museer, based on data from the Danish National Museum

relevance of the preservation of cultural heritage as a valuable and shared property. In the popular view, Danish prehistory is intimately linked with national sentiments and seen as a common ancestral past, providing an important source of national identity. According to Christopher Garrison (2009: 45), who has included the Danish case in his analysis of various incentives for the reporting of portable antiquities, an ordinary Dane would feel a strong ‘identity incentive’ and a strong ‘reward incentive’ to report a find, whereas the ‘punishment incentive’ would only be weak.

Danish metal detectorists consider their work not merely to be a contribution to cultural history in general. It is in fact seen as a way to contribute to the writing of Danish national history. Instead of passively consuming cultural heritage through media or in the context of museums, the

metal detector offers these citizens the possibility to actively produce cultural heritage and thus contribute to a common good. Metal detecting has thus become more a source of social and cultural capital than of economic income.

ALL THAT GLITTERS IS NOT GOLD

As in countries where metal detecting is prohibited by law, negative cases only seldom reach public attention. The gravity of the problems relating to metal detecting in Denmark is therefore difficult to assess. It would, however, be naïve to believe that, for example, ‘night-hawking’ (illegal metal-detecting on registered heritage sites or without the landowner’s consent) does not occur. Neither can we exclude the possibility that metal detector finds are

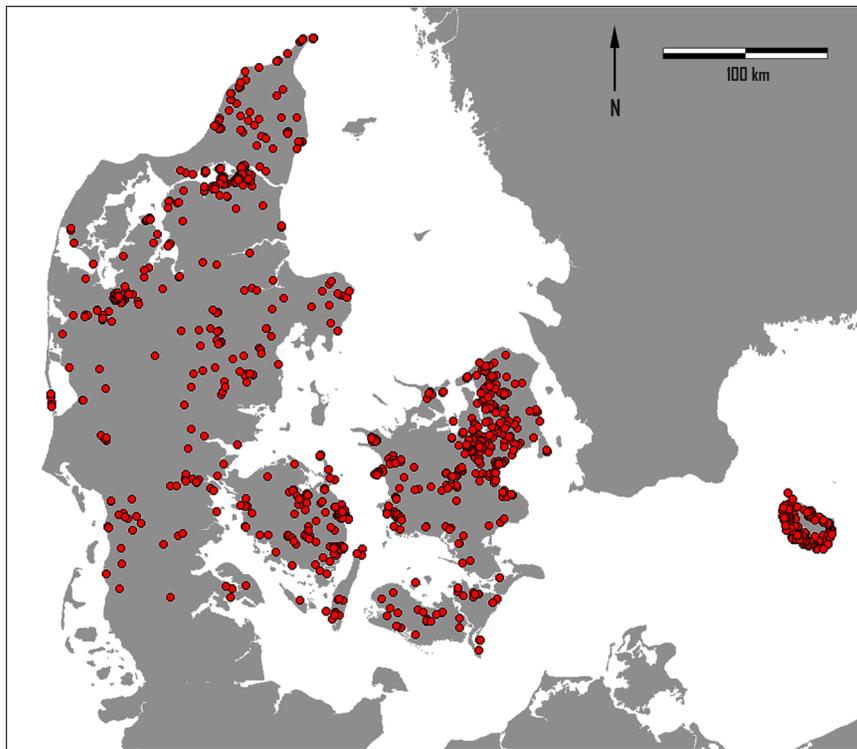


Figure 7. Distribution of find-spots with danefæ finds discovered with metal detectors in Denmark up to and including 2006.

Data: Kulturstyrelsen; drawing by Mogens Bo Henriksen, Odense Bys Museer

held back and instead offered for sale on the global market, where the monetary rewards may exceed the compensation paid under the legislation of the Danish Treasure Act. In general, however, this compensation still beats the fictitious market price, and until now, only very few such cases have been reported (Jensen, 2004; Henriksen, 2011b; P.V. Petersen, personal communication, 2012).

A more general problem observed by museum curators is the unsatisfactory handling of finds and incomplete or even completely missing information on find locations. As both the amount of *danefø* compensation and (maybe more important) the status/esteem of the individual detectorist within the associations is very much dependent on the standard of the

find handling, such cases are relatively rare, even though they do occur (see, for example, Henriksen, 2011b).

A pressing issue is and will be the constant 'improvement' of metal detectors, allowing deeper ground penetration. Already today, several producers offer devices with a search range beyond the average depth of the plough horizon. The majority of Danish metal detectorists have proven patient enough to contact officials in those cases where they hit upon *in situ* assemblages. The consequences of the increased effectiveness of future metal detectors, however, are difficult to assess at present.

One of the unintended and rather unfortunate effects of the Danish Treasure Act is a separation between 'good' finds (i.e. finds for which compensation is paid)

and ‘bad’ finds (i.e. finds for which no compensation can be expected). The bulk of the assemblage of metal finds from an ordinary Iron Age or early medieval settlement belongs to the second group (scrap metal, melted pieces, unidentifiable fragments of bronze and lead, etc.). Even though such finds are in fact important sources of archaeological data, the focus on *danefæ*-finds ultimately leads to a misrepresentation of the evidence, as these objects are often either not even collected by detectorists or omitted from the find registration at the respective local museum.

All surface surveying, but especially metal detector surveying with its ‘trophy factor’, carries the risk of resulting in a biased representation of artefact scatters, since areas with a high ratio of finds are generally prospected more thoroughly than areas where finds appear to occur less regularly. Repeated reconnaissance may confirm or even strengthen the appearance of artefact concentrations or supposed peripheral areas, generating a biased representation of the outer limits or the internal structure of, for instance, a settlement complex (Paulsson, 1999: 51; Watt, 2000: 6). This problem can be easily tackled, however, through the application of a systematic working approach, based on a grid system or a GPS tracking system and continuous monitoring of surveying intensity (Gregory & Rogerson, 1984; Skre, 2007; Dobat, in press).

The biggest challenge by far of Danish metal detector archaeology is the lack of any central and enduring registration procedure or system. The many thousands of metal detector finds being handed over to local museums and the National Museum remain inaccessible to the public eye and researchers. Only a selection (especially spectacular objects made of gold with glittering stones and the like) is published (see, for example, Andersen & Nielsen, 2010; Nielsen, 2012). The bulk is only

registered at local museums—if at all—each of them following different registration practices and standards. There is no central registration of finds comparable to, for example, the Portable Antiquities Scheme (Portable Antiquities Scheme, 2012), and the best place for the public and researchers alike to get a comprehensive view of new finds is on the Danish metal detector associations’ own internet platform (Detecting People, 2012) (for positive exceptions, see, for example, Jensen, 1992; Christiansen, 2008; Feveile, 2011; Baastrup, 2012; or the publications of the Swedish Uppåkra Project: Hårdh, 1999, 2003). The consequences are disturbing. Not only is the enormous and unique research potential of the many finds impossible to exploit, but the finds and their contextual data (and with them a central component of Danish cultural heritage) are in fact in danger of being irretrievably lost; and this despite the fact that the individual finds have been reported. Even now, it is impossible to gain a comprehensive picture of the massive amount of data. The development of a central registration system for the thousands of metal detector finds that have already been discovered and that are to come in the next decades is therefore one of the most pressing challenges that Danish archaeology has to face.

Even if the real extent of the various problems connected to liberal metal detecting in Denmark are difficult to assess, and future developments may also change the picture, one must conclude that there are only few ‘black sheep’ among the Danish metal detectorists. In general, the protagonists in the field abide by the treasure-trove regulations of the museum law and practice their hobby with a highly professional attitude. And even though undetected cases of illegal detecting, sale and export of artefacts certainly exist, and some practitioners may

have unsatisfactory registration standards, I am convinced I speak for the majority of Danish archaeologists when I state that the positive effects of liberal detector archaeology far outweigh the negative effects.

The lack of central and enduring registration procedures for past and future metal detector finds, however, is a ticking bomb under the shining surface of Danish metal detector archaeology. The solution for this problem lies in the application of the new possibilities offered by public internet databases. The Portable Antiquities Scheme for England and Wales could be drawn upon as a suitable model. The professional attitude and commitment of the many amateur metal detectorists could be included as a potential resource in this respect. With their various internet-based databases of detector finds, the amateur metal detector scene in Denmark is already far ahead of the Danish archaeological establishment. Along the lines of current trends of civic participation and citizen-based research initiatives also within cultural heritage management, future registration of metal detector finds should try to include and empower the many amateur detectorists not only as qualified fieldworkers, but also as monitors and registrants, reporting and registering the result of their work (the Wiki-principle could be a suitable model for such a user-driven database).

CONCLUSIONS

Drawing some conclusions from the 30 years of liberal metal detector archaeology in Denmark, one can state the following: from a research perspective, metal detecting has contributed to a staggering increase in the amount of data and sites. In effect, it has not only radically altered our understanding of central aspects of the Scandinavian societies during the metal-

rich periods, but also opened new research perspectives. As an integrated tool of heritage practice, metal detecting has secured an important part of cultural heritage and ensured the identification of countless archaeological sites that otherwise would have been in danger of destruction by factors such as construction and agricultural activity, acid rain, chemical fertilizer, etc.

To be sure, these benefits have come at a price. It can be estimated that a total sum of more than 10 million DKK (1.3 million Euros) has been paid to individual metal detectorists only in the last ten years. In terms of a cost-benefit calculation and in the light of the general expenses for archaeological rescue excavations in Denmark, this can be regarded one of the most profitable investments in Danish archaeology.

Another price of the liberal model is the occasional loss of single finds or assemblages that are not handed over to the official stakeholders, but are instead sold, officially (all antiquities that are not declared for *danefæ* can be officially traded) or on the black market. However, would such cases have been prevented by a restrictive policy? The experience in countries with a prohibition model provides a clear answer to this question. Given the prevailing benefits gained from the many finds that are registered, even those few real and a hypothetical number of unknown cases can be considered a cheap price to pay.

The primary goal of this article was to provide a status update after 30 years of liberal metal detector archaeology in Denmark, and to identify the reasons why the concept of liberal metal detector archaeology has proven as successful as demonstrated above. The following aspects have been identified as crucial in this respect. (1) The provision of a simple set of rules for liberal detector archaeology and the securing of financial compensation

for the finders in the Danish treasure-trove legislation, with the amount being dependent on the care taken by the finder during the recovery of the find. (2) The decentralized character of the Danish museum landscape and the deep embeddedness of museums in society as trustworthy institutions. (3) Close cooperation and mutual respect between museums and individual or organizations of amateur metal detectorists. (4) The relatively small proportion of precious metal in the average metal detector find assemblages and the nature of the typical Danish metal detector sites (ploughed fields). (5) The long tradition of amateur (in the positive sense of the word) archaeology in Denmark. (6) The generally professional attitude of metal detectorists towards their hobby and their understanding of metal detector archaeology as a contribution to Danish cultural history. (7) The high level of organization among metal detectorists and the various associations and museums' educational role. (8) The general popularity of archaeology and a widespread and profound historical awareness in Danish society, closely linked with national sentiments. (9) A widespread understanding of cultural heritage as valuable and communal property and a source of national identity. (10) The 'trophy factor' and the significance of metal detector archaeology as a potential source of social and cultural capital.

An important conclusion one must draw from this analysis is the fact that the legislative foundation and in particular the financial incentive embedded in the *danefæ* law has to be regarded as only one of many reasons why the liberal model of metal detector archaeology has proven successful. Any attempt to find an answer to this question has to include a number of factors far beyond the influence of legislative regulations and official stakeholders. From this broad perspective, the success of

the Danish model has to be seen as based on a very complex interplay of legislative, historical, cultural and social aspects, and even the psychological disposition of the practitioners has to be included as an important factor (for comparable conclusions, see Olsen, 1984; Henriksen, 2005, 2011a, b; Garrison, 2009; Ulst, 2012).

PERSPECTIVES: A FUTURE FOR THE LIBERAL MODEL?

This leads us to an obvious question: can the Danish experience be used as a model for liberalising metal detector archaeology in other countries? Given the success of the Danish model based on very specific, and to some degree even unique, social and cultural factors, the answer must be no. Simply transferring the Danish model's legislative foundation to a different cultural context cannot be expected to result in the same positive result.

The countless examples of the looting and destruction of cultural heritage sites in countries with highly restrictive regulations for metal detector archaeology (mirroring only a small fraction of the problem's real extent) prove the inefficiency of the prohibition model. In the same way as drugs, illegal metal detecting cannot be effectively stopped by legislative means. In effect, the restrictive model forces archaeology to largely omit an important element of cultural heritage and archaeological research, while at the same time failing to contribute significantly to its preservation. Instead of being able to 'work' on open and ploughed fields, illegal metal detectorists are forced to seek the cover of forested areas with intact prehistoric surfaces, which is precisely where we do not want them to be under any circumstances. And the constant verbalization of metal detecting and its practitioners as the incarnation of evil criminalises and pushes further

afield the practitioners who could eventually be motivated to actually cooperate with the official stakeholders of heritage management. Seen in this light, the only positive consequence of the prohibition model is that it helps the official stakeholders maintain the illusion of protecting cultural heritage, while at the same time this heritage is constantly being destroyed.

The problems that come along with illegal metal detecting are not going to solve themselves in the near future. On the contrary, they will increase in gravity and distribution around the globe. It is therefore necessary to re-evaluate the prohibition model and to discuss seriously the various options for a more successful legislative framework. It is worth considering whether the Danish experience can be used as a source of inspiration in this process towards a legal agenda for responsible metal detector archaeology. One could argue that archaeology does not really have a choice.

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BIOGRAPHICAL NOTE

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Entre sauvetage et recherche: une évaluation après 30 ans de politique libérale par rapport à la détection de métaux dans la recherche archéologique et les pratiques du patrimoine au Danemark

Depuis le début des années 80, la prospection à l'aide de détecteurs de métaux par des archéologues amateurs a significativement contribué à la recherche archéologique et aux pratiques du patrimoine au Danemark. La détection des métaux a toujours été légale dans ce pays, et les intervenants officiels poursuivent un modèle libéral qui se focalise sur la coopération et l'inclusion plutôt que sur la confrontation et la criminalisation. Aucune autre méthode de prospection depuis l'invention de la pelle n'a contribué plus à l'énorme augmentation de la quantité de données et de sites des périodes riches en métal. Pratiquement toutes les découvertes spectaculaires et révolutionnaires des dernières décades sont dues à des détecteurs de métaux dans les mains d'archéologues amateurs. Et ce sont justement ces découvertes et sites qui constituent aujourd'hui un des épicentres de la recherche archéologique. Cet article fournit un aperçu de l'état actuel de l'archéologie libérale avec détecteurs de métaux au Danemark 30 ans après son début et essaie d'identifier les raisons pour lesquelles cet hobby populaire n'est jamais devenu le problème qu'il représente dans d'autres parties du monde. Pour conclure, on avance que le succès du modèle libéral danois est le résultat d'une interaction très complexe de facteurs législatifs, historiques, culturels et sociaux. Sur cette base on discute si l'expérience danoise peut être utilisée comme source d'inspiration dans la progression nécessaire vers un nouveau agenda législatif pour une archéologie avec détecteur de métaux responsable. Translation by Isabelle Gerges.

Mots-clés: détecteur de métaux, découvertes en métal, méthodes de prospection, pratiques du patrimoine, législation sur la protection, recherche citoyenne, Âge du Bronze, Âge du Fer, période médiévale

Zwischen Rettung und Forschung: Eine Evaluation nach 30 Jahren liberaler Metalldetektorensuche in der archäologischen Forschung und der Denkmalpflegepraxis in Dänemark

Seit den frühen 1980er Jahren hat die Suche mittels Metalldetektoren durch Laienarchäologen signifikant zur archäologischen Forschung und Denkmalpflegepraxis in Dänemark beigetragen. Hier ist Metalldetektorensuche immer legal gewesen und die Vertreter der öffentlichen Institutionen folgen einem liberalen Modell, das auf Kooperation und Einbeziehung statt auf Konfrontation und Kriminalisierung setzt. Wie keine andere Surveymethode seit der Erfindung der Schaufel hat der Metalldetektor zum

enormen Anstieg von Daten und Fundplätzen metallreicher Perioden beigetragen. Praktisch alle spektakulären und bahnbrechenden Entdeckungen der zurückliegenden Jahrzehnte sind Metalldetektoren in den Händen von Amateurarchäologen zu verdanken. Und es sind diese Funde und Fundplätze die heute einen von vielen Schwerpunkten der archäologischen Forschung bilden. Dieser Beitrag bietet einen Überblick über den derzeitigen Stand der legalen Metalldetektorenarchäologie 30 Jahre nach ihrem Beginn und will die Gründe identifizieren, warum dieses populäre Hobby nie zu dem Problem geworden ist, das es in anderen Teilen der Welt darstellt. Es wird gefolgert, dass der Erfolg des liberalen Modells in Dänemark das Resultat eines sehr komplexen Zusammenspiels von Gesetzgebung, historischen, kulturellen und sozialen Faktoren darstellt. Auf dieser Basis wird die Frage diskutiert, ob die dänischen Erfahrungen als Inspirationsquelle für die notwendige Veränderung hin zu einer neuen rechtlichen Agenda für eine verantwortungsvolle Metalldetektorenarchäologie dienen können. Translation by Heiner Schwarzberg.

Stichworte: Metalldetektor, Metallfunde, Surveymethoden, Denkmalpflegepraxis, Denkmalschutzgesetze, bürgerbasierte Forschung, Bronzezeit, Eisenzeit, Mittelalter