THE CURRENT MODEL OF ARCHAEOLOGICAL METAL DETECTING AND ITS SUCCESS IN SCHLESWIG-HOLSTEIN

Bente Sven Majchczack, Archäologisches Landesamt Schleswig-Holstein

ABSTRACT: The current model of archaeological metal detecting and its success in Schleswig-Holstein

In Germany, each state has its own legislation concerning heritage management. This paper focuses on the system used in Schleswig-Holstein, and a number of recent research projects are presented. In 2005, the State Archaeological Department of Schleswig-Holstein (Archäologisches Landesamt Schleswig-Holstein, ALSH) launched a system known as the Schleswig Model to allow and control the private use of metal detectors based on a certification process, licensing and cooperation. With this system, Schleswig-Holstein became one of the first German states to establish a legal system for metal detecting. Subsequently, the system has proven to be practical and efficient, yielding an output of finds, sites and excavations of high scientific value. Not least due to this success, other German states have established similar systems for legal metal detecting.

INTRODUCTION

Throughout Europe, many different ways have been found to address metal detecting in terms of law and the protection of cultural heritage. The circumstances are the same in Germany, where the federal system leaves relevant legislation to the states. In 2005, the State Archaeological Department of Schleswig-Holstein (Archäologisches Landesamt Schleswig-Holstein, ALSH) developed a system known as the Schleswig Model to allow and control the use of metal detectors. The system is based on a certification process, licensing and cooperation (Segschneider 2008; Fischer 2010). With this system, Schleswig-Holstein became one of the first German states to establish a legal system for metal detecting. Over the last years, the system has proven to be practical and efficient, yielding an output of finds, sites and excavations of high scientific value. Not least because of this success, other German states have established similar systems for legal metal detecting.

LEGAL ASPECTS OF METAL DETECTING IN SCHLESWIG-HOLSTEIN

The law for the preservation of cultural monuments in Schleswig-Holstein states the following regarding the use of metal detectors: “Anyone searching for cultural monuments on land or in water, in particular by digging or with the help of technical instruments, requires a permit issued by the state office for the protection of monuments. To protect the monuments, the permit can be denied” (free translation of §18 Denkmalschutzgesetz Schleswig-Holstein, 2012). This law provides thorough control over detecting because every use of a detector is capable of uncovering cultural monuments. Recent laws and court rulings regard archaeological finds, even finds as young as certain remains of World War II, as moveable cultural monuments. Prior to 2005, the ALSH used this legislation to prevent any use of metal detecting that would result in an invasion of the ground by denying the necessary permit to private persons. The increasing public interest in metal detecting and positive experiences regarding the cooperation of archaeologists and “amateurarkæologer” in Denmark resulted in a desire to enable supervised and organized metal detecting in Schleswig-Holstein. Therefore, a certification course was developed, and the first group of detectorists was licensed in 2005. Due to the experiences with the group, several changes have been made to the certification process over the years. Currently, the detector group has 105 active members (166 have been certified in total, as of 2014) of many different occupations and personal backgrounds.

The certification process

To become a member of the official detector group and acquire a license, the interested detectorist must participate in the certification course. Every applicant is invited to the ALSH office in Schleswig for a personal interview regarding his or her motivation and to explain the legal framework of metal detecting. Once found suitable for certification, the applicant participates in a practical training session and a seminar, which are held once annually in Schleswig.

Since 2014, the first part of this program has been held in the form of a two- to three-day practical detector survey on selected archaeological sites to
bring together the applicants with experienced members of the group and archaeologists. In recent years, the certification process has revealed that a certain percentage of all newly certified detectorists abandon their new hobby shortly after certification because metal detecting does not satisfy their expectations. To begin the certification with a practical training session provides the applicant the opportunity to gain practical insight into metal detecting before continuing with the certification process.

The second part of the program is a three-day seminar based on theory and practice, which is held in Schleswig and Kiel. The seminar explains the organization of the Archaeological State Office and the law for the conservation of cultural monuments in Schleswig-Holstein. The focus is on the legal framework for collecting and metal detecting. In addition, the organization of the detector group and the rules for detecting, reporting and treating finds are explained.

It is important to note that all archaeological finds are significant for the understanding of our cultural heritage. Thus, it is necessary to record and secure the finds together with their context. Because most detectorists are not professional archaeologists, it is important to train them to recognize important archaeological finds. Therefore, the second part of the theoretical component includes an overview of the archaeological periods in Northern Europe and their typical find material, with the primary focus on metal objects from the Bronze Age to the high medieval period. Examples of important types of metal object in various conditions are presented because the finder must be able to recognize a fragment as well as an entire object.

In addition to the find material, it is made clear that the context of an object matters greatly in assessing the object’s full scientific value. Techniques for conducting successful detector surveys, excavating and the recording of finds, proper documentation and measuring with GPS are taught to ensure the correct handling of finds and the filing of the required find report at the ALSH.

The next step of the theoretical instruction is a visit to the Archaeological State Museum at Schloss Gottorf in Schleswig. At the conservation laboratory, a short introduction to the correct handling of metal finds is provided. Next follows a visit to the exhibition for close observation of actual find objects.

The seminar’s final step occurs near Kiel at the State Ammunition Disposal Service of Schleswig-Holstein. Dangerous remains of World War II can be found in many parts of Schleswig-Holstein. The ability to recognize old ammunition and bombs is vital for any detectorist. Such objects must not be touched or moved in any way after discovery and must be immediately reported. The handling or possession of old ammunition not only violates several laws concerning ammunition, explosives and military weapons (Kampfmittelverordnung Schleswig-Holstein, Sprengstoffgesetz, Kriegswaffenkontrollgesetz) but also poses a grave risk of life. In recent years, the
frequent finds of dangerous relics have demonstrated the importance of this training.

Shortly after the theoretical instruction, the group conducts a systematic detector survey on a selected site as practical training in the use of a detector, the handling and measuring of finds and cooperation in a group activity. This activity is held in the form of a test and supervised by archaeologists. Passing this practical test concludes the certification.

The license
On certification, the Archaeological State Office issues a license to search for cultural monuments using a metal detector. However, this license does not constitute a general permit to search in any location. It is valid for all beaches in Schleswig-Holstein (excluding the City of Lübeck because of jurisdictional differences) and for specified search areas stated on a separate permit. Every detectorist may request a personal search area of his or her choice, typically based on place of residence or personal research interests. These areas are usually awarded exclusively to one person and do not include known archaeological sites of high significance or protected sites and monuments. In addition to the license, the detectorist must ask landowners for approval to search on private property. It is possible to expand or change the personal search area at any time on request.

The rules for metal detecting are simple: it may only be practiced on beaches and in agricultural areas that have been plowed and not in forests or other locations with undisturbed soil. All finds of archaeological significance older than the mid-17th century or younger finds of special importance must be reported to the ALSH in the form of a find report that provides the find’s GPS coordinates. The find itself must be turned in for conservation and scientific evaluation. All finds of scientific value become property of the state and are handled over to the Archaeological State Museum at Schloss Gottorf for permanent storage. The detectorist is not allowed to dig deeper than the plow layer. If a deep-lying find or archaeological feature is encountered, the ALSH must be informed immediately. Subsequent excavation is performed by an archaeologist, who also establishes the precise location with DGPS. The same rules apply to extraordinary finds or scattered finds that belong to a hoard. Additional detecting should be suspended until the situation is assessed by an archaeologist and the find context is determined in detail.

The members of the detector group spend most of their time in their personal search areas training their skills and prospecting for unknown archaeological sites. However, an essential aim of the certification is close cooperation, not only between the ALSH and the group members but also within the group and with other researchers. The detector group operates an internet forum to facilitate close communication between members. Forum access is restricted to group members and the ALSH. The forum is used intensively to discuss and analyze finds and locations as well as to plan group activities. Most group members post photographs of their find objects on the forum for analysis and identification, thus benefiting from the group’s collective experience. Typically, archaeologically significant finds are quickly recognized, and other find material is filtered out, which represents a major advantage for the ALSH because the handling of insignificant finds is substantially reduced. In addition, archaeologists can obtain a rapid overview of the general find material to determine whether certain finds should be turned in for evaluation.

The significant finds are evaluated by the ALSH. The find report, which is a short scientific analysis, and the find location are filed in the archaeological site register. The finds are also inventoried in the Archaeological Database of Schleswig-Holstein, which makes them traceable and accessible for scientific research. The database maintains a record of find location, type, material and dating as well as other information regarding the history of a find.

Twice annually, a compulsory group meeting is held in Schleswig at the ALSH for additional training lectures, discussion and project planning and to provide an opportunity for the members to display their finds and turn in file reports. In addition to the meetings, each member is obliged to hand in a report regarding his or her activities every two years to renew the detector license. These meetings also provide the ALSH a chance to offer feedback to the detectorists and to inform them regarding ongoing research and publications based on the finds and activities of the group.

Examples of finds and activities
A special find from an individual survey: The Norderstapel hoard
In a number of cases, the individual-survey procedure, which involves the professional assistance of the ALSH when a find is discovered, has proven highly effective. A good example is the discovery of a Bronze Age hoard in Norderstapel (Schleswig-Flensburg County, LA 1). Prospecting in his personal search

1 LA signifies Landesaufnahme; the number refers to the Archaeological Site Register of Schleswig-Holstein.

Fig. 3. (left): The hoard of bronze bowls during excavation. The fragile state of the bronze requires immediate stabilization.

Fig. 4. (right): One of the conserved and restored bronze bowls. Photographs: Linda Hermannsen, ALSH.
area, detectorist Stephan Wieck discovered a strong signal and on digging found a deep-lying, intricate bronze object. The find spot (Fig. 2) was located on an elevated moraine core that overlooks the river lowland of the Treene, with no previously known archaeological finds close by. Wieck recognized the find as a part of an archaeological feature, stopped digging and informed the ALSH. In the following days, the object was carefully excavated. It proved to be a hoard of four bronze bowls that had been stacked in the ground one into another with the bottom side up. Because of the fragile state of the bronze (Fig. 3), excavation and immediate stabilization on site by a conservation expert was crucial for the preservation of the find (Segschneider and Stawinoga 2011).

The bronzes belong to the type of bowl with cross-shaped attachments (Kreuzattaschenbecken), which date from period V of the Nordic Bronze Age (Fig. 4). This type of bowl originates in the Carpathian Basin and is spread over Central Europe, particularly along the Elbe and Oder rivers and as far as Jutland. The Norderstapel hoard fills a gap in the find distribution between the Elbe and Northern Jutland and demonstrates the presence of a local elite with far-reaching trade connections (Schmidt 2012: 79-82). Without the training of the detectorist and the close cooperation with the ALSH, this fragile find could not have been correctly preserved.

COOPERATION AND GROUP ACTIVITIES
In addition to individual metal detecting, a large number of group activities on different scales are conducted annually. Several types of group activity are possible.

Although a search-area permit is typically provided to an individual detectorist, he or she is allowed to invite other group members to conduct a group activity in his or her personal search area. The bearer of the area permit must be present at all times during the detector surveys. These activities are often conducted in areas of large scale, where archaeological sites are expected but yet undiscovered, and more than one detectorist is required to cover the area efficiently, for example, when settlements are expected to be within a certain perimeter due to known cemeteries or previous excavations. Once an archaeological site rich in metal finds is encountered, the group activities are joined by the ALSH for scientific evaluation and precise measurement. Metal-rich sites are often chosen for group surveys coordinated by ASLH staff, which are open to all group members. An example is the urn field of Löptin (Plön County, LA 15), which dates to the Roman Iron Age and the Migration Period. The site has been known for several decades by collectors and unlicensed detectorists. Since the founding of the detector group, several group activities have yielded a large number of fibulas and pieces of jewelry, including imported Roman items (Fischer 2010: 14). Although the urn field is largely plowed up and destroyed, the detector survey resulted in significant scientific gains.

The Viking-Age site of Großenwiehe
The exceptional site of Großenwiehe (Schleswig-Flensburg County, LA 36) is an example of a new discovery that resulted from individual metal detecting and led to a cooperative project of a larger scale. Again on an exposed old moraine core in a flat geest landscape, two detectorists located several finds from the Viking Age, including a key and a bronze trefoil brooch. Additional surveying located several small silver fragments decorated with animal motifs, which were recognized as part of an extraordinary object (Fig. 5). A thorough detector search and a small excavation uncovered additional pieces. After conservation, the object proved to be a small mount of silver, partially gilded and with black niello inlays, bearing a Christian cross on the top and fields with animals depicted in an insular animal style of Anglo-Saxon England. The conical object measures 33 mm in height and bears an eyelet on the lower edge. The eyelet was designed to represent an animal’s head. The object is without direct parallels. However, it exhibits strong similarities with the cone-shaped objects of the St. Ninian’s Isle Treasure (Shetland). The function of the Großenwiehe find remains unclear. The find, which was dated to the late 8th century, indicates that individuals from Northern Schleswig-Holstein were involved in the Viking raids in England (Tummuscheit 2012). The find triggered a series of individual and group activities in Großenwiehe in close cooperation with the ALSH. The outcome was superb, revealing a rich site with numerous pieces of hacksilver, silver bars, Islamic and Frankish silver coins, spheroid weights with flattened poles and cubo-octrahedral weights, all dating from the late 8th or 9th to 10th centuries. Future excavations might reveal the still undetermined nature of the site, which may be a settlement, a trading site or a cultic site. However, the absence of any of the usual settlement indicators suggests a special function.

2 An extensive publication on the silver cap is currently being prepared by Astrid Tummuscheit (ALSH) and Leslie Webster (University College London). The other metal finds of the Großenwiehe site will be presented in a Master’s thesis, which was in preparation in the time of finishing of this manuscript (Wolpert 2015).
METAL-DETECTING SURVEYS ON EXCAVATION SITES

There are other sites at which detector surveying has contributed to research when additional excavation was impossible. Detectorists started to survey known archaeological sites that were previously excavated on a large scale, for example, the Viking Age settlement of Kosel, which was excavated from 1983-88 (Rendsburg-Eckernförde County, LA 198, 199. Meier 1991), and the Migration Period urn field of Bordesholm, which was excavated from 1966-73 (Rendsburg-Eckernförde County, LA 6. Saggau 1986). At both sites, a large number of extraordinary finds were made. The surveys demonstrated how many finds remained in the plow layer after removal and refilling in the excavation process. In particular, the number of fibulas at Bordesholm increased substantially, providing a broadened basis for research – forty years after the original excavation!

Although the use of metal detectors has been standard at excavations of the ALSH for several decades (Fischer 2010: 9), the detector group offers new possibilities for support. ALSH archaeologists regularly invite the group on a regular basis to perform metal detecting on excavations, either helping survey designated excavation areas or examining excavated soil. This process has proven to be fruitful and resulted in increased numbers of metal finds in large-area excavations and in excavations within medieval cities. In the course of preliminary archaeological examinations, local group members are often invited to investigate designated construction sites in addition to field surveys and test trenches.

A business park was planned for construction on a known urn field of the Roman Iron Age and the Migration Period close to the town of Schuby (Schleswig-Flensburg County, LA 252). Therefore, the area was excavated from 2013-2014 and yielded 398 graves and features related to the cemetery and to settlement features from the Bronze Age, the Pre-Roman Iron Age, the Viking Age and the 19th century (Klems 2014). Long before the excavation started, two members of the detector group had begun surveying the site and found several objects related to the urn field. In addition, the site contained a large number of military items from the mid-19th century that could be linked to the First Schleswig War of 1848-51. In preparation of the excavation, several systematic metal-detector surveys were conducted in close cooperation.

Fig. 5: The silver mount from Großenwiehe after conservation (front and top views). Photographs: Linda Hermannsen, ALSH.
between the ALSH and the detector group. The search retrieved several hundred bullets of different types that belonged to weapons of the Danish army. The find distribution of the bullets displayed the typical pattern of a military camp of the time (approximately 1850), with concentrations of unused bullets being lost or discarded in areas used for weapons storage and changes of the guard. Two areas without finds indicated the troop quarters. A subsequent excavation revealed a ditch that was used as a field privy. The location of the ditch fit nicely with the typical layout of the military camp indicated by the find concentrations. Due to the dating and periods of use of the different types of bullet, the occupation of the camp could be determined as the year 1848. In addition, the course of the war indicates that the camp was used in April 1848, when the Danish troops occupied the area around Schleswig and the Danevirke (Weise 2014).

These conclusions add a new layer of historical information to the site. Without the systematic survey, the few modern features revealed by the excavation could not have been interpreted as belonging to a military camp because the camp as an archaeological site is mostly contained in the plow layer.

LARGE-SCALE SURVEYING FOR RESEARCH PROJECTS

In several cases, the detector group was invited by ALSH archaeologists, the Archaeological State Museum or the Center for Baltic and Scandinavian Archaeology to participate in research projects in which large-scale metal detecting helped locate settlements and survey extensive archaeological sites or areas of special significance. An example is the surveying of the Hedeby settlement, which started in 2003 with the help of Danish detectorists and continued until 2010. The settlement area inside the semicircular ramparts of Hedeby was fully and systematically surveyed by the detectorists and yielded approximately 11,500 metal finds (as of 2008). These finds complement the material collected during traditional field surveys conducted in the 1960s and 1970s, which primarily consists of non-metal objects. The detector finds represent a wide spectrum of items, including large series of coins, different types of brooch and standardized weights, which offer new possibilities for the evaluation of the settlement complex. As a result, the detector finds demonstrate a much longer duration of the Hedeby settlement than previously assumed. A settlement phase of the Younger Germanic Iron Age was found in the Southern area inside the ramparts that dates from as early as the late 6th century. The chronological younger Viking Age material contains in addition to material of Scandinavian character a strong continental influence from the 9th century onward. The largest portion of the metal finds belongs to the youngest settlement phases of the 10th and 11th centuries (von Carnap-Bornheim et al. 2007: 16-20). According to traditional research regarding the excavation results, Hedeby lost its international significance in approximately the year 1000. The new finds completely changed this view. In particular, the numerous coins from the 11th century indicate that Hedeby remained a thriving emporium, with the youngest coin dating to the years 1060 to 1086. This time period corresponds to the founding of Schleswig and thus marks the movement of the emporium across the Schlei fjord (Hilberg 2008: 53-55). Hedeby is certainly the most extensive detector project that has been conducted in Schleswig-Holstein. Its immediate success played an important role in the development of the detector group.

A successful project of the detector group: The Viking Age Site of Ellingstedt

One of the most important discoveries of recent years resulted from a research project that was initiated and conducted by members of the detector group who desired to focus on possible Viking Age settlements on the isthmus of Schleswig. Along the course of the Danevirke, which connects the trading center of Hedeby with Hollingstedt, additional settlements would most likely have been established for trade and for military control (Fig. 6). Together with the ALSH, the detectorists searched for sites with a suitable topography in the surroundings of the Danevirke. Close to Ellingstedt (Schleswig-Flensburg County, LA 50), a small hill surrounded by lowland that once included a small river seemed a promising location (Fig. 7). The river was connected to the Rheider Au south of the site. The spot is located halfway between the sides of the Danevirke (Siegloff 2015).

The initial metal detecting demonstrated that these assumptions were correct. The elevated area yielded Viking Age finds of high quality (Fig. 8) that immediately indicated a settlement of high status. However, the metal finds were not only concentrated on the elevated, sandy hill but also stretched surprisingly into the lower, wet area close to the former river (Siegloff 2015).

Several pieces of hacksilver, Islamic and German coins together with lead, cubo-octrahedral and spherical weights indicate trade activities, whereas several spindle whorls of lead, an iron hammer, a depot of iron ingots and drops of molten metal indicate that crafts were practiced. In addition, the field survey
located several pieces of local and imported pottery and fragments of an imported steatite vessel. Personal jewelry was present in the form of several bronze keys, several trefoil brooches, one borre-style fibula, two pseudocoin fibulas and glass beads. One Valkyrie fibula and a small pendant in the form of a Christian cross represent religious objects. Additionally, a gilded strap distributor from a horse harness with four animal-head ornaments, a gilded fitting with braided ornaments and an iron sword pommel imply the presence of persons of high social or political rank at the Ellingstedt settlement.

The elevated area came under the plow only shortly before the site's discovery, and it was deemed necessary
to assess the threat of agricultural tilling to the archaeological remains. A geomagnetic survey of the site was performed without substantial results. Therefore, the ALSH conducted a two-week test excavation in 2013 with the help of several members of the detector group. A trench on the elevated area in the midst of a concentration of detector finds revealed two shallow pit houses (one with a stone hearth), pottery and glass beads. It became clear that the tilling was rapidly degrading the settlement features and that the detector finds were being plowed from their context.

Several trenches were also opened in the lower, wet area beneath the elevated, sandy settlement area. To great surprise, the settlement continued and the

Fig. 8: Selection of metal finds from Ellingstedt: Cross-shaped pendant, pseudo coin fibula, Valkyrie fibula, gilded strap distributor, trefoil brooch, gilded fitting with braided ornaments, cubo-octahedral weight, hacked piece of a silver ingot, Islamic dirham. All finds at actual size. Photographs: Linda Hermannsen, ALSH.
The entire settlement covers an area of approximately 3.5 hectares. According to the find material and several dendrochronological datings of construction timbers, the settlement dates from the 8th to 9th/10th centuries (Meinhart and Siegloff 2014; Siegloff 2015).

The excavation demonstrates the high scientific potential of the Ellingstedt settlement. The excellent preservation, the strategic location at the Danevirke and the high-quality find material indicate a settlement that played a major role in the economic and political system around Hedeby. This potential and the alarming erosion of features due to agriculture called for a quick reaction to preserve the site. The land had to be removed from use. However, the law for the preservation of monuments offered no possibility to prevent tilling. A solution was found in a combination of environmental and cultural-heritage protection. The land was purchased by the county and transformed into a nature-conservation area using funds for the compensation of ecologic losses due to construction projects (Siegloff 2015).

The Ellingstedt site is an example of a research project initiated by enthusiastic members of the detector group, which revealed a previously unknown archaeological site of substantial importance. In close cooperation with the ALSH, the site was surveyed, test excavated and successfully protected for future research.

CONCLUSIONS

Since 2005, the Schleswig Model has proven to be an excellent framework for metal detecting in Schleswig-Holstein. The growing detector group and the many ongoing and successful projects demonstrate the trusting and fruitful cooperation that has been established between official state archaeology and private detectorists during the past nine years. The numerous individuals who are interested in metal detecting are eager to participate in this cooperation and display a high awareness of their potential to contribute to scientific research. The certification process was designed to provide the detectorists with the knowledge necessary to conduct systematic surveys and to recognize, document and report significant finds. Numerous new sites have been found and reported. Often starting with finds of single objects, extensive research has followed, including group activities, excavations and geophysical surveys, and contributed to an extensive understanding of the sites. In particular, the rule that all digging must stop when intact archaeological features, intricate objects or large find scatterings are found (to preserve the finds and their context) has demonstrated its wisdom on several occasions. Objects, such as the Norderstapel hoard, could not have been preserved without a proper excavation. Similarly, the precise locations of scattered finds on a site must be measured using DGPS to understand the context, as demonstrated at the Schuby military camp or by the many silver objects discovered at Großenwische. This close cooperation between detectorists and officials is the only way to unlock the full potential of metal detecting for scientific research and the conservation of cultural heritage. In Schleswig-Holstein, we have realized that maintaining control over private metal detecting is not only achieved by subjecting detecting to laws and regulations but also by expending substantial efforts on training during the certification process, permanent cooperation and being prepared to react and assist the detectorists in their projects. Naturally, this approach requires manpower on the side of official archaeology. However, the results from recent years demonstrate that the effort will be repaid.

REFERENCES


Saggau, Hilke Elisabeth 1986. Der Urnenfriedhof beim...
Brautberg in Bordesholm in Holstein. Neumünster: Wachholtz. (Offa-Bücher, 60)


