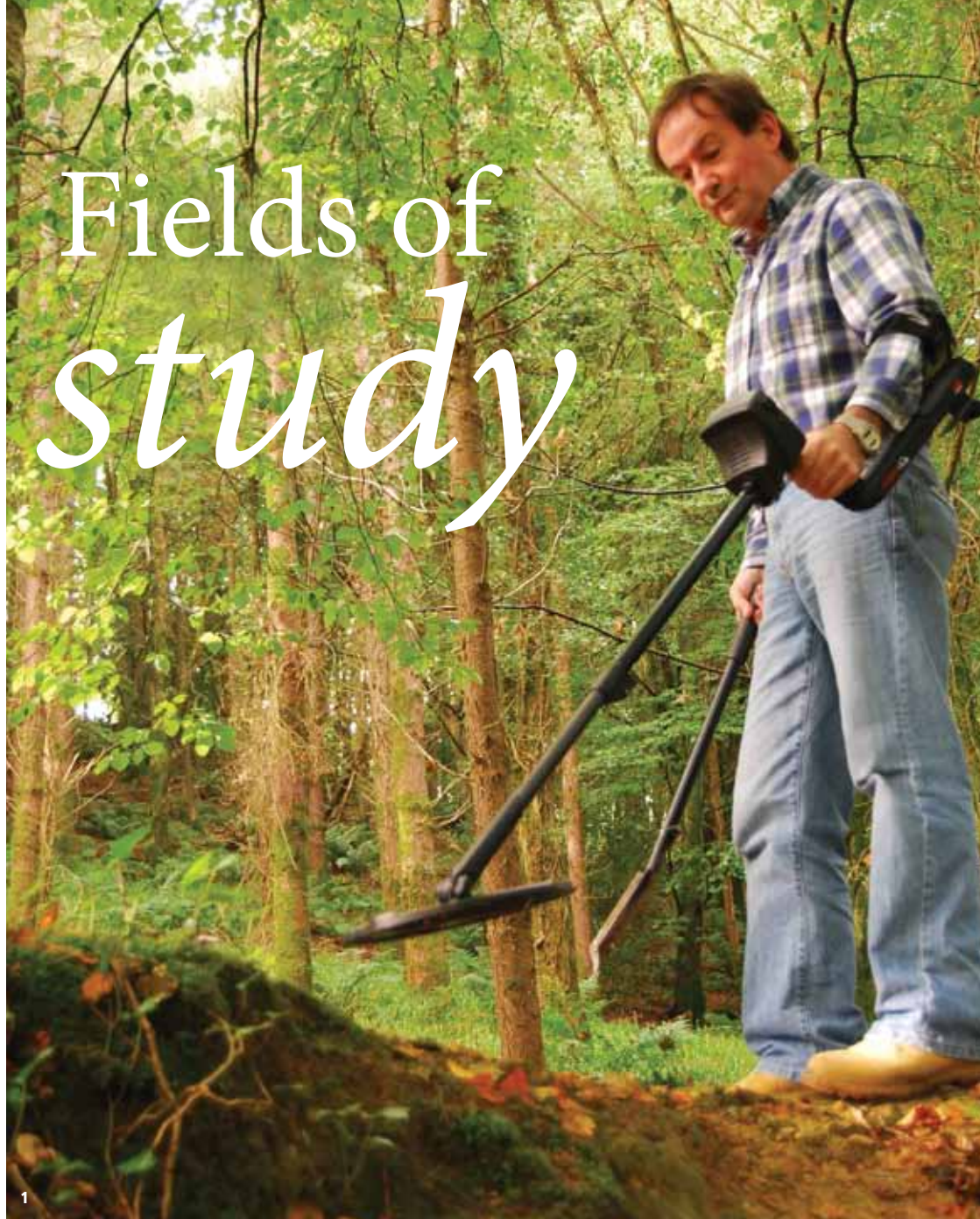


**Trevor Austin** explains the vital role played by metal detectorists in contributing to our knowledge of the past

**A**t this time of year in Britain, it is not unusual to see a lone figure weaving through the bales of straw in a roadside field, following a determined pattern and swinging a metal detector back and forth. Even on wind-swept beaches in the depths of winter, resolute individuals can be seen steadily walking while waving their electronic wands before them. These metal detector users – commonly referred to as ‘detectorists’ – come from all walks of life. Whether builders, teachers or serving in the police or armed forces, they all share the desire to explore the past through the discovery of metal objects that, over the centuries, have been accidentally lost or intentionally buried in the ground. Detectorists are sometimes labeled ‘treasure hunters’, and it is true that, over recent years, they have discovered many spectacular finds that are deserving of the term ‘treasure’. However, detectorists themselves would not use the phrase to describe their activities, and chancing upon finds of precious artefacts it is an exceedingly rare occurrence. Anyone taking up the hobby with the belief that they will uncover such items will quickly become disillusioned with metal detecting. Nevertheless, recent high-profile discoveries by detectorists have brought metal detecting into the media spotlight. For example, the Anglo-Saxon Staffordshire Hoard, found in July 2009, was purchased jointly by the Birmingham Museum and Art Gallery and the Potteries Museum and Art Gallery for £3.285 million (Fig 3); the Frome Hoard, consisting of more than 52,000 bronze and silver Roman coins and unearthed in April 2010, was acquired by the Museum of Somerset for £320,250; the Roman cavalry parade-ground helmet discovered at Crosby Garrett, Cumbria, in May 2010, sold at auction for more than £2.281 million (Fig 2).

Other important finds have been unearthed by detectorists over recent decades, adding immensely to our understanding of the skills and craftsmanship possessed by past societies, and also capturing media interest and the public imagination. The Middleham Jewel, discovered in

# Fields of study



**Fig 1. Metal detecting in woodlands offers beautiful scenery, but it can be difficult working in a systematic and through fashion when attempting to manoeuvre the machine through the trees and undergrowth.**

**Fig 2. The Crosby Garrett Helmet, discovered in Cumbria in May 2010 by an anonymous detectorist. The bronze parade ground helmet probably dates to the late 1<sup>st</sup> or 2<sup>nd</sup> century AD and caught the public attention when it sold for more than £2.2 million at auction in September 2010. H. 40.7cm.**

1985 by Ted Seaton while detecting in the grounds of Middleham Castle, is a truly beautiful object, and anyone who has seen this medieval sapphire pendent cannot help but be impressed by the outstanding workmanship (Fig 4). The collection of 10<sup>th</sup>-century coins and artefacts revealed in the Vale of York in 2007 by father and son David and Andrew Whelan was the largest Viking hoard to be discovered in Britain since 1840. These and other spectacular finds were discovered by dedicated detectorists who have been practising their hobby for many decades, quietly unearthing objects and reporting what they find (with the permission of the landowner) to their

local museum or Finds Liaison Officer. Perhaps the best example of the care and respect for artefacts shown by detectorists was in discovery of the Hoxne Hoard, unearthed in 1992 (Fig 5). Asked by the farmer to locate a lost hammer in a field, detectorist Eric Lawes instead began to find gold and silver coins, jewellery and spoons. (For a review of the entire hoard, see *Minerva* July/August, 2010, pp. 30–33.) Rather than removing any further artefacts from the soil, Mr Lawes immediately contacted the police and local council, and the following day the site was carefully excavated by professional archaeologists who were able to record what



PHOTO: TREVOR AUSTIN

PHOTO: COURTESY OF CHRISTIE'S



PHOTO: COURTESY OF BIRMINGHAM MUSEUM AND ART GALLERY



**Fig 3. A tiny fraction of the artefacts that comprise the Staffordshire Hoard. Found by detectorist Terry Herbert in June 2009, the Anglo-Saxon hoard provided new insights into the skills and artistic sophistication of craftsmen of the 7<sup>th</sup>/8<sup>th</sup> centuries AD.**



**Fig 4. The Middleham Jewel, with lozenge-shaped gold pendant and 10-carat sapphire. An inscription on the pendant indicates it was a charm against epilepsy. Found by detectorist Ted Seaton in September 1985, it has been acquired by the Yorkshire Museum in York for £2.5 million.**



**Fig 5. A display featuring part of the Hoxne Hoard. Found by Eric Lawes in 1992, the nearly 200 gold and silver objects, together with 15,234 coins was placed in the ground in the early 5<sup>th</sup> century AD.**

**Fig 6. Recently ploughed fields offer detectorists the best opportunity for discovering ancient artefacts, while searching such sites rarely conflicts with archaeological investigations.**

**Fig 7. The principal components of a modern metal detector.**

There are many types of metal detectors on the market, with prices ranging from around £100 to well over £1000. Although almost any hobby machine will find buried coins and artefacts, the way they present the information to the user varies considerably. Today, even entry-level machines allow the user to adjust settings to discriminate between different metals. More expensive metal detectors allow the customisation of as many as a dozen different parameters, and while it takes considerable practice and skill to operate some of the top-of-the-range machines, once the detectorists has mastered them, they present a wealth of information in

both audio and visual format. Rather than running out and buying the first metal detector that comes to hand, then heading to the nearest plot of land, would-be detectorists are advised to join a metal detecting club – preferably one affiliated to the National Council for Metal Detecting (NCMD). These organisations provide interested people with the opportunity to learn about the different machines currently in use, introduce them to the methods and techniques expected of responsible metal detectorists, and allow them to gain familiarity with some of the artefacts commonly found in their local area.

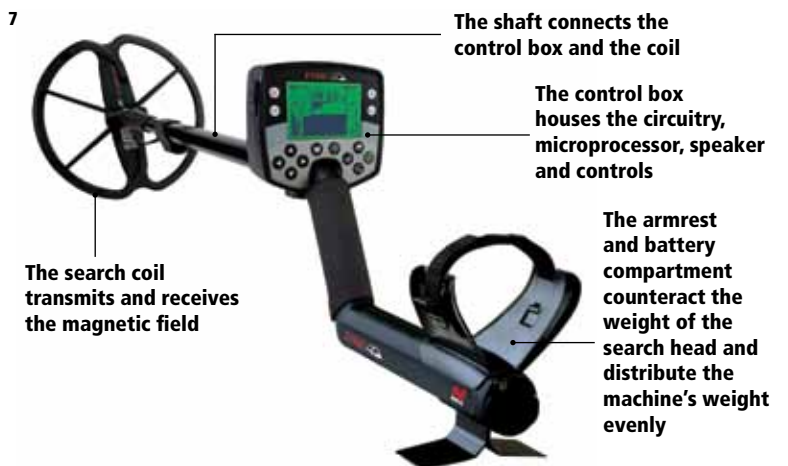


PHOTO: CHRISTIAN BICKEL

proved to be the largest collection of Late Roman silver and gold ever discovered in Britain, deliberately buried as Roman rule came to an end.

Last year alone over 90,000 objects were reported to the Portable Antiquities Scheme (PAS) by members of the English and Welsh public, almost all of them metal detectorists. Each year the *Portable Antiquities & Treasure Report* brings thousands of important artefacts to academic and public attention (see this issue of *Minerva*, pp. 8–10, for the 2008 report). It is precisely this dedication to their hobby that characterises so many detectorists, most of whom will never discover valuable or historically important objects. However, they are rewarded by the enjoyment that accompanies the discovery of small metallic objects randomly lost throughout the countryside, each of which has the potential to offer the finder a fascinating window on the past.



PHOTO: DOMINIC COYNE, PORTABLE ANTIQUITIES © THE BRITISH MUSEUM

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**Fig 8. The Ringlemere Gold Cup, found near Sandwich, Kent, in 2001 by detectorist Cliff Bradshaw. Dating to c. 1700–1500 BC, the vessel had been crushed by plough action. H. 14cm (in original state).**

A metal detector is not a magic wand. The user has to understand how the machine operates and what information it is presenting. Metal detectors work by transmitting a signal that creates an electrical current in the transmit coil, which in turn generates a magnetic field. This causes electrical currents to flow in metal targets (called eddy currents). These then create a magnetic field that differs from the transmitted field. The receive coil detects the magnetic field generated by the eddy currents and amplifies it, extracting the signal that comes from the target from signals from other environmental magnetic sources, such as earth's magnetic field. The machine then translates this information into the familiar beeping sound.

A detailed map showing the area

**Fig 9. A beach metal detectorist with the San Francisco skyline behind.**



PHOTO: INGRID TAYLOR

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Detecting on beaches is also popular, although the finds are generally from more recent periods of history and are often hidden among a profusion of ring pulls and bottle tops

**Fig 10. Sword fitting from the Staffordshire Hoard. The dent in the garnet and cloisonné decoration is due to plough damage. L. 3.2cm.**



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to be searched and for the plotting of finds is essential, and if finances allow, a GPS provides a highly accurate alternative. You will also need a collection of plastic sealable finds packets, a pen and a pair of stout waterproof boots (obviously without metal toe caps). Most landowners will be willing to allow you to detect on their property, but you must obtain permission before venturing on to any land.

Recently ploughed land is the most rewarding landscape for detectorists to search (Fig 6). Cleared of crops, newly ploughed fields are easy to investigate and also provide fresh targets following each turn of the plough. However it is ploughing that accounts for much of the damage and corrosion visible on many coins and metal artefacts. Once removed from a sealed, anaerobic environment, metallic items soon begin to degrade as they are eaten away by chemical reactions. Detectorists who discover items brought close to the surface by the actions of the plough are therefore rescuing them from further degradation, or even complete destruction. The artefacts found in the Hoxne and Staffordshire hoards would not have survived in the wonderful condition in which they can now be seen had they come within reach of the plough. In the case of Staffordshire Hoard, damage is visible on some pieces, including the beautiful sword hilt fitting (Fig 10). Had the hoard remained undiscovered for even one more year, much of the magnificent metalwork would very probably have been smashed and ripped apart when

the field next came under the plough. The detectorist, Terry Herbert, therefore saved one of the most important Anglo Saxon archaeological finds since the excavation of the Sutton Hoo ship in 1939. The Bronze Age Ringlemere Cup, unearthed by Cliff Bradshaw in 2001, is another prime example of an extremely rare ancient object recently damaged by the plough, and clearly demonstrates the value of metal-detecting as a recovery method that can save precious objects from the soil and make a hugely important contribution to our understanding of the past (Fig 8).

The best time to search fields is just after the harvest, although the stubble of cereal and oilseed rape can prove difficult to walk over and dig beneath. Another good time to investigate land is just before the new crop is drilled, when the earth has been freshly prepared, although this will depend to some extent on the type of crop being grown. Detecting on beaches is also popular (Fig 9), although the finds are generally from more recent periods of history and are often hidden among a profusion of ring pulls and bottle tops. Woodlands are also a good environment to explore with a metal detector (Fig 1), although to avoid insects and undergrowth the wintertime is the best season to investigate these sites.

Rather than just walking haphazardly across a field, decide how best to cover the search area. Some detectorists walk in parallel lines, while others prefer to first detect the corners and then cross the centre diagonally. While





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PHOTO: EDMOND TERAKOPIAN, COURTESY OF THE PORTABLE ANTIQUITIES SCHEME

searching it is important to swing the metal detector back and forth in a steady sweep, overlapping each sweep slightly and keeping the search head as close to the ground as possible over the full extent of the sweep, as the magnetic field put out by metal detectors can only penetrate the ground to a limited depth. Although nearly all metal detectors now possess the ability to cancel out unwanted items such as iron nails or silver paper, this 'discrimination' is generally used at minimum settings so as not to overlook items of interest. Any seasoned detector user will tell you that the best form of discrimination is the human ear; the sounds emitted by metal detectors have very subtle differences as they pick up different targets. The secret is to interact with the machine and understand the information it is imparting, concentrating on the signals coming from the machine and excavating each one, making sure that unwanted scrap metal targets are removed from the site so they will not provide a distraction in future. At the end of a search, always try and meet with the landowner and discuss what has been found. It may be something of historical interest, or it may just be scrap metal, but that is part of the fascination of the hobby.

Detectorists receive numerous requests from members of the public to locate lost keys or, even more frequently, rings that have slipped off fingers or been thrown away during arguments. Judging by the number of rings found by detectorists over the years, these pieces of personal ornamentation have been lost in similar circumstances since prehistory (Fig 11).

The National Council for Metal Detecting (NCMD) was formed in 1982, primarily to combat the ill-informed anti-metal detecting campaign orchestrated by some professional and amateur archaeologists under the banner of 'STOP' (Stop

**Fig 11. One of a pair of medieval love rings unearthed by a group of three metal detectorists near Lewes, Sussex, in 2004. Both gold rings are inscribed MON CUER ENTIER ('my whole heart'). Such rings were common in the 15<sup>th</sup> century.**

**Fig 12. The five middle Bronze Age gold artefacts c. 1200 BC of the Crow Down Hoard were discovered during a metal-detecting rally on the Lambourn Downs, West Berkshire, in 2004.**

**Fig 13. Metal detectorists often have a symbiotic relationship with archaeologists, and those practising the hobby can prove extremely useful during archaeological excavations.**



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PHOTO: COURTESY OF THE PORTABLE ANTIQUITIES SCHEME © WEST BERKSHIRE MUSEUM

Taking Our Past). From the outset, the NCMD has been committed to promoting best practice, encouraging members to practice metal detecting in a responsible manner, and protecting their rights to freely pursue the hobby with landowners' permission. The NCMD also provides members with free public liability insurance, which all local authorities and many landowners insist upon. The organisation has its own code of conduct, and members found to be in breach of its code will be expelled. Since its formation, the NCMD has seen many changes, but none so important as the Treasure Act of 1996 and the accompanying Portable Antiquities Scheme (PAS) which began to come into effect the following year. The NCMD played a significant part in the negotiations with the then Department for National Heritage for both these programmes, but there are still those in the archaeological world who either fear or dislike metal detecting. This is a great shame, as the system in England and Wales is envied by many other European countries whose portable antiquities laws are far more draconian and consequently less efficient in protecting their cultural heritage.

The NCMD continues to maintain that there is nothing to fear from responsible metal detectorists, whose hobby is crucial to the protection of historical artefacts. Metal detecting is usually conducted in locations where archaeologists would have no initial interest, and where metal objects are under the greatest threat of being destroyed by modern farming methods.

In reality, detectorists and archaeologists have much in common, sharing a love of history and a fascination with objects from the past. While archaeologists remove these from sealed stratified layers, most finds made by metal detectorists are plucked from the plough soil, and are generally already out of context and in danger of imminent destruction. Slowly but surely, most archaeologists have begun to acknowledge that responsible metal detecting has greatly complemented archaeology and has provided a key service in helping us better understanding the past (Figs 12, 13). ■

**Trevor Austin is the General Secretary of the National Council for Metal Detecting.**

PHOTO: COURTESY OF THE PORTABLE ANTIQUITIES SCHEME



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