

# The Idea of the Past

Our aim in this chapter is to show how some fundamental principles and methods emerged and combined to form the modern discipline known as archaeology. This has been the subject of several complete books, but we will attempt to map the development of archaeology in a wider intellectual context and look in more detail at some themes that are particularly important:

- Interest in landscapes and travel promoted the recognition and recording of **ancient sites**. Visits to sites, together with the habit of **collecting** ancient artefacts and works of art, eventually led to deeper investigations (with the help of excavation) of **early civilisations**.
- The study of **human origins** stimulated profound thinking about concepts of time, and forged lasting links between archaeology and the natural sciences, notably biology and geology. It also underlined the importance of being able to identify and interpret **artefacts** made by early humans.
- The word '**prehistory**' was invented in the nineteenth century to describe the long period of human existence – undocumented in historical sources – revealed by newly developed archaeological methods. Later, these methods were applied to the study of other fundamental phenomena such as the **transition from hunting to farming** and the **origins of urbanism**.

These issues are not presented in a strict chronological sequence, and no clear line divides the history of archaeology from its present concerns. Many topics are discussed further in Chapter 6, which looks at more recent trends in theory and interpretation.

## 1.1 THE INTELLECTUAL HISTORY OF ARCHAEOLOGY

- key references: Trigger, *A history of archaeological thought* 2006; Murray, *Milestones in archaeology* 2007; Schnapp, *The discovery of the past* 1996.

It is important that the benefit of hindsight does not make us forget the constraints of the social and intellectual context in which **antiquaries** lived and worked. For example, in the early nineteenth century the Danish scholars who first organised prehistoric objects into three successive Ages (Stone, Bronze and Iron) assigned them to a very short time span. In mid-seventeenth-century Britain, Bishop Ussher had used the Bible to

calculate that the creation of the Earth took place in 4004 BC, and other estimates were not much earlier (Stiebing 1993: 32; Rowley-Conwy 2007: 6–7). Pressure from developments in geology and biology to adopt a much longer time-scale did not finally displace the biblical scheme until the 1860s. The dating of prehistory underwent major revisions after the radiocarbon dating technique was introduced and accepted in the 1950s, while techniques such as potassium-argon dating revealed that some of the earliest sites with tools made by **hominins** were much earlier than had previously been suspected (Chapter 4).

We may learn a great deal by examining how early antiquaries and archaeologists (the difference between the two will emerge later in this chapter) tackled the formidable problem of

making sense of the human past without the help of the libraries, museums, travel and technical facilities available today. At the same time we should take care not to look only at the origins of ideas we still consider important, and ignore the wider setting in which they were formulated. At the most fundamental level it is possible to see the whole idea of looking for origins of things as a peculiarly Western intellectual diversion (Foucault 1970; Trigger 2006: 9–10).

We feel that it is important to place the development of archaeology within a broad intellectual, philosophical and historical framework; however, terms such as **Renaissance**, **Enlightenment** or **Romanticism** are less well known than they once were. Table 1.1 places onto a chronological scale the labels used in this chapter to indicate the cultural, political, philosophical or religious

context of a particular approach to archaeology; many of these labels were only invented in the nineteenth century and are used for convenience. It is also worth remembering that in charting the development of archaeological thought, the contribution of female archaeologists to these advances has often been underplayed because of the social context in which archaeology developed (Diaz-Andreu and Stig-Sørensen 1998; Kehoe and Emmerich 1999: 117). It is also true that this simplified account of intellectual history places Europe and America at its centre, and carries the implication that everything on the chart happened as part of a linear evolution towards the present. Although this kind of thinking can cause all sorts of problems (which are explored in Chapter 6), it may nevertheless be a useful starting point.

**Table 1.1** Archaeology and the history of ideas

| Intellectual or cultural phase | Date                                      | Characteristics  | Impact upon archaeology   | Key names (those after ‘/’ relevant to archaeology)         |
|--------------------------------|---|--|---|---|
| Classical                      | ancient Greece and Rome                   | philosophical and scientific outlook, particularly in Greece, embracing both the human and the natural/physical world  | collecting artistic objects, visiting sites, speculation about early human societies                  | Aristotle, Plato, Lucretius / Herodotus, Pausanias, Tacitus |
| Late Roman/ Byzantine          | fourth century AD to fifteenth century AD | Christian theology emphasising lack of free will, preoccupation with truth against heresy  | perpetuation of idea of Roman Empire, collecting Christian relics, pilgrimage to holy sites           | St Augustine  |
| Islam                          | seventh century AD onwards                | conquest and conversion of much of Mediterranean Classical world, along with Persia and the East   | translation into Arabic of Classical Greek literature, especially on philosophy, medicine and science | Mohammed, Avicenna, Averroes                                |
| ‘Dark Ages’                    | AD 600–1000                               | replacement of western Roman Empire by kingdoms of Germanic origin; continuation of scholarly Christian outlook still regarding Rome as its centre, particularly in Britain and France | interest in Roman art, architecture, and literature; relics and pilgrimage                            | Bede, Alcuin, Charlemagne                                   |

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|------------------------|--|--|--|--|
| Medieval scholasticism | eleventh to fourteenth century AD              | expanding interest in Classical intellectual heritage (especially Aristotle), scientific investigation; important background to Renaissance  | rediscovery of ancient Greek philosophical and scientific writings preserved by Arab scholars  | St Thomas Aquinas, Roger Bacon                                   |
| Renaissance            | fourteenth to sixteenth century AD             | interest in humanism as well as theology, flowering of the arts (especially in Italy); broadening of horizons through European voyages of discovery  | recording of Greek and Roman buildings and inscriptions, study of Roman architecture to provide models for new buildings   | Erasmus, Leonardo da Vinci / Brunelleschi, Cyriac of Ancona      |
| Reformation            | sixteenth to seventeenth century AD            | rejection of the authority of the Roman Church, greater emphasis on the individual; conflict between science and papal authority   | growth of national awareness in Northern Europe leading to studies of local sites  | Luther, Calvin, Loyola (Counter-Reformation) / Copernicus        |
| Scientific Revolution  | seventeenth century AD                         | rejection of Aristotle, investigation of the physical world by direct observation and experiment, particularly in astronomy; concept of scientific laws  | growing curiosity about ancient sites, recording them using mathematically sound surveying methods   | Descartes, Hobbes, Galileo, Isaac Newton, Francis Bacon / Aubrey |
| Enlightenment          | eighteenth century AD                          | as a result of the Scientific Revolution, increasing explanation of the world in rational rather than religious terms; profound philosophical interest in the evolution of human society; emphasis upon free will and rights | expansion of scientific recording and classification of natural world (including antiquities)  | Diderot, Hume, Kant / Stukeley, Winckelmann                      |
| Romanticism            | late eighteenth to early nineteenth century AD | reaction against Enlightenment rationality: emotional attraction to dramatic, wild landscapes and primitive peoples  | increasing national identity and interest in origins of modern nations; preference for 'Noble Savage' rather than 'brutish' image of primitive humans; interest in progress through ages | Rousseau, Schelling, Hegel                                       |
| Positivism             | nineteenth to twentieth century AD             | continuation of Enlightenment preference for empiricism, naturalism and science rather than speculation; emergence of sociology  | intellectual atmosphere receptive to developments in geology and biology leading to evolutionary theory and the study of human origins   | Comte  |

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| Evolutionism (Darwinism) | nineteenth to twentieth century AD           | concept of natural selection added a new scientific dimension to long-held ideas about the evolution of organisms (including humans); transformed by development of genetics in the twentieth century       | extensively adopted as an analogy for explaining (and justifying) changes in societies (Social Darwinism) and for the development of archaeological objects                             | Lamarck, Darwin, Herbert Spencer / Pitt Rivers                            |
| Marxism (communism)      | nineteenth to twentieth century AD           | theory of social evolution derived from anthropology and ancient history that emphasised the economic basis of social structures, and the notion of revolutionary (rather than gradual) change              | particularly important in the twentieth century when archaeologists reacted positively or negatively to developments in Russia, and highly influential in 'explaining' prehistory       | Marx, Engels / Childe   |
| nationalism              | nineteenth to twentieth century AD           | extension of Reformation and Romantic concepts into political action, frequently using evolutionary ideas about natural selection to include notions of racial superiority                                  | extensive archaeological work devoted to establishing connections between modern peoples or nations and 'ancestral' sites and artefacts   | Hegel, Byron / Kossinna   |
| Modernism                | late nineteenth to late twentieth century AD | culmination of the Enlightenment and positivist confidence in social progress and objective science   | fundamental to much archaeological work, especially the 'New Archaeology', up to the 1980s  | Hegel, Marx / Binford, David Clarke                                       |
| Structuralism            | early to late twentieth century AD           | intellectual movement that relates superficial phenomena such as language, myths, works of art and social institutions to the underlying structure of language  | particularly influential upon anthropology, and therefore upon archaeology  | Saussure, Barthes, Lévi-Strauss / Hodder                                  |
| Postmodernism            | late twentieth century AD                    | breaking down of confidence in modernism and grand narratives of social evolution such as Marxism; related to post-structuralism, which denies fixed meanings, simple dichotomies and the pursuit of truths | encourages highly personal archaeological outlook that suspects that all interpretations based on supposedly objective observation are illusions reflecting prevailing power structures | Nietzsche, Lyotard, Foucault, Derrida / Christopher Tilley, Julian Thomas |

### 1.1.1 Archaeology and antiquarianism, prehistory and history

- key references: Sweet, *Antiquaries* 2004; Pearce, *Visions of antiquity* 2007a; Rowley-Conwy, *From Genesis to prehistory* 2007; Daniel and Renfrew, *The idea of prehistory* 1988.

The concept of prehistory is perhaps the single most important contribution made by archaeology to our knowledge of humanity; furthermore, it is based almost exclusively on the interpretation of material evidence. The emergence of prehistoric archaeology in the nineteenth century, although it relied heavily upon natural sciences such as geology and biology, was a remarkable episode that changed people's ideas about themselves (Richard 1993). Indeed, research into human origins in the nineteenth century did as much as the discovery of civilisations to establish public awareness about what was distinctive about archaeology as an intellectual pursuit. Early progress in the study of ancient Greece and Rome established the value of recording sites and artefacts as well as documents and inscriptions; the term **archaeology** was already being used in Jacob Spon's publications of his research in Athens and elsewhere in the seventeenth century (Etienne and Etienne 1992: 38–41). Nevertheless, most historical scholars gave the written word priority over physical evidence, and until quite recently considered archaeology inferior to the study of texts or works of art (Trigger 2006: 498).

Archaeologists still tend to be placed in one of two categories: prehistorians or historical archaeologists. This division is not particularly helpful, but it does distinguish the latter, who study people or places within periods for which written records are available, from the former, who are concerned with any period that lacks documents. Historical archaeologists usually possess a basic framework of dates and a general idea of the society of a particular period into which to fit their findings. In contrast, those who study **prehistory**, a concept only firmly established after 1850 (Clermont and Smith 1990; Rowley-Conwy 2007), have to create some kind of framework for themselves from artefacts and

sites alone, normally with the help of analogies drawn from anthropology. The methods used by both kinds of archaeologist today are very much the same, and there is considerable overlap between their ideas and interests, including those who restrict the term 'historical archaeology' to a period beginning around AD 1500 (Hicks and Beaudry 2006). Historians who studied ancient Greece, Rome, or the Bible could set out to locate physical traces on the ground of events and civilisations described in literature; this possibility was simply not available to other historians, natural scientists or collectors who tried to make sense of artefacts or graves surviving from times before the earliest existing written records in other areas, for example pre-Roman Britain.

In 1926 R.G. Collingwood, a British philosopher who combined academic philosophy with extensive involvement in archaeology, disputed the clear distinction generally drawn between history and prehistory:

Strictly speaking, all history is prehistory, since all historical sources are mere matter, and none are ready-made history; all require to be converted into history by the thought of the historian. And on the other hand, no history is mere prehistory, because no source or group of sources is so recalcitrant to interpretation as the sources of prehistory are thought to be.

(quoted in Van der Dussen 1993: 372)

Collingwood was influenced by his knowledge of the difficulties of linking the general history found in classical documents to the physical remains encountered on Roman sites (and the problems in dating them). Another challenge to the perception of prehistory is exemplified by a Bolivian Indian archaeologist who questioned the simple dichotomy between written and unwritten evidence:

Prehistory is a Western concept according to which those societies which have not developed writing – or an equivalent system of graphic representation – have no history. This fits perfectly into the framework of evolutionist thought typical of Western cultures.

(Mamani 1989: 51).

This issue will be revisited in Chapter 6; meanwhile we should recognise that prehistory as a distinctive phenomenon seen through Western eyes is not a concept accepted throughout the world (Kehoe 1991b).

### 1.1.2 The problem of origins and time

- key references: Rowley-Conwy, *From Genesis to prehistory* 2007; Lucas, *Archaeology of time* 2005; Murray, *Time and archaeology* 1999b; Rossi, *The dark abyss of time* 1984.

A quest for origins is only possible in an intellectual framework that has a well-developed concept of time, in particular linear time that progresses from a beginning to an end rather than going around in an endlessly repeating circle of life, death and rebirth (Gell 1992; Bintliff 1999). Recognition of the existence of a significant amount of time before historical records began was also essential before any attempt was made to understand it. Finally, people had to conceptualise using ancient objects, monuments and sites to explore prehistoric time. Many societies have developed sophisticated mythologies which, in association with religion, allow the physical environment to be fitted into an orderly system where natural features may be attributed to the work of gods. Artificial mounds, abandoned occupation sites and ancient objects were often associated with deities, fairies, ancestors or other denizens of the world of mythology, and explanations of this kind abound in surviving folklore. Many prehistoric sites in England have traditional names that reveal this background, for example the large standing stones in Yorkshire known as The Devil's Arrows.

For those early prehistorians who believed in a biblical Creation dating to 4004 BC, as calculated by Bishop Ussher, or by relating Roman and Greek historical documents back to the Old Testament (Rowley-Conwy 2007, 6–9), there was at least an upper limit to the age of any of the items that they studied. If not, an apparently insoluble range of questions was raised. Which sites and objects were in use at the same time,

and how many years had elapsed between those that looked primitive and those that seemed more advanced? Did technical improvements represent a gradual series of inventions made by a single people, or did innovations mark the arrival of successive waves of conquerors with superior skills? The first step essential to any progress was a recognition of the amount of time occupied by human development in prehistory, and this advance took place in the first half of the nineteenth century. In the view of Bruce Trigger, the liberation of archaeologists from this 'impasse of antiquarianism' had two distinct consequences. The first was the development of new dating methods in Scandinavia, and the second was the study of human origins in France and England, both of which 'added vast, hitherto unimagined, time depth to human history' (Trigger 2006: 121). We will examine dating methods in Chapter 4, and look at the more fundamental and dramatic issue of human origins later in this chapter.

Hesiod, in the eighth century BC, had talked of five ages of man, from the Golden Age to the Iron Age. Roman philosophical poetry written by Lucretius in the first century BC contained ideas about the successive importance of stone, bronze and iron as materials for the manufacture of implements (Schnapp 1996: 332–3; see also below, pages 21–4). Although this **Three-Age System** was widely accepted as a philosophical concept by AD 1800, it was not applied in a practical way to ancient objects until 1816 (Rowley-Conwy 2007: 37–8; below: 23). Some individuals, such as the British **antiquarian** Thomas Wright, argued against its validity as late as the 1870s (Rowley-Conwy 2007: 2). It is difficult now for us to appreciate the basic problem that confronted historians or philosophers in literate societies right up to the eighteenth century AD. They were able to pursue their origins through surviving historical records, but beyond the earliest documents lay a complete void, containing unverifiable traditions that merged into a mythological and religious world of ancestors and gods. Gould's thoughtful examination of the complex and varying concepts of time held by nineteenth-century geologists (1987) contains many surprises for anyone who had assumed that they rapidly adopted a 'modern'

outlook. Indeed, the depth of archaeological and geological time is still grossly underestimated in the contemporary mythology of cartoons,

in which prehistoric humans use stone axes or wooden clubs, wear simple animal-skin garments and have trouble with dinosaurs (Fig. 1.1).



**Figure 1.1** In *One Million Years BC* (Hammer Films Ltd, 1968), humans competed for survival with dinosaurs, volcanoes, and other bands of equally ferocious humans. Curiously, they had developed tools, but little language – despite their thoroughly modern physiques. Ideas about human origins and early development amongst archaeologists, biologists and evolutionary psychologists remain controversial and confusing, but all agree that dinosaurs had been safely extinct for many millions of years. (*British Film Institute*)

The fundamental problem of conceptualising chronology did not change significantly between the Greek and Roman period and the eighteenth century AD (Rossi 1984). If ancient sites and artefacts were considered at all, they were linked to peoples and events known from documents. Samuel Johnson expressed a view characteristic of an English scholar of the eighteenth century: ‘All that is really known of the ancient state of Britain is contained in a few pages. We can know no more than what old writers have told us’ (quoted in Trigger 2006: 119).

## 1.2 THE EMERGENCE OF ARCHAEOLOGICAL METHODS

- key references: Stiebing, *Uncovering the past* 1993; Schnapp, *The discovery of the past* 1996; Romer and Romer, *Great excavations* 2000; Murray, *Milestones in archaeology* 2007.

### 1.2.1 Greece and Rome

- key references: Blundell, *The origins of civilisation in Greek and Roman thought* 1986; Hall, *Inventing the barbarian* 1989.

Greek and Roman culture and commerce grew from modest origins but eventually embraced the whole Mediterranean region as well as parts of its hinterland. Something akin to anthropology (rather than archaeology) existed in ancient Greece. Greek writers such as Herodotus, Posidonius and later Strabo wrote accounts of encounters with ‘barbarian’ (i.e. non-Greek) peoples such as the ‘Celts’ in Iron Age Europe, whom they described as heavy drinkers and head-hunters. This curiosity stemmed from their interest in the origins of their own society and political system. On a more practical level, Greek and Roman observations were useful to other travellers and colonial administrators. Such ideas were taken up again with enthusiasm during the Renaissance by Cyriac of Ancona, William Camden and John Leland (Box 1.2) and advanced to a stage where travel and observation developed into archaeological fieldwork.

In the Roman period Julius Caesar described life in Iron Age Gaul in the 50s BC (Riggsby 2006), and Tacitus wrote an interesting account of the Germans in the late first century AD (Rives 1999). It was not simply scientific curiosity that motivated Tacitus’ description of the simple life and virtues of these barbarians, however; he wished to make a political point by contrasting them with the corruption of Roman society. His *Germania* is an early example of the **Noble Savage myth**, a philosophical and literary concept that regained popularity in the eighteenth century in the writings of Rousseau (Ellingson 2001). Unlike his Greek predecessors or Caesar, Tacitus made no attempt to gather first-hand information by travelling among the Germans. He embellished and updated Greek writings with information from army officers and civil servants from his own social circle who had held appointments on the frontiers of the Roman Empire.

Collections of antique objects were not uncommon in the past, from Babylon in the sixth century BC to the civilisations of Greece and Rome, although many were prized more for their religious or symbolic value than for their potential as sources of information about the past (Trigger 2006: 43–8). Romans collected Greek

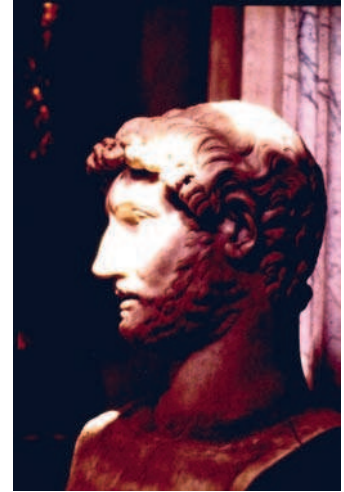
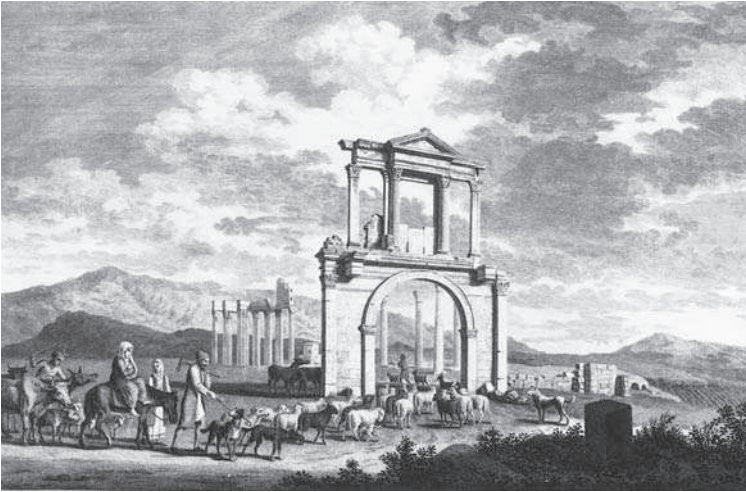
sculptures, and appreciated stages in the historical development of art and architecture. Tourists had already begun to visit ancient monuments, not only in Italy and Greece but also in Egypt. The Emperor Hadrian (AD 117–38) is a good example of a traveller and collector: during official tours of the Empire he visited ancient Greek shrines and restored or completed Greek buildings. He designed a country villa inland from Rome at Tivoli that housed a library and a collection of Greek sculpture, and incorporated gardens and lakes reminiscent of places he had visited in Egypt and Greece. Hadrian even adopted a new curly hairstyle and a beard in the manner of Greek philosophers, in contrast to the severe clean-shaven and short-haired appearance of his predecessors (Fig. 1.2–3). A few years after the death of Hadrian, Pausanias – a wealthy Greek traveller and geographer from Asia Minor – wrote a guide book, *Description of Greece*, that remained indispensable to anyone studying the art and architecture of ancient Greece at first hand up to the nineteenth century (Alcock, Cherry and Elsner 2001; Pretzler 2007).

The antiquarianism of the Classical world had not developed any further before it was swept away by the political and economic problems of the third and fourth centuries AD. The Western half of the Roman Empire gradually disintegrated and was invaded and settled in the fifth and sixth centuries AD by Goths, Franks and Anglo-Saxons – the descendants of Tacitus’ Germans. Roman culture did survive to a certain extent under the rule of Germanic kings, and it did of course continue in the (Byzantine) eastern Roman Empire (Angold 2001). However, the Classical inheritance was modified or displaced by the growing importance of Christianity, which paid more attention to contemporary theology and the Bible than to the pagan Classical past.

### 1.2.2 Medieval attitudes to antiquity

- key references: Murray, *Milestones in archaeology* 2007; Bahn, *Cambridge illustrated history* 1996b: 7–13.





**Figure 1.2–3** Behind the Arch of Hadrian, Athens, is the Temple of Zeus Olympius which was begun in the sixth century BC but completed by the Roman Emperor Hadrian in the early second century AD as part of his informed enthusiasm for ancient Greek culture and architecture. Hadrian adopted the beard and curly hair associated with Greek philosophers in contrast to the short straight hair and clean-shaven appearance of his predecessors. (*Stuart and Revett 1794: chapter 3 pl. 1; photograph: Kevin Greene*)

For most of its history, Christianity has been founded on total belief in the Bible; to doubt its word offended not only God, but also the political organisation of Church and State that enforced its acceptance. Thus, independent thinking was discouraged by both intellectual and social circumstances, and new ideas were likely to be treated as heresy (Kelley 2002). In particular, archaeological speculation was hampered by the account of the Creation given in the Old Testament, together with a description of the subsequent settlement of known lands by descendants of Adam and Eve. The credibility of the Bible was enhanced by the fact that it also contained episodes set in contexts with independent historical records, such as Pharaonic Egypt or the early Roman Empire. In the Islamic world things were a little different, with the historian and philosopher Ibn Khaldun (1332–1406) developing relatively complex theories on the development of civilisations (Simon 2002).

Some aspects of antiquarianism found in the medieval Church are superficially similar to those associated with Romans such as Hadrian, but on closer inspection are usually found to be motivated by religion. **Tourism** was common, in the form of pilgrimages to ancient shrines, as was

the collecting of manuscripts and relics (Elsner and Rutherford 2005). Many travellers combined both activities; collections of relics enhanced the status of churches as centres for pilgrimage, and good libraries improved the reputation of monastic centres of learning. Since monastic libraries often contained the works of some of the more inoffensive pagan Latin and Greek authors, educated ecclesiastics could gain some knowledge of the Classical world and its culture. Indeed, early Christian monasteries in Northumbria and Ireland provided educated scholars who took part in the Carolingian Renaissance around AD 800 in northern France. Ancient Greek authors became increasingly familiar in western Europe in the twelfth century AD, thanks to the translation into Latin of important Greek manuscripts. Many of these had only survived because of their interest to Arab scholars in former parts of the Roman and Byzantine Empire that were absorbed during the rise of Islam. A medieval bishop of Winchester made a purely aesthetic collection of Roman antiquities in the twelfth century, including at least one ship-load of marble sculptures from Rome itself; his interest presumably resulted from visits to Italy, and knowledge of the works of Roman authors such as Pliny and

Vitruvius on art and architecture. Historians of the Middle Ages (such as Geoffrey of Monmouth, who died c. 1155) filled out early periods of British history with fantastic tales of mythological and real figures such as Brutus the Trojan, King Arthur and Julius Caesar (Crick 2004). Later writers tended to associate ancient monuments with Romans or Danes rather than Trojans or Druids, but a concept of the great depth of prehistoric time was still elusive. In Ireland, medieval topographical lore (the *dinnseanchas*) dating from eleventh-century AD manuscripts, but which may have their origins much earlier, allowed the identification of ancient places which were undoubtedly archaeological monuments. One such document provides a detailed account of the ceremonial complex of Tara which, in the nineteenth century, could be relatively accurately related to the standing monuments (Wardell 2005: 15–17). However, such accounts were as much about the creation of mythologies of these places and landscapes as about the recording of archaeological monuments.

### 1.2.3 From medieval humanism to the Renaissance

- key references: Trigger, *History of archaeological thought* 2006: 48–61; Bahn, *Cambridge illustrated history* 1996b: 21–47; Moatti, *The search for ancient Rome* 1993; Etienne and Etienne, *The search for ancient Greece* 1992; Payne, Kuttner and Smick, *Antiquity and its interpreters* 2000.

Although the western Roman Empire broke up in the fifth century AD, in the east it resisted centuries of attacks and became the Byzantine Empire. Most of its Mediterranean and Near-Eastern territory was soon lost, but the legacy of Roman rule survived in decreasing areas of Greece and Asia Minor until the capture of Constantinople by the Turks in 1453. However, the civilisation that had emerged from the ruins of the former eastern Roman Empire was very much a Greek Christian culture. Much of Greece was ruled by Italian states in the final years before the Turkish conquest, but they took little interest in its ancient

monuments. In western Europe monastic scholarship gradually drew upon a wider range of ancient Greek and Roman writers until the rediscovery of pagan philosophers such as Aristotle inspired new interest in science and the natural world during the phase known as medieval humanism. The physical heritage of ancient Rome was understandably of particular interest during the fourteenth- to fifteenth-century Italian Renaissance (a term invented by French art-historians in the nineteenth century). Scholars, artists and architects turned to pre-Christian Roman sources for largely forgotten ideas and new inspiration – for example by imitating Roman building practice in completing the new cathedral at Florence with a Classical dome rather than a Gothic spire. The monuments of the city of Rome itself were studied by Cola di Rienzo and Giovanni Dondi in the fourteenth century, and by Poggio Bracciolini and Flavio Biondo in the fifteenth, using every possible source of written evidence to elucidate the physical remains (Moatti 1993: 25–52). Nevertheless, during this period of enthusiastic recording, Roman structures were frequently demolished to provide stone for new buildings. In some ways the Renaissance attitude to the examination of the past resembled that of the Romans, for it involved travel, the study of buildings and the collection of works of art and manuscripts.

One scholar with this outlook who looked beyond Italy to Greece and even Egypt was Cyriac of Ancona (Etienne and Etienne 1992: 24–9; Bodnar and Foss 2003). Cyriac was born in 1391, well before the fall of Constantinople, which still held great symbolic significance for him as the last remnant of ancient Roman political power. He spent twenty-five years of the early fifteenth century in Greece, visiting sites and libraries for himself and publishing commentaries on his observations; unfortunately not all of these survive. Cyriac embodied some of the principal components of a modern archaeologist, notably the active recording and study of physical remains of the past, whether sites or objects, through extensive fieldwork. In addition, as a historical archaeologist Cyriac carried out his research with the help of the literary background of the culture

that he investigated. On the negative side, Cyriac displayed a typically selective attitude to what he recorded, and failed to comment upon changes that had affected the condition of Athenian monuments (McNeal 1991: 52).

The Renaissance atmosphere of discovery and speculation gradually spread to the rest of Europe, including areas in the north connected only briefly with the Classical world (such as Britain) or not at all (much of Germany and Scandinavia). In these countries the same spirit of inquiry was also directed towards the non-Classical past, and the first steps began to be taken towards the methods of prehistoric archaeology. Some of this research was undertaken by individuals whose means did not permit them to travel widely in southern Europe. Thus, most advances in archaeological methods occurred in northern Europe, and the ideas fostered on the fringes of the Classical world were only applied to sites in Greece and the Near East much later.

The many voyages of discovery from Europe that began shortly before AD 1500 confirmed by direct observation that the Earth was not flat but a sphere – as mathematical astronomers claimed, and as was widely accepted in ancient Greece. European contact with North and South America revealed an extraordinary range of different societies, from hunter-gatherers to city dwellers. It became increasingly difficult to reconcile such discoveries with the authority of the Bible, with its story of the peopling of the Earth by the descendants of Noah's family who had survived the Flood. A book published in 1655 by a French Protestant theologian, Isaac de Lapeyrère, proposed that Adam was simply the 'father of the Jews, not of all men' (Schnapp 2006). His views were founded upon knowledge of the ancient civilisations of the Near East and the newly discovered inhabitants of various parts of the world. De Lapeyrère was forced to recant by the Inquisition and his book was publicly burned in Paris (Schnapp 1996: 224–31). Many must have sympathised with his views, but they could not be examined further until developments in geology and biology in the nineteenth century allowed archaeologists such as Jacques Boucher de Perthes to propose the existence of

antediluvian (i.e. before the Flood) tool-using humans by observation and fieldwork (below: 29–30). However, reports of 'savages' encountered by European traders and colonists in Africa or the Americas offered a new possibility for understanding the way of life of ancient peoples; English and French antiquarians familiar with Julius Caesar's account of his military expeditions in Britain and Gaul might well see similarities between the societies and activities of the indigenous inhabitants of North America and the 'Ancient Britons' (Box 1.1; Smiles 1994; Hingley 2007; Olivier 1999).

Thus, the Renaissance interest in pagan Classical literature, combined with geographical discoveries in other parts of the world, had created a favourable atmosphere for archaeological work. After the Renaissance, the religious upheaval of the Reformation encouraged sentiments of nationalism, as many countries – particularly in northern Europe – broke the long tradition of dependence on Rome. National consciousness enhanced the interest of searching for the origins of peoples such as the Celts, Germans or Slavs (Sklenár 1983: 24–8) and of nationally unifying characters in the past (Hingley 2007). Herodotus and Tacitus had written about primitive peoples who lived on the fringes of the Greek and Roman world, including Germany and Britain. These countries were now involved in Renaissance scholarship and religious Reformation, and followed the precedent set by ancient authors in investigating the primitive state of Europe; a study of Lapland published in the 1670s by John Shefferius (a Swedish professor of law) was inspired by Tacitus' *Germania*. Since primitive peoples such as the Lapps were not easily accessible for study, the alternative was the examination and description of archaeological remains – a more complicated task in northern Europe than in Mediterranean countries, where research was dominated by Classical sites recorded in documentary sources. Classification and explanation of prehistoric earthworks, tombs and artefacts offered a greater challenge because they lacked direct historical evidence. Mendyk's study of the progress of antiquarian study up to AD 1600 in Britain relates it closely to new interests and methods generated

## BOX 1.1

## The past in the present: developing analogies with the New World

From the sixteenth century onwards, contact between European travellers or colonisers and the peoples of the Americas led to significant developments in concepts of the past. Artists such as John White created images of the past peoples of Europe based on drawings of indigenous peoples encountered in North America, such as that seen here (Sloan 2007). Comparisons were made between the appearance of a contemporary North American Indian and the 'painted Picts' of Britain's distant past, who had been described (but not illustrated) by Roman and early medieval writers (Pratt 2005). Stone tools brought back to Europe by travellers suggested the possible uses of those found in Europe (pp. 21–2). Parallels of this kind helped to justify interpretation of such objects as artefacts made by humans, rather than thunderbolts or other natural or mythological phenomena. The observation of peoples who were still living in a manner comparable to the prehistoric past, in contrast to more advanced Europeans, also contributed to the development of ideas about social evolution. Ethnographic observations of the comparative lack of development of indigenous peoples elsewhere in the world also encouraged concepts of racial superiority amongst Europeans when ideas derived from biological evolution became more widespread in the nineteenth century.



(Getty Images)

by the Scientific Revolution: 'During our period of study these remained under-developed ... but a start was made; experimentation, collection, and observation of material was required in the first stage, and only then could one hope to arrive at sound generalisations or theories' (Mendyk 1989: xiii).

### 1.2.4 Archaeology and the Enlightenment

- key references: Bahn, *Cambridge illustrated history* 1996b: 48–79; Wilson, *Encyclopedia of the Enlightenment* 1996.

The Enlightenment was the culmination of increasing separation between science and religion among many philosophers of the eighteenth century AD. This rift had been developing since medieval humanists began to use the writings of Greek philosophers such as Aristotle

in which ideas of biological and **social evolution** were already emerging (Blundell 1986: 73–97). One important shift in outlook in this new secular period was a revision of the biblical view that humans had degenerated since the expulsion of Adam and Eve from the Garden of Eden. The rapid economic and technological development that was going on in Europe encouraged an alternative idea involving progress in human material, intellectual and spiritual culture (Pluciennik 2006; Trigger 2006: 100). This was reflected in the work of philosophers such as Rousseau and Hume – rather than antiquaries – who incorporated reports of 'primitive' cultures into their attempts to define stages of social evolution. The adoption of an evolutionary frame of mind clearly encouraged both philosophers and scientists to accept the implications of new investigations into geology, biology and artefacts. Not everyone saw progress as a linear phenomenon of improvement or degeneration, however; although largely

overlooked in his own time, Giambattista Vico (1668–1744) envisaged stages of human society as dynamic phases in a repeating cycle. This idea was a fundamental component of views expressed much later by Hegel and Karl Marx (Blackburn 1994: 393–4). Thus, by the early nineteenth century European scholars had finally come into possession of a range of essential concepts suitable for confronting the problem of the prehistoric origins of humanity (below: p. 26). Meanwhile many antiquaries had adopted the habit of making careful records of archaeological sites as part of a broader scientific interest in the natural environment, even though most of them could not yet be dated (Sweet 2004).

### 1.2.5 Antiquarian fieldwork

- key references: Mendyk, *Speculum Britanniae* 1989; Piggott, *Ancient Britons and the antiquarian imagination* 1989; Sweet, *Antiquaries* 2004.

#### *Sixteenth century: chorography and recording*

The work of antiquaries who engaged in active field archaeology in Britain illustrates the aims

and concepts of research into the past undertaken after the diffusion of Renaissance thinking into northern Europe. Before the sixteenth century, historical writers occasionally referred to monuments, but with little purpose other than to display sheer wonder, or to add circumstantial detail to some actual or invented episode in their works. For example, a recognisable illustration showing Stonehenge being built by the magician Merlin appeared in a fourteenth-century British manuscript (Bahn 1996a: 9), and another was recently discovered in a French manuscript (Heck 2007; Fig. 1.4). The Tudor dynasty of the sixteenth century coincided with an increase in national consciousness, underlined by the Reformation and the establishment of the Church of England. John Leland (1506–52) was Keeper of the King's Libraries for Henry VIII, and on his travels recorded ancient sites such as Hadrian's Wall. William Camden (Box 1.2; 1551–1623; Murray 1999b: 1–14) was another royal employee who travelled extensively; his *Britannia*, published in 1586, was the first general guide to the antiquities of Britain. John Aubrey and William Stukeley were important later examples of individuals – described by their contemporaries as antiquaries, or more rarely **chorographers** (Mendyk



**Figure 1.4** An image of Stonehenge discovered in a French manuscript dating from the 1440s AD. It is the first known depiction which provides observations on the form and construction techniques of Stonehenge, rather than representing it as a symbol, as in earlier images. In the words of Christopher Heck (2007): ‘the drawing bridges perfectly the worlds of medieval myth and Renaissance observation’. (Mike Pitts and the Bibliothèque Municipale de Douai)

## BOX 1.2



(Getty Images)

important. His *Britannia* enjoyed great popularity, and its careful organisation allowed additions to be made for nearly two hundred years after Camden's death.

## William Camden (1551–1623)

William Camden was born in London and spent much of his life at the University of Oxford and Westminster College. His book *Britannia*, published in 1586, combined observations made while travelling throughout England and Wales with information gathered by examining archives. His emphasis on the importance of the Roman occupation linked Britain to the continental centres of the Renaissance, and gave Britain a respectable position in European culture. Camden also attempted to use the unity of Britain as a Roman province for political purposes in support of forming Britain into a united kingdom in his own day (Hingley 2007). Camden's descriptions of antiquities were thorough and detailed, and sections on Roman and pre-Roman coinage and language were also included. The founding of Britain was no longer attributed to unlikely or imaginary individuals and peoples (such as Brutus the Trojan, or the Phoenicians); instead, greater reliance was placed on references contained in Classical sources, and analogies from the New World. Camden's interest in material culture, and his recognition of the part it could play in elucidating the past, was fundamentally

1989: x) – who paid systematic attention to field monuments in Britain from the sixteenth century onwards.

### Seventeenth century: scientific antiquarianism

- key references: Trigger, *History of archaeological thought* 2006: 106–114; Murray, *Encyclopedia of archaeology* 1999a: 15–26; Tylden-Wright, *John Aubrey: a life* 1991.

John Aubrey (1626–97) lacked the depth of education of Leland or Camden, but participated in a new kind of scholarship that came to prominence in the **Scientific Revolution** of the seventeenth century. It was characterised by a desire to approach any subject from a sound basis of classification and comparison, whether astronomy, medicine, botany or antiquities. In addition to antiquities, Aubrey included natural

and artificial phenomena in accounts of his beloved Wiltshire. His great archaeological work *Monumenta Britannica* was never published, but fortunately the manuscript was donated to the Bodleian Library, Oxford, where it was examined by many later antiquaries. The first part is best known because it focused on the great prehistoric monuments of Wessex, including Stonehenge, Silbury and Avebury. Aubrey was one of the first to assign these sites to the pre-Roman Celts and their priesthood, the Druids, who were known from the writings of Tacitus and other Roman authors. On the instructions of King Charles I he made an excellent plan of the remarkable ditched enclosure at Avebury and its surviving internal stone circles, probably making use of new surveying instruments that had been developed by the seventeenth century (Welfare 1989).

To Aubrey, information was worth collecting and classifying for its own sake, rather than

simply to illustrate a particular theory. A similar approach is found in the work of contemporaries in fields such as botany or the study of fossils (Hunter 1975: 95–7). Aubrey's observations and interpretations also reveal awareness of descriptions of American Indians. He did not share an idealistic Noble Savage view that might have resulted from reading the *Germania* of Tacitus: 'the inhabitants (of northern Wiltshire) almost as savage as the Beasts whose skins were their only rayment ... They were 2 or 3 degrees I suppose less savage than the Americans ... The Romans subdued and civilized them' (quoted in Piggott 1989: 62). Clearly, Aubrey shared Camden's view that the Roman occupation of Britain raised its status in the eyes of post-Renaissance scholarship (Hingley 2007).

Aubrey was not able to solve the conundrum of dating ancient monuments. Although he was right to place Stonehenge and Avebury into a ritual context of pre-Roman date, he attributed Iron Age hillforts to Britons, Romans or Danes with wild inconsistency (Piggott 1989: 118–20). However, Aubrey's work made a great impact upon the best-known antiquary of the eighteenth century – William Stukeley (Fig. 1.5).

The contemporary Welsh antiquarian Edward

Lhuyd (or Llwyd) (1660–1709) was instrumental in developing awareness of the archaeology of the British Isles beyond England. His *Archaeologia Britannica* recorded archaeological monuments in Wales, Ireland, Scotland and Cornwall through systematic first-hand recording, being, for example, the first to record the impressive Neolithic monument at Newgrange in Ireland, and recording many early medieval sites in Wales (Wardell 2005: 52; Edwards 2007). Combining an expertise in linguistics with archaeology Lhuyd was influential in suggesting that these regions of the British Isles were unified by similar languages and histories, which reflected their 'Celtic' heritage (James 1999: 45–7). This suggestion was developed later by archaeologists and has led to much controversy in recent years about whether these regions really should be defined as 'Celtic' on the basis of Iron Age archaeology (James 1999; Collis 2003: 49–56).

#### *Eighteenth century: the antiquaries*

- key references: Schnapp, *The discovery of the past* 1996: 212–18; Piggott, *William Stukeley* 1985; Murray, *Encyclopedia of archaeology* 1999a: 39–50; Sweet, *Antiquaries* 2004.



**Figure 1.5** A drawing by William Stukeley (1687–1765) showing him engaged in fieldwork with friends. Even in this light-hearted sketch a number of antiquities and features of the landscape are drawn and labelled; his observations and plans remain an important source of information. (Bodleian Library, Oxford: Ms Eng. Misc. b 65 fol. 43r.)

Although the eighteenth-century Enlightenment favoured Classical literature, art and architecture, it also engendered reactions against a purely rational and secular outlook. By the nineteenth century this had resulted in a Romantic movement which preferred fanciful ‘Gothic’ buildings incorporating medieval features, and which glorified primitive and exotic peoples. William Stukeley reflected these changes in the spirit of the age; his interpretations of sites such as Stonehenge, and their association with primitive religion, were very much in tune with the sentiments of Romanticism (Peterson 2003). These interpretations never affected the quality of his fieldwork, however.

William Stukeley (1687–1765) was trained in medicine at Cambridge but had also studied botany. The ancient monuments in the countryside captured his imagination, especially after reading the manuscript of Aubrey’s *Monumenta Britannica* in 1718. Extensive fieldwork in Wessex followed in the 1720s, including accurate and thorough surveys of Avebury, Stonehenge and Silbury. He went on to travel extensively throughout Britain, making surveys and excellent sketches. His Romantic leanings are evident in a taste for dramatic landscapes such as the Lake District, and for Gothic architecture (to the extent of designing mock-ruins or ‘follies’). His professional life changed direction in the 1720s, from medicine to religion.

From this point Stukeley attempted to use the results of his collected fieldwork from Wessex to establish a theological connection between the Druids and Christianity. Aubrey had made observations, sorted them into a sensible order and drawn limited conclusions from common sense and historical information; Stonehenge and its related monuments did not fit into the Roman period, so he attributed them to the pre-Roman Britons. Since the sites were apparently ritual rather than functional, Aubrey assigned them to the only known cult and priesthood attested by Classical authors, the Druids. Stukeley went on to invent a vast theological system for the Druids, supported by quite unwarranted connections with features of the monuments: ‘The form of that stupendous work (Avebury) is the picture

of the Deity, more particularly of the Trinity’. He published two major books – *Stonehenge* (1740) and *Avebury* (1743) – which he intended to be part of a larger enterprise entitled *Patriarchal Christianity or a chronological history of the origin and progress of true religion, and of idolatry*.

Stukeley’s basic evidence still forms an invaluable record of monuments that have suffered severe damage since his day. He recorded an avenue of stones leading from Stonehenge to the River Avon that was subsequently destroyed; it was only relocated by aerial photography in 1920 (Piggott 1985: 92) and recently excavated (Parker Pearson *et al.* 2007). A long-doubted second avenue was rediscovered in 1999 (Gillings *et al.* 2000). Stukeley did not just record individual sites, but placed separate earthworks in an area into a coherent pattern, such as that illustrated by Schnapp (1996: 216–17). He also made analytical observations, such as deducing that some ‘Druid’ burial mounds on Oakley Down, Dorset, must already have been in existence before the construction of a Roman road which cut across the ditch of one of them (Piggott 1989: pl. 27). Stukeley expressed another role for fieldwork that echoes modern **rescue archaeology**: it ‘perpetuates the vestiges of this celebrated wonder & of the barrows avenues cursus &c for I foresee that it will in a few years be universally plowed over and consequently defaced’ (quoted in Piggott 1989: 127). His approach to the landscape, seeing sites such as Avebury as part of a wider social landscape, also anticipated more recent approaches to landscape archaeology, such as **phenomenology** (Peterson 2003; see Chapter 6).

From a methodological point of view, field archaeology could not make substantial progress in Britain beyond the point reached by Stukeley until some new element was introduced. Accurate recording was continued and extended, but the interpretation of recorded monuments remained static because historical evidence barely stretched back beyond the Roman period. Historical events could be shuffled into a different order, or fanciful theories could be constructed to expand them, but no new source of evidence was available until the idea of excavation was adopted on a large scale in the nineteenth century, and refined in the



twentieth; this development will be followed in Chapter 3.

Historians of ideas, science or archaeology can point to early antiquarian work throughout Europe. In Scandinavia, Johan Bure and Ole Worm undertook antiquarian research – with royal patronage – in the early seventeenth century (Schnapp 1996: 156–65), and similar efforts were devoted to Roman and earlier antiquities in central Europe (Sklenár 1983: 6–43). A German pioneer of the systematic investigation of Roman art and architecture in Italy, Johann Winckelmann, was a near contemporary of Stukeley (Schnapp 1996: 258–66; Murray 1999b: 51–64).

### 1.2.6 Antiquarianism in the Americas

- key references: Schnapp, *The discovery of the past* 1996: 142–65, 198–212; Malina and Vasícek, *Archaeology yesterday and today* 1990; Sklenár, *Archaeology in central Europe* 1983.

An indigenous archaeological tradition had also emerged in America by the nineteenth century (Trigger 2006: 177–89). It began with ethnographic accounts of the Native Americans, but gradually extended to sites and artefacts. The literate civilisations of Central and South America attracted comment as early as the sixteenth century, because their architecture, sculpture and inscriptions offered the same kind of possibilities for study as those of Greece or Italy. The King of Spain commissioned reports on the Mayan palace at Palenque in 1785–6, and Antonio del Río organised forest clearance to reveal monuments for recording – and then tore out decorated items to send back to Madrid for King Charles III, who had already financed excavations in Pompeii and established a collection of Classical archaeology (Baudez and Picasso 1992: 36–7). By the end of the eighteenth century, it was generally accepted that the native population of North America had migrated from Asia by way of the Bering Straits (Stiebing 1993: 173–5). Nevertheless, speculation about the origins of Indians was still influenced by a desire amongst European colonists to justify their conquests by proving

that the natives were inferior to themselves. Archaeological fieldworkers in North America did not find great stone cities and temples, but observed and recorded extensive ritual earthworks reminiscent of burial mounds found in northern Europe (*ibid.*: 170–80). There were attempts to attribute them to Israelites, Danes, or even Welshmen. Even the systematic fieldworkers Squier and Davis, who surveyed, excavated, classified and published ‘Mound Builder’ sites in the Mississippi valley in the 1840s, attributed them to a vanished non-Indian race (Meltzer 1998; **Box 1.3**). This phase in the archaeological study of North America from 1492–1840 has been called, appropriately, ‘the speculative period’ (Willey and Sabloff 1980: 12–27).

### 1.2.7 Touring, collecting and the origin of museums

- key references: Hooper-Greenhill, *Museums and the shaping of knowledge* 1992; Impey and MacGregor, *The origins of museums* 1985; Stagl, *A history of curiosity* 1995; Anderson *et al.*, *Enlightening the British* 2003.

In Western intellectual circles, the collection and study of objects ran parallel to the development of archaeological fieldwork but did not become dominant until the nineteenth century, when the expansion of agriculture, industry and (eventually) archaeological excavations began to provide sufficient quantities of pottery, metal and stone artefacts for advanced studies.

The Renaissance revived the Roman habit of visiting monuments and collecting works of art for aesthetic reasons, in contrast to the medieval Church’s concentration upon shrines and relics. In particular, ownership of Classical art and architecture was linked to the focus of knowledge on rediscovered Classical literature, which emphasised education and status (Moser 2006: 11–14). The concept spread to northern Europe, and educated people of sufficient financial means began to visit the Mediterranean centres of Classical civilisation in Italy, Greece, Turkey and the Near East. Travellers purchased antiquities as souvenirs to adorn their northern residences

### BOX 1.3 Discovering the archaeology of North America: the Mounds of Ohio and Illinois

Until the nineteenth century, European settlers in North America largely ignored the archaeology that they encountered, although early explorers had noted the existence of large mounds. It was only when large-scale European settlement began in areas such as the Ohio Valley that mounds and earthwork structures (such as the Serpent Mound of Ohio and this mound at Cahokia, Illinois) were encountered. These structures are now known to have been burial and ceremonial monuments dating from a range of different periods, some as early as 1000 BC; the better-known Mississippian mounds date from c. AD



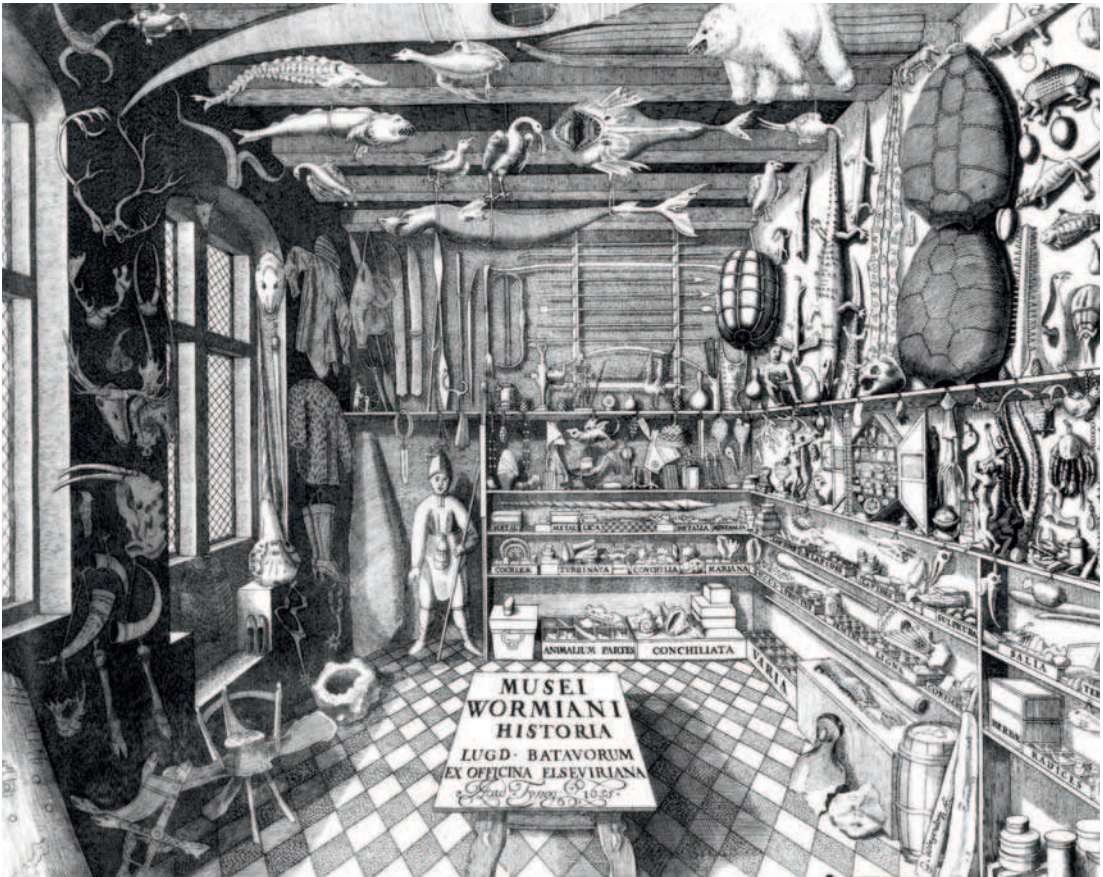
(National Park Service, USA)

500–1550 (Abrams and Freter 2005). Ephraim Squier and Edwin Davis were among the first to survey and excavate the mounds systematically. North American archaeology in the nineteenth century suffered from a social evolutionary perspective that made it impossible to conceive that Native Americans could have constructed such monuments, and preferred to think that they had been built by groups from Europe such as Vikings, or lost tribes from Israel (Barnhart 2005; Trigger 2006: 159–60). This view was reinforced by the fact that the Native Americans who the colonists encountered were not settled societies like those that had originally built the mounds, but communities which had adopted nomadic ways of life in the succeeding centuries (Fagan 2007: 316–27). A more scientific approach to American archaeology in the later nineteenth century by individuals such as Joseph Henry and Cyrus Thomas refuted such ideas by demonstrating that they really had been the result of indigenous development (Alex 2000: 15–19; Trigger 2006: 163). Despite this, the earlier ‘diffusionist’ interpretations continue to be prominent in popular views and in pseudo-archaeology (see Box 6.2; Feder 2005).

– which were constructed and decorated, of course, in a Classical manner. The process was accelerated by agents sent to seek out further items and to arrange shipment back to their new owners’ homes. An early example of an English **Grand Tour** aristocrat was Thomas Howard, Earl of Arundel (1585–1646), who first travelled (with a large entourage) to Italy in 1612; there he bought, and even dug for, antiquities. His agent, William Petty, extended the search to Greece and built up a collection (at bargain prices compared with Italy) that became a centre of great learned interest, known throughout Europe after its publication in 1628 (Penny 1985). Although Arundel’s collection suffered neglect and dispersal after

the English Civil War, it had already generated similar interests amongst other noblemen and even royalty. Indeed, King Charles I stated that ‘The study of antiquities is by good experience said to be very serviceable and useful to the general good of the State and Commonwealth’ (Daniel 1975: 19).

Tours had other effects too; learned societies such as the Society of Dilettanti (an organisation of British antiquaries) sponsored expeditions to record Classical sites rather than simply to loot them. Individuals of lower social status and lesser wealth began to form more diverse collections (Fig. 1.6). John ‘Gardener’ Tradescant’s collection was created in the first half of the seventeenth



**Figure 1.6** Ole Worm's collection of natural and archaeological curiosities, formed in Denmark and illustrated in 1655. Modern museums derive from the wide scientific interests of such collectors, who embraced natural history and geology as well as displaying ethnographic and archaeological specimens. (*Museum Wormianum* (Leiden 1655); Bodleian Library, Oxford B 5.9 Art)

century and a catalogue of its contents appeared in 1656. Although largely made up of botanical specimens, it also comprised 'Mechanick artificial works in carvings, turnings, sowings and paintings' and 'warlike instruments', mainly from Polynesia, Africa and America. After his death, the material passed to Oxford University through Tradescant's friend, Elias Ashmole. A new museum was opened in Oxford in 1683 by the future king James II and it moved in the nineteenth century to the building known as the Ashmolean Museum; the original building still exists and is now the Museum of the History of Science. Thus, the Renaissance fashion for collecting contributed to the establishment of public museums attached to centres of learning

or to cities. By the eighteenth century the establishment of national museums, such as the British Museum in 1753 and the Louvre, France, in 1793, was more about national standing and colonial power than education for the masses. In the nineteenth century such institutions attempted to emphasise similarities between modern nations and the ancient civilisations whose artefacts they displayed (see Chapter 6; Anderson *et al.* 2003; Moser 2006: 2).

Museums have become the first point of contact with archaeology for many members of the public. The essential features of the early Ashmolean (collecting, scholarship and public display) are now accepted as integral parts of the cultural life of almost every modern country. The



**Figure 1.7** Lord Fortrose's apartment in Naples in 1770 illustrates how the interests of northern European aristocrats extended well beyond antiquities. In addition to the classical style of the room and a collection of Greek and Roman artefacts displayed on shelves, there are books, paintings and weapons. Patronage of contemporary arts is represented by the artist (Pietro Fabris, bottom left) and a performance in progress by musicians who include the young Mozart. (Scottish National Portrait Gallery)

interest of antiquaries like Aubrey and Stukeley in prehistoric sites and objects was connected to the same phenomenon; indeed, many travelled in their own countries because they could not afford to go abroad. However, early field archaeologists naturally concentrated on sites, because the potential for using objects to distinguish between stages of development in prehistory remained extremely limited until time was conceptualised in a more scientific way.

People did not embark upon the Grand Tour purely to visit historical sites or to collect antiquities, of course. There were opportunities for many other pursuits, including art and music (Fig. 1.7). Tourism in the modern sense expanded dramatically in the nineteenth century with the help of improved roads and railways and regular

shipping services. It did not remain the preserve of the aristocracy, whose pioneering paths in search of more exotic destinations in Egypt and the Middle East were soon followed by less wealthy travellers. The appearance of commercial travel agents such as Thomas Cook, who organised his first tour in 1863, initiated a completely different phase of mass tourism that persists in the twenty-first century (Withey 1997).

The desire to preserve ancient ruins had its roots in the Renaissance and the Enlightenment interest in the aesthetic value of Classical ruins (Sweet 2004: 285). However, by the late nineteenth and early twentieth century preservation became more formal, and a number of countries set about creating laws to protect, and sometimes restore, historic and archaeological monuments (see

Chapter 6). For instance, Lord Curzon, Viceroy of India, did much to restore archaeological monuments in India and England (Thompson 2006: 52). Many such projects were, however, designed to enhance national identity and imperial pride in the past of these nations rather than to develop archaeological management.

## 1.2.8 Science and Romanticism

- key references: Bahn, *Cambridge illustrated history* 1996b: 80–115; Smiles, *The image of antiquity* 1994; Trigger, ‘Romanticism, nationalism and archaeology’ 1995; Gran-Aymerich, *Naissance de l’archéologie moderne* 1998; Pluciennik, *Social Evolution* 2005.

Nineteenth-century Europe experienced a spectacular rate of change. It began with an essentially rural landscape and economy in the early stages of the Industrial Revolution, and ended with mechanised factories drawing upon large urban populations completely divorced from their agrarian roots. There was also considerable political change, with the aftermath of the American and French Revolutions (1775–83, 1789) still felt at the beginning of the century, and the development of Marx’s political ideas by its end (*Das Kapital* 1867–93). Science had moved on from the seventeenth and eighteenth centuries to become what we know today – a discipline based upon laboratory observation and experiment, rather than a term encompassing the pursuit of knowledge in general. Awareness of rapid change probably boosted interest in causes and effects, and assisted in the development of grand explanatory schemes. This was the context of ideas such as evolution of the natural world by **natural selection** (Darwin 1859), or human **social evolution** through stages from savagery to barbarism to civilisation (Morgan 1871, *Ancient society*, popularised by Marx and Engels). The Enlightenment and Romanticism provided a seedbed in which archaeology could grow rapidly, because scientific observation and classification had become directly linked to explanation. Furthermore, Enlightenment ideas about the value of education were actually put

into practice in the nineteenth century, and museums and art galleries were included with the schools and colleges considered essential for the ‘improvement’ of the general public. The scene was set for the convergence of many separate strands – fieldwork, geology, collecting of artefacts, excavation – into a discipline which is directly ancestral to the kind of archaeology practised in the twenty-first century.

## 1.3 THE RECOGNITION AND STUDY OF ARTEFACTS

- key references: Woolf, ‘The dawn of the artifact’ 1992; Pearce, ‘The interpretation of ancient objects, 1770–1820’ 2007b.

The history of the study of objects, like that of fieldwork, provides a useful illustration of some basic principles of archaeology. Ordinary artefacts from historical periods were only recovered by accident until excavation became an essential part of archaeology during the nineteenth century, and they attracted little interest unless they possessed aesthetic qualities. Although in the sixteenth century a number of Italian collectors accurately identified flint arrowheads or polished axes from much earlier periods as human artefacts (Schnapp 1996: 154), the concept spread slowly. It still seemed a novelty when, in the seventeenth century, de Lapeyrière proposed that stone implements were not ‘thunderbolts’, but tools and weapons made by peoples who had preceded the creation of Adam (Piggott 1989: 45–7). The matter was soon placed beyond doubt when similar items became available for study in ethnological collections from the South Seas and the Americas, where they could still be observed in use (**Fig. 1.8; Box 1.1**).

Concepts of successive Ages of stone, bronze and iron, suggested by actual finds, are known from Chinese literature as early as the first century BC, and Shen Kua made remarkable studies of artefacts in the eleventh century AD (Evans 1982: 13–14; Schnapp 1996: 74–9). A Greek writer of the second century AD, Pausanias, had noted the lack of any mention of iron in the poetry of



**Figure 1.8** Recognition of prehistoric implements in Europe was helped by observations of similar objects, still in use, in other parts of the world. In 1699, Edward Lhuys wrote: 'I doubt not but you have often seen of these Arrowheads they ascribe to elfs or fairies: they are just the same chip'd flints the natives of New England head their arrows with at this day; and there are also several stone hatchets found in this kingdom, not unlike those of the Americans' (quoted in Piggott 1989: 86). The artefacts on the left come from North and South America; those on the right are from northern Britain. (GNM Hancock, Newcastle upon Tyne)

Homer, and inspected ancient weapons preserved in temples, confirming that they were indeed made of bronze (Schnapp 1996: 46). John Frere published drawings of typical flint bifaces ('hand-axes') from the early Stone Age in *Archaeologia* in 1800, 'evidently weapons of war, fabricated and used by a people who had not the use of metals'. Bronze artefacts actually caused more problems than those made of stone or iron, for while early travellers could observe Stone Age communities in America and Australia, and Iron Age societies in many parts of Africa, no living Bronze Age peoples had been encountered. Bronze artefacts found in Europe were normally assigned to the Romans because they seemed too complex to have been made by 'savages', but suggestions of an earlier date found some support by the eighteenth century (Piggott 1989: 95–100; Murray 1999b: 33–4). However, as we shall see below (p. 29), Boucher de Perthes was still fighting for the acceptance of stone artefacts as the work of early humans fifty years later.

### 1.3.1 Scandinavia and the Three-Age System

- key references: Schnapp, *The discovery of the past* 1996: 295–303; Graslund, *The birth of prehistoric chronology* 1987; Rowley-Conwy *From Genesis to prehistory* 2007.

Why has Scandinavian archaeology, generally speaking, an advantage over foreign archaeology, if not because Scandinavian archaeologists have had an opportunity to study in their museums not isolated specimens but whole series and their development?

(Hans Hildebrand 1873, quoted in Graslund 1987: 16)

The archaeology of Scandinavia is particularly rich in finely made artefacts dating from the prehistoric to Viking periods, and many of them are found in good condition in graves. Hildebrand was right to stress these factors, for



**Figure 1.9** The Oldnordisk Museum in Copenhagen was founded in 1816 and played an important role in increasing public awareness of antiquities. In this drawing (made in 1846 by Magnus Pedersen) the museum's first director, C.J. Thomsen, is inspiring great enthusiasm by showing objects to visitors. (National Museum, Copenhagen)

increased building, agriculture and excavation in the nineteenth century had provided a plentiful supply of discoveries. Fortunately, Scandinavia already had museums where objects could be preserved, studied and displayed. An Antiquities Commission was set up by the Danish government in 1807 to protect sites, promote public awareness of antiquities and establish a museum (Rowley-Conwy 2007: 33). The first curator of the resulting National Museum in Copenhagen was Christian Thomsen, who held the post from 1816 to his death in 1865 (Fig. 1.9).

Thomsen would have been aware of the concept of successive Ages of stone, bronze and iron not just from Greek and Roman philosophical speculation; it had been expressed particularly well by another Scandinavian antiquary, Simonsen, in 1816: 'At first the tools and weapons ... were made of stone or wood. Then the Scandinavians learnt to work copper and then to smelt it and harden it ... and then latterly to work iron. From this

point of view the development of their culture can be divided into a Stone Age, a Copper Age and an Iron Age' (quoted in Daniel 1967: 90–1). Thomsen was the first to demonstrate the validity of these hypothetical Ages by examining **closed finds** (graves, hoards, etc.) in which artefacts had been discovered. He restricted his central definition of the Three Ages to cutting-weapons and tools, and established their relative order. Some finds contained only stone tools, while a few contained stone together with bronze (but never iron). After iron weapons had been introduced, bronze continued to be used for other kinds of objects, but the Iron Age was observably the most recent period because late Iron Age artefacts were found in the same graves as Roman and medieval coins. Once this analysis had confirmed the order of stone and metal weapons and tools, Thomsen was able to see what other kinds of objects were found associated with them, as well as noting which specific burial practices and grave forms characterised different ages. Effective classification was indispensable to the advance of the study of prehistory, and the basic concept of the Three-Age System – with further subdivisions – remains a fundamental framework for understanding prehistory in much of the world.

Thomsen presented the evidence for these chronological deductions in museum displays by placing together groups of objects that had been found in association. He was keen to show them to visiting archaeologists, and also to ordinary visitors and especially farmers, who were likely to discover objects that could be added to the collections. His paper on how to deal with such artefacts when they were encountered in the field was printed in 1836, receiving wider attention after it was translated into English in 1848. The phenomenon of collecting antiquities, once a hobby of a social elite typified by the Earl of Arundel (above: p. 18), had been transformed by the nineteenth century in a remarkably democratic fashion. The popularising approach of Thomsen was reinforced by other archaeologists, such as General Pitt Rivers, and it remains essential to the survival of modern museums (below p. 299). However, unlike Pitt Rivers, Thomsen did not attempt either to study the development of the

forms of individual artefacts (**typology**) or to explain the reasons for the changes that he had observed (Graslund 1987: 26–8).

Thomsen's successor as director of the Danish National Museum was another remarkable man, Jens Worsaae (1821–85). Both Thomsen's and Worsaae's recommendations for the use of systematic excavation were inspired by the need to recover still more artefacts from specific contexts that would allow Thomsen's broad classifications to be refined (Rowley-Conwy 2007: 16). In 1861 Worsaae subdivided the Stone Age into three periods according to the nature of stone artefacts. The earliest period was characterised by hand axes and large flakes, found in the gravels and caves of western Europe; these were followed by finer tools found in Denmark in kitchen middens (mounds of shells and bones left by hunter-gatherers). Finally, polished stone tools were associated with elaborate tombs that occasionally also contained the earliest metal objects. The first and third of these divisions of the Stone Age were soon named **Palaeolithic** and **Neolithic** (old and new) by Sir John Lubbock in his book *Pre-historic times* (1865), while the second was termed **Mesolithic** by Westropp in 1866 (Rowley-Conwy 1996). Worsaae used a different method to divide the Bronze Age. He identified a series of different burial practices and grave forms, and was able to place them into chronological order either by reference to artefacts found in them or by observation of excavated sites where examples of different forms had been found in a **stratigraphic** sequence. Thus, Worsaae, like Thomsen before him, relied primarily on the contexts of artefacts, rather than typological study of the artefacts themselves.

The success of the Scandinavian approach to classifying past ages in terms of materials and technology overshadowed other methods such as the Frenchman Edouard Lartet's division of early prehistory according to the prevailing mammalian fauna (reindeer, cave bear), or craniologists' attempts to recognise sequences of races according to the shapes of their skulls (Morse 1999). The focus upon objects led to the development of typology (Fig. 1.10).



**Figure 1.10** In an explanation of his methods of studying typology, Oscar Montelius illustrated the transition of the axe head from stone to metal. The first copper axes (second and third, top row) were very similar to their stone counterparts (top left), but it was soon realised that metal could be saved by making them thinner, while increasing their effectiveness by hammering out a wider cutting edge (below). Further developments can be seen in Fig. 4.1. (Montelius 1903: 22)

### 1.3.2 Typology

- key references: Åström, Oscar Montelius 1995; O'Brien and Lyman, *Seriation, stratigraphy and index fossils* 1999; Bowden, Pitt Rivers 1991.

Classification was an important part of the Enlightenment approach to science; **typology** differs from classification in that artefacts are arranged into sequences according to developments and changes that may then allow them to be placed into a hypothetical chronological order. This may not seem a particularly significant distinction until it is recognised that before the nineteenth century there was a prevailing



idea that the natural world was fixed at the time of the Creation. **Ray's Taxonomy**, developed in the seventeenth century, laid down the principle of fixed species. Swedish scientist Linnaeus (Linné) (1707–78) incorporated this idea into his binomial system – two-part names, such as *Homo sapiens* – which not only allowed the natural world to be classified systematically, but enabled other scientists to apply precisely the same system to their own specimens. The idea of a **Great Chain of Being** consisting of a hierarchy from God down to the simplest creatures was not a radical departure from Aristotle's Ladder of Nature defined in Greece in the fourth century BC. As long as species were regarded as fixed there was therefore no reason to look for development and change or to attempt any kind of chronology, and it required a half-century of geology and biology after 1800 before there was a shift to looking for evolution rather than stability (Turnbaugh et al. 2002).

The development of typology did not rely upon the concept of the Three-Age System or Darwin's theory of evolution. Graslund's thorough study (1987) of the original writings of Thomsen, Worsaae and other Scandinavian scholars revealed that studies of artefacts were based primarily on the contexts in which they had been discovered. These were sufficiently plentiful in Scandinavia for virtually all classes of artefacts to be placed in chronological order, and once this had been done typological studies could begin on a secure basis. Evolution provided a striking explanatory metaphor that stimulated typological studies from the 1860s onwards, despite the problem of equating biological change and technical change (Basalla 1988).

The influence of Classical archaeology on typology has been underestimated because most histories of archaeology have been written by prehistorians. The styles of Classical sculptures and Greek painted vases were also studied primarily from the objects themselves, largely because their contexts were rarely recorded. Systematic studies of Greek and Roman architectural and artistic styles began during the Renaissance, and were formalised by Johann Winckelmann in his publication of 1764 (Murray 1999b: 53–7). A parallel

phenomenon was the careful recording, classification and dating of medieval and Renaissance architecture, such as John Ruskin's studies of Venice in the 1850s. In both cases classification was inseparable from moral judgements about artistic standards and the social systems that had produced them; this consciousness of the subjective attitudes lying behind research was re-emphasised by archaeologists in the 1980s and 1990s (Chapter 6, p. 273).

Ancient coins were even more significant; Petrarch studied inscriptions and portraits in the fourteenth century, and classifications of large coin collections were published from the sixteenth century (Berghaus 1983: 19–23). Joseph von Eckhel's *Doctrina numorum veterum* (1782–98) and similar works by other authors provided comprehensive geographical and chronological classifications that must have been useful reference tools for Thomsen and his successors. It is also important to recognise that coins are artefacts, and that their study by means of stylistic sequences of portraits or other ornamentation, combined with changes in size and weight, bears many similarities to typology. Graslund rightly stressed the importance of the numismatic knowledge of Thomsen, Hildebrand and the Swede, Oscar Montelius, who all appreciated the importance of coins as dating evidence that could be used to subdivide the Scandinavian Iron Age (1987: 66). John Evans, inspired by Darwinian ideas of evolution, undertook similar work on British Iron Age coinage and successfully demonstrated the development of indigenous coinage from earlier Greek prototypes (Evans 1864; de Jersey 2008).

Augustus Henry Lane Fox (1827–1900) took the name Pitt Rivers under the terms of an inheritance in 1880 (Murray 1999b: 127–40). He collected artefacts from all over the world from the early 1850s while serving in the Grenadier Guards. He was involved in replacing muskets with rifles in the British army, and in testing various models and modifications for reliability and efficiency. Pitt Rivers applied the same approach to the study of the development of ancient objects. He liked to collect examples of the principal stages involved, and, in contrast to

earlier collectors like John Tradescant, assembled artefacts ‘... solely with a view to instruction. For this purpose ordinary and typical specimens rather than rare objects have been selected and arranged in sequence’ (Daniel 1981: 140). Pitt Rivers’ concept of typology was very different from that of Montelius, for he invoked analogies with Darwinian evolution as early as the 1860s (Bowden 1991: 54). His concept of Australian weapons placed a variety of clubs, boomerangs, throwing sticks, shields and spears into sequences from simplicity to complexity, all beginning with a simple stick. This reveals the weakness of the evolutionary analogy, for a shield is only a shield when it is broad and flat, and a boomerang is not a boomerang if it does not fly; Pitt Rivers did not take sufficient account of invention.

As soon as Scandinavian prehistory had been subdivided according to groups of artefacts found together in graves and other contexts, further attention was turned to the artefacts themselves. The work of Montelius (Murray 1999b: 155–64) encompassed the whole of Europe from the 1880s, and he used his broad knowledge to fix dates for the Bronze and Iron Ages by cross-referencing north-European finds to datable objects exported from the civilisations of Egypt and the east Mediterranean (cross-dating: see below p. 149). Fellow Swedes Bernhard Salin and Nils Åberg continued typological research in the twentieth century by studying objects and ornamental styles associated with Germanic tribes of the Roman and ‘Dark Age’ periods. Like Montelius, they used dated finds from southern Europe to provide fixed points in the archaeological sequences of Scandinavia. Unfortunately, the introduction of radiocarbon dating in the 1960s revealed major errors in the dating of European prehistory and cast typology in a bad light, for the similarities detected between European and Near-Eastern objects turned out to be illusory (below: p. 153).

Typological studies were not restricted to Scandinavia, of course. Flinders Petrie (Murray 1999b: 221–32) produced comprehensive typologies of Egyptian pottery and stone tools from periods preceding the historically dated Pharaonic period. In the United States typology reached a peak in the study

of Native American pottery by archaeologists such as James B. Griffin in the 1930s (Murray 1999b: 454); their intellectual context blended anthropology with social evolution but came under attack in the 1960s from **processualists** (Kehoe 1998: 97–112; see Chapter 6).

Nevertheless, with appropriate caution the typological technique remains fundamental to the classification and study of artefacts of virtually any kind or date found anywhere in the world.

## 1.4 RECOGNISING HUMAN ORIGINS

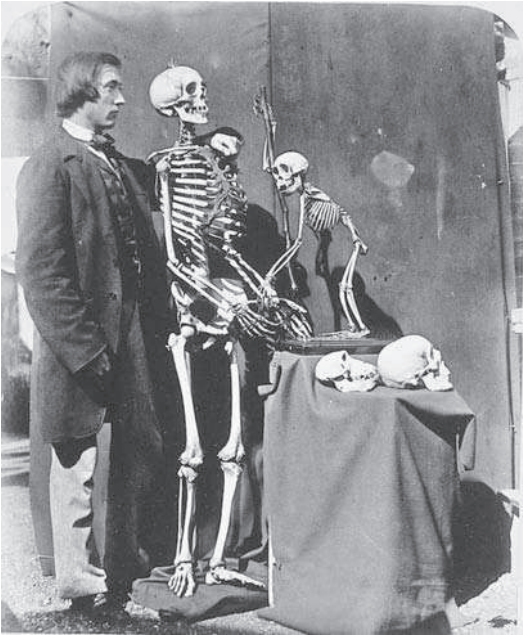
### 1.4.1 Evidence for human antiquity

- key references: Grayson, *The establishment of human antiquity* 1983; Thomas, *The first humans* 1995; Van Riper, *Men among the mammoths* 1993; O’Connor, *Finding time for the Old Stone Age* 2007.

Humans cannot be descended from the apes because, in some ways, they are apes themselves. Really we should ask whether humans descend from ‘an’ ape. Naturally, people are not descended from a present-day ape, any more than we are descended from our cousins. But palaeontology and all the disciplines of the biological sciences have taught us that humans and modern great apes had common ancestors several million years ago.

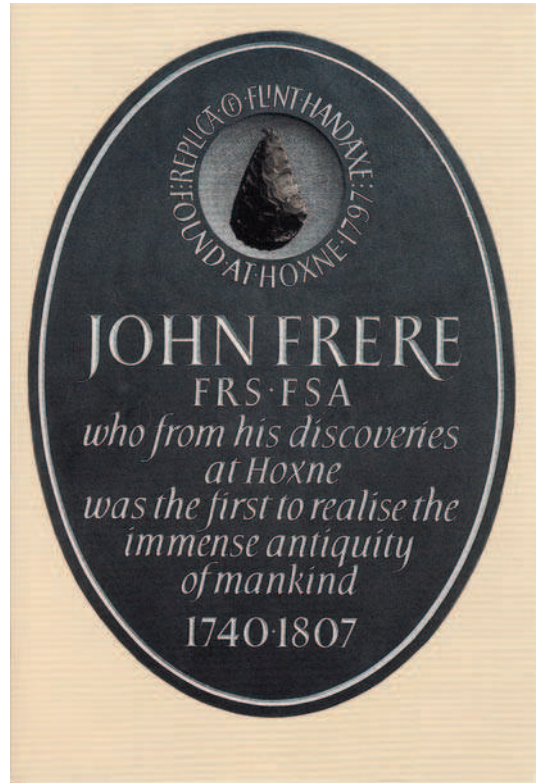
(Thomas 1995: 57)

This succinct quotation is a modern restatement of a fundamental question about human existence that has worried theologians, geologists, biologists and archaeologists for a very long time. In 1619 Lucilio Vanini was burned alive for suggesting that humans originated from apes, while the great apes were only classified as distinct (but related) species – as opposed to degenerate forms of humans – in the eighteenth century, by Linnaeus and Buffon (Thomas 1995: 19, 23–4). Pioneers of geology and fossil classification such as Ray or Cuvier were not able to contribute to this debate because neither fossil apes nor primitive



**Figure 1.11** Reginald Southey photographed by Charles Dodgson between 1857 and 1859. The setting displays an interesting consciousness of the common origin of humans and primates at a time when fossil evidence had not yet been found for the development of either. It is an early example of amateur photography, taken in Oxford close to the publication date of Charles Darwin's *Origin of species* (1859). (NMPFT/Science & Society Picture Library)

human remains were encountered until the 1830s (*ibid.*: 26–9) – well after the existence of early humans had been predicted on the evidence of stone tools discovered alongside bones of extinct animals. Skeletal remains of humans with ‘primitive’ characteristics (for example, projecting brow-ridges and receding chins) that differed from anatomically modern humans were discovered with increasing frequency in Europe between 1856 and 1886, and named after the locations where they were found, Neanderthals and Cro-Magnons (Thomas 1995: 43–9). Not until the discovery of ‘Java Man’ by Dubois in the 1890s was there any physical evidence for a ‘missing link’ between apes and humans of the kind predicted by Darwin and Huxley (*ibid.*: 50–5; Bahn 1996a: 236–7); their statement that the earliest human ancestors would be found in



**Figure 1.12** In 1999 a memorial was installed in Finningham Church, Suffolk, to commemorate the powers of observation and recording shown in John Frere’s publication of Stone Age artefacts found at Hoxne in the late eighteenth century (Frere 1800). From the 1850s onwards it was recognised as the first scientific account of prehistoric artefacts found in early geological strata. (Designed and cut by the Cardozo Kindersley Workshop, Cambridge)

Africa was not supported by finds of fossil bones until the twentieth century (Fig. 1.11).

#### **John Frere and Hoxne**

- key references: Singer *et al.*, *The Lower Palaeolithic site at Hoxne* 1993; O’Connor, *Finding time for the Old Stone Age* 2007.

Volume 13 of the periodical *Archaeologia* (published by the Society of Antiquaries (Box 1.4) in 1800) included a minor item, the full significance of which did not become apparent for sixty years. Amongst an assortment of papers – on subjects ranging from a Roman fort in

### BOX 1.4 The great societies: archaeology comes of age?

Informal meetings in a tavern from 1707 led to the creation of the Society of Antiquaries of London in 1717 (Pearce 2007a: 2), and a similar society began in Scotland in 1780; these societies were among the earliest formal associations of archaeological researchers in the world (Starkey et al. 2007). Societies of this kind began to publish journals recounting recent finds and concepts of the past, such as *Archaeologia* from 1770 and the *Archaeological Journal of the Royal Archaeological Institute* from 1845 (Murray 2001, 199–216). Meetings of antiquarian and archaeological societies provided a context in which influential new ideas in archaeology could be presented, such as the Danish antiquary Jens Worsaae's account of his concept of prehistory (Briggs 2007), or John Evans' magisterial analysis of Iron Age coins (de Jersey 2008). At these antiquarian societies, and their predecessors such as the Royal Society, many of the great topics of the day such as the antiquity of humans was debated and advocated (Briggs 2007). The American Institute of Archaeology (established in 1879) and several European national archaeological institutions founded archaeological schools or research centres in the countries in which they focused their research, notably in Rome, Athens and Jerusalem, whose work continues today (Murray 2001, 100; Wallace-Hadrill 2001). Research into specific periods and areas of the world was facilitated by the establishment of groups such as the Prehistoric Society (formed as a national body in 1935 by expanding the Prehistoric Society of East Anglia, which had existed since 1908) and the Society for American Archaeology (established in 1934). The histories of such societies reflect changes in the focus and direction of archaeological research over time, and before modern communications were established they provided a crucial network of communication that facilitated cross-fertilisation of ideas, allowing new information about evolution and dating to spread rapidly through the international antiquarian community (Sweet 2004: 81; Rowley-Conwy 2007). The cartoon below, by George Cruickshank in 1812, illustrates how antiquarian societies quickly became satirised in the late 18th and early 19th centuries for their odd interest in artefacts and the past (Society of Antiquaries, London).



Germany to historical documents associated with British royalty – was a short letter from John Frere (1740–1807), drawing attention to some

observations made in a clay pit at Hoxne in Suffolk. He reported flint weapons found at a depth of twelve feet in a layer of gravel, overlain

by a bed of sand containing bones of extinct animals and, remarkably, shells and remains of marine creatures ‘which may be conjectured to have been once the bottom, or at least the shore, of the sea’. Frere was evidently conscious of the problematic implications: ‘It may be conjectured that the different strata were formed by inundations happening at distant periods ... The situation in which these weapons were found may tempt us to refer them to a very remote period indeed; even beyond that of the present world’ (Frere 1800: 205). Frere made no reference to the biblical Creation and Flood, and he died before an accumulation of similar finds began to suggest an alternative view of human origins (Fig. 1.12).

Frere’s conundrum was already familiar to geologists, such as Robert Hooke and Nicolas Steno, who had been speculating about the significance of fossil animals for several centuries (Stiebing 1993: 33–4). Worries about geological time did not yet have a significant impact upon biblical views about the age of the world, but the likelihood of conflict increased as growing numbers of finds of artefacts made by humans but associated with remains of extinct animals were noted in Europe in the early nineteenth century (*ibid.*: 34–46).

#### **Boucher de Perthes and the Somme gravels**

- key reference: Schnapp, *The discovery of the past* 1996: 310–44.

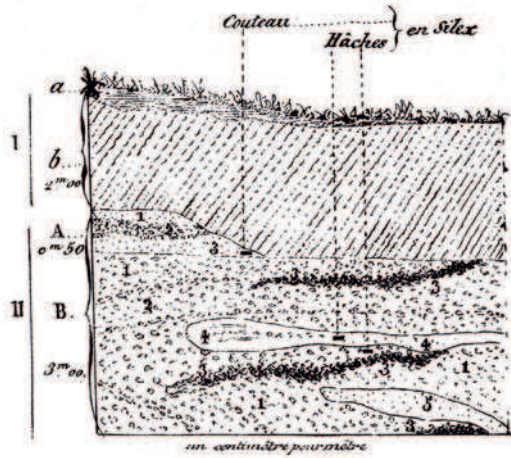
By the time of Frere’s death in 1807 Jacques Boucher de Perthes (1788–1868) was already becoming interested in archaeology in France; he spent several decades studying the gravel quarries of northern France (Fig. 1.13–14). He was impressed by the great depth and variety of the deposits of sediment and he felt that they were far too complex to result from the biblical Flood, although he did not totally reject the authority of the Old Testament. However, it was an uphill struggle to convince contemporaries that flint tools collected from the gravels were made by humans, and that they could be recognised by their artificial shaping: ‘at the very mention of the words “axe” and “diluvium”, I observe a smile on the face of those to whom I speak. It is the



**Figure 1.13** Jacques Boucher de Perthes published many ideas about artefacts found around Amiens in northern France and their stratification. His bombastic manner diminished the credibility of his beliefs. Despite this, Perthes’ central idea – that human artefacts of great age were to be found in the gravels of northern France – was confirmed when John Evans and Joseph Prestwich travelled from England to inspect his finds in 1859. (Portrait by Grévedon, 1831; Society of Antiquaries, London)

workmen who help me, not the geologists’ (quoted in Daniel 1981: 52). Because he was able to prove that these tools came from within ancient gravel beds, Boucher de Perthes concluded that humans had existed before ‘the cataclysm that gave our country its present configuration’, and that these humans were therefore also contemporary with a wide range of extinct animals. He did not abandon the idea of floods, but suggested that Adam and Eve resulted from a later and separate Creation, long after the flood whose results he observed had wiped out earlier humans. Whether or not people accepted this view, the Earth was seen to be becoming increasingly ancient, and humans were being drawn back into an immeasurable void.

Not all geologists treated Boucher de Perthes’ work sceptically. An English geologist, Joseph



**Figure 1.14** A section drawing published by Boucher de Perthes in his *Antiquités celtiques et antediluviennes* (1847) shows the geological strata in which he had found flint implements (labelled *couteau/haches en silex*) in the Somme Valley gravels. The carefully numbered and delineated layers and artefacts, with a vertical scale in metres, illustrate how geologists used this method of recording decades before it was adopted by archaeological excavators (compare with Box 3.2).

Prestwich, together with an authority on ancient implements, John Evans, travelled to France to meet him and to visit the celebrated gravel pits. In May 1859 they were rewarded with the opportunity of observing a flint axe, still firmly embedded in an ancient gravel deposit; any remaining doubts were removed (photographs were taken, too: [Fig. 1.15](#); Gamble and Kruszynski 2009). Prestwich read an account of their observations to the Royal Society in London before the end of May, and a summary of his paper appeared in print in 1860. He referred to Frere's letter published in 1800, and pointed out that Frere's observations conformed with the new findings from France. Both finds were corroborated at Brixham Cave and then Kent's Cavern in Devon, where in 1858–9 flint tools had been found among the bones of Ice Age animals, firmly sealed beneath a sheet of stalagmite (Stiebing 1993: 44–5). In 1864 in France, among many important discoveries made during Edouard Lartet's excavations in rock shelters near Les Eyzies, was a piece of mammoth ivory decorated with an engraving of a mammoth



**Figure 1.15** This stone was photographed in situ in the gravels of the Somme valley associated with mammoth bones in 1859, when John Evans and the geologist Joseph Prestwich visited Boucher de Perthes' excavations at St Acheul, Amiens, proving human antiquity. Evans later published hand axes similar to this example: 'That they really are implements fashioned by the hand of man, a single glance at a collection of them placed side by side ... would, I think, be sufficient to convince even the most sceptical. There is a uniformity of shape, a correctness of outline, and a sharpness about the cutting edges and points, which cannot be due to anything but design' (Evans 1860: 288). The artefact was recently rediscovered in the collections of the Natural History Museum, London (Gamble and Kruszynski 2009.)

– clear evidence that humans were contemporary with these extinct mammals (Bahn 1996a: 120).

In 1869 Pitt Rivers (an important pioneer of typology and excavation) successfully sought and

found flint implements in association with bones (elephant, hippopotamus, extinct deer etc.) at Acton, London. They occurred in a gravel terrace 25–30 m above the River Thames; however, Neolithic and Bronze Age finds from the river itself demonstrated that its present course was more than 2000 years old: ‘this gives us some idea of the great length of time it must have taken to erode the whole valley’ (Bowden 1991: 74). Pitt Rivers designed a particularly elegant method of proving the antiquity of early flint artefacts in Egypt by looking for them in the walls of tombs constructed around 1500 BC near Thebes. The tombs had been dug into hard gravel that included (along with other artefacts) a flint flake cut by the builders; the geologist who accompanied Pitt Rivers commented: ‘It belongs to the geological delta formation, and beyond question it is older beyond calculation than the tomb which was cut into the gravel, and cut through the end of this particular flint flake’ (Bowden 1991: 91).

### 1.4.2 Catastrophists, Uniformitarians, and the impact of Darwin

- key references: Hallam, *Great geological controversies* 1989; Good, *Sciences of the earth* 1998; Repcheck, *The man who found time* 2003; Schwartz, *Sudden origins* 1999.

Speculation about the age of the Earth took place well before the biblical story of the Creation was undermined in the mid-nineteenth century. Georges Buffon, author of a massive survey of natural history, conducted scientific tests in the mid-eighteenth century in which he heated spheres of stone and metal and then measured their rate of cooling. Since he believed that the Earth might have been formed from hot material of solar origin, he deduced that the Earth had been cooling for almost 75,000 years, and that life on the Earth would have been possible from about 40,000 years ago. Many scientists, including Georges Cuvier, reconciled fossils and geological evidence with the Bible by assuming that the creation of humans before the Flood described in the Old Testament (estimated to have taken

place in 2501 BC) was only the last of a series of creations and catastrophic destructions. The recognition of authentic associations between flint axes and the bones of extinct animals did nothing to solve the problem of dating faced by geologists and historians: how long ago did these humans and animals live? The predicament was expressed by Joseph Prestwich:

The author does not, however, consider that the facts, as they at present stand, of necessity carry back Man in past time more than they bring forward the great extinct Mammals towards our own time, the evidence having reference only to relative and not to absolute time; and he is of the opinion that many of the later geological changes may have been sudden or of shorter duration than generally considered. In fact, from the evidence here exhibited ... the author sees no reason against the conclusion that this period of Man and the extinct Mammals ... was brought to a sudden end by a temporary inundation of the land.

(Prestwich 1860: 58)

However, Charles Lyell (1797–1875; Wilson 1972) had published a series of books in the 1830s (entitled *Principles of Geology*) which asserted that gravel, sand and clay deposits were formed by the same processes of erosion and deposition by weather and water observable in modern times, rather than by extraordinary floods. Lyell, and subsequent historians of geology, expressed the debate in terms of **catastrophists** and **uniformitarians**. The influence of the work of the earlier James Hutton (1726–97) meant that after AD 1800 few geologists still believed that layers of gravel and sedimentary rocks were formed simply by the catastrophic Flood described in the Book of Genesis, and few were constrained by the very short time span for the Earth derived from the Old Testament (Gould 1987: 112). **Fluvialists** and catastrophists both studied and interpreted sequences of rocks and fossils, and their methods offered a solution to the problem of early human tools and weapons. If the levels observed by Frere and Boucher de Perthes really *had* been laid down by slow erosion by wind and water and gradual

deposition by rivers and oceans, an immense length of time must have been involved. It could not yet be measured, but, if these processes were assumed to have operated uniformly in the present and the past, their duration could perhaps be sensed and visualised rather more easily than mysterious catastrophic floods.

Sufficient finds of human bones in early geological deposits had accumulated in many parts of Europe for Lyell to publish *The geological evidences of the antiquity of man* in 1863. Although incorporating the new evolutionary ideas of Darwin seemed revolutionary, Lyell was pushing at an open door, for concepts of biological evolution were already familiar to scientists and widely debated (for example, in France by Lamarck and Cuvier). The very gradual nature of the mechanism that Darwin proposed in *The origin of species by means of natural selection* (1859) did not just provide an appreciation of the depth of time demanded by geology. It offered an idea of progress that was almost historical in the way that it led from simple to complex organisms in a linear fashion; this concept could be adopted easily by archaeologists. Science in the nineteenth century was not divided into small, specialised compartments in the way it is today, and Darwin was well aware of the implications of recent geological thinking. Darwin and the geologists both demanded the acceptance of the same concept: the present surface of the Earth, and the plants and animals (including humans) that inhabited it, resulted from an immense period of change. At this stage Darwin had said little or nothing about the place of humans in his grand evolutionary scheme, but the impact of evolutionary thinking was evident in the work of artists who represented early humans as near-naked savages from whom modern people were clearly very different (Moser 1998).

The slow development and acceptance of a concept of human antiquity illustrates how archaeology progressed by changing prevailing explanations gradually until a **paradigm shift** (Kuhn 1962) occurred, and reminds us that new ideas normally meet resistance. We must avoid a sense of satisfaction that we may distinguish the 'right' ideas about the past simply because

they accord with a modern consensus, and we must always be prepared for the emergence of new evidence about such fundamental issues as human origins. Although finds of fossils of early primates, hominins and early humans have accelerated since the middle of the nineteenth century, they are still rare, and impossible to form into a coherent pattern that will satisfy all experts in this field. DNA variability among living populations suggests that anatomically modern humans were latecomers who spread out of Africa and occupied the whole world – displacing their earlier relatives – within the last 100,000 years (Lewin 2005: 200–7).

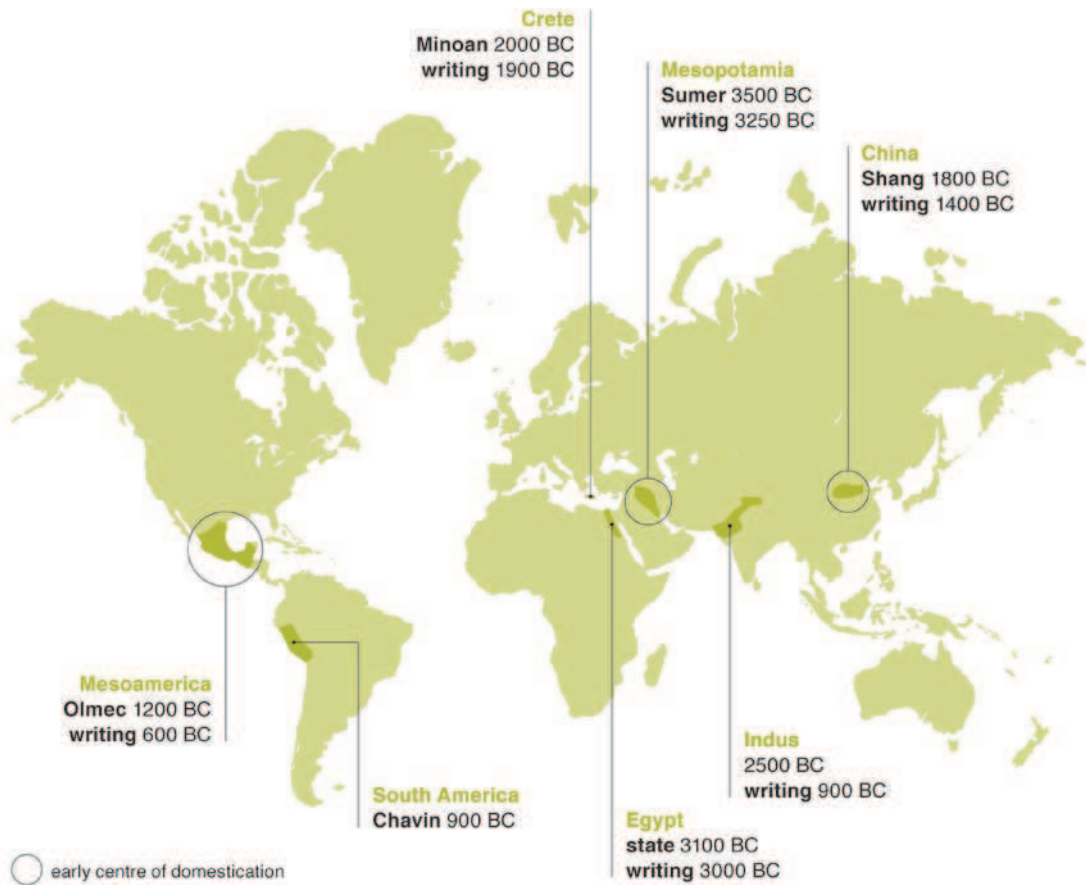
## 1.5 FROM HUNTING TO FARMING

- key references: Rudebeck, *Tilling nature* 2000; Smith, *The emergence of agriculture* 1995.

The reasons behind, and the date of, the transformation of the early hunter-gatherer communities into farming societies was harder to explain. The idea had existed in purely theoretical form from the time that Greek philosophers speculated upon the origins of modern human society. Such a change was fundamental to nineteenth-century attitudes towards social evolution, and was enshrined in the writings of Karl Marx, among others (Chapter 6: 257). Little that was meaningful could be said about the *origin* of civilisation(s) until some understanding had been achieved of the earlier adoption of agriculture by settled prehistoric communities (**Fig. 1.16**).

Finds of bones and plants in Scandinavia and in Switzerland established a clear link between farming and the diagnostic polished stone tools of the so-called New Stone Age, or Neolithic period. In the 1930s such finds were combined with Marxist theory by V. Gordon Childe, who coined the term 'Neolithic Revolution' to describe the fundamental shift from hunting to farming, and many general accounts of the history of the world still employ the terms **Neolithic** and **urban revolution** as if they were historical 'events' comparable to the European Industrial





**Figure 1.16** Ideas about social evolution in the eighteenth and nineteenth centuries involved a straightforward progression from savagery (hunting bands) through barbarism (farming communities) to civilisation (urban states). The reality revealed by archaeology is more complicated, for domestication of varying combinations of animals and plants occurred in many places independently. Civilisations with architecturally sophisticated urban centres and systems of writing also emerged independently in at least three regions (Mesoamerica, Mesopotamia, China) at different times. Nineteenth-century attempts to link them all together by means of superficially similar features, such as pyramids or pictographic writing, reflected a quest for simple linear schemes of social evolution. It required an earlier 'lost civilisation' (such as Atlantis) to be proposed as a common source for these features. However, great differences in detail and in date make such 'diffusionist' explanations very difficult, and most archaeologists are happy to acknowledge separate invention and development. (Chris Unwin, using data compiled from numerous sources)

Revolution of the eighteenth century AD (Greene 1999; **Box 1.7**).

It is one thing to discover civilisations, quite another to understand how they arose. Most parts of the world where complex societies emerged now have well-documented earlier phases during which animals and plants were

domesticated. Thanks to twentieth-century scientific dating methods such as radiocarbon dating, we now know that the first signs of domestication appeared about 10,000 years ago; in the Old World, farming villages with crop cultivation and domestic animals were widespread by 5000 BC, and similar developments were beginning in the

Americas. As with civilisation, there have been attempts to trace the diffusion of agriculture back to a single source, but this is even more difficult in the case of farming. Completely different crops formed the basis of domestication in different parts of the world – wheat and barley in the Near East and Europe, rice in south-east Asia, and maize in Mesoamerica. The single factor most likely to have brought thousands of years of hunting and gathering to an end is climatic change; the kinds of environmental evidence upon which such an interpretation may be based are presented in Chapter 5.

### 1.5.1 World prehistory

- key references: Clark, *From savagery to civilisation* 1946, *World prehistory: a new outline* 1969; Fagan, *People of the Earth* 2007; Scarre, *The human past* 2005.

Developments during the twentieth century in integrating archaeological and scientific evidence with anthropological interpretation mean that **world prehistory** is now a meaningful concept. Formerly, ideas about social evolution current in Europe meant that indigenous peoples elsewhere in the world were regarded as inherently inferior, and their lands ripe for reallocation to new settlers – just as the Romans had brought ‘civilisation’ to Iron Age Britain (Corbey and Theunissen 1995). The grotesque figure Caliban in Shakespeare’s *The Tempest* characterises Tudor attitudes to primitive peoples so well that a nineteenth-century pioneer of prehistory, Daniel Wilson, devoted an entire book to ‘that imaginary intermediate being, between the true brute and man, which, if the new theory of descent from crudest animal organisms be true, was our predecessor and precursor in the inheritance of this world of humanity’ (1873: xii; Trigger 1992: 58). Australia played an important role in revealing hunter-gatherer lifestyles that could serve as a model for interpreting Palaeolithic human life in Europe (Griffiths 1996). The situation was complicated by evolutionary ideas which suggested that Aborigines were an unsuccessful lower form of humanity, and made worse by the interests of

colonisers in dispossessing indigenous people. North American and African native populations had made a fundamental contribution as models for conceptualising prehistoric life in Europe in later prehistoric times. Understanding was enhanced in the nineteenth century by anthropological research in Polynesia, where Neolithic communities, relatively untouched by European intrusion, were being encountered. Social structures as well as material culture were investigated in great detail, for example by the Torres Straits Expedition of 1898 (Slobodin 1997: 19–26).

### 1.6 THE DISCOVERY OF CIVILISATIONS

- key references: Stiebing, *Uncovering the past* 1993: 55–226; Maisels, *The emergence of civilisation* 1993; *Early civilisations of the Old World* 1999; Whitehouse, *The first cities* 1997; Dyson, *In pursuit of ancient pasts* 2006.

It is important to remember that **civilisation** is a modern definition imposed upon the past from a Western intellectual perspective; it is used here without implying that it is intrinsically superior to other ways of living, or that it is the natural end-point of progress. The fact that the modern world is dominated by sophisticated cities and states might encourage a misleading view that the discovery of civilisations was a more important archaeological achievement than the revelation of human origins or the growth of the study of prehistory. A distinction must be drawn between the Classical civilisations that were directly ancestral to those European countries where archaeology emerged, and civilisations that were not, such as China, India or America (**Fig. 1.16**). Greece and Rome had never been forgotten, but the study of their sites and material remains developed dramatically from the Renaissance to the Enlightenment. A further group of civilisations was also well known to Europeans aware of the Bible, since the Old Testament included episodes set in Egypt and Mesopotamia; these regions were, however, relatively inaccessible to

travellers and antiquaries before the nineteenth century. Other civilisations – notably the Aztec, Maya and Inca in Mesoamerica and South America – were still flourishing at the time of the Spanish conquests in the early sixteenth century AD, but their achievements were downplayed in the process of colonisation and religious conversion that followed. These American civilisations suffered such a sharp decline that even the grandest cities and temples were abandoned, so that they were in effect rediscovered in the nineteenth and twentieth centuries (Stiebing 1993: 167–97).

Archaeological study of civilisations raised new questions that continue to provide problems, particularly over definitions (Gowlett 1993: 8–9, 172–97). How may civilisations be recognised? Urban settlements and systems of writing were the most generally accepted characteristics, but how, where and when did they originate? Did civilisation begin once in a single location and spread outwards from there? Naturally, detailed investigation led to awareness of earlier phases of civilisations about which little or nothing was known – Minoan Crete, the Indus Valley, Olmec Mesoamerica. Another problem was that some written languages recorded in documents and/or inscriptions could be read by scholars (Greek, Latin, Chinese) while others could not. At least Egyptian hieroglyphs and Mesopotamian cuneiform texts, although not yet deciphered, were written in languages whose structure and vocabulary were well known from other sources, but those of Minoans or Hittites could not be assumed to relate to any known language (Pope 1999).

### 1.6.1 Greece and Rome

- key references: Stiebing, *Uncovering the past* 1993: 119–65; Dyson, *In pursuit of ancient pasts* 2006; Etienne and Etienne, *The search for ancient Greece* 1992; Moatti, *The search for ancient Rome* 1993; Morris, *Classical Greece* 1994.

The Classical Mediterranean civilisations of Greece and Rome received particularly close attention from the fourteenth to the eighteenth

centuries AD. Their familiarity reduced the potential for Classical archaeology to introduce new techniques and concepts, compared to the study of earlier civilisations in Egypt or Mesopotamia, or prehistoric questions such as human origins. When looking at photographs of the familiar ruins of the Forum in Rome, it is easy to forget that in the eighteenth century it was still a cow pasture not yet cleared by archaeologists – little different from how it was seen by Bracciolini in 1430: ‘where they assembled to enact their laws and elect their magistrates, is now enclosed for cultivation of pot-herbs, or thrown open for the reception of swine and buffaloes’ (quoted in Moatti 1993: 149). However, innovations in technique that did occur included art history (pioneered by Johann Winckelmann in the eighteenth century: Dyson 2006: 2–4), architectural recording and analysis, epigraphy (the study of inscriptions), and the study of sequences of artefacts from graves or sites excavated – eventually – with careful attention to **stratification**. The archaeology of early Rome extended to study of the Etruscans, early Rome’s neighbours to the north, and relations with southern Italy and Sicily, where Greek cities had been established from the eighth century BC (Stiebing 1993: 153–8). The archaeology of Greece and Rome became inextricably linked with political movements for independence and national unity, which were particularly strong during the Romantic period of the nineteenth century. Meanwhile the establishment of archaeological institutes in Greece and Italy by the nineteenth-century powers – France, Germany and Britain – reflected their desire to relate their modern empires to those of the Classical world (Dyson 2006).

The failing grip of the Ottoman Empire in the nineteenth century stimulated the exploration of Greece, which gained independence from the Turks in 1821 (Etienne and Etienne 1990: 85–93). Foreign excavators rapidly cleared the Acropolis at Athens, disengaging the remains of such buildings as the Erechtheum and the Parthenon from a harem and mosque (**Fig. 1.17**). Societies tend to select the past that they wish to emphasise; the removal of physical reminders of Turkish rule and its religion, Islam, helped

the new Greek nation to emphasise European roots (McNeal 1991). Excavations by Heinrich Schliemann in Turkey and Greece and by Arthur Evans on Crete demonstrated the potential of archaeological methods for elucidating the Mycenaean and Minoan antecedents of Greek civilisation (Stiebing 1993: 130–8).

### 1.6.2 Egypt and Mesopotamia

- key references: Moser, *Wondrous curiosities* 2006; Siliotti, *Egypt lost and found* 1998; Vercoutter, *The search for ancient Egypt* 1992; Maisels, *The Near East* 1990; Pope, *The story of decipherment* 1999.

Interest in Egypt and Mesopotamia was not entirely separate from the investigation of Classical Greece and Rome, for the two areas had fallen under the control of Alexander the Great in the fourth century BC, and parts of

both were absorbed into the Roman Empire in the first century BC. Thus, some indications of the early history and antiquities of Egypt and Mesopotamia could be gleaned from Classical writers, while even earlier references abounded in the Old Testament of the Bible. There was another reason for the expansion of interest from Egypt to other parts of the Near East during the nineteenth century. Classical archaeology had amplified written records about Greece and Rome, and hinted at the origins of their civilisations; investigations in Palestine and Mesopotamia therefore offered similar success in relation to the Bible. Thus, a wide public could take a safe interest in news of discoveries that promised to enrich and confirm one of the major formative elements of European Christian culture, in contrast to hearing of the disturbing implications of the crude stone tools that threatened to undermine the date and nature of the Creation recorded in the Book of Genesis (Moorey 1991).



**Figure 1.17** Engraving of the Parthenon, Athens, published in 1787, shows Turkish houses and a mosque that were removed when Greece became independent in 1831. Stuart and Revett published five volumes of architectural studies and views of buildings between 1762 and 1830, and placed great emphasis upon accurate recording, for these books were intended for use by architects building in the neo-classical style. Fortunately for modern researchers with a wider interest in these sites, they began by sketching the actual condition of each monument. (Stuart and Revett 1787: pl. 1)

The decline of the Turkish Empire allowed progressively easier access to Egypt and Mesopotamia after AD 1800, resulting in the presence of diplomats and soldiers from France and Britain (and later Germany) around the Red Sea and Arabian Gulf – the strategic routes that connected the Mediterranean to the Indian Ocean. Many of these individuals came from the same educational and social background as the antiquaries who had studied the classics and travelled to historic sites on the Grand Tour. It is therefore not surprising to find that Claudius James Rich (agent of the East India Company at Baghdad from 1807) or Paul Émile Botta (French consul from 1842 at Mosul, the ancient Nineveh) investigated the remains of Babylon and Nineveh and other sites in Iraq near the towns where they were based (Bahn 1996a: 98–109). National prestige became embroiled in the pursuit of antiquities, and as a result sculptures and even parts of buildings were transported to the museums of London, Paris and Berlin. Napoleon's invasion of Egypt in 1798 was even more striking; although Nelson ensured that it was not a military success it was certainly an academic triumph. Two hundred scholars accompanied Napoleon's army, and they established the foundations for decades of subsequent research into Egypt's civilisation and prehistory (Vercoutter 1992: 39, 53–9; Trigger 2006: 68). Historians of archaeology sometimes overlook the fact that Napoleon's scholars were also engaged in the study of contemporary aspects of Egypt, such as its natural history; thus Drovetti, who is chiefly remembered for his acquisition and sale of antiquities, also organised the even more impressive feat of delivering a live giraffe to King Charles X in Paris (Allin 1999; **Box 1.5**). Once again we are reminded that archaeology was part of a wider cultural world.

The methods developed since the Renaissance for the study of Classical Greece and Rome, based upon a coordinated investigation of literature, art and architecture, provided a model that could be applied to the study of Egypt and the Near East (Trigger 2006: 67). Literary interest was soon given a tremendous boost, for the written languages of both regions were deciphered by the middle of the nineteenth century (Pope 1999).

An inscription on the Rosetta Stone (discovered in Egypt by a French officer in Napoleon's army in 1799) turned out to have been written in two different Egyptian scripts and also in Greek. The stone was taken to Britain after Napoleon's defeat, but attempts to use the Greek text as a key for understanding the Egyptian scripts culminated in success by Jean François Champollion, who published a grammar and dictionary of Egyptian hieroglyphics in the 1830s (Parkinson 2005). The cuneiform script of Mesopotamia was first translated at around the same time, and the early Babylonian language of the region was deciphered with the help of a gigantic inscription carved on a high cliff at Behistun in Persia, recorded by Henry Rawlinson, a soldier and diplomat in the region. It included identical texts written in Persian, Babylonian and Elamite to proclaim the authority of the Persian king Darius over his conquests, and the study was completed by 1857 (Bahn 1996a: 108–9). Rawlinson eventually became curator of the British Museum in 1876.

The implications of these translations were tremendous: in the course of the nineteenth century Egyptology and Assyriology added 3,000 years of history to two areas of particular interest in terms of biblical studies. Countless Egyptian hieroglyphic inscriptions were already known (their use had continued under Greek and Roman rule until at least the end of the fourth century AD), and buildings could now be dated according to the names of pharaohs inscribed on them. The decipherment of cuneiform writing allowed the translation of thousands of clay tablets found on excavations throughout the area; these tablets frequently provided details of palace stores and accounts, as well as historical information. Egypt and Mesopotamia thus joined Greece and Rome in having a detailed historical framework for the study of their culture and physical remains.

The increasing interest in Near-Eastern civilisations was not entirely beneficial, for it led to intensive plundering of sites for carvings and inscriptions to satisfy greater demands from museums and collectors. In Mesopotamia, even palaces and temples were largely built out of sun-dried mud-brick (**Fig 3.18**) – unlike the stone of their counterparts in Egypt. Fragile structures

## BOX 1.5

## Plundering and collecting: Belzoni and Lord Elgin

During the early years of archaeology, much of its activity throughout the world consisted of the unsystematic collection (or looting) of antiquities, particularly from the ancient civilisations of Greece and Egypt. Giovanni Belzoni (1778–1823), an Italian strongman, for example, collected antiquities from Egypt, such as Ramesses III's sarcophagus, which later became part of the Egyptian collections of the British Museum (Murray 2001: 155). Many classical antiquities were removed from the Ottoman Empire (which included modern Greece and Turkey) to be displayed in private collections or donated to new national museums. Most famously Lord Elgin (1766–1841), Britain's ambassador to the Ottoman Empire, had friezes from the Parthenon in Athens (the so-called 'Elgin marbles') removed and shipped to London, where they were bought by the British Museum in 1816 (Murray 2001: 467; Beard 2002). The legacy of these collectors continues today, since many of the world's most prestigious museums (for example the Metropolitan Museum in New York, the Louvre in Paris, and the British Museum) contain artefacts from many parts of the world whose provenance is either unrecorded or whose ownership is contested. In some cases entire buildings were removed, such as the Greek altar from Pergamon in Turkey re-erected in a museum in Berlin. The opening of a new museum (seen here) in Athens in 2009 to house the Parthenon sculptures, where elements such as the Elgin marbles now held in foreign collections are represented by casts, contests the long-held argument that archaeological remains from Athens were safer, or better treated, in museums elsewhere. It adds to the much wider challenge to museums to return objects removed from other countries in the eighteenth and nineteenth centuries (see Chapter 6; Hamilakis 1999). (Getty Images)



and perishable or unimpressive artefacts were neglected for most of the rest of the nineteenth century, along with any earlier prehistoric levels underlying historical sites. Frere, Worsaae and Boucher de Perthes observed and recorded the stratigraphic contexts of prehistoric artefacts because they were the only possible source of chronological evidence (Chapter 3: 90–2); with historical records written in hieroglyphs or cuneiform, who needed strata?

Mariette's discovery of the Serapeum, at Memphis in Egypt, in 1851 (Vercoutter 1992: 101–5) may be contrasted with the way in which Schliemann approached fieldwork (below). Mariette knew about the site from an ancient Greek traveller's account and from references in

Egyptian papyri, but only discovered it thanks to a good memory and the chance observation of the head of a sphinx sticking out of the sand; four years of excavation followed. Happy accidents of this kind were the rule rather than the exception. Many sites mentioned in historical sources or the Bible were only identified because their names appeared on building inscriptions or clay tablets found during plunder for museum exhibits. One example of this kind was the site of Sippar in southern Mesopotamia (the biblical *Sepharvaim*), where Rassam excavated for the British Museum in 1881. Ironically, one of the cuneiform inscriptions that he found recorded an excavation carried out by the Babylonian king Nabonidus in the sixth century BC. Nabonidus dug beneath



**Figure 1.18** Schliemann's excavations at Troy (Hissarlik, Turkey) were not a good model of archaeological technique. Only solid structures were noticed and recorded, and they were rapidly demolished to reveal earlier features. Schliemann's awareness that a succession of cities had occupied the site, and his determination to find the Homeric level, did at least force him to take note of the occurrence of artefacts in different levels. His motivation for digging is of particular interest; it was the culmination of a long programme of literary research, fieldwork and excavations on other sites, all aimed at identifying the geographical setting and physical remains of Homer's Greeks and Trojans known only from literature. (Schliemann 1880: facing p. 265)

the foundations of a temple dedicated to the Sun-god Shamash to find out who had built it, and discovered an inscription that answered his question (Schnapp 1996: 13–18).

### 1.6.3 The Aegean Bronze Age: Schliemann and Troy

- key references: Murray, *Encyclopedia of archaeology* 1999a: 109–26; Fitton, *Discovery of the Greek Bronze Age* 1995: 48–103; Allen, *Finding the walls of Troy* 1998; McDonald and Thomas, *Progress into the past* 1990; Runnels, *The archaeology of Heinrich Schliemann* 2007.

Heinrich Schliemann was born in Germany in 1822. His commercial skills and gift for languages

allowed him to close down his business interests in 1863 to devote himself to travelling and studying the ancient Greek world until his death in 1890. Part of the enduring appeal of Schliemann's life-story lies in his rather dubious role as an outsider who took on the academic establishment and outwitted the Greek and Turkish authorities in the relentless and successful pursuit of his theories. How far this view is correct may be debated, but the persistence, discipline and intelligence that brought him commercial success and a rapid rise from shop assistant to Californian banker would have been helpful in approaching excavation. However, Schliemann was not the only archaeologist in Greece or Turkey to pay attention to the recognition and recording of stratification and finds during an excavation. In the 1870s Alexander Conze working at Samothrace

and Ernst Curtius at Olympia both applied rigorous methods of excavation inspired by the work of Giuseppe Fiorelli at Pompeii in Italy (Trigger 2006: 63).

Nineteenth-century German literary scholars considered that the *Iliad* (Homer's epic poem recounting stories of the Trojan Wars) was based not on a historical reality but on accounts of mythical heroes. Schliemann held the opposite view, and, having combined study of the Homeric text with fieldwork in Greece and Turkey, he published observations about Mycenae and the location of Troy in 1869 – two years before he began to excavate the latter site. He drew wide attention to his findings through the rapid publication of his work, as well as popular reports to newspapers such as *The Times* (Fig. 1.18). His results have undergone considerable reinterpretation, initially by his co-worker Dörpfeld, who redefined the occupation level at Troy considered

to have belonged to the Homeric period only three years after Schliemann's death.

Although Schliemann's excavations and research around the Aegean were initially motivated by the desire to elucidate a specific literary text, they brought the Greek Bronze Age and its antecedents to light for the first time. He conducted his work as a conscious problem-oriented exercise, rather than simply to recover attractive finds from a known historical site; he also paid attention to the whole stratigraphic sequence at Troy, not just a single period. Clearer objectives were finally coming into the study of early civilisations. The late nineteenth century also witnessed a more systematic approach to the recording of surface remains of monuments, using improved surveying techniques, combined with the rapidly advancing technique of photography. In the early twentieth century, Gertrude Bell made the most of photography as a way

### BOX 1.6

## Pioneer of Near Eastern archaeology: Gertrude Bell

The role of many female pioneers has been underplayed in histories of archaeology until relatively recently, despite the fact that archaeology was a discipline in which women made a significant contribution at a time when society was dominated by men. Successful women archaeologists include skilled excavators such as Kathleen Kenyon (1906–78), who excavated the Neolithic town of Jericho (Davis 2008), and the first female professor of archaeology in England, Dorothy Garrod (1892–1968). The contribution of antiquaries in Britain such as Christian MacLagan (1809–1901) is less well known (Eldson 2004), as is the work of many others (Cohen and Sharp Joukowsky 2004). One pioneer who is better known because of her political connections is Gertrude Bell (1868–1926), seen here investigating an Arab funerary monument in Lebanon. She was born in Washington, England, and spent a considerable part of her life travelling in western Asia during the final decades of the Ottoman Empire and the emergence of Arab countries such as Iraq. She used her knowledge of languages and her skills as a cartographer to map, survey and photograph large numbers of archaeological monuments, in addition to establishing the Iraqi Archaeological Museum in Baghdad (Asher-Greve 2004; Howell 2007). Bell also had a significant influence on many (male) pioneers in Near Eastern archaeology such as Leonard Wooley (1880–1960) and Max Mallowan (1904–78) (McCall 2001). (Mark Jackson, Gertrude Bell Archive, Newcastle University)





of recording not only ancient monuments but scenes of everyday contemporary life (Box 1.6).

### 1.6.4 Greece and the Aegean: Evans and Knossos

- key references: Dyson, *In pursuit of ancient pasts* 2006: chapter 3; Stiebing, *Uncovering the past* 1993: 134–8; Farnoux, *Knossos: unearthing a legend* 1996; Fitton, *Discovery of the Greek Bronze Age* 1995: 115–39.

One of the final stages in revealing the early civilisations of Europe and the Near East took place when Arthur Evans investigated the origins of the Mycenaean civilisation revealed by Schliemann in Greece (Bahn 1996a: 146–50). Soon after the independence of Crete in 1898 Arthur Evans excavated the Minoan palace at Knossos, where a literate civilisation had developed from around 2000 BC. Arthur Evans, like Schliemann, was following up an idea suggested by prior research. He was aware that engraved seal-stones bearing a pictographic script had been found in Crete, and that their script (now known as Linear A) was independent of those of Egypt or Turkey. It indicated that a system of writing had been developed well before the adoption of an early form of Greek by the Mycenaeans (Pope 1999: 146–58). Unlike Schliemann, Arthur Evans did not suffer opposition or ridicule; he had an impeccable academic background, and worked in the Ashmolean Museum, Oxford. At the age of eight he had accompanied his father John on the famous visit to Boucher de Perthes at Abbéville in 1859, where young Arthur actually found a flint implement.

Unlike Egypt, Mesopotamia or even Homeric Greece, the Minoan world was almost entirely unknown; the notion of a civilisation preceding that of Classical Greece was a real revelation. As at Troy, earlier levels were found below the palace at Knossos; they extended back into the prehistoric period and emphasised the depth of time that preceded the literate stages of these early civilisations. Archaeology alone provided almost everything that was known about Minoan civilisation, and this achievement paralleled the

contribution made by prehistorians to the understanding of human antiquity. The excavations at Knossos were directed at the solution of a specific cultural problem, using a variety of evidence, including some small previous excavations on the site: the results were spectacularly successful (Fig. 3.2). Arthur Evans was helped by the fact that the Minoan palace was not overlain by extensive remains of subsequent occupation. He was able to make really detailed interpretations because it had been destroyed – probably by an earthquake – leading to its abandonment and contained the remains of most of its artefacts and furnishings.

After the discovery of Minoan Crete, the only other early European or Near-Eastern civilisation to remain unknown until the twentieth century was that of the Hittites in Turkey. Like the Mesopotamian civilisations, it was known from the Bible, but it employed a form of writing (now known as Luvian Hieroglyphic) that was even more difficult to decipher than cuneiform. Understanding was accelerated in 1906–8 by the discovery of large numbers of inscribed tablets at the large fortified city of Hattusas (Boghaz-köy), and of a bilingual Luvian and Phoenician inscription in 1947 at Karatepe (Pope 1999: 136–43).

### 1.6.5 India and Asia

- key references: Stiebing, *Uncovering the past* 1993: 199–225; Chakrabarti, *A history of Indian archaeology* 1988; Barnes, *The rise of civilisation in East Asia* 1999.

Despite contacts through commerce with the Roman Empire and frequent interaction with the medieval Islamic world, little was known in Europe about India or China before the sixteenth century. By this time European traders (notably from Britain and the Netherlands) were well established in the Indian Ocean, following routes and visiting ports used for centuries by Arab merchants. European trade developed into colonial rule in the eighteenth and nineteenth centuries, bringing reports by officials and soldiers about ancient cities or temples such as Ellora (north-east of Bombay), Anuradhapura (Sri Lanka) and Angkor

(Cambodia). Thus, by the nineteenth century no educated European could remain ignorant of the fact that civilisation, measured in Western terms through its cities, art, architecture and systems of writing, was not restricted to the ancient Near East and Mediterranean region. Similar observations in Central and South America made it clear that civilisation was actually a very widespread phenomenon in human history.

In the same way that discoveries around the Aegean provided a Bronze Age background for ancient Greece, fieldwork and excavation in the twentieth century in India and China eventually produced evidence of Bronze Age antecedents for their own civilisations, dating back to before 2000 and 1000 BC respectively. The Indus civilisation spread over a very wide area – larger than either Mesopotamia or Egypt – and engaged in wide-ranging trade. The impressive sites of Harappa and Mohenjo Daro (now in Pakistan) were excavated in the 1920s, and were shown to have had a much longer history than was thought, and to have had links with the Mesopotamian sites in the third millennium BC (Murray 2007: 353–7). In China, artefacts, settlements and rich burials found near Anyang revealed material evidence for the Shang Dynasty (Debaine-Francfort 1999: 51–67). The civilisations of the Indus Valley and the Shang Dynasty shared another feature with their Aegean counterpart: both made use of symbolic systems of writing, although that of the Indus has yet been deciphered.

### 1.6.6 Civilisations in the Americas

- key references: Lyman and O'Brien, *Measuring time with artifacts* 2006; Stiebing, *Uncovering the past* 1993: 167–98; Kennedy, *Hidden cities* 1994; Barnhart, *Ephraim George Squier and the development of American anthropology* 2005.

Spanish conquistadors and churchmen reported the existence of sophisticated urban civilisations during initial contacts in the early fifteenth century, but only recorded them in the course of their destruction. Some churchmen wrote detailed accounts of Mayan settlements, customs and religion; Diego de Landa (1524–79), first

Bishop of Yucatán, also described and sketched remains of abandoned settlements, some of which dated back to the collapse of classic Mayan civilisations in the ninth century AD. Archaeological rediscovery began in the eighteenth century, but the literate civilisation of the Maya was first presented to a wider public by John Stephens and Frederick Catherwood in the 1840s (Bourbon 1999). Stephens had published successful books about travels in the Near East and Eastern Europe before he met Catherwood, an excellent draughtsman, whose attention had already been attracted by published illustrations of Mayan buildings (Fig. 1.19–21). Fortunately, the accuracy of their fieldwork set an example for work elsewhere in Central and South America.

Further south, fieldwork and excavation took place from the 1850s onwards, notably by Ephraim Squier (1821–88) who, after his study of the mounds of Ohio (Box 1.3; Trigger 2006: 161–2), mapped the ruins of Central America and Peru (Shimada 1994; Barnhart 2005). Later the German archaeologist Max Uhle (1856–1944) conducted influential excavations in Peru and elsewhere (Murray 2007: 441–3). As in Yucatán, it became apparent that the Inca who occupied sites known from the time of the Spanish conquest stood at the end of a much longer sequence (Stiebing 1993: 186–8). All of this exploratory work falls within Willey and Sabloff's 'classificatory-descriptive period (1840–1914)' of American archaeology, and it was of course influenced by European work on both human antiquity and early civilisations (Willey and Sabloff 1980: 34–76). A drawback for South American archaeologists was that the Mayan script, unlike those of Egypt and Mesopotamia, was not deciphered until the 1960s, even though it had still been in use at the time of the Spanish conquest (Coe 1992; Pope 1999: 195–203).

The influence of Europe upon American archaeology was not entirely positive. Many early students of American antiquities, from Diego de Landa to John Stephens, were insistent that the impressive ruins were the creation of the same people who inhabited the New World at the time of the Spanish conquest, or their antecedents. For others it was inconceivable that such civilisations

should have come about independently, and the concept of a lost civilisation inhabiting an island called Atlantis was invoked to link the Old and New Worlds. The idea of Atlantis began in ancient Greece with Plato's account of an island destroyed by volcanic activity, but was transformed and popularised in its modern form in *Atlantis: the antediluvian world*, written by Ignatius Donnelly in 1882. Lost civilisations that deprived indigenous peoples of the early heritage of the regions they inhabited were very helpful in justifying colonial rule in many parts of the world; this, and the underlying concept of the diffusion of culture (**diffusionism**), will be examined further in Chapter 6.

## 1.7 ACHIEVEMENTS OF EARLY ARCHAEOLOGY

- key references: Murray, *Milestones in archaeology* 2007; Trigger, *A history of archaeological thought* 2006; Schnapp, *The discovery of the past* 1996.

This chapter has sketched the outline of the development of archaeology as a cultural phenomenon inseparable from broader intellectual developments. It has also taken a close look at the application of archaeology to the study of artefacts, where the subject began to achieve an identity of its own. The discovery of the 'lost' civilisations, the appearance of careful excavation techniques, and the increasingly sophisticated interpretation of past societies all belong to a phase of archaeology that had scarcely begun before the nineteenth century. However, the rapid developments of the nineteenth and twentieth centuries incorporated several preoccupations already established during the Renaissance and Enlightenment. Pursuits that were considered respectable in intellectual circles happened to include collecting artefacts and recording ancient sites as part of the scientific study of natural history. The efforts of individuals, usually amateurs and often eccentrics, established the methods of fieldwork, and led to the opening of displays in museums that had to be staffed and catalogued. Natural scientists working with

archaeologists extended the perceived length of the existence of humans on Earth from a mere 6,000 years back into an immeasurable period. As a result of all these achievements, greater efforts were made to collect human artefacts, and to organise them in more sophisticated ways in order to provide evidence for technological progress and social evolution.

Early attempts to introduce some order into the past divided it into three stages of social development (savagery, barbarism, civilisation) or technological ages (Stone, Bronze, Iron). At the beginning of the twenty-first century a considerable proportion of archaeological interpretation is focused upon three rather broader topics, which are frequently described as 'revolutions'. In the twentieth century archaeology reached its heyday, developing its own theories and models of the past, independent of history and classical texts (**Box 1.7**). Considerable progress had been made by the early twentieth century in revealing the basic evidence that allowed fundamental questions to be formulated about three phenomena:

- a The study of **human origins** shows how the recognition of stone artefacts led to the establishment of the existence of early prehistoric humans. Only after this nineteenth-century breakthrough did actual bones belonging to early humans begin to be recognised and classified. By the late twentieth century sufficient evidence had accumulated for a **human revolution** in which artefacts and behavioural patterns associated with 'anatomically modern' humans spread rapidly all over the world within the last 100,000 years (Mellars and Stringer 1989).
- b The importance of the economic background to early civilisations placed new emphasis upon understanding how and when hunting and gathering wild animals and plants began to be supplemented by domesticating animals and growing crops, culminating in **settled farming**. Since this change took place during the final stage of the Stone Age it became known as the Neolithic (or agricultural) revolution (Childe 1935; Cowan and Watson 1992).

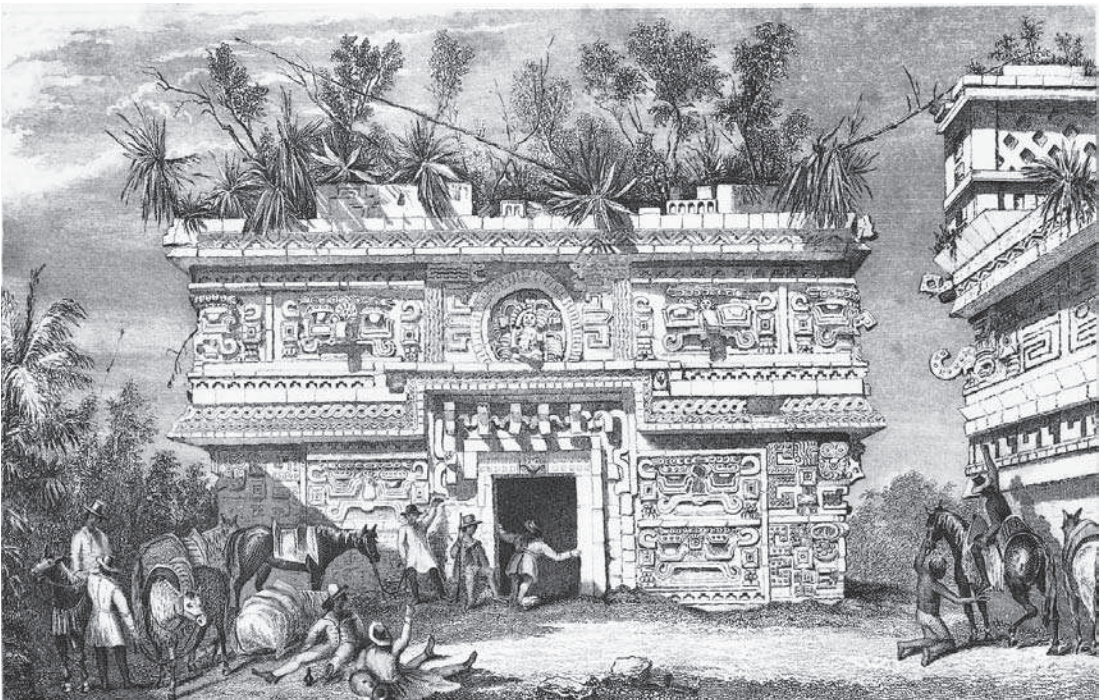
c The study of **civilisations** grew dramatically from the Renaissance to the nineteenth century, when archaeological excavation revealed that cities in many parts of the world were preceded by a long sequence of prehistoric developments. Observations of surviving 'prehistoric' peoples by nineteenth-century anthropologists helped to show what kinds of lifestyles and economies preceded civilisation. The emergence around 5,000 years ago of settlements comparable to modern towns – with elites of literate rulers and priests, and specialised traders and craft workers – was described as an Urban Revolution in the 1930s (Childe 1934; Whitehouse 1997). The importance of social and economic factors added depth to the study of civilisations, and stimulated improvements in excavation techniques. The archaeology of Greece and Rome developed first, followed by Near-Eastern, Asian and American civilisations; emphasis upon works of art and major monuments was gradually supplemented by studies of ordinary artefacts and settlements. Last on the scene in terms of historical archaeology came the study

of medieval, post-medieval and even modern industrial periods (Hinton 1983; Crossley 1992; Palmer and Neaverson 1998), the latter very much in the twentieth century (Fig 1.24). The role of archaeology was enhanced by the growth of interest in social, economic and technological aspects of these periods, which led naturally to the study of their material culture as well as their art and architecture (Vyner 1994; Bintliff 1991b).

### 1.7.1 Excavation: the investigative technique of the future

- key references: Romer and Romer, *Great excavations* 2000; Lucas, *Critical approaches to fieldwork* 2001; Parslow, *Rediscovering antiquity* 1995; Ridley, *The eagle and the spade* 1992.

Interest in material remains, and in particular the concept of excavating sites for information rather than treasure, developed well after the great period of descriptive study characterised by antiquaries such as Aubrey. Although by the sixteenth century





**Figure 1.19–20–21** John Stephens spent several seasons travelling in Mesoamerica in the early nineteenth century and published entertaining books about his exploits. Many were illustrated by Frederick Catherwood, a gifted draughtsman and watercolour painter. Catherwood's views of buildings such as the Monjas at Chichén Itzá, a ninth- to twelfth-century Mayan city in eastern Mexico, give a clear impression not only of the scale of such structures but also of their state of preservation before any conservation or excavation had been carried out. Rather neglected in comparison with illustrations such as Fig. 1.20 are measured plans made by Catherwood. At major sites such as Chichén Itzá this was a difficult task because of their size and overgrown condition. Catherwood's superb draughtsmanship is evident in engravings made from his detailed drawings and watercolours of Mayan carved decoration and inscriptions at Copán, Honduras (Fig. 1.21). Tropical vegetation and human figures were included both to provide scale and to increase the drama of these illustrations, which are an extremely valuable record of details that may have been damaged or have disappeared subsequently. Photography rapidly overtook this laborious form of recording in the second half of the nineteenth century. (Stephens 1843: opposite p. 293 and p. 290; Bodleian Library, Oxford, Stephens 1841 vol. 1: opposite p. 140; Robinson Library, University of Newcastle)

the study of ancient ruins (accompanied by attention to coins and inscriptions) was an indispensable companion to historical investigation of the past, the idea of using **systematic excavation** lay far in the future. There were of course exceptions, including Stukeley in England and Thomas Jefferson in America, who both excavated burial

mounds in the eighteenth century AD – with notable success in the latter case (Stiebing 1993: 172–3). Pompeii and Herculaneum underwent substantial investigation, initially through the use of tunnels, from the early eighteenth century, and the quantity and quality of artefacts, sculptures and wall paintings recovered exerted a

## BOX 1.7

### V. Gordon Childe: twentieth-century archaeology begins to model the past

Despite its much earlier roots, archaeology only came of age in the twentieth century when more sophisticated explanatory models of the archaeological record began to be devised. One of the leading figures in this development was Vere Gordon Childe (1892–1957). In early works such as *The Danube in prehistory* (1929) and *Man makes himself* (1936) he sought not just to present details of the archaeological record (artefact typologies, settlement types, burials, etc.) but also to explain how societies developed and changed. Childe was instrumental in defining ‘revolutions’ in the past: the Neolithic Revolution marked the transition from nomadic hunting and gathering to settled farming communities, while the Urban Revolution was characterised by



the transition from agricultural villages to large communities living in cities (Greene 1999; Gathercole 2005). His theories are often considered to be part of ‘culture history’ in terms of archaeological thought (described more fully in Chapter 6), but they originate in Childe’s lifelong Marxism (Patterson 2003); his concept of the processes of political and social evolution that formed the modern world was presented to a wide public in *What happened in history* (1942), a successful early Penguin paperback book. Childe’s incorporation of archaeological data from prehistoric times into a clear theoretical explanation of the past helped archaeology to become an established discipline in its own right, rather than a subsidiary part of history, Classics or anthropology (Patterson and Orser 2004). Thus, archaeological enquiry became more than just the ‘handmaiden to history’ (as it was described by Noël Hume in 1964); it can tell us about a wide range of aspects of ancient societies, rather than simply reinforcing evidence from texts. A variety of visions of the past and theories which developed over the last 100 years are discussed in more detail in Chapter 6. (Edinburgh University)

strong influence upon interior design throughout Europe. Although this early work was destructive and in no way scientific, the discoveries did at least demonstrate that excavation had the potential to reveal aspects of everyday life that were only hinted at in documentary sources (Schnapp 1996: 242–7). Otherwise, archaeological exploration usually began for one of two reasons. Some structures, such as Hissarlik (Schliemann’s Troy), were investigated because they were thought to relate to historical people, periods or events. Conversely, mysterious monuments – such as the

pre-Columbian North American mounds investigated by Jefferson – were dug into in the hope of revealing their nature and date (Bahn 1996a: 113–14). A third factor existed almost universally: treasure hunting, either for purely financial gain, or, on a more intellectual plane, in search of curiosities or *objets d’art* for collectors.

By the mid-nineteenth century excavations in caves had become quite common, whether in pursuit of early human remains or of artefacts associated with extinct animal species, and the finds were frequently observed and recorded

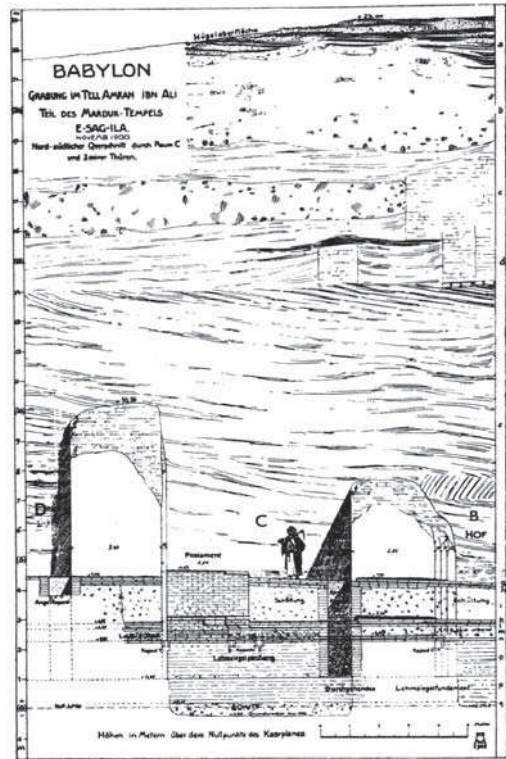
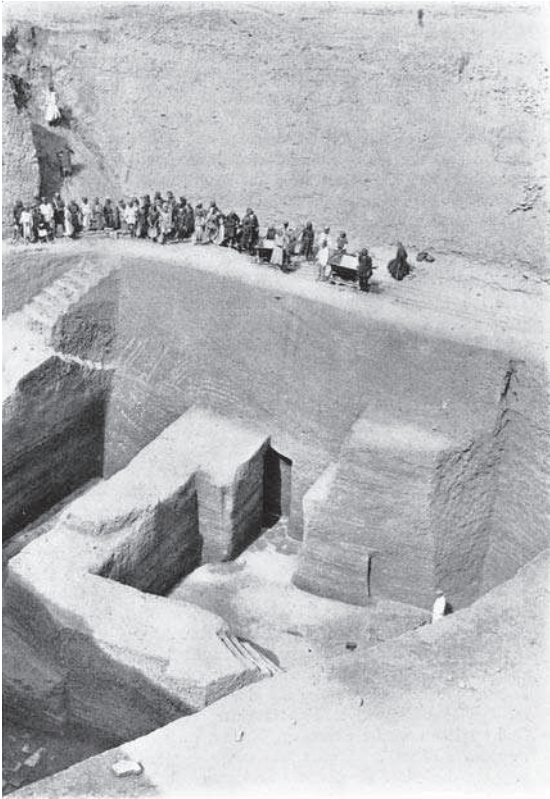


Abb. 124: Schnitt durch Esagila.

**Figure 1.22–23** Babylon, on the river Euphrates in modern Iraq, was one of a number of urban sites at the time of the first phase of Mesopotamian civilisation around 3500 BC; almost 3,000 years later it was one of the capitals of the Assyrian empire. The long occupation led to a build-up of deep stratification, largely composed of the remains of buildings made from mud-brick. Clay tablets with cuneiform inscriptions occasionally provided information about the date and function of structures. Tell sites such as this did much to improve techniques of excavation because of both their depth and the difficulty of identifying structures. Excavation by Robert Koldewey (who had previously worked with Schliemann) was conducted with considerable skill. A 23-metre section drawn in 1900 reveals careful observation not just of brick structures but also of variations in the texture and consistency of tell material. Recording and publication of drawings of this standard did not become firmly established until well into the twentieth century. (Koldewey 1913: 207, 202; Robinson Library, Newcastle University)

with considerable care (for example by Lartet in France). Scandinavia's rich sequence of graves containing artefacts was also being excavated with excellent recording by Worsaae and others (Klindt-Jensen 1975), and the early Iron Age graves at Hallstatt in Austria were excavated and recorded in meticulous detail in the 1840s to 1860s by Johann Ramsauer (Bahn 1996a: 96–7).

The investigation of Classical civilisations did little to advance archaeological techniques until excavators such as Schliemann and Arthur Evans began to ask more sophisticated questions about

the origins or prehistory of sites such as Troy or Knossos. Advances in excavation also began to emerge from work on prehistory and ethnography by individuals such as Pitt Rivers and Petrie, who displayed a new sense of responsibility about the study of finds and publication. Some subjects – for example, human origins, prehistoric farming communities found in earlier levels in Near-Eastern tells (artificial mounds formed by the accumulation of occupation debris, especially mud-brick), or traces of civilisations preceding the Maya or Aztecs of Central

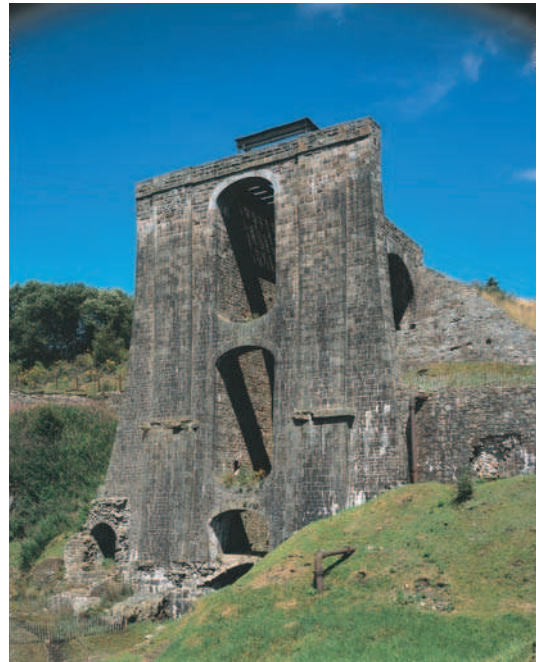
America – could *only* be studied by archaeological methods (including excavation). Without historical texts, and before the advent of radiocarbon dating, these could only be investigated by excavation – conducted with reference to stratification, and combined with typological studies of pottery and other artefacts that might provide relative dates.

**Tell excavations** increased awareness of deep **stratification** and (if excavated carefully) provided sequences of artefacts from successive levels such as those explored at Troy. Many of Schliemann's assistants went on from Troy to apply high standards to other sites in Greece and Turkey. Robert Koldewey, who investigated Babylon in Mesopotamia, shared this background (Daniel 1981: 122–3); he was interested both in exploring large areas of buildings on individual levels, and in excavating complete stratified sequences from the top to the bottom (Fig. 1.22–23). Furthermore, the majority of the structures in the Near East had been constructed from sun-dried bricks rather than stone: 'It was, therefore, in Mesopotamia that the Classical techniques were reshaped and that new techniques of stratigraphical excavation, and of the excavation of perished and semi-perished materials, were developed' (Daniel 1975: 290). Petrie built upon British traditions established by Pitt Rivers, who had conducted meticulous excavations in Britain in the 1880s and 1890s; Petrie's excavations, and those of Leonard Woolley at Ur, applied rigorous methods through the whole process of extraction, preservation, interpretation and publication (Drower 1985; Winstone 1990).

Arthur Evans' excavations at Knossos were assisted by the fact that the Minoan palace was not overlain by too many later periods of occupation, and because it had been destroyed by fire and still contained the remains of most of its artefacts and furnishings. In contrast to nineteenth-century excavators, Arthur Evans preserved and restored the crumbling gypsum masonry of the palace at Knossos while excavation proceeded. His earliest photographs show a meticulously cleaned site, and the text demonstrates close attention to the stratigraphic positions of finds, both as dating evidence and as a means of interpreting

the destruction of the palace (Arthur Evans, 1899–1900; Fig. 3.2). These high standards were far from universal, and – unlike Pitt Rivers – Arthur Evans did not publish *full* excavation reports. Fortunately the detailed notebooks kept by his assistant, Duncan Mackenzie, have allowed more recent archaeologists to review the evidence (Momigliano 1999).

Chapter 1 has followed archaeological concepts and techniques up to the early twentieth century; the chapters that follow will present archaeological principles and methods in detail, referring back to their historical development when necessary. The development of excavation techniques will be explored further in Chapter 3. Chapter 6 will return to concepts, and follow the development of many ideas presented in Chapter



**Figure 1.24** Long after the mature development of Classical archaeology and prehistory, archaeologists developed distinctive approaches to the medieval period and – eventually – to industrial archaeology (Cossons 2000). South Wales was a centre of iron and coal production during the Industrial Revolution, and the Blaenavon Industrial Landscape was inscribed on the UNESCO World Heritage List in 2000; this water balance tower for lifting wagons was built in 1859. (CADW: Welsh Historic Monuments. Crown copyright)



1 through the twentieth century, before looking at some issues that they raise in modern archaeological practice.

A lesson to draw from this historical introduction is that archaeology is the product of ideas and information from many different sources. Fortunately, the multidisciplinary approach that made possible the study of early humans and the transition from agriculture to urbanisation has grown ever since, with the result that archaeology remains one of the few subjects available in the educational world that forms a genuine bridge between the sciences and the humanities (Fig. 1.24). As we will see in Chapter 6, it is a challenge for us that each generation of archaeologists rewrites the history of the discipline in its own image (Murray 2007; Murray and Evans 2008: 6); our story here might be different if we, the authors, held different theoretical perspectives on the nature of archaeology itself.

## 1.8 GUIDE TO FURTHER READING

Complete details of every publication mentioned in this section can be found in the consolidated bibliography. Consult the works cited as key references beneath section headings within this chapter first.

### THE INTELLECTUAL HISTORY OF ARCHAEOLOGY

While Trigger presents the most detailed intellectual history and Schnapp places it into fascinating contexts, an accessible overview with comprehensive illustrations is *A short history of archaeology* 1981 by Glyn Daniel, whose earlier writings on the subject (and works by Stuart Piggott) remain stimulating and informative. Murray, *Milestones in archaeology* 2007, provides a personal overview of the key developments. Wardell, *Foundation myths* 2005, is an account of Irish archaeology, whilst Bowman and Williams, *New perspectives on Americanist archaeology* 2002,

provides perspectives on specifically American developments. Margarita Diaz-Andreu, *A world history of nineteenth century archaeology: nationalism, colonialism, and the past* 2007, charts the context of archaeology's development in the nineteenth century and provides greater discussion on the history of archaeology beyond Europe and North America. Murray and Evans, *Histories of archaeology* 2008, provides a useful collection of earlier essays by prominent historiographers of archaeology. The often neglected role of some of the early female archaeologists is explored in Cohen and Sharp Joukowsky, *Breaking ground* 2004. The Gertrude Bell archive at Newcastle University library provides an open resource to her letters and diaries.

### ARCHAEOLOGY AND ANTIQUARIANISM, PREHISTORY AND HISTORY

Sweet, *Antiquaries* 2004 provides an overall account of eighteenth-century antiquarianism, while Starkey *et al.*, *Making history* 2007, a guide to the Society of Antiquaries' tricentennial exhibition, provides an illustrated introduction to many of the characters and developments. Richard, *L'invention de la préhistoire* 1992, is an extensive collection of essays, while Ferguson, *Utter antiquity* 1993, and Van Riper, *Men among the mammoths* 1993, look at prehistory in Renaissance and Victorian England. Rowley-Conwy, *From Genesis to prehistory* 2007, gives a lively account of how the concept of prehistory developed and was adopted across Britain and Scandinavia and challenges some of the claims made in other histories of archaeology. Freeman, *Victorians and the prehistoric* 2004, gives an account of the discovery of the long history of the world. A recent biography of a prehistorian who expanded the scope of prehistory in the twentieth century is Fagan, *Grahame Clark* 2001. MacGregor, *Sir John Evans* 2008, is a volume of papers examining this influential polymath. Much of the **historiography** of archaeology has focused on prehistory, but Howard Williams,

‘Digging Saxon graves in Victorian Britain’ 2006, and Edwards, ‘Edward Lhuyd and the origins of early medieval Celtic archaeology’ 2007, have recently examined approaches to early medieval archaeology. The history of archaeology can also tend towards the Anglo-American past: Schlanger and Nordbladh, *Archives, ancestors, practices* 2008, provides a balance of case studies from around the world. The *Oxford Dictionary of National Biography*, available on-line, provides good outlines of many key British figures.

## THE EMERGENCE OF ARCHAEOLOGICAL METHODS

Fagan, ‘Short history of archaeological methods 1870 to 1960’ 2005, is a good basic introduction to the emergence of archaeological methods. Fagan, *Eyewitness to discovery* 1996, is an anthology of first-person accounts of ‘the world’s greatest archaeological discoveries’, as is the earlier Silverberg, *Great adventures in archaeology* reprinted in 1997. For Classical archaeology see Weiss, *The Renaissance discovery of classical antiquity* 1988. Antiquarianism in Britain is best covered in Sweet, *Antiquaries* 2004, while Aubrey’s and Stukeley’s work appears in Ucko *et al.*, *Avebury reconsidered* 1990.

The origin of one particular museum is recounted in Wilson, *The British Museum: a history*, 2002, while essays about its founder have been edited by MacGregor, *Sir Hans Sloane: collector, scientist, antiquary* 1994 and its development examined through the lens of one of its early benefactors in Chambers, *Joseph Banks and the British Museum* 2007. Details on the controversy of cleaning the Elgin marbles are covered in Jenkins, *Cleaning and controversy* 2001. The context of the collectors and collections at the Pitt Rivers Museum, Oxford, is explored by Gosden and Larson, *Knowing things* 2007. Developments outside Britain are featured in Alexander, *The museum in America: innovators and pioneers* 1997 and Skeates, *The collecting of origins: collectors and collections of Italian prehistory* 2000. Thompson,

*Ruins reused* 2006, provides a basic introduction to some of the early legislation in monument protection and key figures in the development of monument preservation.

## THE RECOGNITION AND STUDY OF ARTEFACTS

Romer and Romer, *Great excavations* 2000, includes an account of Scandinavia and the Three-Age System. Murray’s *Encyclopedia of archaeology: Great archaeologists* 1999, and *History and discoveries* 2001, provide introductory snippets.

## HUMAN ORIGINS

An excellent illustrated outline is included in Turnbaugh *et al.*, *Understanding physical anthropology and archaeology* 2002. A biography of the discoverer of ‘Java Man’ in the style of a novel is Shipman, *The man who found the missing link: the extraordinary life of Eugene Dubois* 2001. For a complete overview of geology see Thompson, *Chronology of geological thinking from antiquity to 1899* 1988.

## THE DISCOVERY OF CIVILISATIONS

Traill, *Schliemann of Troy: treasure and deceit* 1995, is a biography, while Moorehead, *Lost and found: the 9,000 treasures of Troy* 1997, brings Schliemann’s story up to date. The life of Arthur Evans (and his father, John) are included in *Time and chance* 1943, written by his daughter Joan, while Horwitz, *The find of a lifetime* 1981, is a biography. The uses, and abuses, of the Egyptian past in the eighteenth and nineteenth century are explored in Reid, *Whose Pharaohs?* 2002. Chakrabarti, *Archaeology in the Third World* 2003, brings the story of archaeology in India up to date, examining the period from 1947 to the present.