

ASSIGNMENT 1

Introduction to Archaeology

In which we introduce you to the fascinating world of archaeology and explore some of the basic concepts and objectives of this remarkable science. We discuss the early history of archaeology and how scientific archaeology began. We also cover basic methods of dating the past.

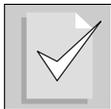


WHAT LIES AHEAD

Assignment Objectives

After completing Assignment 1, you will be able to:

1. Define scientific archaeology as part of anthropology and history,
2. List and evaluate four basic objectives of archaeology,
3. Describe and evaluate four major developments in the early history of archaeology,
4. Compare and contrast Absolute and Relative dating, and define the Law of Superposition. You will be able to describe and evaluate three basic absolute dating methods in archaeology.



WORK REQUIRED

This assignment requires you to complete the following:

1. Two Web exercises, the one on the History of Archaeology, the other on Dating Methods.
2. Respond in the Study Guide to the (short) question about culture history and cultural process.

START AT THE BEGINNING, GO ON TO THE END, THEN STOP. . .

The quote comes from *Alice in Wonderland*, when the White Rabbit tells a confused Alice to gather her thoughts, then tell a story. Each Assignment of Anthropology 3 is a story, made up of a sequence of learning experiences. Assignment 1 begins, as do the others, with a lecture So read on:



LECTURE 1: ORIENTATION AND INTRODUCTION

The first lecture of the course is a very general one and there is no need to take notes. We:

- Introduce the members of the course instructional team,
- Discuss the way the course works and how you learn,
- Give a brief visual survey of archaeology and human prehistory.

Once you have attended the lecture, you can start work any time you like by following the sequence of topics below

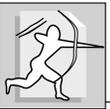
The Videoclip on the Web introduces the subject matter of Assignment 1. You might care to view this now. . . Then read on here. . .



LECTURE 2: METHOD AND THEORY ISSUES

The second lecture looks ahead and surveys the major methodological and theoretical topics covered in the first three weeks. It is designed as a synthesis of method and theory in archaeology related to the major developments in world prehistory later in the course. Specifically, we discuss:

- Chronology and world prehistory,
- Major theoretical developments and their history,
- The goals, uses, and limitations of archaeology in the context of Assignments 1 to 3 and world prehistory.



WHAT IS ARCHAEOLOGY?

In the videoclip, we told you that archaeology is the study of ancient human behavior. It has also been described as the “science of rubbish.” Putting it crudely, we do indeed spend much of our time delving into ancient garbage heaps, and sometimes into modern ones as well. Archaeology has a close relationship with anthropology, the general study of humankind, but differs from it in that we are concerned not with living societies but with ancient human behavior and culture. We are a special kind of anthropologist.

Why study archaeology at all? Why dig up lost abandoned cities and villages, or rummage through ancient middens? Who needs the past? Why is archaeology important?

We need to explore these topic more thoroughly in the first reading:

Archaeology: A Brief Introduction. Read Chapter 2, pp. 22–31 only.

When you have completed this reading, return to the Study Guide . . .



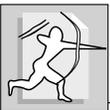
ARCHAEOLOGY'S GOALS

Archaeology is anthropology and shares a common concern with culture and culture change. Archaeology is the only means of studying human cultural change over very long periods of time, which gives it great importance in a world of increasing cultural diversity. Our next reading explores more fundamental principles:

Archaeology: A Brief Introduction. Read Chapter 3 in its entirety.

This reading deals with the all-important issues of cultures, cultural systems, and cultural process, and with the fundamental goals of archaeology. All archaeological method and theory depends on these basics, which is why it's important to have a good understanding of them.

When you've finished, back to the Guide



HOW ARCHAEOLOGY BEGAN

Archaeology has a long and respectable past in adventure, exploration and treasure hunting. Like all sciences, it has developed rapidly and with increasing specialization and sophistication, especially since the advent of radiocarbon dating in the late 1940s and the computer and more developed theoretical approaches in the 1960s. It's important that you have some understanding of the roots of our discipline, for many of the greatest and most fundamental discoveries were made well over a century ago. Quite apart from anything else, too, the adventures of our scientific forebears make for entertaining reading.

Scientific archaeology began as a result of three major developments:

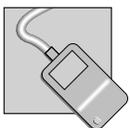
- The establishment of a high antiquity for humankind in the mid-nineteenth century.
- The discovery of early civilizations in southwestern Asia and Central America.
- The development of stratigraphic excavation as a scientific recording tool, also the Direct Historical Method.

Let's explore the history of archaeology through a series of reading and a Web exercise: First, the general background:



Archaeology: A Brief Introduction. Read Chapter 1 in its entirety.

Now go to the Web for Exercise 1-1:



Web Exercise 1-1: History of Archaeology
(45-60 minutes)

This brief and simple computer exercise gives you a chance to explore the time-line of major developments in the history of archaeology. It's really a browsing exercise designed to place major events in a chronological framework.

We recommend that you use this as a way of familiarizing yourself with the way our exercises work, starting with the Software/Internet Introduction mentioned in the Preface to this Guide.

Now some original readings.

Anthology Section: Read the following:



1. *John Evans on the Antiquity of Humankind (1859)*
2. *Austen Henry Layard on his excavations at Nimrud, Iraq, in the 1840s.*
3. *John Lloyd Stephens on the Maya city at Copán, Honduras.*

These readings give you a vivid impression of what early archaeology was like, of excavation conditions, and the romance of original discovery.

Finally, read:

4. *General Augustus Lane Fox Pitt-Rivers on excavation (1887).*

Pitt-Rivers sets the stage for the archaeology of today.

When you have finished return to the Guide



ARCHAEOLOGICAL CONTEXT: TIME

Context, in archaeology, simply means the culturally significant location of the find spot of any object in an archaeological site. Cultural context is a sub-category that represents the position of an object; was it found in a pit, in a room, on a surface? The space and time context of an archaeological find provide the basis for building up long sequences of archaeological sites in time and space: culture history. (Definition on page 282 of *Archaeology*.)

Time

How old is it? This is probably the first question that comes to mind when you see an archaeological site or handle an ancient artifact. There is something very thrilling in handling a tool fabricated by a human being more than 50,000 years ago, or the skull of someone who lived more than 250,000 years ago.

Almost certainly the archaeologist will reply to your question with an estimate: "It's about 5,000 years old," or "A Chumash Indian made it about 750 years ago." This may seem like black magic until you learn how archaeologists establish chronologies.



Ancient British coin minted in the first century BC. An archaeological find of known age.

In a sense, the archaeologist is peopling a vast, featureless landscape that stretches out infinitely beyond the outer limits of historically recorded dates of about 5,000 years ago. We can only people this landscape by using Relative and Absolute dating methods.

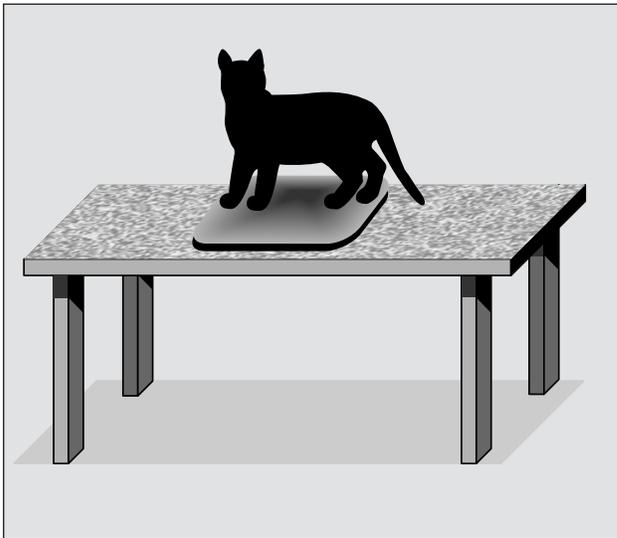
Relative chronology: Relative dates correlate ancient materials with one another in terms of their age relative to one another.

It's time to read about relative chronology:



Archaeology: A Brief Introduction. Read pages 77–82 (end of section).

This reading deals with the Law of Superposition, the fundamental principle behind relative chronology. Figure 5.1 in the reading gives an excellent exposition of the principle.



Relative Chronology of the Cat

Sequence of events

- Someone puts a mousepad on a table.
- Subsequently, the cat jumps on the table and goes to sleep on the mousepad.

When did the cat jump on the mousepad?

All we know is that it was relatively later than the moment when the mousepad was put on the table, not the length of the interval between the two events or the exact moment when either mousepad or cat arrived on the table. Whence—relative chronology.



Now describe, in your own words and in a few sentences, how relative chronology can be used to order artifacts.

When you have finished, please read on . . .

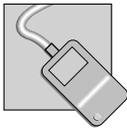
Absolute Chronology: Dating the past in calendar years before present, using methods of acceptable accuracy for the purpose.

Absolute dates in calendar years are of paramount importance to answering key questions, such as:

- How old is this artifact or site?
- How long was that settlement occupied, or how many centuries have elapsed between the first and second occupations of this city?
- Are these villages contemporary?
- Did agriculture begin in southwestern Asia before China, or at the same time in both areas?

We must now describe the most important dating methods used in archaeology.

Begin by examining Figure 5.4 (p. 84) in *Archaeology*, which shows the chronological spans of the major dating methods. Once the schema is in your head, go up on the Web for . . .



WEB EXERCISE (1–1)

(40–60 minutes)

This exercise describes each major chronological method in turn, taking you back further into ancient times. These are animated exercises, which explain the basic principles of each method. Take your time, and respond as required by the exercise, then keep your notes by you as you read . . .



Archaeology: A Brief Introduction, pp. 82 (bottom)–92.

Pay careful attention to the uses and limitations of each method. When you have finished, write down, what, in your view, are the specific limitations of each of these four major dating methods:



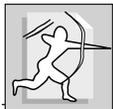
Objects of Known Age

Dendrochronology

Radiocarbon Dating

Potassium Argon Dating

When you have finished, please read on . . .



MAJOR DEVELOPMENTS OF WORLD PREHISTORY

Your last reading for this assignment is a short summary of the major developments of human prehistory, so that you have a general outline of what happened in the past in your mind . . .

Archaeology: A Brief Introduction, pp. 31–36.

Pay careful attention to the summary table on p. 34



SYNTHESIS ESSAY - CULTURE

Finally, to complete Assignment 1, you must write a *two-page* synthesis essay, following the guidelines in the Study Guide Introduction, on the following topic:

“Why is the concept of culture important to archaeology? Why do archaeologists think in terms of cultural systems as much as cultures?”

E N D O F A S S I G N M E N T 1

ASSIGNMENT 1: ANTHOLOGY

1. JOHN EVANS AND THE ANTIQUITY OF HUMANKIND, 1859

John Evans (1823-1908) was the epitome of a successful Victorian—a millionaire papermaker and a highly respected geologist and antiquarian. He was deeply involved in the controversies over whether humans had lived on earth at the same time as long-extinct animals. In 1859, he heard of remarkable discoveries of stone axes and extinct animal bones being made in the gravel quarries of the Somme River in northern France by an eccentric Frenchman named Boucher de Perthes. In his diary, he describes a visit to the quarries, which convinced him of the high antiquity of humankind. . . .

“Think of their finding flint axes and arrowheads at Abbeville in conjunction with bones of elephants and rhinoceroses forty feet below the surface in a bed of drift! In this bone cave in Devonshire, now being excavated by the Geological Society, they say they have found flint arrowheads among the bones, and the same is reported of a cave in Sicily. I can hardly believe it. It will make my ancient Britons quite modern if man is carried back in England to the days when elephants, rhinoceroses, hippopotamuses, and tigers were also inhabitants of the country

Easter Sunday Prestwich has altered his plans about Abbeville and seeing M. Boucher de Perthes’s collections and investigating the gravel pits where the flint weapons are found in conjunction with the bones, and has got up a party of some of the best men in the Geological Society for the purpose. As it has been deferred till after Easter I could not resist accepting his invitation to join in. . . . I have accordingly arranged to go to Abbeville on Tuesday and return on Thursday to London. . . . I shall miss seeing the collection of M. Boucher de Perthes but be in time I hope for the gravel pit.

May 1st 1859. I crossed from Folkestone to Boulogne and had as rough a passage as the strongest stomach could desire. . . . I had about an hour and a half in Boulogne and at nine took the train to Abbeville, where I found Prestwich waiting for me at the station, and very glad to see me, as of all the party he had asked to meet him there I was the only one who came. We went straight to bed and soon after seven the next morning Monsieur Boucher de Perthes, the first discoverer of the stone axes we were in pursuit of, came to take us to some of the gravel pits from whence his collection had been derived. A. M. Marotte, the curator of the museum, accompanied us but we did not succeed in finding anything. We then adjourned to the house of M. de Perthes, which is a complete museum from top to bottom, full of paintings, old carvings, pottery, etc., and with a wonderful collection of flint axes and implements found among the beds of gravel and evidently deposited at the same time with them—in fact the remains of a race of men who existed at the same time when the deluge

or whatever was the origin of these gravel beds took place. One of the most remarkable features of the case is that nearly all if not quite all of the animals whose bones are found in the same beds as the axes are extinct. There is the mammoth, the rhinoceros, the bear, a tiger, etc., etc. After the examination of his museum M. de Perthes gave us a most sumptuous dejeuner and we then set off for Amiens.

Of course our object was if possible to ascertain that these axes had been actually deposited with the gravel, and not subsequently introduced; and we had received intelligence from Amiens that in one of the gravel pits an axe was to be seen in its original position, which made us set off at once. At Amiens we were met by the president of their Society of Antiquaries and the public librarian, MM. Dufour and Garnier, and with them a M. Pinsard, an architect. We proceeded to the pit, where sure enough the edge of an axe was visible in an entirely undisturbed bed of gravel and eleven feet from the surface. We had a photographer with us to take a view of it so as to corroborate our testimony and had only time to get that done and collect some twelve or fifteen axes from the workmen in the pit when we were forced to take the train again to Abbeville. The early part of Friday we spent in and about Abbeville and returned to London in the afternoon. All together I enjoyed the trip very much, and am now only troubled to find time to write an account of our investigations for the [Society of] Antiquaries, as Prestwich is going to do for the Royal Society.”

2. AUSTEN HENRY LAYARD AT NIMRUD, IRAQ, 1845.

Austen Henry Layard (1817–1894) was one of the greatest archaeological adventurers of the nineteenth century. He trained in the law, then started off to ride to India, but was diverted to archaeology in Iraq. In the 1840s, he conducted a series of large scale excavations into the vast city mounds of Nimrud (Biblical Calah) and Nineveh, where he discovered several spectacular Assyrian palaces. His bestseller, *Nineveh and Its Remains*, which appeared in 1849, describes conditions on his enormous dig:

“The six weeks following the commencement of excavations upon a large scale, were amongst the most prosperous, and fruitful in events, during my researches in Assyria. Every day produced some new discovery. My Arabs entered with alacrity into the work, and felt almost as much interested in its results, as I did myself. They were now well organized, and I had no difficulty in managing them. Even their private disputes and domestic quarrels were referred to me. They found this a cheaper fashion of settling their differences than litigation; and I have reason to hope that they received an ampler measure of justice than they could have expected at the hands of his reverence, the Cadi [headman].

The tents had greatly increased in numbers, as the relatives of those who were engaged in the excavations came to Nimrud and swelled the encampment; for although they received no pay, they managed to live upon the gains of their friends. They were, moreover, preparing to glean, in the event of there being any crops in the spring, and to take possession of little strips of land along the banks of the river, upon

which they might cultivate millet during the summer. They already began to prepare water-courses, and machines for irrigation. The mode of raising water is very simple. In the first place a high bank, which is never completely deserted by the river, must be chosen. A broad recess, down to the water's edge, is then cut in it. Above, on the edge of this recess, are fixed three or four upright poles, according to the number of oxen to be employed, united at the top by rollers running on a swivel, and supporting a large framework of boughs and grass, which extends to some distance behind, and is intended as a shelter from the sun during the hot days of summer. Over each roller are passed two ropes, the one being fastened to the mouth, and the other to the opposite end, of a sack, formed out of an entire bullock skin. These ropes are attached to oxen, which throw all their weight upon them by descending an inclined plane, cut into the ground behind the apparatus. A trough formed of wood, and lined with bitumen, or a shallow trench, coated with matting, is constructed at the bottom of the poles, and leads to the canal running into the fields. When the sack is drawn up to the roller, the ox turns round at the bottom of the inclined plane. The rope attached to the lower part of the bucket being fastened to the back part of the animal, he raises the bottom of the sack in turning, and the contents are poured into the troughs. As the ox ascends, the bucket is lowered into the stream again. Although this mode of irrigation is very toilsome, and requires the constant labour of several men and animals, it is generally adopted on the banks of the Tigris and Euphrates. In this way all the gardens of Baghdad and Basra are watered; and by such means the Arabs, who condescend to cultivate, when, from the failure of the crops, famine is staring them in the face, raise a little millet to supply their immediate wants.

The principal public quarrels, over which my jurisdiction extended, related to property abstracted, by the Arabs, from one another's tents. These I disposed of in a summary manner, as I had provided myself with handcuffs; and Ibrahim Agha, and the Bairakdar were always ready to act with energy and decision to show how much they were devoted to my service. But the domestic dissensions were of a more serious nature, and their adjustment offered far greater difficulties. They related, of course, always to the women. As soon as the workmen saved a few piasters, their thoughts were turned to the purchase of a new wife, a striped cloak, and a spear. To accomplish this, their ingenuity was taxed to the utmost extent. The old wife naturally enough raised objections, and picked a quarrel with the intended bride, which generally ended in appeal to physical force. Then the fathers and brothers were dragged into the affair; from them it extended to the various branches of the tribe, always anxious to fight for their own honour, and for the honour of their women. At other times, a man repented himself of his bargain, and refused to fulfill it; or a father, finding his future son-in-law increasing in wealth, demanded a higher price for his daughter, a breach of faith which would naturally lead to violent measures on the part of the disappointed lover. Then a workman, who had returned hungry from his work, and found his bread unbaked, or the water-skin still lying empty at the entrance of his tent, or the bundle of faggots for his evening fire yet

ungathered, would, in a moment of passion, pronounce three times the awful sentence, and divorce his wife; or, avoiding such extremities, would content himself with inflicting summary punishment with a tent-pole.

The dinners or breakfasts (for the meal comprised both) of the Arab workmen, were brought to them at the mound about eleven o'clock by the younger children. Few had more than a loaf of millet bread, or millet made into a kind of paste, to satisfy their hunger; wheaten bread was a luxury. Sometimes their wives had found time to gather a few herbs, which were boiled in water with a little salt, and sent in wooden howls; and in spring, sour milk and curds occasionally accompanied their bread. The little children, who carried their father's or brother's portions, came merrily along, and sat smiling on the edge of the trenches, or stood gazing in wonder at the sculptures, until they were sent back with the empty platters and bowls. The working parties ate together in the trenches in which they had been employed. A little water, drank out of a large jar, was their only beverage. Yet they were happy and joyous. The joke went round; or, during the short time they had to rest, one told a story, which, if not concluded at a sitting, was resumed on the following day. Sometimes a pedlar from Mosul, driving before him his donkey, laden with raisins or dried dates, would appear on the mound. Buying up his store, I would distribute it amongst the men. This largesse created an immense deal of satisfaction and enthusiasm, which any one not acquainted with the character of the Arab, might have thought almost more than equivalent to the consideration.

The Arabs are naturally hospitable and generous. If one of the workmen was wealthy enough to buy a handful of raisins, or a piece of camel's or sheep's flesh, or if he had a cow, which occasionally yielded him butter or sour milk, he would immediately call his friends together to partake of his feast. I was frequently invited to such entertainments; the whole dinner, perhaps, consisting of half a dozen dates or raisins spread out wide, to make the best show, upon a corn-sack; a pat of butter upon a corner of a flat loaf, and a few cakes of dough baked in the ashes. And yet the repast was ushered in with every solemnity; the host turned his dirty kefflah, or headkerchief, and his cloak, in order to look clean and smart; appearing both proud of the honour conferred upon him, and of his means to meet it in a proper fashion.

I frequently feasted the workmen, and sometimes their wives and daughters were invited to separate entertainments, as they would not eat in public with the men. Generally of an evening, after the labours of the day were finished, some Kurdish musicians would stroll to the village with their instruments, and a dance would be commenced, which lasted through the greater part of the night. Sheikh Abdurrahman, or some Sheikh of a neighboring tribe, occasionally joined us; or an Arab from the Khabour, or from the most distant tribes of the desert, would pass through Nimrud, and entertain a large circle of curious and excited listeners with stories of recent fights, plundering expeditions, or the murder of a chief. I endeavoured, as far as it was in my power, to create a good feeling amongst all, and to obtain

their willing cooperation in my work. I believe that I was to some extent successful.

The Tiyari, or Nestorian Chaldaean Christians, resided chiefly on the mound, where I had built a large hut for them. A few only returned at night to the village. Many of them had brought their wives from the mountains. The women made bread, and cooked for all. Two of the men walked to the village of Tel Yakoub, or to Mosul, on Saturday evening, to fetch flour for the whole party, and returned before the work of the day began on Monday morning; for they would not journey on the Sabbath. They kept their holidays and festivals with as much rigour as they kept the Sunday. On these days they assembled on the mound or in the trenches; and one of the priests or deacons (for there were several amongst the workmen) repeated prayers, or led a hymn or chant. I often watched these poor creatures, as they reverentially knelt - their heads uncovered - under the great bulls, celebrating the praises of him, whose temples the worshippers of those frowning idols had destroyed, whose power they had mocked. It was the triumph of truth over paganism.

The women retained their mountain habits, and were always washing themselves on the mound, with that primitive simplicity which characterizes their ablutions in the Tiyari districts. This was a cause of shame to other Christians in my employ; but the Chaldaeans themselves were quite insensible to the impropriety, and I let them have their way.

As for myself I rose at day-break, and after a hasty breakfast rode to the mound. Until night I was engaged in drawing the sculptures, copying and moulding the inscriptions, and superintending the excavations, and the removal and packing of the bas-reliefs. On my return to the village, I was occupied till past midnight in comparing the inscriptions with the paper impressions, in finishing drawings, and in preparing for the work of the following day. Such was our manner of life during the excavations at Nimrud.”

3. JOHN LLOYD STEPHENS AT COPÁN, HONDURAS, 1839.

Lawyer, traveler, and entrepreneur, John Lloyd Stephens (1805–1850) achieved immortality for his discoveries of ancient Maya cities, notably Copán described in this classic piece of early archaeological writing. Stephens’ *Incidents of Travel in the Chiapas and Yucatan* was a bestseller in 1841 and is still in print today. He was remarkable for his insistence that Maya civilization was of indigenous origin, not an import from Egypt or elsewhere. All subsequent research has been built on his discoveries, and those of his artist colleague Frederick Catherwood.

“As we gazed on the wall of the city on the opposite side of the river, this account of the city’s conquest which the Spanish historians have given us, seemed to us most meager and unsatisfactory. It did not appear to us that the massive stone structures before us could have belonged to a city the entrenchment of which could be broken down by the charge of a single horseman. Since at this place the river was not fordable,

we returned to our mules, mounted, and rode to another part of the bank, a short distance above. Here the stream was wide, and in some places deep, rapid, and with a broken and stony bottom. Forging it, we rode along the bank by a footpath encumbered with undergrowth, which José opened by cutting away the branches. At the foot of the wall which we had seen from the opposite bank we again dismounted and tied our mules.

The wall was of cut stone, well laid, and in a good state of preservation. We ascended by large stone steps, only some of which were well preserved, and reached a terrace, the form of which it was impossible to make out because of the density of the forest in which it was enveloped. Following a path which our guide cleared for us with his machete, we passed a large fragment of stone elaborately sculptured and half buried in the earth, and came to the angle of a structure with steps on the sides, which in so far as the trees allowed us to make them out, resembled the sides of a pyramid in form and appearance. Diverging from the base of the structure, and working our way through the thick woods, we came upon a square stone column, about fourteen feet high and three feet on each side, sculptured on all four of the sides, from the base to the top, in very bold relief. On the front side was carved the figure of a man (evidently a portrait) curiously and richly dressed, whose face was solemn, stern, and well fitted to excite terror. The design on the opposite side was unlike anything we had ever seen before; the remaining two sides were covered with hieroglyphics. About three feet in front of the column was a large block of stone, also sculptured with figures and emblematical devices. From our guide we learned that the square column was an “idol” and the block of stone an “altar.” The sight of this unexpected monument put at rest once and forever all uncertainty in our minds as to the character of American antiquities, and gave us the assurance that the objects we were in search of were not only interesting as the remains of an unknown people, but were works of art as well, proving, like newly discovered historical records, that the people who once occupied the American continents were not savages. With an interest perhaps stronger than we had ever felt in wandering among the ruins of Egypt, we followed our guide, who, sometimes missing his way, with a constant and vigorous use of his machete conducted us through the thick forest, among half-buried fragments, to fourteen more monuments of the same character and appearance, some with more elegant designs, and some in workmanship equal to the finest monuments of the Egyptians. One, we found, had been displaced from its pedestal by enormous roots; another, locked in the close embrace of branches of trees, was almost lifted out of the earth; and still another had been hurled to the ground and bound down by huge vines and creepers. One with its altar before it stood in a grove of trees which grew around it, seemingly to shade and shroud it as a sacred thing; in the solemn stillness of the woods, it seemed a divinity mourning over a fallen people. The only sounds that disturbed the quiet of this buried city were the noise of monkeys moving among the tops of the trees and the cracking of dry branches broken by their weight. They moved over our heads in long and swift processions,

forty or fifty at a time. Some with little ones wound in their long arms walked out to the end of boughs and, holding on with their hind feet or a curl of the tail, sprang to a branch of the next tree; with a noise like a current of wind, they passed on into the depths of the forest. It was the first time we had seen these mockeries of humanity and, amid these strange monuments, they seemed like wandering spirits of the departed race guarding the ruins of their former habitations.

We returned to the base of the pyramidal structure and ascended by regular stone steps, which in some places had been forced apart by bushes and saplings and in others thrown down by the growth of large trees. In parts they were ornamented with sculptured figures and rows of deaths heads. Climbing over the ruined top, we reached a terrace overgrown with trees and, crossing it, descended by stone steps into an area so covered with trees that at first we could not make out its form. When the machete had cleared the way, we saw that it was a square with steps on all the sides almost as perfect as those of the Roman amphitheatre. The steps were ornamented with sculpture, and on the south side, about halfway up, forced out of its place by roots, was a colossal head, again evidently a portrait. We ascended these steps and reached a broad terrace a hundred feet high overlooking the river and supported by the wall which we had seen from the opposite bank. The whole terrace was covered with trees, and even at this height were two gigantic ceibas (kapok trees), over twenty feet in circumference; their half-naked roots extended fifty or a hundred feet around, binding down the ruins and shading them with their wide-spreading branches.

We sat down on the very edge of the wall and strove in vain to penetrate the mystery by which we were surrounded. Who were the people that built this city? In the ruined cities of Egypt, even in the long-lost Petra, the stranger knows the story of the people whose vestiges he finds around him. America, say historians, was peopled by savages; but savages never reared these structures, savages never carved these stones. Then we asked the Indians who had made them, their dull answer was "Quien sabe? (Who knows?)" There were no associations connected with this place, none of those stirring recollections which hallow Rome, Athens, and "The world's great mistress on the Egyptian plain." But architecture, sculpture, and painting, all the arts which embellish life, had flourished in this overgrown forest; orators, warriors, and statesmen, beauty, ambition, and glory had lived and passed away, and none knew that such things had been, or could tell of their past existence. Books, the records of knowledge, are silent on this theme.

The city was desolate. No remnant of this race hangs round the ruins, with traditions handed down from father to son and from generation to generation. It lay before us like a shattered bark in the midst of the ocean, her masts gone, her name effaced, her crew perished, and none to tell whence she came, to whom she belonged, how long on her voyage, or what caused her destruction—her lost people to be traced only by some fancied resemblance in the construction of the vessel, and,

perhaps, never to be known at all. The place where we were sitting, was it a citadel from which an unknown people had sounded the trumpet of war? Or a temple for the worship of the God of peace? Or did the inhabitants worship idols made with their own hands and offer sacrifices on the stones before them? All was mystery, dark, impenetrable mystery, and every circumstance increased it. In Egypt the colossal skeletons of gigantic temples stand in unwatered sands in all the nakedness of desolation; but here an immense forest shrouds the ruins, hiding them from sight, heightening the impression and moral effect, and giving an intensity and almost wildness to the interest.”

4. GENERAL AUGUSTUS LANE FOX PITT-RIVERS ON EXCAVATION, 1887

By all accounts, General Augustus Lane Fox Pitt-Rivers (1827–1900) was a strict and humorless martinet. But he revolutionized archaeological excavation by his strict insistence on discipline and careful recording. After a long career as an army musketry expert, during which time he developed a passionate interest in the evolution of weapons, Pitt-Rivers inherited an enormous fortune and vast estates at Cranborne Chase in southern England. He devoted the rest of his life to archaeology and excavation, developing methods that were the prototypes of those used today. Here he describes his principles, set down in a privately printed, and now very rare volume on his researches, *Excavations on Cranborne Chase*:

“Having retired from active service on account of ill health, and being incapable of strong physical exercise, I determined to devote the remaining portion of my life chiefly to an examination of the antiquities on my own property. Of these there were a considerable number, consisting of Romano-British villages, tumuli [burial mounds], and other vestiges of the Bronze and Stone Ages, most of which were untouched and had been well preserved. . . .

I at once set about organizing such a staff of assistants as would enable me to complete the examination of the antiquities on the property within a reasonable time, and to do it with all the thoroughness which I had come to consider necessary for archaeological investigations

My attention has been drawn more especially to the Romanized Britons, as being the race for whose study the district appears capable of affording the greatest facilities. . . . It will, perhaps, be thought by some that I have recorded the excavations of this village [Woodcuts Common] and the finds that have been made in it with unnecessary fullness, and I am aware that I have done it in greater detail than has been customary, but my experience as an excavator has led me to think that investigations of this nature are not generally sufficiently searching, and that much valuable evidence is lost by omitting to record them carefully. That this has been so in the present instance is proved by the fact that this village had before been examined, and not a single pit or skeleton had been found; whilst I have discovered ninety-five pits and fifteen skeletons.

Excavators, as a rule, record only those things which appear to them important at the time, but fresh problems in archaeology and anthropology are constantly arising, and it can hardly fail to have escaped the notice of anthropologists, especially those who, like myself, have been concerned with the morphology of art, that, on turning back to old accounts in search of evidence, the points which would have been most valuable have been passed over from being thought uninteresting at the time. Every detail should, therefore, be recorded in the manner most conducive to facility of reference, and it ought at all times to be the chief object of an excavator to reduce his own personal equation to a minimum.

I have endeavoured to record the results of these excavations in such a way that the whole of the evidence may be available for those who are concerned to go into it, whilst those who confine themselves to an examination of the plates will find each object carefully described on the adjoining page I have placed all the relics discovered in the ancient villages and tumuli in a museum near the village of Farnham, Dorset, where each object is carefully ticketed and described. Accurate models have been made of the villages, and models on a larger scale of the particular finds. In the case of Rotherley, I have a model of the ground, both before and after excavation, by means of which the results of the exploration are explained in such a way as to require the least possible effort of attention.

The museum also includes other objects of husbandry and peasant handicraft, calculated to draw the interest of a purely rural population ten miles distant from any town or railway station, and I am glad to say the interest it has attracted amongst the workingmen of the neighbourhood has exceeded my utmost expectations. On Sunday afternoons the visitors' book often records more than 100 visitors: and on special holidays, between 200 and 300 frequently visit the museum I have established a pleasure ground and built a temple in the woods, with a private band . . . where upwards of 1,000 of the villagers and neighbours frequently congregate with their wives and families, between the hours of divine service upon Sunday afternoons.

All the villages and tumuli, after being excavated, have been restored and turfed over, leaving sufficient indication to mark the various parts discovered in the villages, and at the bottoms of the principal excavations I have placed a medallet to show future explorers that I have been there.

It only remains to say something of the way in which the work has been carried out. I saw clearly that it was more than I could accomplish without assistance in the brief space of time allotted to me at my period of life. I therefore determined to organize a regular staff of assistants, and to train them to their respective functions after establishing a proper division of work. It was necessary they should all have some capacity for drawing in order that the relics discovered might be sketched as soon as found, instead of entrusting the drawings to inexperienced lithographers and artists who had little feeling for the subject. Surveying I was able to teach them myself, having

always been fond of field sketching as a soldier. The superintending of the digging—though I never allowed it to be carried on in my absence, always visiting the excavations at least three times a day, and arranging to be sent for whenever anything of importance was found—was more than I could undertake singlehanded, with the management of a property and other social duties to attend to, and I had by ample experience been taught that no excavation ought ever to be permitted except under the immediate eye of a responsible and trustworthy superintendent. The work of clearing and drawing the skeletons on the ground also required to be done by competent hands, although no skeleton has ever been taken out except under my personal supervision. The calculation of the indices, the classification and sorting of the pottery upon so large a scale, and with the care that I considered necessary, involved an amount of labour that I was not able to devote to it alone. . . . Reserving, therefore, to my share of the work the entire supervision of everything, the description and arrangement of the plates, the writing of the record, checking the calculations and the measurement of every relic discovered in the diggings, and all the bones, I have, after some changes and preliminary trials been able to engage . . . assistants with suitable salaries. . . . All have from time to time been present at the excavations and have acquired much archaeological experience, which, I trust, may be useful to them in after life.

Mr. Martin, the estate carpenter, has shown much ingenuity in constructing wooden models of the villages and pits from plans and sections provided for him by the assistants. Some of the workmen of whom I employed from eight to fifteen constantly, have acquired much skill in digging and detecting the relics in the several villages and tumuli that have been examined, so as to entitle them to be regarded as skilled workmen, upon which no small share of the success of an investigation of this kind depends. . . .

I have endeavoured to keep up in the present volume the minute attention to detail with which investigation commenced. Much of what is recorded may never prove of further use, but even in the case of such matter, superfluous precision may be regarded as a fault on the right side where the arrangement is such as to facilitate reference and enable a selection to be made. A good deal of the rash and hasty generalization of our time arises from the unreliability of the evidence upon which it is based. It is next to impossible to give a continuous narrative of any archaeological investigation that is entirely free from bias; undue stress will be laid upon facts that seem to have an important bearing upon theories that are current at the time, whilst others that might come to be considered of greater value afterwards are put in the background or not recorded, and posterity is endowed with a legacy of error that can never be rectified. But when fullness and accuracy are made the chief subject of study, this evil is in a great measure avoided. . . .

No excavations have been carried out at any time during my absence . . . all the measurements of skulls and bones, human and animal, as well as of all the objects

found in the excavations, have been taken by myself personally. All the descriptions, and the letterpress, have fallen to my share as well as the close direction and supervision of the whole, both indoors and out. Nothing has been delegated to the assistants which has not been personally supervised by me. . . . As a rule I visited the diggings from two to three times a day, regulating my time on the ground by the importance of the work that was going on. The excavations in Winkelbury having been carried on before my assistants were sufficiently trained, I never left the ground during any part of them. One or more of the assistants were always engaged in superintending the workmen upon the ground, and the others were employed in planning the ground, or in drawing the objects, in repairs to the skulls and the pots, and in forming the relic tables, by which means the records have been kept up to date; and it has been found important that, as far as possible, everything should be recorded whilst it was fresh in the memory. . . .

The expense of conducting explorations upon this system is considerable but the wealth available in the country for the purpose is still ample, if only it could be turned into this channel. The number of country gentlemen of means who are at a loss for intelligent occupation beyond hunting and shooting must be considerable. . . it may not perhaps be one of the least useful results of these volumes if they should be the means of directing attention to a new field of activity, for which the owners of land are, beyond all others, favourably situated. It is hardly necessary to insist upon the large amount of evidence of early times that lies buried in the soil upon nearly every large property which is constantly being destroyed through the operations of agriculture, and which scientific anthropologists have seldom the opportunity or the means of examining.

To render all this evidence available for anthropological generalization is well worth the attention of the owners of property, who may thus render great service to an important branch of science, provided always that it is done properly; for to meddle with and destroy antiquities without recording the results carefully would be a work as mischievous as the converse of it would be useful. . . .

An almost new branch of inquiry has been added to this volume by the careful measurement of all the bones of domesticated animals, of which a large number have been found in the Romano-British villages; fifteen animals have been killed for comparison as test animals after external measurement, and by this means the size of all the animals whose bones have been found in the villages has been ascertained.

Tedious as it may appear to some to dwell on the discovery of odds and ends that have, no doubt, been thrown away by their owners as rubbish, and to refer to drawings, often repeated, of the same kind of common objects, yet it is by the study of such trivial details that archaeology is mainly dependent for determining the dates of earthworks; because the chance of finding objects of rarity in the body of a rampart is very remote. The value of relics, viewed as evidence, may on this account

be said to be in an inverse ratio to their intrinsic value. The longer I am engaged in these pursuits, the more I become impressed with this fact, the importance of which has, I think, been too much overlooked by archaeologists. Hereafter it will probably strike future archaeologists as remarkable that we should have arrived at the state of knowledge we now possess about ancient works of high art and yet have paid so little attention to such questions as when iron nails for woodwork were first introduced into Britain, what kind and quality of pottery was in common use at different periods, when red Samian was first introduced from abroad, at what exact period in the world's history flint flakes ceased to be fabricated and used for any purpose, and other matters of that nature. . . .

Next to coins, fragments of pottery afford the most reliable of all evidence, and, on this account, I have elsewhere spoken of pottery as the human fossil, so widely is it distributed. . . . Vessels of pottery in prehistoric and Roman times were subject to breakage, as are now our less fragile and more durable ones; the pieces were not carried away by the dustman, as is now the case, but were scattered and trampled into the soil. . . .

A tumulus is easily dug into and the relics obtained from it are of value, whereas the examination of a town or encampment is a costly undertaking and the relics have seldom any intrinsic value, consisting mostly of common objects that have been thrown away by the inhabitants. It is for this reason that our knowledge of prehistoric and early people is derived chiefly from their funeral deposits, and for all we know of their mode of life, excepting such information as has been obtained from lake dwellings, and crannoges [bog villages], they might as well have been born dead. Yet the everyday life of the people is, beyond all comparison, of more interest than their mortuary customs. . . .

I hope that these excavations . . . may serve to stimulate research into ancient sites, in preference to mere relic grubbing . . .”

