ABSTRACT

The early investigators of Kent’s Cavern, Torquay, Devon, had an important part to play in the understanding of human antiquity. Father John MacEnery (1796–1841) first realised the significance of Kent’s Cavern as a site where stone tools and extinct animal bones could be found together. It was, however, to be William Pengelly (1812–1894) who came to be credited with proving the ancient contemporaneity of stone tools and extinct fauna, firstly at Windmill Hill Cave, Brixham, Devon, and later during excavation of Kent’s Cavern, Torquay. Pengelly adopted a methodical approach to his excavations recording everything he discovered in such a way that much of his work can now be plotted using sophisticated computer mapping techniques that were unimaginable in his day (McFarlane & Lundberg 2005). The finds from MacEnery’s investigations became largely scattered between different private and public collections, whilst those from Pengelly’s work remain mostly in the collection of Torquay Museum, which he helped to found. The stone tools are now known to span throughout the prehistoric occupation of Britain, and include handaxes, Mousterian scrapers, Aurignacian forms, Font-Robert points and types typical of the late Upper Palaeolithic. A human mandible discovered during later excavations in 1926 at the cave by Keith (1927), now dated to an age beyond 35,000 BP, has tantalisingly yet to reveal itself as either a late Neanderthal, or an early Modern Human (Stringer 2006: 197). MacEnery and Pengelly’s work at Kent’s Cavern continues to be built upon by modern workers and still makes a large contribution to present-day research.


Keywords: MacEnery, Pengelly, Kent’s Cavern, Windmill Hill Cave

INTRODUCTION

Today, just as it was two hundred years ago, Kent’s Cavern is a tourist attraction, visited by many people each year. Visitors, including Dr Maton and Rev. Polwhele, whose reports of 1797 are amongst the earliest known, record how they were shown to the cave by local women, whose ‘business it was to provide escort, candles, tinder-boxes and other necessaries for the expedition’ (Maton 1797; Polwhele 1797). The first excavation in the cave was undertaken by Thomas Northmore in 1824, who was attempting to find evidence of a Mithraic temple (MacEnery & Vivian 1859: 6). Later the same year, Mr W.C. Trevelyan conducted some more scientifically-based excavations, finding and reporting rhinoceros, hyaena and tiger teeth with jaws
of bear and fox (Kenrick 1861; Alexander 1964: 122). The cave was also visited by William Buckland who is recorded to have found a flint blade and over a thousand animal bones in the cave (Anon. 1825; Buckland 1826; Kennard 1945: 185). The following year John MacEnery found himself amongst a party investigating the cave with Thomas Northmore. Seemingly less than impressed by the methods being used by Northmore, he commenced his own excavations at the cave in 1825 which he continued until 1829 (Alexander 1964).

**FATHER JOHN MacENERY**

(1796–1841)

John MacEnery was a Catholic priest, who originated from near Limerick, Ireland. His father emigrated to America with his family, yet left John behind to pursue his studies at St Munchin’s Seminary in Limerick where he was ordained to the priesthood in June 1819. In 1822 he became chaplain to the Cary family who, post-reformation, had bought Torre Abbey in Torquay which they turned into their family home. This post gave him a salary of £120 per year and the use of a horse (Alexander 1964: 115–116). MacEnery’s interest in Kent’s Cavern came about as a result of an accidental meeting one day in Torquay. He commenced excavations there in 1825 and was joined in his work by Mrs Cazalet, who became one of the most regular contributors to his excavations and after whom he proposed to name a cave they investigated together at Anstey’s Cove (ibid: 125). In 1826 he accompanied Sir Henry de la Beche in his investigations of Dean Cave, Buckfastleigh and in his survey of Babbacombe and Torbay. In 1827 he investigated the Berryhead Cave with Mr Nepean (ibid: 129) and went on to work at Ugbrooke Fissure and Pixie’s Cave at Chudleigh (ibid: 117). In 1829 MacEnery had a serious accident whilst working in Kent’s Cavern when overcome with foul air. He never fully recovered, and was forced to retire. He spent a few years travelling abroad, living in Rome in 1831 and in Paris during 1837. He returned to Torre Abbey in 1838, but died on 18th February 1841 and was buried in Torre Churchyard, Torquay (ibid: 117–118). MacEnery left his one book about his work and discoveries from excavations at Kent’s Cavern, and the caves at Anstey’s Cove, Chudleigh and Berryhead, and their possible interpretations unfinished and unpublished. Nineteenth century commentators attributed this to a lack of funds (e.g. Vivian’s preface to MacEnery & Vivian 1859). MacEnery managed to pay for the preparation of most of the thirty plates that were intended to illustrate the book, and he had sought to raise the money required to see it to publication by subscription on two occasions, but failed to raise sufficient funds. Subsequently, it has been suggested by twentieth century commentators that it was not in fact due to lack of money that the book remained unpublished, but really due to the influence of William Buckland, who persuaded MacEnery to doubt the evidence he saw before him, and left him uncertain about putting his observations out into the wider world. Buckland did not accept that the discoveries made by MacEnery were unequivocally undisturbed, and so had urged caution in making any assertion to the effect that they were so (Cook 2003: 180–181). At MacEnery’s death his vast collection of fossil remains from the cave was sold by auction and dispersed. The book manuscripts, his sermon notes and other papers were purchased by John Lear of Torquay. On Lear’s death sometime prior to 1850 the manuscript and a cabinet of fossils were purchased by W. Long of Saxmundham, Suffolk, who presented the manuscript to Edward Vivian, a banker, magistrate and local antiquarian of Torquay for publication. This was achieved in edited form in 1859 (MacEnery & Vivian 1859), and in 1867 Vivian presented the original manuscript to the Torquay Natural History Society in whose museum it is now preserved (W. Pengelly 1869a: 196–197). Vivian’s publication was a severely edited
version of MacEnery’s manuscripts, so in 1869 William Pengelly, co-founder with Vivian of the Torquay Natural History Museum, published the manuscript in its entirety, unedited, with all spelling errors, alterations etc. in the Devonshire Transactions (MacEnery 1869). This unedited version provides a valuable insight into the work that MacEnery undertook within Kent’s Cavern.

MacEnery recorded his first visit to Kent’s Cavern in some detail in his manuscript. It appears that on the day he first visited the cave it had not been his intention to go there at all, but chance led him to meet his friend Captain Welby on his way to join an exploring party being led by Thomas Northmore with the local coastguard commander and his men (ibid: 208). He recalled the futility of attempting to hack through the stalagmite floor, and how, having observed an area of the cave showing signs of more recent disturbance quietly took himself off there. He soon found some fossil teeth, the discovery of which he kept to himself, preferring to send them to Oxford, where William Buckland would be made aware of them (ibid: 210). MacEnery’s excavations were extensive in the cave. He recorded finding flints sealed below the stalagmite, including blades, and tools he described as representing arrow- and spear-heads and hatchets, intermingled with animal bones. In an area he describes as disturbed MacEnery also found pottery and human remains. MacEnery doubted the human evidence he found was contemporary with any ancient animal bones. In his manuscript MacEnery quotes Buckland with the comment ‘I cannot sum up better than with his [Buckland’s] remarks’ (ibid: 225). Buckland’s interpretation was that, whilst found together in the same soil, the co-occurrence of extinct animal species and evidence for a human presence could not be more than accidental. He observed that they had no proof of how or when human artefacts were introduced into the deposit containing ancient animal bones. The age of the flints, and their relationship to the stalagmite floor and to the animal bones, is something that caused MacEnery concern, and the accounts as drawn together by Vivian show how much consideration he gave to this question (MacEnery & Vivian 1859: 61).

After MacEnery’s work in the cave came to an end in 1829 there were no further investigations of Kent’s Cavern until Robert A.C. Godwin-Austen undertook minor work in 1840 (Austen 1842: 444–446). A few years later William Pengelly was to take up the cause as abandoned by MacEnery and placed both their names, along with Kent’s Cavern, firmly on the map. Of particular interest to MacEnery, had been the discovery in the Kent’s Cavern deposits of carnivore teeth that were first attributed to *Ursus cultridens* by Cuvier. Now identified as the felid *Meganeleon cultridens*, these specimens were, however, reattributed to the sabre-toothed cat *Machairodus latidens* [now *Homotherium latidens*] during Pengelly’s time (W. Pengelly 1869b: 486). The significance of these teeth and their association with stone tools led Dr Hugh Falconer to call their provenance into question (letter quoted in Alexander 1964: 134). Pengelly took on the challenge of seeking to determine whether or not the apparent evidence of *Machairodus latidens* really did originate within this cave. He concluded that MacEnery had genuinely found five teeth during his work at Kent’s Cavern and he set his sights on proving this by finding further specimens from known contexts (ibid: 493; cf. below).

**WILLIAM PENGELLY (1812–1894)**

William Pengelly (Figure 1) was born at East Looe, Cornwall in 1812. He left school aged just twelve to go to sea with his father, a ship’s captain (H. Pengelly 1897). Pengelly was shipwrecked once and rescued from drowning twice, before his mother brought him back to Looe immediately following the
Figure 1: William Pengelly towards the end of his life
death of his younger brother in an accident at school (ibid: 11). He began to teach himself mathematics in the nights, until in 1830 he moved to Torquay, where he set up a small day-school (ibid: 16). It was to be in Torquay that he had his first encounters with geology and from where he embarked on correspondence with many of the eminent geologists of the time. Most significant perhaps was his friendship with Sir Charles Lyell for whom he became an adviser to both of his main works (Julian 1913: 228); Principles of Geology (1830) and Geological Evidences of the Antiquity of Man (1863). In 1844 Edward Vivian, Robert Battersby and Pengelly established the Torquay Natural History Society and later saw it establish its museum on Babbacombe Road, Torquay, which was to be Pengelly’s intellectual home for the rest of his life. In 1846 Pengelly found that the number of private students he had was sufficient for him to be able to give up his day-school and instead to concentrate on private tutoring in natural sciences and mathematics. Amongst his pupils were members of the Russian imperial family and members of several royal houses from across Europe (ibid: 228). His reputation as a Quaker was erroneous, although his second wife Lydia Spriggs was from a Quaker family (ibid: 229). In 1862 he was instrumental in setting up the Devonshire Association for the Advancement of Science, Literature and Art and was to become its President in 1867 (Boylan 2006: 81). In 1863 he was elected a Fellow of the Royal Society and in 1886 was awarded the Lyell Medal by the Geologists’ Association (H. Pengelly 1897: 275). Pengelly’s geological work focused on three areas: the investigation of deposits at Bovey Tracey; the examination of caves; and miscellaneous geological studies across the south-west peninsula (Bonney 1897: 291). It is his work concerning the examination of caves, particularly at Windmill Hill Cave (Brixham) and at Kent’s Cavern (Torquay), both in Devon, which particularly concerns us here.

In 1846, two years after establishing the Torquay Natural History Society, the three founder members secured a small grant from it to enable them to undertake a limited investigation of Kent’s Cavern (H. Pengelly 1897: 26). The aim of this work was to investigate the problem of human antiquity, and to address the possibility of there being flint tools in the deposits in the cave alongside bones from extinct mammals, as had been observed by MacEnery earlier in the century (McFarlane & Lundberg 2005: 39). Vivian’s report of the work, as read to the British Association for the Advancement of Science, made clear that they had broken through undisturbed stalagmite to find flint artefacts (Vivian 1847a: 73). The geological academic establishment was clearly not prepared for such a revelation and refused to publish it, instead just allowing publication of a note to the effect that ‘in this paper an account was given of some recent researches in that cavern by a committee of the Torquay Natural History Society, during which the bones of various extinct species of animals were found in several situations’ (Vivian 1847b: 353). Pengelly observed how curious this was, given that the Journal already contained a disclaimer that the authors alone were responsible for the facts and opinions within published papers printed in it (W. Pengelly 1868: 518). The unpublished paper claimed human antiquity, and that the stone tools discovered were contemporary with ancient and extinct animal bones. Pengelly adopted this case readily, and was to champion it with Vivian throughout his lifetime. In 1856 Vivian was made aware of the survival of MacEnery’s manuscripts and provided an announcement and taster of their contents at a meeting of the British Association in Cheltenham (Vivian 1856: 79). Pengelly would also have been aware of these and he was clearly well aware of the need for caution in publicising the contents. So, when an opportunity to excavate the previously unknown Windmill Hill Cave at Brixham came about in 1858, he did so in a highly organised and systematic manner in order to prevent it being possible to refer bones or any indications of a human
presence to the wrong beds, depths or associations (H. Pengelly 1897: 76).

This work was undertaken under the auspices of both the Royal Society and the Geological Society, from whom grants were secured by Dr Hugh Falconer, who, on learning of its discovery had also expressed an interest in its contents. Joseph Prestwich was also on the excavation committee, although it was Pengelly who oversaw all the work (ibid: 74–75). The cave floor was found to be sealed by a stalagmite floor, so Pengelly chose to adopt a method by which he removed the stalagmite floor horizontally throughout the entire length of the cave. Beneath this he removed the next bed and so on down. His view was that in this way he could reveal the stratigraphical sequence of the deposits and be able to record the amount and direction of any dip in them. He could also record the variations in the thickness of the beds and this method would ensure that he secured all the fossils contained within them. From these he would be able to determine the quantity of the different animal bones in the cave, the ratios which the numbers of individuals of various species bore to one another, as well as all peculiar or noteworthy relationships between them and the extent, character and features of the cave (ibid: 75–76).

Pengelly’s work at Windmill Hill Cave, Brixham took place over one year and came to an end in June 1859 (H. Pengelly 1897: 76). The sequence of deposits beneath the stalagmite comprised four layers: the uppermost was a breccia; this was underlain by a layer of blackish matter; this in turn was underlain by a reddish-brown tenacious clayey-loam; and a gravel bed lay at the base of the sequence. Worked flints were recorded with animal bones in both the loam and basal gravel. The bones were examined by George Busk who noted they were found throughout all the deposits, other than the blackish layer (Bonney 1897: 298). In September 1858 Pengelly reported to the Leeds meeting of the British Association for the Advancement of Science (unpublished presentation in the Geology section of the meeting) that eight flint tools had been found in various parts of the cave, all of them in association with bones of mammals appearing at depths varying from nine to 42 inches in the “cave-earth”, the reddish-brown tenacious clayey-loam noted above, on which lay a sheet of stalagmite from three to eight inches in thickness, and having within and on it remains of lion, hyaena, bear, mammoth, rhinoceros and reindeer. In the furore that followed it became clear to Pengelly that the reason geologists, including MacEnery, had been, and were, so wary about entertaining the question of human antiquity was really due to the untrustworthiness of much evidence that had previously been offered to them on the subject (H. Pengelly 1897: 76; Rudwick 2008: 228). Prestwich, an early advocate of human antiquity, in his 1860 paper to the Royal Society likewise stated that it was not until he himself had witnessed the conditions under which the flint implements had been found at Brixham that he could become fully impressed with the validity of the doubts thrown upon the previously prevailing opinions with respect to such remains in caves (Prestwich 1860: 278–279).

The results of the work at Brixham led Pengelly to seek to convince the scientific world that Kent’s Cavern might, after all, be entitled to its place amongst science. At the Bath meeting of the British Association for the Advancement of Science in 1864 an exploration committee was appointed comprising Lyell, Evans, Lubbock, Phillips, Vivian, Pengelly (British Association for the Advancement of Science 1864: xlv). They were later joined by Busk, Dawkins, Sanford and Lee (Bonney 1897: 303). Work commenced under the superintendence of William Pengelly, with Henry Keeping employed as site foreman, and this work continued for 16 years. The sequence of deposits recorded comprised, from the top: limestone blocks from the roof; a black mould layer; a granular stalagmite of
generally a foot or more in thickness sealing the cave floor; a red loam; and, at the base, a breccia. Pengelly once again adopted a rigorous excavation methodology. Layers were removed in a series of blocks that Pengelly called ‘yards’, each three feet long and a foot square in cross-section. The material removed in each yard was first examined by candlelight inside the cave, and then taken to the cave door for re-examination in natural light, with anything of interest that the sediment yielded being placed in a labelled box. All the boxes were sent to Pengelly daily who would meticulously clean, label, pack and record all specimens found and note the day’s work into a journal (W. Pengelly 1865: 20; Bonney 1897: 305). Pengelly was reported to have spent no less than five hours each day engaged in working on the finds from Kent’s Cavern on top of his regular tutoring, which remained his sole source of earnings throughout his life. He claimed no financial remuneration from the excavations for himself (Bonney 1897: 312). In 1872 Pengelly was able to prove another aspect of MacEnery’s research correct. It had long been Pengelly’s aim of determining the presence of the extinct sabre-toothed cat Machairodus latidens [as the felid remains now known as Megantereon cultridens were then attributed] in the cave, and particularly its relationship to the stone tools found in the cave (W. Pengelly 1869b). Pengelly eventually found a single incisor tooth within the uppermost levels of the reddish-brown clayey-loam (the so-called “cave-earth”) which he reported to the Brighton meeting of the British Association and which demonstrated the contemporaneous date of this cat with the stone tools (W. Pengelly 1872). Previously MacEnery had reported finding teeth of the sabre-toothed cat in the Long Arcade, and Pengelly’s discoveries now put paid to thoughts that these were not genuine (Bonney 1897: 309).

The work in Kent’s Cavern was painstakingly undertaken and Pengelly himself observed two distinct groups of artefacts from the two main deposits sealed beneath the stalagmitic floor in the cave. The stone tools found in the “cave-earth” were predominately made on flakes and were found with bone tools, ornaments, harpoons, eyed-needles or bodkins, awls, pins and perforated teeth. However, the tools from the basal breccia beneath were more roughly formed, not on flakes, but on nodules, suggesting that the “breccia men” were “ruder” than those who followed. He was able to claim that both sets of tools and therefore their makers, whilst distinct ‘civilizations’, were nonetheless both coeval with extinct animals (W. Pengelly 1873: 208). This observation was confirmed and noted by others in their syntheses of the state of knowledge in the latter half of the nineteenth century. Boyd Dawkins also observed that there must have been a considerable time between the laying down of these two deposits, as in some parts of the cave the remnants of a stalagmite were found between the layers (Dawkins 1874: 328–329).

It was not until Dorothy Garrod’s work in the early 20th century (cf. Price, this volume) that more sense was made of the stone tools retrieved by Pengelly’s excavations (Garrod 1926). She noted how Pengelly observed that the cave-earth was unstratified, and commented that this was in most probability due to Pengelly, in common with the understanding of his time, failing to understand the nature of archaeological ‘floors’. A mixture of industries could therefore have resulted from his foot-deep excavation spits. She did, however, credit Pengelly’s cataloguing method, as this provided a means of relocating individual artefacts back to their positions in the cave, and she found she was able to reconstruct separate layers within his single context of “cave-earth”. From this she sorted the tools into four assemblages. The oldest group contained chert cordiform handaxes accompanied by some side-scrapers, which she deemed to be Mousterian. Then came a group of Middle Aurignacian tools,
including a bone pin of similar form to those seen at Paviland Cave, on the Gower peninsula, South Wales. The next group includes seven proto-Solutrean points of Font-Robert type. And the final, youngest and stratigraphically highest, group comprises a Magdalenian-type assemblage, including backed blades and barbed points made from reindeer antler (ibid.). Garrod noted that approximately 800 stone tools were recorded by MacEnery and Pengelly, although most of MacEnery’s collection was not located by her.

More recently it has proved possible for the entire site to be reconstructed from Pengelly’s records and recreated in a three-dimensional format (McFarlane & Lundberg 2005). This is quite an achievement, and whilst today many credit workers such as Pitt-Rivers with inventing modern excavation, perhaps it is really Pengelly in his excavations at Kent’s Cavern and the work of Henry Keeping as his site foreman, who should be seen as having run the first truly modern excavation. The meticulous recording of Pengelly, and his belief in MacEnery’s observations, made Kent’s Cavern both a key site in the acceptance of the antiquity of Man, and one of the key sites in a modern understanding of the British Palaeolithic. Without both MacEnery and Pengelly, much would not now be known about these important times in our understanding of the Palaeolithic as we know it today.

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