

# JOHN COLES

John Morton Coles

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by

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*Fellow of the Academy*

John Coles was an archaeologist who managed to encompass a large number of fields in his academic life, becoming influential in all of them. While his most lasting achievement is perhaps in what has become known as wetland archaeology, in earlier phases of his career he made a lasting impression on the study of Scottish prehistory, he wrote standard textbooks on field archaeology, the Palaeolithic and the Bronze Age, and he was a pioneer in the study of experimental archaeology. An interest which endured from the early part of his career into his later years was the study of rock art, particularly that in Scandinavia, where frequent study trips to Sweden became an important part of his life.

*John Coles receiving an honorary doctorate from Uppsala University, 1997*



*John Coles*

John Morton Coles<sup>1</sup> was born in Woodstock, Ontario, the son of Alice (née Brown) and Jack (John) Coles. His grandfather Edward, always known as EJ, came from Somerset, where the family were farmers. Both of EJ's parents died young, leaving seven children; EJ emigrated to Canada and eventually established a department store in Woodstock, becoming a pillar of the local community. His son Jack, John's father, set up a real estate, insurance and investment firm, for which the young John Coles worked after university. He studied at Victoria University, which is federated with the University of Toronto, graduating in 1952. He was a talented tennis player and represented the university in tournaments; this skill was one which he maintained after his move to Scotland, when he won the Scottish men's singles title in 1957 and the Scottish Tennis Cup in 1959. He also learnt the trumpet and played in the High School band and at university, something which came in handy later on when he was invited to blow on the horns of Bronze Age Ireland.

After graduating he started work for the family firm but soon found this was not to his liking. As he described in his memoir, 'I found myself ... working in an office in a small town, and doing things that were of little interest to me, buying and selling'.<sup>2</sup> As a natural 'doer' he found sitting in an office stifling and the work boring. In his holidays he came to Europe and made extensive tours of Britain and the Atlantic seaboard and visited a range of historical and archaeological sites. In 1955 he stopped off in Cambridge on the way home and met Professor Grahame Clark FBA. Clark encouraged him to come to read for the Diploma in Prehistoric Archaeology, which he did over the following two years, attached to Fitzwilliam House, though staying in a flat in town as Fitzwilliam in those days had no college buildings (and only became a full College in 1966).

John has described how he began his studies with no real knowledge or understanding of archaeology, but learnt on the hoof very quickly. His account of the course of study at Cambridge in the 1950s, and the staff who taught it, sheds fascinating – if not always complimentary – light on a famous Department and on well-known scholars (Clark himself, Charles McBurney, Miles Burkitt, and Glyn Daniel). Learning prehistoric archaeology at that time was mostly a question of learning typology, particularly of flint tools, and not of the techniques of field archaeology, in which none of the teachers was very skilled. (This is in spite of the fact that Clark's famous excavation at the Mesolithic site of Star Carr near Scarborough was long regarded as ground-breaking in its approach,

<sup>1</sup>A Festschrift for John Coles was published in 1999: *Experiment and Design. Archaeological Studies in Honour of John Coles*, ed. A.F. Harding (Oxford, 1999); a bibliography of his publications up to 1998 appears on pp. 194–8. Through the 2000s Coles continued to publish, mainly on the rock art of Scandinavia (see p. 131). He also edited a number of volumes in this period, contributing articles of his own. Because of the large volume of Coles's output (the 1999 bibliography lists 235 items), this memoir concentrates on the main phases of his career, and his main archaeological interests by topic, rather than attempting to include consideration of everything he wrote.

<sup>2</sup>John Coles, *Yesterday's Man. An Archaeological Life 1955–1980* (Wetland Archaeological Research Project, 2019), 1.

especially in the use of biological information to supplement the inorganic remains dominated by flintwork.) Later, John wrote a concise and authoritative account of field techniques, which remains valuable, the result of his years of fieldwork in Scotland and, subsequently, Somerset (see below).<sup>3</sup>

John concentrated on Palaeolithic archaeology during his Cambridge student years, at the insistence of Grahame Clark. This gave him the thorough grounding in the sites and artefacts of the period, or periods, that enabled him later to write his textbook on the Palaeolithic.<sup>4</sup> His reading and travels had already made him particularly interested in the cave paintings of France and Spain. An interest in prehistoric art became an enthusiasm that lasted throughout his career.

During this time John also went on his first excavation, at Hoxne in Suffolk, where McBurney was keen to investigate a site that was famous through the late 18th-century observations of John Frere, one of the pivotal moments in the recognition of the antiquity of ancient flint implements (soon to be recognised as Palaeolithic handaxes). This was a short-lived project, but John subsequently dug at Wandlebury hillfort near Cambridge (site of the supposed hill figure studied by T. Lethbridge), and – more significant – at the Upper Palaeolithic site of Arcy-sur-Cure in the Yonne *département*. These were the beginnings of a long career in field archaeology.

## Scotland

At the end of his Cambridge studies, he toyed with the idea of doing doctoral study on the painted caves of France, but following a meeting and correspondence with Stuart Piggott FBA, in 1957 he decided to move to Edinburgh. He had wanted to study the Picts, but Piggott persuaded him that the Late Bronze Age metalwork of Scotland needed work, so John threw himself into the topic with a vigour which came to characterise all that he undertook. In his memoir he described amusingly how he got access to museum objects in apparently unopenable glass cases, in sometimes dusty museums the length and breadth of Scotland. But he did get access, to large numbers of bronze objects, and their study began his academic career. His first published papers were on some of the bronzes he studied; one, on swan's-neck sunflower pins, necessitated perusal of a wide range of continental material, an early indicator of the thoroughness with which he pursued the topics that interested him.<sup>5</sup>

<sup>3</sup> John Coles, *Field Archaeology in Britain* (London, 1972).

<sup>4</sup> J.M. Coles & E.S. Higgs, *The Archaeology of Early Man* (London, 1969).

<sup>5</sup> J.M. Coles, 'Scottish swan's-neck sunflower pins', *Proc. Soc. Antiqs Scotland*, 92 (1958–9), 1–9.

He later said that the study of bronzes was not ‘the most exciting subject I have ever encountered’, but having started it he persevered with it, and typically his paper on the Late Bronze Age metalwork of Scotland appeared in the *Proceedings of the Society of Antiquaries of Scotland* in the volume dated 1959–60 (actually appearing in 1962).<sup>6</sup> Not many students can claim not only to have completed their PhDs so swiftly (he actually had to resubmit it, because Edinburgh University required a minimum of two years doctoral study), but also to have submitted them for publication by the end of their study period.

This lengthy paper, essentially a slightly abbreviated version of John’s PhD thesis, is a workmanlike account of its subject matter. It starts with a consideration of the Middle Bronze Age background, in terms of both settlement and metalwork. This picture was then supplemented by the arrival of the bronze sword, one of the most characteristic types of the Late Bronze Age. John related the Scottish finds to the wider British picture and to potential continental influences. One of the find types that obviously interested him particularly, and which was to play a part in his later work, was the shield, with splendid examples from Yetholm and Beith. He discusses axes, spearheads, knives, cauldrons and buckets, pins (notably ‘sunflower pins’, the subject of the paper mentioned above), gold and bronze bracelets, lockrings, dress fasteners, moulds and hoards (with consideration of the possible motives for hoard deposition). Particular attention was paid to the ‘Covesea bracelets’, named after the eponymous find at the Sculptor’s Cave in Morayshire, with their parallels across Britain and the North European plain. These types are then summarised in terms of chronological phases between the 10th and 5th centuries BC (nowadays modified somewhat; subsequent refining of Bronze Age chronology built on such beginnings). A series of distribution maps was followed by an exhaustive listing of the objects.

It is easy to see why John found this type of study less enthralling than the subjects to which he subsequently turned his attention. The work clearly began with the task of assembling all the material, reading whatever had been published on British and continental bronzework, and creating lists and maps. This type of study, while essential and valuable, was alien to his mercurial nature and offered little scope for the lighter touch, at least in terms of publication.

Nevertheless, John was not finished with Scottish metalwork. The Late Bronze Age paper was followed by ones on the Middle Bronze Age<sup>7</sup> and the Early Bronze Age;<sup>8</sup> these appeared after he had left Scotland, but he had collected most of the material during his museum trips in the 1950s. The Middle Bronze Age paper followed a slightly different path from the Late Bronze Age one; each type was first considered individually, followed

<sup>6</sup>J.M. Coles, ‘Scottish Late Bronze Age metalwork: typology, distributions and chronology’, *Proc. Soc. Antiqs Scotland*, 93 (1959–60), 16–134.

<sup>7</sup>J.M. Coles, ‘Scottish Middle Bronze Age metalwork’, *Proc. Soc. Antiqs Scotland*, 97 (1963–64), 82–156.

<sup>8</sup>J.M. Coles, ‘Scottish Early Bronze Age metalwork’, *Proc. Soc. Antiqs Scotland*, 101 (1968–9), 1–110 (appeared 1971).



by a consideration of ‘industrial traditions’ (essentially chronology). Lists of objects completed the survey. The Early Bronze paper is different again, the result of the fact that the evidence base is different from that for later periods, notably the number of grave finds rather than simply isolated bronzes or hoard finds. The date and context of the earliest metalwork in Scotland had already been a matter of debate, as it was (and is) in England too; not only that, but by the time John moved to consider the earliest metalworking period, metal analysis had become a major topic of interest. While some work had been done on British metals before, it was the work of the Stuttgart programme, *Studien zu den Anfängen der Metallurgie*, that stimulated new research.<sup>9</sup> These analyses had identified particular metal groups, which appeared to suggest that specific metal types were widely distributed across Europe. This might have made metallurgical sense but it seemed to fly in the face of the archaeological evidence, as a consequence of which a pair of Dutch scholars adopted a different way of looking at the analytical data, which resulted in much more acceptable archaeological groupings.<sup>10</sup> John followed this method, identifying five ‘clusters’ (so called to distinguish them from the ‘groups’ used by the Stuttgart team and other scholars), of which four were firm and clear, the fifth (E) more ambiguous.<sup>11</sup> Although the method was only applied to the Scottish material, it appeared to provide believable archaeological results, whereas the Stuttgart method implied that a particular metal type – and thus presumably the metal from a particular metal source – was distributed widely across Europe.

Brendan O’Connor and Alison Sheridan have written about how studies of Scottish metalwork have progressed since John’s articles were published. O’Connor was able to use the metalwork groupings established by more recent work, for instance those identified by Peter Northover and now accepted as standard,<sup>12</sup> or the work on copper mines in Ireland by William O’Brien (particularly the identification of the copper used for Beaker metallurgy emanating from the mine at Ross Island, Killarney),<sup>13</sup> and did not discuss how these correlate with John’s Clusters A–E. Sheridan was able to point to a number of very significant new finds from Scotland, both in bronze and in gold. Inevitably much has been

<sup>9</sup>The first two volumes to appear were S. Junghans, E. Sangmeister, & M. Schroder, *Metallanalysen kupferzeitlicher and frühbronzezeitlicher Bodenfunde aus Europa* (Berlin, 1960); and *Kupfer und Bronze in der frühen Metallzeit Europas* (Berlin, 1968), both of which Coles took into account.

<sup>10</sup>H.T. Waterbolk & J.J. Butler, ‘Comments on the use of metallurgical analysis in prehistoric studies’, *Helinium*, 5 (1965), 227–251.

<sup>11</sup>A second paper on the topic was published at the same time: J.M. Coles, ‘Metal analyses and the Scottish Early Bronze Age’, *Proc. Prehistoric Soc.*, 35 (1969), 330–344.

<sup>12</sup>J.P. Northover, ‘The analysis of Welsh Bronze Age metalwork’, Appendix to H.N. Savory, *Guide Catalogue of the Bronze Age collections, National Museum of Wales* (Cardiff, 1980); ‘The exploration of the long-distance movement of bronze in Bronze and Early Iron Age Europe’, *Bull. Inst. Archaeol. Univ. London*, 19 (1982), 45–72.

<sup>13</sup>W. O’Brien, *Ross Island: mining, metal and society in early Ireland* (Galway, 2004).

written, and much found, since the 1950s and 60s, but the basic work that John did remains the starting point for all later investigations.

John was also active in fieldwork during his time in Scotland, and this continued after he moved to Cambridge in 1960 to take up a post as Assistant Lecturer. After taking part in various small excavations, mostly led by other people in the 1950s, he undertook various projects of his own. One of the most significant was the excavation in 1964, together with Derek Simpson, of a round barrow at Pitnacree, Perthshire.<sup>14</sup> This site, one of a considerable number in the Tay valley east of Loch Tay, was expected to belong to the Bronze Age, but on excavation turned out to produce Early Neolithic pottery and a Neolithic radiocarbon date. The turf mound covered an 'enclosure', in reality a roughly rectangular space framed by large stones with large pits at either end, thought to have contained massive timbers; a number of cremations had been placed on the old land surface at the western end. The pits were compared with similar arrangements in Neolithic long barrows from southern England; the real surprise was that such things should have been found so far north on the British mainland, something that has been confirmed by other projects since.

In 1969 he took over a major project at the fortuitously named site of Morton in Fife, just south of the Firth of Tay, an important Mesolithic site, excavating there in 1969 and 1970.<sup>15</sup> He had already investigated the Mesolithic of south-west Scotland in a paper published in a local county journal.<sup>16</sup> Previous work at Morton had recovered flints but the general character of the site was unclear, and some of the material had gone missing. John systematically collected and analysed the stonework, showing where the densest distribution of material lay, demonstrating the existence of occupation areas, some with lines of stakes suggesting windbreaks; hearths; and a midden containing large quantities of bone, shell and other debris. All this suggested that occupation was of a temporary nature, repeated many times, with no more than ten persons present at any one time.

The Morton assemblage was the largest quantity of stonework known from any Scottish mainland site. The analysis showed that a large proportion of the material was retouched or utilised, nearly 20 per cent, much higher than at other Mesolithic sites in Britain. This suggested to John that material was being treated in antiquity in a much more careful manner than at equivalent sites in England. In cultural terms, the Mesolithic industries of southern Scotland were not sufficiently well known or differentiated for the Morton assemblage to be attributed to a particular type or phase, with the occupation of the site probably

<sup>14</sup>J.M. Coles & D.D.A. Simpson, 'The excavation of a Neolithic round barrow at Pitnacree, Perthshire, Scotland', *Proc. Prehistoric Soc.*, 31 (1965), 34–57.

<sup>15</sup>J.M. Coles, 'The early settlement of Scotland: excavations at Morton, Fife', *Proc. Prehistoric Soc.*, 37 (1971), 284–366.

<sup>16</sup>J.M. Coles, 'New aspects of the Mesolithic settlement of South-West Scotland', *Trans. Dumfries and Galloway Nat. Hist. and Ant. Soc.*, 41 (1964), 67–98.

lasting anything up to 1000 years. John was able to suggest different types of stonework on different features of the site, presumably of different ages.

Unusually for the time, no less than eleven radiocarbon dates were obtained, from different site features and from the midden. By today's standards the error terms were unacceptably large, but ignoring one exceptionally early date, the rest were reasonably consistent and suggest an occupation of the site across the 6th millennium cal BC, with a couple of outliers somewhat earlier.

From analysis of the bones (mammals, fish and birds), shells and the plant remains (hazelnuts, a few seeds and grasses), John attempted a reconstruction of the likely population of the site, using estimates of human protein requirements in relation to protein availability. This exercise would be considered one usual in the 'New Archaeology' which was becoming fashionable at this time; but John was never a New Archaeologist in the usual sense of the term. Instead, this is surely the influence of Grahame Clark's 'economic archaeology' being brought into play. The practice of sieving to recover small bones and plant remains as well as small pieces of stonework was very much something that John's Cambridge colleague Eric Higgs was developing with his students; the Morton dig was just as revolutionary for the period and area he was researching as the excavations of Higgs in north-west Greece at around the same time, not least in its involvement of specialists to cover aspects hitherto paid little attention.

## The Bronze Age

At Cambridge John initially taught a course on the Palaeolithic, but as he explained in his memoir, by mid-career he was involved in the teaching of nine other courses, in whole or in part.<sup>17</sup> He must have had the highest teaching load of any member of staff in the Department of Archaeology, on his estimation around 60 hours per week, which made him particularly annoyed that some of his colleagues appeared to do very little in either teaching or administration. One of the courses that was significant for his research output, other than that on Experimental Archaeology, was that on the European Bronze Age, which a number of students who subsequently became well-known in the discipline took, including the author of this memoir. The single most important outcome of this interest was a book published in 1979 on the Bronze Age of Europe, still the only one of its kind.<sup>18</sup> John covered the north and west of Europe, and Harding the centre, south and east. In retrospect, the extraordinary thing about John's achievement in the book was that it was accomplished

<sup>17</sup> *Yesterday's Man*, 54.

<sup>18</sup> J.M. Coles & A.F. Harding, *The Bronze Age in Europe. An Introduction to the prehistory of Europe c.2000–700 BC* (London, 1979).



while he was extremely busy with his fieldwork in Somerset, quite apart from his teaching duties, as a glance at his publication list during the 1970s shows; he also published his second book on experimental archaeology in the same year as the Bronze Age book.<sup>19</sup> Subsequently John declined further involvement in general studies of the Bronze Age.<sup>20</sup> He was very occupied with the work in Somerset, and by then he was moving on to another focus of research, rock art (see below).

### Experimental archaeology

Already during his Scottish period, John was finding that metalwork studies were leading him to other aspects than merely typology, in particular to the reconstruction of particular objects in order to ascertain their function or precise way of operating. This was in effect the start of his interest in experimental archaeology, which he pursued vigorously once he arrived in Cambridge, notably through his important studies of shields and horns (see below). In a paper dated 1966–7 (appearing in 1968) he introduced the topic.<sup>21</sup> In this, John went through some of the most important work that had appeared up to that point, noting especially the work done by Danish scholars on techniques of ancient agriculture and house-building, on cooking in pits by Irish archaeologists, on earthworks (drawing attention to the Overton Down experiment by Jewell and Dimbleby),<sup>22</sup> and to work on artefacts, bringing in his own work on bronze horns and shields (see below). His was not the first article on the topic; the field was begun by an article in 1961 by Robert Ascher, based on American material.<sup>23</sup> But his was the first to take a holistic view of the subject.

John went on to publish two books on the subject, which have dominated the field ever since.<sup>24</sup> Although there are now many groups working in the field, and journals devoted to the topic,<sup>25</sup> none has surpassed the utility of these books. They cover a wide range of material, and are suffused with a breadth of knowledge, combined with gentle humour, that makes them classics in the field, and reading them a pleasure. Chapter 1 of the 1979

<sup>19</sup> He finished the writing of *The Bronze Age in Europe* in early 1978 and wrote *Experimental Archaeology* in 1978–9.

<sup>20</sup> He told me in the early 1990s, when I asked him if he was prepared to work on another Bronze Age book, that it was a chapter of his life that was over. He did, however, produce one general article drawing on the 1979 book: ‘The Bronze Age in Northwestern Europe: problems and advances’, *Advances in World Archaeology*, 1 (1982), 265–321.

<sup>21</sup> J.M. Coles, ‘Experimental archaeology’, *Proc. Soc. Antiqs Scotland*, 99 (1966–7), 1–20.

<sup>22</sup> P.A. Jewell & G.W. Dimbleby (eds), ‘The experimental earthwork on Overton Down, Wiltshire, England: the first four years’, *Proc. Prehistoric Soc.*, 32 (1966), 313–342.

<sup>23</sup> R. Ascher, ‘Experimental archaeology’, *American Anthropologist*, 63:4 (1961), 793–816.

<sup>24</sup> John Coles, *Archaeology by Experiment* (London, 1973); *Experimental Archaeology* (London, 1979).

<sup>25</sup> E.g. *Ethnoarchaeology*; *EXARC Journal*; *Experimentelle Archäologie in Europa*.

book covers the theoretical aspects of experimental archaeology, concentrating on the need for correct materials and production methods in reconstruction, the use of ethnography for gaining knowledge of technologies no longer available in the developed world, and the study of function. For the latter, he stressed the importance of manipulation and operation, and environment, as well as repetition (a one-off experiment may produce a particular result, but only if it is repeated many times can legitimate inferences be drawn). He considered questions of cost and time, discussing scaled-down experiments and their problems; he also stressed the need for a flexible approach in order to adapt experiments to unforeseen problems and outcomes.

His interest in the topic had been fired initially through his study of the Late Bronze Age metal shields. A classic study, appearing in 1962,<sup>26</sup> examined the evidence for the date and distribution of Bronze Age shield types. So far so traditional; but John was not satisfied with having established the typological and chronological parameters of the pieces, successful though this was, necessitating a far-reaching study of shields across Europe. After considering the well-known continental types (Herzprung, Nipperwiese and others), John set the British and Irish examples in a typological framework, and considered their origins. But from there he moved on to consider how the shields were made and how they were used. In this, the survival of a shield in leather, from Clonbrin, Co. Longford, was crucial, as well as wooden formers or moulds from Churchfield, Co. Mayo, and Kilmahamogue, Co. Antrim, and wooden shields from Annandale, Co. Leitrim, and Cloonlara, Co. Mayo. These finds stimulated John to reconstruct the processes by which leather shields were made. Three different ways of treating the leather were attempted; the best turned out to be beating after soaking in cold water followed by impregnation with wax.

John did not attempt a reconstruction of a wooden shield, contenting himself with detailed study of the moulds and surviving shields. He did, however, make a metal shield, of copper, ribbed, and of metal 0.03 cm thick. He then proceeded to see how it fared in combat; pictures of the experimental fighting show John wielding a Bronze Age sword, and one of the Cambridge departmental technicians the shield. To quote him: 'the point of a leaf-bladed bronze sword easily penetrated the metal shield, and a slashing blow cut entirely through the shield, only the wired rim holding the two slices together'.<sup>27</sup> By contrast, in trials the leather shield only suffered minor flexing and no perforation, leading John to argue that the sheet metal shields were ceremonial in nature, and not used for 'real' fighting. While this theory has been challenged in recent years, it remains very plausible for the highly decorated bronze shields, which were surely designed for display rather than

<sup>26</sup> J.M. Coles, 'European Bronze Age shields', *Proc. Prehistoric Soc.*, 28 (1962), 156–190.

<sup>27</sup> Coles actually did one of these demonstrations at a lecture at the Society of Antiquaries in 1961: *Yesterday's Man*, pp. 61–2. It is fortunate that the Health and Safety Executive did not exist in those days.

defence. The whole exercise was a model in the conduct of archaeological experiments.

A somewhat similar exercise was conducted the following year, this time with bronze horns from Ireland the object of attention.<sup>28</sup> These splendid objects had long attracted attention, combined as they were with jangly bronze pendants and bell-like rattles known as crotals, thus suggesting the existence of Bronze Age ‘orchestras’. In this case, John demonstrated both the typological affinities of the horns, not only in the British Isles but also across Europe, and then discussed how they were made and how they might have been blown. Some of the horns were blown from the end, like modern horns and trumpets, other from the side, rather like flutes. In the case of the end-blown examples, there was typically a flange at the end and a metal tube could be inserted to act as a mouthpiece; the side-blown pieces have nothing to aid blowing which suggests that a mouthpiece of organic material (wood or bone) might have been used (blowing across the hole as with a flute would not create a sufficient column of moving air in the horn). Most modern experimenters had added their own mouthpiece (from a modern brass instrument), which helped produce sounds, but this procedure was hardly authentic. John was able to show that the end-blown horns could produce two or three notes, the side-blown ones just one note, and demonstrated these skills in the National Museum in Dublin as well as in the British Museum for a TV show.<sup>29</sup> This recalls the playing in 1939 of a trumpet found in the tomb of Tutankhamun, when James Tappern, a bandsman of Prince Albert’s Own 11th Royal Hussars, had played the trumpet for a BBC broadcast, but finding it very difficult had inserted his own mouthpiece, thus producing a range of notes not unlike those of modern cornets.<sup>30</sup> The sounds (which one can hear through BBC iPlayer) are very unlikely to represent what would have been heard in ancient Egypt.

John also considered the extent to which horns might have been blown together; several of the finds occurred in groups, while the Danish *lurs* usually occur in pairs (probably through imitation of horned or antlered animals). Whatever the truth of these matters (which John admitted was unknowable), his enthusiasm for the reconstruction of these ancient objects was infectious.

John himself carried out experimental reconstructions later in his career, notably of structures he had found in his excavations in the Somerset Levels (see below). These included most famously a reconstruction of the Sweet Track, but also other features such

<sup>28</sup>J.M. Coles, ‘Irish Bronze Age horns and their relations with northern Europe’, *Proc. Prehistoric Soc.*, 29 (1963), 326–356.

<sup>29</sup>*Yesterday’s Man*, p. 58; *Archaeology by Experiment*, pp. 164–6. One of the first archaeological lectures I myself ever attended was on ancient music given by Coles to the student Archaeology Society in Cambridge, probably in 1967, and included a tape of him playing the horns, having previously pointed out that a 19<sup>th</sup> century attempt had resulted in the experimenter bursting a blood vessel in his throat and dying.

<sup>30</sup>[https://en.wikipedia.org/wiki/Tutankhamun%27s\\_trumpets](https://en.wikipedia.org/wiki/Tutankhamun%27s_trumpets) and <https://www.bbc.co.uk/news/world-middle-east-13092827>, last consulted 19 October 2021; *Archaeology by Experiment*, p. 159; *Experimental Archaeology*, pp. 204–5.

as hurdles as used in the Walton Heath (Neolithic) and Eclipse (Bronze Age) trackways.<sup>31</sup> He also tested axes of stone and bronze on a range of native species of wood, to see if different materials produced different traces.

He taught a course in Experimental Archaeology at Cambridge and has described how he would take students outside to try spear-throwing, or to visit West Stow in Suffolk to experiment with hafting stone axes and using them to cut down trees. He also teamed up with Peter Holmes at Middlesex Polytechnic (now Middlesex University, in Hendon, north-west London) to carry out melting and pouring copper and bronze, hammering sheet metal and other activities related to the production of metalwork.<sup>32</sup> He was friends with Peter Reynolds and a great supporter of the Butser Ancient Farm experimental archaeology site which Reynolds founded.

John, in his early article and then in the two books, set out the principles and procedures of experimental archaeology. He pointed out that there are two aspects to the exercise: imitation or reconstruction, and assessment of functional capabilities. He pointed to the difficulty of accurate imitation of ancient technology, given that modern tools and materials are usually different from those used in ancient times, for whatever reason, and that modern experimenters are usually inexperienced and therefore inefficient in production. They are also handicapped by the contemporary cultural environment in which they work. For all these reasons, the various parameters must be strictly controlled. This helps to mitigate the fact that much about ancient technology remains unknowable: he warned against the common problem that many experiments ‘fall within the compass of that damning definition of prehistory, the unwarrantable deduced from the unverifiable’.<sup>33</sup> This salutary reminder cannot be reinforced too often.

### Somerset and wetlands

In 1962 John was taken by Grahame Clark to Somerset to see work that was being carried on in the peat areas, known as the Levels, by a local amateur archaeologist, Stephen Dewar. Dewar was observing the peat-cutting that was taking place on Shapwick Heath and elsewhere on the Levels, and recording features of interest. Clark was interested in the area because various wooden objects, notably bows, had been pulled out over the years, and he had involved Professor Harry Godwin to investigate the palaeoenvironment of the Levels. Following a series of meetings with all those involved, John started work in 1964 on a

<sup>31</sup> J.M. Coles & R.J. Darrah, ‘Experimental investigations in hurdle-making’, *Somerset Levels Papers*, 3 (1977), 32–38.

<sup>32</sup> I was invited to one of these exercises in the 1980s; it left one in awe of the achievements of the Bronze Age metalsmith.

<sup>33</sup> *Experimental archaeology*, p. 6.

wooden trackway known as the Abbot's Way, with small numbers of students from Cambridge and elsewhere. He brought in Alan Hibbert, then also at Cambridge, to cover the environmental material. This resulted in his first paper on the Somerset material, specifically on the Abbot's Way and the Bell Track, both of which produced Neolithic radiocarbon dates.<sup>34</sup> Although the Abbot's Way had been noted and described before, its extent and precise method of construction had not previously been studied in detail. This paper can justly be described as revolutionary in its findings. Clark had realised that the Somerset Levels had great potential, while Godwin had undertaken significant studies of the environmental context of several fragmentary trackways; archaeologists in Lower Saxony in north-west Germany had already published some of their findings.<sup>35</sup> But the 1968 paper includes detailed plans of trackways along with descriptions of the ways in which the planks and posts were fixed in position. A singular find from the Bell Track was a crude hermaphroditic figurine in ash wood, which John called a 'god-dolly', and which remains the earliest such piece from Britain or Ireland.<sup>36</sup>

The 1968 paper was followed by another in 1970 and a third in 1973.<sup>37</sup> In 1973 the Somerset Levels Project was set up, with a small steering group consisting of John, Geoffrey Wainwright, Alan Hibbert and Bryony Orme. In 1975, John and his main collaborator Bryony Orme started a series specifically for publishing the work done by them and their team on the Levels: the *Somerset Levels Papers*, which continued until the final volume (15) in 1989. In these volumes, annual reports of the work in Somerset appeared, along with studies of particular aspects, for instance woodworking, wood species, individual tracks, conservation and so on. The format of the *Papers* was landscape rather than portrait, to enable easier presentation of trackway plans and pollen diagrams. During the 1970s and 1980s large numbers of papers were produced, both in the *Papers* and elsewhere.<sup>38</sup> A book published in 1986 described for a wider audience the history of the Somerset Project, still one of the easiest places to study the overall picture of the Somerset work;<sup>39</sup> other summarising papers and booklets were also produced, and a small museum

<sup>34</sup>J.M. Coles and F.A. Hibbert, 'Prehistoric roads and tracks in Somerset, England: I. Neolithic', *Proc. Prehistoric Soc.*, 34 (1968), 238–258.

<sup>35</sup>H. Hayen, 'Zur Bautechnik und Typologie der vorgeschichtlichen, frühgeschichtlichen und mittelalterlichen hölzernen Moorwege and Moorstrassen', *Oldenburger Jahrbuch*, 56 (1957), 87–189.

<sup>36</sup>J.M. Coles, 'A Neolithic god-dolly from Somerset', *Antiquity*, 42, 275–7; 'Prehistoric roads and tracks I', 256 Fig. 9a-b; B. Coles, 'Anthropomorphic wooden figures from Britain and Ireland', *Proc. Prehistoric Soc.*, 56 (1990), 315–333.

<sup>37</sup>J.M. Coles, F.A. Hibbert & C.F. Clements, 'Prehistoric roads and tracks in Somerset, England: 2. Neolithic', *Proc. Prehistoric Soc.*, 36 (1970), 125–151.

<sup>38</sup>In the final volume of the *Papers* (no. 15), John summarised what they had covered and what the Project had achieved: J.M. Coles, 'The Somerset Levels Project 1973–1989', *Somerset Levels Papers*, 15 (1989), 5–14.

<sup>39</sup>B. & J. Coles, *Sweet Track to Glastonbury. The Somerset Levels in Prehistory* (London, 1986). The volume won the 1986 British Archaeology Book Award.

was set up in a local garden centre. A brief assessment of John's feelings about the success (and potentially the shortcomings) of the Project appears in the last of the *Papers*.

John was not the first to recognise the importance of wooden trackways in Britain or Europe; this study had a history going back to the 19th century, when the Abbot's Way was first recognised, a typical 'corduroy' track composed of planks placed laterally across piles driven into the peat. In Germany trackways had been recognised on the Ipwegermoor near Oldenburg and on other moors in the area,<sup>40</sup> similar things were known from the Netherlands.<sup>41</sup> In Somerset, the work of Arthur Bulleid and (later) Harold St George Gray, starting in the 1890s and culminating in the excavation of the Glastonbury and Meare 'lake villages', was crucial, as were the investigations by Harry Godwin, starting in the 1930s and continuing into the 1960s, when he worked with Clark. John's arrival on the scene led initially to a fuller investigation of the Abbot's Way as well as recognition of other tracks (Viper's, Bell, and the Baker Platform). By 1970 attention turned to a new discovery: the Sweet Track.<sup>42</sup> This remarkable structure, excavated over 12 years, produced not only Neolithic radiocarbon dates but also contemporary artefacts, including a jadeite axe.<sup>43</sup> The construction technique, hitherto unknown, consisted of oblique pegs overlying a longitudinal pole, creating a V shape onto which planks were placed. The wood was predominantly oak and hazel, with ash, willow, holly and smaller amounts of other species. Perhaps most remarkably, tree-ring studies were able to show that the track was constructed in the years 3807–6 BC; with dendrochronology specialists, John and Bryony Coles were able to suggest the dynamics of construction and repair of the track.<sup>44</sup> Continuing John's abiding interest in experimental work, a section of the track was later reconstructed.<sup>45</sup>

This work on the Abbot's Way and the Sweet Track was followed by work on several other trackways, of varying methods of construction. Neolithic tracks were discovered at

<sup>40</sup> See note 37.

<sup>41</sup> W. van Zeist, 'Pollen analytical investigations in the Northern Netherlands, with special reference to archaeology', *Acta Botanica Neerlandica*, 4 (1955), 1–8.

<sup>42</sup> J.M. Coles, F.A. Hibbert & B.J. Orme, 'Prehistoric roads and tracks in Somerset: 3. The Sweet Track', *Proc. Prehistoric Soc.* 39, 1973, 256–293.

<sup>43</sup> J.M. Coles, B. Orme, A.C. Bishop, & A.R. Woolley, 'A jade axe from the Somerset Levels', *Antiquity*, 48 (1974), 216–220.

<sup>44</sup> R.A. Morgan, 'Tree-ring studies in the Somerset Levels: the Sweet Track 1979–1982', *Somerset Levels Papers*, 10 (1984), 46–84; J. Hillam, C.M. Groves, D.M. Brown, M.G.L. Baillie, J.M. Coles & B.J. Coles, 'Dendrochronology of the English Neolithic', *Antiquity*, 64 (1990), 210–220.

<sup>45</sup> J.M. Coles & B.J. Orme, 'A reconstruction of the Sweet Track', *Somerset Levels Papers*, 10 (1984), 107–9. This reconstruction was built at the (then) Peat Moors Visitor Centre. Funding for the Centre from Somerset County Council was withdrawn in 2009; the Centre later reopened under the aegis of Natural England with the name Avalon Marshes Centre. The original reconstruction, along with that of a replica house from the Glastonbury Lake Village, was visible until a few years ago but its remains have now (2021) been entirely removed, its place taken by new reconstructed buildings. Sections of the Sweet Track and Meare Heath Track were constructed by volunteers in 2014 in the nearby woods in Shapwick Heath National Nature Reserve.



Walton Heath and Chilton Heath; at the former, the Garvin's track was of brushwood, while the Eclipse, Walton and Rowland's tracks were constructed from hurdles, each hurdle being 2.2–2.5 m long and 0.7–1.4 m wide, and carefully constructed from hazel rods. These tracks belong to the later Neolithic and the transition to the Bronze Age. Running from Edington Burtle to Westhay Meare Island was the Honeygore Track; while at the eastern end there were two superimposed tracks, dubbed Bell A and B, and a platform, the Baker.

Trackway construction continued into the Bronze Age, and fine examples were the Meare Heath, a plank track with two layers of planks laid at right angles to each other, the Viper's track of planks and brushwood, and a number of small lengths of track in Tinney's Ground (mostly brushwood) and elsewhere. These were mostly built on a wet raised bog, which was later (*c.* 700 BC) the subject of a major flooding episode. The story of track building could thus be followed from the early Neolithic, in the early 4th millennium BC, to the middle of the 1st millennium BC. The Coleses were able, on the basis of these interventions in many places in the Levels, and a large amount of palaeoenvironmental work, to create a model of how settlement and subsistence worked in the area throughout later prehistory.

The really significant thing about John's work on the trackways, most of it with Bryony Coles, is not that they were the first to discover or work on them, but that they created a fully worked out plan of study, which enabled them to place the sites in a context of movement and development across three millennia, with some of the tracks being dated to a specific moment in time which can be compared with what is known of other aspects of life and death in prehistory. Of course this work involved many days and weeks of labour in uncomfortable conditions, urgent journeys across southern England in response to reports of new discoveries, and a determination to rescue whatever could be rescued and preserve, through discussion with peat companies and pressure on the heritage organisations, what could not be examined, even fleetingly. In the last of the *Papers*, John summed up what the original intentions of the Project were, and how they achieved them or pointed to future needs. He specifically mentioned the success of the Project in concentrating on organic materials (principally wood), but also the need for continuing predictive surveys of the sort which he and his team had undertaken.

The other thing to mention is the matter of funding: John's early work was done on a shoestring, but he enlisted the support of Geoffrey Wainwright, Chief Archaeologist for what became English Heritage, who was persuaded of the significance of these and other wetlands in England, and assisted with funding to enable work to be done on a much larger scale.

Separate from the work on trackways was that on the Glastonbury and Meare Lake Villages. Only a small excavation was conducted by the Coleses at the Glastonbury site, but John with Stephen Minnitt (Curator of Archaeology at the Museum of Somerset in

Taunton) undertook a comprehensive review of the well-known publication by Bulleid and Gray, which had led to many re-interpretations in the past.<sup>46</sup> This was amplified in the light of the work at Meare, which included both reconsideration of the work by Bulleid and Gray, a small excavation by Michael Avery in 1966 with trial trenches in 1968–69, and some excavation at both western and eastern sites (Meare consists of two separate sites, the western one published by Bulleid and Gray, the eastern one barely published before the Coleses started work).<sup>47</sup> The publication of the material from the old excavations, amplified by that from their own work, has led to a much better understanding of the nature and date of these important late Iron Age sites, consisting of large numbers of mounds, most of them the site of a round house with clay floor and hearth, many times renewed.

John and his team excavated at Meare in 1979 and 1984 (West site) and 1982 (East site), with a long trench between the two sites in 1984 to investigate what lay between them (in essence nothing). Understanding of the West site, where John excavated some 300 m<sup>2</sup>, essentially has to follow from the detailed work they did on the East site and the Glastonbury site; the same problems are basically present with all the Bulleid and Gray sites, as John made clear.

For the Meare East site, where John excavated only 150 m<sup>2</sup>, he undertook an enormously detailed and laborious examination of the old Day Books, sketches and pencil drawings, catalogue of finds, and interim reports, along with the interim report of Michael Avery, combined with the new material from the Somerset Levels Project's work between 1979 and 1986. A detailed account of the 51 mounds was thus produced, with plans and section drawings of most. John was then able to indicate a sequence of deposits on the site, specifying the context of the mounds, with clay floors, ash spreads, hearths and so on. A catalogue of all known finds followed, with specialist reports on glass, pottery, plant remains, animal bones and other biological material. It is the summary and assessment (Chapter 7 of the 1987 report) that gives the most detailed account of John's thinking about the site.

Glastonbury is somewhat different from Meare, both in its archaeological survival and its location: the Meare villages were on the edge of the raised bog, arguably a more difficult location than Glastonbury. For Glastonbury, Coles and Minnitt described the difficulties in

<sup>46</sup>A. Bulleid & H. St George Gray, *The Glastonbury Lake Village*, 2 vols (Glastonbury, 1911, 1917); *Sweet Track to Glastonbury*, 156–171; J.M. Coles, B.J. Coles & R.A. Morgan, 'Excavations at the Glastonbury Lake Village 1984', *Somerset Levels Papers*, 14 (1988), 57–62; J. Coles & S. Minnitt, 'Industrious and fairly civilized': *The Glastonbury Lake Village* (Taunton, 1995).

<sup>47</sup>A. Bulleid & G. St George Gray, *The Meare Lake Village*, 3 vols (Taunton, 1948–1966) [this is the West site]; J.M. Coles, *Meare Village East: The Excavations of A. Bulleid and H. St George Gray, 1932–1956*. *Somerset Levels Papers*, 13, 1987; B.J. Coles, S.E. Rouillard & C. Backway, 'The 1984 excavations at Meare', *Somerset Levels Papers*, 12 (1986), 30–57; M. Avery, 'Excavations at Meare East 1966. An interim report and discussion', *Proc. Somerset Archaeol. and Nat. Hist. Soc.*, 112 (1968), 21–39. Interim accounts of the excavations by Gray on the East site appeared in *Proc. Somerset Archaeol. and Nat. Hist. Soc.* between 1933 and 1956–7.

marrying accounts of excavations conducted in the late 19th and early 20th centuries with the available field and artefactual data; in particular the very varied quality of the excavation and recording themselves. In spite of these difficulties, they succeeded in tying in most artefacts to the mounds they came from and in giving a description of each mound, based on what Arthur Bulleid wrote in his 1911 book, supplemented by his notebooks and plans. The structure of the mounds was then examined, based on the plans and section drawings which Bulleid made; they succeeded in producing believable plans of several house-mounds, along with their history of repeated floor and hearth construction. What is more, their examination of the stratigraphy thus revealed showed that there were four phases of occupation on the site, increasing in density from the Early (6 houses, 15 spreads) to the Final, with a *floruit* in the Late (third) Phase when almost every mound was utilised (13 houses, 57 spreads, 6 shelters, and a causeway). But they stress that these are only 'moments' in the life of the settlement, and that not all the structures of any one phase were in use at the same time. The plans that they produced, however, are a very remarkable outcome of their endeavours.<sup>48</sup>

Coles and Minnitt then considered the various models that had been advanced over the years for the form and function of the site. Particular attention was paid to a well-known attempt by David Clarke to understand the nature of the site.<sup>49</sup> The assessment of this model was polite but in the end the critique was scathing: Clarke did not know the material at first hand and evidently misunderstood many of the details presented in the original reports. One remark may illustrate the problem: Fig. 7.1 in their account reproduces Clarke's idea of 'modular units' on the site (his Fig. 21.1), with this caption: 'Clarke's modular unit, in theory. Nothing on the site fits this scheme'.

Coles and Minnitt present their view of the significance and nature of the Glastonbury site following this critique. The basic problem, of course, lies in the inadequacy of the original report, and the previous lack of environmental evidence on which to base an assessment of the situation of the site in its landscape. On the basis of the work done by them and their collaborators, the site can now be seen to have lain in a tree swamp or fen carr, so that it was a 'swamp village' rather than a lake village. A raised bog lay to the west, and reed swamp, sedge fen, fen carr and open water to the east. The landscape was thus viewed as 'concave', the site surrounded by wet ground, and with the arable and pasture areas, and woodland, on the higher ground a little further away.

At the end of the day, the reasons for the establishment of these villages on wet ground is puzzling, given that dry ground is available a few kilometres to the north and the south. They are also rich in artefacts, evidently having access to a range of resources, human and

<sup>48</sup> *Industrious*, Figs 4.9–4.12.

<sup>49</sup> D.L. Clarke, 'A provisional model of an Iron Age society and its settlement system', in *Models in Archaeology*, ed. D.L. Clarke (London, 1972), pp. 801–869.

other. The sites are not defended, though their wet location might have served as a deterrent to hostile incursion. One suggestion that Coles and Minnitt put forward is that they may have served as seasonal markets, at or near the boundaries between different tribal groupings (the Durotriges in Wessex, the Dobunni in the Severn-Cotswold area, and not far away the Dumnonii in south-west England).<sup>50</sup>

### Other wetland interests

The work in Somerset led to invitations to get involved with wetland archaeology in other areas of Britain, and to advise on similar situations in other countries, notably Ireland. The support of Geoffrey Wainwright was crucial in getting projects started in several parts of England in the following years. John was involved in the Fenland Survey from the beginning, when in 1975 meetings of a committee of which he was chairman discussed threats to archaeology in the area around the Wash, principally the counties of Cambridgeshire, Norfolk and Lincolnshire; as a consequence a Field Officer post was established to undertake a preliminary survey of the Cambridgeshire fens. Initial work soon demonstrated the nature of the threat, as a result of which the Fenland Project was established, funded by the Department of the Environment, later English Heritage, and chaired by John. It concentrated on survey work rather than excavation; John himself acted as advisor rather than fieldworker (he was fully engaged in Somerset at the time) though he did conduct one excavation.<sup>51</sup> The impressive results of this initiative were demonstrated by the end publication of the project in 1994, a book of which around half was written by John.<sup>52</sup> His contribution consisted of a chronological survey of patterns of settlement across the Fenlands, with chapters on the Palaeolithic and Mesolithic, the Neolithic, and the Bronze Age. Put like that, this does not sound a very demanding task, but in fact these chapters are highly detailed, taking into account not just important recent excavations such as those by Francis Pryor at Flag Fen and Ian Hodder at Haddenham, but also older work by Grahame Clark and others. Each chapter is rounded off with a review of the sites in their environmental context, and an overview of the character of settlement in each period. David Hall covered the Iron Age, Roman and medieval periods. John then provided a summary chapter, 'Reflections', which brings together the outcomes of the whole project.

The project identified hundreds of sites, many not previously known; John pointed to particular areas of great potential, where both more fieldwork and preservation measures

<sup>50</sup>The archive of the Somerset Levels Project is held by the South West Heritage Trust in Norton Fitzwarren near Taunton.

<sup>51</sup>J.M. Coles, B. Orme, J. May & N. Moore, 'Excavations of Late Bronze or Iron Age date at Washingborough Fen', *Lincs History and Archaeology*, 14 (1979), 5–10.

<sup>52</sup>D. Hall & J. Coles, *Fenland Survey. An essay in landscape and persistence* (Swindon, 1994).

should be considered. He enjoyed introducing quirky features into his writing, and his account of the ‘fen slodgers’ is a classic example; these were fenland inhabitants who lived by catching birds and their eggs, and taking reeds and rushes, as well as wood, for their subsistence – often contrary to the law. The precarious life of these traditional inhabitants of the fens is sketched, showing us that not everything can or should be reduced to emotionless scientific fact.

The Fenland Survey was succeeded by the Fenland Evaluation Project, which produced a dossier of sites, 148 of which were presented to English Heritage as being of particular importance. Overall, the Fenland work was a remarkable achievement on the part of many people; John Coles acted as stimulator rather than primary researcher, but whether the project could have happened without him is an interesting question.

He helped to set up, and advised, a number of other projects, for instance the Humber Wetlands Project (based in Hull and Exeter), the North-West Wetlands Project (Lancaster), and the Severn Estuary Levels Research Committee (from 1985). His encouragement led to the formation of the Scottish Wetland Archaeology Programme in 1998.

### **Ireland<sup>53</sup>**

John’s involvement in Irish wetlands predates the development of the discipline in Ireland, as underscored by his short but impactful 1984 article ‘Irish Bogs: the time is now’.<sup>54</sup> His existing friendship with Professor Barry Raftery also played an important role when soon afterwards Raftery was drawn into peatland excavations with the discovery of the Iron Age road at Corlea. John was an adviser and supporter from the outset and the work of the Somerset team was a ready reference as the Irish programme developed. The Coleses visited on a number of occasions and shared their experience and publications.

In 1988 they led an application to the European Science Foundation that brought together teams of young graduates from Exeter, Dublin, Leiden and Aarhus to work and train in wetland archaeology and host exchange visits.

In the late 1980s Barry Raftery campaigned for the establishment of a systematic national survey of industrial peatlands. It led to the formation of the Irish Archaeological Wetland Unit (IAWU), which ran from 1990 to 2005. Even though John was not directly involved with the IAWU, the case studies and bodies of literature from Somerset provided ongoing standards on which to draw. Initially the state funded surveys by the IAWU, but later (1998 onward) the state peat company, Bord na Móna (BnM), reluctantly accepted

<sup>53</sup>I am grateful to Conor McDermott (University College Dublin) for information on this section; with his permission, several of the paragraphs have been adopted from his email of 18 November 2021 more or less unchanged.

<sup>54</sup>*North Munster Antiq J.*, 26 (1984), 3–7.

responsibility for a degree of mitigation through excavation. Later the funding of both survey and excavation was transferred to BnM. John was a member of the Directorate of the Discovery Programme in the 1990s. Earlier he had served as external examiner for the National University of Ireland, working with colleagues in Dublin, Cork and Galway.

One of John's last major roles in Ireland was in 2001 when he was commissioned by *Dúchas* The Heritage Service (the state heritage organisation at the time) to undertake 'An Evaluation of Current Peatland Survey and Excavation Strategy'. This provided a frank and comprehensive review of what had been achieved to date and what remained to be done, with recommendations on future strategy and practice. While not all of these were adopted, there is no doubt that John's Somerset work and wide experience of wetland archaeology throughout the world had a major impact on the situation in Ireland, both in the field and in the classroom.

In 2005 he was elected a member of the Royal Irish Academy. More recently he donated his archive of material on experimental archaeology to the Department of Archaeology at University College Dublin, which is active in the field and runs graduate programmes in the subject. John was also a strong supporter of the magazine *Archaeology Ireland*.

## Poland

In Poland, John was in regular touch with Wojciech Piotrowski and the team at the Early Iron Age site of Biskupin, well known for its very well preserved wooden structures, and made several visits there. In 1989 he was asked to become a consultant on wetland matters to the project (which at the time was a part of the State Archaeological Museum in Warsaw). In 1991 he was invited for a longer trip, with Bryony, and advised on the setting up of monitoring tubes on the site, as well as visiting other wetland sites in the area, such as Izdebnó, and other parts of Poland, notably Masuria, including the extensive swampy bog area of the Biebrza river basin, and the towns of Łomża and Nowogród on the river Narew and Ciechanowiec on the river Bug, in the east of the country. In 1997 the Coleses were guests of honour at the third Biskupin Archaeological Festival, where John delivered a keynote paper on the problems of wetland archaeology across the world.<sup>55</sup> His last trip to Biskupin was in 2007, at a conference to honour the memory and academic legacy of Grahame Clark. He delivered a paper about Clark and his work, and with Arkadiusz Marciniak edited a volume of the proceedings.<sup>56</sup> A nice spin-off from his Polish connection occurred at the conference in his honour held in Exeter in 1997, when Piotrowski and his

<sup>55</sup>J.M. Coles, 'Wetland archaeology in the 20th century: history and commentary', *Archaeologia Polona*, 35–36 (1997–98), 287–317.

<sup>56</sup>A. Marciniak & J. Coles (eds), *Grahame Clark and his Legacy* (Newcastle upon Tyne, 2010).



Biskupin colleague Wiesław Zajączkowski presented him with a replica Bronze Age sword, to his amazement and pleasure, and the delight of the assembled company.

The Coleses travelled widely as a result of their wetland expertise. In this, the formation of the Wetland Archaeology Research Project (WARP), based in Exeter, was very important, as its newsletter NewsWARP and its regular conferences began to be influential around the world. John was frequently invited to lecture on wetland archaeology, for instance in Florida, in both the US and Canada on the north-west coast of America, and in Japan. Several of these locations later hosted WARP conferences. NewsWARP morphed into the *Journal of Wetland Archaeology*, a respected journal with a wide circulation;<sup>57</sup> John often contributed pieces to NewsWARP.

### Rock art and Sweden

As early as the 1960s, John became interested in the rock art that is abundant on the glacially polished rocks of Scandinavia, above all in Sweden but also in parts of Norway and on erratic boulders in Denmark. This interest was part of his lifelong enthusiasm for ancient art, and was stimulated by his long-standing friendship with Bo Gräslund from Uppsala University, whom he knew through his earlier shield studies, and who went with him to some of the locations in Uppland where the art panels occur. The interest had to remain latent while Somerset was his top priority, but even during that period he visited the rock art sites of Scandinavia frequently, including all the major carving areas, and certain ones many times.<sup>58</sup> Much had been written about the art, over many decades, but John soon realised that the published accounts concentrated on the most accessible and obvious art panels, the depictions of which were often unreliable, whereas large numbers lay in inaccessible spots and were unknown to scholars. Thus began a series of visits to Sweden, both the west coast (above all Bohuslän where the most famous sites lie), the east (the province of Uppland), and less frequently the south. These trips were essentially working holidays, undertaken on minimal budgets.<sup>59</sup> Together with Gräslund, and often with Bryony Coles and/or Stephen Minnitt, John would decide on an area to explore on the basis of existing surveys, and set off with recording materials into the meadows and forests, inspecting any rock outcrop they came across. By this low-tech method, large numbers of

<sup>57</sup> Now published by Taylor and Francis; the latest number is 20 (2020).

<sup>58</sup> J. Coles, 'A conflict of opinions. Rock carving in Sweden 2003', *J. Nordic Archaeological Science*, 14 (2004), 5–12.

<sup>59</sup> Coles did sometimes apply for funding from the British Academy, in the days when its Small Grants scheme was a welcome source of funding for many scholars; these applications were often successful, though the amounts requested were invariably small.

new sites were discovered, and their location and character made known to the local heritage authorities (notably the rock art museum at Tanum and the Swedish Rock Art Research Archive in the University of Gothenburg).<sup>60</sup> John donated all his rock art documentation to the ATA Archive at the National Board of Antiquities in Stockholm. As well as studying the panels for their content and artistic merit, John was concerned, as he had been with endangered wetland areas, to draw attention to the ways in which some of them were suffering from agricultural and industrial activity, as well as natural processes, for instance acid rain.<sup>61</sup>

Tracings of the art were produced through a range of techniques. Various methods had been used over the years, the most intrusive of which was that of painting the motifs with red paint; the art was thus spectacularly revealed but the method was potentially destructive since as the paint wore away, the rock surface might come away with it; and it was certainly inaccurate, in that it only showed the most obvious and easily defined images as one particular observer saw them at one particular time. Early methods involved simple sketching; later, scholars attempted tracing or rubbing, in both cases by laying soft paper over the rock and attempting to produce an image of the underlying art on the paper. In John's work, the first step was to clean the rock surface using a soft brush, and to set up a gridded recording framework. Images might be highlighted using white chalk and planned using a 1m grid; or they might be rubbed onto 60 g paper using grass or carbon. In all cases the plans were supplemented by photographs. John was at pains to stress that much recording is subjective, and needs to be done in optimal lighting conditions, such as low sunlight or, in some instances, dampness, and that repeated viewings are essential.<sup>62</sup>

The task of making some sort of sense of all these images was, and is, a daunting one. Previous scholars, for instance Mats Malmer, had attempted to categorise the motifs,<sup>63</sup> and in his first Bohuslän guide book (1990) John did the same, listing thirteen groups of images and giving a rough count of their frequency. Cup marks are by far the most common in the 40,000 plus images known (something in excess of 27,000); of the figurative images the ship is particularly common, and thereby particularly interesting. More detail was added in his later, more lengthy, discussions.

What was it all about? That simple question belies the baffling nature of the art. As John headed a chapter in *Shadows*, the images represent a 'complex simplicity'. At first

<sup>60</sup>As well as many articles presenting individual sites, or the problems of survival and recording, two major books were published in the 2000s: *Patterns in a Rocky Land. Rock Carvings in South-West Uppland, Sweden* (Uppsala, 2000), and *Shadows of a Northern Past: Rock Carvings of Bohuslän and Østfold* (Oxford, 2005). Two smaller guidebooks to the art in the east and the west appeared in the 1990s: *Images of the Past: A guide to the rock carvings and other ancient monuments of Northern Bohuslän* (Vitlycke, 1990), and *Rock Carvings of Uppland: A guide* (Uppsala, 1994).

<sup>61</sup>J. Coles, 'The dying rocks', *Tor*, 24 (1992), 65–85.

<sup>62</sup>Discussions of the techniques were presented in *Patterns* pp. 14–24 and *Shadows* p. 5.

<sup>63</sup>M. Malmer, *A Chorological Study of North European Art* (Stockholm, 1981).

glance the images appear unstructured, with the same motif repeated many times over and placed randomly. The technique is simple, and the approach ‘minimalist’, in that the lines of each motif are simply and economically drawn. But John points out that the subjects are restricted and controlled, with strict parameters beyond which the artists did not stray.<sup>64</sup> The production was ‘linear’, based on lines created by pecking, sometimes enhanced by grinding; and the lines can be shown to proceed from those creating a basic shape to those designed to enhance the representation of particular motifs. The method of depicting motifs depends on the subject matter: side view for birds, animals and boats, front view for humans, top views for feet or footprints, known as ‘footsoles’. The degree to which motifs are conceived as part of a unified piece of art has been much discussed; John was able to show that some complex motifs can only have been created as a group, such as the ‘processions’ of human figures, or the ‘stacks of boats’, seen on some panels.<sup>65</sup> Equally important is whether or not a given set of panels were intended to be viewed or experienced together, or as different experiences depending on time and context. It is also the case that panels must have been intended to be viewed from certain viewpoints, e.g. below or above the panel, and at different times of day and night.

Another vital question to be asked is the timescale over which panels were created, in particular the extent to which one can observe chronological depth in them, and evidence of palimpsests. This bears too on the question of whether one or many artists were involved in the work, and the length of time over which they were intended to be used and visible. None of these matters is straightforward, given the medium on which the art is created, and the techniques of creating it.

The other aspect relates to the landscape setting of the art panels, which, as a consequence of isostatic uplift, can be shown originally to have frequently, if not always, lain within sight of water or close to the shoreline.<sup>66</sup> Concentrations of art panels, when not just the consequence of especially active fieldworkers in particular areas, may reflect the importance of special areas that were thus marked out by an abundance of art – particularly true with parts of Bohuslän. These ‘major catchments’, as John dubbed them, occur in places such as Tanum, Kville or Vitlycke, with art panels widely found across landscapes of around 4–5 km<sup>2</sup>. In addition, what John calls ‘minor catchments’ show smaller groupings in particular locations, stretching in a line only a few tens of metres long. Pointing out that with sea level change, conditions around bays and inlets must have sometimes been challenging, John allowed himself a moment of unusual subjectivity: ‘This was perhaps exactly the place for such an outpouring of emotion in the rocks, to mark the transient

<sup>64</sup> *Shadows*, p. 15.

<sup>65</sup> J. Coles, ‘And on they went ... processions in Swedish Bronze Age rock carvings’, *Acta Archaeologica*, 74 (2003), 211–250; ‘Bronze Age rock carvings at Häljesta, Västmanland, Sweden: domination by isolation’, *Germania*, 79 (2001), 237–271. These matters are also discussed in *Shadows*.

<sup>66</sup> *Shadows*, pp. 100–103.

nature of the land and the sea and to ensure that the ideology expressed on the rocks was captured by the landscape itself, inaccessible to the flow of normality over the drylands and the deep waters'.<sup>67</sup>

Finally John asked himself, and us, what is 'the meaning of it all, or nothing'? 'Can we rely upon a wider scene, an archaeological landscape, as representing a reliable reality?', he asked in the concluding chapter of *Shadows of a Northern Past*.<sup>68</sup> He identifies four areas of life surrounding the art: the story or idea or belief; the griot, holder of ancestral voices and interpreter of traditions; the artist-craftsperson who was empowered to transform the rock surface; and the viewers or onlookers, for whom the art represented a means of consolidation of community and cohesion against seen and unseen forces. The motifs obviously had a meaning, though it may have changed with time and context. A motif meant something in itself, but also reflected an association, for instance with boats or particular humans. Figures with arms and armour seem to be involved in some kind of fighting; boats suggest the importance of water-borne movement; animals suggest subsistence. Given the other evidence for remarkable social and economic developments in Scandinavia during the period over which the art was created, it would not be surprising to find indications of long-distance contact as represented by images that reflected those found in distant lands to the south.

Unusually for John, he finished his discussion of the art with a 'traveller's tale', a fictitious and personalised account of a lone traveller who brought back stories of distant lands and places. This was a special person, distinct from his home group. He visited wonderful places in southern lands where stone monuments and temples were erected, where people worked with little tangible reward to quarry stone to build, and to create statues and sculptures. He returned home to find the difficult situation of the sea withdrawing, creating mudflats where boats could not be launched, and where artists would work to create designs on rock panels. He might tell tales of his journeys and the battles and displays he had seen; his tales would enhance his standing in his native land, and enable him to create new concepts of expression, even new images, which might get transferred into the local art, and encourage the local people to 'absorb new ideas, and develop their own concepts of behaviour and belief'.

'Whether', he mused, 'anyone will wish to accept such an explanation seems quite unlikely to me'. But the rock art attests to an indigenous origin and the emergence, over centuries, of thought and belief systems. 'The fundamental concerns and their symbolic representation on the rocks came to be firmly established in the social consciences and behavioural patterns of the many small congregations of people ... their expressions of desire and commemoration on the rocks were unwavering and were not deflected by

<sup>67</sup> *Shadows*, p. 117.

<sup>68</sup> *Shadows*, p. 120.

external ideologies and imagery ... their symbols are those we now encounter on the rocks, a record of endeavour and strongly-held beliefs, now reduced to shadows of a northern past.<sup>69</sup> These words conclude John's last single-authored book, a remarkable study of a remarkable phenomenon; and a rare excursus into a style of writing that ventured into the subjective and the imaginary.

### Personal qualities and appreciation

In his Scottish sojourn, through tennis John met Mona Shiach, a schoolteacher. They married in December 1958 and had four children, born 1959–1966. The marriage ended in divorce, and in 1985 he married his long-time collaborator Bryony Orme (Bryony Coles FBA), with whom he published many articles and several books.

He was elected a Fellow of the British Academy in 1978, and in 1995 he received its Grahame Clark Medal. This was one of many distinctions he received: he was awarded the gold medals of the Society of Antiquaries of London (2000) and of the Swedish Royal Academy of Letters, History and Antiquities (2009), presented to him by the King. He was awarded an honorary doctorate by Uppsala University (1997). He won the European Archaeological Heritage Prize of the European Association of Archaeologists in 2006, being nominated for his work on wetland archaeology.

He served on many national committees, notably as a commissioner for the Royal Commission on the Ancient and Historical Monuments of Scotland; he was an adviser to the Heritage Lottery Fund, on its Historic Buildings and Land expert panel, from when it was established in 1994 until 2004. His notes from the work on that panel show how seriously he took the tasks, and the considerable lengths to which he went to master the sometimes complex briefs involved. He was President of the Prehistoric Society from 1978 to 1982, having served as its editor for many years previously. He was a member of the working group which resulted in the formation of the Institute for Field Archaeologists in 1982 (now the Chartered Institute for Archaeologists). He and Bryony set up the John and Bryony Coles Bursary, established in 1998 and administered through the Prehistoric Society, to fund student members of the Society to undertake foreign travel to deepen their understanding of prehistoric archaeology through fieldwork, museum study or site visits. In 2007 he established the British Academy's Medal for Landscape Archaeology.

As a man he was kind, witty, discreet to a fault, and highly amusing company. He was well read and well travelled; he was a book collector, and with Bryony regularly went to visit second-hand bookshops, especially in Hay on Wye. They had no television; they read and they listened to the radio. Their home in Devon is quite isolated, but they knew all their

<sup>69</sup> *Shadows*, p. 128.

neighbours and took part in a range of local activities. They were frequent visitors to John's children in different parts of Britain, or received them at their home.

It is less easy to assign John a particular place in the firmament of major archaeologists in the second half of the 20th century. He was a man of many talents. He was essentially a practical archaeologist. He was perfectly familiar with the theoretical trends that emerged during his career, but he saw them as a means to an end, not an end in themselves. He did not write purely theoretical articles, divorced from the reality of practical work, though he did write about the theoretical underpinnings of, for example, experimental archaeology, and he was well aware of what might be called ideological or cosmological aspects of rock art (in the sense of experiencing the world as the creators of the art did). Indeed, two of the poems that he wrote reflect respectively the view of the carver and the view of the archaeologist observing the art. In 1989 he wrote: 'If the word theory hardly figures on the printed pages of the *Papers*, it is because theory and practice were merged from the first in such a way that they are bidirectionally evolutionary and individually indistinguishable, or so we believe' – a clear statement of where, in his opinion, the true tasks of archaeology lie.<sup>70</sup> In this, his work stands out from that of other big names in 20th-century archaeology; he was essentially an empiricist. He never engaged with 'big theory' as practised by other big names, including some he taught in Cambridge; indeed, if anything he could be disdainful of their approach which can seem arrogant and intolerant of the more practical side of the discipline. He had a great capacity for assimilating information at great speed (witness the breadth of reading evident in his articles) and obviously chose not to go down the theoretical path.<sup>71</sup>

The practical nature of his approach can be illustrated by two simple things: first, when he needed slides for his teaching in Cambridge, rather than waiting for the wheels of departmental bureaucracy to grind slowly into action, he used a photographic stand on which to mount a camera, and simply photographed the images from books and articles that he needed, sending the film off to a company that offered a rapid return of the resulting slides. Second, he had a drawing board and set of pens in his office, and was able to produce rapid but accurate drawings of the plans and other images that he needed for his publications. Simple things, and involving him in work and expense that could have been left to others, but ones that meant he had the results he needed straightaway and in the form he wanted.

<sup>70</sup> *Papers*, 15 (1989), 13.

<sup>71</sup> Many of those he taught went on to successful careers in archaeology; some are Fellows of the Academy. The best-known of his former students is undoubtedly HRH the Prince of Wales; in *Yesterday's Man* (pp. 74–79) John amusingly describes a trip to France in 1968 with Prince Charles and Glyn Daniel to visit the painted caves of the Dordogne and the megalithic monuments of Brittany.



John was a remarkable man, versatile, industrious, thorough, and much loved by those with whom he worked and those whom he taught or advised. He achieved a huge amount through diligence and hard work, never by bullying or unduly forceful behaviour. He could be single-minded in achieving his aims, but always showing by example how things could and should be done. It was to this aspect of his character that Bo Gräslund alluded when, in the opening talk at the 1997 conference in his honour, he remarked: ‘John is like a never-ending eruption of new publications and achievements. I bet he finished a fresh article this morning’; and later in the piece: ‘Since John has never followed any trends just because they are new, he will never be untrendy. His works are based on so much professionalism, wisdom, experience, intelligence, methodological insight and awareness of the conditions and possibilities of archaeology, that when the archaeology of our time is looked back on in retrospect some hundred years ahead, he will be one of the few who will still be reckoned with and whose influence will still be felt’. And he finished with these words describing John’s approach: ‘Don’t wait, do things now, do it yourself, do it cheap, do it simple, do it thoroughly and do it well’.<sup>72</sup> These words perfectly encapsulate the approach to life and work that John Coles took, and which made him such a dominant presence in the fields in which he worked.

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<sup>72</sup>B. Gräslund, ‘Introductory address’, in *Experiment and Design*, p. x.

