



Additional possible finds of flint implements at Kirkhead Cavern, and the legacy of excavations by the Lancaster Cavern and Mine Research Society

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Abstract: Details of the known history of archaeological excavations at Kirkhead Cavern in Cumbria, UK, are presented and reviewed, together with brief considerations of the interpretation and significance of the outcomes of the early investigations by members of the Lancaster Cavern and Mine Research Society. Artefacts unearthed during the early digging are described broadly, and considered in their stratigraphical context, alongside the results of limited isotopic dating of material recovered from the site, leading to a conclusion that the chronostratigraphical record extends back at least as far as the Palaeolithic. Additionally, two newly rediscovered flint flakes, previously collected at the site, are described, discussed and illustrated.

Keywords: Chronostratigraphy; Holocene; Late Pleistocene; Mesolithic; Palaeolithic; stalagmite.

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Background and History

This well-known archaeological site near Grange-over-Sands, Cumbria (British National Grid Reference: SD 39100 75660), situated on the western side of Kirkhead Hill near Kents Bank, had seen the attention of local antiquarians in the 1850s and 1860s when a variety of metal and bone artefacts along with human and animal bones were recovered. Finds were dispersed and accounts are difficult to reconcile. During these early excavations recovery of a flint flake embedded in stalagmite from a depth of seven feet is mentioned by Wood *et al.* (1969) though no source for this comment could be found in the references given (Barber 1868, Morris 1868, Bolton 1869, pp166–168). Unfortunately, the materials from these early excavations have been dispersed and lost. Subsequently, around 1920, the site was also subject to the attentions of the North Lonsdale Field Club (Smith, 2012).

The Lancaster Cave and Mine Research Society (LCMRS) was founded on 22 March 1967 with the intention of providing much-needed clarity and structure to cave exploration and recording in the Morecambe Bay region. This society intended to avoid acquiring a purely sporting-caver image but to have a more scientific, archaeological and exploratory approach, and thus began a programme of investigations into the mines, caves and karst features of the area (Murphy and Moseley, 2020 a, b). LCMRS work at Kirkhead Cavern started in 1968, and it was decided that the cave should be the site of the Society's annual excavation. This decision was prompted partly by a statement made by J W Jackson in his earlier report on the finds, that the work at the site had not been completed (Jackson, 1910).

The first published report on the LCMRS activities (Wood *et al.*, 1969) covers the annual excavations of both 1968 and 1969, though the final report states that excavation commenced in 1969 and continued for four years (Anon, 1980). The cave consists of a single chamber that has now largely been cleared of fill (Smith, 2012). The first activity was to excavate a trench across the centre of the chamber, 11 feet six inches (*c.* 3.5m) wide by two feet nine inches (*c.* 0.85m) long, which was labelled Trench B. No finds were recovered from this trench, but it did enable an understanding of the stratigraphy, which was interpreted in the context of the Late Pleistocene and Holocene record as understood at the time. Towards the end of the week's activities, interest moved to the southeastern corner of the chamber where Trench A was excavated (Fig.1). The main finds in Trench A were nine flint implements in the layer below a stalagmite floor. These were interpreted typologically as either Mesolithic or Palaeolithic with suggestions of a likely Palaeolithic origin for one of the tools (Mellars, 1969). The potential to provide more conclusive evidence for Palaeolithic occupation in North-West England drove much of the future LCMRS activity at the site.

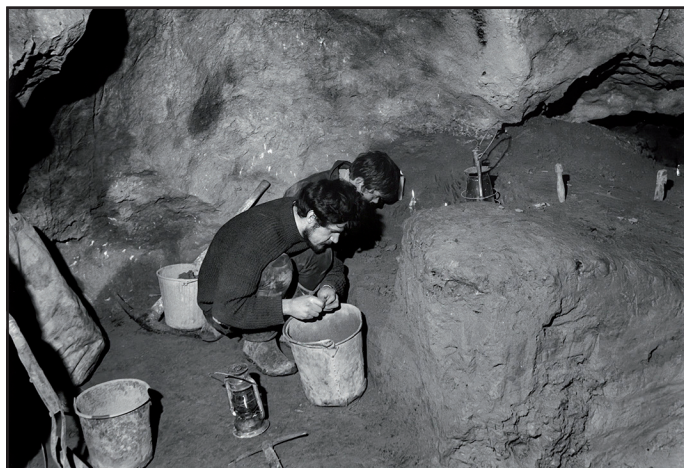


Figure 1: Photograph labelled "Flint Location Epi-Palaeolithic Floor Kirkhead Cavern 69 P Ashmead and Assistant." This is believed to be taken looking southward into Trench A. [From the Ashmead Collection.]

The next phase of work was focussed mainly on deposits beneath the overhanging wall outside the cave entrance. Here a further trench (C) was excavated (Ashmead and Wood, 1974). The sequence incorporated a cemented layer of angular and waterworn stones. Eleven flint implements and two tiny fragments of flint were recovered from a thin layer of red earth below the cemented layer. These were judged to be of a similar type to those from inside the cave. The flints were found in a group with no other signs of occupation, as were the flints from within the cave. Several finds were made elsewhere in the cave, including a whetstone cemented to the underside of a stalagmite floor along with fragments of charcoal, a further flint implement from Trench A (similar to the nine already recovered) and an amber bead on the surface. The flints from Trench C and the single flint recovered from Trench A during the 1970/1971 excavations are pictured by Ashmead and Wood (1974). Photographs of flint implements from Kirkhead Cavern are reproduced as Figures 1 and 2 by Murphy (2019). These are presumed to be those recovered from Trench A but, unfortunately, hardly any explanatory labelling accompanied the photographs. This suggests that the finds described here might be from another, unrecorded, occurrence in the cave. A collection of flints is on display in the Lancaster City Museum, labelled as being from Kirkhead. The assemblage contains examples from both Ashmead and Wood (1974) and Murphy (2019). A detailed cross-section of the deposits was constructed wherein the flints-containing layers, both within and outside the cave, were interpreted as being of equivalent age.

Partly as a result of the untimely death of Peter Ashmead on 02 June 1977, the activities of the Society dwindled. Work was still undertaken at the site, and the final report on excavations was dated 06 May 1980. Several samples preserved in the Ashmead Archive are dated 1981, indicating that some work continued right up until the final days of the Society's existence. Vandalism is given as the reason for the final closure of the work at the site (Anon, 1980).

The soft and porous stalagmite layer in trenches A and B was considered to correlate with the cemented layer from Trench C. A segment of deer antler impregnated with calcite, reported as being found partially embedded in the stalagmite layer, was subjected to radiocarbon dating at Harwell in 1975. The resulting date was 10,700 years BP $\pm$ 200 (HAR – 1059 uncorrected), though this work was undertaken before the development of modern techniques such as ultrafiltration, when analytical technology and calibration were still relatively primitive. Several letters in the Ashmead Archive refer to the antler as having been identified as Irish Elk (*Megaloceros giganteus*) by J W Jackson, though no formal record of this identification has been found.

A later study (Gale *et al.*, 1984, 1985) on the stratigraphy of the site proved rather controversial (Salisbury, 1986; Tipping, 1986; Gale and Hunt, 1990). The preceding work undertaken by the LCMRS was pivotal to the discussions around this study. One issue was confusion over the position of the antler – mentioned above – that was subjected to carbon dating. The excavation report states that it was partially embedded in the stalagmite floor (Wood *et al.*, 1969, p.21) whereas, when sent for dating, its position was described on the dating certificate as being “*from beneath a stalagmite level ...*”. A further reference gave its position as “*...resting on a tufaceous deposit*” (Ashmead, 1970). The confusion concerning the contradictory details of the location of the dated antler sample undermined its value in constraining the stratigraphy, and fuelled debate about the chronostratigraphy of the site. Nevertheless, it did show that, beneath the stalagmite layer, the cave contains deposits of considerable antiquity, which included the layers that had contained the flint implements. Stalagmite floors occur in a similar stratigraphical position at other cave sites across the area, and uranium-series dating of such a stalagmite floor from a cave near Silverdale indicates that speleothem deposition occurred between 13,567 to 8539 years BP (Murphy and Moseley, 2020).

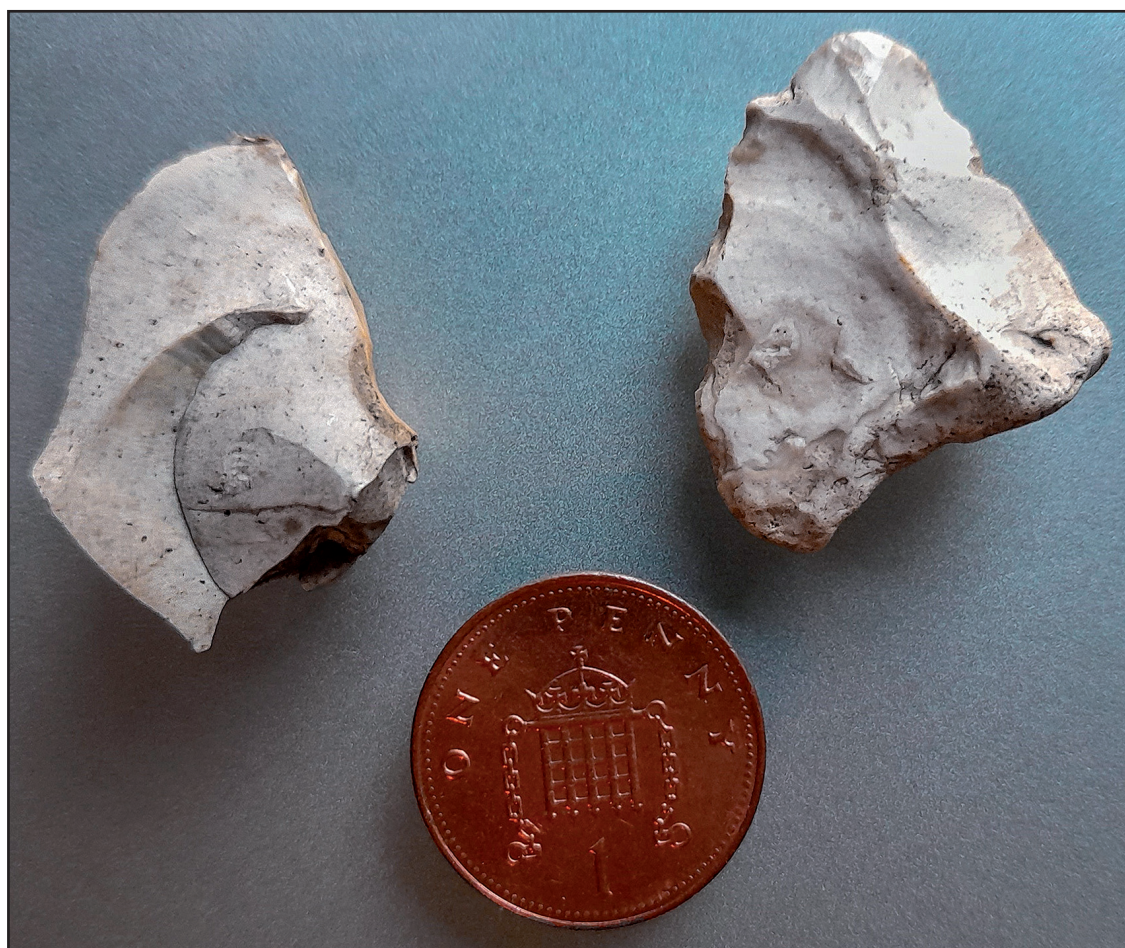


Figure 2:
Flints 1 and 2 (as numbered and described in the present text.

When looking at the page, Flint 1 is on the right, with Flint 2 on the left.

A 2007 UK 1 (new) penny coin (diameter = 20.3mm) is included as a guide to the sizes of the flints.

Excavated materials, including several flint implements from within the cave, from the LCMRS digs have been accessioned into the collection of Lancaster City Museum. The excavations in the floor of the cave have since been infilled with gravel in an attempt to preserve the remaining stratigraphy (Turnbull, 1991).

As a result of work being undertaken to ensure the preservation of the legacy from Kirkhead Cavern in the Ashmead Archive, two small flint implements were found within a collection of mineral specimens from the area. These were contained in a paper envelope labelled “*Flints from Kirkhead Cavern*”, along with a hand-written note reading “*Kirkhead Cavern*”, with the dates 1968 and 1972 (Fig.2). These two flints, described below, are not figured either in Ashmead and Wood (1974) or in Murphy (2019), and it is suggested here that they are from an additional, undocumented, find. The two flints are:

1. A small triangular fragment of pale brown flint, patinated white on most surfaces, measuring 25 × 22mm. Two of the three edges show some areas of retouch, whereas the third edge has rounded margins. The artefact might have functioned as a side scraper.
2. A small trapezoidal fragment of pale grey flint that is patinated white on one face and is coloured pink and grey on the opposite face. The fragment measures 29 × 19mm. There is a small amount of light retouch on the edges at one end of the flake, and the artefact might have functioned as an end scraper.

The raw material, size and patination of these two artefacts are consistent with the appearance of some of the other Upper Palaeolithic flint tools from the cave as described by Wood *et al.* (1970) and Ashmead and Wood (1974). The recovery of these two flints adds weight to the interpretation by Mellars (1969) of a possible Palaeolithic origin for the Kirkhead Cavern flint assemblage.

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The documentary contents of the Ashmead Archive are now under the care of the Librarian of the Red Rose Cave and Pothole Club, Bull Pot Farm, Fell Road, Casterton, LA6 2GP.

The two recently rediscovered flints here described have been accessioned into the collection of the Lancaster City Museum, where they will be conserved alongside other flints from the excavations at Kirkhead Cavern.

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