

ART. I – *The Pleistocene Exploitation of Cumbria: A Review of the Evidence.*

By C.R. SALISBURY

ARCHAEOLOGISTS carrying out research into Pleistocene exploitation of Britain, rarely if ever, take Cumbria and north Lancashire into account, yet very few areas have the potential so far exhibited by the region. Recent excavations in caves along the northern shore of Morecambe Bay have revealed a far earlier human presence than had previously been suspected.

In 1987, Lindale Low Caves were excavated by C.R. Salisbury (1988). A number of flint tools were recovered from glacial deposits sealed in by stalagmite floors. Even though the British Museum identified the artefacts as Late Upper Palaeolithic (Cook: pers. com.), the excavators braced themselves for an expected post-publication battle. It never came and the artefacts from Lindale Low Cave have been accepted as evidence of a Pleistocene occupation of the region.

Whilst this paper makes mention of current and past excavations, it is not an excavation report. It is an attempt to corrolate the evidence and an attempt to open up greater issues to debate.

Early Excavations and Research

In the 19th century, J. Bolton (1864:1869) and J.P. Morris (1865), investigated a number of caves in the Morecambe Bay karst, notably Kirkhead Cave (NGR – SD 3910.7565) and Capeshead Cavern (NGR – SD 3333.7814). At the time of the excavations, knowledge and understanding of the antiquity of man was very limited and both Bolton and Morris have subsequently, and unfairly, been referred to as “bone hunters”.

At Kirkhead Cave they recovered a large number of human remains and an extant faunal collection, together with artefacts of bone, copper, bronze and iron. They also recovered coarse pottery and a coin of Domitian (A.D. 81–96). The artefacts have since been lost.

A similar faunal assemblage was recovered at Capeshead Cavern, again the artefacts are not now available.

The very large number of caves, phreatic conduits, geo-chemical solution holes and rock-shelters in the Morecambe Bay karst attracted the attention of other excavators in the 19th century and another cave investigated at that time was Merlewood Cave (NGR – SD 4115.7892). A number of human bones were recovered together with an extant faunal assemblage. Pottery and coinage of the mid-Saxon period were also recovered. As in previous cases, the artefacts are now missing.

In the early years of the 20th century, J.W. Jackson (1911:1913) excavated a number of caves in the Silverdale and Warton area. At Dog Holes (NGR – SD 4833.7304) he discovered a large number of human bones, an extant faunal assemblage, tools of bone,

flint and metal and, of great significance, the bones of extinct British mammals including Irish Elk, Siberian Vole and Arctic Lemming. He also recovered the shells of an Arctic–Alpine snail *PYRAMIDULA RUDERATA*.

Jackson reported that one of the human skulls was of the “riverine” type and similar to the Tilbury Skull. The faunal assemblage from Dog Hole together with the assemblages from Fairy Hole and Badger Hole, all excavated by Jackson, are missing. Some of the artefacts have survived, one flint is at Buxton Museum and several artefacts are deposited at Lancaster Museum. None point to a Pleistocene occupation. The extinct faunal remains are no longer available for study.

Examination of the human remains, now at Lancaster Museum, has led to the conclusion that they are relatively modern. Whilst Jackson made extensive use of photography during the excavations the loss of his archives and drawings has rendered a stratigraphic reconstruction impossible. Yet his work remains important and valid, his results tend to point to a very early exploitation of the area and to an occupation that may have occurred during the late stages of the Devensian Glacial Period. Other, more substantial evidence has recently been found to support a hypothesis of a glacial occupation of the region.

Excavating a Museum Basement

An art now seemingly lost to the modern archaeologist is that of investigating the contents of the local museum store-room. Recent examination of the basement at the Kendal Museum of Natural History revealed a few interesting “finds”, notably a Mousterian tool assemblage and a number of Palaeolithic backed flint blades.

Many of the Mousterian tools are identified to sites in the south of England, but several are not. The backed Palaeolithic blades are typologically sound, as are the Mousterian tools, but all are either surface or “out of context” finds and are therefore of little archaeological value.

The source of the Mousterian assemblage is not known but the Palaeolithic blades are thought to be part of the Colonel Oliver North Collection. The Colonel travelled extensively, he could have acquired the blades in a remote corner of the world, on the other hand, he could have found them in Cumbria, we will never know, but any archaeologist looking into the prospect of a Pleistocene occupation of the region, cannot ignore them.

At the Yorkshire Museum at Hawes there is another example of an Upper Palaeolithic backed blade. It is not complete, being a large fragment, but it is typologically sound and described as one of the most important finds in northern Britain. It sits ignominiously in a battered showcase surrounded by dead sheep and Victorian sewing machines. It was found in a field in the region, is of little archaeological value, but cannot be ignored.

The strongest evidence to support a hypothesis of a Pleistocene occupation of the region comes from the excavation of Lindale Low Cave and current excavations in the Ulverston area. Many would consider the evidence from the Kirkhead Cave excavations undertaken in 1969 to point to a late glacial occupation, others tend not to agree.

Excavations at Kirkhead Cave – 1969 to 1974 (NGR – SD 3910.7565)

In 1969, P. Ashmead (1969:1974) and R.H. Wood (1974) excavated Kirkhead Cave, a geo-chemical solution hole in a limestone cliff near to the village of Allithwaite. The cave had previously been excavated by Bolton and others in the 19th century. From the outset problems were encountered. The first was the fact that Wood, a qualified archaeologist, left the area to take up another post, leaving Ashmead to complete the work. Ashmead was an amateur archaeologist but he overcame the prejudice usually associated with that status by carrying out the work in a highly professional manner. His archives, photographs, drawings and publications are of a very high standard.

The second, and by far the more important problem encountered, was the fact that the stalagmite floor, formed during climatic amelioration at the end of the last glacial period had been removed by others, possibly by Bolton during the 19th century. The dating marker had disappeared, a glacial occupation could therefore only be established by a very marked typology of any tool assemblage recovered or by faunal association. The excavation of the cave was restricted to three trenches representing a very small percentage of the stratigraphy. From those trenches Ashmead recovered some 20 flint blades and a tool made from antler. He also recovered a fragment of antler which yielded a ^{14}C determination of $10,700 \pm 200$ b.p. (HAR-1059). The absence of an intact stalagmite floor, a disturbed stratigraphy and problems of association between the artefacts and the dated antler, led Gale & Hunt (1985) to argue that occupation of the site may have been later than that implied by Ashmead.

A review of the site archives led Salisbury (1986) to argue that engineering operations undertaken during the excavations may have distorted results obtained by Gale and Hunt. Tipping (1986) argued that the methodology employed by Gale and Hunt may not have been appropriate. Ultimately, Gale and Hunt (1990) replied to their critics.

Excavations at Lindale Low Caves – 1987 to 1989 (SD 4173.8014)

The excavators at Lindale Low Caves, a phreatic conduit at Lindale near Grange over Sands, did not encounter the problems faced by Ashmead at Kirkhead Cave. The supervisors were graduates and very experienced excavators and the site was regularly visited by staff of the British Museum. More important, the stalagmite floor, marking the end of the last glacial period, was intact throughout both cave systems.

The flint artefacts recovered from beneath the stalagmite and breccia floors are typologically and chronologically sound. They have been accepted as Late Upper Palaeolithic and have been published as such (Salisbury: 1988). Although few in number, only 14 intact flint tools were recovered, they have not been subject to academic dispute.

The artefacts and site archives will eventually become part of the national collection. Documentation is currently being prepared by English Heritage with a view to scheduling the site as an Ancient Monument. It is now considered to be the most northerly Pleistocene exploitation site in Britain.

A North Lancashire Site – High Furlong, Poulton le Fylde: (SD 331387)

Although some 40 k south of Lindale Low Cave and Kirkhead Cave, the discovery of an almost complete skeleton of an elk at Poulton le Fylde some years ago, may have a bearing on what might have been occurring along the shores of Morecambe Bay at the end of the Devensian glacial period some 12,000 years ago. The remarkable discovery at High Furlong gives us a vivid picture of the environment and economy of northern Britain during the latter part of the Devensian. The elk was recovered from lacustrine sediments in such a well preserved condition that we are able to reconstruct the last weeks of its life.

It would appear that some time during the winter, the elk was attacked by hunters and wounded in the limbs and in the thorax. That it escaped is evidenced by the fact that the bone has re-grown over the wounds, but not completely. About a month after the first encounter it was attacked again, this time with weapons tipped with uniserial bone points. It was wounded in the left hind foot and the flank, the points having penetrated through into the bone. The points were *in-situ* in the wounds when the elk was recovered.

Although wounded, it escaped again but died shortly after the attack. Immediately after death it sank into a marsh and possibly became trapped under ice, certainly it sank into almost anaerobic condition. The elk was found within pollen zone 2 deposits and yielded a ^{14}C determination of $10,250 \pm 160$ b.c. (Barnes *et al.* 1971).

A Summary of the Evidence

Of the archaeological evidence reviewed, only three sites may be considered to have produced reliable evidence of a Pleistocene exploitation of the Morecambe Bay area; Lindale Low Caves, Kirkhead Cave and High Furlong. That any such exploitation may have been permanent or restricted to seasonal hunting visits is not material. The simple issue for discussion is that the archaeological evidence seems to contradict evidence previously put forward by the geologist and glaciologist when they state that environmental conditions were too severe to have allowed exploitation of the region.

Discussion

Geologists, glaciologists and geomorphologists have long subscribed to the view that the Devensian glacial period resulted in huge tracts of polar desert in northern Britain where conditions would have prevented human habitation. That the Devensian glacial period did occur is not disputed, neither is the theory that the glacial maxima occurred some 18,000 years ago. What is disputed, based on archaeological evidence, is the long held view that northern Britain was a polar desert for most of the last ice-age.

Over the years we have become conditioned into accepting a theory based on a map of the British Isles where a line drawn from the Severn to the Humber is a clear line of demarcation. Land to the south of that somewhat arbitrary line was free of ice during the

Devensian glacial period (120,000 to 10,000 years BP), land to the north of the line being polar desert. Surely the time is ripe for us to question the validity of the theory? Perhaps the theory of Isostatic Compensation may be as good a starting point for discussion as any. For isostatic compensation to work, and to form high level beaches, it must possess a low contour, that low contour being the interface between the processes of ice ablation and accretion. Below the low contour, ablation is the dominant process, above the low contour, accretion of ice is the dominant process. The contour must be above sea level otherwise glacial beaches would not form. If that is the case then there must be a coastal strip, at low altitude, which is free of ice.

That ice-free low lying coastal strip could have been possessed of a rich fauna and flora. This phenomenon can be seen at Spitzbergen, a group of islands lying between 74 and 81 degrees North. Whilst the fjords and shallow coastal waters are frozen over from November until June, shipping can approach the western coast during most of the year.

Although devoid of trees, Spitzbergen has an otherwise rich flora consisting of lichens and mosses, ranunculus, scurvy grass, cuckoo flower, many saxifrages and fox tail grass. In the drier areas poppies, whitlow grasses and mountain avens thrive. Poppies are found on the higher slopes at heights in excess of 760 m (2500 ft). Over 130 species of flowering plants have been recorded.

About 70 species of breeding birds are permanently resident on the islands including eider duck and ptarmigan. Red char are the only fish in the rivers and lakes. Land mammals include polar bear, arctic fox (both blue and white), musk-ox, hare and reindeer in abundance.

A theory well worth debate is the Refugium Hypothesis which subscribes to the view that during the Devensian glacial period, and others, certain areas became botanically isolated and that certain plants and animals thrived in isolation. Often referred to as the nunatak hypothesis or the over-wintering theory, very little research has been undertaken on the subject other than in Scandinavia, an area which may not be relevant to northern Britain.

The hypothesis was formulated to attempt to explain anomalous plant distributions. The hypothesis implies the existence, within the boundaries of the refugium, of a micro-environment, and perhaps more specifically, a micro-climate. The question for debate must surely be — could a micro-climate have existed in the Morecambe Bay area during the Devensian glacial period?

That one exists today cannot be disputed. The residents of the coastal strip around the bay take a perverse delight each winter in watching the whole country grind to a halt under a deep cover of snow whilst they tend to their flower borders. The area does not suffer from either severe or numerous frosts or a wide temperature range. Plants not normally found in northern Britain thrive in the region, even palm trees are grown in the low lying areas.

The mild climatic condition of the area cannot be wholly explained by the presence of the sea, there must be other contributing factors. That a micro-climate existed in the area during the last ice-age is of course impossible to prove, pollen analysis is too "coarse scale" and we cannot extrapolate modern climatic data back some 12,000 years. It is an aspect of the subject that is well worth further debate and study.

Conclusion

In a paper designed to stimulate debate, it would seem inappropriate to draw conclusions and that is not my intention. The arguments now seem to be polarised into three main issues –

- a) That during the latter part of the Devensian glacial period climatic conditions were not as severe as we have been conditioned to believe.
- b) That the region was at that time a Refugium and enjoyed mild climatic condition in isolation.
- c) That early hunters exploited the region during the summer only.

Whichever stance we adopt, we cannot ignore one simple fact, namely, that man was exploiting the region during the last ice-age.

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