
Cefn and Galltfaenan Caves

Highlights

This is an important site yielding the only known 'warm' Ipswichian mammal fauna from North Wales, as well as a 'cold' mammal fauna from the rocks of the succeeding Devensian Stage.

Introduction

Cefn and Galltfaenan Caves (the Cefn Caves) are important for reconstructing the Late Pleistocene history of North Wales. Unlike South Wales, evidence for Pleistocene interglacial conditions in North Wales is strictly limited and a 'warm' mammal fauna from Cefn Caves, including hippopotamus and straight-tusked elephant, provides an important record of environmental conditions during the Ipswichian Stage. A 'cold' fauna associated with the Devensian Stage, is also present. The site has a long history of research commencing with Stanley (1832) and has also been described by Trimmer (1841), Falconer (1868), Mackintosh (1876), Hughes (1885, 1887) and Neaverson (1942). The place of the site with regard to the Late Pleistocene history of the region has been discussed by Bowen (1973a, 1974) and Peake *et al.* (1973). A more detailed account of its faunas and artefacts was given by Valdemar (1970), and the faunal evidence was also discussed by Currant (*in Green* 1984).

Description

Cefn Cave [SJ 021 705] occurs at approximately 76m OD in Carboniferous Limestone above the Elwy Valley, and consists of a number of interconnecting passages with multiple entrances. Galltfaenan Cave [SJ 023 702] is situated in a small ravine about 400m to the south-east. Reliable details of the stratigraphic sequences in these caves are not available, although Trimmer's (1841) account of Cefn Cave would appear to offer the best description thus far available. Trimmer recorded a sequence of:

- 4 Sand and silt containing marine shells
- 3 Calcareous loam containing bones and fragments of limestone
- 2 Stalagmite floor
- 1 Sediment containing smooth pebbles, bones and wood fragments

Unfortunately, the position of the faunas and artefacts within this sequence is not known, making dating and interpretation difficult. Significant deposits are thought to remain *in situ* at both caves.

Interpretation

A mammalian fauna was first discovered in the Cefn Caves by Stanley (1832). He gave an account of the caves and their contents, which included the remains of hyaena and rhinoceros. Trimmer (1841) interpreted beds 2 and 3 as terrestrial cave deposits and bed 1 as fluvial in origin. The overlying sand and silt with marine shells (bed 4) was considered to be a marine deposit formed during 'glacial submergence' of the land. This interpretation was largely followed by Mackintosh (1876).

In 1866, Moore excavated for a short time at Cefri; specimens from this time were placed in the Liverpool City Museum (Neaverson 1942). The site was also described by Hughes (1885, 1887), who unlike Trimmer and Mackintosh, believed that the 'shelly marl' (bed 4) had been washed in from the overlying boulder clay via fissures, and was not marine in origin.

The first detailed faunal list from the site was given by Falconer (1868) and later updated by Neaverson (1942), and now revised as follows:

Straight-tusked elephant *Palaeoloxodon antiquus*

Extinct rhinoceros *Dicerorhinus hemitoechus?*

Hippopotamus *Hippopotamus amphibius* L.

Horse *Equus ferus*

Reindeer *Rangifer tarandus*

Giant deer *Megaceros giganteus*

Red deer *Cervus elaphus*

Extinct bison *Bison priscus*

Lion *Panthera leo*

Spotted hyaena *Crocuta crocuta*

Cave bear *Ursus spelaeus*

Wolf *Canis lupus*

Red fox *Vulpes vulpes*

Brown bear *Ursus arctos*

Badger *Meles meles*

Human bones and artefacts were also recovered during early excavations at the site (Dawkins 1874). Both the human remains and tools were described as being of Neolithic type and they were apparently intermixed with the mammalian fauna. Dawkins (1871) also recorded finds of reindeer, bear and hyaena from Galltfaenan Cave.

More recently, Valdemar (1970) reassessed the faunas and artefacts from Cefn Cave, and discussed these in relation to those from Pontnewydd. He showed that the flint artefacts described by Dawkins as Neolithic, were probably Upper Palaeolithic in age, belonging to a Creswellian or Cheddarian culture. The stratigraphic context of these finds, however, was uncertain. Dawkins had identified the human remains as belonging to a brachycephalic race usually attributable to the Neolithic (Foulkes 1872). Valdemar therefore suggested that there must have been at least two phases of human occupation. He noted that, since Cefn Cave had yielded Upper Palaeolithic artefacts as well as human remains, it is possible that other caves excavated by Dawkins and earlier excavators also contained evidence from both the Upper Palaeolithic and Neolithic periods.

Elements of both a 'temperate' interglacial type mammal fauna, including hippopotamus and straight-tusked elephant, and a 'cold' glacial type fauna, with woolly rhinoceros, mammoth and reindeer, have been described from the Cefn Caves. These records have been discussed by Bowen (1973a, 1974), Peake *et al.* (1973) and Stuart (1982) who have emphasised the difficulties of interpreting the assemblages without precise stratigraphic details. It has also been noted that early workers may even have confused faunal material from Cefn with specimens from Pontnewydd Cave (Currant 1984). Nevertheless, the fauna from Cefn Caves is of considerable importance in reconstructing Late Pleistocene events in North Wales, and it has been suggested that the 'temperate' fauna can be assigned to the Ipswichian Stage and the 'cold' fauna to the Devensian Stage (Bowen 1973a, 1974; Peake *et al.* 1973; Stuart 1982).

The fauna of proposed Ipswichian age at Cefn assumes considerable importance in view of the lack of evidence in North Wales for Pleistocene interglacial conditions. Cefri Caves, therefore, provide a contrasting record to nearby Pontnewydd where, although an extensive Middle Pleistocene sequence is present, sediments and fauna from the Ipswichian Stage are absent (Green 1984). Together they form important elements in a network of cave sites that demonstrates evidence for changing environmental conditions in North Wales in the Pleistocene.

The Cefn Caves have yielded the only mammalian fauna known in North Wales from the Ipswichian Stage. They also provide an important Devensian 'cold' fauna. Although the stratigraphic context of these finds has not been established, substantial deposits remain *in situ*, giving the site considerable potential for elaborating Late Pleistocene conditions in North Wales. Human and artefact evidence from here strongly suggests occupation during both the Upper Palaeolithic and Neolithic periods.

Conclusions

The Cefn Caves contain rocks which have yielded a prolific assemblage of fossils, including hippopotamus, which can be dated to some 125,000 years ago. This is important because it was the last time that Britain enjoyed conditions similar to the present. Evidence of this kind when assembled over a wide area may provide information on how interglacials like the present come to an end. The Cefn Caves were also occupied by Man during the Palaeolithic and Neolithic periods.

[References](#)