

I.

PRELIMINARY REPORT ON CAVES CONTAINING PALÆOLITHIC RELICS, NEAR INCHNADAMPH, SUTHERLAND. BY J. GRAHAM CALLANDER, F.S.A.Scot., JAMES E. CREE, F.S.A.Scot., AND JAMES RITCHIE, M.A., D.Sc., F.R.S.E., F.S.A.Scot.

In the summer of 1925 Mr James E. Cree found on the surface of the floor of a cave in the valley of Allt nan Uamh, near Inchnadamph, Sutherland, two pieces of horn which turned out to be the antler of a young reindeer and an incisor tooth of a bear. The deposits were undisturbed except for a rabbit's burrow, and the presumption was that the bones had been brought to the surface from lower layers by the rabbit's activities.

The cave in question was one of a series of four in a limestone bluff some 200 feet above the present-day bed of the stream, Allt nan Uamh or "Burn of the Caves," a tributary of the Loanan, which flows into Loch Assynt. In 1889 Dr John Horne and the late Dr Benjamin N. Peach explored another of these caves—No. 3 from the west, termed by them the "Bone Cave"—and discovered therein remains of a rich Arctic fauna containing several animals now extinct in Scotland, associated with traces of human habitation.

The outstanding results obtained by these excavators,¹ and Mr Cree's find in an undisturbed cave, suggested the possibility of further discoveries, and with the consent of General Stewart of Assynt and assistance of his factor, Mr Murdo Kerr, and by the aid of a grant from the Government Research Fund of the Royal Society of London, made to a committee composed of the authors of this paper, excavations were carried on during three full months in the summer of 1926. Throughout this period Mr Cree superintended the work of excavation.

EXCAVATIONS OF 1926.

Work was confined to three caves and their subsidiaries. The most westerly cave (No. 1), in the series of four, was excavated by a median trench, and entrance was made to a second cave in the rear of No. 1. The second (No. 2, or the Reindeer Cave) was completely excavated to the rock floor, and behind it a newly revealed cave of considerable dimensions was sufficiently worked at, in spite of great difficulties, to show the character of the deposits and the nature of a fauna which was represented in their upper portions. Lastly, for purposes of comparison with the very different deposits found in these caves, a short trial trench was dug in the deposits of the cave partially excavated by Drs Peach and Horne in 1889 (No. 3, the Bone Cave).

SUMMARY OF RESULTS OBTAINED IN 1926.

Cave No. 1 contained deposits very largely composed of cave-earth and roof debris, and it was solely in the cave-earth that relics were found. They consisted of animal bones of species still existing in Scotland, and a single artefact, a portion of a broad iron blade. In the subsidiary cave behind No. 1 were found bones of present-day species of animals, a human femur and again a single artefact, a well-dressed bone haft. The general aspect of the relics suggests that the upper deposits in this cave were of relatively recent date.

In Cave No. 2, or the Reindeer Cave, two bone-bearing deposits were discovered—the cave-earth and an underlying slightly rolled gravel. Beneath this, over part of the cave, lay a barren gravel of much more rolled appearance.

During the accumulation of both bone-bearing series man was undoubtedly present.

The more recent series, the cave-earth, contained many bones of

¹ "The Bone Cave in the Valley of Allt nan Uamh ('Burn of the Caves'), near Inchnadamph, Assynt, Sutherlandshire," *Proc. Roy. Soc. Edin.*, vol. xxxvii. (1917) pp. 327-49.

species of animals still surviving in Scotland, but in addition there were also bones of bears, and the condition of some of the bones indicates considerable age. In this deposit were found a human skeleton and portions of another, the latter which was found at the base of the cave-earth, having been definitely interred. This is the only formal interment yet recorded from a Scottish cave. The mode of burial showed some features of interest, and the skull is long-headed or dolicocephalic. Two bone implements, an awl and a pin of peculiar form, represented the handiwork of man in this deposit.

The older layer of the bone-bearing deposits presented features of great interest. It contained vast numbers of shed antlers of young reindeer, mostly broken, representing over four hundred individual deer. Along with these bones were remains of several other members of an Arctic fauna, but the reindeer was by far the most numerous, and on this account the cave has been named the Reindeer Cave.

No human interment was found in the reindeer gravel, but there was clear evidence of the presence of man, indicated by a simple reindeer horn implement, by humanly cut and scratched reindeer antlers, and by fragments of charcoal.

The evidence derived from the bone relics and the geological evidence point to this deposit having been re-sorted in the cave by a stream (probably a seasonal stream of melt-water) which flowed along the margin or off the surface of a valley glacier, the surface of which stood about the level of the caves.

The strong indications, therefore, conveyed by the nature of the fauna, by the state of fossilisation of the bones, and by the geological evidence are that we are dealing here with one of the periods in the Upper Palæolithic series, certainly belonging to Magdalenian or earlier times. Lack of artefacts of cultural significance prevents more definite decision in the meantime.

Behind the Reindeer Cave, and entirely blocked to access till the removal of much material allowed of entry by way of a narrow vertical descending shaft, was a cave (No. 2A) of considerable dimensions. It contained deposits of glacial silt with a lenticular layer of well-rounded and polished pebbles. These deposits apparently point to an earlier period, when the limestone bluff in which the cave lies was almost or wholly under the ice-field. The superficial eighteen inches of the deposits here contain a few bones of reindeer, of the long extinct cave-bear (*Ursus spelæus*), Arctic fox, etc. This association represents an Arctic fauna not hitherto found in Scotland, which was probably present during an interglacial period preceding the recurrence of the valley glaciers of the final ice epoch.

NEW INFORMATION GAINED.

(1) More definite information has been gained regarding the glaciation of this part of Sutherland.

(2) The period of the early fauna with human associations has been more definitely fixed, and has been thrown back to the final valley-glacier stage of the Ice Age.

(3) The numbers of reindeer antlers found in a limited space are remarkable; an accumulation of such a nature has not hitherto been found in Britain, and we do not remember a parallel case even on the Continent of Europe.

(4) For the first time evidence of the presence of palæolithic man in Scotland has been found.

(5) For the first time the Arctic fauna of the cave-bear and Arctic fox has been found in Scotland.

FUTURE EXCAVATIONS.

The value of the discoveries made during the past summer, and the facts (1) that there is still much field for exploration in the series of caves; (2) that the cultural stage of the palæolithic people has still to be defined; and (3) that the newly discovered cave-bear interglacial fauna is still scantily known, points to the need for further investigation. This we propose to carry out during the summer of the present year.

We have to acknowledge our indebtedness to Mr Morrison, Inchnadamph Hotel, for the kind assistance he rendered to us in many ways during the excavations.