THE EXCAVATION OF DOWEL CAVE, EARL STERNDALE, 1958-9.

By D. Bramwell.

DOWEL CAVE, which is situated at the lower end of the small dry valley known as Dowel Dale, near the village of Earl Sterndale (Nat. Grid Ref. SK 076676), was excavated during 1958-9 by the Peakland Archaeological Society. About 100 yds. below the cave, the dry valley terminates in a wide basin bounded by the hills, Parkhouse and Chrome. Across this basin flows a small tributary stream of the River Dove. The stream rises, in suitable conditions, from a rock cleft 120 yds. below Dowel Dale. This resurgent brook has been found, by the Orpheus Caving Club, to take surface water which has entered by the swallets at Piker's Pit and Stony Low, the latter water taking 44 hours to travel about 5/8 mile.[1] It is thought that at some time Dowel Cave formed an additional resurgence in this drainage system, thus explaining the great depth of silt which almost filled the cave when first explored. This silt has admirably preserved the various bones, shells and archaeological material which have accumulated during seasonal dry periods. At one point, in section V on the plan (Fig. 11), the silt has been sounded to a depth of 20 ft. where it reached a fissured rocky floor.

From the fissure-like entrance the cave slopes steeply downwards, but the arched roof has been smoothed by water and is clearly part of a considerable passage which led down from a land surface long since eroded away, so it is possible that the cave was once an influent type, later becoming an effluent to the drainage from the south-eastern slopes of Axe Edge. An examination of the silt

[1] P. Smith in *The Lyre, Journal of the Orpheus Caving Club*, 1958-9, 68, map.

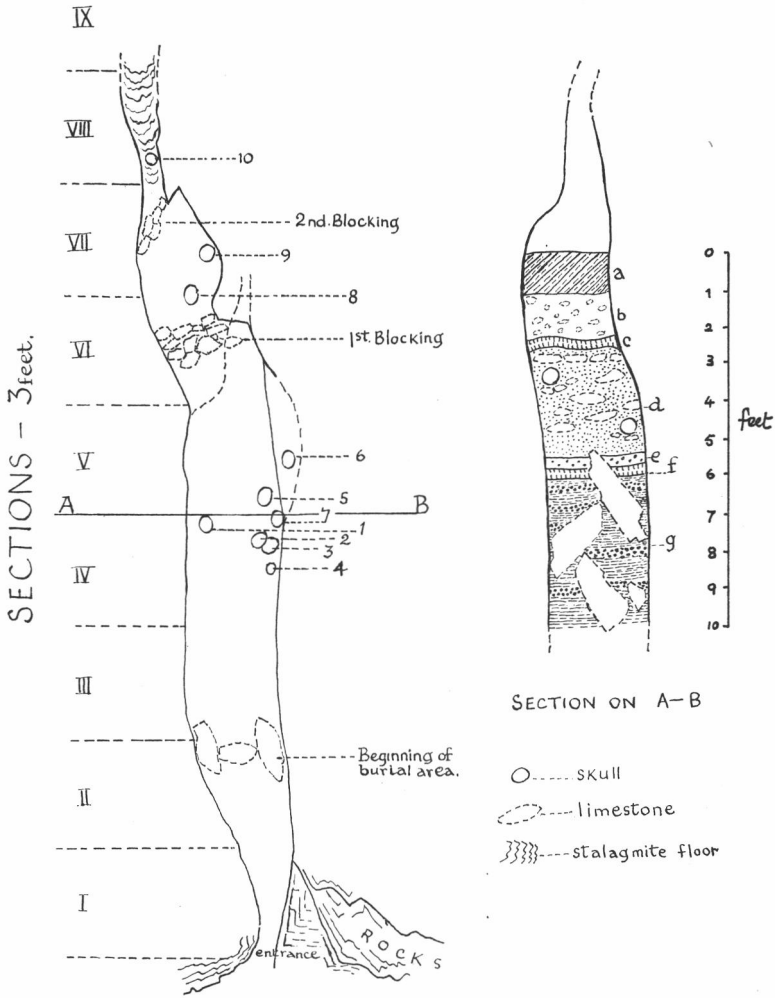

FIG. 11. Dowel Cave — plan and section A-B.

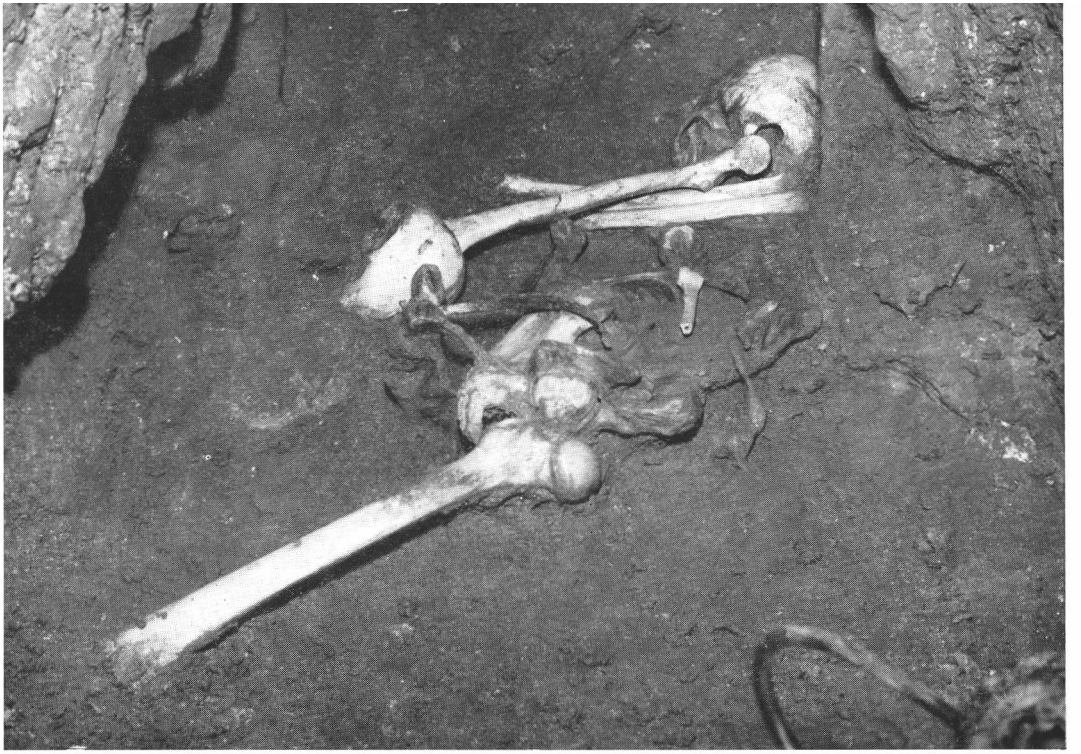

Photo: A. Ball

PLATE V. Skull 9 and associated bones in Dowel Cave.

facing p. 99

discloses much material derived from the shale and grit country of the Axe Edge region. The cave entrance has been much shattered by weathering agencies, but the interior is smooth and solid, though many slabs detached from around the entrance have rolled down and lodged at various points and at varying depths in the passage. Around and above these slabs the main silt deposits have accumulated. The rock debris had formed a considerable slope in the entrance sections, I, II and III. This formed a barrier behind which the silt was deposited from a period in the late Pleistocene to Early Iron Age times, at which point the silt is replaced by a thin calcareous layer and clay, containing Early Iron Age and later pottery.

The main cave passage is 21 ft. in length with a very tight continuation leading a further 10 ft. or more before becoming impassable. The average width of the whole cave is less than 3 ft. so excavation could only be carried forward by one person at a time. A cable haulage system was devised to remove the buckets of silt to the sorters at tables on the platform outside. A special effort was made to recover every bone and shell, however minute, in order to make the environmental picture as complete as possible.

THE CAVE SEDIMENTS (Fig. 11).

The late glacial deposit — Layer (g).

This lowest deposit consisted variously of grey silt, clay, fine gravel and limestone slabs. In places there was definite current bedding to be seen, whilst the gravel and clay formed occasional thin horizontal layers. In section VII the bedding showed some slumping. The upper 3 ft. of this late glacial deposit contained slight remains of late Pleistocene mammals and birds, together with two small flint blades, charcoal and some fragments of split deer bone. This evidence of human occupation indicates that in late glacial times there were periods when the cave became habitable, the thinness of the bedding suggesting that these times were seasonal.

The lower calcareous layer — Layer (f).

This very widespread and clearly distinguishable layer consisted of loamy material bound by thin plates or encrustations of calcareous material, so that the whole layer showed up white and thus became an important demarcation. This calcareous layer was rich in small vertebrate remains and this fact, together with the formation of stalagmite lenses, indicates that there was a halt in the resurgence of the underground brook at this period. The bones from this layer, as well as from layer (g), are stained bluish black, thought to be due to manganese coloration, whereas the later bones, of the Neolithic level for example, are white or yellow. This factor is important in view of the disturbance by badgers which burrowed in places through several horizons and mixed material of different ages.

The golden silt — Layer (e).

This material was similar in texture to the main silt deposits but differed in colour, and was named accordingly. It is suggested that the change in colour might be due to the underground water, at this stage in the cave's history, collecting sediment from a different geological stratum, in which light yellow sandstones predominated. Layer (e) was only 6 to 8 ins. thick and seems to mark an early post-glacial phase. It contained no remains of domestic animals but did have the same kinds of split bones, indicative of human occupation, as layer (g). In the base of this layer was found the interesting piece of worked bone (Fig. 12, no. 3), which appears to be the basal or haft portion of a uniserial barbed point. In the same layer were a few bones and scales of fish, including pike, suggesting that the Dowel basin may have been filled by a small lake at this period. The bones of marsh and water birds in the layer tend to confirm this view.

The grey silt — Layer (d).

The chief difference between this and the lower sediments, layer (g), was that the large slabs and the lenses of clay and gravel were absent. There was little sign of

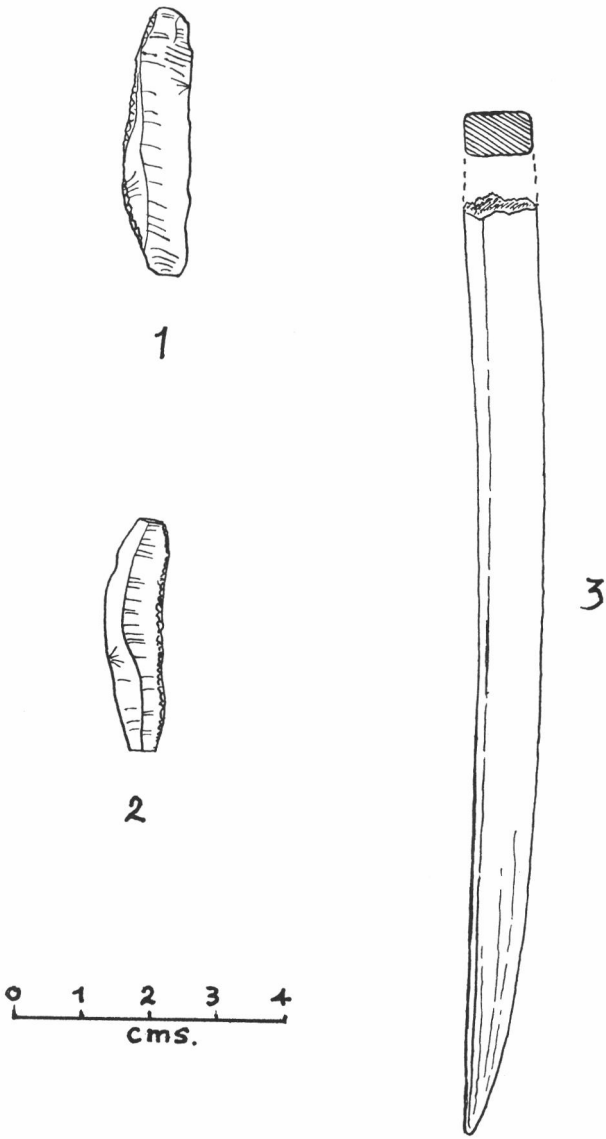

FIG. 12. Creswellian blades and base of bone implement from Dowel Cave.

current bedding in this deposit, as might have been expected, because of its extensive disturbance by Neolithic people, who had deposited their dead in it, built stone walling and laid flooring. The layer varied in thickness but averaged about 3½ ft., being deepest towards the rear of the cave. The silt was constituted from a mixture of sand and fine clay, but also contained many small highly-polished pebbles, mainly of limestone. Specks of mica and quartz crystals can be detected in the silt itself. Besides the human bones, the grey silt contained numerous remains of bats, birds and small mammals, which seemed to be the prey of owls and falcons. In addition, there were many bones of domestic and some larger wild animals associated with the burials.

The upper calcareous layer — Layer (c).

This thin deposit is important as it demonstrates the end of seasonal water resurgences through the cave. The deposit seems from certain potsherds found in and on its surface to have been formed in Early Iron Age times.

Brown clay loam — Layer (b).

Varying in thickness from a few to about 18 ins., this was a sticky material of no special significance as it proved to have been seriously disturbed by previous excavators. From it was recovered a fragment of Romano-British pottery and later ware, also some damaged bones of domestic and wild animals.

Black mould — Layer (a).

This usual top layer in a limestone cave was of most recent origin, containing dead leaves, remains of jackdaw nests, 18th and 19th century pottery, molluscs, amphibian and bird remains.

THE ARCHAEOLOGICAL CONTENT.

The lower parts of layer (g) showed no evidence of the presence of man, but in the upper 2 ft. were some remains of meals in the form of split bones of large ungulate animals. A few fragments of antler appear to belong to reindeer although other species are probably

present. There are a few antler tips, less than an inch long, which may have been used in some way by the cave dwellers. Other pieces of bone show marks of cutting and crushing, and even phalangeal bones have been split as though to extract the marrow. A few fragments of charcoal testify to occasional fires. Finally there are two small worked flint blades from this layer, one from section I at the cave entrance (Fig. 12, no. 2) and the other from section VI (Fig. 12, no. 1). Both show retouching along one edge (battered back technique) and are characteristic of the British Upper Palaeolithic or Creswellian culture. They could be closely matched by specimens from Aveline's Hole[2] and Gough's Cave, Cheddar.[3] The scarcity of finds in this layer shows that these late Palaeolithic hunters were rare visitors as in other Peakland caves. Contemporary with the Dowel finds are flints from Elder Bush Cave[4] and Ossom's Cave[5] in the Manifold Valley, in both of which evidence of reindeer hunting was found. I think therefore that Dowel Cave was one of a number of hunting stations scattered over the main route taken by reindeer when migrating through the western area of the Peak. The liability of Dowel Cave to flooding would render it habitable only at certain times, probably in winter when the flow from the Axe Edge would be checked by the intense cold.

From layer (e) came the well-fashioned piece of bone which has been assumed to be the lower half or haft portion of a bone point, probably of the uniserial type found at Star Carr in some quantity.[6] The majority of the implements have been shown by Clark[7] to have been made from strips of antler cut from red deer antler beams, whereas the Dowel implement is of bone with a rectangular section, not the more usual oval section of barbed points. There is little or no sign of wear at the sharper

[2] D. A. E. Garrod, *The Upper Palaeolithic Age in Britain* (1926), 86, Fig. 14, no. 1.

[3] R. F. Parry, "Excavation at The Caves, Cheddar", *Proc. Somerset A.N.H.S.*, LXXIV, Plate XVI, Figs. 8-9.

[4] D. Bramwell in *Peakland Arch. Soc. Newsletter*, V (1949), 3.

[5] D. Bramwell in *P.A.S. Newsletter*, XII (1955), Fig. 1.

[6] J. G. D. Clark, *Excavations at Star Carr* (1954).

[7] J. G. D. Clark and M. W. Thompson, "The Groove and Splinter Technique of working antler in Upper Palaeolithic and Mesolithic Europe", *P.P.S.*, New Series XIX, part 2 (1954), 148-60.

end so this was almost certainly fixed in a shaft; it is possible that the other end was carried way by the hunted animal. Further split bones were found in the layer, besides fish remains. It is suggested that the point belongs to a later period than the flint blades and may be equivalent to the Maglemosian of other British and continental sites. Another factor in favour of a Mesolithic dating is the absence of lemmings in this layer, whilst the northern vole (*Microtus ratticeps*) is still present.

In the next 6 ins. of silt there was no archaeological material, and the characteristic grey colour returned to the particle. Next, in layer (d), were abundant remains in the form of human bones and bones of domesticated animals. The upper level of the silt was partially sealed with a layer of limestone, the pieces being suitable for lifting with one hand. This layer or pavement had been broken through by previous excavators near the front of the cave. Below it were parts of ten or possibly more individuals of varying ages, including three infants, an adolescent and five adults between 20 and 50 years of age. Further details are held over, pending the anatomist's report, but it is clear that these people were small and delicately featured, with only moderately dolichocranial skulls. They are not in any way like the "boat-shaped" skulls from some Peak District chambered tombs.[8] A feature of the Dowel inhumations was the separation of most of the skulls from the bodies; in fact only skull 9 was in conjunction with the trunk. In sections IV and V occurred a peculiar concentration of seven skulls, mostly lying under the shelter of the cave wall and usually in part enclosed by a curb of small stones. The final discovery of the child's skull in section VIII was also peculiar in that the skull had a small flat piece of limestone supporting the palatal region, presumably to make the skull secure in this sloping fissure. The conclusions to be drawn are that the cave was used as a family or tribal burial ground at different times. It is obvious that in some cases an older burial has been moved to clear a space for a later one. In section III was found at a low level parts of two skeletons in which there was

[8] T. Bateman, *Ten Years' Diggings* (1861), 268.

a concentration of the long bones, as though these had been bunched into a convenient parcel and redeposited. The skulls, moved separately to a selected area, seem to have been given more careful reinterment.

An unusual feature was the mixed nature of the burial methods, for we were able to uncover sufficient parts of the lower trunk and legs of one skeleton to determine that it had lain in a crouched position, whereas the skull and trunk no. 9 (Plate V) were in the extended position. There were two pieces of transverse walling in the cave separating particular interments, besides numerous stones disposed among the bones in the main chamber. The first limestone walling or blocking came in section VI; apart from a shallow channel excavated by a badger, it reached up to the roof. Behind this blocking were the two interments, nos. 8 and 9, both extended, as far as could be distinguished, though the tibiae of no. 8 appear to have been removed to allow the body to fit into the very confined space. The second blocking was in sections VII and VIII and devoted to sealing off the skull of the child, no. 10, in the narrow fissure in section VIII. This skull was accompanied by the mandible of a large form of ox, whilst other bones of ox were very near. The circumstances of this disposition of skull 10 suggest that it was formerly part of a skeleton resting in section VII; then, when further burials had to be made, it became necessary to move the child's skeleton into the main passage, whilst the skull was given burial in the convenient niche presented by section VIII. With the skull were food bones, and the question remains whether this food was fresh or whether these bones were already meatless, having been lying earlier with the complete skeleton.

Beyond the blocking of VI and VII towards the cave entrance, the sequence of burials is obscure. It is clear that there had been much disturbance of bones at different times, but out of the confusion it was possible to discern the position of two extended and one contracted burial.

Grave goods were disappointingly few, only four flints (Fig. 13, nos. 1-4) and a bone point (Fig. 13, no. 5), fashioned from a split metacarpal bone of a sheep. There

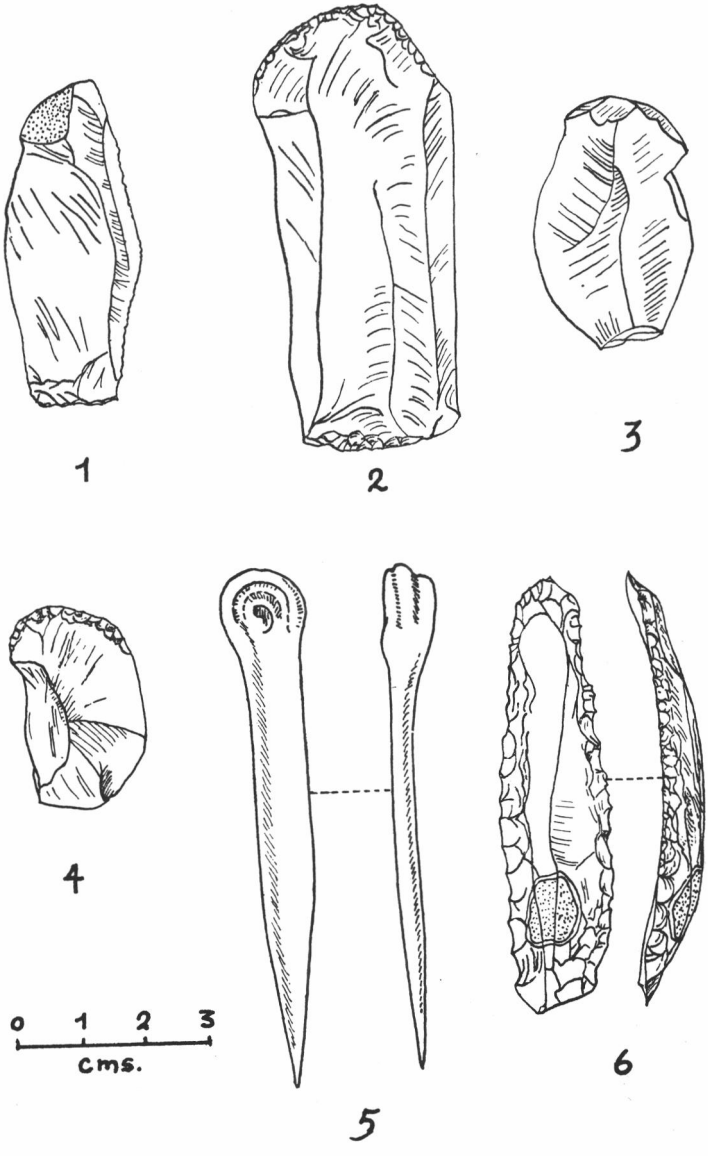

FIG. 13. Flint tools, bone pin and plano-convex knife from Dowel Cave.

was also a fragment of beaker pottery from a level which appeared undisturbed by badgers. With the contracted skeleton was a joint from an ox of a large species, and close to one of the extended skeletons was the headless skeleton of a dog. Other bones which appear to have been associated with some funeral ceremonial were of sheep, goat, pig and red deer. There were parts of another dog scattered among the reinterred human bones. Two of the flints had been placed on either side of the pelvis of the crouched skeleton. The occurrence of some lustre on the serrated tool suggests its use for reaping cereals. On the whole, this set of flint tools is not particularly typical of the Neolithic. A nice example of a plano-convex knife (Fig. 13, no. 6), found in a rock niche elsewhere in Dowel Dale, may or may not be associated with these burials but it was deemed worth recording in this report.

Above the final sealing stones of the burial layer in the cave was the upper calcareous and then the clay layer. In the clay and also on the surface of the upper calcareous layer some fragments of a shouldered pot were found. Professor Stuart Piggott has kindly reported that this material is similar to that of the Early Iron Age vessels found by Dr. Kenyon at Breedon on the Hill.[9] He comments, "As this type of pottery seems characteristic of the English Midlands, it would not be surprising to find it in Derbyshire, and I think it has considerable interest in its own right". The Dowel pot, which was a small bowl, thus extends the distribution of this ware into the Peak. Also in the clay was a fragment of a Romano-British pot and a probable part of a small crucible of relatively late date. In bone there was a spindle whorl made from the head of a femur of a large animal, probably ox.[10]

DATING THE BURIALS.

A disappointing feature of this important series of burials has been the lack of archaeological material by which the period or culture of the people who used the

[9] K. Kenyon in *Trans. Leicestershire Arch. Soc.*, XXVI (1950).
[10] D. Bramwell in *P.A.S. Newsletter*, XV (1958).

cave might be determined. In the absence of typical Neolithic flint tools and pottery, it has been necessary to depend largely on the fauna and also on the neighbouring strata in the cave. The underlying stratum, as has been demonstrated, is of Mesolithic or early post-glacial date, containing remains of a now extinct vole. This layer (e) then pased upwards imperceptibly through about 6 ins. of transitional material into the grey silt. We have fortunately obtained a fine series of vertebrate remains from the supposed Neolithic layer (d), and found a series of forms which tends to favour a rather milder climate than exists today in this area. The other important feature of the fauna is its strongly woodland aspect, which suggests that at the period in question there was much primitive forest still remaining in the district. This hardly agrees with conditions in the Middle and Late Bronze Ages, when it has been suggested, in view of the spread of settlement to the gritstone areas, that the limestone was probably over-populated.[11] Among the mammals at Dowel are wild cats (*Felis silvestris*), marten (*Martes martes*), polecat (*Mustela putorius*), red squirrel (*Sciurus vulgaris*), yellow-necked mouse (*Apodemus flavicollis*), roe deer (*Capreolus capreolus*), together with Bechstein's bat (*Myotis bechsteinii*) which now has a very limited distribution in southern England and which also occurred at Grime's Graves Neolithic flint mines.[12] A fuller faunal list, with discussion, will be published later.

In favour of a late Neolithic date are certain features of the methods of burial. The practice of using layers of stone to separate different burials has been recorded from "hunebedden", a megalithic tomb form common in Holland, particularly in Drenthe province,[13] whilst special attention to the reburial or replacement of disturbed skulls has been noted from burial caves of late Neolithic use along the Meuse Valley. It is difficult to find parallels in the Peak District as existing accounts do not give very precise details. The most important of these earlier finds were in the Churchdale rock shelter,

[11] A. L. Armstrong in *Sheffield and its Region* (1956), 107-8.
[12] S. Piggott, *Neolithic Cultures of the British Isles* (1954).
[13] S. J. de Laet, *The Low Countries* (1958), 83-4.

near Monyash, where a petit tranchet derivative arrow point and a Peterborough bowl were associated with a group of skeletons.[14] At Sevenways Cave in the Manifold Valley, the present excavators discovered a few bones and a human mandible with two leaf-shaped arrow points;[15] at Fox Hole Cave, near Earl Sterndale, human bones were found associated with western Neolithic pottery and beaker sherds.[16] In North Wales, the well-known sepulchral caves of Cefn, Gop and Perthi-Chware may have affinities with Dowel Cave. These caves and their contents have been summarised recently by Dr. J. W. Jackson.[17]

CONCLUSION.

The human remains at Dowel Cave belong to a late Neolithic group, distinct from the builders of the Derbyshire and Staffordshire megalithic tombs. Their environment was quite heavily wooded, but they had clear areas on the limestone where they herded domestic animals. In addition they hunted the wild animals of the neighbourhood, one of which may have been a large form of ox — not *Bos primigenius*. Their burial traditions followed a pattern characteristic of late Neolithic folk in North Wales and the Low Countries, but with adaptations to meet the conditions in this particular cave.

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[14] S. Piggott in *P.P.S.*, New Series XIX, part 2 (1954), 229.
[15] D. Bramwell in *P.A.S. Newsletter*, X (1954), 6-7.
[16] J. W. Jackson in *D.A.J.*, LXXI (1951), 72-7.
[17] J. W. Jackson in *British Caving* (1953), Ch. VIII.