

ART. III. – *Excavation of a Stone Circle at Wilson Scar, Shap North 1952.*

By G. DE G. SIEVEKING, M.A., F.S.A.

**Introduction**

**I**N the summer of 1952, the enlargement of the Shap Quarry of Messrs Harrison's limeworks threatened to engulf the site of the prehistoric stone circle at Wilson Scar in the northern extremity of Shap Park (Fig. 1). This threat was brought to the notice of the Inspectorate of Ancient Monuments, who arranged for an excavation to take place before the site was demolished. The excavation had to take place in 1952 in order to fit in with the timetable at the quarry, but action was only taken to authorize the excavation in November of that year. The staff were limited to a director (the author), and an assistant director, (Mrs A. de G. Sieveking). Two labourers and equipment were kindly provided by Messrs Harrison. The excavation took place between 1-31 December, 1952. On the third day of the excavation there was a heavy fall of snow and thereafter the ground froze solid. This made excavation difficult. Nevertheless the entire circle was excavated, and a number of interesting features noted.

**The Stone Circle (Fig. 2)**

The former position of the Wilson Scar Stone Circle (NY 549182) is marked on the ordnance survey map (OS 6" Sheet NY 51NW A pub. 1956 revised for major changes 1951). A description of the monument was published by Dr J. E. Spence in 1935 together with a very accurate plan which proved to be particularly useful in interpreting the results of the excavation.<sup>1</sup> The site of the monument lay below the crest of Knipe Scar, the ground sloping gently southwards towards Shap.

A modern field boundary of dry stone walling was built through the centre of the circle bearing NNE. This wall was the boundary between Wilson Scar and Sweet Holme Pasture, so that approximately half the monument lay in each land division. The position of the wall is shown on Dr Spence's plan in 1935, but the wall had been demolished prior to 1952, and no traces of wall footings were found during the excavation.

At the time of the original survey in 1934, the monument consisted of a carefully laid out circle of 35 prostrate stones, approximately 18.3 m in diameter, constructed out of erratics from the hillside, which had been placed upon level or levelled ground. One further small, eccentrically placed, boulder broke the surface within the interior of the circle. Dr Spence noted that at the south and west sides the ground sloped gently down from the circle in such a manner as to suggest that the surface had been levelled. A sunken trackway, which ran from the circle in a south-westerly direction towards Roskill, was also noticed by Dr Spence. No trace of the trackway could be seen at the time of the excavation, and it may be that this was a modern feature or that it was in the general vicinity of the monument rather than attached to it. The wording of the report is ambiguous and it may be noticed that Dr Spence did not survey in the position of the trackway in his otherwise meticulous plan. A number of gaps do appear between the stones of the circle along its circumference, and in one case, almost due south. There

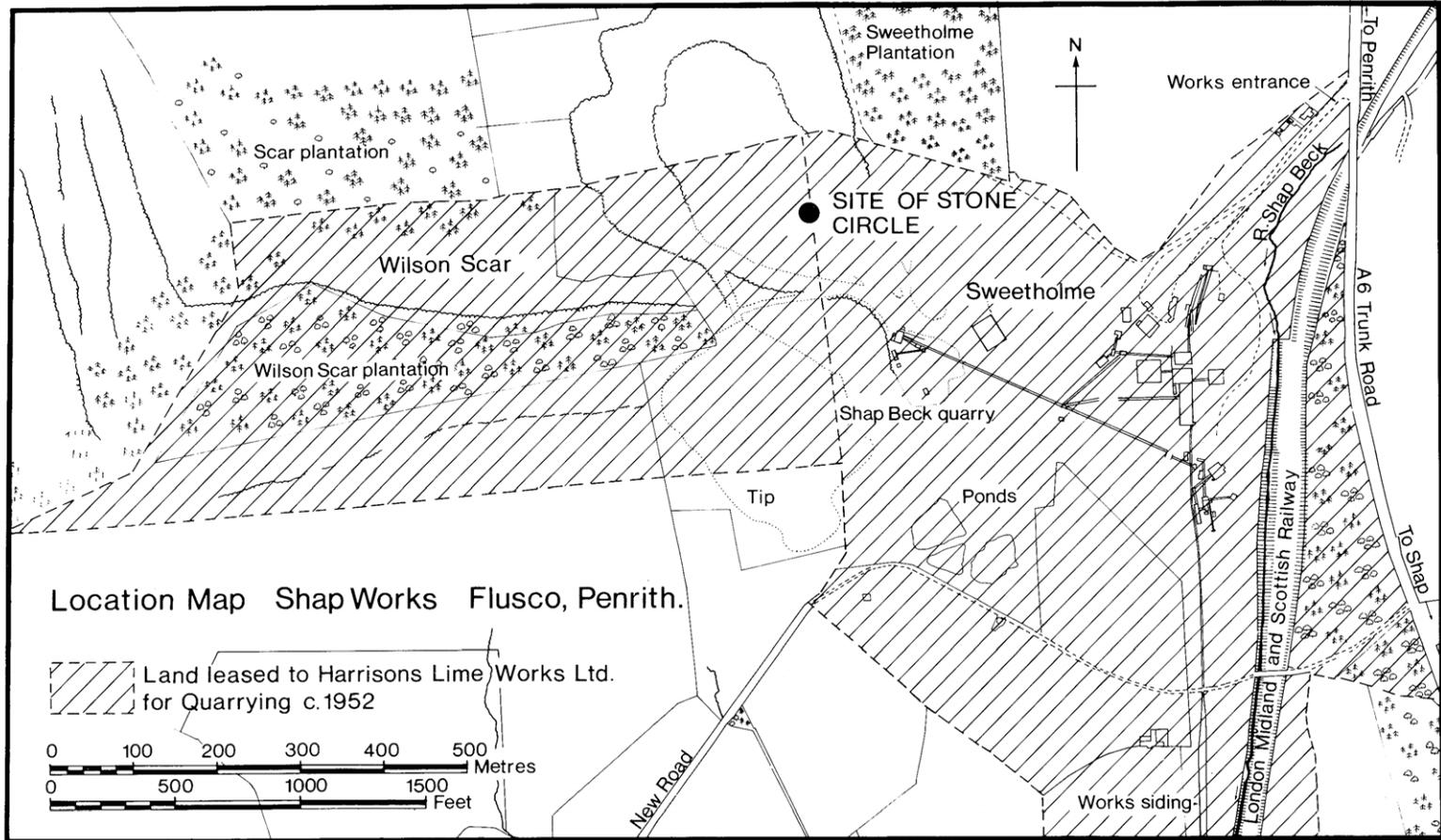


FIG. 1. - Location map of environs of Wilson Scar Stone Circle.

also appears to be a gap in the outer stone embankment, an emphasis upon a cardinal point noticed in other Cumbrian rings.<sup>2</sup> But there is nothing which would otherwise suggest an entrance, such as is shown in other circles by the presence of a single or a pair of rather more prominent portal stones.

Spence's description and plan of the circle was corroborated by the 1952 excavation, in respect to the size, shape and position of the stones, except for those which, it could be shown, had been moved since the preparation of the plan.

As is known from other examples of small stone circles, the stones are, in general, lying on their longest sides in their natural resting positions, as they would have been when they were collected in prehistoric times to build the circle. When the stones had been cleared to their bases, their size and shape was not appreciably different, and it was quite easy to recognize the stones from the 1934 plan.

As is noted below, evidence is lacking for one portion of the circle. However, to judge from the stones which are *in situ* and from the previous plan, the original setting of stones had been continuous. The available supply of large erratics up to 1.5 m by 1.2 m in horizontal dimensions, had been supplemented by packing smaller stones in between, and it is likely that a number of these had been robbed in modern times.

### The excavation

The circle was excavated on the quadrant method. North-south and east-west transverse sections of the monument were preserved. In the north-west, south-west and south-east sections it was possible to examine the surface of the ground for a distance of 3.3 m beyond the circle. At the time of the excavation the quarry face bordered the monument to the east and came to within a metre of the stones, which had originally formed the circumference of the circle, so that excavation outside the circle was not possible along the eastern margin of the circle.

Examination of the stones in this sector showed that these were not *in situ*. The unweathered surface of some stones showed distinctly at the turf line; in one or two cases the stones were placed in position upside down with the unweathered portion of the stone uppermost.

If the 1952 plan of the monument is projected on the earlier (1934) plan (Fig. 2), it can be seen that the stones are easily identified in the three undisturbed sectors, where they form part of the circumference of a true circle approximately 18 m in diameter. In the north-east sector, however, the two plans do not coincide. The stones, whose position in 1934 (see Fig. 2) lay on the circumference in 1952, form a straight line, a chord across the circle. The ground beyond this latest position had been dug away and removed by quarrying. Moreover, in one case, a prehistoric cremation (marked 1 on plan) was found already excavated at the foot of the escarpment, 6 m below the monument. From this it is plain that this portion of the monument was encroached upon in the summer of 1952, and hastily reconstructed for the benefit of the archaeologists. This would not have been quite so obvious had it not been for the published plan of the monument fifteen years before.

The cross-section of the monument provided little evidence of stratigraphy, due to conditions on the bare hillside. There appeared to be no trace of an ancient soil profile either in the interior or outside the mound, except where this was preserved by archaeological features. In general, the stratigraphy consisted of top soil and humus

directly underlain by undisturbed sub-soil. This appeared to have been artificially levelled in ancient times. The stones of the circle lay directly on the subsoil, and were not held up by stone holes or footings. They were provided with a low external retaining bank and the interstices between the stones were filled in, in a number of cases, to make a continuous circle below turf level. However, the circle was discontinuous in places. This was attributed by the excavators to stone robbing in medieval or modern times.

In the interior of the circle the levelled subsoil lay directly beneath the humus. In places the interior appeared to be paved with fairly thin limestone slabs, lying in a horizontal position. These were carefully surveyed in. However, the paving, if such it was, was discontinuous. In two instances small cairns of stones were found. These contained nothing and it was not possible to establish whether these were related to the monument. In addition, there are four cases of funerary deposits which are described briefly below.

The main feature of architectural interest was the external retaining bank of stones which directly abutted on to the stones of the circle on the portion which was still *in situ*. The bank was between 60 cm and 90 cm in width and between 30 cm and 45 cm in height at its highest point. It consisted of closely packed limestone fragments, occasionally underlain by a thin discontinuous blackish soil horizon, but in general lying on the undisturbed sub-soil. This feature explained the appearance of the monument as described before excavation, when Dr Spence noted that the ground sloped gently down from the edge of the circle on the south and western side.

### The Interments

The interments are numbered on the plan in the order of their discovery. The first interment recovered was the cremation alluded to above, which was not *in situ*, but lay on the quarry surface below the stone marked 1. It was a compact black mass of bone fragments about 23 cm in diameter, such as might have come from the interior, either of an urn, or a small funerary pit, perhaps dug for the purpose beside the stone in question. The stone itself retained traces of charcoal or burnt bone which suggests that the latter hypothesis is the true one. With the funerary deposit were found the skull of a small mammal and two further mammalian teeth, which are reported in the Appendix II, also three further specimens. The first of these consisted of a small flint flake, 5 cm in length and 13 mm in breadth, showing no traces of any wear or secondary trimming. The upper surface of the flint was partially concealed by cortex. A second artefact, also associated with the burial, was a flat black river pebble, 7.62 cm in length and 19 mm in diameter, which had been split into three pieces. All three pieces were recovered in different parts of the cremation. Also associated with the cremation was a flat plaque of limestone, 11 cm long, with three holes through it. The holes were identified as the casts of a common fossil type from the limestone of the Shap area, and the specimen, unless associated with the cremation by accident, is another example of stones containing fossils from British prehistoric burials. The association of fossils with burials of the Bronze Age is well known. Most of the authenticated cases are associated with burials of the Wessex Culture. There is also a famous burial in a barrow at Kempston, Bedfordshire, where a collared urn of Longworth's Primary Urn Series was buried with a very large collection of fossil sponges (unpublished – Bedford Modern School Museum). The urn should be

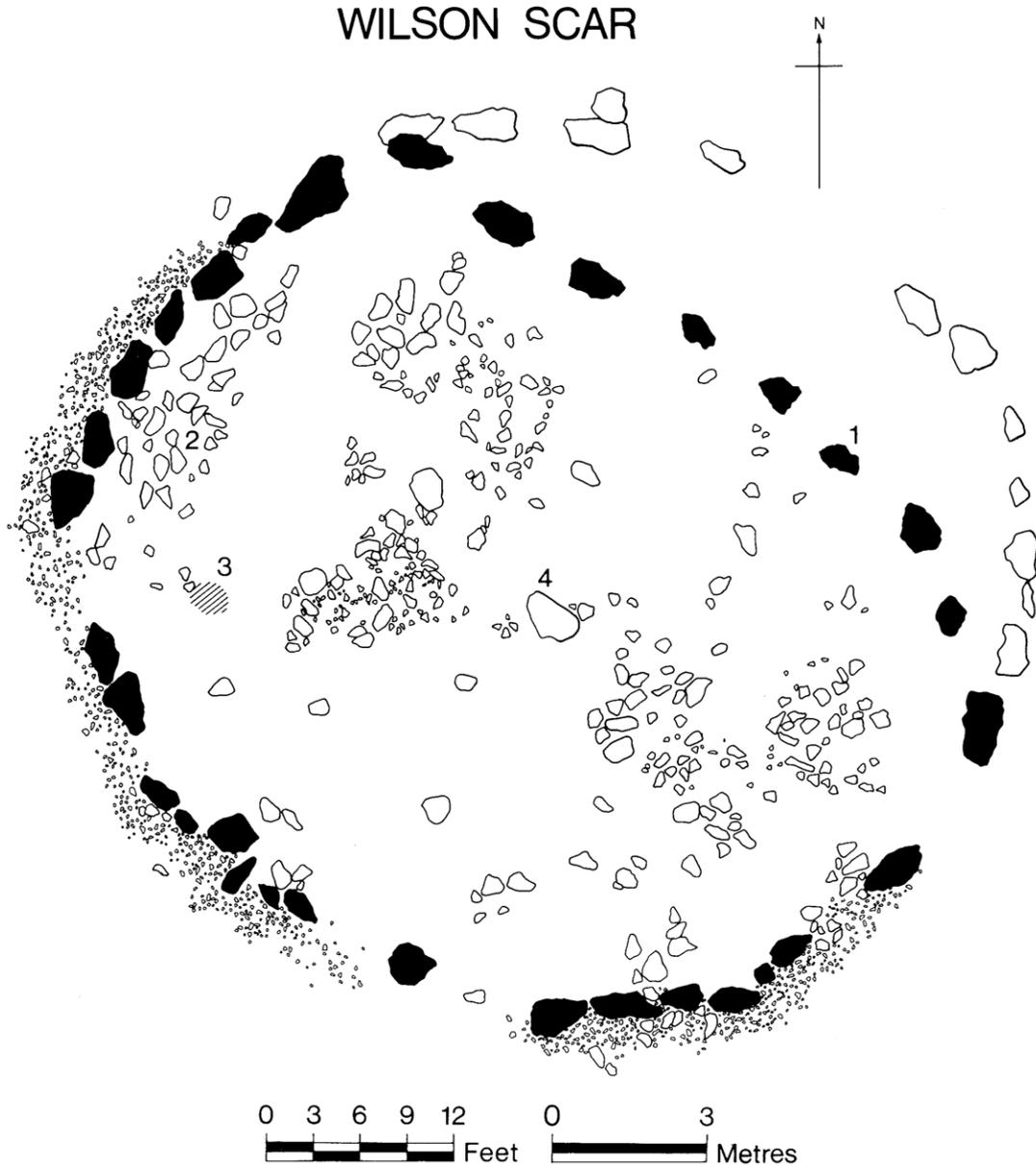


FIG. 2. - Plan of Wilson Scar Stone Circle.

dated before 1400 b.c. This burial is distinguished from the others by being the only interment associated with grave goods, and being eccentrically placed in the circle seems likely to have been a subsequent addition to the monument.<sup>3</sup>

In addition to the above cremation (No. 1), which was not found *in situ*, three further burials were recorded. An inhumation (No. 4) at the approximate centre of the circle, to judge from the original plan, which may have been primary, had no associated grave

goods. Some form of partial cremation from a charcoal patch (No. 3) contained fragments of a human cranium and human teeth (adult). It was judged that a portion of a single skull was present. No indication of sex was observed. There was sufficient however to show that only one adult burial was present. The only complete interment was that for the grave in the second quadrant (marked 2 on plan), close to the edge of the circle. The disarticulated inhumation burial was lying immediately beneath the turf line in a shallow grave 1.35 m long, surrounded by a setting of small boulders. All the major skeletal parts were recovered. The stone setting is too small to have contained an articulated skeleton except in a contracted state. However, there was no evidence that the burial was performed in this manner.

### Conclusions

In general terms the Wilson Scar Stone Circle falls into the same class as represented by the late stone circles<sup>4</sup> excavated at Lacra, near Kirksanton,<sup>5</sup> and at Broomrigg, near Ainstable.<sup>6</sup> The size and shape of the stones is very similar, as in every case glacial erratic boulders were employed in the construction of the circles. Though the stones are prostrate it would be incorrect to apply the archaeological term Recumbent Stone Circle to the Wilson Scar Monument, which lacks any of the distinctive features normally found in the Scottish rings.

In 1976 Burl indicated that stone circles of the Wilson Scar type are composite monuments representing a fusion of social and cultural traditions.<sup>7</sup> Notable features at this site include the levelling of the ground, attested in several circles in Aberdeenshire (e.g. Castle Fraser) and Ireland. Closer to hand there is a possible example at Swinside, Cumbria.<sup>8</sup> Paving and flooring in circles is not uncommon. For example the north circle of the Hurlers, Cornwall is paved with granite; Drombeg, Co. Cork, Ireland had a gravel floor. Mosley Height, Lancashire had discontinuous rough paving over pits and cists which held cremations and Lacra C also had a paved central area.<sup>9</sup> At Wilson Scar it does not apparently form part of an old cairn from a vanished burial monument, but it may originally have consisted of a number of small cairns (as in some Derbyshire circles) or stones, and there is no stratigraphical evidence to show whether it is contemporary with the circle. It has been suggested by Burl that although the levelling and paving may have facilitated the performance of ritualistic activities, such as dancing, an alternative explanation for the concealment of burials is probable in view of for example the spiky stone floor at Beaghmore E.<sup>10</sup>

The stone embankment heaped up against the outside of circles is a feature common to many of the later stone circles of Yorkshire and the Peak District. At Barbrook, Derbyshire two stone circles within 300 m have stones set into a rubble bank.<sup>11</sup> Cairns frequently occur in these circles and at Barbrook II the cairn concealed an inurned cremation which was radiocarbon dated  $1500 \pm 150$  b.c., and thus very late in the stone circle tradition. O'Riordain suggested that the bank at Lios was a primary feature and that the stones were used to revet it.<sup>12</sup> In North Wales a group of circles near Penmaenmawr also have a revetting bank of small stones and are associated with Bronze Age food-vessels.<sup>13</sup>

Such a diversity of features without stratigraphical relationships in an enduring architectural tradition such as stone circles, pose a considerable problem in establishing

chronological priority or function for their various components. Inevitably over a millennium they drew on influences as diverse as henges on the one hand and enclosed cremation cemeteries on the other.<sup>14</sup> The Wilson Scar Circle with its bank of small stones and paved, levelled central area is analogous to enclosed cremation cemeteries such as Blackheath Barrow near Todmorden, Yorks.<sup>15</sup>

In the Cumberland and Westmorland region Wilson Scar may be directly compared with the circle at Birkrigg Common,<sup>16</sup> the stone-lined ring-cairn at Banniside Moor, Lancashire and with Mosley Height, Lancashire.<sup>17</sup> Mosley Height (see above) with a charcoal patch near the centre, an unurned burial, appeared to be 10m away from the old trackway, Collingwood's section of Banniside Moor showed that the stones of the circle were supported by a bank of smaller stones and the description of Mosley Height suggests that this was also the case here.

Nearly all these monuments are associated with collared urns or food vessels, and it seems most likely that the Shap Monument should be accepted as a member of this class and dated accordingly to the later phases of the Early Bronze Age in England. It has been suggested that such sites which display a greater propensity for regionalized idiosyncracies may reflect the social and economic changes of the time giving rise to more localized hierarchies.<sup>18</sup>

### Acknowledgements

Mr H. A. W. Burl for his invaluable advice and comments on this report.

The original site photographs are in the National Monuments Record (Archaeology Section).

### Appendix I

#### *Geology*

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The Wilson Scar Stone Circle was built at the eastern end of a prominent escarpment formed by the Knipescar Limestone. The ground south of this escarpment is drift-covered, and here a series of low drumlins trending north-south have been mapped. The Stone Circle was constructed from local erratics on a drumlin. A section of this drumlin exposed on the north face of Harrison's Lime Works Quarry consists of large boulders of Carboniferous Limestone with tuffs and lavas from the Borrowdale Volcanic Series. Large erratics of the latter type are scattered on the surface.

An examination of the erratics on Wilson Scar and around the Stone Circle demonstrated that the Circle was made of boulders collected locally. There is no evidence of discrimination of rock type, both tuffs and lavas having been used. No Shap Granite or rocks from the thermal aureole were found on Wilson Scar although Shap Granite erratics occur east of the A6 road. The most characteristic rock type is an agglomerate or coarse lithic tuff composed of subangular fragments, often seven or ten centimetres long, of pink felsite and andesite set in a highly chloritized light green matrix of similar smaller fragments. These are usually ill-graded and unbedded, although one specimen

shows well marked graded bedding. One boulder used in the construction of the Stone Circle shows the effects of shearing. These tuffs and agglomerates are undoubtedly equivalent to Mitchell's Coarse Tuffs which occur toward the top of the Borrowdale Volcanic Series and outcrop in the Ralfland Forest-Swindale Common area 5·6 kilometres S.S.W. of the Circle.<sup>19</sup> The lavas can be identified with less certainty, but they appear to be generally similar to the Upper Andesites which overlie the Coarse Tuffs in the Swindale Common area. The most characteristic type is blue green porphyritic lava with feldspar phenocrysts and occasionally chlorite pseudomorphs. Aphanitic, vesicular and epidotized types also occur and have been used in the Stone Circle.

A consideration of the boulders used in the construction of Wilson Scar Stone Circle has thus led us to the conclusion that it is constructed from glacial erratics collected locally. A study of the geology and geomorphology of the district strongly suggest a south-south-westerly or south-westerly origin of the erratics. The alignment of drumlins and the ice-striae on limestone exposed in Harrison's Quarry suggest a more southerly origin but this anomaly is possibly due to the northward deflection of the Swindale ice by northward moving ice from the Shap Fells area.

## Appendix II

### *Fauna*

By THE LATE EARL OF CRANBROOK

The animal remains sent to me were two cheek teeth probably from a red deer and parts of the skull of some species of water vole (*Arvicola*), these last from the circumstances of their discovery almost certainly of one individual. The *arvicola* remains consist of:

1. The lower portion of a rostrum (nose) and palate from and inclusive of the two upper incisors to the hinder end of the two second molars.
2. Part of a right mandible with a broken incisor and all three molars.
3. A fairly complete left mandible lacking the third molar.

The remains are those of an animal smaller than a full-grown English water vole, (*Arvicola terrestris amphibius* Linn) and indeed slightly smaller than *A. t. reta* Miller from the north of Scotland.

The length of the mandibular tooth row is – 8·5 mm

In *A. t. amphibius* this is – 9·4-11·4 mm

In *A. t. reta* – 9·9·5 mm.<sup>20</sup>

The small size could be due to the immaturity of the individual animal concerned, but I do not think that this is so. As water voles grow up the temporal ridges on top of the skull become more marked and gradually grow closer together, fusing in the mature individuals: from the material available one cannot of course see if the temporal ridges were fused, but it is I think possible to get some indication of age from the proportionate lengths of the rostrum and width across the upper molars. M. A. C. Hinton has shown how with increasing growth and age considerable changes take place in the relative proportions of the various parts of the skull and how in the later stages the rostrum

becomes progressively longer and narrower as the upper incisors increase in length.<sup>21</sup> In this specimen the distance from a line joining the front edges of the two first upper molars to the anterior end of the praemaxillae between the two incisors is 14 mm: the extreme width across the front ends of the same two molars 7 mm, i.e. the first distance is 200 per cent of the second. This seems to be the usual proportion in fully grown specimens of *A. t. amphibius*: of six casually chosen skulls with temporal ridges fused five gave this figure of 200 per cent, in one the proportion was 15:8; in four juveniles the measurements were 12:5:7, 13:7:5 (twice) and 14:7:5 (average  $\pm 180$  per cent), in four skulls with ridges open or barely touching 14:8, 15:8 (twice) and 16:8 (average  $\pm 190$  per cent).

It seems reasonable to assume that these remains were those of a fully grown animal considerably smaller than any adult *A. t. amphibius*. It is possible therefore that they should be referred to *A. t. reta* Miller and that 3,000 years ago that animal's range extended further south than it does at present.

It is worth adding that there are in the British Museum (Natural History) a broken skull and five mandibles of some species of *Arvicola*, dug up at the Roman fort at Newstead near Melrose and said on the label to have been 'found amongst produce of the chase' and to be 'certainly of the 1st or 2nd Century A.D.' It is possible to say how many individuals are represented. One of the mandibles lacks  $m_3$ , of the other four the tooth rows measure 9, 8.5 (twice) and 8 mm. The skull has the ridges fused. Though of course 1000 years later these remains also seem nearer in size to *A. t. reta* than to *A. t. amphibius*.

These indications that a water vole smaller in size than *A. t. amphibius* may have existed in southern Scotland and northern England until a comparatively recent date are interesting. Further material from archaeological sites or holocene deposits in this district is needed before one can say anything definite.

Water voles are vegetable feeders, not scavengers and one would not expect to find them in nature about a rubbish heap or midden. The presence of these remains with other 'produce of the chase' in both cases seem to indicate that they were deliberately hunted, probably for food. That Bronze Age man would eat them seems highly probable. On the Burma Tibetan frontier I have seen primitive tribes in a more or less comparable state of culture eat small mammals of a similar size, indeed I have there eaten them myself and found them very palatable. While it must not be forgotten that the brain case of any small mammal is made of thin and fragile bones likely to be broken and disintegrate with time, the condition of the Wilson Scar remains is highly suggestive. The brain is a tasty morsel: the vole, rat or squirrel is removed from the fire or pot, the head torn off, the hinder portion of the skull removed and the brain extracted leaving the nose, palate and lower jaws to be thrown away in one piece: in these small mammals the tongue is too small to be worth looking for. The Romans in Italy ate the edible doormouse (*glis*), fattening them for the table in *gliraria* (e.g. Varro: *de Re Rustica* 3. 15): that animal is comparable in size with *Arvicola* which may well have been looked upon as a substitute in a country where *glires* did not exist. In any case I understand that the Roman army contained many barbarian units drawn possibly from tribes which normally ate such animals as *Arvicola*. I see no reason to draw analogies with rats eaten at the siege of Paris etc., etc.: *Arvicola* is not a town rat but an animal of open spaces most unlikely to be found in a besieged wall or strongpoint.

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