

## I

## THE STAR CARR SITE

## I. EXCAVATION

The settlement at Star Carr (Nat. Grid 54/027809), situated near the eastern end of the Vale of Pickering some five miles south of Scarborough, Yorkshire, lies close to the southern bank of the modern canalized course of the River Hertford, west of Star Carr bridge and north of the old course of the river which separates the parish of Seamer from that of Flixton. The site lies on the southern flank of a low glacial hillock rising some 6 ft. above the general level of the peat, which now occupies the bed of the Mesolithic lake (Pl. I). The archaeological level, comprising a well-defined scatter of flints and a few pieces of decayed antler and bone, was first recognized in the exposed section of the field drain against the southern bank of the canal by Mr John Moore, who cut back the ditch some 2½ ft. on a front of 23 ft. (*ab* 14-21; fig. 1).

When more extensive excavations were begun in the summer of 1949 (fig. 1) the first object was to test the possibility of recovering something of the organic component in the material equipment of Mesolithic settlers, and to obtain as much information as possible about the animals on which they subsisted and about the physiographic and ecological conditions prevailing in the immediate area at the time of the occupation. With this in mind a 9-ft. trench (Cutting I) was sent out at right angles to the field-ditch for a distance of 50 ft., so as to open up waterlogged deposits favourable to the survival of organic matter. In the event this single trench multiplied tenfold the material, other than flint and stone, bearing on the equipment of Maglemosian man in Britain; secured our first substantial assemblage of narrowly dated Post-glacial fauna; and revealed the existence of a rough birch-wood platform on which the Mesolithic hunters were enabled to camp on the reedswamp close to the very waters of the lake.

The peat and organic mud were systematically removed from the archaeological level and this was found to consist at the higher end of the trench mainly of worked flints, charcoal and stone pebbles, together with a few scraps of antler and bone, dark in colour and soft as leather. As the occupational debris descended the slope towards the lake the organic content was recovered in a progressively better state of preservation: by Zone D rolls of birch bark and disconnected pieces of birch wood began to appear; by Zone E the birch flooring was more intact and animal remains were sometimes in better condition; and by Zone G conditions for the survival of

certain organic materials were as good as anywhere on the site. Finds of worked flints and barbed points were densest in Zones J–L. In this part of the section an upper birch level was encountered, but this was lacking in finds and the birch platform with its wealth of archaeological and faunal evidence was found in place underneath.

During the 1950 season two parallel 9-ft. trenches (Cuttings II and III) were excavated on either side of Cutting I, but separated therefrom by 3-ft. balks; in addition two 4½-ft. trenches were cut, one 50 yards west of datum (Cutting IV) and one immediately east of datum (Cutting V), to test the extent of the site. In Cutting II the upper birch layer was particularly well-marked and since the birch stems were in places squashed flat with their bark intact, the illusion of artificial flooring was quite pronounced. Careful examination disposed of this possibility, however, and the platform with its debris of occupation was found to underlie this upper level, as in Cutting I. Clearance of this platform in both sections only served to confirm and amplify our knowledge of its character (fig. 2). Although the closest watch was maintained, no trace of piles or vertical structure was encountered. As in Cutting I, the platform was composed of birch branches thrown down directly on the reedswamp and consolidated by occupational debris, including quantities of stag antlers, glacial boulders and pebbles and wads of grey clay resembling that found on the floor of Cutting V. A fresh detail was the discovery in Cutting III (Pl. I, B) among the birch brushwood of wads or cushions of moss, identified (see p. 60) as *Eurynchium myosuroides* and *Camptothecium sericeum*. Minor occurrences of the first-mentioned could be explained on the theory that it had been introduced on the birch stems forming the structure, but there can hardly be any doubt in the case of the area in J 22–3, some 3 ft. in diameter, that the moss was introduced by man. Another fairly large cushion was found in H 26 during the third season. The lakeward margin of the platform was defined particularly clearly in the northern part of Zone M of Cutting II (Pl. II).

Extension of Cutting II towards the margin of the lake revealed the greater part of a large birch tree and the trunk of a smaller one, which in each case had evidently been cut down at the time of the settlement, either to clear the site or to provide some kind of primitive landing stage. Both trees had apparently been felled by a crude axe or adze: in the case of the larger one, which was approximately 14 in. thick, the work had been carried on more or less evenly and at a markedly oblique angle all round the trunk so that the base was sharpened rather like a pencil;<sup>1</sup> the stump of the smaller one was more obtuse and less symmetrical, showing that it had been felled by blows mainly from one direction and at a lower angle. The pointed tip of the larger tree articulated with the margin of the brushwood flooring (Pl. IV), to which the trunk

<sup>1</sup> Compare the bases of tree-trunks felled experimentally by means of a polished flint axe in Denmark. See Svend Jørgensen in *Fra Nationalmuseets Arbejdsmark*, 1953, pp. 36–43, figs. 28–9.

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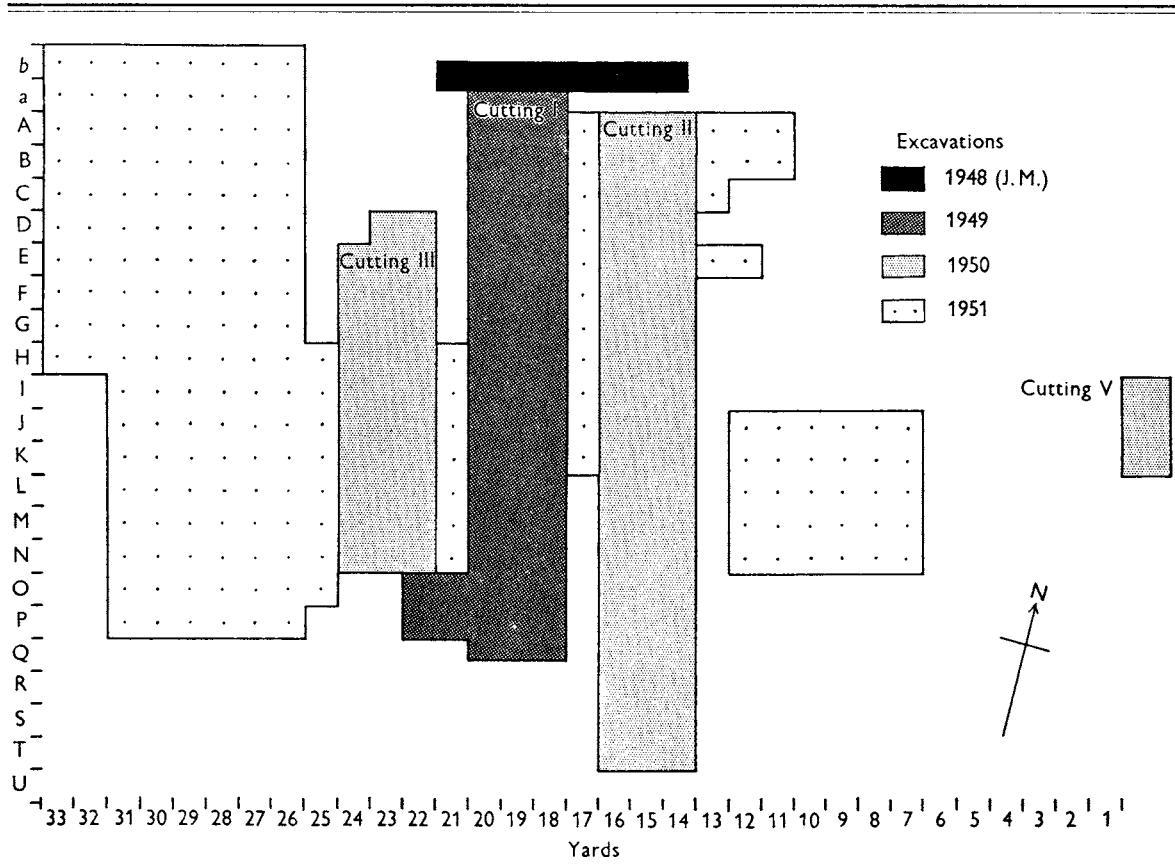


Fig. 1. Plan of excavations at Star Carr.

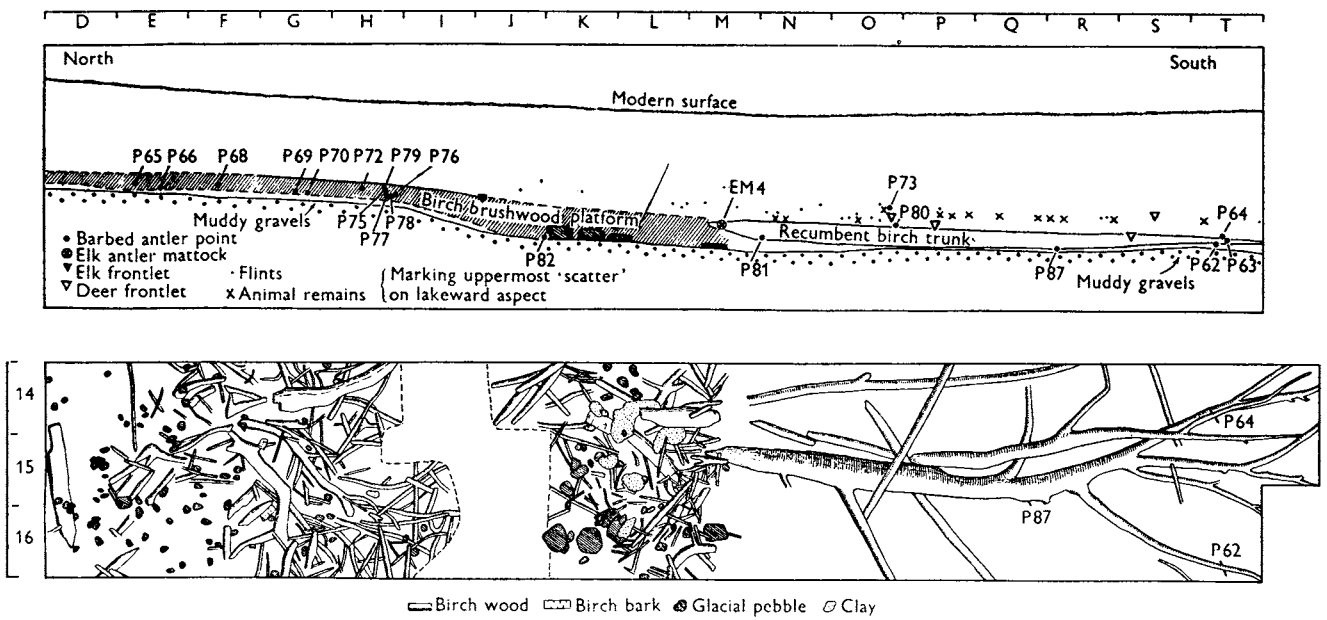


Fig. 2. Plan and section of Cutting II, Star Carr.

lay more or less at right-angles. The finer branches of the trees were traced by Mr Walker out into the lake mud. There can be no doubt that they were felled during the occupation or as an immediate preliminary to this, since, as shown in fig. 2, barbed antler points were found in two places under the main trunk (P62 and P87) as well as between the upper branches of the two trees (P64).

Cuttings IV and V both produced almost negative results so far as settlement material is concerned: the former yielded only two bones and one flint; the latter no more than a single flake. These tests showed that the settlement could not have been very large and encouraged the hope that the whole area could be uncovered. Accordingly the aim of the 1951 campaign was to complete the definition of the site and examine as much of the archaeological deposit as could be managed. Since the eastern limit had already been approximately established, only one medium-sized area of 30 square yards (JN7-12) and two very small ones (E12-13; AB11-13 and C13) were opened up on this side. On the west a very substantial area (bH 26-33 and IP26-31) was cleared down to the Late-glacial gravel (Pl. III, *B*) and then extended eastwards to clear part of the balk (HO25) separating this area from Cutting III. As it turned out, only the middle part of the eastern zone of the area yielded much in the way of occupational debris, though some of this was as productive as any part of the site: on the other hand, the very poverty of finds in the rest of the area was valuable in that it served to define beyond any doubt the western and parts of the northern and southern limits of the site.

Finally, Mr Moore made a great effort to salvage the potentially richer parts of the balks between Cuttings I, II and III. He succeeded in clearing Zones HN21 and AK17 and maintained a detailed record of the finds, here incorporated in figs. 7-14.

## 2. SIZE AND CHARACTER OF SETTLEMENT

### (a) SIZE

Any attempt to define the extent of the settlement by objective means has to take account of the fact already noted that organic remains survived to a very varying degree in different parts of the site. The only reliable indication of the inhabited area is that given by imperishable traces, notably by worked flints, the overwhelming mass of which represented the debris of flint-knapping. With this in mind a record was maintained of the numbers of flints found in each square yard uncovered. The results, disregarding small spalls, are shown on fig. 3.<sup>1</sup> It can be seen, especially on the west where an extensive marginal area was examined, that in the peripheral parts of the excavated area the numbers of flints per square yard fell to negligible values.

<sup>1</sup> Some adjustment of the figures for Mr Moore's strip, *ab* 14-21, has been made to allow for the inclusion of spalls.





more extensive than, that of worked flints to a density of thirty-six per square yard. Where the edge of the birch-wood platform was clearly defined, as in Cutting II, it was found to lie just within this zone, but elsewhere, as in the south-western quadrant (Pl. III, *B*), it was rather more extensive. A useful check is provided for the lakeward aspect of the site by the distribution of barbed antler points. Of the 181 examples plotted on fig. 5, 156 or 86.2 % were found within the zone of thirty-six flints per square

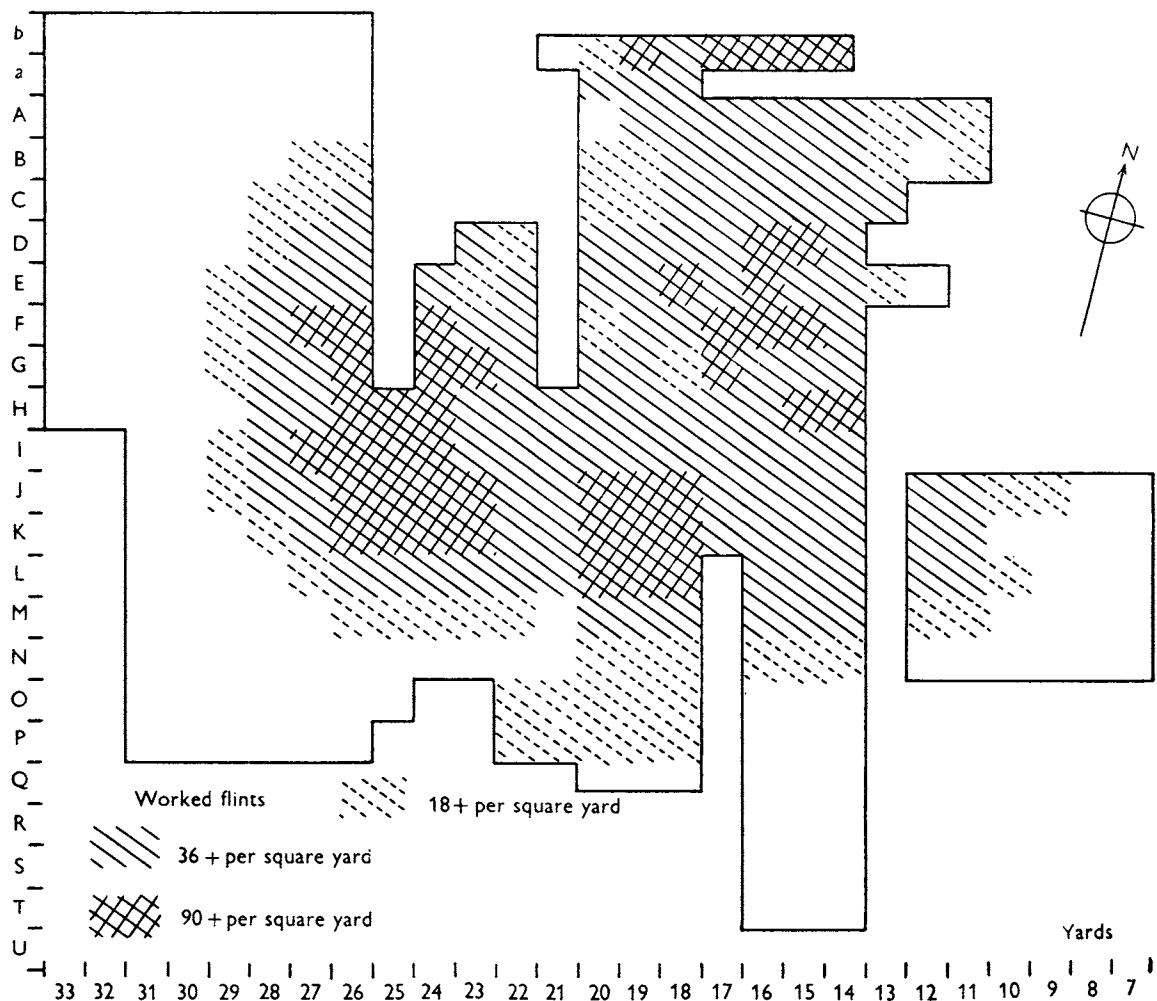


Fig. 4. Extent of site as shown by density of flints.

yard and 170 or 93.9 % within that of eighteen flints per square yard; further, of the eleven remaining specimens five were found in the immediate neighbourhood of the recumbent birch trees tentatively interpreted as a landing stage.

It seems therefore legitimate to accept the zone with at least thirty-six flints per square yard as constituting the approximate area of the settlement. This comprises

188 square yards tested by excavation, to which may be added 11 square yards in the unexcavated parts of balks between Cuttings I–III and the western sector, a similar amount to the east of Cutting III and a possible extension of the northern lobe under the canal bank which can hardly have been less than 10 square yards and might have been two or three times as much. Thus one may think in terms of around 220–240 square yards as the probable area of the settlement at Star Carr.

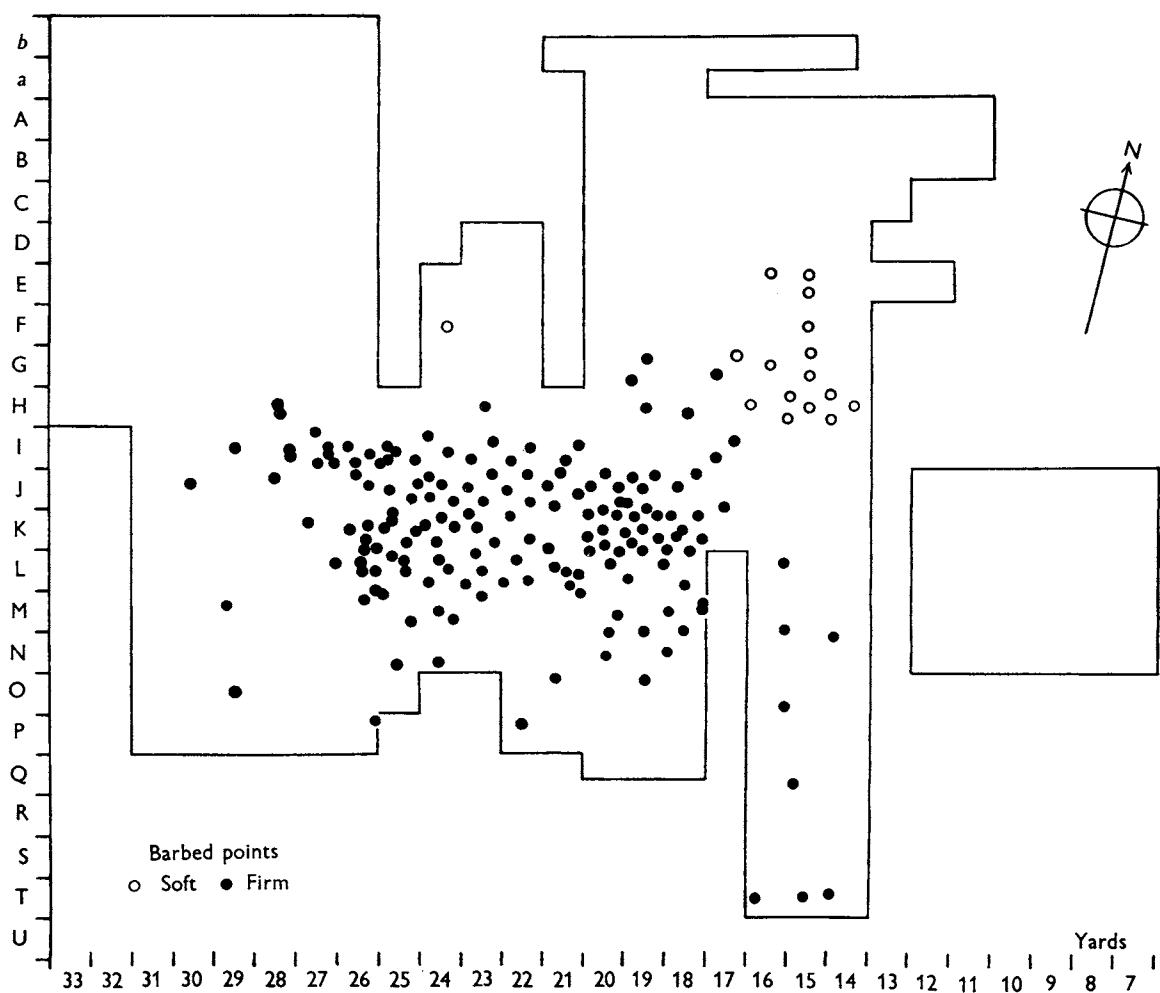


Fig. 5. Distribution of barbed points of antler and bone.

If we compare Star Carr with other Mesolithic settlements a close agreement will be found. Despite incomplete excavation and the complication of superimposed settlements, it is possible to cite the dimensions of a number of Mesolithic sites from different parts of temperate Europe. For comparative purposes it has been found simplest to express size in terms of length and breadth measurement, length being

taken from the main axis and breadth from the longest measurement at right angles to this. Reduced to metres we get the following approximate results:<sup>1</sup>

Nørre Sandegaard III, Bornholm, Denmark <sup>2</sup>	. . . . .	22 × 13 m.
Téviec, Morbihan, France <sup>3</sup>	. . . . .	20 × 12 m.
Vinde-Helsing Mose, Aamosen, Denmark <sup>4</sup>	. . . . .	20 × 12 m.
Star Carr, Yorkshire, England	. . . . .	16.5 × 14.5 m.
Oakhanger, Hants., England <sup>5</sup>	. . . . .	14.5 × 11 m.
Nørre Sandegaard II <sup>6</sup>	. . . . .	10 × 10 m.
Flixton I, Yorkshire <sup>7</sup>	. . . . .	10 (N-S) × ? m. (E-W)

The communities found camping by the sea-shore and on the margins of lakes in Mesolithic Europe evidently belonged to the same order of society as those which in different circumstances sought shelter in caves or under overhanging rocks. For example, one might quote the dimensions of the Upper Natufian occupation at the Mugharet el-Wad, Mount Carmel:<sup>8</sup>

Platform in front of cave	. . . . .	20 × 16 m.
Occupation in inner cave	. . . . .	12 × 8 m.

The contrast in scale between all these hunter-fisher communities and those which first became possible in temperate Europe with the adoption of mixed farming is very marked. The size of settlement first made possible by the new economy may be illustrated from some of the best-known examples of peasant communities from prehistoric Europe of which the total plan has been recovered:

Neolithic:		
Aichbühl, <sup>9</sup> S. Germany (built up area)	. . . . .	116 × 56 m.
Köln-Lindenthal, <sup>10</sup> W. Germany (enclosed area)	. . . . .	331.5 × 183 m.
"    "    (built-up area)	. . . . .	222.5 × 150 m.
Kolomyseina, <sup>11</sup> S. Russia (excluding structures outside circle)	. . . . .	173 × 145 m.
Late Bronze Age:		
Wasserburg Buchau, <sup>12</sup> S. Germany (perimeter)	. . . . .	156 × 120 m.
"    "    (built-up area)	. . . . .	116 × 90 m.
Early Iron Age: Glastonbury, <sup>13</sup> England	. . . . .	143 × 90 m.

It will be seen that the new economy made possible settlements of the order of a hundred times greater by area than the old. Meanwhile it was probably as true of

<sup>1</sup> Based on extent of undisturbed flint scatter, except in the case of Téviec the measurements for which comprise the area within which hearths were located.

<sup>2</sup> C. J. Becker, *Aarbøger* (1951), pp. 104, 106, 109.

<sup>3</sup> M. and S.-J. Péquart, *Téviec. Station-nécropole mésolithique du Morbihan* (Paris, 1937), fig. 3.

<sup>4</sup> T. Mathiassen *et al.*, *Stenalderbopladsen i Aamosen* (Copenhagen, 1943), p. 16.

<sup>5</sup> W. F. Rankine, *P.P.S.* xviii (1952), p. 23, fig. 2.

<sup>6</sup> Becker, *op. cit.*

<sup>7</sup> J. W. Moore, *P.P.S.* xvi (1950), Pl. v.

<sup>8</sup> Garrod and Bate, *The Stone Age of Mount Carmel* (Oxford, 1937), vol. 1, Pl. III; also information from Professor Garrod.

<sup>9</sup> R. R. Schmidt, *Jungsteinzeitsiedlungen im Federseemoor* (Augsburg, 1930-6).

<sup>10</sup> Buttler and Haberey, *Die bandkeramische Ansiedlung von Köln-Lindenthal* (Frankfort, 1936).

<sup>11</sup> E. Kricevskij, *Tripil's'ka Kul'tura* (Kiev, 1941).

<sup>12</sup> H. Reinerth, *Das Federseemoor* (Leipzig, 1936), pp. 119-50.

<sup>13</sup> Bulleid and Gray, *The Glastonbury Lake Village* (Glastonbury, 1911).



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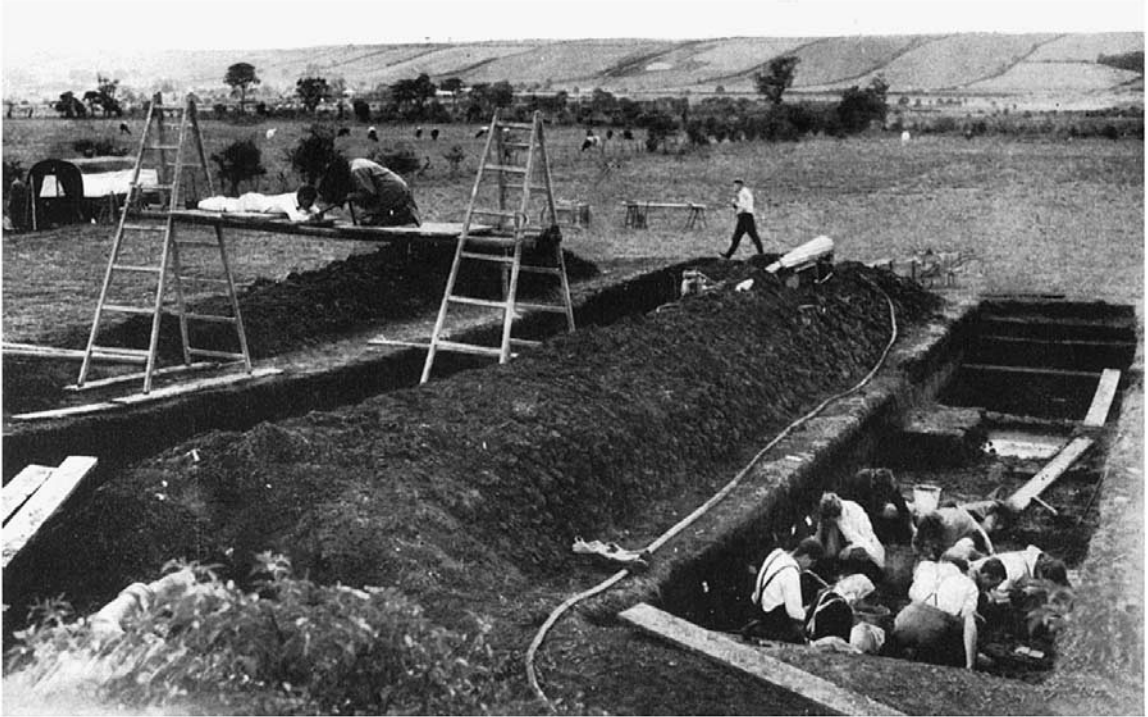
978-0-521-10768-6 - Excavations at Star Carr: An Early Mesolithic Site at Seamer Near Scarborough, Yorkshire

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Excerpt

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PLATE I



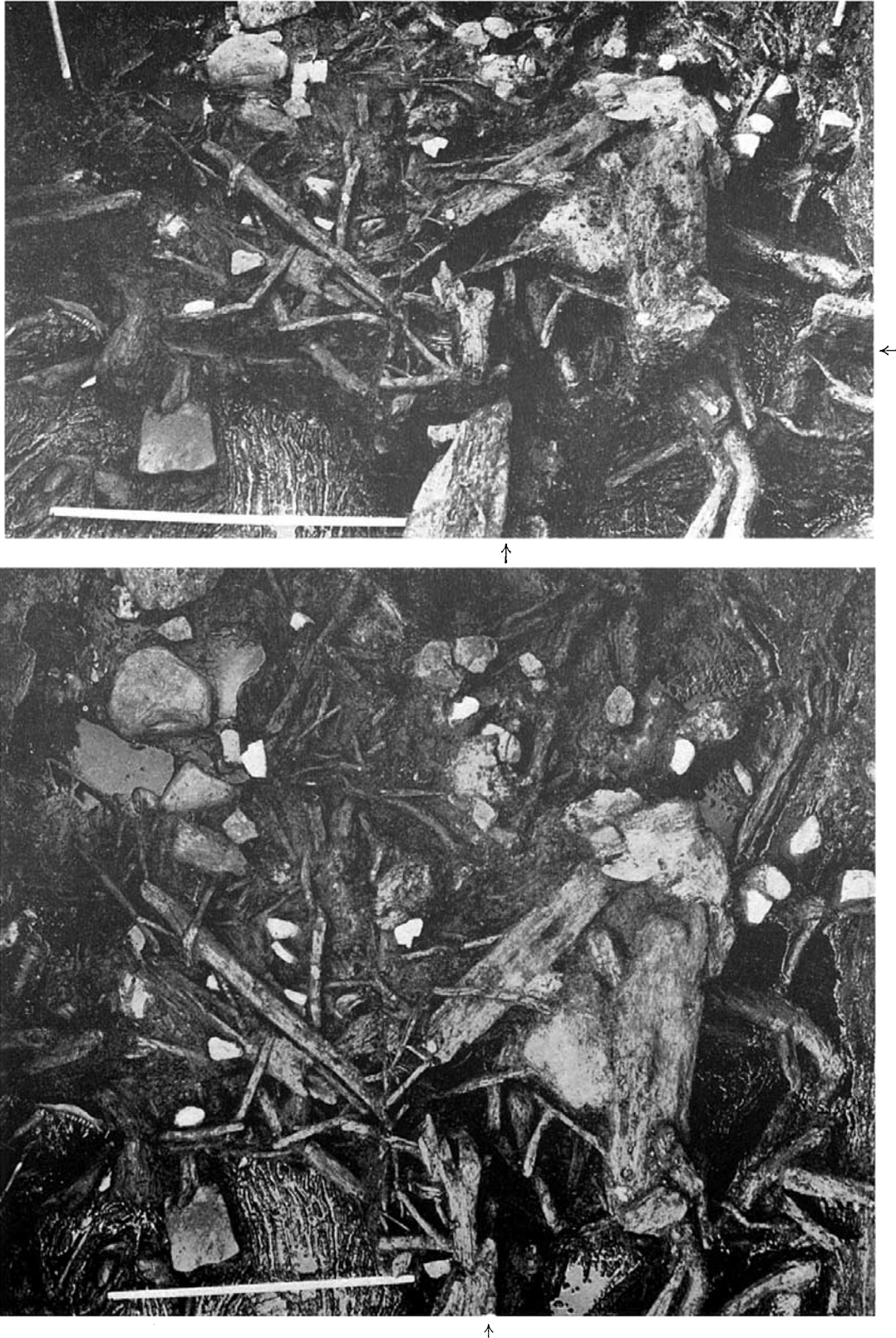
*A.* Star Carr: view from north across ancient lake-bed with Cutting III in foreground and Wolds in background



*B.* Vertical view of archaeological layer in Cutting III (squares GH 22–24)



## PLATE II



Star Carr: oblique (*upper*) and vertical (*lower*) view of archaeological layer in Cutting II (squares KM 14–16). Note glacial stones and, less sharply defined, wads of clay. The point of intersection of the arrows in each photo marks the position of the pointed base of the larger felled birch tree