

# EXCAVATION OF AN EARLY PREHISTORIC SITE AT STRATFORD'S YARD, CHESHAM

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*An excavation at Stratford's Yard, Chesham, in 1969 resulted in the discovery of a late Mesolithic working floor approximately 1 metre below the present ground level. Some Neolithic material was also recorded. A quantity of flint implements, flakes, cores and waste was found, together with animal bones. The latter gave a radio-carbon dating of the fourth millennium BC. Some pottery fragments were also found. There was a further opportunity to examine the site in 1982, which added details.*

## *Introduction*

Stratford's Yard was one of the early closes of Chesham (Fig. 1). In 1966-7 East Street was constructed across this part of Chesham, truncating Stratford's Yard and demolishing the remains of a ruined sixteenth-century cottage there. The Chess Valley Archaeological and Historical Society (CVAHS) was asked by the owner, the late Arthur Stratford, to investigate the building history of the remains. The excavation was run as a training dig by the Field Group at weekends throughout September and October 1969. The finds from both excavations are deposited with the Buckinghamshire County Museum.

## *Topography of the Site*

Chesham stands at approximately 350 OD on a spread of alluvium deposited at the confluence of several minor valleys that have been cut by streams into the dip slope of the chalk of the Chiltern Plateau, and which here unite to form the main valley of the River Chess.

The site is on the south-east edge of the alluvium at SP95980150. How near it was to the bed, or beds, of the Chess (for the river appears to have braided its way across the valley in earlier times) cannot now be determined. However, during the digging of a deep sewer across the town in 1978-9, the CVAHS observed a

deep layer of black silt of a previous river bed above the river gravels in the wall of a trench some 50m from Stratford's Yard. The slight slope of the land from the site towards the river suggests that it would have been above normal river levels. The hillside behind the site rises steeply to approximately 500 feet and would produce considerable down wash (Fig. 1).

The upper chalk, the flint-bearing section, although much eroded on the Chiltern scarp, does occur in greater depth on the dip slope. It is found in the Chesham area as a capping of the hills over 400 feet, giving a possible depth of flint-bearing rock of up to 100 feet on the hill tops behind the site, or lower if erosion revealed it.

## *The 1969 Excavation*

This report has been compiled without the assistance of the directors of the excavation and without the full complement of finds. The shed in which some of them were housed was vandalized and they were lost. The writer was one of the diggers in 1969.

The only area available for excavation (Fig. 2) was the remaining room, bounded by the back wall of the cottage, the new boundary wall, an old well and the large chimney breast plus debris. Approximately 3×4m was suitable for

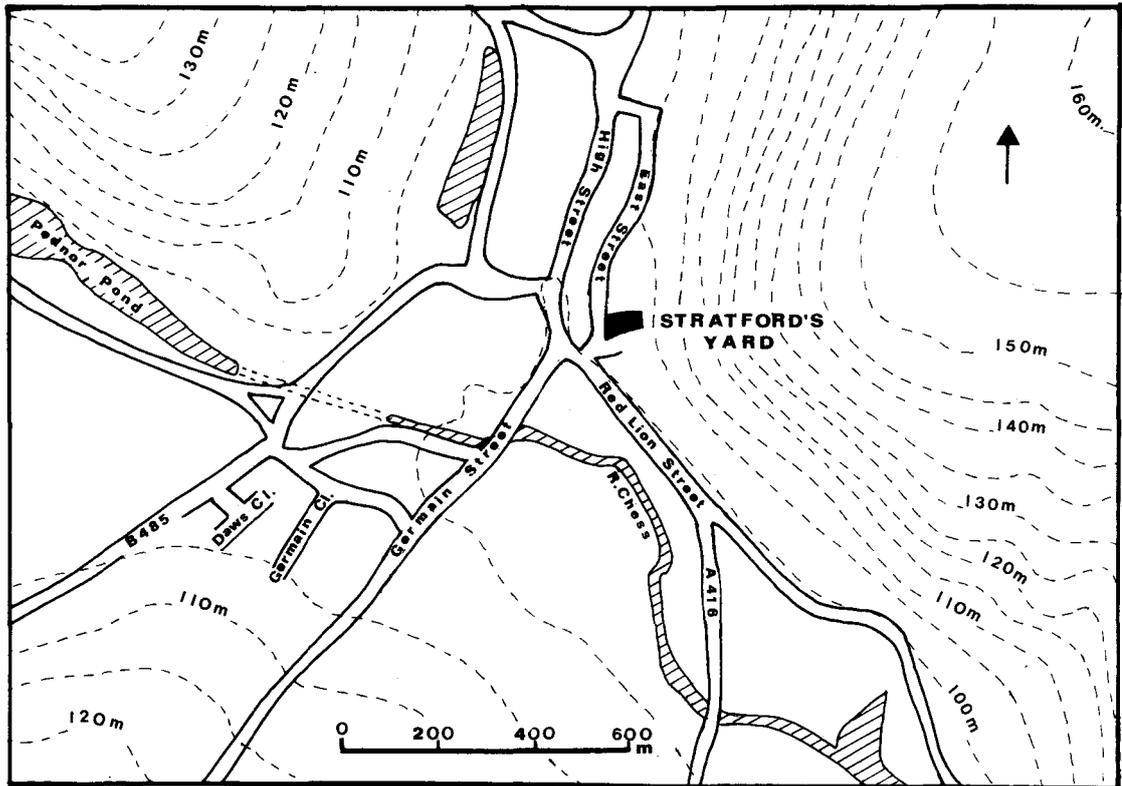


Fig. 1. Chesham, showing location of Germain's Close, Dawes Close and Stratford's Yard.

excavation. Oak floor boards (Fig. 3, B, layer 1) were removed and two trenches, AI and AII, were laid out, each initially divided in two by east-west baulks.

Layer 2, not shown in section, was an irregular layer of silver sand which had worked down between the floor boards. Objects in this layer consisted of lace-makers' bronze pins, buttons, glazed pottery and nails, suggesting that floor boards had been lifted at some time for replacement. The remaining layers are shown in Fig. 3, sections S, and T.

Below the boards, and not fixed to them were 10cm wide half-round split stakes, many of them existing now only in ghost form. These were bedded in clay, Layer 3, with flint nodules and chalk lumps and sand. Together with Layer 4, loose chalk, and Layer 4a, compacted chalk, these represented the building make-up of the

cottage. The tiles shown in Fig. 3 B existed only as added foundation under the walls and did not extend to the floor area. Finds in the clay were similar to above: bronze pins, late pottery and a seventeenth-century token.

Below these layers were about 60cms of brown loam with small natural flints, chalk fragments and fragments of brick and charcoal. The top 20cm, Layer 7a, was darker and more weathered, suggesting plough soil, than Layer 7, undisturbed hill wash. Pottery sherds found in 7 and 7a included some prehistoric, Romano-British, medieval and post-medieval. From some 30cm below the surface of 7a increasing numbers of struck flakes, cores and some artifacts were recovered.

At about 70cm below floor level the east-west baulks of both trenches were removed, giving two trenches AI and AII, each 1x4m. At about

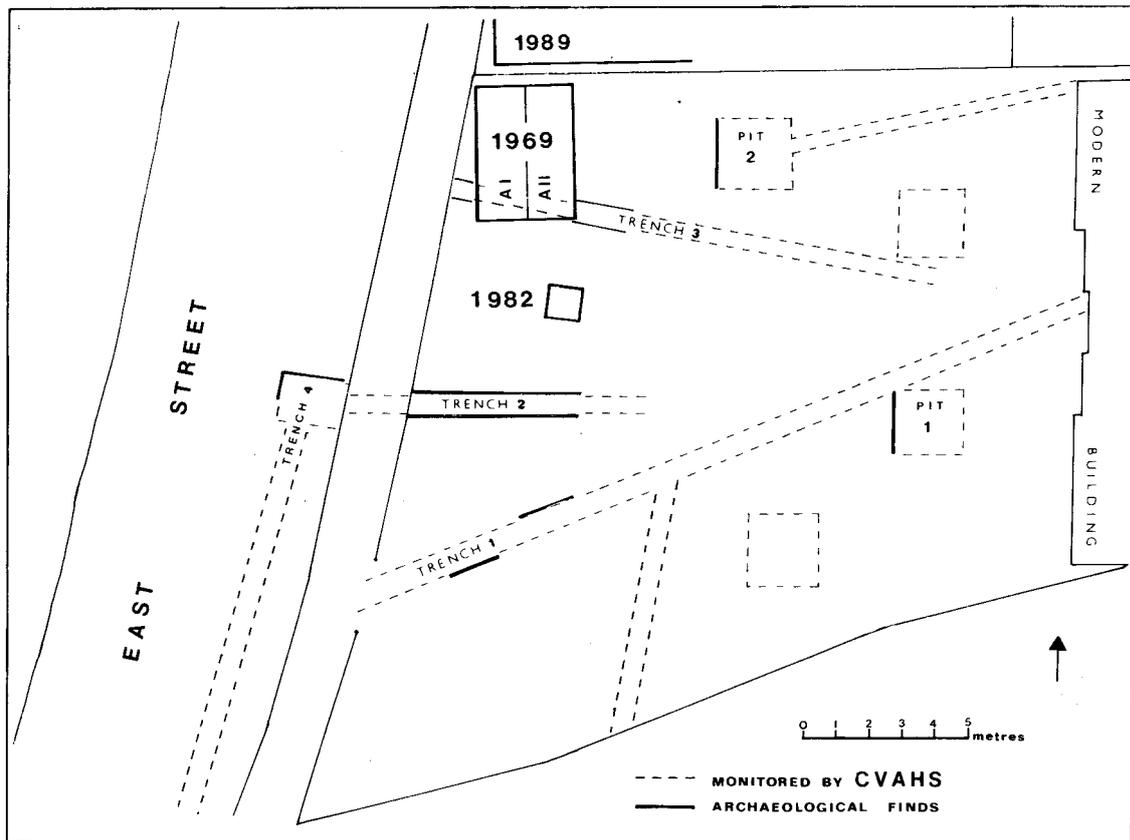


Fig. 2. Plan of Stratford's Yard 1982, showing 1969 and 1982 excavations and development trenches.

75cm below floor level a dark humic layer was reached, Layer X, some 2.5–5cm thick, containing quantities of struck flint flakes, artifacts, cores, burnt flints, bone and flint-working debris. The excavation continued in  $\frac{1}{2}$ m squares.

Immediately below this almost the whole site was covered with angular and irregular large flints. This layer, XI, was of varying thickness but increased in depth towards the north end of the trenches. It was originally thought of as a deliberate 'platform', but may have been a concentration of the flint-working material. Many struck flakes, bones, artifacts, cores and burnt flints were found imbedded within this layer.

A pit was recorded in Layer XI, some 30cm in

diameter and 25cm deep, Fig. 3 A (9), containing flint flakes, some bone, burnt flints and a large flint which might have been packing for a post. The filling was very dark and wetter than the surrounding layer. Another dark layer, XII, below these flints was up to 15cm thick in places, its irregularity due to the uneven ground beneath it; it contained similar finds of bone and flint to X and XI.

Layer XIII was of fine yellow-brown silty material containing the occasional flint flakes which probably worked down. The depth varied from 22cm on the eastern side to practically nothing on the west side of the site.

Layer XIV was a much darker layer of fine silty material immediately above the natural river gravels. No soil analysis was done and

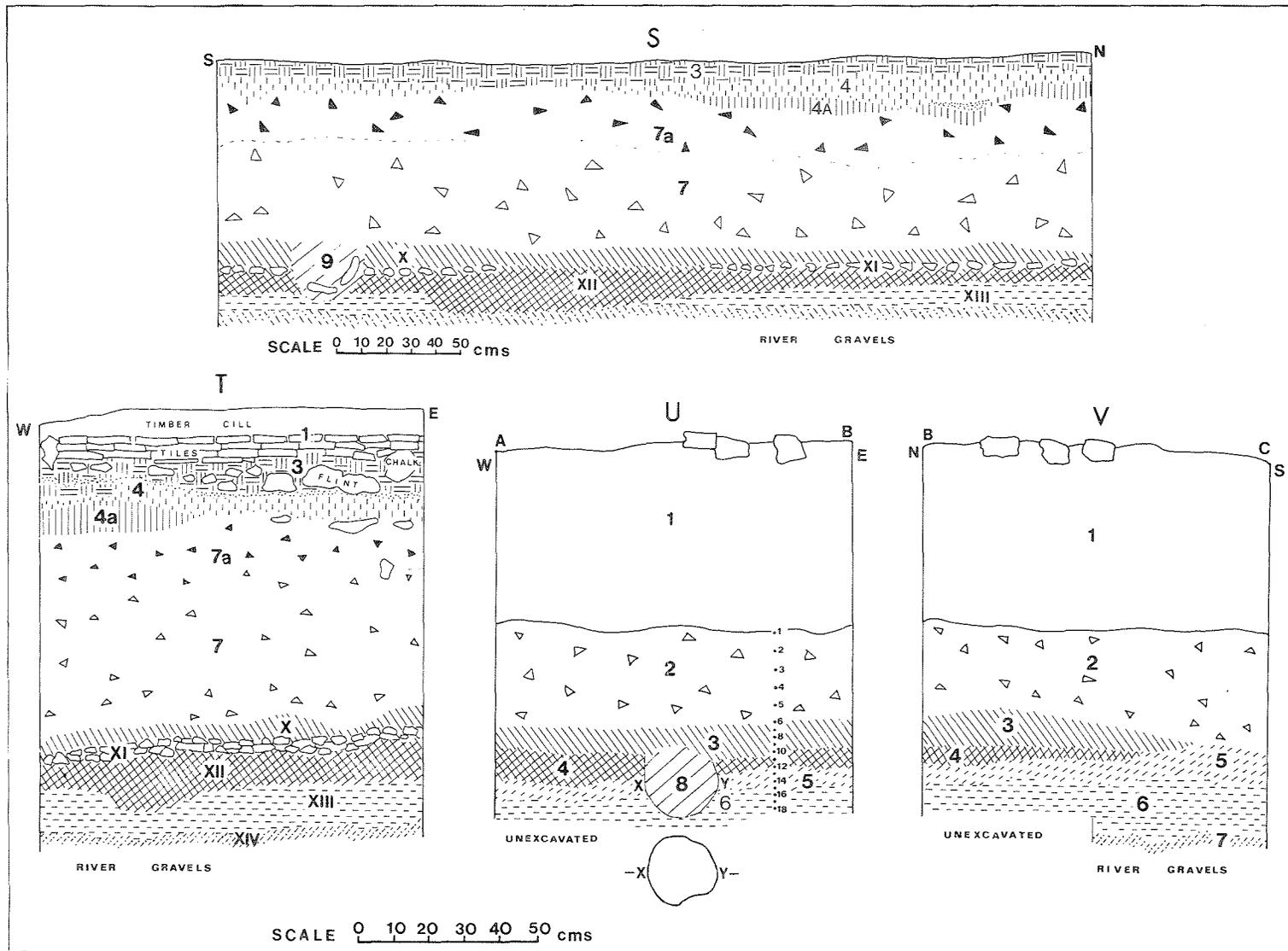


Fig. 3. S: 1969 excavation, north-south section, Trench AI. T: 1969, west-east section, Trench AII. U: 1982 excavation, west-east section at north end. V: 1982, north-south section at east end.

interpretation of this layer was originally that it was water-borne.

### *The Flint*

Almost the entire collection of flint from the 1969 excavation was totally white patinated, the very occasional blue-grey flake being remarkable. The basic colour of the flint was mainly blue-grey with some of a pale brownish beige.

The cortex mostly showed the mid-brown discoloration of present-day surface flints but some were of a pale creamy beige colour, suggesting that some nodules were obtained directly from the chalk. The steep valley sides might have revealed flint-bearing chalk within easy reach of this site. The river gravels underlying the site would also have been easily reached but do not appear to include nodules of sufficient size to be workable.

A histogram (Fig. 8) shows the dimensions of the unbroken flakes, 276 from Layer X, black columns, and 284 from Layer XII, white columns. There was no difference between the flakes of either layer. The histogram demonstrated the dominance of blades in the industry and that there was no shortage of raw material for making good blades.

The following finds were available for study:

22 whole or broken microliths	2 axe-sharpening flakes
3 notched blades	2 axe-thinning flakes
5 scrapers	11 micro-burins
7 truncations	3 micro-burins mis-hit
2 backed knives	25 cores (78 originally recorded)
2 saws	6 core tablets
2 piercers	6 edge rejuvenation flakes
1 tranchet axe	7 face-trimming flakes with fine blade scars
2 denticulates	

Many notched flakes and blades and many flakes with both fine and casual retouch were noted. A total of 3,632 flakes from layers X, XI, and XII, including 1,227 blade and blade-like flakes, were recorded in 1969. A quantity of burnt flint and angular flint debris was also noted on the site.

### *The 1982 Excavation*

In 1982 Stratford's Yard was developed by Dunton Brothers of Chesham. During the demolition they offered the CVAHS the opportunity for further investigation and arranged for their mechanical digger to remove the top layer of rubble and old yard make-up. Subsequent to the excavation the CVAHS was given unlimited access to the site during development to monitor the service trenches (Fig. 2). These trenches sloped from deepest in the road up to the office building. Starting at different depths they cut across many archaeological layers in different places, levels and angles, rising above these layers as the trenches neared the building.

The area available for excavation was very small, but it was only some two metres from the 1969 excavation site (Fig. 2). The aim was to assess the extent of the site and to confirm or otherwise the stratification and findings of the earlier excavation. This was successful; all layers previously noted were observed with the exception of layer XI and similar finds were recorded. A small pit was noted and the possible traces of two more. It was also possible to excavate with more detail than in 1969 and to wet-sieve the spoil, with considerable increase in the recovery of significant finds, including fragments of hazel nuts and seeds.

An area 2×1m was laid out and the builders' JCB removed approximately 50cm of rubble and overburden, Layer 1 (Fig. 3, U & V). A trench 1×1m was laid out within the next Layer 2, a brown calcereous loam considered to be hill wash. Its corners were designated A, B, C and D, starting at the north-west. This was excavated in two halves, divided by a north-south line down the middle, and in 5cm spits: it yielded numbers of struck flints and was identified as the equivalent of Layer 7 in 1969.

Approximately 15cm below the surface of 2 a darker humic layer was reached, Layer 3. The excavation now continued in ¼m squares *a*, *b*, *c*, and *d*, and in 2cm spits. All spoil was now wet-sieved. After the removal of artifacts the residue was sent for botanical study (see below). Layer 3 varied in depth from 10cm to nothing in the south-east corner of the trench.

Table 1. Correlation of layers of 1969 and 1982 excavations (Fig. 3).

1969	1-4a	Building make-up for cottage.	
	7a	Weathered hill wash.	
1982	1	Earth, compact chalk, brick, flint nodules and modern debris removed by JCB.	
1982			1969
2		Brown calcareous loam, natural flints, chalk, brick and charcoal fragments, darker and with some struck flints towards the base.	7
3		Dark brown clay loam, less chalk and natural flints, bone, struck flints, artifacts, burnt flints, larger angular pieces.	X
4		Same dark brown clay loam but finer, almost no chalk or natural flints, same finds.	XII
5		Brownish yellow silty clay, still some struck flints etc.	
6		Yellowish brown silty clay, few finds.	XIII
7		Dark layer above river gravels.	XIV

Layer 4 beneath this was of a slightly darker clay loam, averaging 5cm in depth. Both 3 and 4 yielded struck flints, flint artifacts, burnt flints, bone, cores and other working debris. With wet-sieving small fragments of microliths were recovered as well as botanical remains. The layer of large flints, XI, noted in 1969 was not found, though there were many lumps of angular debris. A yellowish brown silty layer was differentiated into 5, intermediate between dark 4 and the more yellowish 6, which contained finds only at the top. This layer contained many snail shells.

A possible post-hole was noted from the base of layer 3 down into layer 6, as the section A-B dried out. The filling was very dark and moist (8). There was slight evidence for the base of two small subcircular hollows at the interface of layers 5 and 6.

There was no time to excavate the whole trench to natural so a ¼m sondage was dug in c down to the river gravels. The dark layer just above these was noted. The section A-B was then excavated back a further 10cm to reveal the plan of the 'post-hole'; the finds in this were recorded but could not be accurately assigned to any of the previous spits.

The finds listed below can only indicate the possible extent of the site (Fig. 2).

#### *The Flint*

All the struck flints and flint-working debris were blue-grey on excavation. After washing

and drying they had all acquired white patination similar to those of 1969.

#### Excavation:

27 whole and broken microliths	420g of very fragmented bone and teeth
2 notched blades	6 microburins
1 chopper tool/scrapper	1 microburin mis-hit
1 denticulate	1 axe-sharpening flake
1 piercer	1 axe-thinning flake
18 cores	4½kg burnt flint
	9g angular debris

#### Service Trenches:

Trench 1	4 flakes, 2 burnt flints, 2 bones, 1 angular debris
Trench 2	3 flakes, 5 burnt flints, 1 core, 6 angular debris
Trench 3	3 flakes, 1 burnt flint, 4 angular debris
Pit 1	7 flakes
Pit 2	3 flakes, 2 burnt flints

#### A-B Section:

63 flakes (1 notched blade)	21 bone fragments
4 cores	75 pieces of angular debris

### *1969 and 1982 Finds*

#### *The Flint*

Overall the following flint types were identified. Layer numbers 7, X and XII refer to 1969, numbers 2-5 refer to 1982.

#### *Microliths* (Fig. 4, 1-30)

Classification according to Clark (1939).

1969 22 (4 broken): 5 A, 6 B1, 2 C1, 2 C2, 1 D1a, 1 E2

1982 27 (8 broken): 1A, 6B, 4 B2, 1 C2, 1 D1a, 1 G, 1 H, 2 H2

The following are illustrated. Where possible, Dr Roger Jacobi's description is given in brackets after the Clark classification code.

Nos. 1–2, H2a (microtranchet) (layers 3 and 5); No. 3, G (microtranchet with inverse retouch) (layer 3); No. 4, G (inverse retouch) (layer X); No. 5, B1 (narrow straight backed blade) (layer XII); Nos. 6–7, B1 (narrow straight backed bladelets (layers XII and 4); No. 8, D1b (scalene triangle) (layer 4); No. 9, D1b (scalene triangle retouched on three sides) (layer X); No. 10, D2a (scalene triangle) (layer 3); No. 11, D1a (isosceles triangle) (layer 3); No. 12, D2a (layer 4); No. 13, D1a? D5 (layer 5); No. 14, D5 (layer 5); No. 15, D2a (convex backed piece) (layer 3); No. 16, C1 (lanceolate retouched across base) (layer XII); Nos. 17–18, B1 (lanceolate) (layer XII); No. 19, C1 (lanceolate, retouched across base) (layer XII); No. 20, C2? (Layer XIII); No. 21, C2 (layer 3); No. 22, B2 (retouch on all sides) (layer 4); Nos. 23–24, C2 (layer 7), No. 25, C1 (layer 7), No. 26, E2 (convex-backed piece with inverse retouch) (layer X); No. 27, E2 (obliquely backed piece with inverse retouch, flake removed from tip on ventral side, possible indication of use) (layer X); Nos. 28 and 30, notched blades (layer 4); No. 29, notched blade (microlith intermediaries) (no layer number).

The preponderance of rods and geometric shapes indicates a Narrow Blade Late Neolithic industry.

#### *Microburins* (Fig. 4, 31–6)

A total of 17 microburins (10 bulb, 6 tip and 1 on a snapped blade) and 5 microburins mis-hit were recovered from both excavations. 14 were notched on the left and 4 on the right.

Six are illustrated: Nos. 33–4 from 1969, Nos. 31, 32, 35 and 36 from 1982. From 1969 1 microburin and 1 mis-hit are recorded from layer 7 baulk and one from layer XIII. 1 microburin from layer 2, 2 from layer 3 and 4 from layer 4, including one mis-hit, were found in 1982. Unfortunately 9 microburins (7 bulb and 2 tip) from 1969 have no layer number.

E. S. Higgs (1959) suggests that there was a decline in the use of microburin technique at the

end of the Mesolithic. Certainly the number of microburins recovered at Stratford's Yard is considerably less than the number of microliths, a not uncommon observation. In 1982, of the many snapped blades, 28 had been separated close to the bulb and some were on very narrow blades indeed, which would produce the desired effect without the use of any other technique.

#### *Truncations* (Fig. 5, 1–6)

Six flakes with abrupt and semi-abrupt retouch are illustrated: Nos. 1 (layer XII), 2 (layer XI) and 3 (Layer XII) are oblique truncations; 6 (layer 4) concave, the retouch is on the proximal end; 5 (layer XII) has retouch on all four sides. 4 (layer X) has retouch only on the long sides, possibly an incomplete truncation.

#### *Piercers* (Fig. 6, 7–9)

Nos. 7 (layer XII), 8 (layer X). No. 9 (layer 4) has minute retouch on a fine flake.

#### *Saws* (Fig. 5, 10)

Two wide blades, one broken, have deep retouch along one edge. The irregularities along the one illustrated (layer 7) are later damage.

#### *Backed Knives* (Fig. 6, 11–12)

No. 11 (layer XII) shows steep retouch on a fine smooth flake of pale grey flint; No. 12 (layer 7 baulk) was considered by Dr Jacobi not to be Mesolithic.

#### *Scrapers* (Fig. 5, 13–17)

No. 13 (layer X) is an end scraper on a deep flake with regular retouch at a low angle and narrow platform, considered by Dr Jacobi to be of Mesolithic workmanship. No. 14 is retouched along part of one side of a long irregular flake with some cortex; No. 15 is a very well made scraper in fine smooth pale grey flint, possibly originally circular in outline, it appears to have been broken in antiquity; No. 16 is a circular scraper from layer 7, no longer available. No. 17 is an end scraper on a flat flake with some later damage. Nos. 14–17 are designated layer 9 (Baulk). Nos. 14 and 17 were considered by Dr Jacobi not to be Mesolithic in workmanship.

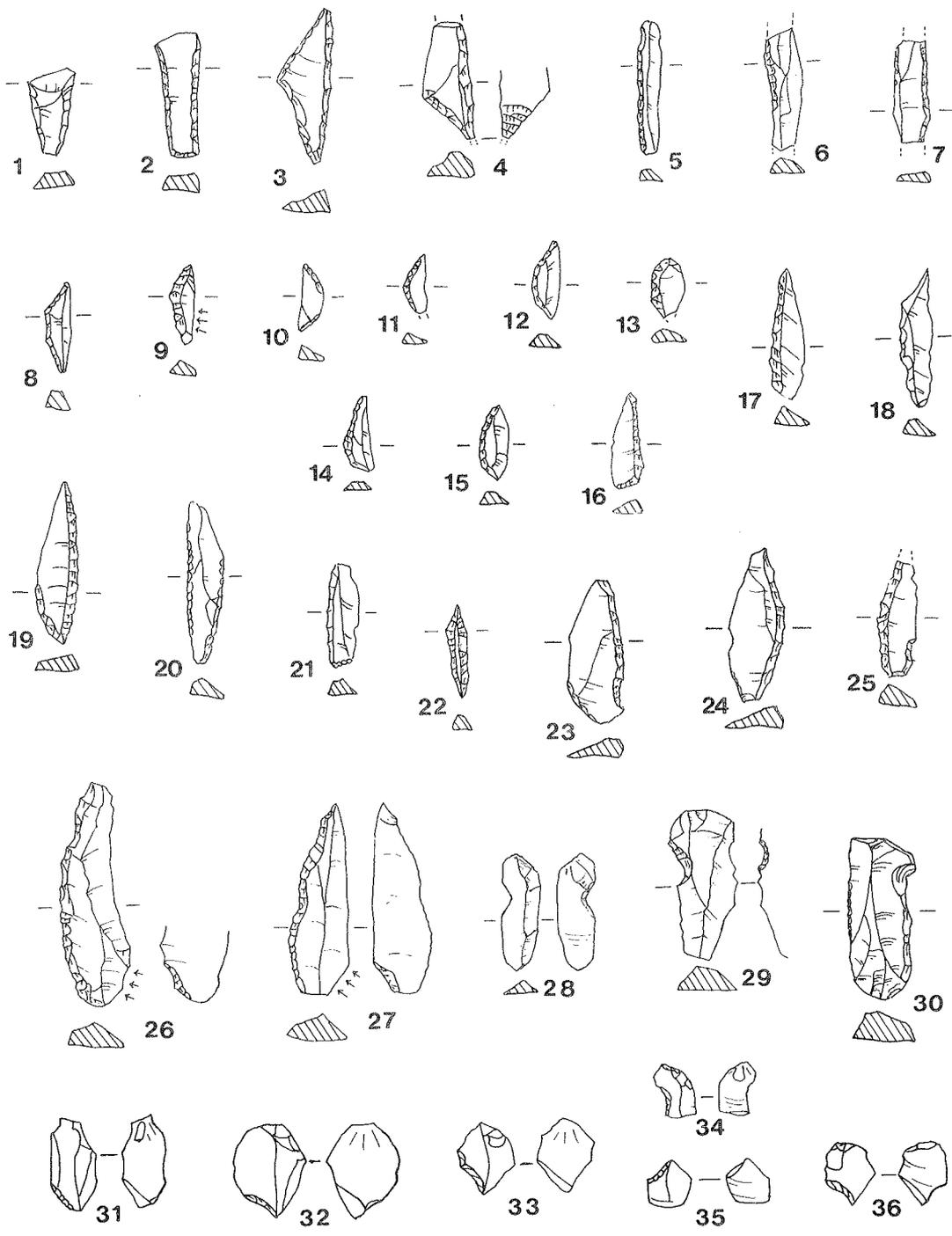


Fig. 4. Microliths (1-27) and notched flakes (28-30), 1:1. Microburins (31-6), 2:3.

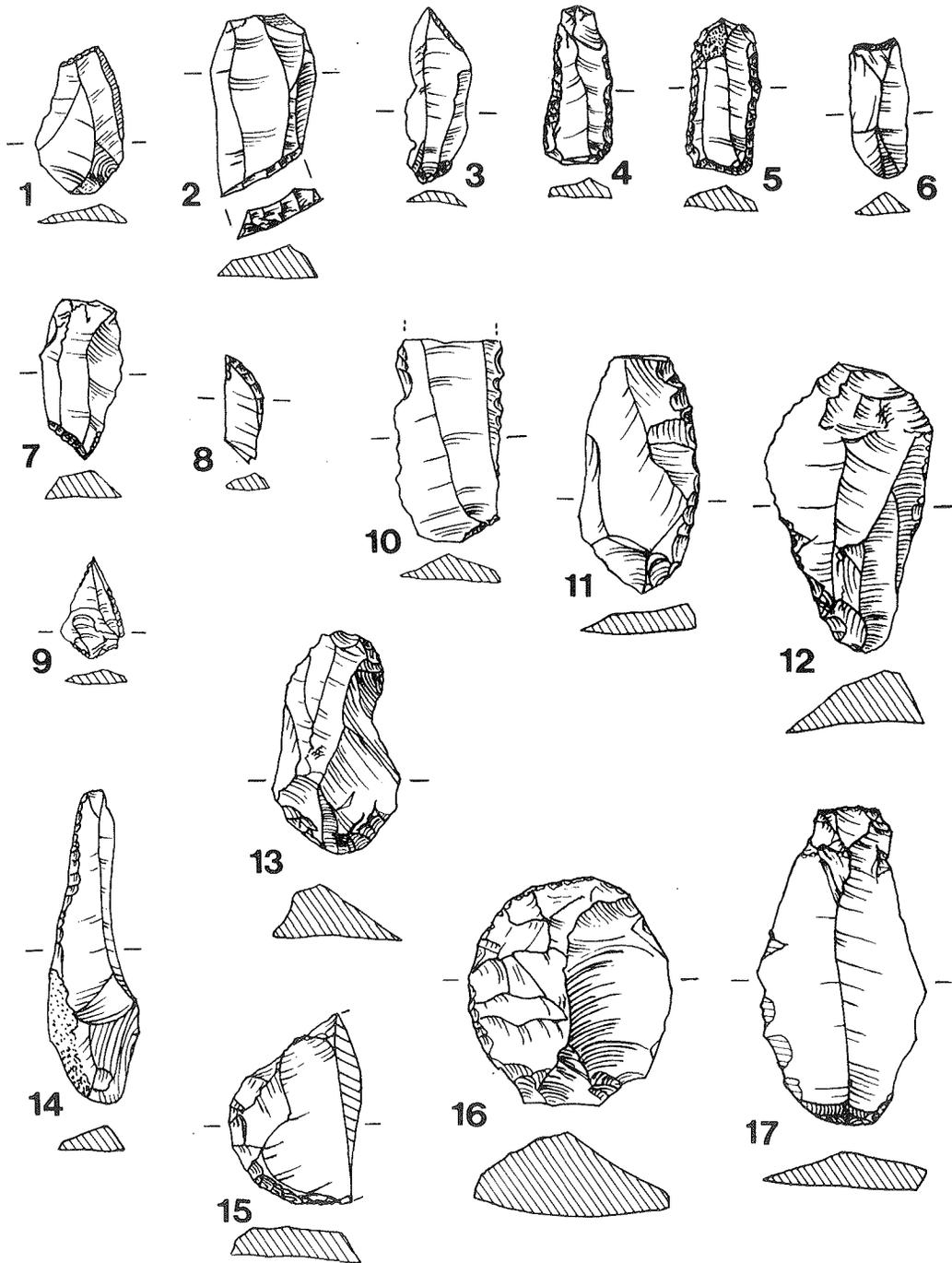


Fig. 5. Flint artifacts 2:3. (1-6) truncations, (7-9) Piercers, (10) Saw, (11-12) Backed Knives, (13-17) Scrapers. Nos 11, 12, 14 and 17 considered by Dr Jacobi not to be of Mesolithic workmanship. (He did not see No. 16.)

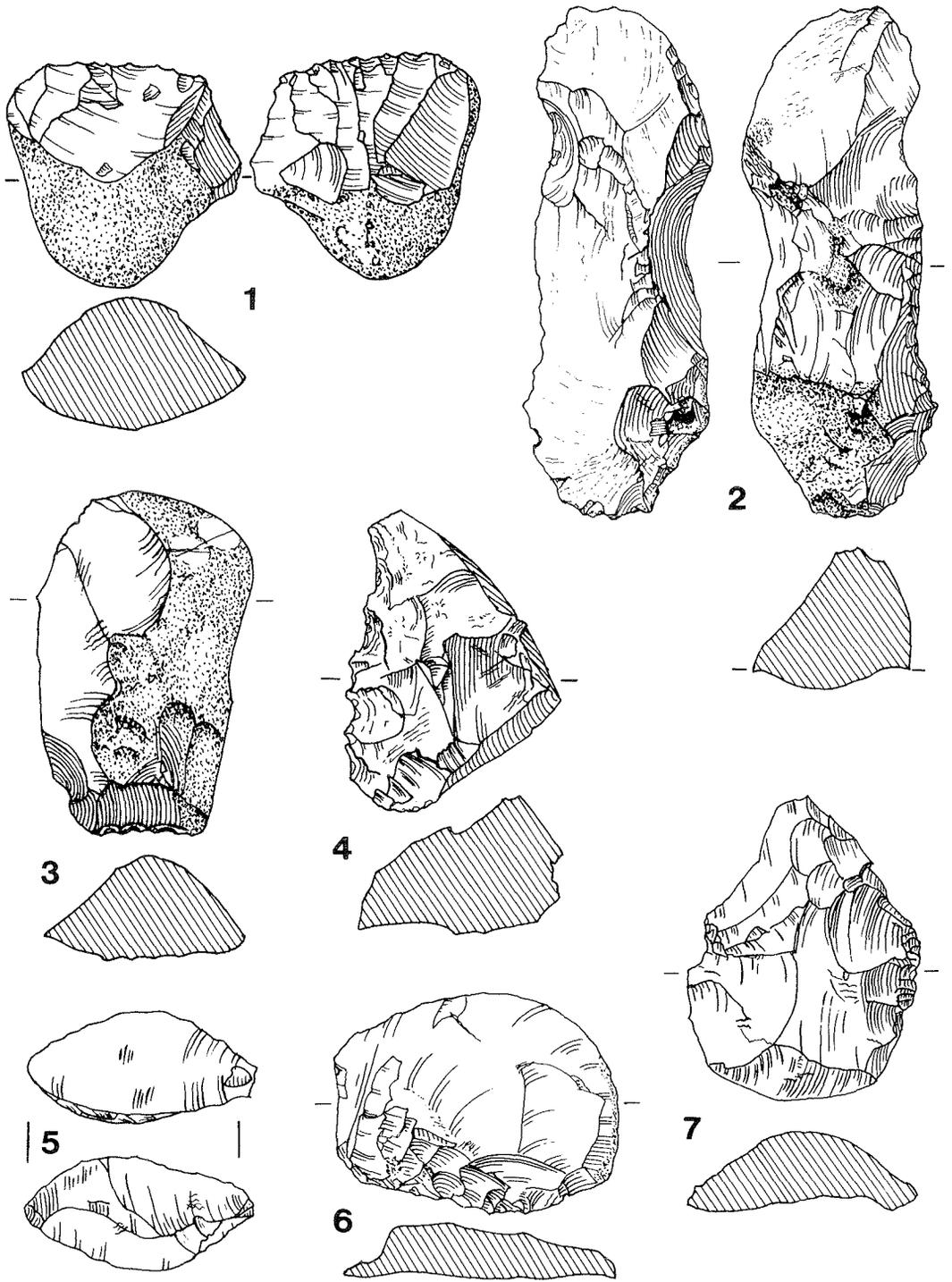


Fig. 6. Flint artifacts 2:3. (1) Chopper tool, (2) Tranchet Axe, (3-4) Denticulates, (5-6) Axe sharpening flakes, (7) Axe thinning flake.

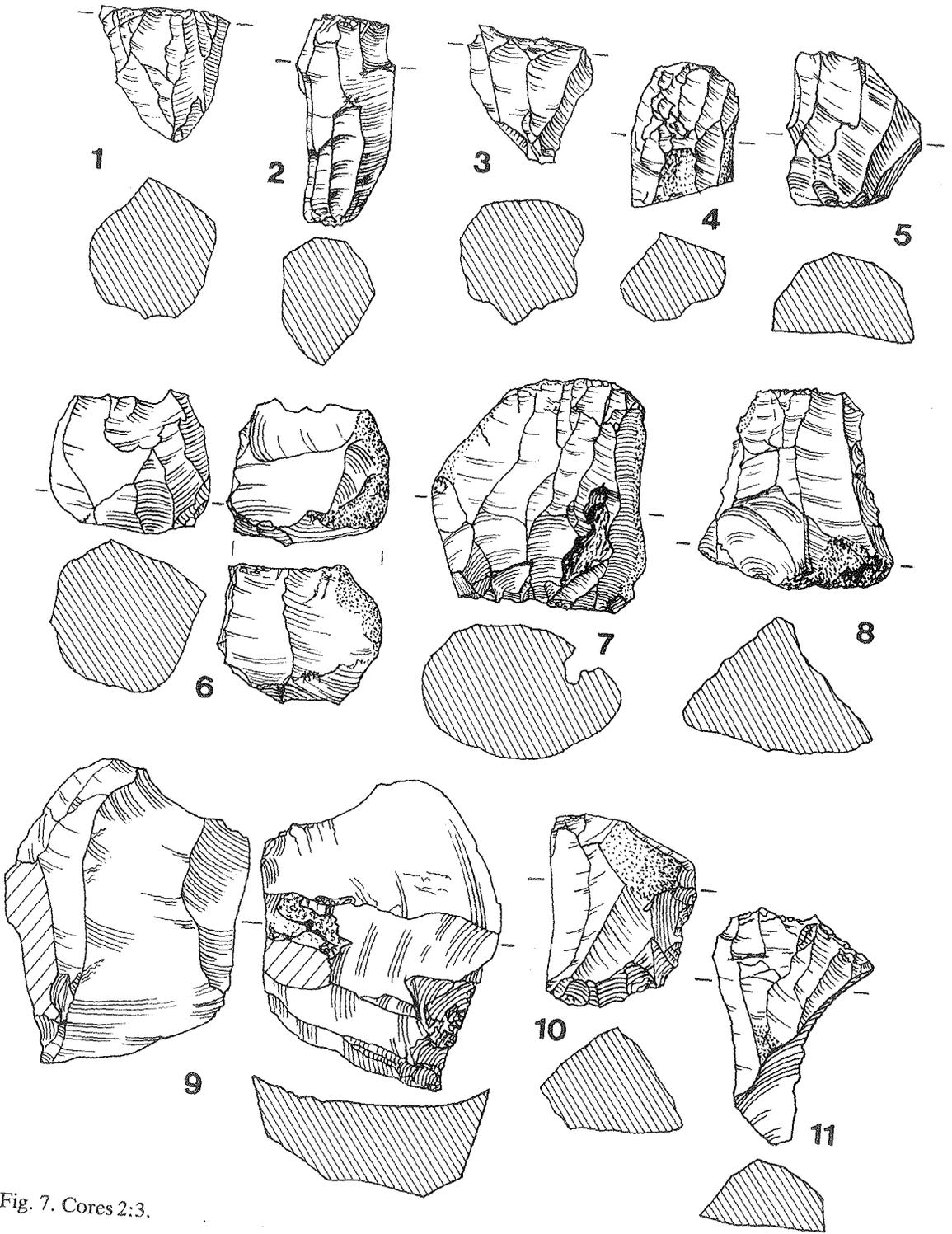


Fig. 7. Cores 2:3.

*Chopper Tool/Scraper* (Fig. 6, 1)

No. 1 (layer 4) is bifacially worked in pale grey flint, the butt is all cortex, a smooth even mid brown in colour, probably a surface pebble. The additional retouch along one face of the worked edge suggests it may also have been used as a scraper.

*Axe* (Fig. 6, 2)

No. 2 (layer XII) is an irregular axe type core tool, with one end sharpened on both faces.

*Denticulates* (Fig. 6, 3-4)

No. 3 (layer XII) has narrow even retouch at the distal end of a very thick chunky flake. No. 4 (baulk) is a very crudely flaked artifact on a chunky pale grey flint, with rough flake scars. It could also be considered a scraper.

*Axe Manufacture* (Fig. 6, 5-7)

Nos. 5 and 6 are sharpening flakes from axes of widely differing size; No. 6 is from 1982 layer 2/3 interface; No. 7 is an axe thinning flake, possibly over enthusiastically struck; Nos. 5 and 7 are from 1969, no layer number recorded.

One much finer thinning flake from a large axe (layer 4) is not illustrated.

*Cores* (Fig. 7, 1-10)

In discussing the cores from the 1969 excavation we have the problem of so few remaining for analysis and also some lapses in recording. The majority available from both excavations are blade cores and appear to be almost completely worked out, back to unworkable irregularities or a portion of cortex. Those illustrated are classified according to Clark (1960): No. 1 B1 (XII), No. 2 B2 (3), No. 3 A2, (Baulk, 7), No. 4 A4 (XII), No. 5 B2 (2), No. 6 (Trench 1, six platforms, No. 7 B2 (X), No. 8 C (4), No. 9 C (Section A-B 1982), No. 10 C Core scraper (Baulk, 7), No. 11 Core-trimming flake from blade core (XII). Unillustrated cores are of the following types: 5 A1, 4 A2, 1 B1, 3 B2, 5 B3, 9 C.

Many cores were pitted with irregular holes, made unworkable by frost cracks, cherty patches and general poor quality material, suggesting that small surface nodules were being

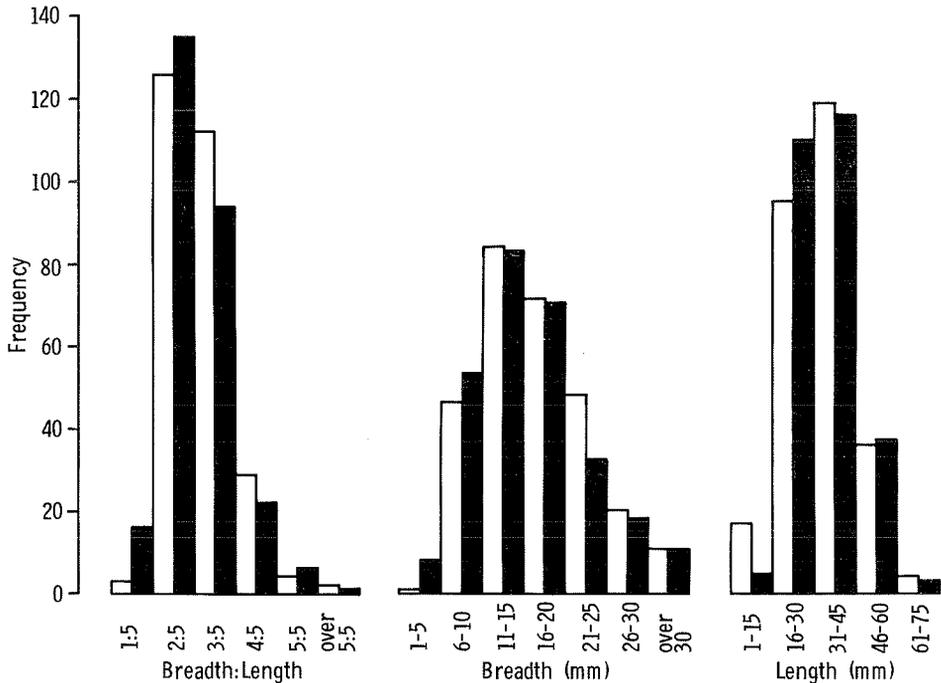


Fig. 8. Distribution histogram for dimensions of flints.

used, with brown cortex similar to present day surface flints. Six or more core tablets are recorded, renewing part of the striking platform, and six edge-rejuvenation flakes. Core-trimming flakes, of which there were many, are counted among working debris but seven are noted as coming from fine-blade cores (Fig. 7, 11).

A quantity of broken pieces of flint found in both excavations show no bulb of percussion, etc., but should be considered as part of the waste of tool manufacture. These are recorded as angular debris. It is not possible to assess the amount for 1969; there were 9kg from 1982.

#### *Flakes and Blades*

A proportional analysis of flakes and blades would not be meaningful as we do not have the full complement from 1969. The histogram (Fig. 8) underlines the preponderance of blade manufacture; in addition there were many broken and snapped blades.

Lack of detailed recording in 1969 does not allow comparison between flakes from layer 7 and those from layers X, XI and XII, but some recorded in layer 7 in 1969, and some from layer 2 in 1982, show comparatively wide striking platforms and square outline, associated with Neolithic technique, though these can also be found in Mesolithic assemblages (Pitts and Jacobi 1979). There do not appear, however, to be any of the crude, wide flakes associated with the Late Neolithic/Early Bronze Age found by the CVAHS field walking the high ground behind this site. No earlier flint work was found. If this Neolithic material had come down with hill wash, the presence of such flakes would have been likely.

#### *The Animal Remains* by Caroline Grigson

##### *Introduction*

The animal remains reported on here are those from East Street, Chesham, Bucks, excavated by Mrs Bambi Stainton and the Chess Valley Archaeological and Historical Society in 1969 and 1982. The material from a subsequent excavation (in 1989) will be the subject of a future report.

The animal remains can be divided into two groups, the first consisting almost entirely of the remains of wild animals, and the second which was entirely of domestic animals, mostly in quite a different state of preservation. Clearly the animal remains derive from at least two separate episodes of deposition. It seems likely that the domestic animal bones were laid down with the hill wash deposits which overlaid parts of the site. As there were a few sheep and goat bones in with the wild animals in the first group it seems probable that there has been some mixing.

Most of the bones of domestic animals from the 1969 excavations were in loci AII (2) and AI (B 5), but there was a sheep or goat molar in AII (X) ('mixed grids') and another from the 1982 excavations in the sieved deposits in square d8. It is possible that a few of the unmeasurable pig and cattle bones are from domestic animals, as at least one of the cattle bones is smaller than the wild size range. The domestic animal bones being of unknown date will not be discussed further.

In addition to the 103 bones identified there were 147 unidentified fragments and some scraps which would not be quantified because some seem to have been broken during or after excavation. As there is no means of telling what period they belong to the unidentified fragments will not be discussed further. Although wet-sieving was carried out in the 1982 season this rather high proportion of identified bones suggests that some of the smaller fragmentary bones may have been missed in excavation.

##### *The Mesolithic Bones*

As they were associated with Mesolithic flints it was assumed that all the bones, except those which were obviously of domestic animals or in a different state of preservation from the majority, were Mesolithic. The Mesolithic date has been confirmed by a radio-carbon date made on the collagen from five of the *Bos primigenius* bones of  $3940 \pm 100$  uncalib bc (BM 2404, Radiocarbon 1987, vol. 29).

##### *Species Represented and their Size*

The 78 bones and teeth of large mammals

which are assumed to be Mesolithic are listed in Table 2. They were all ungulates: aurochs, or wild ox (*Bos primigenius*), red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*) and wild boar (*Sus scrofa*). In addition some small bones were retrieved by sieving; there were 1 frog (*Rana temporaria*), 5 rodents and 2 small birds; the rodent and bird bones could not be identified to taxon. Despite sieving in the 1982 season there were no fish bones at East Street, Chesham.

As both cattle and pigs underwent some diminution with domestication the bones and teeth of the wild forms are larger than those of the domestic ones. The sizes of the measurable bones are set out in Table 3. The wild or domestic status of those from the Mesolithic at East Street, Chesham, can be ascertained by comparing their dimensions with those of animals known to be wild.

Fig. 9a and 9b are plots of the dimensions of five of the cattle bones from East Street, Chesham, compared with those of wild cattle of the Mesolithic of northern Europe (including Britain) and Neolithic domestic cattle of Britain and Ireland. Fig. 9b shows that while some of the cattle from East Street, Chesham were undoubtedly wild, one middle phalanx was in the domestic range and another, and the lower third molar (Fig. 9a), were in the area of overlap between wild and domestic cattle, so their wild status is less certain. Similar results were obtained when seven of the *Bos* bones from East Street, Chesham, were compared with those of *Bos primigenius* from the Mesolithic of northern Europe using the index method developed by Grigson (1989): one was domestic, three were wild and three were less certainly wild. In addition to the measurable bones there were unmeasurable cattle bones of very large size that undoubtedly derive from *Bos primigenius*.

All the measurements of red deer are within the ranges established by Grigson (in Grigson and Mellars 1987) for Mesolithic red deer on the British mainland, except for the metacarpal with a proximal breadth of 51.3mm, which is just outside the large end of the range. Examples are illustrated in Fig. 10.

The pig bones from East Street, Chesham are also in the wild range; an example is given in Fig. 11, which is a plot of the length of the astragalus in early wild and Neolithic domestic pigs in Britain. Although the upper first molar with a length of 17.2mm is small for a wild pig, its small size may be due to its extreme state of wear.

Like other prehistoric British roe deer remains, those from East Street, Chesham are large (Grigson 1983), but the measurable bones are not those for which comparative data are available.

#### *Demographic Parameters*

There are too few bones for certainty, but the vast majority of the ageable bones are from adult animals. The only bones indicating the sex of the animals are the larger and smaller bones of wild cattle, which suggests roughly equal numbers of bulls and cows, and the antler tines. Antlers are found only in males, but both tines could have come from the same antler and anyway this could have been collected from the ground as a shed antler and not derived from a living animal.

#### *Bone Element Analysis*

Table 4 lists the numbers of each bone element of each species found at East Street, Chesham. With a minimum number of individuals of only one *Bos*, the expected number of all paired bones should be 2, with more for the teeth, vertebrae, ribs and footbones. The only bones to be present at at least 50% of the expected frequency are the horncore, proximal radius, hamatum, lunata, proximal metacarpal, proximal metatarsal and middle phalanx. The sample sizes are too small for any definite conclusion, but it does seem as though the horncore and bones of the limbs, wrists, ankles and feet were better represented than those of the trunk, the shoulder and the pelvic girdles. That is, the harder *Bos* bones are better represented than meat-bearing bones, suggesting either differential preservation (harder bones tend to survive better than softer bones), or a selection of harder bones for tool-making. This is discussed further below.

Table 2. The large ungulates retrieved from East Street, Chesham.

	<i>East Street, Chesham</i>				<i>Cherhill</i>	
	raw data		adjusted		tufa etc.	
	No.	%	No.	%	No.	%
<i>Bos primigenius</i> (wild cattle)	24	30.8	29	37.2	82	65
<i>Cervus elaphus</i> (red deer)	18	23.1	21	26.9	23	18
Cattle or red deer	8	10.2	—	—	—	—
<i>Sus scrofa</i> (wild boar)	19	24.4	19	24.4	19	15
<i>Capreolus capreolus</i> (roe deer)	9	11.5	9	11.5	3	2
Total large ungulates	78	100.0	78	100.0	127	100

The raw data (left-hand columns) have been adjusted (centre columns) by assigning the bones which could only be identified as cattle/red deer to the two taxa in the same proportion as the more definitely identified bones. The numbers in the right-hand column are from the Tufa and 'probably Mesolithic' levels at Cherhill (Grigson 1983).

Table 3. Measurements of the animal remains from East Street, Chesham.

(Details of contexts not defined in the text are to be found in the site archive at the County Museum)

Bone No.	Where found	Bone	Dimension	Comment
<i>Bos primigenius</i>				
29	(XII)	lower P2	1 crown	13.6 wild
4	?	lower M3	1 crown	44.2 ? wild
23	AI (XII) AC	navicular	GB	c.70 wild
1	?	metatarsal Bp	Bp	57.1 ? wild; ? comb
18	AI (X) EE	mid phalanx (ant?)	Bp	c.33 ? wild
19	AI (X) EE	mid phalanx (post?)	Bp	28 domestic
21	AI (X) EF	mid phalanx (ant)	Bp	43.2 wild
53	-(XII) EE	mid phalanx	Bp	c.39 wild
30	-(XII) -	distal phalanx	GL	c.90 (> 85) wild
<i>Cervus elaphus</i>				
48	AI (XII) -B	metacarpal	Bp	51.3
50	(XII) EE	navicular	GB	43.6
62	(XII) EE	astragalus	Bd	39.9
78	d 14	astragalus	Bd	38.8
78	d 14	astragalus	GL	60.4
<i>Capreolus capreolus</i>				
44	AI (XII) AC	lower P3	1 crown	11.3 mod wear
<i>Sus scrofa</i>				
85	d 12	upper M1	1 crown	17.2 v. worn
52	?	astragalus	GL	52.4 wild
24		metapodial	Bd	19 wild?
34	(XII)	central prox. phalanx	Bp	20.6 wild?
8		central mid phalanx	Bp	19.7 wild?
			GLpe	31.9 8 & 9 same foot?
9		central mid phalanx	Bp	20.4 wild?
			GLpe	30.6 8 & 9 same foot?

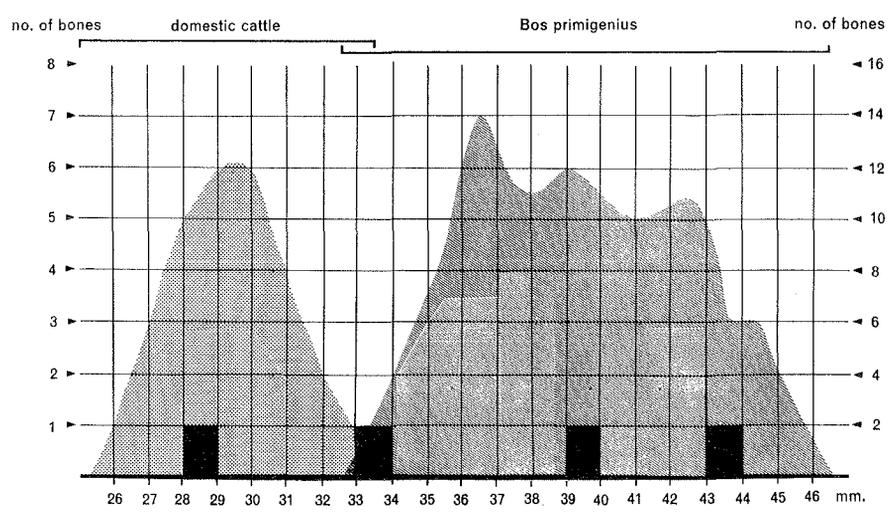
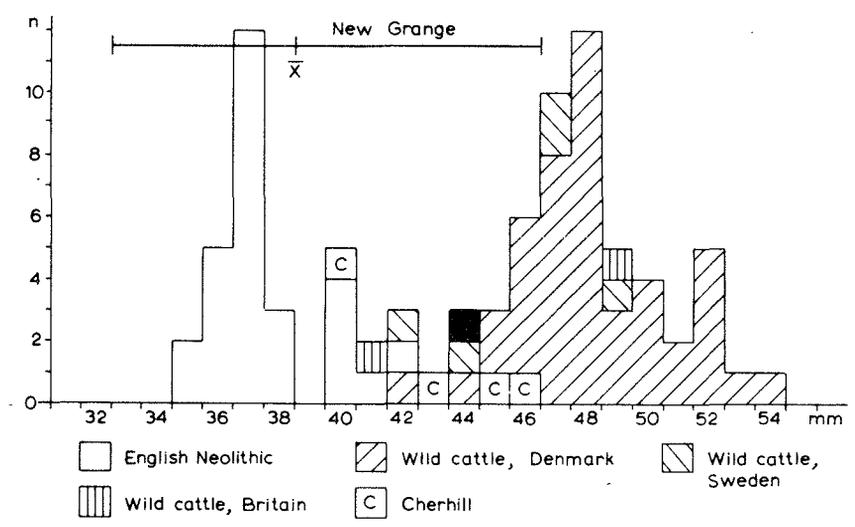


Fig. 9. Cattle bones from Chesham compared (a) with other Mesolithic and Neolithic ranges and (b) with standard domestic/wild ranges.

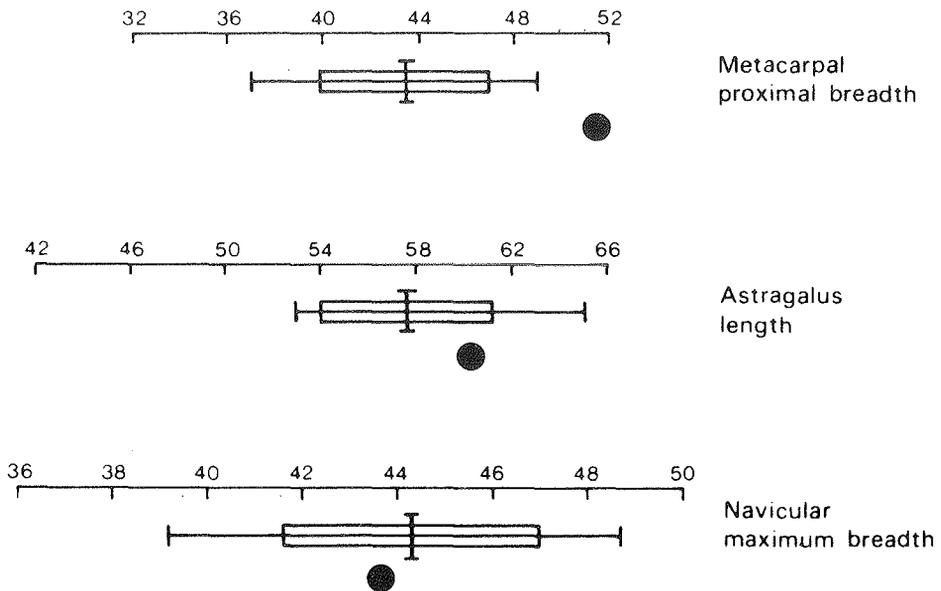


Fig. 10. Red deer bones from Chesham compared with British Mesolithic ranges (Grigson and Mellars 1987).

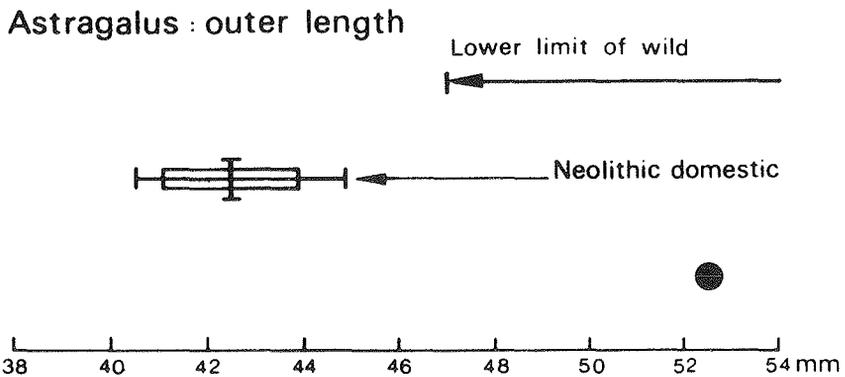


Fig. 11. Pig astragalus (outer length) from Chesham compared with early wild and Neolithic domestic pig in Britain (Grigson and Mellars 1987).

With a minimum number of individuals of two red deer (based on two right proximal metacarpals) the only elements to reach 50% of the number expected are the proximal metacarpal, distal femur and proximal tibia. Again these are dense elements which might have been selected for tool-making (see below) or may be the result of the differential preservation.

The only pig bones (minimum number of individuals=1) to reach 50% of the expected number were the distal humerus, anterior cuneiform, distal femur, astragalus and navicular: that is, bones of the fore and hind limbs, wrists and ankles. This may be the same pattern as found with the cattle and red deer bones.

There were too few roe deer bones to allow discussion of the bone element representation.

#### *History of the Bones*

A fair number of the bones at East Street, Chesham, are battered or worn, suggesting that they may have been moved about before being finally incorporated in the sediments. As some of the deposits are thought to have been derived from hill wash this is not surprising. However, as some seem to be anatomically associated, for example two of the pig phalanges which may be from the same foot, and the cattle wrist bones, it is unlikely that the majority of the bones suffered serious post-depositional movement. Wet conditions at the site, at least intermittently, are indicated by the frog bones.

#### *Animal usage at East Street, Chesham*

There are really far too few bones for certainty, but the presence of more dense limb and foot bones than of meat-bearing bones suggest that bone was utilized at East Street, Chesham, as a raw material for the manufacture of artifacts. This idea gains some support from the fact that the large proximal metatarsal is some sort of comb (Fig. 12). On the other hand this may simply be the result of differential preservation of the denser bone.

The presence of some meat-bearing bones as well suggests that meat was eaten, or at least prepared, at East Street, Chesham. A few of the bones have been vertically split; this is indica-

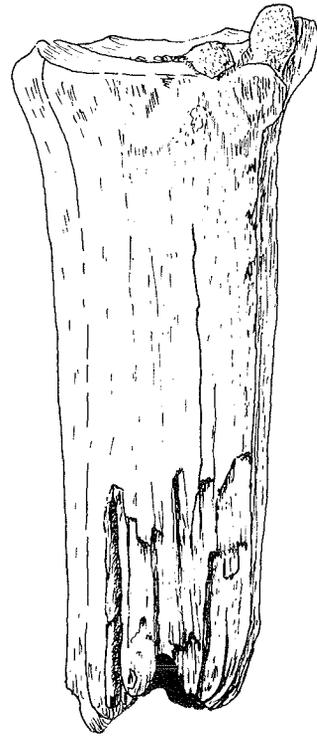


Fig. 12. Worked bone (2:3).

tive of human bone-processing, but it could be for artifact manufacture rather than marrow splitting. Cut marks on the pubis of an ox pelvis may indicate skinning, that is, leather processing. Only one bone (bird? fragment) is charred.

#### *Hunting or Scavenging?*

There are no indications from the bones as to whether they were from hunted animals or scavenged carcasses. The former seems more likely as with only wolves as serious predators, preying on carcasses of animals killed by carnivores is an unlikely scenario in Britain. The presence of most parts of the body suggests no differential transport of particular parts to the site.

#### *Environmental Indicators.*

As already mentioned the frog bone indicates moist conditions at the site, though not necessarily at the time(s) of occupation. The other animals are what one would expect to find in the wooded conditions of the Late Mesolithic.

Table 4. Mesolithic bone elements at East Street, Chesham.

Element	<i>Bos</i>	<i>Bos/Cervus</i>	<i>Cervus</i>	<i>Capreolus</i>	<i>Sus</i>
horncore/antler	1		2	1	X
upper teeth	2	1	1	3	5
lower teeth	3			1	1
uncertain teeth	1	1		1	2
cervical vertebrae	1				
dorsal vertebrae	1				
lumbar vertebrae	1				
uncert. vertebrae	1	2			
humerus proximal					
humerus distal		2	1	1	1
radius proximal	1				
radius distal					
scapoid	1				
hamatum	1				
lunate	1			1	
ant. cuneiform					1
metacarpal proximal	1		2		
metacarpal distal					
pelvis		1			
femur proximal	1		1		
femur distal			2		1
patella			1		
tibia proximal			2		
tibia distal			1		
calcaneum			1		
astragalus					1
navicular	1		1		1
metatarsal proximal	1		1		
metatarsal distal					
metapodial distal	1		1		1
proximal phalanx					2
middle phalanx	3		1		2
distal phalanx	1				1
long bone fragment		1			
rib				1	
Total	24	8	18	9	19

#### *Seasonal Indicators*

There are no positive indicators of seasonal occupation at East Street, Chesham, but their absence may be fortuitous. It is not safe to assume that the site was permanently occupied. Indeed the damp conditions make this unlikely.

#### *Comparison with other Mesolithic faunal assemblages*

Reports on the fauna from other Mesolithic inland sites in Britain are sparse, but include

those from the famous site of Star Carr (Fraser and King 1954), Thatcham (King 1962) and Cherhill (Grigson 1983). Star Carr and Thatcham are early Mesolithic and although the Mesolithic levels at Cherhill are later in time, and therefore closer to East Street, Chesham, the complexities of the stratigraphy there make comparison difficult. The fauna from the tufa and 'probably Mesolithic' levels at Cherhill are probably the most comparable. They have been added to Table 2. In both sites the most im-

portant animals were wild cattle, followed by red deer and pigs in roughly equal numbers and then by a very few roe deer.

Both Cherhill and East Street, Chesham lack the elk (*Alces alces*) of the early sites, which helps to confirm the supposition that elk became extinct during the Mesolithic (Grigson 1981).

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### *Radio-Carbon Date*

Bones of *Bos Primigenius* from the 1969 excavation were included in Dr Richard Burleigh's Late Pleistocene/Early Holocene Mammalian Extinctions Programme at the British Museum. These included a middle phalanx (layer X, XI, or XII), a distal phalanx (layer XII), and a navicular (?) (layer XII).

These gave the date  $5890 \pm 100$  bp ( $3940 \pm 100$  bc) (BM 2404, Radiocarbon 1987, vol. 29). The report states 'This confirms the presence of *Bos Primigenius* in Southern England in the Atlantic Period and the identification of the flint assemblages as Late Mesolithic'.

### *The Botanical Remains* by Marie-Dominique Vaughan

Excavations at Stratford's Yard, Chesham, Bucks, were carried out in 1969 and again on a much smaller scale in 1982. During the latter occasion some soil samples were collected and sieved through 2mm mesh, and fragments of charred organic remains were found (see description of the 1982 excavation). These remains were sent to the Institute of Archaeology, University of London, for examination. The Institute also received, in addition to the charred organic remains mentioned above, four small soil samples, the weight of which ranged from 186g to 456g.

The organic materials of plant origin were sorted at the Institute of Archeology and examined under a light microscope at magnifications of from  $\times 12.5$  to  $\times 50$ . The four soil samples were sieved through 1mm, 500 microns

and 250 microns meshes and the organic remains thereby obtained were examined in the same way as the other previously recovered material.

The most abundant type of plant remains were charred hazel nut fragments; each fragment was generally extremely small. There were some cereal grains, identified as hexaploid wheat, oats and barley. Fragments of the seed of some leguminous plants were also present; they could not be identified precisely but were possible of the cultivated pea or of the common vetch or vetchling. A few weed seeds were recovered from the post-hole sample processed at the Institute from the 500 micron and 250 micron meshes. Apart from these weed seeds, the charred remains were spread fairly evenly through the samples. The state of preservation of the material was poor, and it was not always possible to identify the cereal grains very precisely. Details of the material recovered are set out in Tables 5 and 6.

### *Interpretation*

The presence of charred cereal grains means that the plant remains cannot be assigned to the Mesolithic period. The grains of cultivated cereals do not appear in Britain before the Neolithic. The hazel nut fragments, on the other hand, would not be out of place in Mesolithic levels and may indeed belong to them. Although it is perhaps simpler to assume that the hazel nuts and the other grains are all from the same period, the possibility that some Mesolithic remains were mixed with more recent plant remains cannot be excluded. Since artifacts of undoubtedly Mesolithic origin have been recovered from this excavation, it follows that part or all of the charred plant remains are in some way intrusive. Various agencies may have caused this, including small rodents (Keepax 1977).

It is not possible to link the material definitely with any single period, but the assemblage of hazel nuts, wheat, oats and barley and a legume which is probably pea or vetch (sometimes cultivated for fodder) is rather reminiscent of medieval crop remains. So are the weed seeds from the post-hole which represent plants com-

Table 5. Charred seeds and grains from Stratfords Yard, Chesham, Bucks. For contexts see p. 52.

Context	A7	A9	A9	A12	A13	A14	A15	A16	B7	B8	B9	B9	B10	B11	B12	B13
<i>Triticum</i> cf. <i>aestivo-compactum</i> (bread wheat)				2	1	1	1				1					2
<i>Triticum</i> sp. (wheat) Fragments	2		1					1								1
cf. <i>Hordeum</i> sp. (barley) fragments																3
<i>Avena</i> sp. fragments		1					1									
Cereal grains, indet. fragments		1			1			3	1	3		2	1	3	2	
<i>Pisum/Vicia/Lathyrus</i> (Pea/Vetch/Vetchling) Fragments	1												1			1
<i>Corylus avellana</i> (Hazel nuts)	5	7	5	20	28	9	16	15	2	15	13	30	28	51	17	30
Equivalent whole nuts	¼	¾	¾	1	2	½	1	1	⅓	1	1	1½	1½	2	¾	

Context	C9	C11	C12	C13	C14	C15	D7	D9	D10	D12	D13	D14	D15	D16
<i>Triticum</i> cf. <i>aestivo-compactum</i> (bread wheat)			1										1	
<i>Triticum</i> sp. (wheat) fragments			1			2							1	
cf. <i>Hordeum</i> sp. (barley) fragments			1											3
<i>Avena</i> sp. fragments				1			1							
Cereal grains, indet. fragments	1	1					1	1	1			1	1	
<i>Pisum/Vicia/Lathyrus</i> (Pea/Vetch/Vetchling) Fragments			1			1	1	1					1	1
<i>Corylus avellana</i> (Hazel nuts)	5	2	56	51	14	34	1	6	3	1	3	10	10	40
Equivalent whole nuts	1	¼	⅓	2	½	1½	½	¼	½	⅓	½	½	2½	

Table 6. Charred seeds and grains from Stratford's Yard. Samples from doubtful contexts (left-hand columns); other soil samples (right-hand columns) sieved at the Institute of Archaeology, London.

	Samples from doubtful contexts				Soil samples from:			
	C7? B4? unlabelled	C7? B14? Layers 7-15	C12 or D11	Feature 1 ½ bottom of post-hole ?	Trench 1 368g	Trench 2 455g	BC 3-4 186g	Post- hole 275g
<i>Triticum</i> cf. <i>aestivo-compactum</i> (Bread Wheat)	1							
<i>Triticum</i> sp. (Wheat)	1							
<i>Avena</i> sp. (Oats)								
Cereal indet. fragment			1					
<i>Chenopodium</i> sp. (Goosefoot)								1
<i>Corylus avellana</i> (Hazel nuts) Equivalent whole nuts (approx.)	34 c.3	42 c.3	10 c.½	16 c.½				2 c.½
<i>Anthemis cotula</i> (Stinking Chamomile)								6
<i>Chrysanthemum segetum</i> (Corn Marigold)								4

monly grown on arable land. A rather similar assemblage was recovered from an apparently Mesolithic level at Hendre, Rhuddlan, Clwyd (Hillman 1982). There also, hazel nuts, cereal grains, pulses and one or two weed seeds were recovered and were also thought to have been intrusions from the medieval period which had penetrated quite deeply down into the under-

lying deposits. The plant remains from Chesham seem to be another example of this phenomenon.

#### Acknowledgment

My thanks to Sue Colledge for reading and correcting the draft of this report.

Table 7. Pottery from Stratford's Yard.

Feature	Iron Age			Romano-British			Medieval			Post-Medieval		
	Rim	body	base	Rim	body	base	Rim	body	base	Rim	body	base
AI-L2	—	—	—	—	—	—	—	1	—	2	15	1 handle
AI L(X)	—	6	—	—	—	—	—	—	—	—	—	—
AI/II L(X)	—	4	—	1	—	—	—	1	—	—	—	—
L(XII)	—	2	—	—	—	—	—	—	—	—	—	—
AII L1	—	—	—	—	—	—	—	1	—	—	4	—
AII L(X)	—	1	—	—	—	—	—	—	—	—	—	—
AIB L7	—	6	—	—	4	—	—	103	1	2	27	4
												1 handle
Baulk	1	2	—	—	3	—	—	24	—	—	—	—
Unstratified	—	3	—	—	1	—	—	3	—	—	2	2
Total	1	24	—	1	8	—	4	133	1	4	48	6
												2 handles

### *The Pottery by Stanley and Pauline Cauvain*

The pottery from the Stratford's Yard excavation is too fragmentary to be illustrated. Table 7 details the sherds found in the individual layers.

#### *Iron Age/Romano-British*

These sherds are typical of the local fabric to be found at Latimer (Branigan 1971), Pitstone, Iver and Cholesbury. One interesting Iron Age sherd is part of a rim from a bowl with traces of slashing on the edge and diagonal grooves on the outer surface. Fabric for the Iron Age pottery is black, soft with crushed flint intrusion, while the Romano-British fabric is grey, smooth with no intrusion.

#### *Medieval*

In the medieval pottery there are some 12 fragments of early green-glazed jug. The remainder of the sherds are buff in colour with no grit or grog, slightly sandy; also there are some fairly fine grey fabrics.

#### *Post-Medieval*

Some sherds have a galena glaze on them in a light or deep honey colour on a hard buff fabric. One base is interesting in that, whilst having a honey-coloured glaze on the inside it has also some crusted honey glaze on the bottom, suggesting that it might be a kiln waster. The post-medieval fabric is both grey and buff with little sand but no intrusions. There were two mid eighteenth-century glazed decorated sherds.

### *Discussion*

One question posed by this site is the relationship between the Mesolithic assemblage and the Neolithic artifacts found.

This is not a sealed site; it has been preserved by the layers of hill wash that gradually covered it from the steep hillside behind the site (Fig. 1) and the normal build-up of land surface at an unknown rate. This overburden in its lower layers, 1969 (7) and 1982 (2), contained flint flakes, cores, burnt flints and also some artifacts that Dr Jacobi considered to be of Neolithic workmanship, eg. two scrapers (Fig. 6, Nos. 14 and 17) and a backed knife (Fig. 6, No. 12). Three microliths (Fig. 4, 23, 24, 25), 2 microburins and 1 microcore were also found in layer 7 and 2 microliths (not illustrated) from the base of layer 2. The concentration of artifacts recovered in the E-W Baulk, layer 7 (4 scrapers, 1 backed knife and 3 microliths) may reflect the expertise of one excavator.

No Neolithic horizon was detected though it could have been destroyed by sixteenth-century ploughing, which could also have raised Mesolithic material to higher levels.

The extent of possible Neolithic, or later, contamination of the 'Mesolithic Layers' is harder to detect. Diagnostic Neolithic artifacts were not found in these layers but small sherds of prehistoric pottery were found down to layer XIII, some identified as Iron Age. In an exca-

vation along the River Misbourne (next valley to the River Chess), Dr Laurence Barfield recorded prehistoric pottery, possibly Iron Age, in contact with the Mesolithic layer. An excavation mounted by the Buckinghamshire County Museum in 1989, adjacent to Stratford's Yard, produced Neolithic pottery.

No Iron Age settlement has been recorded in Chesham, but in the Dawes Close/Germain Street area (Fig. 1) enough Romano-British material has been found to suggest a small settlement which may have been preceded by an earlier one. This site is close enough to Stratford's Yard to be included in a farming area.

The impression gained from the 1969 and 1982 excavations is one of two sites, Mesolithic and Neolithic overlapping to a greater or lesser extent, with unknown depth of interface.

The Mesolithic layers (X–XII and 3–5) are considered to be *in situ*. The matrix (a possible buried land surface) was distinct from the layers 7 and 2 above; all but four of the microliths, the other Mesolithic artifacts and Mesolithic bone were found within them. The few Mesolithic artifacts previously mentioned as from layers 7 and 2 could have been moved up by later disturbance.

The spread of Neolithic artifacts through layer 7 (exact spatial positions not known), as well as the general flakes, cores, etc. found within it and layer 2, could be either the result of a much disturbed Neolithic horizon or the random deposition of material that had come down from above with the hill wash. With the depth of overburden between these two assemblages and its rate of accumulation unknown, the mechanism by which contamination took place can only be guessed at; certainly some mixing has occurred but it is the belief of the writer, given the available facts, that this is not extensive.

It is known that when a number of radio-carbon dates are taken for a site they can show considerable variation. The single radio-carbon date for Stratford's Yard (3890 bc $\pm$ 100) is crucial to the problem. It lies within that ex-

pected for the Late Narrow Blade Industry and within what is considered to be the Late Mesolithic/Early Neolithic overlap. As the naming of a period is largely a convention of convenience and the changeover of toolmaking techniques never a matter of sudden cut-off, at Stratford's Yard there may have been some merging as well as overlap, depending on the unknown separation.

This dilemma of Late Mesolithic/Neolithic sites has been found and discussed elsewhere. Ms Vaughan quotes a site at Rhuddlan, Clwyd, where seeds of cereals and arable seeds were mixed with hazel butts in a Mesolithic assemblage, while at High Rocks, Surrey (Money 1960), the Mesolithic industry is associated with Neolithic pottery which is unlikely to be intrusive.

Richard Bradley, in *The Prehistoric Settlement of Britain* (1978) postulates the possible pioneering stage of Neolithic settlement in the early fourth millennium. Ian Kinnes discussed the Late Neolithic/Early Neolithic in *Reflections on the Neolithic in Britain* (1988), concluding that 'any given context in the 4th millennium might show from "pure Mesolithic" to "pure Neolithic".'

The Mesolithic tool-making assemblage at Stratford's Yard indicates a flint-working area particularly geared to microlith manufacture, either for use elsewhere or for hunting or fishing locally. The sharpening of axes could again be for use elsewhere, but some possible resharpening flakes suggests their use on local woodland. The range of other artifacts and the quantity of burnt flints and animal bone suggest some period of occupation, even if only during the knapping period, and the four possible post-holes, assuming they relate to the Mesolithic, hint that some structure was erected. The frequency or duration of occupancy of the site cannot be estimated.

Mesolithic material has been recorded along the River Colne (Lacaille 1963) and later field-work has shown that it spread along its tributaries. Mesolithic flakes and artifacts have been found further down the River Chess at Latimer

by the CVAHS (NGR SU 98759930 to SU 99659868) and a sealed assemblage of Mesolithic material similar to that found at Stratford's Yard was excavated by the County Museum along the River Misbourne at Gerrards Cross ahead of the building of the M25 (Farley 1983).

#### *Acknowledgements*

The 1969 excavation was carried out by members of the Field Group of the Chess Valley Archaeological and Historical Society, jointly directed by Mr Tony Davenport, Mr Derek Humphreys and Mr John Martin. The 1982 excavation, also by the CVAHS Field Group, was directed by Mrs Bambi Stainton.

Dr John Evans, then Field Officer to the County Museum, visited the site in 1969 and confirmed the findings. Dave Allen, Assistant Field Officer to the County Museum, visited the 1982 excavation.

Our grateful thanks go to Dr Roger Jacobi, who advised on the recovery of information from the 1982 excavation and looked at the majority of the flint artifacts; to Dr Caroline Grigson for her report on the bones and for being instrumental in arranging for them to be carbon dated by Dr Richard Burleigh of the British Museum, who most kindly included

them in his project on Mesolithic bones; and to the late Alan Nicholson for geological information on the site.

We would like to express special thanks to Dunton Bros, the developers of Stratford's Yard, who most willingly gave us unlimited access to the site prior to development in 1982, and for the help and interest of the site supervisor who allowed examination of all service trenches during development.

Responsibility for individual sections of this report lies as follows. The pottery, Pauline and Stanley Cauvain; the histogram, Tony Davenport (drawn for publication by Dr David Turner); maps, plans, sections and analysis and drawing of the finds, and discussion, Bambi Stainton (original 1969 sections recorded by Tony Davenport).

We owe a debt to Arthur Stratford for initiating the 1969 excavation and we would like to thank his family for allowing us to re-examine material from it.

Finally our special thanks to Mike Farley for his help and advice in preparing this report, though everything within it is the responsibility of members of the CVAHS.

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