

4. THE LITHIC ARTEFACTS

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In total some 3,500 lithic artefacts were examined for this report. These were recovered during various episodes of archaeological work undertaken at Cramond from 1971 to 1995. Most of these artefacts were recovered from the targeted 1995 excavations in Trenches D and E, with over 80% (n = 3,179) of the total from Trench D alone. Each artefact was macroscopically examined and recorded. A full catalogue is given in Appendix 1 of the site archive. Wet sieving, using a fine mesh, of most of the contexts excavated in 1995 resulted in the retention of all small spalls and chips and other minute fragments of struck lithic artefacts, and these rather dominate the assemblage. Pieces less than 3 to 4mm in size were excluded from the catalogue unless they exhibited retouch.

The Cramond lithic assemblage is of particular interest because of its association with the carbonised hazelnut shells, several of which were radiocarbon dated to around 8400 cal bc. These are the earliest absolute dates returned so far for Mesolithic presence in Scotland. The contexts dated all came from features in Trench D, and the artefacts they contained are listed in Table 1. These artefacts serve to characterise the Mesolithic lithic assemblage sufficiently to permit extrapolation to all the lithic material recovered from the 1995 Trench D contexts labelled from (1400) onwards. The lithic assemblage from these contexts diagnostically matches those

from the dated contexts exactly and can be regarded as the basic, uncontaminated Cramond Mesolithic sample of 2,771 artefacts. This sample is itemised in Table 2 and forms the basis for the following analysis. By far the most prolific context was (1401), the general 'old ground surface' horizon, which contained 1,487 artefacts (53.6% of the total). Apart from the contexts listed in Table 1, the other contexts producing significant numbers were 1400 (12 artefacts), 1408 (67 artefacts), 1420 (32 artefacts), 1422 (17 artefacts), 1424 (120 artefacts), 1428 (21 artefacts) and 1429 (234 artefacts). All the remaining contexts with artefacts contained fewer than ten artefacts each.

4.1 Raw material

The Cramond sample is dominated by the use of Southern Uplands type chert, mostly of the blue/green-grey coloured variety with a smaller presence of the purple-grey type. This chert has been exploited chiefly from non-gravel, non-riverine sources displaying angular and relatively unabraded external surfaces, though a small number of pieces of chert do exhibit rounded, smooth cortical exteriors indicating a gravel or river-bed derivation. Many of the cores, core fragments and flaked lumps exhibit stained matt surfaces representing fracture zones within the original chert seams. Other varieties (of varying grain size and consistency) and colours (brown, dark grey, black and spotted) of chert are present in small numbers, presumably

Table 1 Artefacts from contexts dated by radiocarbon determinations

Type	Context 1402	Context 1409	Context 1426	Total
Unretouched flakes	39	526	128	693
Core fragments	0	3	0	3
Flaked lumps	0	3	0	3
Microliths	1	12	10	23
Microburins	0	7	9	16
<i>Lamelles à cran</i>	0	1	0	1
Scrapers	0	3	2	5
Miscellaneous retouched pieces	4	20	5	29
Unclassified burnt pieces	1	4	0	5
<i>Total</i>	45	579	154	778

Table 2 Artefacts from Trench D contexts excavated in 1995

Type	Chert	Flint/ Chalcedony	Quartz	Baked mudstone	Quartzite	Total
Unretouched flakes	2114	412	31	1	2	2560
Cores	9	2	0	1	0	12
Core fragments	12	0	1	0	0	13
Flaked lumps	9	0	0	0	0	9
Microliths	49	17	0	0	0	66
Microburins	36	14	0	0	0	50
<i>Lamelles à cran</i>	2	0	0	0	0	2
Scrapers	13	3	0	0	0	16
?Piercers	2	0	0	0	0	2
Serrated edged flake	1	0	0	0	0	1
Truncated blade	1	0	0	0	0	1
Edge-trimmed flake	2	1	0	0	0	3
Miscellaneous retouched pieces	14	4	0	0	0	18
Unclassified burnt pieces	14	4	0	0	0	18
<i>Total</i>	2278	457	32	2	2	2771
Percentage	82.20	16.49	1.15	0.07	0.07	

reflecting the opportunistic use of any suitable (ie flakeable) cherty material.

The flint, usually light-to-medium grey in colour but with some brown and cream examples, is more problematic to characterise. It all occurs in the form of derived small pebbles with smooth exteriors, but much of it may in fact be a chalcedonic silica (chalcedony for brevity), rather than the specific raw material of Cretaceous chalk derivation that archaeologists usually mean by flint. That is to say that the silicious rock identified here as flint/chalcedony almost certainly includes materials of divergent diagenesis and geological (and geographic) context of formation. Identification is complicated by the very small size of the average artefact and its lack, or insignificant retention, of cortex. Apart from the fact that 43 artefacts were sufficiently enigmatic in appearance to be listed as of unidentified raw material (one piece was subsequently identified as a spotted hornfels; Suzanne Miller pers comm), many of the flint and chert artefacts are listed in

the catalogue with a qualifying question mark, and it would be misleading to suggest anything other than relative accuracy in the indicated proportion of chert to flint/chalcedony in the sample.

Artefacts of milky-white pebble quartz, with rounded water-worn external surfaces (but of vein quartz origin), form a small element within the sample. Although many of the quartz pieces are borderline artefacts, without absolutely clear striking platforms or other diagnostic features, there are some undoubtedly struck pieces which indicate that quartz was on occasion utilised. The two quartzite flakes, from different cores, are definitely struck, but it is uncertain whether they reflect purposeful knapping for flakes or the modification of quartzite cobbles or blocks for other reasons. The baked mudstone (green/grey/buff/brown in colour) was clearly available, on the evidence of one of the cores (Illus 7: 509), in the form of water-worn pebbles, and was regarded as a suitable raw material for the manufacture of microliths (Illus 8: 638, 1753),

though it appears on the whole to have been a rare commodity.

The raw material type used for implements is roughly in accord with the proportions of different raw materials in the overall assemblage, though it could be argued that the figures suggest an underlying preference for flint/chalcedony over chert in the case of microliths/microburins (ie the flint–chert ratio is 1:5.1 overall, and 1:2.8 for microliths/microburins).

In terms of acquisition, it is clear that the flint/chalcedony, quartz, baked mudstone, quartzite, and some of the chert was collected in pebble form from gravel or riverine sources, presumably from superficial exposures which are likely to have been available relatively close to the site at Cramond. The bulk of the chert was not collected in this way and may conceivably have been quarried (Warren 2001: 218–25). Suitable occurrences are insufficiently well researched to speculate on origin but there are certainly possibilities for sources within the Lothians (Wickham-Jones & Collins 1978).

4.2 Typology

4.2.1 Cores and unretouched flakes

The 12 cores in the 1995 excavated sample are all small platform cores, intended principally for the production of bladelets. In terms of conventional typology, six are basically single-platform (A2) cores (Illus 7: 887, 573 & 618), four are two-platform cores (Illus 7: 399 & 1944), and three have three or more platforms (Illus 7: 140). The weight range is from 4.1 to 27.1g (mean 12.4g; standard deviation 6.76), the maximum dimension range is 21.7 to 38.5mm (mean 29.7mm; standard deviation 5.12), and the maximum surviving flake scar length range is 11.3 to 26.3mm (mean 20.7; standard deviation 4).

Core rejuvenation flakes are frequent, removing both platform fronts and platform edges (Illus 9: 710, 2237, 4020). Distinctive preparation of platform front edges is clear from the number of flakes/blades with abrasion on the dorsal face of their proximal ends.

Faceting of platforms is very rare, and only nine examples were noted from the sample. Flakes with shattered platforms are quite common, also some with acute linear platforms, though in only one or two instances did this hint at anvil flaking, for

which there was otherwise little positive evidence. No hammerstones or abraders were recovered from the excavations.

The core fragments and minimally flaked lumps add nothing to the typological picture gained from the complete cores, except in the case of a very small fragment of what appears to be a bipolar scalar-type anvil-struck core (2125 from context 1409). This example is in white quartz, and the method of reduction in this case presumably reflects the relative intractability of the raw material.

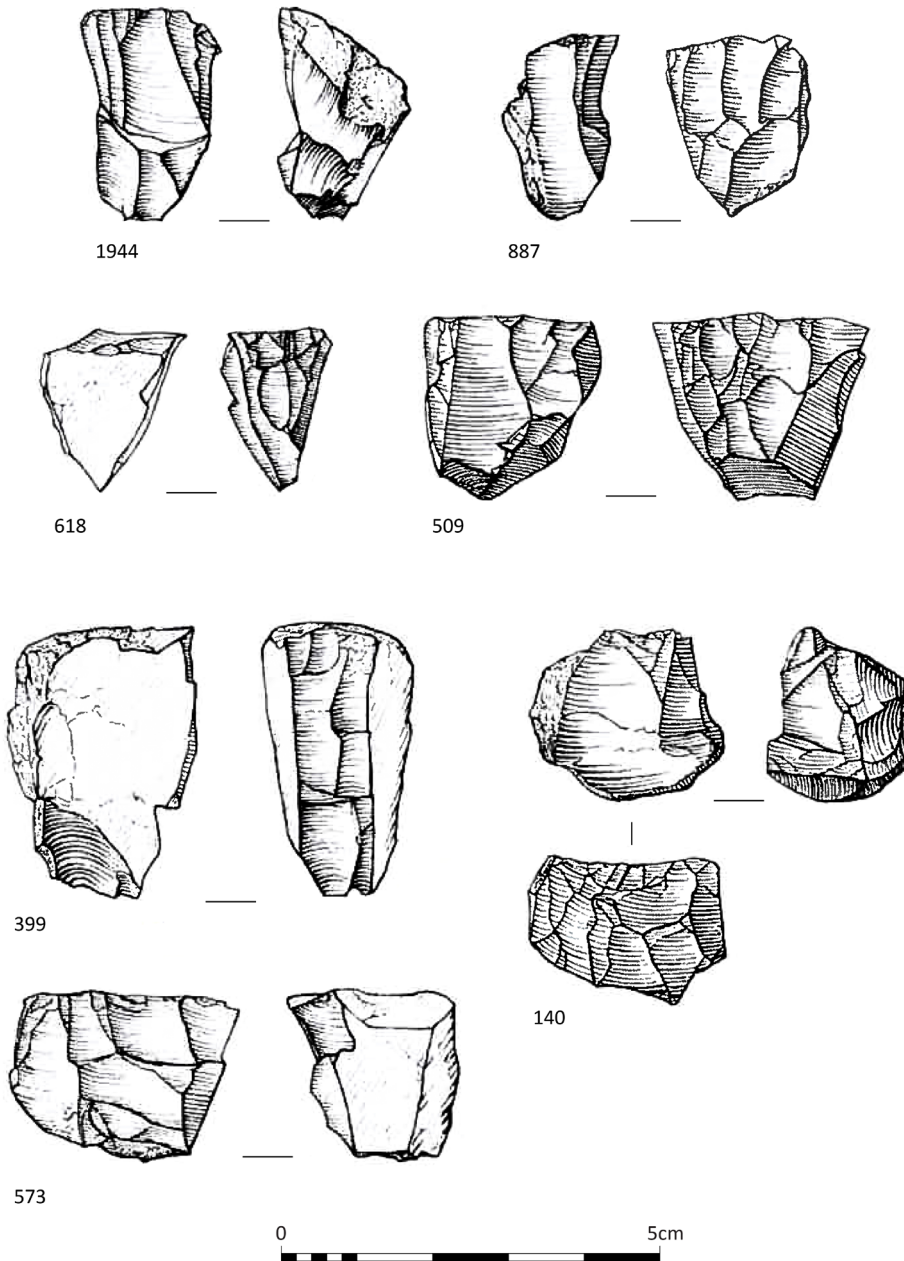
The overall total of 2,560 unretouched flakes recovered from the excavations of Trench D included 677 (26.4%) pieces recorded as complete. These comprise seven primary flakes, 160 secondary flakes and 510 tertiary flakes, with a combined weight of 281.4g. The mean weight of 0.4g is a good pointer to the very small size of most of these flakes, and when measured only 64 (9.5%) of the complete flakes were longer than 20mm, the dimension above which metrical data are normally used to indicate shape characteristics. As previously explained, the large number of small-size flakes – really spalls, chips or other micro-debitage – results from the high level of recovery obtained by wet sieving.

The sub-sample of 64 complete flakes 20mm or longer (comprising 51 chert, 8 flint/chalcedony, 3 unknown, 1 quartz and 1 quartzite examples) was analysed in the usual way, as shown in Tables 3 & 4, but it is really too small a sample to give a satisfactory picture of the intended product of on-site reduction. In particular, although there is a lamellar index (L/B 1.5 or above) for the sub-sample of 61%, the data in Table 4 under-represent the blade-like nature of much of the flake product, which is otherwise clear from consideration of the cores, the broken flakes/blades and the implements, especially the microliths. Some of the few examples of unretouched blades are illustrated as a corrective to this picture (Illus 9: 574, 844, 805, 831, 4608, 1211, 1217, 1225).

4.2.2 Microliths, microburins and *lamelles à cran*

Most of the 66 microliths in the sample are unclassifiable fragments. The 30 more complete examples could be classified as follows:

- 16 scalene triangles (Illus 8: 638, 1815, 1442, 2089, 766, 764, 1599, 3776, 3854, 2583, 2541, 3953, 4592)



Illus 7 Platform cores. (© AOC Archaeology Group)

Table 3 Complete unretouched flakes: length

Length (mm)	Primary	Secondary	Tertiary
20–30	2	28	21
30–40	1	9	3
<i>Total</i>	<i>3</i>	<i>37</i>	<i>24</i>

Table 4 Complete unretouched flakes: length/breadth index

L/B index	Primary	Secondary	Tertiary	Shape
>2.6	0	2	6	Very narrow
2.5–2.1	0	2	2	Narrow
2.0–1.6	0	13	9	Medium/narrow
1.5–1.2	3	15	5	Medium/broad
1.0–0.6	0	5	2	Broad
<0.6	0	0	0	Very broad
<i>Total</i>	<i>3</i>	<i>37</i>	<i>24</i>	

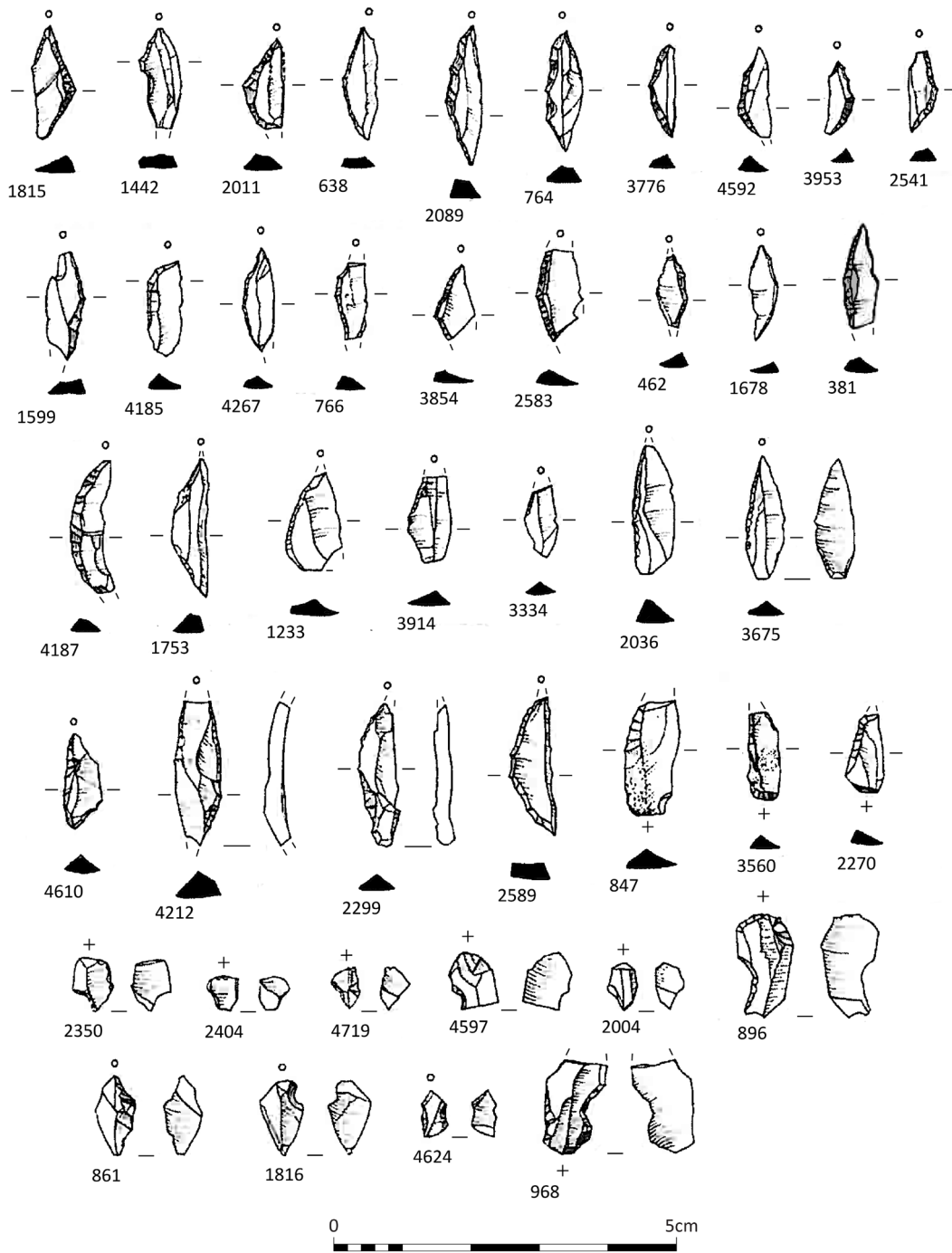
- 2 crescents (Illus 8: 1678, 1753)
- 4 obliquely blunted points (Illus 8: 2036, 3334, 3914, 1233)
- 1 obliquely blunted point with inverse basal retouch (Illus 8: 3675)
- 1 edge-blunted point (Illus 8: 4610)
- 6 atypical (Illus 8: 2299, 2270, 847, 3560, 2589)

While this is only a small sub-sample, it does give a clear indication of the basic microlith typology, which is narrow-blade and predominantly ‘geometric’, and this picture is not contradicted by the apparent form of any of the unclassifiable fragmentary pieces. The scalene triangles include several which are borderline triangle/crescent and vice versa with the crescents, but it is significant that the definite triangles are all narrow and scalene, not in any sense small versions of isosceles or equilateral forms. The obliques are not broad types nor always simple (eg Illus 8: 764 has additional retouch), and one example (Illus 8: 3675) has inverse basal retouch on what appears to have originally been a rounded base, now slightly damaged. The atypical forms include two bladelets with oblique blunting (Illus 8: 2270, 847), and a crescentic form which has a naturally blunt right edge (Illus 8: 2589). Bi-

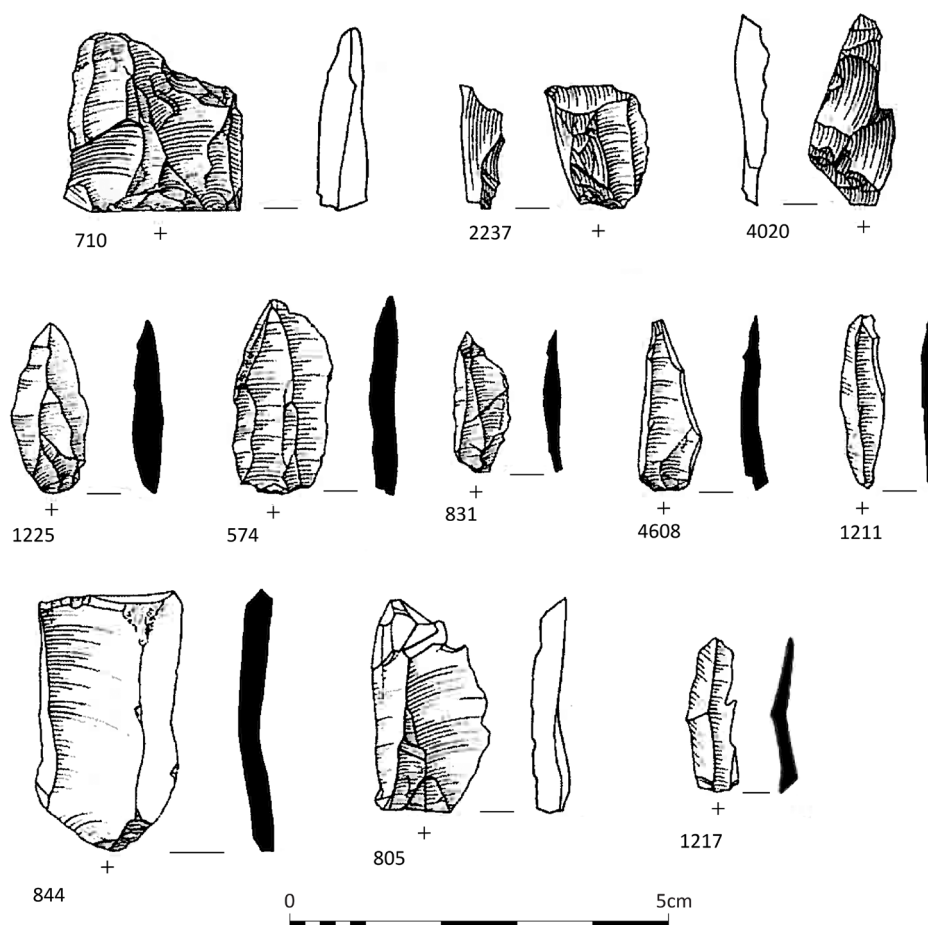
directional anvil or enclume retouch is rare among the Cramond microliths, Illus 8: 2089 being one of the few examples to show this trait. Blunting of the left edge of the microlith blanks is, as usual, more common than on the right.

Fifteen of the microliths are complete enough to use for measurement (comprising 10 scalene triangles, 1 crescent and 4 obliques). The weight range is 0.0 to 0.3g (mean 0.15g), the length range is 8.5 to 21mm (mean 14.7mm; standard deviation 3.3), the width range 3.6 to 7.5mm (mean 4.9mm; standard deviation 1.04), the thickness range is 1.5 to 3mm (mean 2.1mm), and the length/breadth index range from 1.4 to 4.7 (mean 3.1; standard deviation 0.84).

The 50 microburins in the sample subdivide into 28 butt types (Illus 8: 896, 2004, 2350, 2404, 4719), 20 tips (Illus 8: 1816, 861), and one double (Illus 8: 4624). Three of the butt types have a typical straight-snap truncation rather than an oblique one and may thus be miss-hits (Illus 8: 4597). All but one of the butt types have the notch on the left side, and all the tip types have the notch on the right side, except one atypical example which has the notch worked inversely from the dorsal rather than the ventral surface. The double example is anomalous and may betoken a ‘second go’ after



Illus 8 Microliths and microburins. (© AOC Archaeology Group)



Illus 9 Core rejuvenation flakes, bladelets and flakes. (© AOC Archaeology Group)

an initial miss-hit failure. The average size of the microburins is extremely small; only five are larger than 10mm and four are only 4mm or less. Of the 30 butt types, the mean length is 7mm, the mean width 6mm; and of the 20 tip types the mean length is 8mm and the mean width 5mm.

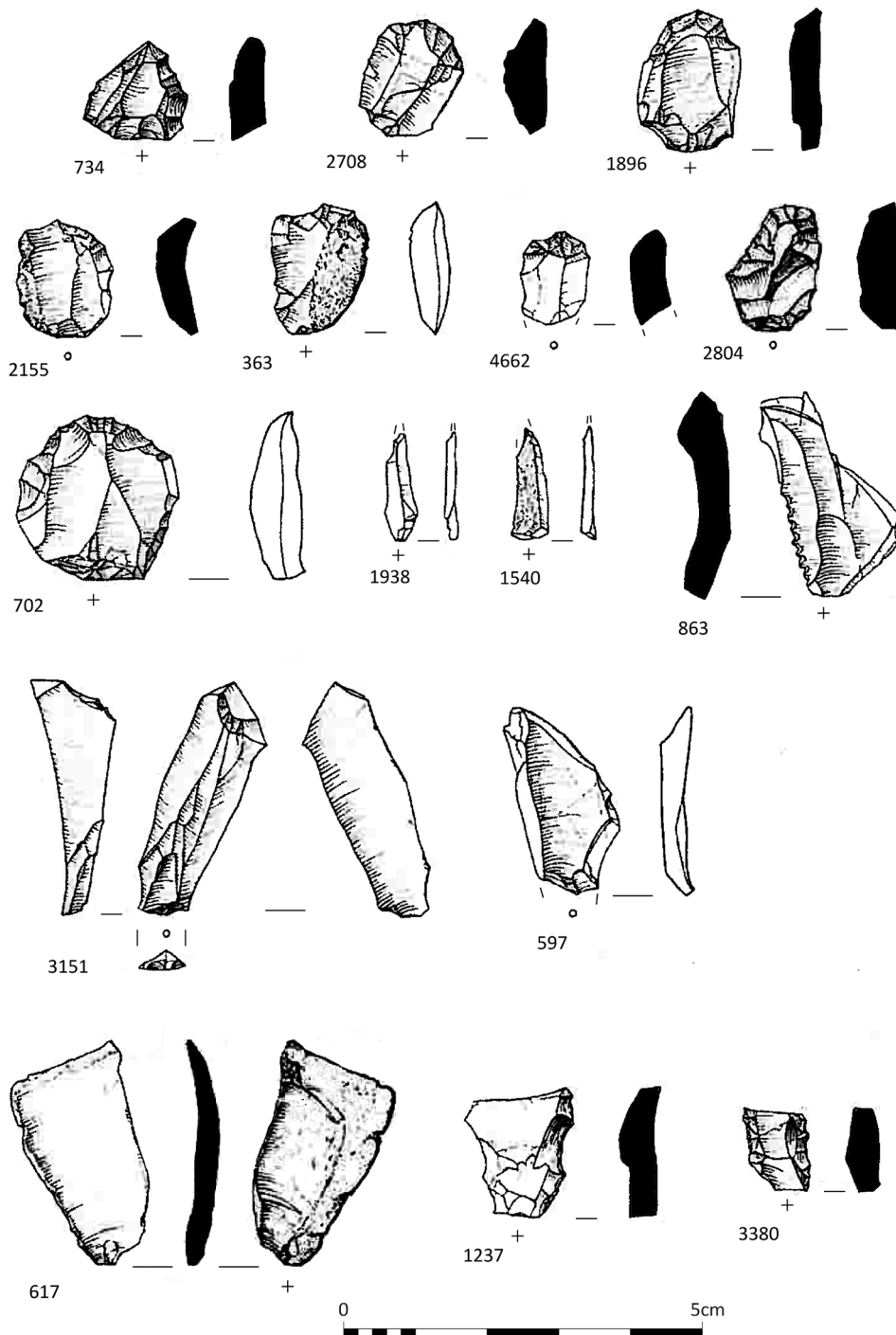
There are two notched bladelet segments (*lamelles à cran*) with a snap above the notch which probably represent microburin/microlith miss-hits (Illus 8: 968).

4.2.3 Scrapers

The 16 scrapers are all 'short' examples on flakes or blade segments. Typologically they comprise 11 end scrapers (Illus 10: 702, 1896, 363, 4662, 2708), one end-and-side, one double end (Illus 10: 2155), one side (Illus 10: 734), one atypical (Illus 10: 2804) and one unclassified fragment. Thus,

end scrapers predominate, and are sometimes on blanks with the bulbar end either accidentally or deliberately snapped off (Illus 10: 4662). Most are simple convex-edged examples with semi-abrupt retouch; angular or overhung edges are rare. Many of the scrapers are 'classic' Mesolithic forms, such as the atypical extensively edged example (Illus 10: 2804), the side scraper (Illus 10: 734), and some of the end scrapers (eg Illus 10: 1896, 4662), while more refined types (eg Illus 10: 702) are unusual.

Only ten of the scrapers were intact enough for measurement. The weight range is from 1.2 to 3.9g (mean 1.8g; standard deviation 0.8); the length range is from 13.2 to 22.5mm (mean 17.5mm; standard deviation 2.66); the width range from 13.2 to 22mm (mean 15.2mm; standard deviation 2.47); the thickness range from 4.5 to 7.9mm (mean 6mm; standard deviation 1.2); and the length/breadth index range from 0.9 to 1.4 (mean 1.2). There is a



Illus 10 Implements. (© AOC Archaeology Group)

distinct uniformity here, obviously conditioned to a degree by the potential size given the character of the raw material exploited.

4.2.4 Piercers

Only two possible piercing tools were identified. One (Illus 10: 1938) is a small bladelet spall, obliquely blunted at the tip; the other (Illus 10: 1540) is again a bladelet, with slight retouch at the top right-hand side below the broken tip. The latter is reasonably robust while the former is perhaps too fragile to have functioned as a piercer.

4.2.5 Serrated-edge flake

There is one irregular plunging flake of chert with eight coarse indentations along a length of 13mm on the lower left edge (Illus 10: 863). This retouch is more akin to tools sometimes described as 'saws' rather than to micro-denticulates.

4.2.6 Truncated flake

A plunging core rejuvenation flake of unusual orange chert has been truncated at the proximal end (Illus 10: 3151). There is very slight trimming or utilisation on the upper left side inversely, and associated edge-gloss on both dorsal and ventral faces.

4.2.7 Edge-trimmed flakes

There are only three examples, and they have relatively minor trimming and/or utilisation modification. Two of these are 'edge' tools (Illus 10: 597), the third is a bladelet with an area of both dorsal and inverse trimming on the left side.

4.2.8 Miscellaneous retouched pieces

This catch-all category for all those modified pieces which cannot otherwise be classified will inevitably include numerous fragments of microliths, microburins, edge-trimmed flakes and scrapers. The only obvious fragments of implement types which are not otherwise represented in the sample are two instances of proximal blunted blade segments, one with unilateral blunting (Illus 10: 1237), the other with bilateral blunting (Illus 10: 3380).

4.3 Distribution

Most of the contexts excavated in 1995 from Trench D were removed on a grid of 36 0.5m × 0.5m squares. In all 2,842 lithic artefacts could be assigned to squares. The highest total in any one square was 251, the lowest 15 (mean 79; standard deviation 48.48). The densest areas of the distribution correspond approximately with the central 'pit' features [1430], [1432] and [1459], and with the clustering of stake holes at the south end of the trench (see Illus 5a, 5b & 5c). The fact that a significant proportion of the artefacts are in contexts that represent the fills of features means that the distribution cannot be analysed in a simplistic fashion as indicative of horizontal discard across a flat surface, but in fact there is little obvious patterning to be observed when the distributions of the different types of artefact are examined, other than that the cores and core fragments are predominantly at the south end of the trench. The distribution of microliths and microburins mirrors the overall distribution pattern.

The number of unclassified burnt pieces in the sample is quite low at 23 (0.8%), which suggests the absence of any hearths or fire-pits in the immediate vicinity. There were in addition a further 83 classified artefacts which exhibited signs of burning to a lesser or greater degree, and the combined distribution of these and the unclassified burnt pieces perhaps hints that a focus for burning may exist further to the south of the trench.

4.4 Other Trench D contexts

The main sample obtained from the 1995 excavations in Trench D can be supplemented by the 173 artefacts recovered from the excavation of more superficial contexts in 1993 (contexts numbered 350 onwards), which are listed in Table 5. Significant here are the additional ten cores, compared to 137 flakes, probably an artificial bias created by the lack of sieving and the selective recovery of larger pieces during excavation by hand. However, there is clearly some chronological admixture in the material from these contexts, most obvious in that a core, a core fragment and a flaked lump are of completely fresh flint relating to significantly post-Mesolithic knapping and deposition. This means that evaluating the artefacts from these contexts

in terms of Mesolithic activity must be restricted to those pieces which are distinctively Mesolithic typologically and which in terms of condition are in character with those from the main sample. Effectively this restricts analysis to the microliths, microburins, scrapers and some of the cores.

The two microliths comprise one edge-blunted or large crescent form (Illus 8: 4212), with blunting on the convex right-hand side, and one unclassified fragment. The microburins (2924) and (2998) are both butt types notched on the left-hand side and the scrapers comprise one double-side type (2925) and one atypical side scraper (3060). The distally truncated flake (3061) is a very small and thin proximal segment and its status as an implement remains uncertain.

The cores which are definitely Mesolithic types include a small flake core (2992) and a core on a large lump of grey-green chert (3012), which with a weight of 43g and a maximum dimension of 49mm gives an indication of what appears to be the largest size of raw material being brought to the site. Intriguingly there is one three-platform flake core (3049) on a white quartz pebble from context 363 but this cannot be ascertained as definitely Mesolithic.

4.5 Trench E

This trench produced a small collection of 235 pieces from the contexts excavated in 1995, and a further 34 pieces from those more superficial contexts excavated in 1993 (Tables 6 & 7). The former (contexts 1501 etc) seems to represent exclusively Mesolithic material, while the latter (contexts 400 etc) are clearly contaminated with later items, most obviously the gunflint (3305, context 400) and the strike-a-light (3308, context 401).

The seven microliths comprise three unclassified fragments, a scalene triangle (Illus 8: 4185), and three crescents (Illus 8: 381, 462, 4187), and the two microburins are both butt types ((3117) and (3225)), notched on the left-hand side, of which one is a straight-snap type.

The marked fall-off in density of Mesolithic artefacts and the absence of features to the north of Trench D confirms that the focus of Mesolithic settlement activity appears spatially restricted, though the distribution of both artefacts and features may have been heavily impacted on by later activity.

4.6 Other trenches and casual finds

The small number of lithic artefacts found elsewhere at Cramond is summarised in Tables 8, 9, 10 & 11.

Table 5 Artefacts from Trench D contexts excavated prior to 1995

Type	Chert	Flint/ Chalcedony	Quartz	Baked Mudstone	Quartzite	Total
Unretouched flakes	105	23	7	1	1	137
Cores	8	1	1	0	0	10
Core fragments	5	1	0	0	0	6
Flaked lump	0	1	0	0	0	1
Microliths	0	2	0	0	0	2
Microburins	2	0	0	0	0	2
Scrapers	2	0	0	0	0	2
Truncated flakes	1	0	0	0	0	1
Misc retouched pieces	6	1	0	0	0	7
Unclassified burnt pieces	1	0	0	0	0	1
<i>Total</i>	<i>130</i>	<i>29</i>	<i>8</i>	<i>1</i>	<i>1</i>	<i>169</i>
Percentage	77	17.2	4.73	0.6	0.6	

Table 6 Artefacts from Trench E contexts excavated in 1995

Type	Chert	Flint/ Chalcedony	Quartz	Baked mudstone	<i>Total</i>
Unretouched flakes	156	49	11	1	<i>217</i>
Cores	3	0	0	0	<i>3</i>
Core fragment	1	0	0	0	<i>1</i>
Flaked lump	1	0	0	0	<i>1</i>
Microliths	3	2	0	0	<i>5</i>
Microburins	1	1	0	0	<i>2</i>
Scraper	1	0	0	0	<i>1</i>
Miscellaneous retouched pieces	4	0	0	0	<i>4</i>
<i>Total</i>	<i>170</i>	<i>52</i>	<i>11</i>	<i>1</i>	<i>234</i>
Percentage	72.65	22	4.7	0.5	

Table 7 Artefacts from Trench E contexts excavated prior to 1995

Type	Chert	Flint/ Chalcedony	Quartz	<i>Total</i>
Unretouched flakes	11	8	0	<i>19</i>
Cores	2	1	0	<i>3</i>
Core fragments	3	0	1	<i>4</i>
Microliths	1	1	0	<i>2</i>
Scraper	1	0	0	<i>1</i>
Strike-a-light	0	1	0	<i>1</i>
Gunflint	0	1	0	<i>1</i>
Miscellaneous retouched pieces	1	2	0	<i>3</i>
<i>Total</i>	<i>18</i>	<i>14</i>	<i>1</i>	<i>34</i>

The single additional microlith (Illus 8: 4267), from Trench G (context 510), is a near-complete scalene triangle. Otherwise, this material is of very mixed character and probably spans a wide chronological range. Two artefacts which could be Mesolithic, and which would expand the typological range available in the sample, are a worn-edge piece (Illus 11: 5017), found in 1986 (unstratified), and a flint miscellaneous retouched piece which is probably a damaged 'long' end-of-blade scraper (3338, unstratified), found in 1976.

Black pitchstone is not represented in the Mesolithic sample but from elsewhere there are three pieces: unretouched flakes from Trench III in 1975 (3452)

and Trench A in 1988 (3343), and a fine unretouched blade (Illus 11: 5000) from Trench I in 1976. It is not impossible that any of these pieces could relate to Mesolithic activity, but it is inherently more likely that they are of later (Neolithic/Early Bronze Age) date in terms of our current understanding of the use of this Arran-derived raw material (Saville 2003: 345–6). The baked mudstone flake from Trench F in 1995 is a miscellaneous retouched piece with minor retouch on the right-hand edge of what is the distal part of a broad blade with a hinged terminal. In contrast to the lighter mudstone from the Mesolithic sample, the colour of this artefact is grey-black, and it cannot necessarily be seen as Mesolithic either.

Table 8 Artefacts from Trenches A, B and C: all contexts

Type	Chert	Flint/ Chalcedony	Quartz	Pitchstone	<i>Total</i>
Unretouched flakes	19	18	2	1	42
Cores	5	3	0	0	8
Core fragments	1	1	0	0	2
Flaked lumps	1	3	0	0	4
Piercer	0	1	0	0	1
Miscellaneous retouched pieces	7	5	0	0	12
Unclassified burnt piece	0	1	0	0	1
<i>Total</i>	33	32	2	1	70

Table 9 Artefacts from Trenches F, G and H: all contexts

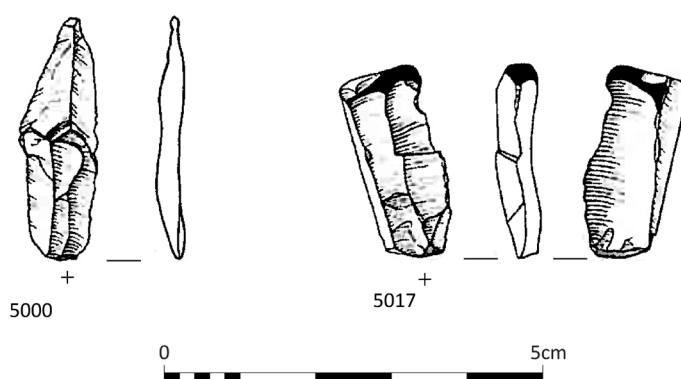
Type	Chert	Flint/ Chalcedony	Quartz	Baked mudstone	<i>Total</i>
Unretouched flakes	16	3	2	0	21
Cores	2	3	0	0	5
Core fragments	1	1	0	0	2
Flaked lump	0	1	0	0	1
Microlith	1	0	0	0	1
<i>Lamelle à cran</i>	0	1	0	0	1
Miscellaneous retouched pieces	2	3	1	1	7
<i>Total</i>	22	12	3	1	38

Table 10 Artefacts from 1975–8 Trenches I, III, V and VI: all contexts

Type	Chert	Flint/ Chalcedony	Pitchstone	Unknown	<i>Total</i>
Unretouched flakes	14	5	2	0	21
Cores	7	0	0	1	8
Core fragments	2	1	0	0	3
Flaked lumps	2	0	0	0	2
Scraper	0	1	0	0	1
Miscellaneous retouched pieces	0	3	0	0	3
<i>Total</i>	25	10	2	1	38

Table 11 Artefacts from the Cramond area 1971-97

Type	Chert	Flint/ Chalcedony	<i>Total</i>
Unretouched flakes	16	4	<i>20</i>
Core fragment	1	0	<i>1</i>
Worn-edge piece	1	0	<i>1</i>
Miscellaneous retouched pieces	2	0	<i>2</i>
<i>Total</i>	<i>20</i>	<i>4</i>	<i>24</i>



Illus 11 Pitchstone bladelet and worn-edge piece. (© AOC Archaeology Group)