

LITHIC ASSEMBLAGE VARIATION IN THE LATE THIRD AND EARLY SECOND MILLENNIA BC IN EASTERN ENGLAND

by Frances Healy

This article summarizes a comparison made between two groups of industries from apparently domestic sites in East Anglia, associated respectively with grooved ware and beaker pottery. It was undertaken in the course of reporting on material from Lawford, Essex, and Weasenham, Norfolk, and involved industries from the sites listed in Table 1, where the sites are numbered in the sequence in which they are represented in Figs. 1 and 2 and in Tables 2 and 3.

Table 1. List of sites.

1. Tye Field, Lawford, Essex; a rich deposit of debris, surrounded by an irregular, double-causewayed ring-ditch; grooved ware akin to the Durrington Walls sub-style (Shennan forthcoming).
2. Feature divisions 1-9, area I, Storey's Bar Road, Fengate, Cambridgeshire; a ring-ditched occupation and burial site with its related enclosures; grooved ware akin to the Durrington Walls sub-style (Pryor 1978).
3. Lion Point, Clacton, Essex; pits, hearths, and other features; grooved ware mainly of the Clacton sub-style (Warren *et al.* 1936; Longworth *et al.* 1971).
4. Neolithic I level, Honington, Suffolk; artefact-rich discoloured patches with some pits; grooved ware mainly of the Woodlands sub-style (Fell 1951).
5. Holes 1-6, Creeting St Mary, Suffolk; pits; grooved ware of the Clacton sub-style (Wainwright and Longworth 1971, 284).
6. Redgate Hill, Hunstanton, Norfolk; pits, post-built enclosure and structures; grooved ware mainly of the Clacton sub-style (Kinnes in preparation; Burgess 1980, 195).
7. Occupation scatters, Weasenham Lyngs, Weasenham All Saints, Norfolk; dumps of debris beneath a round barrow; beaker of steps 2-3 (Petersen and Healy forthcoming).
8. Site 93, Hockwold-cum-Wilton, Norfolk; debris, hearths, gully, flimsy stake-built structure; beaker of steps 6-7 (Bamford 1982).
9. Hearths III-VI and VIII, barrow V, Chippenham, Cambridgeshire; features beneath a round barrow; beaker of steps 5-7 (Leaf 1940).
10. Reffley Wood, King's Lynn, Norfolk; debris, hearths, pit, partly sealed by a round barrow; beaker of steps 6-7 (Robertson-Mackay 1961).

Radiocarbon dates for these sites are confined to a series of five

determinations for Storey's Bar Road (2), which range from 2030 ± 100 bc (HAR-397) to 1860 ± 150 bc (HAR-409), and to single determinations of 1736 ± 63 bc (BM-704) for Hunstanton (6) and of 1850 ± 150 bc (BM-152) for Chippenham (9). There is no clear chronological framework for the remainder. Radiocarbon dates relating to the southern sub-styles of grooved ware range from the mid-third to the mid-second millennium bc, while those for beaker of steps 2 to 7 range from the late third into the later second millennium bc (Gibson 1982, fig. 2). It is arguable that grooved ware was more widely-used in the earlier part of their overlapping currencies and beaker more widely-used in the later (Healy 1984), but, in the absence of better dating, the two groups of industries must be regarded as potentially contemporary.

The comparison is far from perfect. Contextual integrity was at its highest at Weasenham (7), at its lowest at Lawford (1). Small amounts of other second millennium bc pottery styles were present at Lawford (1) and Hunstanton (6); and residual material was clearly present in some cases (see section on flake proportions below). Assemblage size is very uneven. Data for Storey's Bar Road (2) and Lion Point (3) are taken from the published reports rather than from first-hand examination of the material. There are, none the less, consistent distinctions between the two groups of industries. Fig. 1 records their core typology, using a simplified version of the Hurst Fen classification (Clark *et al.* 1960, 216), and Fig. 2 presents their retouched components. Table 2 summarizes their flake proportions, and Table 3 their scraper dimensions.

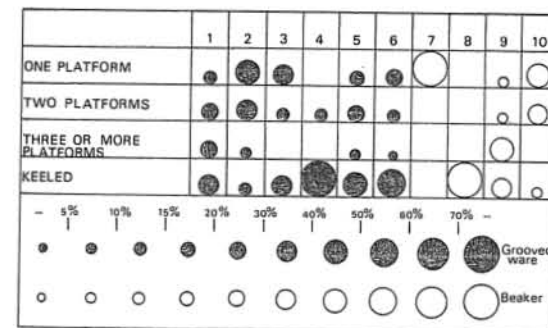


Fig. 1. Classifiable cores in the industries listed in Table 1, expressed as percentages of the total number of cores in each.

CORES (Fig. 1)

There is a marked departure from the preponderance of single-platform cores which is usual in British post-glacial industries, including those listed by Fasham and Ross (1978, 65) and Saville (1981, 48). The erratic composition of the cores of beaker-associated industries is probably no more than a reflection of their small numbers (they have a mean of only 7.5 cores each). The cores of the grooved ware-associated group, however, are more numerous (with a mean of 43.8 each) and, with one exception, include remarkably high percentages of keeled forms. This feature is rarely matched in contemporary industries outside the region: the only two readily found in the literature are those from Arretton Down, Isle of Wight (associated mainly with Peterborough ware: Ozanne and Ozanne 1960), and from Flamborough site 3, Humberside (associated with grooved ware of the Woodlands sub-style: Manby 1974, 74). The production of keeled cores is unlikely to have been raw material-determined, since it was employed equally on the chalk flint of Hunstanton (6) and the gravel flint of Lawford (1).

It has often been suggested, for example by Green (1974, 84), that some keeled cores were prepared for striking the Levallois-like flakes on which many chisel arrowheads were made. This would accord with the coincidence of keeled cores and chisel arrowheads at Arretton Down and Honington (4), but not with the equal prevalence of keeled cores at sites like Lawford (1) where oblique arrowheads, which were made less often on Levallois-like flakes, predominate.

The widely-used Hurst Fen core classification is inappropriate here, because it does not distinguish between Levallois-like cores, regularly flaked around their entire circumference, and much rougher cores flaked on alternate sides of a ridge (Saville 1981, 45). Levallois-like cores are certainly present in some of the industries under consideration, notably Lion Point (3), where there were thirteen carefully-prepared discoidal cores (Wainwright 1971, 121). They were also produced at the contemporary industrial site of Grime's Graves, Norfolk (Saville 1981, 456). Many of the keeled cores in these industries are, however, non-Levallois, and seem to represent a regional preference. Storey's Bar Road (2), the sole industry in the comparison with a low percentage of keeled cores, is from the only site of the ten located to the west rather than to the east of the Fens. In this respect it seems to conform to Midland rather than to East Anglian usage. Keeled cores are, for example, equally scarce in the Peterborough ware-associated industry from Ecton, Northamptonshire (Moore and Williams 1975, 20).

FLAKE PROPORTIONS (Table 2)

The two groups of industries share the general tendency of the period towards predominantly broad flakes (Pitts 1978). Chippenham (9) is an apparent exception, but this almost certainly reflects the presence of residual mesolithic and earlier neolithic material. Mesolithic material is also present at Reffley Wood (10).

Table 2. Flake proportions

SITE	MOST FREQUENT BREADTH : LENGTH RANGE	% FLAKES WITH BREADTH : LENGTH RATIO OF 2:5 OR LESS	% FLAKES WITH BREADTH : LENGTH RATIO GREATER THAN 5:5
1	4:5 - 5:5	5.3%	34.6%
2	2:5 - 3:5*	13.1%	26.8%
3	2:5 - 4:5	5.9%	14.9%
4	2:5 - 3:5	5.9%	15%
5	3:5 - 4:5	3.9%	25.5%
6	3:5 - 4:5	3.6%	32.2%
7	4:5 - 5:5	5.1%	40.6%
8	4:5 - 5:5	2.5%	25%
9	1:5 - 2:5	26.9%	15.4%
10	2:5 - 3:5	12.7%	29.3%

*Breadth:length ratios greater than 5:5 for the Storey's Bar Road (site 2) flakes have been bulked in the published report to produce a peak at 5:5+ (Pryor 1978, 143). If, however, the distribution is a normal one, the most frequent single range is that quoted above.

RETOUCHED FORMS (Fig. 2)

The two groups have a common range of forms, with specific exceptions. Some of the variations between industries, especially in percentages of scrapers and serrated pieces, may most easily be interpreted as functional. High scraper percentages in beaker-associated industries at Hockwold (8), Chippenham (9), and Reffley Wood (10) correspond to location on, or close to, the fen margin. These fit, with almost uncanny precision, into Bradley's suggested category (1978, 56-60) of sites in marginal areas with high-scraper industries, resulting from their use for seasonal pasture and associated bone- and hide-processing activities. It is surely no coincidence that Storey's Bar Road (2), which has the highest percentage of scrapers among the grooved ware-associated industries, is a site interpreted in terms of stock-management and the grazing of fenland pasture (Pryor 1978, 161-3).

Apparently non-functional distinctions are seen mainly in the incidence of arrowheads and knives. The well-documented predominant association of the Durrington Walls and Clacton sub-styles of grooved ware with oblique arrowheads, and of the Woodlands sub-style (and Peterborough ware) with chisel arrowheads (Manby 1974, 84; Green 1980, 235-6) recurs here, as does that of beaker with barbed-and-tanged arrowheads (Green 1980, 243-5). Almost as striking is the presence of flaked or polished discoidal knives in grooved ware-associated industries, and of straight-edged flake knives in beaker-associated ones, with the

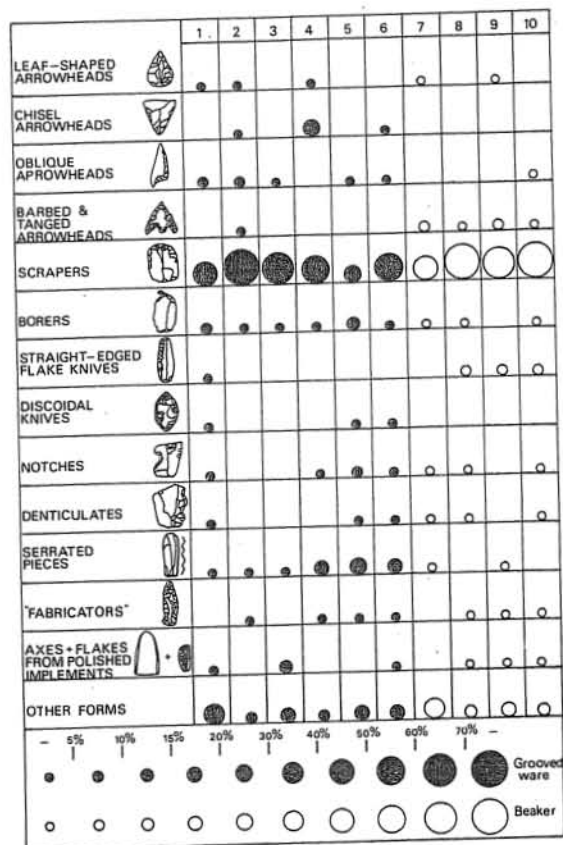


Fig.2. Retouched forms in the industries listed in Table 1, expressed as percentages of the total number of retouched pieces in each.

exception of one rough example from Lawford (1). The former association accords with the manufacture of discoidal knives, apparently by users of grooved ware, at Grime's Graves. 'Straight-edged flake knife' is used to denote regular, scale-flaked forms, often made on blades or blade-like flakes, like those associated with beaker pottery in the upper ditch silts of Windmill Hill, Wiltshire (Smith 1965, fig. 50: F171-4).

SCRAPER SIZE (Table 3)

Scraper dimensions correspond to a general tendency for scrapers in beaker-associated industries to be smaller than those of industries associated with pottery of other styles, whether earlier, contemporary, or later. The apparent small size of the Storey's Bar Road (2) scrapers stems from the generally smaller size of the pebbles of the Nene gravels compared with those of gravels to the east of the Fens, on which most of the other industries were made. Among these, the distinction cannot be put down to raw material variation. Beaker-associated scrapers are smaller than neolithic bowl-associated ones from the same or adjacent sites at Broome Heath, Norfolk (Wainwright 1972, 53) and on the south-eastern fen margin (Clark et al. 1960, 219), just as beaker-associated scrapers from the upper ditch silts of Windmill Hill are smaller than both neolithic bowl-associated ones from the primary levels and predominantly Peterborough ware-associated ones from the nearby West Kennet Avenue occupation-site (Smith 1965, 96). There may be a functional explanation for the prevalence of small, often scale-flaked, 'thumbnail' scrapers in beaker-associated industries, but the frequency and exclusivity of the association combine with the wide range of locations and types of site at which it occurs to make this unlikely.

Table 3. Scraper dimensions.

SITE	MOST FREQUENT SCRAPER LENGTH RANGE	MOST FREQUENT SCRAPER BREADTH RANGE
1	40 - 50 mm	30 - 40 mm
2	30 - 40 mm	30 - 40 mm
3	not available	
4	50 - 60 mm	30 - 50 mm
5	50 - 59 mm	30 - 39 mm
6	40 - 50 mm	40 - 50 mm
7	30 - 50 mm	20 - 50 mm
8	30 - 40 mm	20 - 30 mm
9	20 - 30 mm	20 - 30 mm
10	20 - 30 mm	20 - 30 mm

Scale-flaking and small scraper size are only aspects of the general fineness and neatness of beaker-associated industries. It is this, as much as any classifiable or quantifiable characteristic, which distinguishes them from grooved ware- or Peterborough ware-associated ones. The rare East Anglian examples of the latter are, like Peterborough ware-associated industries elsewhere, similar to local grooved ware-associated industries.

When variations due to raw material, function, and regional tradition are allowed for, there remains a set of consistent distinctions which are most easily interpreted in terms of style or cultural preference. Stylistic distinctions between the pottery traditions themselves are echoed not only, and most obviously, in their associated arrowhead types, but, in the case of industries associated with beaker on the one hand, and with Peterborough and grooved wares on the other, in overall level of workmanship, in scraper size, and in knife forms. This distinction is scarcely surprising in view of the increasingly apparent spatial and contextual segregation of the different pottery traditions, of which it is surely a reflection.

The same distinction may be seen translated into the increasingly restricted lithic associations of the various second millennium bc urn styles (including food vessel). The coarser flint-working tradition of grooved ware- and Peterborough ware-associated industries is ancestral to that of the domestic industries of the full bronze age, as many authors have pointed out, among them Bradley (1972, 98-9), Fasham and Ross (1978, 65-6), and Drewett (1982, 373-4), just as grooved ware and Peterborough ware are ancestral to the urn styles themselves. The finer, beaker-associated tradition is, however, recognizable in the funerary associations of the same urn styles, where scale-flaked knives like those of the industries examined here grade into fully-retouched plano-convex forms (Simpson 1968, 198-200; Pierpoint 1980, 124-42; Longworth 1984, 67-68), and where barbed-and-tanged arrowheads are the most frequently-deposited projectile points (Green 1980, 247-50).

Acknowledgements

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FLINT ARROWHEADS: TYPOLOGY AND INTERPRETATION

by Stephen Green

I first began work on flint arrowheads in 1965 with the preparation of an undergraduate dissertation (Green 1967) and this work was continued with my PhD thesis (Green 1977), which was substantially published as a British Archaeological Reports Volume (Green 1980). The purpose of this paper is to set out my typology in a clear and simple form and, also, to outline some of the conclusions of my work and to comment on them in the light of published reviews. My chronology of the principal arrowhead types defined is set out in Table 1.

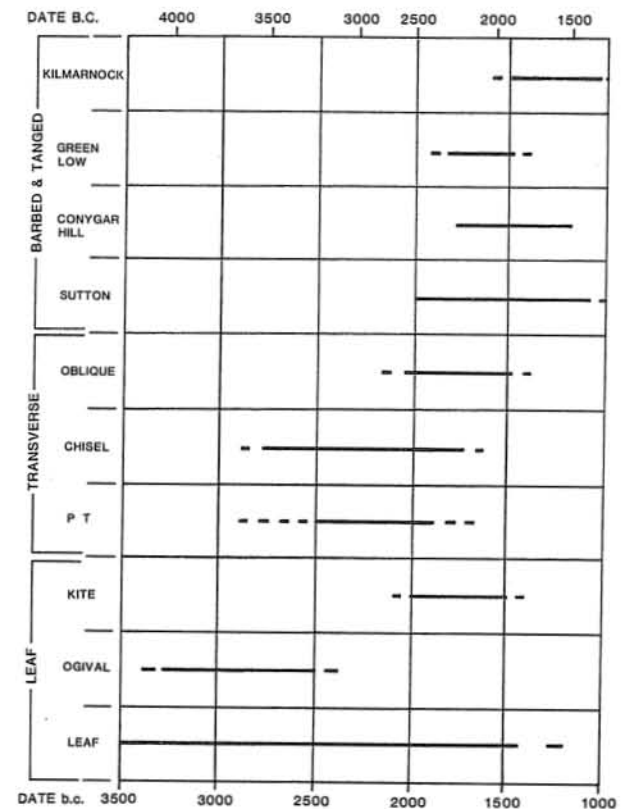


Table 1. The chronology of the principal arrowhead types.