

NEOLITHIC AND IRON AGE MATERIAL FROM A COASTAL SITE AT CHIDHAM, WEST SUSSEX 1978

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A small excavation was carried out at a site identified by Iron Age pottery and burnt flint eroding from the tidal margin. A single early Iron Age feature, part of a small pit (possibly an evaporation pan) was found. This contained pottery, charcoal and a few briquetage fragments; the latter suggest the production of salt from sea-water at the site.

Unexpectedly, large numbers of worked flints were also found; the commonest implement types were various forms of scraper, particularly notched or concave. This unusual flint assemblage is dated to the Neolithic, and is interpreted as evidence of exploitation of salt-marsh resources at that time.

INTRODUCTION

During the 1960s, Richard Bradley carried out an archaeological survey of the Chichester, Langstone, and Portsmouth harbours. Several Iron Age and/or Romano-British salt-working sites were identified (Fig. 1 and Gazetteer, below), among them one at Chidham (Gazetteer site 18). Iron Age pottery, briquetage and burnt flint were seen eroding from a small headland to the west of the Chidham peninsula. (Briquetage is a coarse form of pottery, with plant inclusions in the fabric, and is associated with the production and transport of salt). The coastal location of the site (Fig. 1) and the presence of briquetage suggested the preparation of salt from sea-water here.

No Iron Age or Romano-British salt-working site had previously been excavated in Sussex. By the summer of 1977, less than twenty metres of the small headland where the site lay, survived beyond the sea-wall, and pottery and burnt flint were continually being exposed by coastal erosion. The Sussex Archaeological Field Unit therefore decided to carry out excavation for three weeks in September, 1978. At the present rate of erosion, the site would have disappeared in a few more years.

Few contemporary settlements are known in the area; there are none on the Chidham peninsula itself. The nearest Iron Age material is pottery from chance finds on Thorney Island (Bedwin and Pitts 1978; Gazetteer section, sites 44 and 45). However, the subsoil in the Chidham area is brickearth, and the difficulty of finding sites on such a soil has been pointed out elsewhere (Bedwin 1978).

EXCAVATION

The edge of the small headland on which the site was situated consisted of a step about 50 cm high. From this vertical, though irregular, edge, burnt flint was eroding over a continuous 30 m stretch, at a depth of 25-30 cm below the modern land surface (Fig. 2). A few sherds of flint-gritted pottery were usually visible at any given time in this eroding edge. One conspicuous U-shaped feature was exposed; this was cut about 30 cm into the brickearth subsoil, and its fill contained charcoal and pottery.

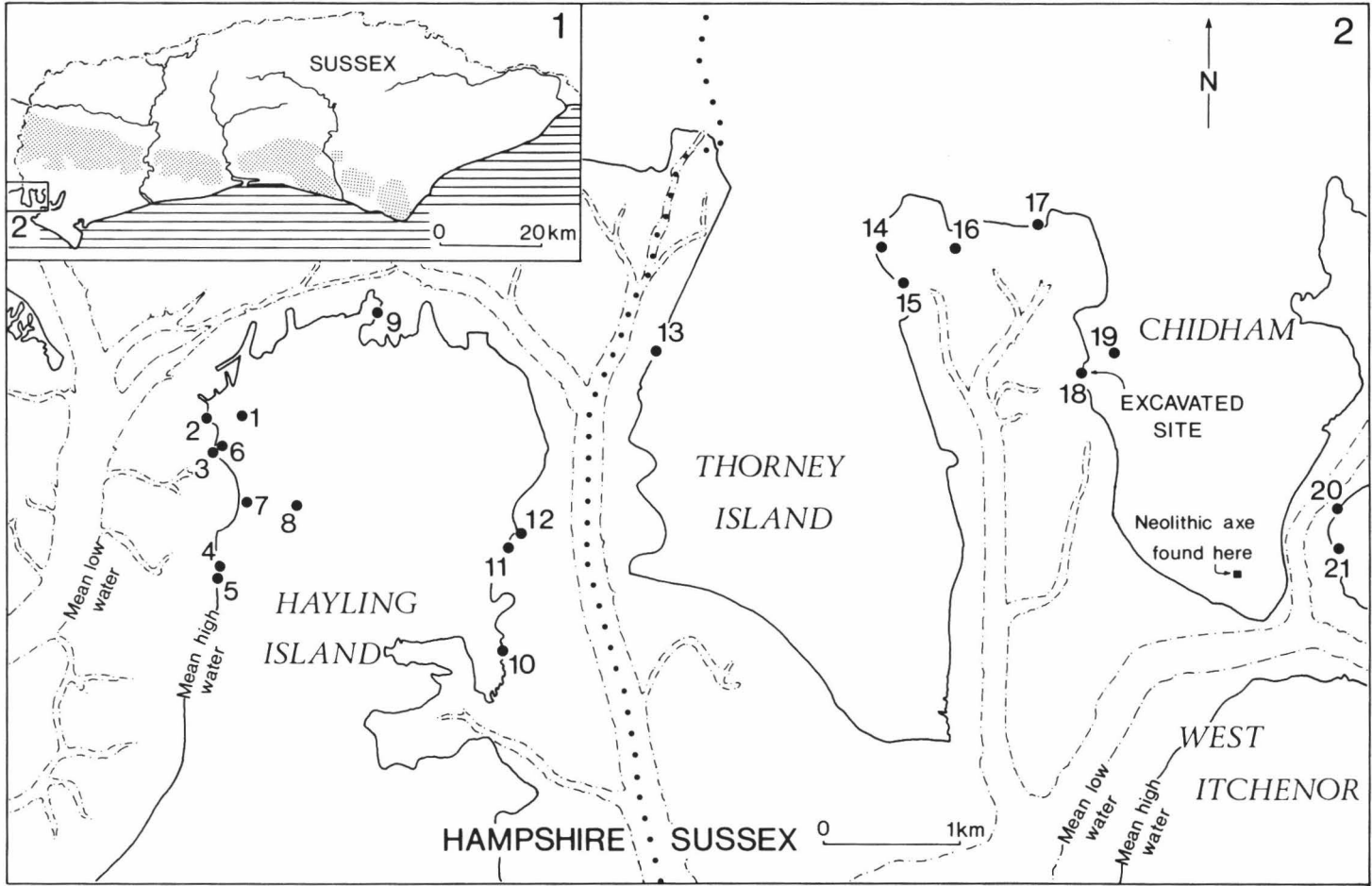


Fig. 1 Chidham 1978. Site location; the numbered sites are those referred to in the Gazetteer

The headland was covered with thick, coarse grass and, apart from the eroding material, there were no surface indications of the presence or boundaries of a site. After clearing the grass, two areas, centred approximately on the single visible feature, were hand-excavated (Fig. 2). Turf and topsoil were removed, followed by about 20 cm of uniform, buff overburden, to a level at which burnt flint, worked flint and pottery began to appear. At this level, the excavated areas were trowelled, plotting in the positions of pottery and flint artifacts as they were found (Fig. 2). A surprisingly large number of flint artefacts came to light (630 in all). Even more noteworthy was the high proportion (133) which could have been used as scrapers. As the distinction between overburden and undisturbed subsoil was impossible to identify either by colour or texture, trowelling was simply continued until finds died out.

The only feature found was the one already revealed by erosion. This consisted of part of a shallow, steep-sided pit, about 30 cm deep and about 40 cm wide at the top (Fig. 3). Within its dark grey lower fill was much charcoal, early Iron Age pottery, some fragments of briquetage, a few flint flakes, and some calcined flint. Given the context of the site and the presence of briquetage, it may be that this feature represents the partial survival of an evaporation pan, in which sea-water was trapped and allowed to evaporate. An alternative possibility, that it was simply a rubbish pit, cannot be ruled out.

DISCUSSION

Iron Age material

The limited evidence for salt-production was disappointing; Bradley (pers. comm.) originally noted at least three features in the tidal margin, and it must be concluded that two of these had been washed away by the time excavation began in 1978. From the single surviving feature, it is possible to infer only that the preparation of salt from sea-water took place here in the early Iron Age, and that briquetage vessels were involved. It is worth pointing out that Bradley assigned the site to the late Iron Age on the basis of pottery being exposed (Gazetteer, below). Most of the pottery found during the excavation belongs to the early Iron Age, however, though a few sherds of sand-tempered wares are clearly later (Pottery report, below). It is thus particularly unfortunate that the site was not investigated earlier, as there may well have been evidence for salt-working activity over most of the Iron Age.

Neolithic material

In contrast to the relative poverty of Iron Age material, a total of 630 worked flints belonging to the Neolithic period was found. This was completely unexpected. No worked flint was being exposed when the site was first recorded (Bradley, pers. comm.), nor are any Neolithic sites known nearby. Furthermore, the assemblage is an unusual one in that a high proportion of the artefacts are scrapers, with an emphasis on notched or concave types. No comparable assemblage is known in Sussex, and Drewett (below) has suggested the preparation of spears and arrow-shafts, or the preparation of osiers for plaited fish-traps as likely uses for these scrapers.

The worked flints were distributed evenly over the excavated area (Fig. 2). It was not possible to trace them further by excavation, but there was a general scatter of flint flakes among the shingle for about 1 km along the coast to the north of the site. There were also considerable numbers of flint flakes in ploughed fields on the inland side of the sea-wall behind the site. In addition, part of a polished flint axe (Fig. 4.11) was found 1 km to the south of the site (Fig. 1) while the excavation was in progress. Nowadays, the Chidham peninsula is well-drained and intensively farmed, but in

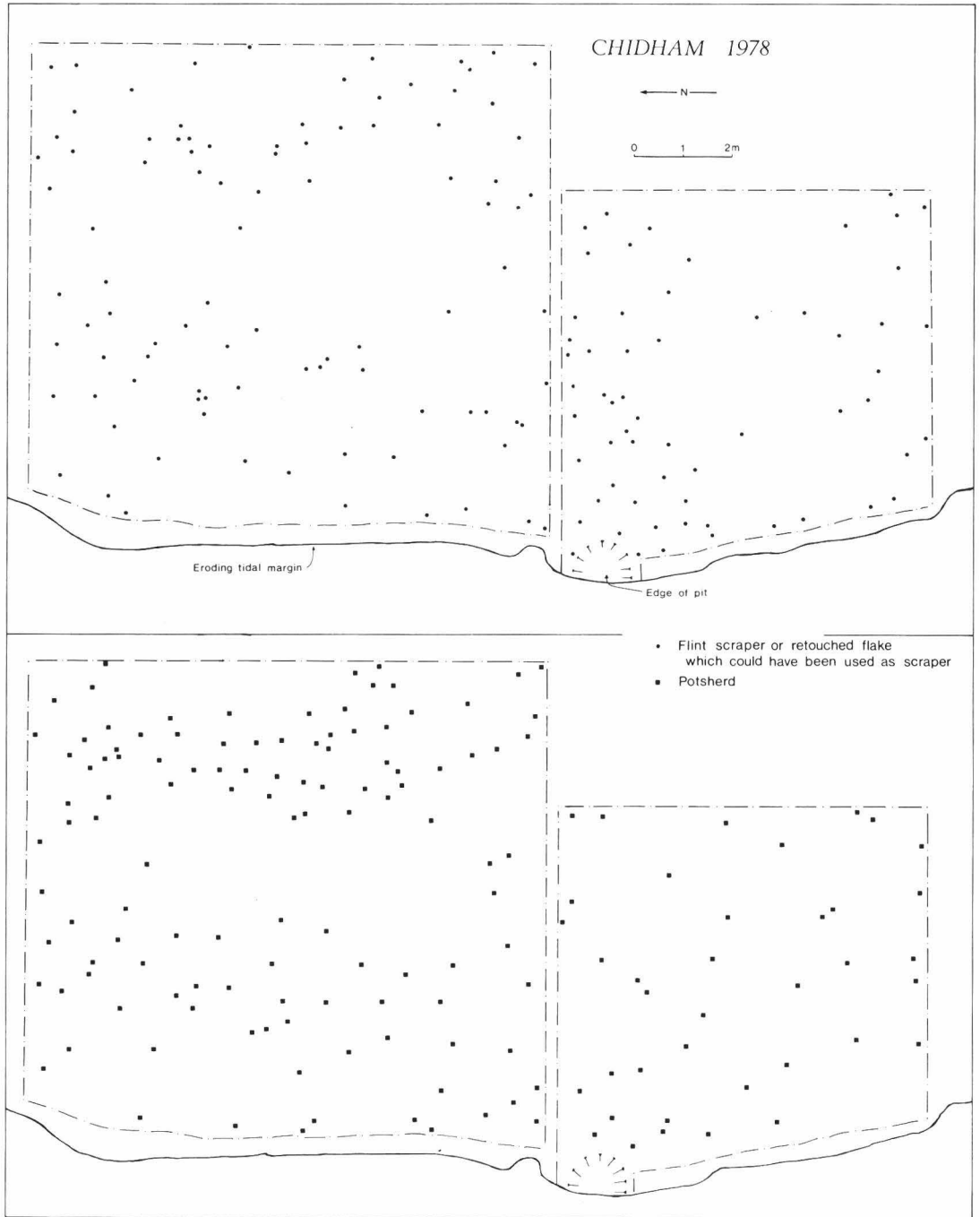


Fig. 2 Chidham 1978. Plan of the excavation showing the distribution of flint scrapers and Iron Age pottery

the Neolithic, it is probable that much of the area was salt-marsh, the fauna of which would have provided a useful source of food. Further investigation of Neolithic activity in this area would obviously be valuable.

THE FINDS

The flint industry (by P. L. Drewett)

An assemblage of 630 worked flints was found during the excavation. All but six came from the uniform buff/brown brickearth (Fig. 3, layer 2) which covered the entire site immediately below the topsoil. It would be unwise to consider material from such a context as a securely associated group; however, the probability is that the assemblage is contemporary.

<i>Layer 2</i>	
Waste flakes with cortex	228
Waste flakes without cortex	142
Cores: Class 2A	3
Cores: Class B3	3
Rough Workshop waste	26
Retouched flakes with cortex	69
Retouched flakes without cortex	16
Concave scrapers (Fig. 4. Nos. 1 and 2)	53
Notched scrapers (Fig. 4. Nos. 3 and 4)	36
Other scrapers (Fig. 4. Nos. 5 and 6)	44
Borer (Fig. 4. No. 7)	1
Leaf-shaped arrowheads? (incomplete) (Fig. 4. Nos. 8-10)	3
Total:	624
<i>Layer 3</i>	
Retouched flake	1
Waste flakes with cortex	3
Rough Workshop waste	2
Total:	6

The flint used is almost exclusively a brown gravel flint. Eight pieces of grey flint may derive directly from the Chalk, while the one strikingly red piece is probably gravel flint. The few properly prepared cores conform to Clark's types 2A and B3 (Clark 1960, 216), but the rough workshop waste includes lumps from which flakes have been struck.

The most peculiar aspect of the assemblage is the astonishingly high number of implements which could be used as scrapers (133). The scrapers (Fig. 4. Nos. 1-6) did not, however, fall easily into the usual scraper classifications (e.g. Clark 1960, 217). Many are roughly made, with 101 being made on flakes with cortex while 16 are on rough nodules. The wide variety of shape and the roughness of manufacture presented problems of classification, so the table (below) simply shows the percentage of the perimeter which has been retouched. This clearly shows that the bulk of the scrapers are retouched around 10-20% of their perimeter, but that 30 scrapers have less than 10% of their perimeter retouched. This group consists largely of the small notched scrapers with only the notch being retouched. This type grade into 53 concave scrapers. Thus 83 of the scrapers are specialised scraping tools of the type required for clearing arrow shafts and spears.

Table 1

Chidham 1978; Scrapers.

Percentage of perimeter retouched:

Less than 10%	10-20%	20-30%	30-40%	40-50%	More than 50%
30	61	23	13	5	2

The three small flakes with fine retouch along part of their perimeter appear to be arrowheads in the process of manufacture (Fig. 4. Nos. 8-10). It is difficult to be certain as to their final shape had they been completed, but their similarity to incomplete leaf-shaped arrowheads from Offham (Drewett 1977, 215) and Belle Tout (Bradley 1970, 353) would suggest that they could have been made into leaf-shaped arrowheads.

One borer was found together with 85 flakes with a little irregular retouch. Sixty nine of these were on flakes still retaining cortex.

Clearly this assemblage represents some specialised activity and its date, though uncertain, is most likely to be Neolithic on the basis of the probable leaf-shaped arrowheads. It is possible, therefore, that we are looking at the material remains of the utilisation of strand and salt-marsh resources rather than any real settlement. The large numbers of notched and concave scrapers suggest the preparation of arrowshafts and spears, but could also have been used for preparing osiers to be plaited into wicker fish traps (if such a technique was in use in the Neolithic in this area).

The widespread use of salt-marsh resources in the Neolithic elsewhere in Britain is well known (e.g. Hedges in Buckley 1980), although study of this aspect of Neolithic economy in Sussex has barely begun. The finding of a broken

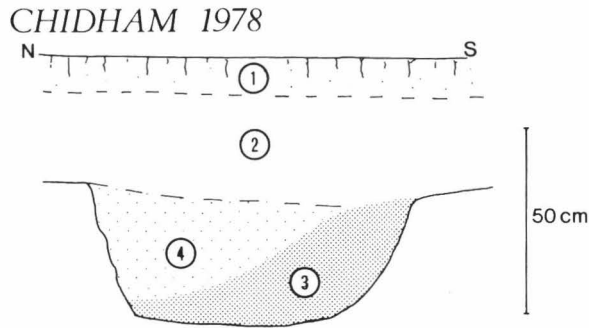


Fig. 3 Chidham 1978. Section through the Iron Age feature

Neolithic polished stone axe (Fig. 4.11) by Mark Roberts to the south-east of the site (SU 7905 0228) confirms Neolithic activity in the area.

Pottery

A total of 135 sherds weighing 1610 g were recovered. From layer 2, there were 90 sherds, weighing 810 g; all were small and abraded. There was also a considerable number of sherds so badly decayed as to be unrecoverable by the trowel. In layer 3, there were 45 sherds weighing 800 g; this feature contained the only large sherds.

Fabrics Almost all sherds were of a heavily flint-gritted fabric; in many cases, calcined flint grits stood out of the surface of the sherd, indicating the decay of the original surface. The colour of the fabric was almost always reddish-brown; the surface was often cracked. Only sherds from the illustrated vessel (Fig. 4.12) differed, being reddish-brown outside but black inside.

In layer 2, most of the sherds were undiagnostic body sherds with heavily flint-gritted fabric. There were, however, ten sherds of a hard, grey-brown, sand-tempered fabric characteristic of the late Iron Age.

The four flat sherds of briquetage (up to 16 mm thick) were only lightly flint-gritted, and the fabric contained a variable number of small inclusions of carbonised plant material.

Forms The single diagnostic vessel (Fig. 4.12) was made up of several large, unabraded sherds. The slightly raised cordon with regularly spaced fingernail impressions is typical of the early Iron Age, as is its flint-gritted fabric. All the briquetage sherds were flat, undecorated and undiagnostic.

In layer 2, among the ten sherds with sand-tempered fabric, were two rim forms of late Iron Age type. These closely resembled material found at North Bersted (Bedwin and Pitts 1978; Fig. 21.200 and Fig. 22.213), and indicate late Iron Age use of the site.

Charcoal (identified by Caroline Cartwright)

85 g of charcoal was recovered from layer 3; the following four species were present;

<i>Crataegus</i> sp. (hawthorn)	<i>Quercus</i> sp. (oak)
<i>Ulex</i> sp. (gorse)	<i>Corylus</i> sp. (hazel)

Gazetteer of salt-working sites

The following list presents in summary form the notes made by Richard Bradley on salt-working sites found during his survey of the Chichester, Langstone and Portsmouth harbour areas. The numbered sites are shown in Fig. 1, from which it can be seen that most sites are revealed by erosion at or near the high water mark.

1. SU 7181 0353 Two flues excavated by Margaret Rule; saucepan pottery and briquetage found in the flues.
2. SU 7150 0341 Pottery and calcined flint on the shore.
3. SU 7151 0321 Iron Age pottery and briquetage exposed on the shore.
4. SU 7157 0259 Scattered briquetage on a gravel bar. Most of the briquetage sherds of 1 cm thickness. Faces of these sherds well eroded; mainly chaff-tempered. No definite dating.
5. SU 7158 0226 Considerable spread (c. 100 m) of abraded briquetage. Scattered sherds of Iron Age and Romano-British pottery but no direct association with the briquetage.
6. SU 7163 0323 Iron Age pottery and fragmentary briquetage sherds seen in spoil from a trench.
7. SU 7182 0282 Abraded briquetage and strut fragments.
8. SU 7210 0270 (Northwood Farm) Surface spread of charcoal plus Iron Age rimsherd. Two flues or gullies seen in section.
9. SU 7275 0426 Areas of calcined flint in the saltings.

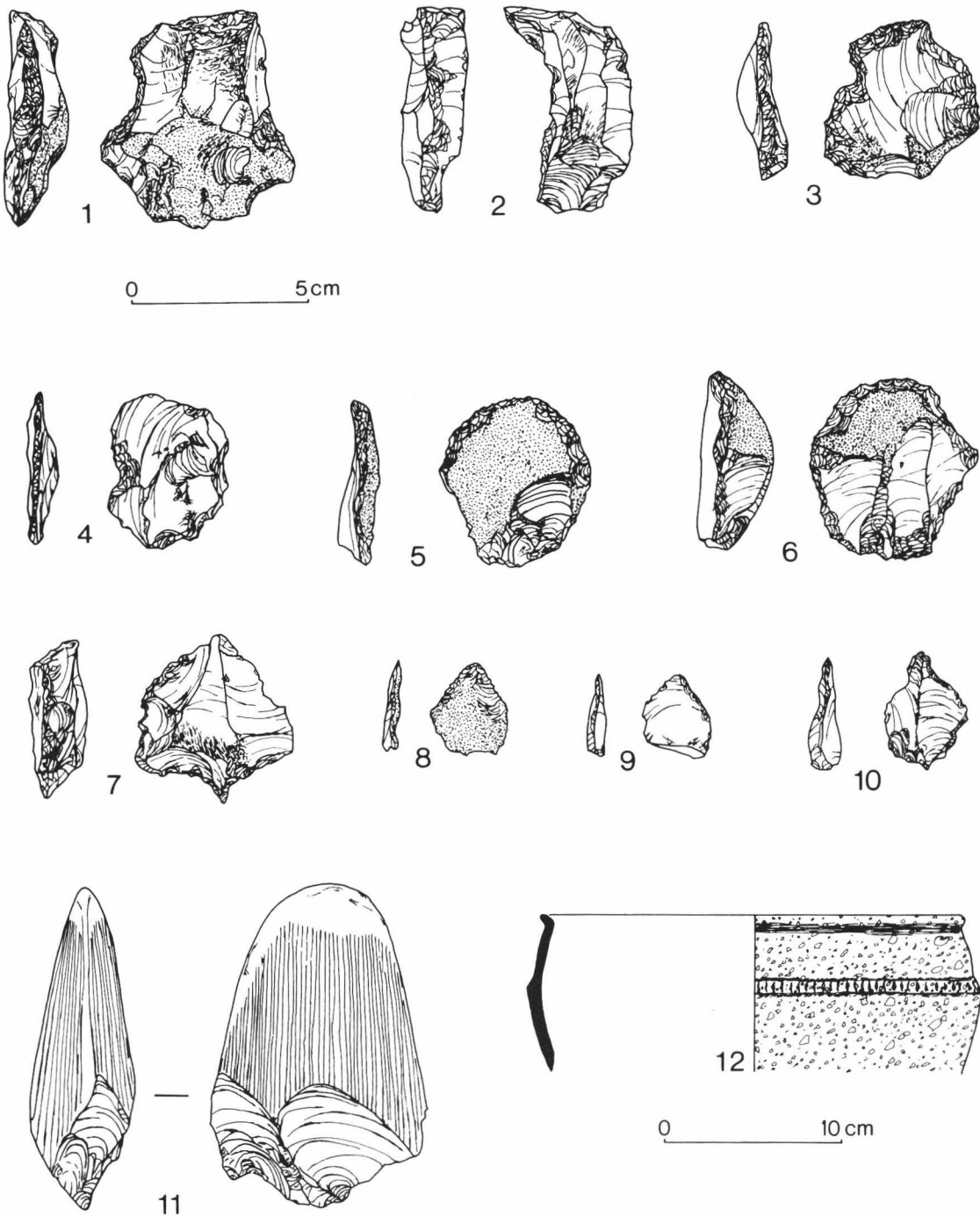


Fig. 4 Chidham 1978. Flintwork and pottery; note different scales

10. SU 7357 0175 Calcined flint on the beach.
11. SU 7370 0248 Calcined flint in spoil on the shore. A serrated blade plus four Iron Age sherds.
12. SU 7377 0256 Patches of burnt red clay and many small body sherds seen in section on the shoreline. Suggestion of a gully or pit.
13. SU 7483 0396 Much calcined flint, and some charcoal. No direct dating evidence. Many broken shells.
14. SU 7635 0471 Saucepan pottery and other later Iron Age wares, and briquetage found in the yacht basin at Prinsted. Wedge-shaped struts present with chaff-tempering.
15. SU 7659 0437 Two separate nuclei of Iron Age sherds and calcined flint from a modern drainage ditch on the landward side of the sea-wall.
16. SU 7699 0473 Surface finds from a large feature; pottery and calcined flint.
17. SU 7757 0481 Coarse sherds (not obviously late Iron Age) and calcined flint below the high water mark.
18. SU 7790 0378 (The excavated site at Chidham) Four parallel channels or flues seen in eroding section. Briquetage and mid/late Iron Age pottery present.
19. SU 7820 0393 Calcined flint, a few Iron Age and Romano-British sherds found after ploughing. A few fragments of burnt clay.
20. SU 7977 0278 Five ill-struck cores plus flakes and a scatter of calcined flint on the shore.
21. SU 7980 0249 Fired clay fragments; probably not briquetage.

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All material found during the excavation has been placed in Chichester Museum.

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