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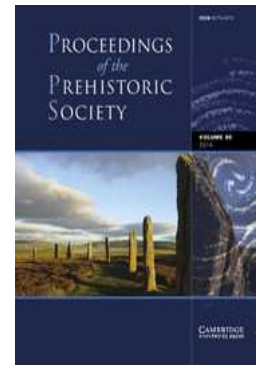
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Roger Miket

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## Pit Alignments in the Milfield Basin, and the Excavation of Ewart 1

By ROGER MIKET<sup>1</sup>

The pit alignment at Milfield North, discussed in the preceding paper, is one of six alignments revealed in the Milfield Basin within the last decade. All discoveries have so far been confined to the sands and gravels of the former delta surface, and whereas additional examples, as well as their extension onto the heavier loams overlying the sandstone series, remain to be found, so crisp has been the definition by means of intensive aerial survey in this valley, that only a limited enlargement of the present distribution pattern by this means is anticipated. The characteristics of the individual alignments are as follows:

1. *Ewart 1*. NT95343209 to NT96103162

An irregular line of closely spaced pits that for most of its observable course follows the crest of a gentle but marked elevation in the sand and gravel-terrace. Two interruptions are visible towards its eastern end before it angles southwards to disappear into a wood. Observed over 1100 m.

Source: Cambridge University Collection. BDE35, BDE36, BKC40.  
Museum of Antiquities, Newcastle upon Tyne. A1656-1662.

2. *Ewart 2*. NT95353165 to NT95803159

Lying to the south of Ewart 1 and running broadly parallel to it. The pit sizes and spacing is similar to Ewart 1 although their inter-relationship is obscured at their eastern end by a plantation. Ewart 2 fades away at its western extremity. Observed over 300 m.

Source: Cambridge University Collection. BDE35, BDE36.

3. *Ewart 3*. NT96223208 to NT96123235

An irregular line of pits running from south-east to north-west, and observed over a distance of some 300 m.

Source: Cambridge University Collection. BEF48 to BEF51.

4. *Milfield Palace Site*. NT94033407 to NT94293392

An irregular line of closely spaced pits fading out at its western extremity and lost at its eastern among features relating to the palace. A short series of pits runs southwards from the river to be lost amidst the palace complex.

Source: Cambridge University Collection. AA110 & C. B. Burgess.

5. *Milfield Plantation*. NT94623424 to NT95403370

Line of closely spaced pits running from north-west to south-east over an observed distance of

<sup>1</sup> Address: Tyne and Wear Museums Service, Arbeia Roman Fort, Baring Street, South Shields.

900 m and intersected at NT94633425 by a line 300 m in length running from north-east to south-west.

Sources: Cambridge Photographic Collections—AC80, BJY95, BDB83, BDB84, ACB82.  
Newcastle Museum Records Nos: 3.3., 3.5., 3.7 to 3.13 inclusive.

6. *Milfield North*. NT93303509 to NT93403511

Irregular double pit alignment running approximately east-west. Eastern-most pair excavated in 1978. See pp. 115–119 above.

Sources: Cambridge Photographic Collection.

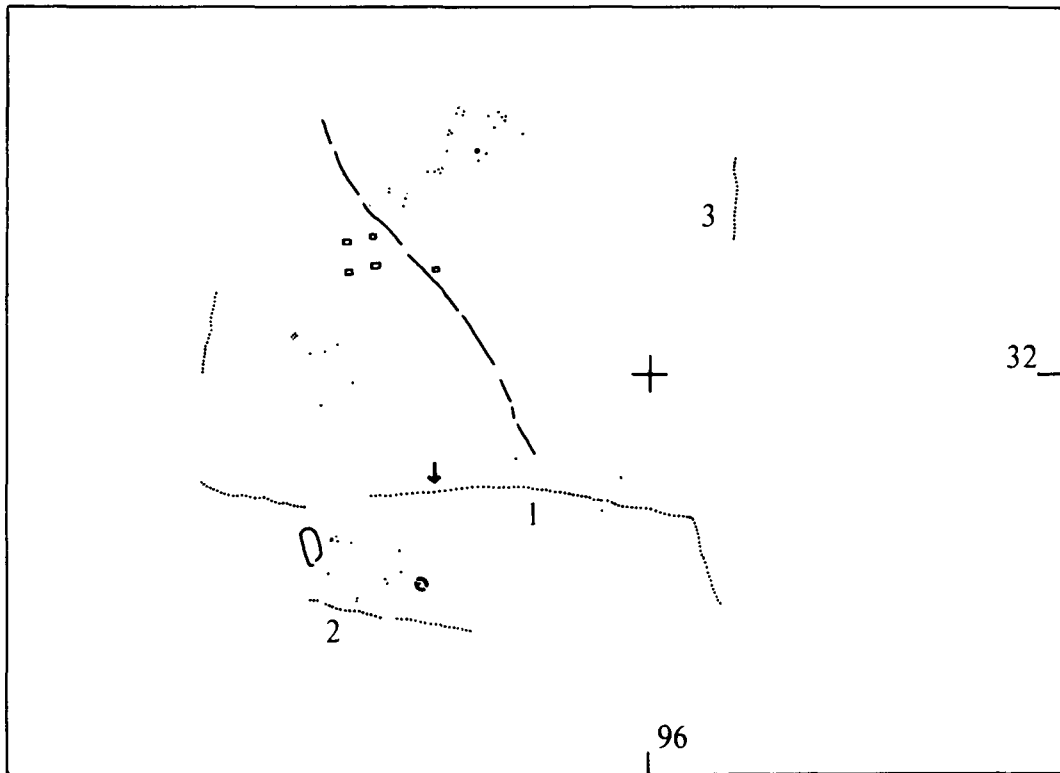


Fig. 1

Cropmarks at Ewart, Northumberland. Scale 1:10,560. Plot: Northern Air Photography Committee, adapted.

THE EXCAVATION OF A PIT ALIGNMENT AT EWART

In 1977, an area averaging 6.30 m × 17.50 m provided six complete pit plans, and two half-sections truncated by the limits of excavation. It was hoped that these would resolve questions concerning the date, internal structure, and thereby probable function of the alignment. In the event, only partial resolution of these questions resulted, and with the benefits of hindsight it can be seen that not only was the sample too small, but that cuttings elsewhere along its course are necessary to test how representative the evidence presented here is.

## 6. Roger Miket. PIT ALIGNMENTS IN THE MILFELD BASIN

### *The Excavation*

*Pit 1.* This extended beyond the limits of the excavation and was therefore not excavated.

*Pit 2.* Measured 1.90 m N/S, × 2.68 m E/W, × 0.80 m in depth. The pit was markedly shelved on its northern, western and eastern sides, assuming a steeper profile on its southern side. The base of the pit was relatively flat, but slightly depressed at its eastern end. Lenses of sands and gravels predominated among the filling, with a concentration of small stones and pebbles towards the centre, where some lay on a vertical axis. Two lenses of dark silt-like earth were noted, at the base of the pit, and the other between 0.15 m and 0.25 m above this base. The upper fill of the pit was a dark brown stone-free earth.

The pit produced no objects.

*Pit 3.* Measured 1.90 m N/S, × 2.66 m E/W, × 0.70 m in depth. The pit was markedly shelved on its northern and western sides but not on its eastern and southern sides. The base of the pit was relatively flat.

Apart from the upper fill of stone-free dark brown earth, the fill was predominantly a sandy gravel with a greater concentration of small stones and pebbles towards the centre. Near the base of the fill was a layer of stone-clear dark brown earth, very similar in character to that in the uppermost fill. There was clear indications of intense animal activity both in the sides of the pit and in its fill.

*Objects:* Pottery (3.1, 3.2, 3.3), Flint (3.4, 3.5), and Bone (3.6, 3.7).

*Pit 4/5.* Measured 4.12 m E/W, 2.10 m N/S (4), 2.25 m N/S (5), the maximum depth of 4 was 0.66 m, and 0.69 m for 5.

Pit 4 was slightly shelved on its northern and western sides, but not on its southern. Pit 5 was more markedly shelved on its southern and eastern sides, however there was clear evidence here for more intense animal activity than noted elsewhere around the pit edges. The central area of the double pit indicated six well-defined and stratified layers. Composed mainly of sandy gravels separated by bands of dark soil, they were considerably less well defined at the eastern and western extremities of the double pit. The continuity of these layers had been interrupted at two points approximating to the centres of pits 4 and 5, and replaced with an earth and gravel fill.

*Objects:* Pit 4—Pottery (4.8, 4.9, 4.10, 4.11, 4.13, 4.14) and Flint (4.12).

Pit 5—Pottery (5.15, 5.16, 5.17, 5.18, 5.19).

*Pit 6/7.* Measured 6.30 m E/W, 2.10 m N/S (6), 2.80 m N/S (7), the maximum depth of 6 was 0.77 m, and 0.83 m for 7.

Pit 6 was shelved on its northern side, and largely filled with a stone-free dark brown soil. On its southern edge two intrusions (10a and 10b) showed as a slightly lighter soil marking, of which 10a was the chronologically later. 10b contained a small sherd fragment which is comparable with the series as a whole and therefore likely to be residual.

Towards its basal layers the brown soil gave way to a red sand containing some small stones which were noticeably more densely concentrated at the centre of the pit's greatest depth.

Pit 7 was similarly stratified although here a continuous band of dark silty earth extended throughout to separate the upper brown soil from the red sand.

*Objects:* Pit 6—Pottery (6.20, 6.24, 6.25, 6.28), Flint (6.22, 6.23), and a Bronze Ring (6.21).

Pit 7—Pottery (7.27, 7.26).

*The Finds* (those marked with an asterisk are illustrated in fig. 4).

*Pit 2.* No finds.

*Pit 3*

\*3.1 Pottery. Depth 8 cm. Body sherd with orange and blackened exterior; orange core containing small grits; smooth dark brown interior surface.

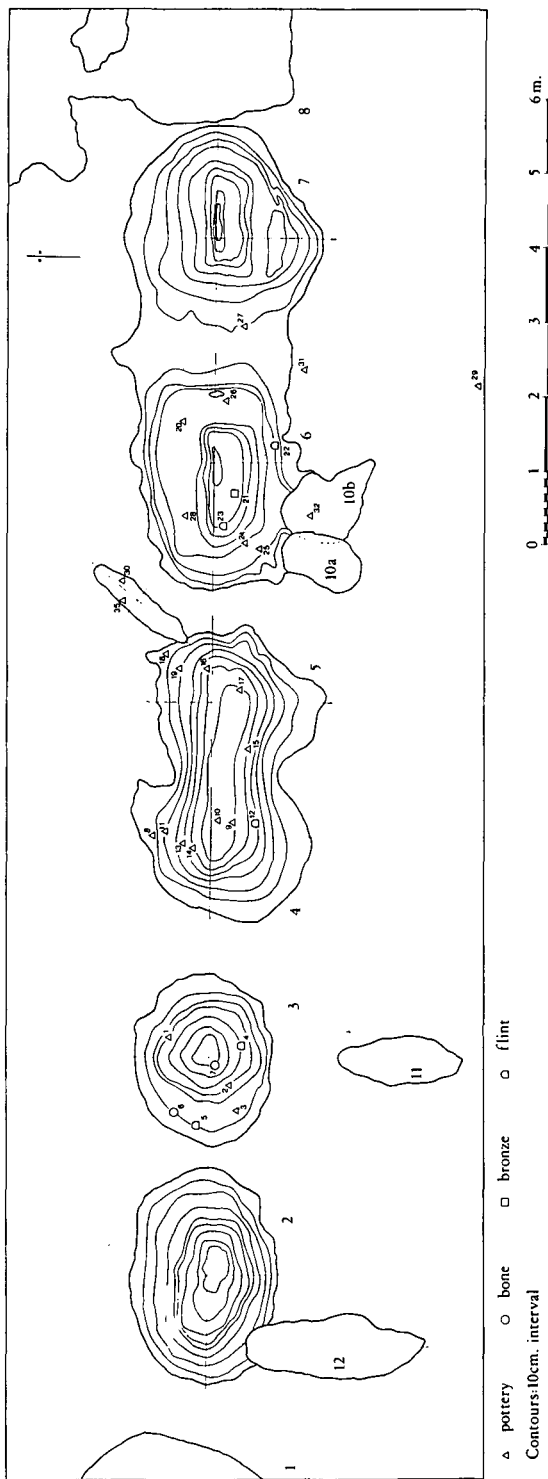


Fig. 2  
Pit alignment at Ewart, 1: plan.

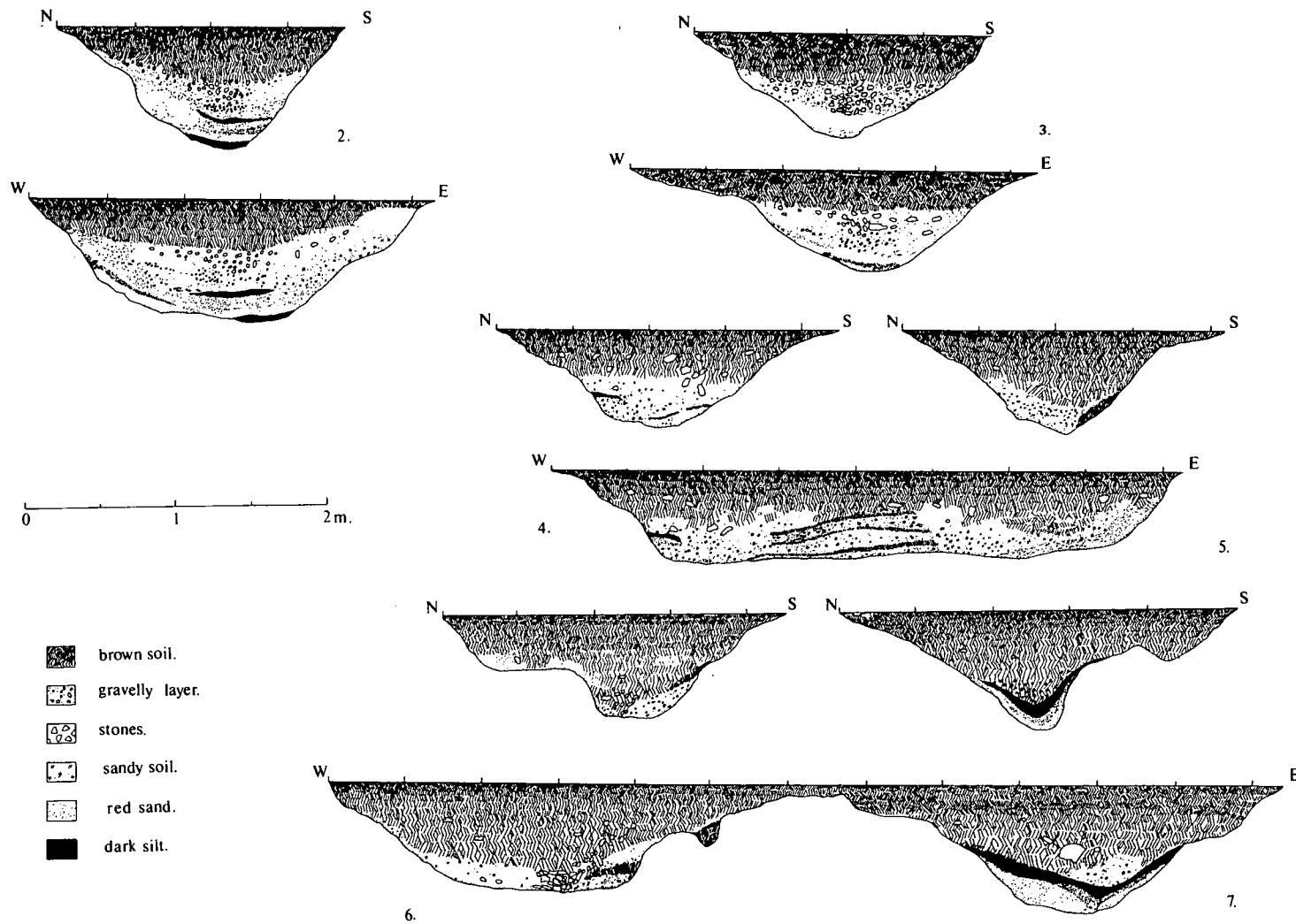


Fig. 3  
Pit alignment at Ewart, 1: sections of the pits.

## THE PREHISTORIC SOCIETY

- \*3.2 Pottery. Two body sherds with brown exterior surface; brown core containing small grits and a gritty brown interior surface. The exterior surface is decorated with horizontal and oblique grooves, and one fragment exhibits oblique nail impressions.
- \*3.3 Pottery. Depth 34 cm. Two sherds including a rim fragment. The rim has a dark brown blackened exterior surface decorated with a combination of vertical and horizontal incised grooves. The core is dark brown and heavily gritted. The interior surface is a heavily gritted dark brown colour. Two heavily incised horizontal lines lie just below the rounded rim, producing a corrugated effect. The second sherd is a small body fragment with a brown blackened exterior surface, brown black core containing small grits, and a brown interior surface. The exterior surface is decorated with horizontally incised lines, and the inner surface with two horizontal shallow grooves. Both fragments appear to have derived from the same vessel.
- 3.4 Flint flake. Depth 15 cm. Small fragment of waste flint. Dark grey and partially cortical.
- 3.5 Flint flake. Depth 20 cm. Small fragment of opaque grey waste flint.
- 3.6 Bone fragment.
- 3.7 Calcined bone. Two small fragments of calcined bone.

### *Pit 4*

- \*4.8 Pottery. Depth 3 cm. Undecorated body sherd dark brown throughout with very small grits.
- \*4.9 Pottery. Depth 20 cm. Blackened throughout with small grits. The exterior surface is decorated with two parallel incised lines.
- \*4.10 Pottery. Depth 60 cm. One large sherd and two very small fragments. The large sherd had a dark brown exterior surface decorated with horizontal and oblique incised lines; grey brown core with a few small grits; rough brown blackened interior surface.
- \*4.11 Pottery. Depth 40 cm. Body sherd with a dark brown exterior surface decorated with horizontal grooves; dark brown core and interior surface.
- \*4.12 Flint. Depth 40 cm. Small fragment in dark grey flint with slight re-touch near the corner of one edge.
- 4.13 Pottery. Depth 37 cm. Small body sherd, dark brown throughout and gritted, with a single score line on one surface.
- 4.14 Pottery. Small body fragment with buff brown exterior surface, and black core and interior surface.

### *Pit 5*

- \*5.15 Pottery. Depth 33 cm. Small body fragment with dark red/brown exterior surface, and black core and interior surface.
- \*5.16 Pottery. Depth 15 cm. Rim sherd with dark red/brown exterior surface decorated with horizontal and oblique incised lines; black gritty core and interior surface. The interior surface near the rim is decorated with three deeply incised horizontal grooves.
- \*5.17 Pottery. Depth 37 cm. Small body fragment with smooth brown exterior and interior surface and brown core. The exterior surface carried a single incised line.
- \*5.18 Pottery. Depth 2 cm. Small fragment showing the right-angle of a flat based vessel, with an orange exterior and gritty/black core.
- \*5.19 Pottery. Depth 4 cm. Large rim sherd from an upright sided vessel. Black throughout with small grits.

### *Pit 6*

- \*6.20 Pottery. Depth 4 cm. Six small body sherds, dark brown throughout with small grits. Decorated with grooves and nail impressions.
- \*6.21 Bronze Ring. Depth 5 cm. Plain bronze ring, elliptical in section.
- 6.22 Flint. Depth 10 cm. Grey flint mottled with white, and re-touched along one edge.
- 6.23 Flint. Depth 53 cm. Small calcined scraper fragment with re-touch around the edge.
- \*6.24 Pottery. Depth 18 cm. Rim fragment with dark red/brown exterior surface and decorated with horizontal, incised lines; black gritty laminated core, and black interior surface. The interior surface is decorated near the rim with at least four deep horizontal grooves.
- \*6.25 Pottery. Depth 15 cm. Large rim fragment similar to no. 24.
- \*6.26 Pottery. Depth 35 cm. Large body fragment with light brown blackened exterior surface; light brown core with small grits, and a brown blackened interior surface. The exterior surface is decorated with a broad raised cordon bearing upright fingernail impressions.
- \*6.27 Pottery. Depth 15 cm. Two small body sherds with orange/red exterior surface, gritty black core and interior surface.
- 6.28 Pottery. Depth 44 cm. Small fragments with dark brown exterior surface, core, and interior surface.

## 6. Roger Miket. PIT ALIGNMENTS IN THE MILFIELD BASIN

### *Surface Discoveries*

\*6.29 Pottery. Surface find. Large body sherd in light orange fabric throughout and containing small grits.

### *Feature 9*

\*9.30 Pottery. Surface. Two body fragments, the larger with a dark brown exterior surface with horizontal and oblique incised lines, brown core and smooth brown interior surface.

9.35 Pottery. Two small body fragments with red/orange exterior surface, dark gritty core and blackened interior surface.

### *Feature 10b*

\*32 Pottery. Surface. Small body sherd, orange throughout with small grits.

\*33 Flint. Surface. Long flake in dark grey mottled flint with re-touch along both long edges.

34 Pottery. Surface. Small body fragment with red blackened exterior surface, black gritted core and interior surface.

### *Surface Discoveries*

\*31 Pottery. Surface. Small body fragment with buff/brown exterior surface decorated with incised lines; black gritty core and interior surface.

## DISCUSSION

The individual pits cut into the laminated sand and gravel subsoil to depths varying between 0.60 m and 0.80 m, while the distance between each pair of pits did not exceed 0.80 m. Pits 6 and 7 merged at the surface, and Pits 4 and 5 were in reality a double-pit with the one continuous flat bottom. The individual pits were oval in surface plan, averaging 2 m × 3 m, and even the double pits were elongated in a manner more marked than could be explained as the running together of two circular features.

A recurrent feature in both plan and profile was the presence of a broad shelf within their upper 0.20 m. Their positioning overall was not consistent for whereas most lay either on the northern or southern sides (i.e. at right-angles to the course of the alignment), the shelf in Pit 3 lay on its western side.

Of the pits examined, all showed a noticeably dense concentration of small stones and pebbles at their centres, and generally in the lower half of their vertical sections. Only in the double-pit 4/5, however, was a readily definable stratified sequence of layering visible, yet truncated at points coinciding with the centre of each pit.

Insufficient charcoal was recovered to submit for radio-carbon analysis.

## INTERPRETATION

The alternative interpretations arising from the sample are a reflection of the diverse opinions applied to this form of field monument. An interpretation which would account for the pits at Ewart 1 as a relic of quarrying to provide upcast for a continuous bank is found wanting in a number of respects. Such a bank might be expected to fill all the pits in a uniform manner. The internal structure of the pit fills showed no such orderly introduction of material from any preferred side, and the layering was for the most part horizontal. Moreover, the sand and gravel lenses which comprised much of the filling was uniformly clean, and can be accounted for on the 'bank' hypothesis only by concluding that the bank had been returned to its quarry. If this were so, a glance at the section shows how half-heartedly such a task of backfilling was conducted, leaving the upper half of the pits empty to refill naturally with brown, gravel-free topsoil. Such a viewpoint is manifestly improbable for other reasons. The recurrent provision of a shelf in these pits, which are not too deep to step into, raises problems, but a particularly forceful argument against the bank hypothesis is the fact that the features are cut at an angle through loose sand and gravel, which could only be preserved through rapid refilling. It may be worth remarking here that where such pits meet in a T-junction, it would be difficult to argue for the presence of a bank without the break in



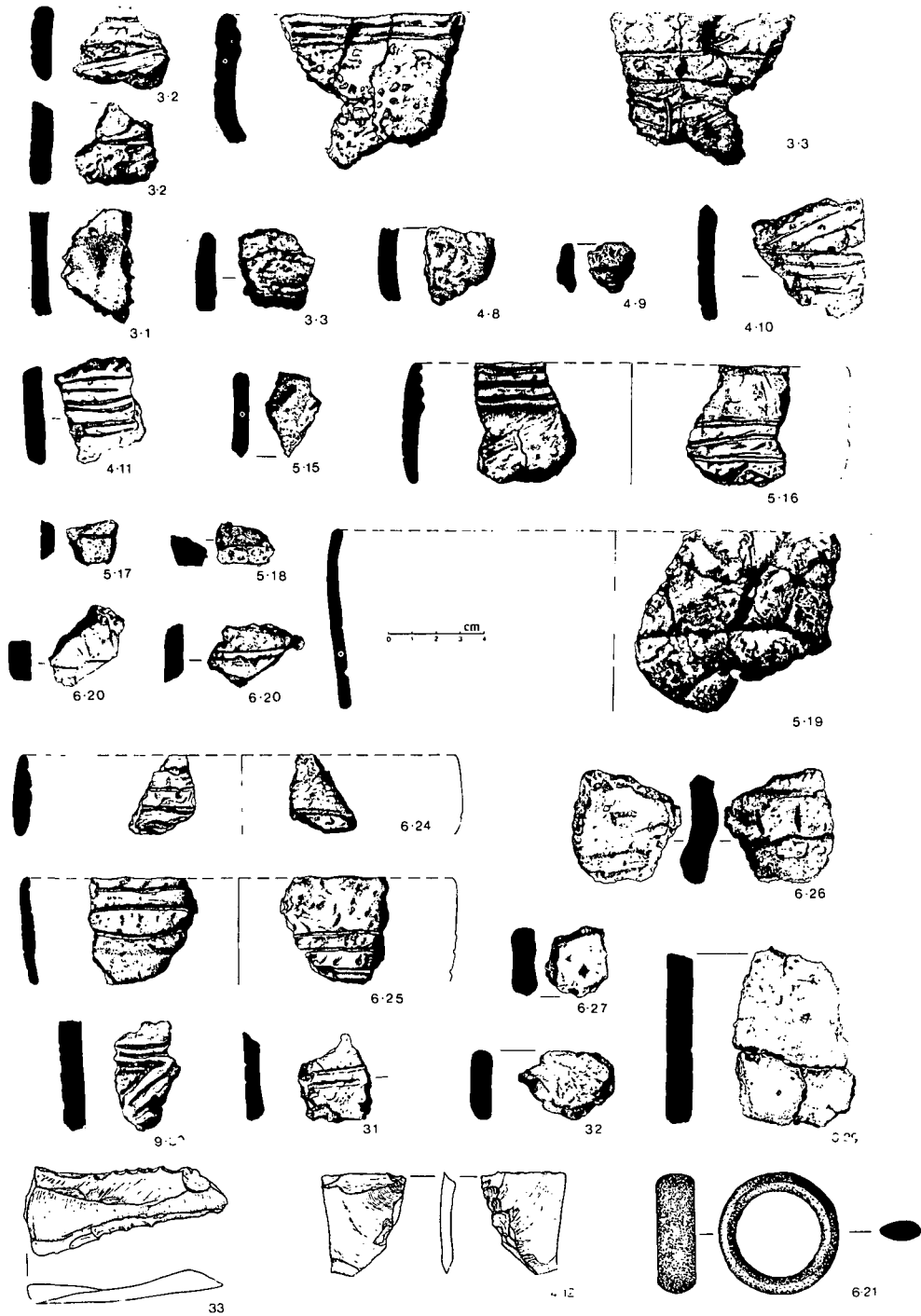


Fig. 4  
Pit alignment at Ewart, 1: pottery (1/3), flint and bronze (2/3).

the row of pits that would be necessary in allowing the banks to meet. That a degree of erosion followed their creation was evident from the basal deposits, but as this was no greater than the slippage noted in the one week that elapsed between finishing the excavation and reconstituting the site, a significant interval of exposure is highly unlikely.

From the above alone, it seems clear that the intended function of the pits was intimately tied to their positioning, a function in which the provision of a broad internal shelf and a rapid-refilling of the pit played a necessary part. Short of an interpretation in terms of a ritual function which need leave little or no trace, it seems likely that only posts held fast within the pits satisfactorily account for the processes already enumerated. Further support was forthcoming from the sections themselves, for below the upper, uniformly brown soil capping, a dense stone and earth concentration lay within the centre of each pit. This was given greater emphasis in the sections of Pit 4/5, where a truncation of the internal layers both readily defined their position and indicated their subsequent extraction, resulting in the medial silt deposits and stone concentrations. Of the timbers themselves then, no trace remained, leaving only the width of the interruption in the layering of Pit 6 from which to estimate a maximum diameter of 0.65 m, a dimension that accords agreeably with measurements of the diameter of stone concentrations in the other pits.

In such a context the positions of the shelved ramps are not only rendered understandable, but their position in relation to the course of the alignment may usefully indicate the direction of work. If one assumes that large timbers could be erected from any side but that where a neighbour already stood, and that ramps on the main axis could indicate the direction in which work was proceeding (in contrast to ramps at right angles to the main axis), then the ramps at the western ends of Pits 2 and 3 assume particular significance by indicating that in this stretch at least, work was proceeding westwards. From an agreement between the centres of stone density and the lowest point of the pits, the distance between the focal points of Pits 2-3-4, 5-6-7, consistently measured 3 m. Assuming the maximum post width of 0.65 m already indicated, a considerable gap of 2.40 m between each pair of posts is left which requires some form of infilling if its effect was meant to be any more than symbolic. On the assumption that certainly no less than one-third of the post-length would be buried, and that there has been little or no erosion of the surface to the present day, a maximum above-ground height of 1.90 m would be achieved. However, forceful and persistent prevailing westerly winds typify the local conditions, and few free-standing uprights are implanted today with much more than half their length above ground.

The pits produced a surprisingly large number of small-finds. The pottery forms a well-defined and homogenous group identifiable as falling broadly within the Clacton sub-style of the Grooved Ware tradition. Some of the sherds at Shenstone, Staffordshire may also be of Grooved Ware, although in this instance they were regarded by the excavator as probably residual (Whitehouse 1961). The quantity and cultural uniformity of the material recovered, and also the crispness of decoration on sherds (which show no trace of weathering) make this unlikely in the case of Ewart. The depths at which the individual pieces were recovered reinforces such a contextual interpretation. Only the very modern-looking bronze ring (6.21) found within the upper 6 cm of Pit 6 need invite a murmur of caution until further excavation on this alignment can re-examine the evidence.

*Acknowledgements.* It is a pleasure to record our thanks to Mr E. H. Reddihough of the Thirlings, Ewart, for allowing us to excavate the site. He and his family have been a source of strength to us over many seasons' work in the valley, and one of the most sympathetic and generous of landowners an archaeologist could hope to work with. Both this project and the other work we have undertaken in the valley has benefited immeasurably from the friendship and advice of Anthony Harding. Especial thanks are due to Mlle. Cecil Trémolet, who carried out so much of the excavation single-handed. The drawings were made by Marion Larkin and Robert Herbert, and Pamela Lowther gave invaluable help with the preparation.

## THE PREHISTORIC SOCIETY

### APPENDIX: SOIL ANALYSIS *by* Michael Alexander<sup>2</sup>

Six samples were analysed for pH, organic carbon, nitrogen and phosphorus. All the samples lie within the range pH 5·8–6·4 to which little significance can be attached. Similarly in terms of % carbon and nitrogen the six samples cluster fairly closely in the range 0·19–0·92%C and 0·07–0·09%N. Only the sample of brown earth from the centre of pit 4 at depth 50 cm differs markedly from this pattern having both higher C and N levels (1·09%C and 0·14%N). Taken in relation to its relatively high phosphorus value of 1032 ppm, it strongly suggests that this represents some 'foreign' addition to the soil. The remaining samples have phosphorus levels ranging from 528–708 ppm.

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<sup>2</sup> Address: Department of Geography, Science Laboratories, South Road, Durham.