

CHARIOT BURIAL NUMBER 3

- 300 Grave of 012 (chariot burial found by machine 16.8.84).
- ✓ 301 Iron tyre (east wheel, broken by machine).
- ✓ 302 Bronze strip (part of yoke).
- ✓ 303 Iron lynch pin.
- 304 Human bone (part of 320).
- ✓ 305 Iron ring (recovered from floor of quarry).
- ✓ 306 Bronze terret (number 5 from north).
- ✓ 307 Bronze terret (number 4 from north).
- ✓ 308 Bronze terret (number 3 from north).
- ✓ 309 Bronze terret (number 2 from north: number 1 from north lost).
- ✓ 310 Bronze sheet (in line of terrets).
- ✓ 311 Bronze sheet (in line of terrets).
- 312 Organic matter and three bronze tacks (on line of yoke).
- ✓ 313 Bone point.
- ✓ 314 Bronze sheet (kidney shaped, on line of yoke).
- 315 Calcareous deposit (on line of yoke).
- ✓ 316 Iron nave hoop (upper, east tyre).
- ✓ 317 Iron nave hoop (upper, west tyre).
- 318 Iron sword, pommel and bosses.
- ✓ 319 Iron shield boss.
- 320 Human skeleton.
- ✓ 321 Bronze belt ring (with coral stud, west side of sword).
- ✓ 322 Bronze belt ring (with coral stud?, east side of sword).
- ✓ 323 Iron horse bit (northerly).
- ✓ 324 Iron horse bit (southerly).
- ✓ 325 Iron dog (east wheel).
- 326 Iron replacement (beneath right hip).
- ✓ 327 Iron nave hoop (lower, east wheel).
- ✓ 328 Iron nave hoop (lower, west wheel).
- 329 Iron tyre (east wheel = 301).
- 330 Iron tyre (west wheel).
- 331 Box shape in fill.

332 Wheel, east side.

333 Wheel, west side.

334 Axle stain.

335 Yoke (consists of terrets, bindings etc.).

336 *done*

1. Enclosure:

The northern half of the ditched burial enclosure had been removed by machine, but the internal width east-west was 6.6 m. The ditch was nowhere more than 1 m wide and c. 0.5 - 0.6 m would be more usual. The maximum depth of the ditch was 0.34 m.

2. Grave:

Only the southern side and the southern part of the western side of the grave survived. These showed that the maximum width of the grave east-west had been across the middle (as in burial 2) rather than across the southern side (as in burial 1). The latter measured 2.35 m at surface and 2.13 m at floor level. The grave does not appear to have been triangular. The maximum depth was: 0.47 m.

The infill consisted largely of gravel which was virtually indistinguishable from the undisturbed natural in colour, although in the central area colour changes were noted where there had been a wooden structure. In contrast to chariot burial number 1 there were no voids where wooden posts had once existed, but there were soil differences, with for example, clean pitched gravel filling the spaces once occupied by wooden members, as found in burials 1 and 2. Unlike 1 and 2, the spokes of the wheels were well indicated by such filling. Around the central area the gravel was light coloured, but darker gravel filled a rectangular box shape in the centre and here the texture was a little looser than around the sides.

3. Structures within the Grave:

The soil differences outlined above and metal fittings indicate that the following structural elements were present:-

331. A central box shape.

334. An axle.
332. A wheel (on the east side).
333. A wheel (on the west side).
335. A yoke.
331. Was visible as a mark from the surface, and clean gravel seemed to indicate a south-east corner at this level. If this genuinely reflects wood at this level then the structure was at least 0.48 m high. Not only this, but the sides as indicated at lower level (down to 0.48 m) indicate that at surface the south side was 0.25 - 0.30 m further north, and the east side 0.10 - 0.15 m further west. What does this mean? Although plans were drawn of the marks at 0.15 m, at 0.35 m and at 0.48 m below the surface the marks indicated vertical sides (except perhaps on the west), so that the sides on the south and east could have flared out suddenly, or the marks at this level could indicate another element in the structure. Collapse of part of the structure is feasible, even probable with the decay of the wood, but this would normally be inward, where there was no gravel to buttress the structure.

At 0.35 m a rectilinear structure c. 1.00 - 1.05 m wide was indicated by the marks of the south side. 1 metre to the north of this the width was c. 0.90 - 0.95 m, and the sides had been between c. 0.04 and 0.09 m thick. (A trapezoidal structure recalls closely the shape found in some French chariot burials). The length of the structure is not known, but it must have been at least c. 1.50 m to have comfortably contained the burial (if that is what it did), and a length of 1.20 m was still recoverable as a soil change. On the west side at c. 0.48 m (at the lowest level) the side angled eastwards in its southerly course and did not join the south side at the corner which had been found at 0.35 m. Instead it joined at 0.19 m to the east. This could have been a structural element which was not represented or not preserved at the corresponding eastern side, or it could have been caused by gravel displacing the wood here when it had reached an advanced stage of decay.

334. Beneath the southern side of 331 were the marks left by the axle. This had been at least 1.83 m long and 0.15 m thick in the centre and for some way east of centre. At the west end it was 0.08 m wide (at 0.68 m). The relative positions of 331 and 334 suggests that they could have been attached when buried.

332. The east wheel was damaged when it was discovered by the machine. The iron tyre was broken into at least three pieces and pieces of iron-replaced-wood were lost as well as spoke stains.

The iron tyre was 0.85 m in diameter and inside it, on the south, were replaced remains of a wooden felloe 0.04 m deep (from maximum radius to minimum radius). Traces of eight spokes, either as replacement or as stains, suggest a total original complement of twelve. The iron nave bands were 0.125 m wide internally and an iron dog (325) suggests a thickening of the hub to c. 0.18 m where the spokes joined. The spokes were 0.02 - 0.025 m thick (from the side). The tyre was tilted but apparently not as much as 333, although the damage was such that an accurate assessment of pitch was very difficult to obtain with confidence. The nave hoops were 0.19 m apart.

333. The west wheel was intact and was pitched so that the tyre rested on its rim on the east side. The tyre was 0.83 m - 0.84 m in diameter and contained a felloe 0.25 m thick. Nine of twelve spokes were visible as marks, replacement or as a calcareous deposit, and were c. 0.02 m thick. The naves were 0.20 m apart and were 0.12 m across internally. The spokes of the wheel appeared to be canted downwards, from where they joined the hub, and were not all in the same plane - a possible sign that the tyres should be conical and not cylindrical.

335. Yoke - see 5 (iii) below.

4. The Burial:

The body was crouched or flexed, with its femurs drawn up at right-angles to the spine and the lower legs parallel to them. The upper arms were parallel with the spine and the forearms were bent back with the hands beneath the chin. The body was on the left side with head to north. The cranium had been disturbed by the machine.

5. Grave Goods:

i) Chariot Fittings:

The wooden parts of the chariot included the following fittings:-

Two iron tyres (301/329 east; 330 west), four iron nave hoops (east wheel upper:316, lower 327; west wheel upper:317, lower 328), an iron dog (325) from the hub of the east wheel, and one iron lynch pin (303, from behind the head). A second iron lynch pin can be assumed to have been lost to the machine.

ii) Horse Harness:

Four bronze terrets (a fifth presumed lost) - 306, 307, 308, 309 and some pieces of bronze strip once nailed on to the wooden element - 302, 310, 311 and 312 indicate, with a calcareous deposit (315), the line of the yoke which had lain on the west side of, somewhat above, and parallel with the body. An iron ring (rein ring? - 305) was recovered from the floor of the quarry and would probably have been near the head, or in the disturbed part of the east wheel.

Two iron horse bits of "Irish type" (323, 324) were found in amongst the spokes of the east wheel.

iii) Weapons:

An iron sword (318) in a scabbard with bronze front plate lay across the body with the hand grip over the right shoulder and the chape next to the right knee. Two bronze rings or wheels were placed below and at either side of the scabbard about midway along the full length of the sword, one on either side of the suspension loop (321, 322).

An iron fitting (319), presumed to be part of a shield boss was resting on the right thigh and suggests that the shield had been placed in the grave face down (as in burial 1).

iv) Miscellaneous:

A bone point (313) was found behind the pelvis.

6. Order of Burial:

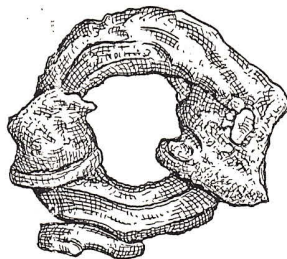
The two wheels and the axle were the first items to be put into the grave. The horse bits were probably put in next, as these had slipped through the spokes of the right wheel. It seems probable that the body of the chariot was put in next, although there is no certainty that this preceded the body and was not inverted. The body was arranged in position before the sword, shield and yoke were placed over it.

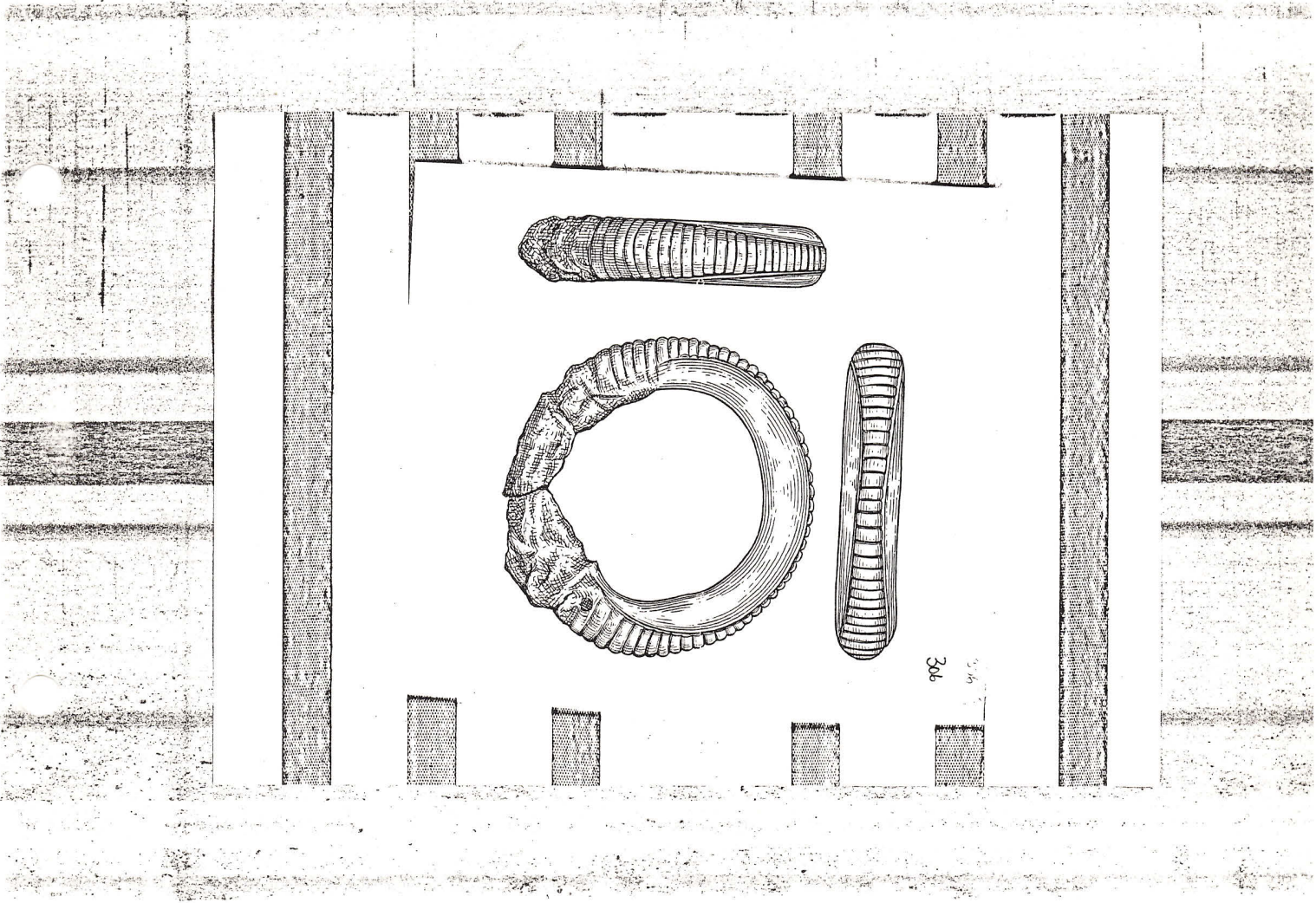
A wooden cover for the burial chamber is indicated by the signs of subsequent collapse; whether this was the floor of the inverted chariot body or additional pieces of wood (as indicated by stains at surface level?) is not known.

7. Subsequent Filling:

Around the wooden chamber (formed by the chariot body), and encasing the exposed sections of axle and wheels, was put the clean gravel which had been dug out from the grave. Once backfilled a mound was constructed over the grave inside the square enclosing ditch. On the decay and collapse of the roof of the chamber material from the mound filled the central area, providing the looser and darker filling found on excavation. With the complete decay of the wooden parts their place was taken by clean white gravel.

King
M2
305
1

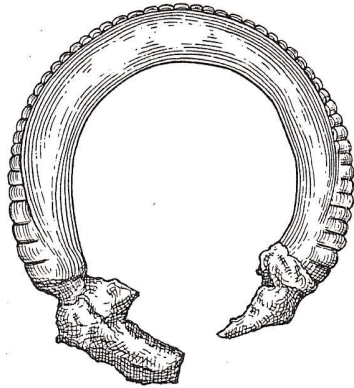
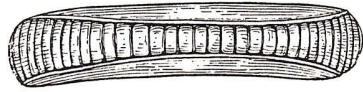


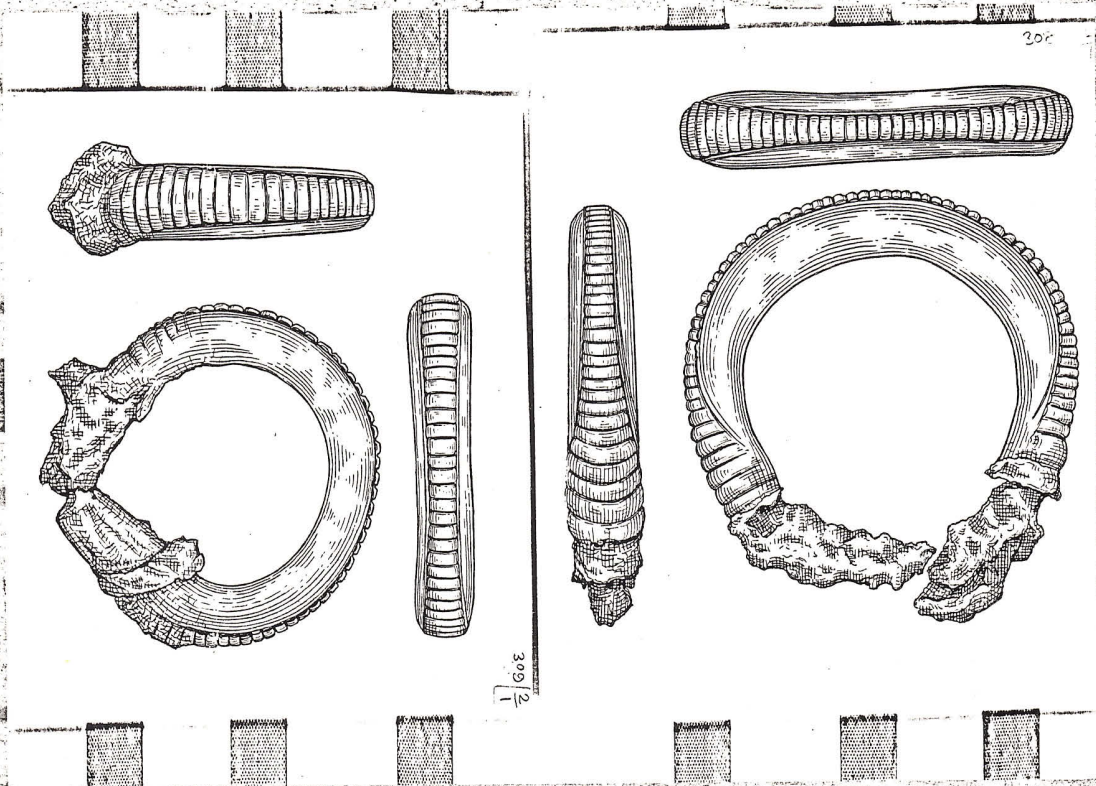


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3.16

307

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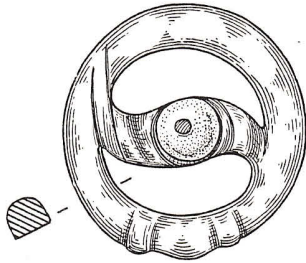


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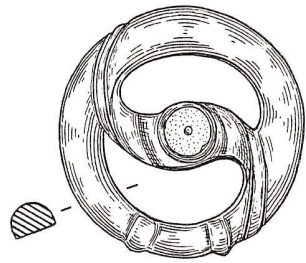
309 1/2

Top

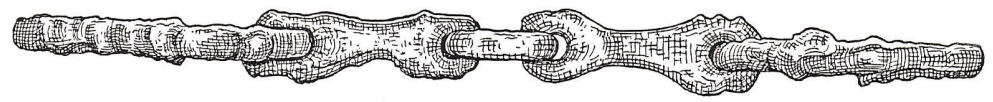
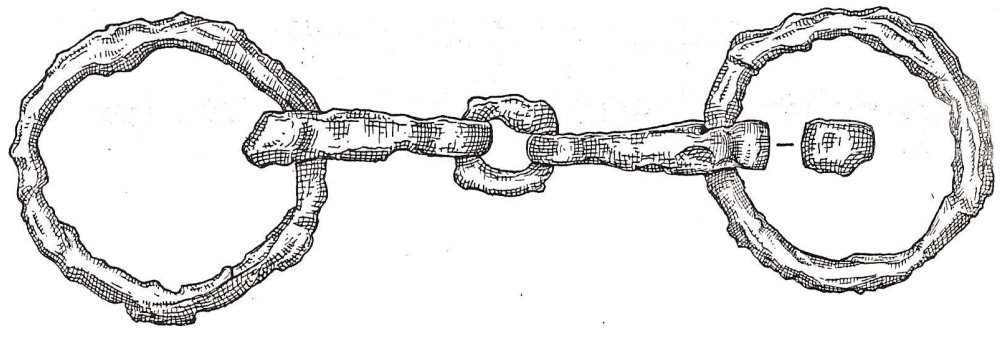
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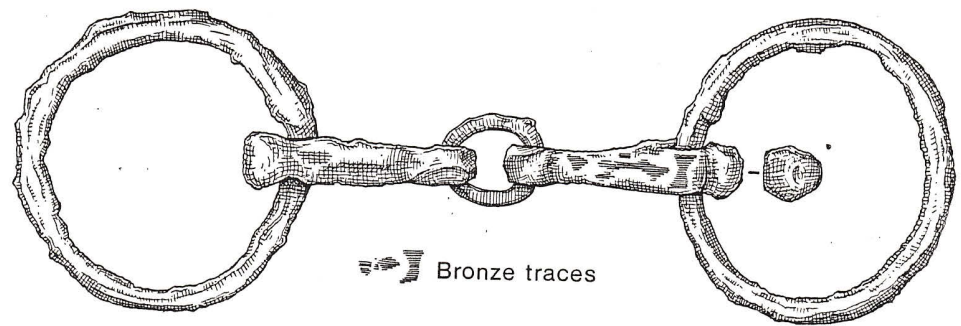


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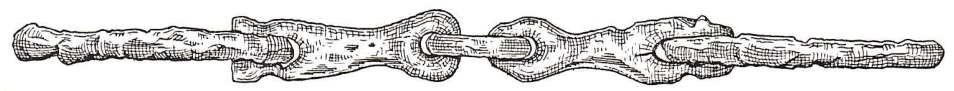


1/7

324
1/7

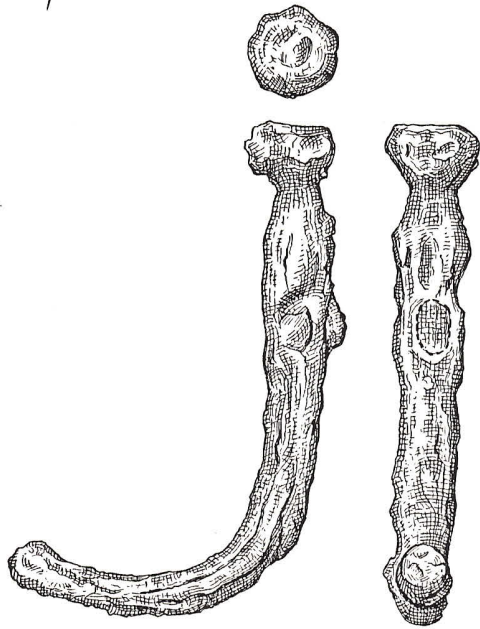


→ Bronze traces

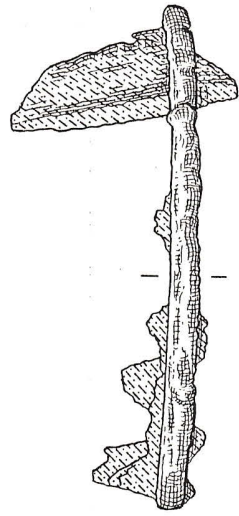
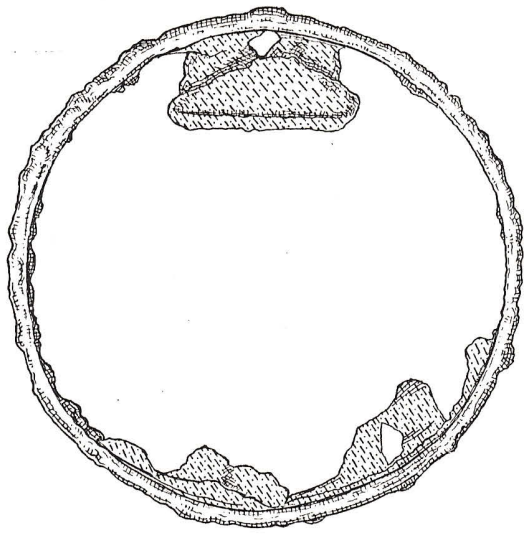


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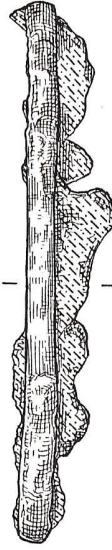
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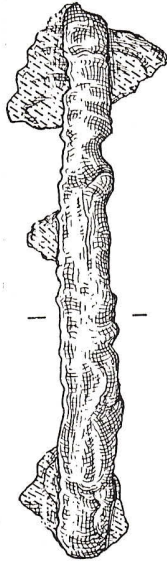


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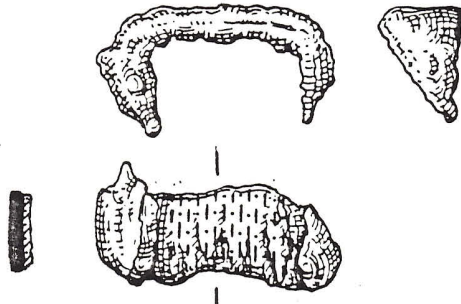
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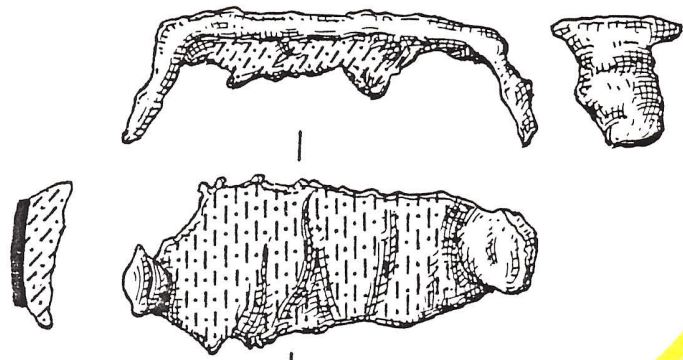
228 Top



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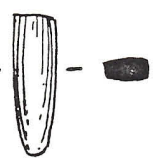


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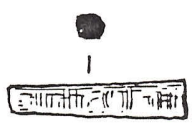


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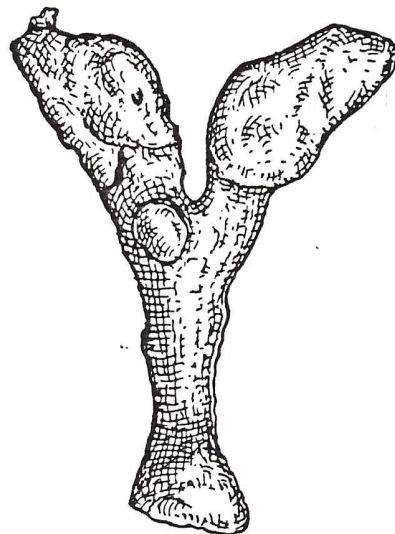
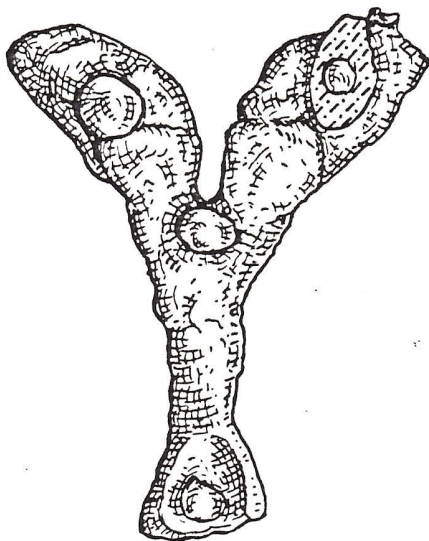
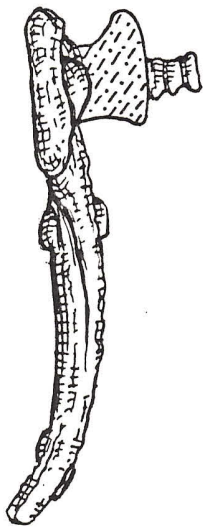


319c Top

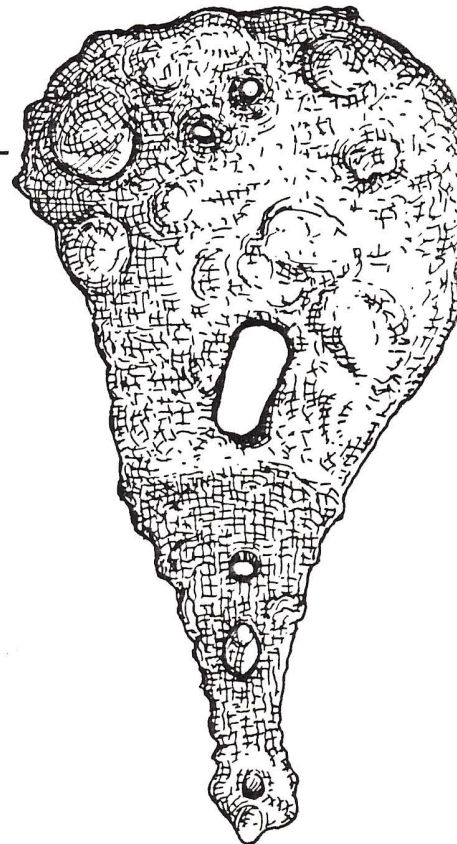
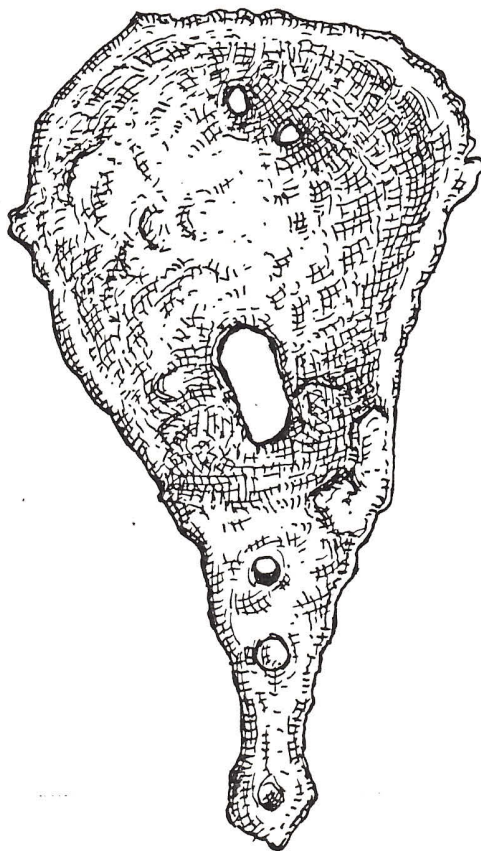
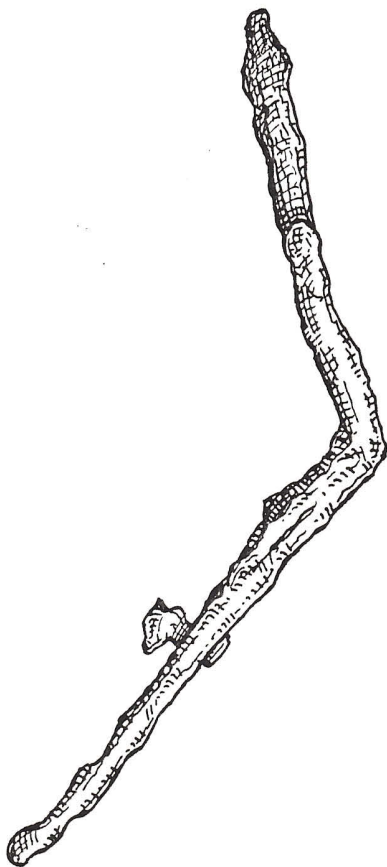


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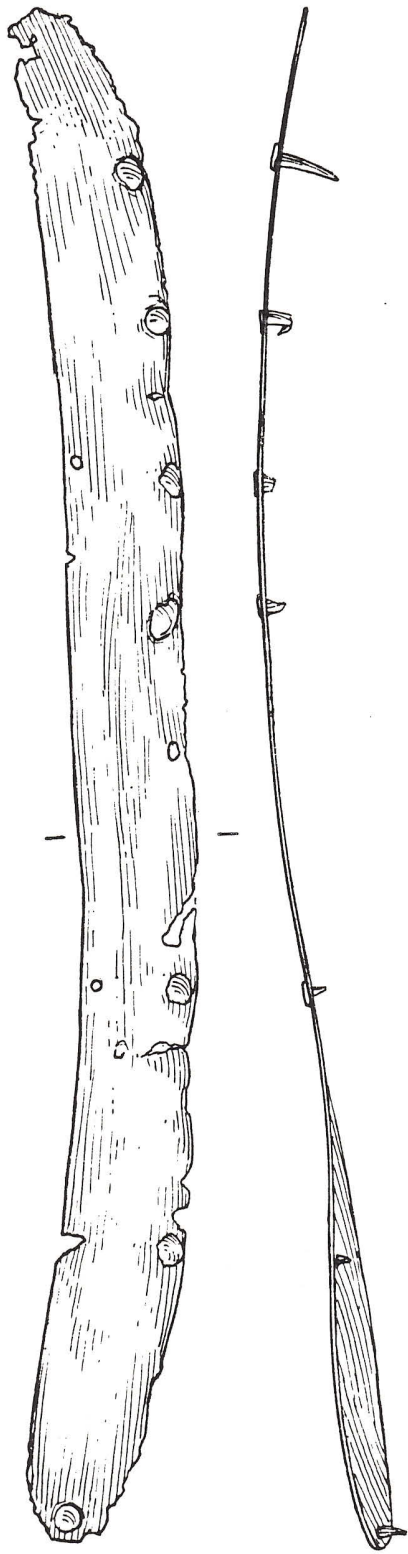


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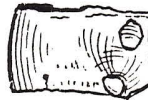
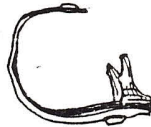
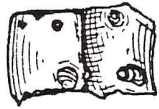


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341



311



310



Jack Writhey, Watchman left about 9.30 a.m., Robert Watts arrived with Peter Wilkinson who just happened to be on business with him in the morning. He stayed a little while and helped with a little bit of shovelling clearing the area on the east of the barrow to prepare for fencing. Tony Pacetto came about mid morning and after a little while departed with John, then came shortly afterwards bringing a radio telephone link; left before John returned.

About 11.30 a.m. Mike Frankland, Dave Atkinson and Lesley came bringing the fencing and some of the items of equipment requested. First they put the fencing up on the western side and south side of the grave and left the eastern side unfenced at the moment for ease of barrowing away gravel over-burden in the south end which we were bound to shovel away late morning. Checked below the grave at the quarry face to see whether there were any finds that had fallen from the grave before Mike Ward made a ramp platform up against the grave face for ease of working on the face. The skull fragments came up as a result of this concentrated in one area just below the grave towards the top of the scree and also a small iron ring possibly part of the harness fitting or even bridle bit link. Tony Pacetto has taken photographs of the grave, prior to it being planned by John, using the vantage point of the transit van roof, using a killer spray to brighten up the ditch and grave crop to help in the photograph.

In the afternoon John linked from the existing grid from which the earlier barrow had been planned, giving two more reference points from which the actual plan of the current barrow no. 4 will be taken and proceeded to plan the grave cut. Went ahead shovelling off the over-burden gravel on the south side of the barrow to check for any other features. There was an awful lot of this material to be moved and weekend volunteers to Peter Wilkinson's compact East Riding Arch. Soc., might see this job done if we get enough people out on Saturday and Sunday.

Sent Mike, Dave and Lesley off at about 3.45 p.m. to return some material back to Eastgate and then to take the hire van back. The 3.30 p.m. radio link as arranged with Ben proved a fiasco in that the receiver seemed to be not operating. We got through once or twice with returns but no conversation was possible; must be faulty equipment!

Actually commenced work on the grave itself just after they had left at about four o'clock. By this time everyone had left, Tony Pacetto had gone about this time and just John and I remained. Continued working on the grave until about six o'clock.

Jack Riby arrived about 5.40 p.m., I left the site shortly after six o'clock in his hands.

Saturday 18th August

Arrived 8.50 a.m., John quickly afterwards, Jack Riby was away by about 9.30 a.m. Val Fairhurst, Nicola and Lesley came along to help and we continued the work moving the over-burden gravel at the south end. Tony Pacetto came to do a magnetometry survey and told, taking the fencing down, to avoid any interference to that quarter. Overall the results were negative.

Bruce Harrison came lunch time to help out too. Afternoon work for the girls was to excavate the ditch fill around the chariot grave. The grave itself was excavated down with two more plan stages. At 35 cms depth a line of white gravel about 5 cms wide appeared along the western side and southern side of the darker stained area already identified. This coincides quite nicely with the position of the lynch pin and if the white gravel line is an edging to the chariot superstructure then the lynch pin may well have been rested against it.

There was no similar well defined line on the eastern side. The grave fill here continued to be slightly darker than on the western, indeed this has been a feature all the way along that the western side of the grave, beyond the stain has been a more open textured larger sized white gravel whereas over the the eastern side it has just been a more uniformed light brown colour with the gravel.

As the grave fill was taken down a little further there was a hint that the line of white gravel on the south side might project a little way to the west beyond the western edge to the effect possibly projecting out from the core of the box-like structure that seems to be indicated.

At 45 cms depth a similar line of white gravel was apparent but inside, that is to say, east of the western alignment seen earlier on, and this is the different line in that it is bowed. The curvature was such that the middle part of this stain was further to the west than the outer ends. It is possible that this might be a strengthening member, of course, and it were a chassis, and if that was the case then it would seem to suggest that the cart proper is laid in the grave the right way up, but having said that there is no clear indication of actual showing yet and it would presumably be at about this level that it would show.

At 45 cms too, the western wheel began to appear, and a little beneath it also the naive hoop of the western wheel and that is clearly tilted downwards as you might imagine, to say downwards towards the middle of the grave. Several stains are indications of structure have been fairly comprehensive photographed during the course of the day at several stages.

I left the site at 5.45 p.m, John staying on with visitors.

Sunday 19th August

Hull and East Riding Arch. Soc. volunteers turned up to help today. Peter Wilkinson, Peter Jackson, Ray Ketch, Peter Cottingham, Lesley, Nicola, also present Tony Pacetto, Bruce Harrison and Ann Dent.

East Riding team detailed to shovel scrape an area to the west of the chariot grave, also indeed the south of the empty square ditch enclosure. This produced the very clear pattern as anticipated of the Medieval furrow but no positive sign of an iron age features. Beyond the third furrow, however, with no sign of a fourth be it said, there was a change of gravel which conceivably is something, and careful trowelling to try and identify the limits of this thing seemed to produce a north-south "aligned ditch" and I do not think it should be a major feature but nonetheless it would bear some further investigation just to make sure in the light of what has happened already.

Chariot grave excavation continued with indications of the axial running on the east-west at the south end of the grave as one might expect, and indeed the burial itself began to become exposed. Whilst the top of the skull has gone the upper and lower mandible are present, a very fine

set of teeth and a sword in a scabbard rather like the first of the graves encountered recently, was lying diagonally over the body. A line of four terrets identified in the usual position was an indication of more bronze and organic material between the southernmost pair seemed to suggest that the northernmost of what ought to be five terrets has been lost in the quarry but the small iron ring which was retrieved from the scree at the quarry face which was conceivably of course could have been a makeshift repair terra.

Two bridle bits beginning show up on the eastern wheel, there is also a curious iron object lying over the shin bone of the body this can only really be described as looking like a hole, possible comparison indeed might be a hippo sandal. It has this wide wedge shape base to it and a bend from which a tang projects. Single piece in fact a wedge shaped piece of iron has a bend as it reaches the tang and in the wider plate just beneath the bend for the tang there is a slot, no indication of any nail fastening to something and the terminal of the "tang" seems to be a small loop.

Careful cleaning within the wheels particularly the western wheel, just below the level of the top of the rim revealed very clear indications of the spokes and in some instances this was wood surviving, calcified wood in part both occurring at the felly and in the spoke positions themselves. We can be absolute confident that it is a 12 spoke wheel, certainly for the west and it looks to be very much the same for the east too. The eastern side isn't as well preserved but the western wheel has a very clearly defined finer gravelly soil at the spoke positions and the area around the spokes is a heavy coarse gravel, altogether more compact. The technique for getting this well seen is in fact flick brushing with a paint brush does the job very nicely indeed. The gravel is very loose round the inside of the iron rim on the western wheel and again flick brushing, although it was not possible to do it all the way round in the time available today, would produce I am sure, the dimensions of the felly. There is a problem here, of course, in that there are these wood traces and too much of this type of approach was liable to damage that wood so one would have to think of the best way of approaching that.

JD/PLT

2nd February, 1988.