

MATERIAL Leather

SITE: ... Ickham, Kent. (DATE:

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AM No	X-Ray No	Photo No	Description and Report	Ref No
516 741721		Draw	<p><u>Fragment of leather belt</u>; one hole and one curved cut/- reason not apparent. 70mm. x 45mm. <u>with bevelled edge</u></p>	
801 741722		Draw and photo. from top with vamp in position	<p><u>Two shoe sole units</u>, probably a pair; heavily nailed and the right foot with vamp and quarter remaining; very deteriorated.</p> <p><u>Right foot</u> - a three-piece unit consisting of insole, middle and sole; nailed and thonged. most of the nails are now missing but large holes remain; also the central thonging at several places joining insole and middle and appearing as long stretches on the underside. The <u>middle</u> itself has largely disappeared even though the thonging remains. The fragmentary <u>vamp</u> has a wide lasting margin ranging from c. 15mm. ^{width} to 45mm. in the inside waist and there are large holes in it where the sole nails penetrated and some smaller ones, possibly where bracing thread was used in lasting. The throat of the vamp is too deteriorated for its shape to be determined. Only a small portion of the <u>quarter</u> (or back) remains but it shows the lasting margin with holes as before.</p> <p><u>The sole</u> has the seat missing but the <u>insole</u> is complete even though the seat is now detached. Some extra holes in this seat near ^{of} the outside edge than the inside probably show where extra reinforcement nails were added to combat wear.</p> <p><u>Left foot</u> - now in two parts, very deteriorated, presumably the fellow of the previous one but it is not very obviously left or right; toe and seat missing. It is also not certain how the two parts fitted together.</p> <p><u>Sole</u>: very heavily nailed. Due to delamination</p>	

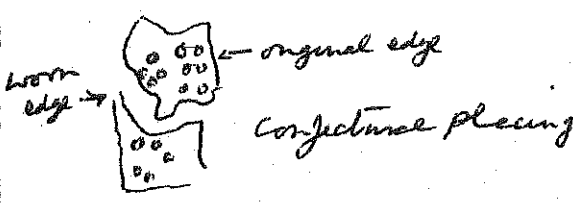
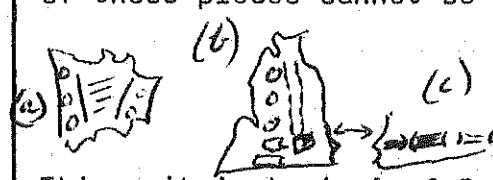
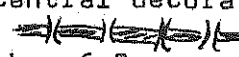
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AM No	X-Ray No	Photo No	Description and Report	Ref No
801 741722 (cont.)		Draw sole to show nails Draw edge to show laminae	<p>it is not obvious how many layers there were in the ^{bottom} bottom unit, possibly four or five.</p>  <p><u>Three very thin pieces of insole (?) middle, or filling</u> which may overlap as the nail holes roughly coincide. Some impression of what may be the upper lasting margin is visible (a) and also the edge shows the toe shape (b). Some thonging remains (c). The precise positions of these pieces cannot be determined.</p>  <p>This unit is typical of Roman shoemaking economy; several thin layers are thonged and then nailed together to make a solid shoe bottom.</p>	
802 741723		Photo. top to show vamp (stuff it to raise it) X-ray to show nail shapes;	<p><u>Shoe forepart</u>; a nailed sole unit with vamp in situ, right foot. The upper is still lasted at the inside joint; the outer edge has deteriorated and no longer meets the sole.</p> <p><u>Vamp</u>: has a central decorative thonging,  "stitch" length c.6.0mm.; width of thong: 1.7mm</p> <p><u>Sole</u>: heavily nailed (see diagram for pattern). width: c. 90mm.</p> <p><u>Middle sections</u>: precise number difficult to determine because of delamination of sections.</p> <p><u>Insole</u>: shows slight toe "inlets" at the outside edge.</p> <p>(Suggest conserve this specimen with clay left inside edge to prevent remains of upper coming away)</p>	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
803 741724			<p><u>Two sole fragments:</u> (a) waist portion, (b) seat. Both are parts of a typical bottom unit with several layers of leather, heavily nailed and, in the case of (a) also thonged</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p><u>Waist</u></p>  </div> <div style="text-align: center;"> <p><u>Seat</u></p>  </div> </div> <p>Draw to show nails and thong.</p> <p>Draw and photo. from both sides and edge to show lasting margin of upper and stiffener in situ.</p> <p>The seat still has the remains of the lasting margin of the upper and the stiffener in situ. The position of maximum wear indicates that this seat portion came from a right foot shoe. (a) and (b) may be parts of the same shoe. Width of seat: 80mm.</p>	
804 741725			<p><u>Seven fragments of narrow leather strips.</u></p> <p>Five of these with an overall length together of 380mm. and an average width of 6.0mm. may be a thong used for joining together sole sections to form a unit. One of these pieces tapers and may have been the pointed end for feeding through the thong holes. This piece also has a slightly serpentine shape with regular indents suggesting it has been in a shoe. A very small piece appears to have been torn away from a line of stitching as it has "half holes". Another piece c. 20mm. x 8.0mm. has three stitch holes with a stitch length of c. 6.0mm. It may be a fragment of upper</p>	
805 741726			<p><u>Strap end (?)</u>. Possibly the seat of a shoe insole or middle never actually used in a shoe. No nail holes or other distinguishing features apart from a small hole right on the edge. 75mm. x 40mm. Very thin: 10mm.</p> <p>Draw</p>	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
1178 741693		<p>Photo & draw to show nailing pattern</p> <p>(draw thongs)</p>	<p><u>Sole unit</u>; right foot, heavily nailed. Worn away under ball of big toe and outside back of seat; surface deteriorated particularly of the sole, the insole having a clear grain. Inside edge is cut, outside edge deteriorated. There are probably several layers but it is difficult to distinguish original sections from laminae produced by deterioration. Some evidence of thonging in the centre. Slight trace of the lasting margin of the upper quarters and stiffener in situ at seat. The nails are very much encrusted. The heel seat has what appears to be interlaced thongs, 3 - 4mm. wide, forming a mat, also two nail holes; these thongs may be the ends of those used to combine the various sections of the unit.</p> <p><u>Length</u>: 260mm. (toe/^{to}extremity of worn seat; <u>width</u>: c. 95mm. About size 6 in modern adult sizes.</p> <p>There are also a few fragments with this specimen, possibly pieces of upper</p>	
1179 741694		<p>Draw to show nailing pattern</p>	<p><u>Toe-end of nailed sole unit</u> from a broad, large sized shoe (judging from the toe shape) The centre has a cluster of smaller nails</p>	
1180 741695			<p><u>Fragment</u>, possibly part of the lasting margin of quarter and heel stiffener. The turned-up edge has several layers and some holes. Very deteriorated.</p>	

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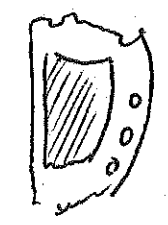

AM No	X-Ray No	Photo No	Description and Report	Ref No
1181 741696		<i>Draw below grid</i>	<p>(a) Marginal portion of the toe-end of a <u>vamp</u> with a narrow reinforcing stiffener having a skived top edge. Above the line of this stiffener the upper is perforated with a grid of small square holes, c. 1.5 x 1.5mm and with 1.5mm between squares. Also a line of holes just below these perforations, 3.0 to 5.0mm. apart (centres); were they stitch holes (if so, what for) or decoration?</p> <p>The turned-in lasting margin has a scalloped edge with stitch holes c. 5.0 mm. apart at the tip of the toe lengthening round the sides to c. 10mm. These resemble very closely the stitch holes found in mediaeval turnshoe soles and even in 16th century welted ones but there are previous records of very early shoes with stitched soles. Possibly the thread was used to last the shoe (called "string lasting today) but the actual sole attachment was by nails as normal for Romano-British shoes. Due to deterioration it is not very clear whether the present edge which the stitches follow is the original one or a torn one; at one point the scallop appears to be on the original edge.</p> <p>(b) <u>Part of sole unit</u>; very fragmentary; nail holes. Possibly the forepart of the same shoe as (a)</p>	
1182 741697		<i>Draw with inside and thongs on top</i>	<p><u>Insole</u> from bottom unit of sandal with parts of another section and toe-thong remaining. The thinness and lack of wear at toe and heel suggest that this not the sole itself but an inner sections. A very small piece near the toe-end carries the under-ends of a double toe-thong. An impression</p>	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
1182 741697 (cont.)			<p>of the upper lasting margin remains all round, c. 10mm. wide in the waist and 15mm. at the seat. Many nail holes and some close pairs of holes where thonging was inserted to hold the various bottoming sections together. On the grain side the the remains of the toe-thong can just be discerned .</p> <p>Length: 245mm.; width: 80mm. About size 4 (adults) (see 1183/741698 below)</p>	
1183 741698	 	Draw	<p><u>Waist portion of sole</u> with a narrower middle; toe and seat missing; also a piece of upper lasting margin. This specimen fits exactly to the previous one, the nail holes and marginal depression coinciding. The holes are larger and rounder than in 1183/741698 suggesting that the nail heads were resting on this section and passing through the other one. The two specimens together indicate a right-foot shoe. What is apparently part of the upper lasting margin, curved with nail holes, remains at one place; these holes correspond to those on the previous section and the cut and scalloped edge on the inside of the curve probably indicates where string was used during the lasting process. The position of this piece of upper presents something of a problem since it appears to come from near the toe-end of the shoe suggesting that the shoe had a fairly complete upper and was not of the sandal type as the toe-thong would suggest. A toe-thong sandal would normally have a wide in-step band (see sketch) to which the thong would be attached; possibly the lasting margin was part of such a band</p> <p>(Draw 1182 and 1183 side by side</p>	

See JHT
 u-drawing

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AM No	X-Ray No	Photo No	Description and Report	Ref No
1184 741699		Draw to show curve	<p>Two fragments of leather:</p> <p>(a) Roughly rectangular, c. 128mm x 60mm, with a turned-in edge carrying nail holes and also similar holes at one end. The general shape suggests it may be a shoe upper quarter but if this moulding has been caused during burial then it may be part of a shoe bottom.</p> <p>(b) A small seat portion with nail holes; may be associated with (a)</p> <p>Also other sections:</p> <p>(c) <u>Heel stiffener</u>; usual moulded shape with the grain inwards (see "Hardknott" report) and nail holes in the ^{turned}turned-in lasting margin. Length round bottom edge: c. 165mm.; height at centre of back above lasting margin: c. 50mm. Nail holes: c. 10-15mm. between centres.</p> <p><u>Note</u>: the section (a) fits over this stiffener with coincident nail holes and moulding indicating that (a) is a shoe quarter and not part of the bottom.</p> <p>(d) <u>Lasting margin of upper</u>; one edge cut, the other torn. Along the cut edge there are scallops with thread holes ranging from c. 23mm. to 37mm. apart showing where the bracing thread was inserted during lasting. Large nail holes c. 20 -25mm. apart show where the upper was sandwiched between sole and insole. The curvature of this specimen indicates that it probably fitted along the waist and forepart of the right foot. 190mm. x 25mm.</p>	
		Photo, & draw		
		Draw		

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AM No	X-Ray No	Photo No	Description and Report	Ref No
1185 741700	also draw small nail	Photo. & X-ray to nail pattern;	<p><u>Forepart of left-foot sole unit</u>; heavily nailed and very deteriorated. Most of the actual sole itself has gone but some of the middle and most of the insole forepart remains. The nail heads are very corroded and one small nail remains loose in its hole and shows the characteristic curvature of the shank due to its being driven through the leather on to an iron last; it is not certain whether this nail has lost its head or has a very small one.</p> <p>170mm. x 100mm.</p>	
1186 741701	Draw 1185 & 1186 together - both sides		<p><u>Waist and seat of a sole unit</u>, heavily nailed. Probably the remainder of 1185/741700. The specimen includes sole, middle (possibly several layers) and remains of upper, stiffener and insole. The heel seat has its nails set in a circle although some have now disappeared and is worn away at the usual places - the outside corner (left side of left shoe). 1185 and 1186 together give a bottom unit c. 265mm. long, about size 6 (modern adults)</p>	
1187 741702	Draw to show nails and X-ray to show nail sizes.		<p><u>Waist and forepart of nailed sole unit.</u> Several layers some of which may have been produced by delamination and are not original sections. There appear to be two sizes of nail but this be a corrosion effect.</p> <p>160mm. x 105mm.</p>	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
1188 741703			<u>Shoe bottom</u> , right foot, seat missing and very deteriorated. Heavily nailed in four parallel rows in waist and a scatter in the forepart; many now missing but those remaining are not very corroded. The insole still shows a clear grain surface and a cut edge at some places. Fragments of the upper still remain sandwiched between sole and insole particularly along the inside edge of the unit. Present length: 230mm; width: 105mm.	
	Draw both sides and X-ray			
1189 741704			<u>Sole fragment</u> , very deteriorated, with nails some of which are now detached and show the typical curvature of shank and in one case a square pyramid head, c. 5.0mm. x 5.0mm. x 3.0mm. high.	
	Draw a nail			
1190 741705			<u>Fragments of a sole unit</u> , probably the forepart, very deteriorated with some nails in situ and nail holes. Two sizes of nail some smaller ones being near the centre of the sole	
1191 741706			<u>Insole</u> , left foot, toe-end incomplete, with nail holes along the margins, down the centre scattered at the seat; one nail left in situ with traces of sole surrounding it. The grain side (uppermost in the shoe) is still smooth. The flesh side shows the impression of the middlesole and/or the lasting margin of the upper. The insole is concave across probably to body weight in wear. 225mm. x 95mm.	
	Draw grain up			
1192 741707			<u>Shank</u> from a shoe bottom, cuneiform shape, with fragments of sole adhering; nail holes and some nails. This component was inserted between the lasting margin of the upper after lasting,	
	Draw grain up to show position			

(cont.)

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1192 741707 (cont.)			resting on the insole and filling up the space. It also served (as in a modern shoe) to give rigidity to the waist and so prevent bending in this area during walking. Length: 125mm.; width at rear end: 40mm. tapering to c. 25mm. at front end.	
1193			<u>Seat and part of waist of a shoe bottom</u> with part of the upper quarters in situ. From the position of maximum wear this is probably part of a right foot shoe with the inside quarter remaining. 130mm. x 70mm. <u>The bottom unit</u> is the usual type with several layers from insole to sole, heavily nailed particularly at the seat. There is one very large square headed nail, present size 10mm. x 10mm. <u>The quarter</u> fragment is c. 35mm. high (above the lasting margin) and is very important technically since its top edge is <u>folded</u> (as in modern shoes) the width of the folded-over margin being c. 5.0mm. It ^{was} stitched along the fold about 3.0mm. from the edge with a stitch length of 3.0mm. - 4.0mm. (difficult to determine accurately); there appear to be traces of thread still remaining in some of these holes. About 3.0mm. below the line of stitching there is an impressed line, presumably decoration. This is the first recorded example known to the writer of a folded and stitched top edge in a R.B. shoe	
1194 741709			<u>Insole seat with shank end and part of quarter and stiffener in situ</u> , probably right foot. The seat has some nail holes and one clean cut	

Draw to shoe quarter and also underneath

Can thread be identified?

Draw from side to

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AM No	X-Ray No	Photo No	Description and Report	Ref No
1194 741709 (cont.)	to show upstanding quarter and also from underneath to show lasting margin, shank and groove		<p>edge, the other being deteriorated. The quarter is probably an inside one (left side of right shoe) is very deteriorated and the stiffener, in better condition, continues with it for a short distance round the back of the insole. As normal, the stiffener has its grain side inwards (next to the foot). The lasting margins of both quarter and stiffener are mitred and some grooves across the shank end and the margins probably indicate where the bracing threads lay.</p> <p>Length: c. 90mm.; width: 50mm.; height at back: 50mm.</p>	
1195 741710	Draw nails up		<p><u>Three sole fragments</u>, heavily nailed and very deteriorated. May be part of the same shoe - forepart and seat as the latter section shows traces of the quarter ^{and} lasting margin; also a cut edge as for an insole seat.</p>	
1196 741711	Draw Draw to show thonging		<p><u>Four fragments:</u></p> <p>(a) A triangular piece of cutting scrap with curved edges showing where shoe sections have been cut as close together as possible leaving only the "unavoidable waste" between. 10mm. x 10mm. x 9mm.</p> <p>(b) A square piece, c. 40mm. x 40mm., cut edges, with a small fragment thonged to it at one corner on the flesh side, <u>c. 2.0mm. wide.</u> This thong continues round the other edges and there is a slight indication of diagonal grooves on the surface. One corner is missing but the opposite corner is cut and the thong follows it. As there is no hole in the centre it seems improbable that this piece was a button or toggle. Use unknown.</p>	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
74171 (cont.)			(c) and (d): two fragments of a bottoming section with nail holes; probably interlayers between sole and insole or laminae from sole or insole.	
1197 741712			Fragment of strap, 105mm. x 26mm. widening to 30mm. at one end; both ends now torn. There are several holes, including three across, but it is not clear what purpose these served. A depression c. 5.0mm. wide runs down the centre of the grain side and a slot and a hole (possibly an enlarged slot) suggests that a thong went down here. This in conjunction with the widening end may indicate that the fragment is part of a shank (see 74170/above) thonged in with the other bottom sections.	
924 741728			<u>Heel seat</u> with remains of quarters still attached and sandwiched between insole seat and sole seat; four nails still remain. Very deteriorated. The remains of the stiffener may also be present but the overall deterioration is so great that separate layers are almost indistinguishable. Width of sole seat: c. 45mm.; height of back of quarter; c.35mm.	
925 741729			<u>Part of shoe upper</u> with turned-in lasting margin and holes where the nails penetrated securing the upper between sole and insole. One of these holes is quite small as originally made but the others are now large as where the nail heads which produced them by corrosion. The present curvature of the turned-in edge suggests that this piece came from the forepart	

Draw to show depression

Draw (JHT will reassemble)



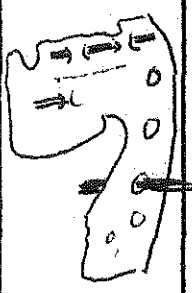
Draw from under to show turn-in



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AM No	X-Ray No	Photo No	Description and Report	Ref No
741729 (cont.)			of the shoe, possibly part of the vamp. 100mm. x 70mm.; width of lasting margin: 20mm.	
926 741730			<p><u>Portion of shoe middlesole (?)</u> ; one cut margin with large holes along it and a piece of thong through one hole. xxxxxximpressionxx</p> <p>The thinness of the section, the large holes and the impression of the upper lasting margin parallel to the edge and c. 15mm. to 25mm. from it, all suggest that this was a middle or intermediate section placed between sole and insole, all three sections being nailed nailed together. One end has an additional small piece thonged on by the usual type of ribbon thong.</p> <p>The presence of the other thong through a hole is something of a mystery; it is quite stout, c. 3.0mm. x 3.0mm., which is rather too thick for a ribbon thong as mentioned above used to unite thin sections; possibly it was part of a "do-it-yourself" repair (similar pieces of thong occur in mediaeval shoes).</p> <p>Section: 125mm. x 50mm.; thong: 80mm. x 3.0mm. x 3.0mm.</p>	
			<p align="center">Draw</p> 	
927 741731			<p align="center">(?)</p> <p><u>Fragment of shoe middle</u> with thong in situ (??)</p> <p>Very thin and deteriorated but has a cut edge. Holes and a ribbon thong suggest that it is part of a middle section between sole and insole. May be associated with 741730 above.</p> <p>c. 80mm. x 50mm.</p>	
928 741752			<p><u>Fragment of a shoe bottom unit (?)</u>; possibly a piece of a middle sole. Some nail holes near the cut edge and impressions of a lasting margin.</p> <p align="center">c. 70mm. x 70mm.</p>	

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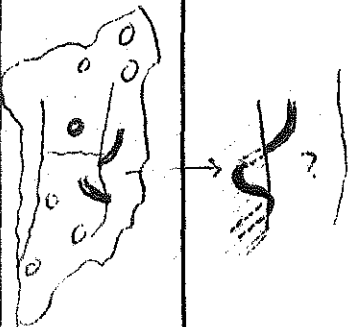
AM No	X-Ray No	Photo No	Description and Report	Ref No
929 741733			<u>Fragment</u> , very thin, with some slotted holes. May be part of a middle section from a shoe bottom. c. 75mm. x 50mm.	
930 741734	Draw		<u>Thong</u> , with hooked end; curved cross-section with the flesh inwards. Possibly a thong from a shoe bottom used to unite the various components. c.80mm. x 6.0mm. x 1.0mm.	
931 741735			<u>Six scraps</u> ; one may be part of a thong or strap and has a pointed end; 60mm. x 13mm. at wide end and 1.0mm. thick. The other scraps may be part of a middlesole or intermediate bottom layer.	
953 741736	Draw to shoe nail heads		<u>Fragment of shoe bottom</u> , Very Deteriorated ; with holes and some nails in situ. The usual multi-layer construction with sole, middle and insole although deterioration makes it difficult to distinguish one layer from another. No original edges left. 105mm. x 72mm.	
954 741737			<u>Waist part of a shoe bottom</u> , very deteriorated; has fragments of sole, middle and insole, and thonging and one nail; also what is possibly the upper lasting margin; several large holes have presumably been caused by nail corrosion. The remaining nail with its head shows which is the underside of the section and that there is very little of the original sole left. The middle section still retains its cut edge and includes part of the seat. Some thonging passes through holes in the margin of this section and in two places also passes through holes in what appears to be the upper lasting margin. This may possibly	

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741737 (cont.)	Draw to show thong (see JHT)		indicate that during the lasting process the upper margin was drawn inwards over the edge of the insole and then thonged to the insole (or middle) to hold the upper in position until the sole was attached. Other Romano-British specimens have shown the impressions of bracing threads passing from the upper margin on one side to the opposite side but this specimen appears to use a different process having the margins thonged to the insole rather than ^{braced} to each other. However, this is not positive since it is not certain that the side section is ^a lasting margin; it may be another bottoming section.	
955 741738			<u>Fragment of shoe bottom</u> ; usual multi-layers with nail holes. 85mm m. x 45mm.	
956 741739			<u>Fragment of a shoe bottom component</u> or a lamina from one. Large holes caused by nail corrosion. 80mm. x 60mm.	
957 74740	Draw from both sides.		<u>Seat and part of waist</u> of a bottom unit; usual multi-layered unit with possibly part of the upper lasting margin. Many nail holes and five nails remaining; also some thong holes. The insole edge is still quite well defined but the other edges are very deteriorated. The position of maximum wear at the back suggests that the fragment piece may come from a left-foot shoe. 105mm. x 70mm.	
958 741741			<u>Bottom unit</u> , almost complete, comprising a sole (very deteriorated), middle section and insole; it appears to be a right foot with the inner margin nearly the original one	

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741741 (cont.)	Draw from both sides to show (a) nailing pattern (b) insole		<p>although the outer margin is very deteriorated. Heavily nailed along the margin, a scatter of nails in the tread and an almost circular pattern at the seat.; some thirty nails still remain. There are also remains of the upper lasting margin towards the rear and possibly part of the stiffener; the seat end of the shank is also visible.</p> <p>The inside margin of the insole is now about 15mm. inside the sole margin which is excessive even allowing for the thickness of the upper; although the insole margin appears to be the original one it may in fact have been broken off as there are half nail holes along it; alternatively the sole may have been made deliberately very much wider for the sake of appearance (as in some modern shoes).</p> <p>A broad piece of thong was found adhering with mud to the toe-end of the insole in the place where a toe-thong, if used, would normally be attached; this seems to be fortuitous however as all the holes in this area appear to be for nails and not thongs. 237mm. x 38mm.</p> <p>The insole length corresponds to a modern size of 3 (adults')</p>	
959 741742	Draw both sides		<p><u>Forepart and waist</u> of nailed shoe bottom unit comprising sole, middle and insole; very deteriorated. It may be part of the fellow to 741741 and again the inner margin of the insole comes well inside that of the outsole (c. 10mm.) Five nails remain in holes. 160mm. x 75mm.</p>	
960 741743	Draw both sides		<p><u>Heel seat of bottom unit</u>, comprising sole and insole seats with other layers between;</p>	

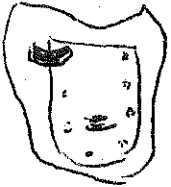
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AM No	X-Ray No	Photo No	Description and Report	Ref No
741743 (cont.)	to show 	insole	nailed and thonged together. There are three possibly four) nails in situ and one thong which may have been used in lasting (see 741737 above); there is also a trace of thonging down the centre. Since this section is worn away most at the left corner of the back it may come from a left shoe. 85mm. x 65mm.	
961 741744			<u>Small sole fragment</u> of sole unit with two nails; one cut edge remains. Probably part of a middle section. 85mm. x 50mm.	
962 741745			<u>Small fragment of a shoe bottom component</u> ; one cut edge and large nail holes; very thin. 80mm. x 22mm.	
963 741746			<u>Fragment of shoe bottom component</u> , part of forepart and waist; nail holes. 115mm. x 75mm. (Note: there is an insect resembling an earwig in the mud attached to this specimen)	
964 741747			<u>Small fragment</u> with a curved cut edge and several holes. Probably part of a shoe bottom section. 50mm. x 45mm.	
965 741748			<u>Small fragment</u> with nail-enlarged holes; probably part of a shoe bottom section. 50mm. x 25mm.	
966 741749			<u>Small fragment</u> , no obvious features but probably part of a shoe bottom section. 55mm. x 35mm.	
967 741750			<u>Small thin rectangular fragment</u> with no identifiable features; all torn edges. 50mm. x 40mm.	

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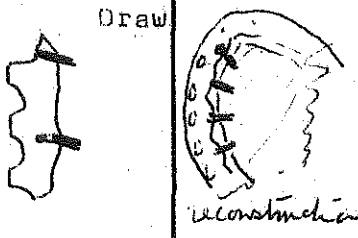
AM No	X-Ray No	Photo No	Description and Report	Ref No
968 741751			<u>Small triangular fragment</u> , no identifiable features; all the edges torn. 70mm. x 52mm. x 52mm.	
969 741752	Draw		<u>Small piece of stitching margin</u> with scalloped edge and stitch holes, c. 5.0mm. stitch length. The cross-section curvature is reminiscent of the turned-in edges of the uppers of mediaeval stitched turnshoes but the writer has not previously found a Roman-British example. 50mm. x 15mm.	
970 741753			<u>Fragment</u> with one cut and curved edge; no identifiable features. 100mm. x 30mm.	
971 741754			<u>Very small fragment</u> with one cut edge and and possibly two nail holes. Probably part of a shoe bottom section. 30mm. x 20mm.	
972 741755			<u>Small fragment</u> , all the edges torn; no identifiable features. 60mm. x 15mm.	
973 741756			Two small pieces of thong; (a) 18mm. x 3.5mm. (b) with a bend in it: 35mm. x 2.5mm. Very thin and probably used for thonging together the bottom sections.	
974 741757			<u>Thong (?)</u> ; very narrow (c. 1.0mm.) and 40mm. long. Under a surface microscope it shows longitudinal striations. (Examine under greater magnification to see whether it is in fact leather)	
975 741758			<u>Thong (?)</u> ; very narrow (less than 1.0mm.) and 35mm. long. Similar to 741757 and shows same striations.	

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MATERIAL	Leather
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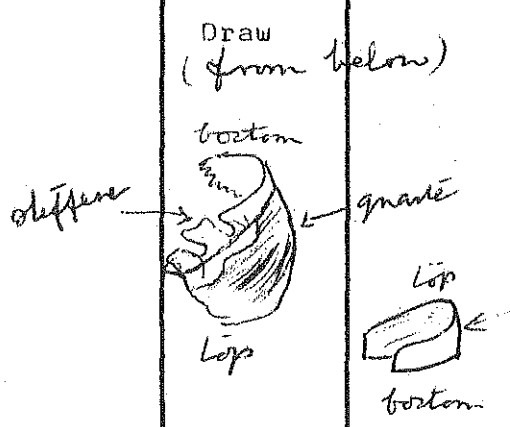
AM No	X-Ray No	Photo No	Description and Report	Ref No
976 741759			<u>Very small fragment</u> with no identifiable features. 30mm. x 13mm.	
977 741760			<u>Very small fragment</u> with no identifiable features. 35mm. x 20-30mm. Also the remains of an insect (see 741746 above)	
978 741761			<u>Very small fragment</u> with one cut edge, iron rust and evidence of holes. Probably part of the edge of a middlesole of a nailed shoe. 55mm. x 10mm. (max.)	
979 741762			<u>Very small fragment</u> with the remains of three nail holes and two thongs holes with grooves running into them from one edge which is serpentine. This is probably part of the lasting margin of a shoe upper, the wavy edge and thong holes showing how the upper was braced across the insole during lasting and before the sole was nailed on. 35mm. x 15mm.	
980 741763			<u>Very small fragment</u> with corroded nails in situ; part of a sole. 40mm. x 15mm. (max.)	
981 741764			<u>Very small fragment</u> with some evidence of holes. 25mm. x 11mm. (max.)	
982 741765			<u>Very small fragment</u> , triangular shape, probably part of an upper but no identifiable features. 35mm. x 35mm. x 25mm.	
983 741766			<u>Very small fragment</u> with all edges torn and some evidence of nail holes. 45mm. x 15mm. (max.)	



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AM No	X-Ray No	Photo No	Description and Report	Ref No
984 741767			<u>Small fragment</u> , diamond shaped; one edge may be a cut one and there is a hole apparently intended for a thong and also some evidence of other holes and grooves. Possibly a fragment of an insole. 45mm. x 35mm. (diagonals)	
985 741768			<u>Small fragment</u> , diamond shape; some evidence of a cut edge and nail holes. Probably a bottoming fragment (middle or insole). 45mm. 35mm. (diagonals)	
1528 741769	Draw flat to show thong holes		<u>Shank</u> (or other filling section) from a bottom, with thong holes. This section fitted in between the upper lasting margin in the waist and seat area to fill the cavity caused by the thickness of the upper. 35mm. x 12mm.	
1529 741770	Draw (from below) 		<u>Fragmentary remains of quarter and stiffener</u> , probably from a left-foot shoe. The quarter has no original edges left but the stiffener, of thicker leather, has a quite definite cut edge. Traces of nail holes are discernible in the remains of the lasting margin underneath and the fore-end of the stiffener has a very sharply defined turn-in, and a blunt front edge (see: <u>"Leather found in Mediobogdum, the Roman Fort of Hardknott"</u> by Charlesworth and Thornton, "Britannia", Vol. IV, 1973) 100mm. x 70mm.	
74668			a pair of <u>Fragmentary remains of a shoe bottoms</u> ; about 18 pieces including parts of insole, middle, lasting margins and some thongs in situ;	



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AM No	X-Ray No	Photo No	Description and Report	Ref No
74668 7 (cont.)	Draw		(a) <u>Insole</u> : waist and seat only; delaminated with a few rather indeterminate holes and some lasting margin impression underneath. 135mm. x 53mm. (48mm. across the seat)	
	Draw to show thonging		(b) <u>Insole and middle section</u> : seat and part of waist only with complicated criss-cross thonging underneath, some of which appears to be for cross-bracing during lasting and some for holding bottoming sections together as it appears on the top side (grain). There are slight traces of upper lasting margin with nail holes round it. Surface delaminated. 120mm. x 45mm.	
	Draw to show margin and thong holes		(c) <u>Waist of insole</u> : with the wide overlapping ends of a wide lasting margin (c.30mm.) and bracing thong; also nail holes. May be part of same bottom as (a) and (b).	
	Draw grain up		(d) <u>Toe-end of sole and insole</u> , probably the former; some original nail holes and signs of repair (smaller holes). There appear to be two layers which could be either sole and middle or a delaminated sole, probably the former. May be associated with the same bottom as the previous specimens. 41mm. x 56mm.	
			(e) <u>Portion of upper lasting margin</u> , with one original cut edge, now scalloped by the bracing thong (holes c. 9.0mm. apart), and the other torn. The present curvature and variation in width suggests that this piece came from the waist, joint and possibly part of the toe area of the shoe bottom. c.115mm. x 25mm.	
			(f) <u>Various fragments</u> (12 main ones) with holes (nail and thong); appear to be parts of	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
746684 (cont.)			lasting margins and bottoming sections, presumably parts of the same shoes as the previous sections	
746685	Draw		(g) <u>Fragment of sole</u> with two large nail holes enlarged by corrosion; one edge may be a cut one. Delaminated. 65mm. x 47mm.	
746686			<u>Fragments of shoe bottom</u> with nail holes; very deteriorated; no cut edges. 70mm. x 45mm. (max.)	
746687	Draw both sides		<u>Shoe bottom, ¹complete</u> , most of forepart now missing; probably a right foot. It consists of insole, middle sections and sole (from which the seat is now missing); all very deteriorated. There are several nails in situ showing the usual corrosion and also empty holes; also some evidence of thonging. The nails appear to follow a line down each edge with others apparently set at random further in and at the seat. The grain surface of the insole is in very good condition. 175mm. x 87mm. (fore-end) x 55mm. (seat)	
746688	Draw both sides		<u>Seat and waist of shoe bottom</u> , very deteriorated; insole, middle, upper lasting margin, stiffener and sole; heavily nailed. The nails are set down each edge and down the centre forming a group of three across; about seven still actually remain, the holes marking the position of the others. The insole surface is more deteriorated than in 746687 but both may belong to the same pair of shoes. 135mm. x 60mm. (fore-end) x 60mm. (seat)	
746689			<u>Part of upper quarter, stiffener and fragment of sole.</u> The piece is the left-hand side of the	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
746689 (cont.)			<p>of the upper and may therefore come from the right shoe, the outside sections of which have now disappeared. It still retains its moulded shape round the back of the heel and underneath where lasted in; large pleats still remain here. There are at least two complete nails with large heads and the curved point of one shows very prominently on the inside surface although the insole on which it was originally clenched has now gone. Some grooves on the lasting margin may indicate where the bracing thongs lay. Length, front - back curve: c.100mm.; Height, top to turned-in edge: c.35mm.</p>	
			<p>Draw to show moulding</p>	
746683A			<p><u>Nailed shoe bottom with part of quarter and stiffener, left foot.</u> The bottom unit consists of an insole, xxxxxxx several intermediate layers and a sole; the number of the interlayers is indeterminate due to delamination but the overall thickness of the whole unit is c.11.0mm. It is heavily nailed with most of the nails still in position; there is marginal row of about 50 spaced at c. 15mm. intervals; an elliptical pattern/ of c. 36; a group of 4 in the waist and a more or less circular scatter of c. 14 at the heel seat. This gives a total of c.100 nails for one shoe alone. The nails have roughly square pyramidal heads and square shanks curved by hammering on to an iron last, the turned points being very prominent on the insole.</p> <p>Thonging just shows at toe and seat.</p> <p>The quarters, still nailed in position, are very fragmentary, the remaining part apparently being the same shape as the stiffener which</p>	
			<p>Draw both sides of A and B together</p> <p><i>showing changes & attached pieces of upper</i></p>	

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AM No	X-Ray No	Photo No	Description and Report	Ref No
746663 A (cont.)			<p>protected them; although the centre of the back is a peak, this is the stiffener shape and not the original shape of the top of the quarters which cannot now be determined.</p> <p>Length of insole: 265mm. (c. size 6 adults'); width across tread: c.95mm.; height of back to peak: c.50mm.</p>	
746663 B			<p><u>Nailed shoe bottom with part of upper remaining at inside waist; right foot. Presumably the fellow to 746663 A but in a poorer condition.</u></p> <p>The unit is similar to A consisting of an insole, several intermediate layers (may be three) and a sole. It is heavily nailed in a pattern corresponding to A with a marginal row, an elliptical spread in the forepart, a group of four in the waist and a circular scatter at the seat; more nails are missing than from A. The insole has the usual nail points and two places, toe and seat, where thong/shows (for joining the various sections). The toe-end of the insole has worn away and has also delaminated at the outside joint.</p> <p>Although there is only a trace of the quarters and stiffener remaining at the outside seat, a small triangular piece of upper also remains at the inside waist; its rear edge has a few edge/flesh stitch holes, c. 4.0mm. stitch length, indicating that it was joined to the quarter here and that the original specimen was probably a low boot rather than a shoe or sandal with open sides. The front edge of this remaining upper fragment is torn. c.240mm. x 85mm.</p> <p>There is also a detached fragment of thin leather c, 65mm. x 55mm. with a finely scalloped edge</p>	

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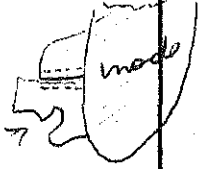
MATERIAL Leather

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AM No	X-Ray No	Photo No	Description and Report	Ref No
746663 B (cont.) <i>Loose piece</i>	 Draw in position (see JHT)		and a few holes. It appears to fit very roughly to the back of the remaining attached section of upper just described and so may be part of the missing quarter.	
<p><i>P. Romlin</i> 3/3/75</p>				