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STUDIES

# LORICA SEGMENTATA

## Vol. II

### A Catalogue of Finds

M.D. Thomas

*JRMES* Monograph No.2

THE ARMATVRA PRESS

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*Lorica Segmentata*  
**Volume II: A Catalogue of Finds**

M.D. Thomas



*JRMES* Monograph 2

THE ARMATURA PRESS

Dr Mike Thomas was the Head of Science, teaching chemistry, in a Cardiff comprehensive school until, aged 50, he was told he could 'retire early'. He decided he was young enough to do something else with his life. His wife saw an advertisement for an MA course in Celto-Roman studies at Newport College (University of Wales) and he thought it was just what he was looking for. He applied, was accepted and in due course obtained a Masters degree, with a dissertation specialising in *lorica segmentata* armour. As a volunteer, he now helps in Caerleon Legionary Museum, partly to catalogue samian pottery and (full circle) partly to teach children about the Roman army in Britain.

*Lorica Segmentata*  
**Volume II: A Catalogue of Finds**

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*JRMES* Monograph 2

THE ARMATURA PRESS

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More information about *lorica segmentata* is available online at [www.loricasegmentata.org](http://www.loricasegmentata.org)

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# Acknowledgements

Archaeology is one of the few academic areas where the ‘amateur’ can still make a potentially worthwhile contribution. I am therefore particularly grateful to Dr Mike Bishop for his invitation to produce this catalogue as a follow-on monograph to his own on *lorica segmentata* armour. In doing this he has taken a step of faith in me. I hope he feels that this faith has not been misplaced.

In a work of this sort it is inevitable that others have been consulted or have become involved in some way. I should particularly like to record my appreciation of the help I have received from Dr Peter Webster FSA, of the Department of Continuing Education at University College Cardiff (University of Wales) in chasing down and supplying often difficult to locate reference material. Mr Richard Brewer FSA, (the Keeper of Archaeology & Numismatics) of the National Museum of Wales in Cardiff was also very helpful in allowing the use of the Museum library and in similarly locating publications.

Others to whom I would give my thanks include Mr Robert Hopkins, Miss Victoria Newton (Curator at Newport City Museum) and Mrs Julie Reynolds (Curatorial Officer at the Roman Legionary Museum Caerleon, of the National Museums and Galleries of Wales) all of whom have either supplied reference material or facilities. I am also grateful for useful discussions to Dr Kate Gilliver (Head of Ancient History, HISAR, University College Cardiff).

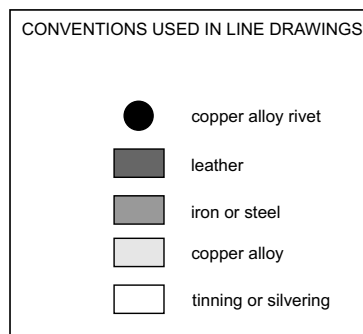
Finally (and by no means least), to my wife Pat go my thanks and love for her continued interest in what I was doing throughout the assembly of the data and the subsequent writing of this work, stretching back through some five years. I promise never to mention the words ‘lobate hinge’ again!

As always, any errors are entirely my own responsibility.

*Michael D. Thomas*  
*Newport, Monmouthshire*  
*January, 2003*

## Note

Sites from many countries are discussed in the text and, in order to avoid constant repetition, information about the country of origin of any given site is given at the beginning of each chapter and in the index entry as an ISO 3166 abbreviation.





# Introduction

The development and structure of the Roman infantry armour known as *lorica segmentata* has been described in detail in Volume 1 of this monograph. In Volume 2, are catalogued the finds of this armour and it is believed that the majority (roughly 1,500) of the *published* items have been included. There may be scope for the future publication of an updated catalogue, should further finds be reported in sufficient quantity to warrant it. A decision was made to include information taken only from those sources published up to and including the year 2000. There is no particular significance for this date but a line had to be drawn somewhere.

The fitments catalogued here have been divided into the following groups, according to their function on the armour.

Category	Description
A	Hinged buckle fittings
B	Hinged strap fittings
C	Hinged fittings, which could be either A or B
D	Hingeless buckle fittings, which includes buckles riveted directly to the plates (Kalkriese and Corbridge types) and directly to leather straps (Kalkriese type). It also includes internal iron buckles from Corbridge A.
E	Buckles. These are very common on military sites and may well include examples that did not come from <i>lorica segmentata</i> armour. In the interests of completeness, however, they are included here. Large buckles that more probably come from belts are, however, excluded.
F	Shoulder hinges, which includes those that are lobate, sub-lobate and rectangular, all from the upper shoulder areas of the cuirass.
G	Vertical fasteners - both hooks and loops from the Corbridge B/C and Newstead types.
H	Tie-loops/hooks from the girdle plates.
I	Tie-rings from the girdle plates of the Newstead type armour.
J	Decorated washers. Only those actually attached to an indisputable cuirass fragment are included here, as these fitments can also occur on helmets.
K	Leathering washers.
L	Armour fragments. Only those indisputably from a cuirass are included.

The purpose of the drawings is to enable immediate comparisons to be made as to shape and form *only*. Accordingly a minimum of shading has been used and no indication of decorative features is included. Where these occur they are described in the text. Normally only a 'plan view' is provided, unless there is some special feature that would otherwise be omitted. The drawings are shaded according to the following system.

- Metal of the fitment itself - light grey
- Armour plate - medium grey
- Textile or leather remains - dark grey
- Rivet heads - black

All drawings are at a scale of 1:2, with the exception of those for armour fragments, which have been scaled to one-sixth actual size. Measurements are either those provided in the publication or (if none were so provided) are taken from scaled drawings/photographs. If the latter is the case, then this is indicated. These alternatives have not been used together, published measurements being given priority, even when these are incomplete.

The fitments have been arranged in: (a) a typology-based order for each fitment category, (b) the alphabetical order of the find-site and (c) in order of date of publication (earliest to latest).

Tables A and B record the number of each category of fitment for each site. For convenience, they have been divided between British sites (Table A) and those from elsewhere (Table B), although, as explained above, this arrangement has not been followed within the catalogue.

Table C indicates the number of each type of fitment that has been included in this catalogue, for a total of 1508 items.

## *Exploded diagrams of types of lorica segmentata armour*

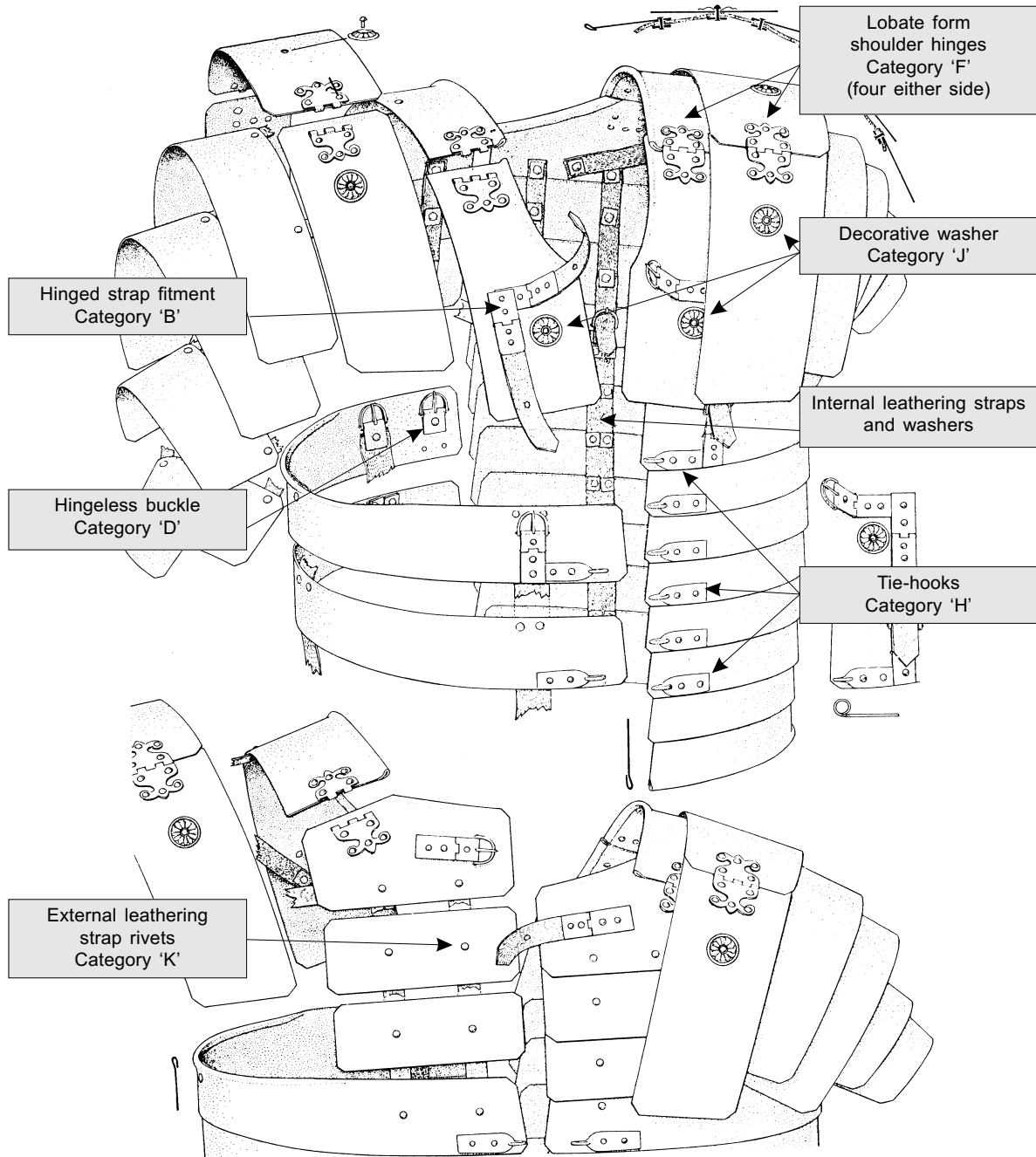
Note, some types of fitment do not appear here, e.g. Category 'C' (which could be either 'A' or 'B'), Category 'E' (buckles), and Category 'I' (Tie-loops)

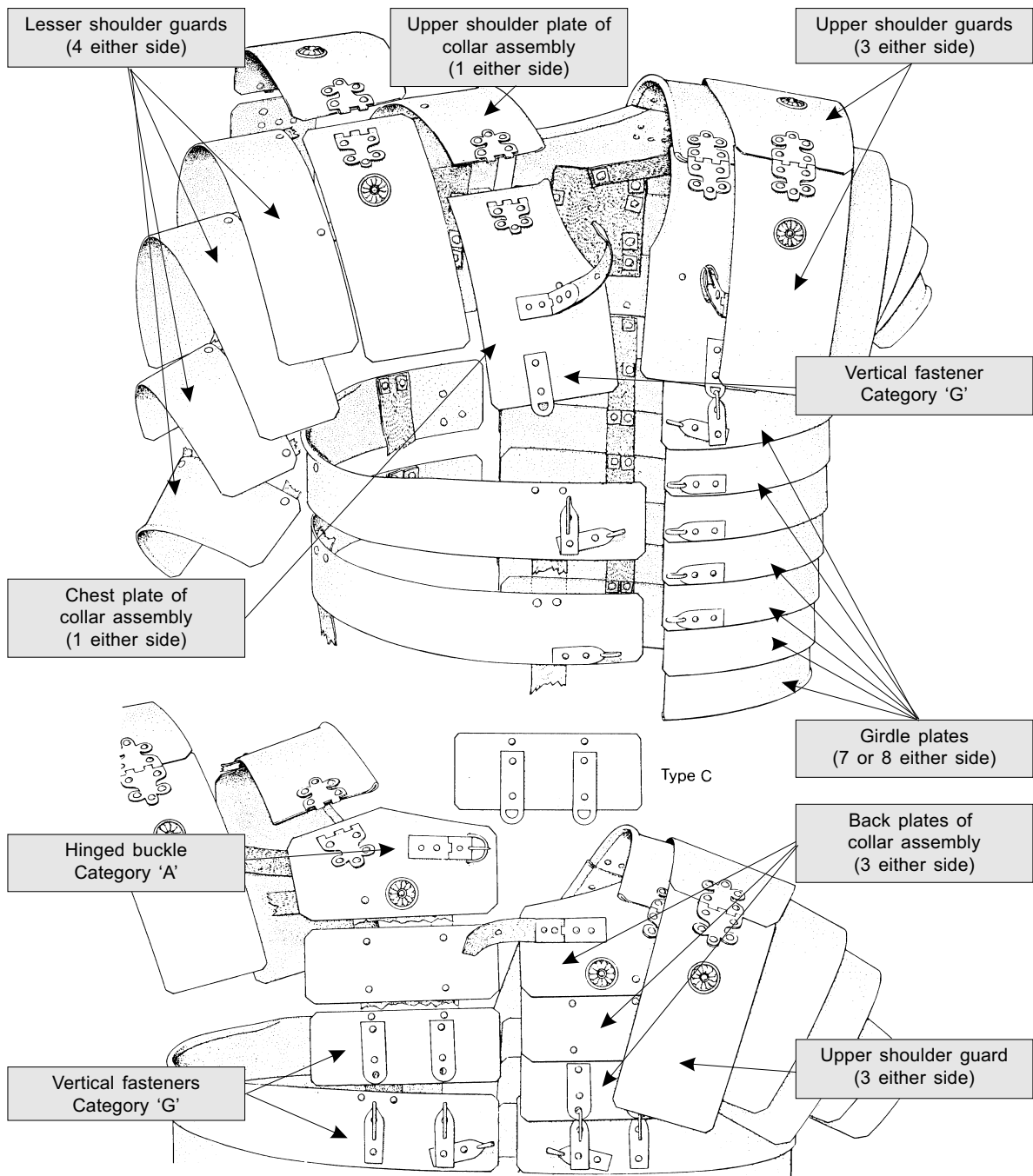




*Table C: Numbers of fitments of each type*

Type No.	A	B	C	D	E	F	G	H	I	J	K	L
	179	129	185	115	89	265	49	237	58	42	31	129

*Corbridge Type-A Lorica segmentata armour (after Connolly in Allason-Jones & Bishop, 1988)*



Corbridge Type-B/C Lorica segmentata armour (after Connolly in Allason-Jones & Bishop, 1988)

# Category 'A': Hinged Buckles

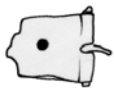
## Contents

*Hinged buckles from the following sites are included here:*

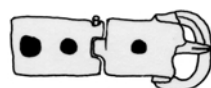
Aislingen (DEU), Alchester (GBR), Aldbourne (GBR), Augsburg-Oberhausen (DEU), Aulnay-de-Saintonge (FRA), Baden (DEU), Bad Deutsch-Altenberg (AUT), Baginton (GBR), Buciumi (ROM), Burghöfe (DEU), Caerleon (GBR), Camerton (GBR), Cirencester (GBR), Colchester (GBR), Corbridge (GBR), Exeter (GBR), Gloucester (GBR), Hod Hill (GBR), Hofheim (DEU), Hüfingen (DEU), Kaiseraugst (CHE), Kalkriese (DEU), Lincoln (GBR), London (GBR), Longthorpe (GBR), Magdalensburg (DEU), Mainz (DEU), Neuss (DEU), Newstead (GBR), Oberstimm (DEU), Rheingönheim (DEU), Richborough (GBR), Risstissen (DEU), Rottweil (DEU), Santon (GBR), Sarmizegetusa (ROM), Silchester (GBR), St Albans (GBR), Sisak (CRO), Strageath (GBR), Usk (GBR), Volubilis (MAR), Waddon Hill (GBR), Wimbourne (GBR), Windisch (CHE), Woodcock Hall (GBR)

## Ai

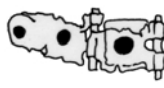
1. Aldbourne *Context:* not recorded *Inventory No.:* WHM 1994.320 *Reference:* GRIFFITHS in ELLIS 2001: 58 & 59, Fig.3.5, 26 *Dimensions (from scale drawing):* L: 24mm, W: 21mm *Notes:* Hinged buckle fitment, lacking the bow to the buckle portion. One rivet remains and the rivet hole has the punched circle decoration.
2. Augsburg-Oberhausen *Context:* not recorded *Inventory No.:* not recorded *Reference:* HÜBENER 1973: Taf.13, 7 *Dimensions (from scale drawing):* L: 30mm, W: 24mm *Notes:* Buckle plate of a hinged buckle fitment. The rivet is missing.
3. Aulnay-de-Saintonge *Context:* not recorded *Inventory No.:* not recorded *Reference:* FEUGÈRE 1993: 30, Fig.18, 4 *Dimensions (from scale drawing):* L: 30mm, W: 20mm *Notes:* Complete hinged buckle.
4. Buciumi *Context:* not recorded *Inventory No.:* not recorded *Reference:* CHIRILA *et al.*, 1972: Pl. LXXI, 48 *Dimensions:* L: 25mm *Notes:* Buckle portion of a hinged buckle fitment. The static plate is missing and the buckle bow and tongue are flexed. One rivet remains in the plate, which also appears to have a small triangular cut-out portion.
5. Camerton *Context:* not recorded, detector find *Inventory No.:* 26769R *Reference:* JACKSON 1990: 29 & Pl.3, 19 *Dimensions (from scale drawing):* L (overall): 32mm, L (plate only): 21mm, W: 19mm *Notes:* Damaged buckle portion of a hinged buckle constructed from a single folded strip of metal. The buckle D-bow and a second plate are missing. A single rivet remains, but the hinge itself is torn and the pivot bar is absent. Weight: 2.8g.
6. Camerton *Context:* not recorded, detector find *Inventory No.:* 26770U *Reference:* JACKSON 1990: 29 & Pl.3, 20



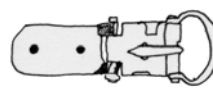
i Unclassifiable free buckle elements



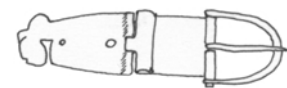
ii Square-ended fixed plates



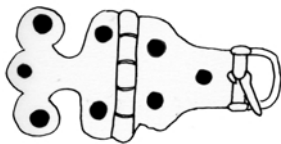
ii/iii Either Type ii or Type iii, uncertain



iii Round-ended fixed plates



iv 'Fleur-de-lys' shape to the fixed plate



v Fully lobate (five rivets)



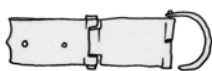
vi Indented ('saw tooth') edges



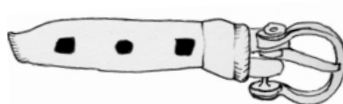
vii Double lobate



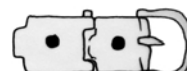
viii Lobate (two rivets)



ix Scalloped end to fixed plate



x Triple-riveted fixed plate



xi Double hinged



xii Single rivet in fixed plate

- Dimensions (from scale drawing):* L (overall): 32mm, : (plate only): 21mm, W: 17mm *Notes:* Similar to the above, although the fitment appears to be less damaged, e.g. it still retains the pivot bars for both the hinges. Weight: 3.7g.
7. Camerton *Context:* not recorded, detector find *Inventory No.:* 26771S *Reference:* JACKSON 1990: 29 & Pl.3, 21 *Dimensions (from scale drawing):* L (overall): 25mm, L (plate): 18mm, W 15mm *Notes:* Similar to the above, but only one pivot bar remains. Weight: 3.1g.
  8. Camerton *Context:* not recorded, detector find *Inventory No.:* 26772Q *Reference:* JACKSON 1990: 29 & Pl.3, 22 *Dimensions (from scale drawing):* L (overall): 26mm, L (plate): 18mm, W: 18mm *Notes:* Similar to the above. Weight: 2.5g.
  9. Camerton *Context:* not recorded, detector find *Inventory No.:* 26773Z *Reference:* JACKSON 1990: 29 & Pl.3, 23 *Dimensions (from scale drawing):* L (overall): 27mm, L (plate): 18mm, W: 18mm *Notes:* Similar to the above. Weight: 2.2g.
  10. Chichester *Context:* Area 7, Pit F.34 *Inventory No.:* not recorded *Reference:* DOWN 1978: 299 & Fig.10.35, 80 *Dimensions (from scale drawing):* L: 19mm, W: 15mm *Notes:* Part of a hinged buckle plate. Both pivot rods are missing, as is the buckle assembly. Retains the (flat) rivet holding the bronze plate together.
  11. Cirencester *Context:* Leaholme, upper levels *Inventory No.:* AL VIII 29 *Reference:* WEBSTER 1982: 114 & Fig.38, 120 *Dimensions:* L: 26mm, W (max): 20mm *Notes:* Small D-type buckle from a hinged buckle fitment. The pivot bar is retained, as is the rivet through the copper alloy sheet. The rivet hole is decorated with an incised circle.
  12. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site I, large rubbish pit cut into an earlier gravel pit *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 36 & 127, Fig.65, 96 *Dimensions (from scale drawing):* L: 33mm, W (max): 23mm, W (plate): 15mm *Notes:* D-loop hinged buckle fitment, here missing the tongue. The rivet of the bronze plate remains in place.
  13. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site I, large rubbish pit cut into an earlier gravel pit *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 36 & 127, Fig.65, 97 *Dimensions (from scale drawing):* L: 28mm, W (max): 16mm, W (plate): 13mm *Notes:* D-loop buckle, largely as above, but here lacking the bow.
  14. Colchester *Context:* Make up or dump, Period 4 *Inventory No.:* SF BKC 5460(C), V186 L108 *Reference:* CRUMMY 1983: 134, & Fig.152, No.4225. *Dimensions:* L: 29mm, W: 16.5mm. *Notes:* A buckle and parts of a hinge from a cuirass fitting.
  15. Exeter *Context:* Goldsmith Street excavation, 1971-2, N corner of the fortress, unstratified. *Inventory No.:* GS + *Reference:* HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110, 29 *Dimensions:* L: 26mm, W: 19mm. *Notes:* D-shaped buckle with looped ends; the pin is lenticular. Rolling a copper alloy sheet, rather than casting it, made a scar round the edge of the buckle.
  16. Exeter *Context:* Mermaid Yard excavation, 1977-8, S corner of the fortress, late 3rd-early 4th century. *Inventory No.:* MY 1056 *Reference:* HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110, 30 *Dimensions:* L: 30mm, L (plate): 22mm, W: 20mm. *Notes:* D-shaped buckle similar to above. The surviving original end butts up against the shank of a single disc-headed rivet.
  17. Gloucester *Context:* Pit(s), post medieval (disturbed), Gilbert School site. SF GBS 293©, A354 F42 *Inventory No.:* 362 *Reference:* HURST 1986: 235 & Fig.6.32 *Dimensions:* L (max): 30mm, W (buckle bar): 18mm. *Notes:* Brass buckle and one section of a hinged cuirass plate.
  18. Hod Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* RICHMOND 1968: Pl.43A *Dimensions (from photograph, approx.):* L: 27mm, W: 16.5mm *Notes:* Buckle portion of a hinged buckle. There is a single, large dome-headed rivet.
  19. Hofheim *Context:* not recorded *Inventory No.:* 08.454 *Reference:* RITTERLING 1913: 1913, Taf. XI, 16 *Dimensions (from scale photo):* L: 30mm, W: 11mm *Notes:* Buckle from a hinged buckle fitment. The pivot bar of the hinge is still in place, as is the rivet on the plate.
  20. Hofheim *Context:* not recorded *Inventory No.:* 18945 *Reference:* RITTERLING 1913: 1913, Taf. XI, 17 *Dimensions (from scale photo):* L: 31mm, W: 18mm *Notes:* Buckle from a hinged buckle fitment. A portion of the hinge remains, as does a single rivet. The hinge bar, however, is absent.
  21. Hüfingen *Context:* Barrack 1b *Inventory No.:* not recorded *Reference:* REVELLIO 1937: 41 & Taf. XI, 31 *Dimensions (from scale photo):* L: 18mm, W: 15mm *Notes:* Buckle portion plate from a hinged buckle. Both hinge bars remain, together with the rivet, but the D-bow is missing here.
  22. Kaiseraugst *Context:* not recorded *Inventory No.:* 1907.1218a *Reference:* DESCHLER-ERB 1999: Taf.13, 171 *Dimensions:* L: 31mm, W: 20mm, Th: 3mm *Notes:* Buckle portion of a hinged buckle assembly. The pivot bar remains, as does a single rivet. Weight: 4.42g.
  23. Kaiseraugst *Context:* Region 1, Insula 51, Period 2, t.a.q. AD 50 *Inventory No.:* 1971.11429; FK A03378 *Reference:* DESCHLER-ERB 1999: Taf.13, 172 *Dimensions:* L: 25mm, W: 15mm, Th: 4mm. *Notes:* Buckle portion of a hinged buckle assembly. The hinge pivot bar remains, as does a single rivet. Weight: 3.00g.

24. Kaiseraugst *Context*: Region 1, Insula 22, undated *Inventory No.*: 1988.51.C04953 *Reference*: DESCHLER-ERB 1999: Taf.13, 173 *Dimensions*: L: 30mm, W: 19mm, Th: 4mm *Notes*: Buckle portion of a hinged buckle assembly. A single rivet remains, but the hinge portion has completely broken off. Weight: 4.45g.
25. Kaiseraugst *Context*: Region 1, Insula 51, undated *Inventory No.*: 1971.8449; FK A03291 *Reference*: DESCHLER-ERB 1999: Taf.13, 174 *Dimensions*: L: 27mm, W: 18mm, Th: 2mm *Notes*: Buckle portion of a hinged buckle assembly, much damaged. The bow of the buckle is missing, as is the fixed portion of the assembly. One rivet remains. Weight: 3.25g.
26. Magdalensburg *Context*: AA/13, rubble, 1<sup>st</sup> half of 1<sup>st</sup> CAD *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 289 & Taf.76/12 *Dimensions*: L (overall): 38mm, L (plate): 25mm, W: 17mm *Notes*: Buckle, retaining the pin and buckle plate, but missing the bow. There is no rivet hole and the buckle plate does not appear to have been folded completely back. Perhaps it is incomplete?
27. Mainz *Context*: unstratified *Inventory No.*: 21 *Reference*: BEHRENS & BRENNER 1911: Abb.26, 80 *Dimensions*: L: 38mm, W: 20mm *Notes*: Buckle portion of hinged fitment, intact apart from the hinge pivot bar.
28. Mainz *Context*: Excavation area 6' *Inventory No.*: not recorded *Reference*: BEHRENS 1912: Abb.3, 13 *Dimensions*: L: 26mm *Notes*: Complete buckle portion of a hinged buckle fitment.
29. Neuss *Context*: not recorded *Inventory No.*: 2290 *Reference*: SIMPSON 2000: 75 & 151, Pl.25, 7 *Dimensions (from scale drawing)*: L: 28mm, W: 20mm *Notes*: Cuirass hinged buckle. The buckle portion is intact, but only one half of the hinge remains, together with the pivot bar.
30. Oberstimm *Context*: not recorded *Inventory No.*: 1975.124 *Reference*: SCHÖNBERGER 1978: 170 & Taf.20, B106. *Dimensions*: L: 27mm, W (buckle): 17mm, W (strap): 15mm. *Notes*: D-shaped hinged buckle, of which the hinge plate is missing. One rivet remains.
31. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 24 *Dimensions (from scale drawing)*: L: 39mm, W: 22.5mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present. The plate lacks a rivet or rivet hole, however.
32. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 26 *Dimensions (from scale drawing)*: L: 24mm, W: 16.5mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present.
33. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 29 *Dimensions (from scale drawing)*: L: 10.5mm, W: 18.8mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present.
34. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 32 *Dimensions (from scale drawing)*: L: 28.5mm, W: 18mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present, as is the bar for the hinge.
35. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 35 *Dimensions (from scale drawing)*: L: 24mm, W: 18mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present. Only a part of the plate is attached.
36. Richborough *Context*: Gully 5 *Inventory No.*: 4894 *Reference*: WILSON in CUNLIFFE 1968: 95 & Pl. XXXIV, 110 *Dimensions (from scale drawing)*: L: 33mm, W (max, at buckle bar): 21mm *Notes*: Intact buckle portion of a hinged buckle fitment. The rivet hole is decorated with concentric punched rings.
37. Richborough *Context*: Gully 5 *Inventory No.*: 4894 *Reference*: WILSON in CUNLIFFE 1968: 95 & Pl. XXXIV, 111 *Dimensions (from scale drawing)*: L: 28mm, W (max): 20mm *Notes*: Very similar to the above, except that there is no apparent decoration around the rivet hole. The buckle bow appears to be either distorted or to have a rather angular shape.
38. Risstissen *Context*: not recorded *Inventory No.*: 2997 *Reference*: ULBERT 1959: 106 & Taf.61, 11 *Dimensions (from scale drawing)*: L: 24mm, W: 19.5mm *Notes*: Buckle portion of a hinged buckle fitment. One rivet remains.
39. Risstissen *Context*: not recorded *Inventory No.*: 2998 *Reference*: ULBERT 1959: 106 & Taf.61, 12 *Dimensions (from scale drawing)*: L: 19.5mm, W: 21mm *Notes*: Buckle plate from a hinged buckle. Although both pivot bars remain, the tongue and buckle bow are missing.
40. Risstissen *Context*: Depth of 0-40cm, Level 31. *Inventory No.*: R 66/91 *Reference*: ULBERT 1959: 23, 54 & Taf.3, 45 *Dimensions*: L: 30mm, W (strap): 15mm, W (buckle bow), 18mm *Notes*: The buckle part of a hinged-buckle unit. There may be a decorative punched ring around the rivet hole.
41. Santon *Context*: possibly AD 50-60 from association with brooches, characteristic of the 1<sup>st</sup> CAD. *Inventory No.*: not recorded *Reference*: SMITH 1909: 153, Pl. XVI, No.2 & SPRATLING 1975: 206-7, Fig.1, 3 *Dimensions*: L: 23mm, W: 14mm *Notes*: Part of a flat hinge buckle. It retains the rivet, but the rest of the buckle has disappeared.



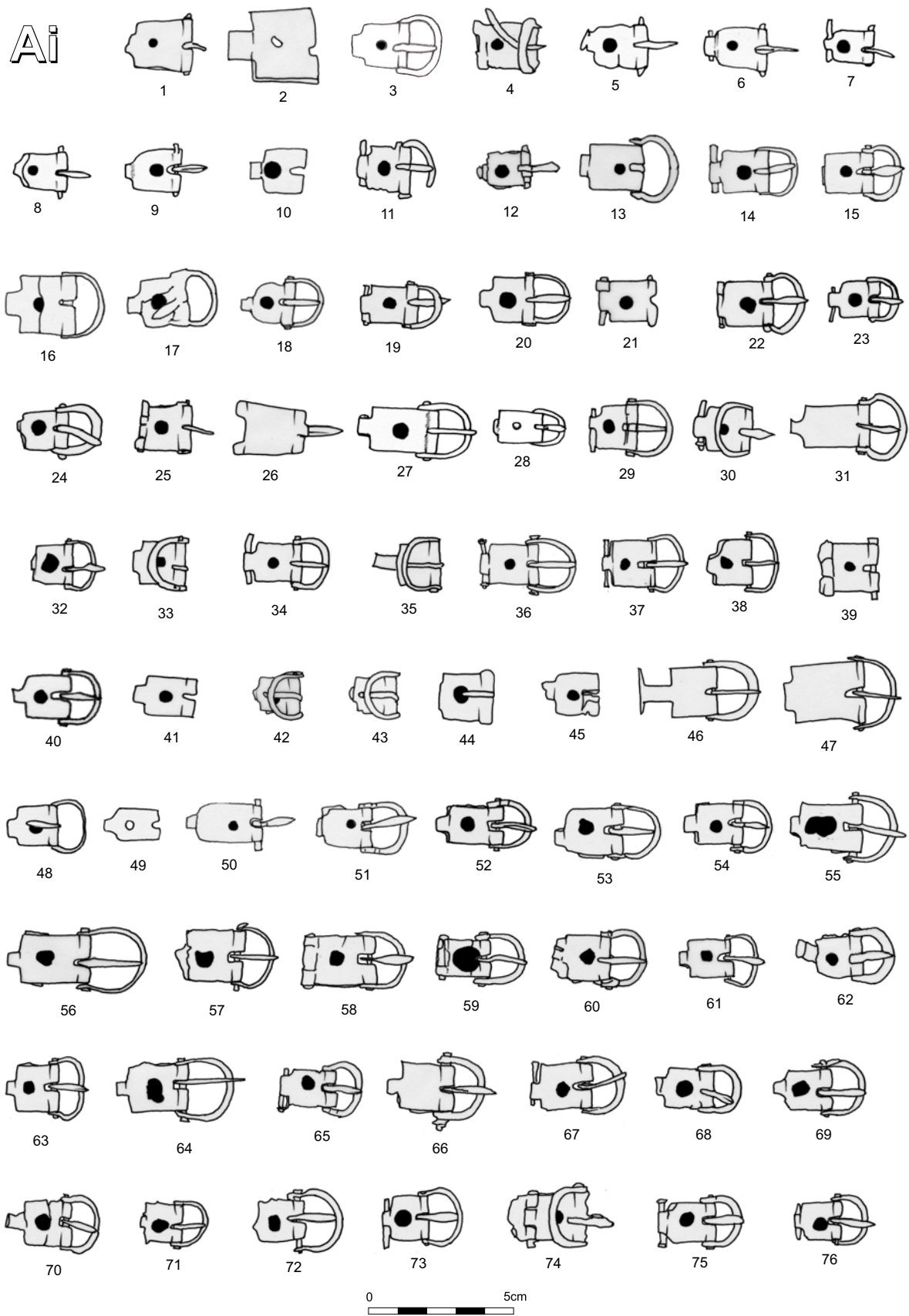


Fig. 1: Category A (hinged buckles) of Type i. Scale 1:2

42. St.Albans *Context*: Insula XXVIII, 2, on floor of Room 1 *Inventory No.*: 55 F VI 1A, AD 240-300 *Reference*: FRERE 1984: 33 & Fig.11.75 *Dimensions (from scale drawing)*: L: 24mm, W: 11mm *Notes*: Hinged buckle, whose static plate is missing.
43. St.Albans *Context*: Insula XXVII, 2, re-deposited Antonine fire debris below Room 8. AD 375-380 *Inventory No.*: 59 X II 4 *Reference*: FRERE 1984: 33 & Fig.11.76 *Dimensions*: L: 23mm, W (max): 16mm *Notes*: Part of a hinged buckle, possibly unfinished. The buckle bow, pin and pivot are all present, as is the plate but the rivet is missing.
44. Sarmizegetusa *Context*: not recorded *Inventory No.*: 24585 *Reference*: ALICU *et al* 1994: 50, 106 & Pl.34, 693 *Dimensions*: L: 19mm, W: 18mm *Notes*: Remains of a bronze hinged buckle. The pin is still present, but not the bow. Dated to 2<sup>nd</sup> to 3<sup>rd</sup> century.
45. Silchester *Context*: Period 5, ca. AD 80/5 to 120/50 *Inventory No.*: (510), 5.1, SF 1003 *Reference*: FULFORD & TIMBY 2000: 345 & 344, Fig.159, 50 *Dimensions (from scale drawing)*: L: 20mm, W: 14mm *Notes*: The buckle leaf of a hinged buckle fitment. It retains the rivet, but the pivot bar, tongue and bow are all missing.
46. Sisak *Context*: not recorded *Inventory No.*: not recorded *Reference*: HOFFILLER 1912: Sl.11, 4 *Dimensions*: L: 40mm *Notes*: Buckle portion of a hinged buckle fitment. The rolled part of the hinge has opened out (loosing the pivot bar).
47. Sisak *Context*: not recorded *Inventory No.*: not recorded *Reference*: HOFFILLER 1912: Sl.11,6 *Dimensions*: L: 40mm *Notes*: Buckle (complete) of a hinged buckle fitment, although lacking the pivot bar for the hinge.
48. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1979: 67 & 68, Fig.29,42 *Dimensions (from scale drawing)*: L: 26mm, W: 18mm *Notes*: Buckle portion (complete) of a hinged buckle fitment.
49. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1979: 67 & 68, Fig.29, 48 *Dimensions (from scale drawing)*: L: 19mm, W: 11mm *Notes*: Buckle plate from a hinged buckle fitment.
50. Windisch *Context*: not recorded *Inventory No.*: 1647 *Reference*: UNZ 1973: 22 & 37, Abb.9, 84 *Dimensions*: L: 37mm *Notes*: Buckle portion of a hinged buckle fitment, which lacks the D-bow of the buckle. The rivet hole is decorated with punched circles.
51. Windisch *Context*: not recorded *Inventory No.*: 1643 *Reference*: UNZ 1973: 22 & 37, Abb.9, 89 *Dimensions*: L: 34mm *Notes*: Strap buckle fitment with all the various elements present.
52. Windisch *Context*: SE corner of the fortress *Inventory No.*: 9008 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 749 *Dimensions (from scale drawing)*: L: 34mm, W: 17mm *Notes*: Buckle portion of a hinged buckle fitment with its rivet remaining in place.
53. Windisch *Context*: rubbish dump *Inventory No.*: 4108 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 751 *Dimensions (from scale drawing)*: L: 35mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment. One large replacement rivet in position.
54. Windisch *Context*: rubbish dump *Inventory No.*: 4105 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 752 *Dimensions (from scale drawing)*: L: 29mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment. One rivet remains.
55. Windisch *Context*: rubbish dump *Inventory No.*: 4106 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 753 *Dimensions (from scale drawing)*: L: 36mm, W: 25mm *Notes*: Buckle portion of a hinged buckle fitment with one large replacement rivet.
56. Windisch *Context*: rubbish dump *Inventory No.*: 4103 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 754 *Dimensions (from scale drawing)*: L: 46mm, W (max, buckle bow): 23mm *Notes*: Buckle portion of a hinged buckle fitment. One repair rivet in place.
57. Windisch *Context*: rubbish dump *Inventory No.*: 4110 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 756 *Dimensions (from scale drawing)*: L: 32mm, W: 24mm *Notes*: Buckle portion of a hinged buckle fitment. Repair rivet in place.
58. Windisch *Context*: part of the Baths complex, by the *via Principalis* *Inventory No.*: 26:28 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 757 *Dimensions (from scale drawing)*: L: 34mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment. This retains a single rivet as well as the hinge pivot bar for the other portion of the hinge.
59. Windisch *Context*: building by the rampart at the north gate *Inventory No.*: 972 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 758 *Dimensions (from scale drawing)*: L: 30mm, W (max, buckle bow): 18mm *Notes*: Buckle portion of a hinged buckle fitment. Retains the pivot bar for the hinged portion as well as a single large rivet – repair?
60. Windisch *Context*: not recorded *Inventory No.*: 1694 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 761 *Dimensions (from scale drawing)*: L: 32mm, W: 21mm *Notes*: Buckle portion of a hinged buckle fitment, broken through the hinge to the other plate.
61. Windisch *Context*: corner of *Principia* outer courtyard. *Inventory No.*: 34:2628 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 763 *Dimensions*

- (from scale drawing): L: 26mm, W (max, buckle bow): 19mm *Notes*: Buckle portion of a hinged buckle fitment.
62. Windisch *Context*: by the *via Principalis*, Tribune's house? *Inventory No.*: 28:3642 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 765 *Dimensions (from scale drawing)*: L: 32mm, W: 19mm *Notes*: Buckle portion of a hinged buckle fitment. The buckle bow is made from very thick wire.
63. Windisch *Context*: rubbish dump *Inventory No.*: 4119 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 768 *Dimensions (from scale drawing)*: L: 26mm, W: 22mm *Notes*: Buckle portion of a hinged buckle fitment. One rivet remains in place.
64. Windisch *Context*: rubbish dump *Inventory No.*: 3367 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 770 *Dimensions (from scale drawing)*: L: 38mm, W: 22mm *Notes*: Buckle portion of a hinged buckle fitment. Replacement rivet repair.
65. Windisch *Context*: part of the Baths complex by *via Decumana*. Find spot No.27 *Inventory No.*: 26:81 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 773 *Dimensions (from scale drawing)*: L: 28mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment. Replacement rivet. This find retains the pivot bar to the second leaf.
66. Windisch *Context*: rubbish dump *Inventory No.*: 4117 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 774, *Dimensions (from scale drawing)*: L: 32mm, L: (including pin): 36mm, W (max, at buckle bar): 26mm *Notes*: Buckle portion of a hinged buckle fitment. Unfinished? There is no hole for the rivet in the copper alloy sheet.
67. Windisch *Context*: not recorded *Inventory No.*: None *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 776 *Dimensions (from scale drawing)*: L: 31mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment. The pivot bar to the second leaf is still present.
68. Windisch *Context*: Königsfelden site *Inventory No.*: 61:2262 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 777 *Dimensions (from scale drawing)*: L: 28mm, W: 16mm *Notes*: Buckle portion of a hinged buckle fitment.
69. Windisch *Context*: barrack area by the ramparts *Inventory No.*: 66:1790 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 778 *Dimensions (from scale drawing)*: L: 30mm, W: 18mm *Notes*: Buckle portion of a hinged buckle fitment.
70. Windisch *Context*: east corner of outer colonnade of the *Principia*, Find site No.10 *Inventory No.*: 35:831 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.33, 780 *Dimensions (from scale drawing)*: L: 30mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment.
71. Windisch *Context*: *via Decumana*, SW corner of the *Principia*. *Inventory No.*: 3640 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.33, 782 *Dimensions (from scale drawing)*: L: 22mm, W: 16mm *Notes*: Buckle portion of a hinged buckle fitment.
72. Windisch *Context*: not recorded *Inventory No.*: 364 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 784 *Dimensions (from scale drawing)*: L: 30mm, W: 22mm *Notes*: Buckle portion of a hinged buckle fitment. Some damage to the plate. The rivet is a replacement.
73. Windisch *Context*: rubbish dump *Inventory No.*: 42:680 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 785 *Dimensions (from scale drawing)*: L: 28mm, W: 20mm *Notes*: Buckle portion of a hinged buckle fitment. Retains the pivot bar of the hinge portion.
74. Windisch *Context*: trench of 1930, not recorded context *Inventory No.*: 42:680 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 786 *Dimensions (from scale drawing)*: L: 36mm, W: 21mm *Notes*: Buckle portion of a hinged buckle fitment. Some of the plate of the second leaf remains. The buckle is flexed backwards and the length measurement is the overall value, including the buckle pin.
75. Windisch *Context*: *via Principalis*, SW corner of the *Principia* *Inventory No.*: 13:408 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 788 *Dimensions (from scale drawing)*: L: 29mm, W: 18mm *Notes*: Buckle portion of a hinged buckle fitment. Retains the hinge pivot bar.
76. Windisch *Context*: SW corner of courtyard building, southern area. *Inventory No.*: 59:1113 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 789 *Dimensions (from scale drawing)*: L (max, including pin): 27mm, W: 18mm *Notes*: Buckle portion of a hinged buckle fitment. Retains the pivot bar.

## Aii

1. Aislingen *Context*: Not recorded *Inventory No.*: 663 *Reference*: ULBERT 1959: 93 & Taf.17, 8 *Dimensions (from scale drawing)*: L: 35mm, W: 14mm *Notes*: Complete hinged buckle assembly. The three rivets remain, though one is much larger than the others are.
2. Aislingen *Context*: Not recorded *Inventory No.*: 7129 *Reference*: ULBERT 1959: 93 & Taf.17, 9 *Dimensions (from scale drawing)*: L: 34mm, W: 13mm *Notes*: Complete hinged buckle assembly. All three rivets remain in place.
3. Aislingen *Context*: Not recorded *Inventory No.*: 7673 *Reference*: ULBERT 1959: 93 & Taf.17, 11 *Dimensions (from scale drawing)*: L: 31mm, W: 13mm *Notes*: Complete hinged buckle assembly; the rivet holes have the concentric punched decorative feature.

4. Alchester *Context*: not recorded *Inventory No.*: 20.37 *Reference*: SAUER 2000: 25 & Fig.10, 4 *Dimensions (from scale drawing)*: L: 23mm, W: 15mm *Notes*: Complete hinged buckle. The two buckle plates are flexed together and the buckle bow is further flexed. All three rivets remain in place.
5. Baden *Context*: not recorded *Inventory No.*: 482 *Reference*: UNZ 1971: Abb.4, 27 *Dimensions*: L: 49mm *Notes*: Hinged buckle assembly, complete but for the buckle bow. Only one rivet remains.
6. Caerleon *Context*: Level 100 *Inventory No.*: SF 106 *Reference*: CASEY & HOFFMANN 1995: 88 & 90, Fig.11, 1 *Dimensions (from scale drawing)*: L: 55mm, W: 19mm *Notes*: Complete hinged buckle with two large rivets, possibly a repair?
7. Caernarfon *Context*: 2172, SF1099, Period 6A, pit beneath the Period 7 floor, following demolition of 1<sup>st</sup> stone building (SS1), Area A, phase BQ *Inventory No.*: 415 (small find no.) *Reference*: CASEY, DAVIES & EVANS, 200 & Fig.10.18, No.415 *Dimensions*: L: 61mm, W (max, at buckle): 18.5mm, L of 1<sup>st</sup> plate: 21mm, W of 2<sup>nd</sup> plate: 16mm, W of 3<sup>rd</sup> plate: 15.5mm. *Notes*: D-shaped copper alloy buckle with the ends expanded to enclose the iron hinge pin, which is covered by a rectangular plate. Part of the pin survives, ending in a small rectangular plate, possibly a repair. An incomplete tubular hinge to a second rectangular plate pierced by two disc-headed rivets hinges this.  
Another pair of (damaged) hinged rectangular plates is attached to the end of the second plate at right angles; this is the strap fitment.  
An iron cuirass plate fragment lies behind all the pieces. Left breast plate.
8. Chichester *Context*: Area 3, Pit Z.31 *Inventory No.*: not recorded *Reference*: DOWN 1978: 293 & Fig.10.30, No.19 *Dimensions (from scale drawing)*: L (max): 57mm, W (max) 21mm *Notes*: Bronze hinged buckle, partially damaged. One rivet remains.
9. Colchester *Context*: W. entrance area of Region 3/filling of Site 4 *Inventory No.*: not recorded *Reference*: HAWKES & HULL 1947: 337 & Pl. CII, 6 *Dimensions*: L: 54mm, W (max): 18mm, W (plate): 14mm *Notes*: Hinged D-buckle. The buckle pin is still in position. Rivet holes are decorated with concentric punched ring pattern.
10. Colchester *Context*: Phase II, from the make-up of the floors, AD49-60 *Inventory No.*: not recorded *Reference*: DUNNETT 1971: 30 & Fig.11, 23 *Dimensions (from scale drawing)*: L (including buckle pin): 57mm, W: 18mm *Notes*: Hinged buckle fitment that appears to be incomplete. The buckle plate has a single rivet, but the fixed plate has only two small holes.
11. Colchester *Context*: Period 3b *Inventory No.*: SF BKC 2000(C), E1317 L195+ *Reference*: CRUMMY 1983: 134 & Fig.152, No.4222 *Dimensions*: L: 50mm, W (at central hinge) 15.5mm *Notes*: The D-shaped buckle has broken away from its hinge. The end of the long plate is damaged and the only rivet remaining is that in the short plate.
12. Corbridge *Context*: SE corner of Site 11, Phase II, AD 122-38 contained in a wooden chest. This chest was later placed within a hole, dug into and beneath the floor of an earlier Phase I building. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 26, Fig.26 *Dimensions (from scale drawing)*: L (approx.): 44mm, W: 22mm *Notes*: A hinged buckle from the upper right hand assembly chest plate of Cuirass 1, (Type-A). The buckle portion is flexed backwards. This is the buckle used to draw together the two chest plates. The flexed position of the buckle makes it impossible to give an accurately measure of the length.
13. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 33, Fig.34 *Dimensions (from scale drawing)*: L: 52mm, W: 22mm *Notes*: The hinged buckle from the breastplate of Cuirass 3 (Type-A). Although positioned close together, this fitment does not share a rivet with the adjacent hinged strap fitment.
14. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 33, Fig.34 *Dimensions (from scale drawing)*: L: 50mm, W: 24mm *Notes*: From Cuirass 3 (Type-A), an upper left-hand collar assembly. This complete fitment is used to pull the two upper back guards together.
15. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 37, Fig.39 *Dimensions (from scale drawing)*: L: 54mm, W (approx.): 22mm *Notes*: Cuirass 4 (Type-A), a hinged buckle from the breastplate, with much concretion evident.
16. Corbridge *Context*: As above *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions (from scale drawing)*: L: 60mm, W: 24mm *Notes*: From Cuirass 5 (Type-B), a hinged buckle attached to the breastplate. The fixed portion retains both rivets but the buckle pin is missing.
17. Corbridge *Context*: As above. *Inventory Nos.*: 75 *Reference*: ALLASON-JONES & BISHOP 1988: 43 & 47, Fig.49 *Dimensions*: impossible to determine *Notes*: A damaged buckle, from the upper right hand assembly of Cuirass 6, attached to the upper right hand back plate. It is partially covered by textile wrapping (shown here as dark grey shading). The buckle pin is present but the loop is flexed backwards.
18. Corbridge *Context*: As above *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 43 & Figs.48, 52 & 54 *Dimensions (from scale drawing)*: L (buckle only): 34mm, W: 20mm *Notes*: Type-A, cuirass i, lower right hand assembly. A bronze buckle, rivetted to the bottom

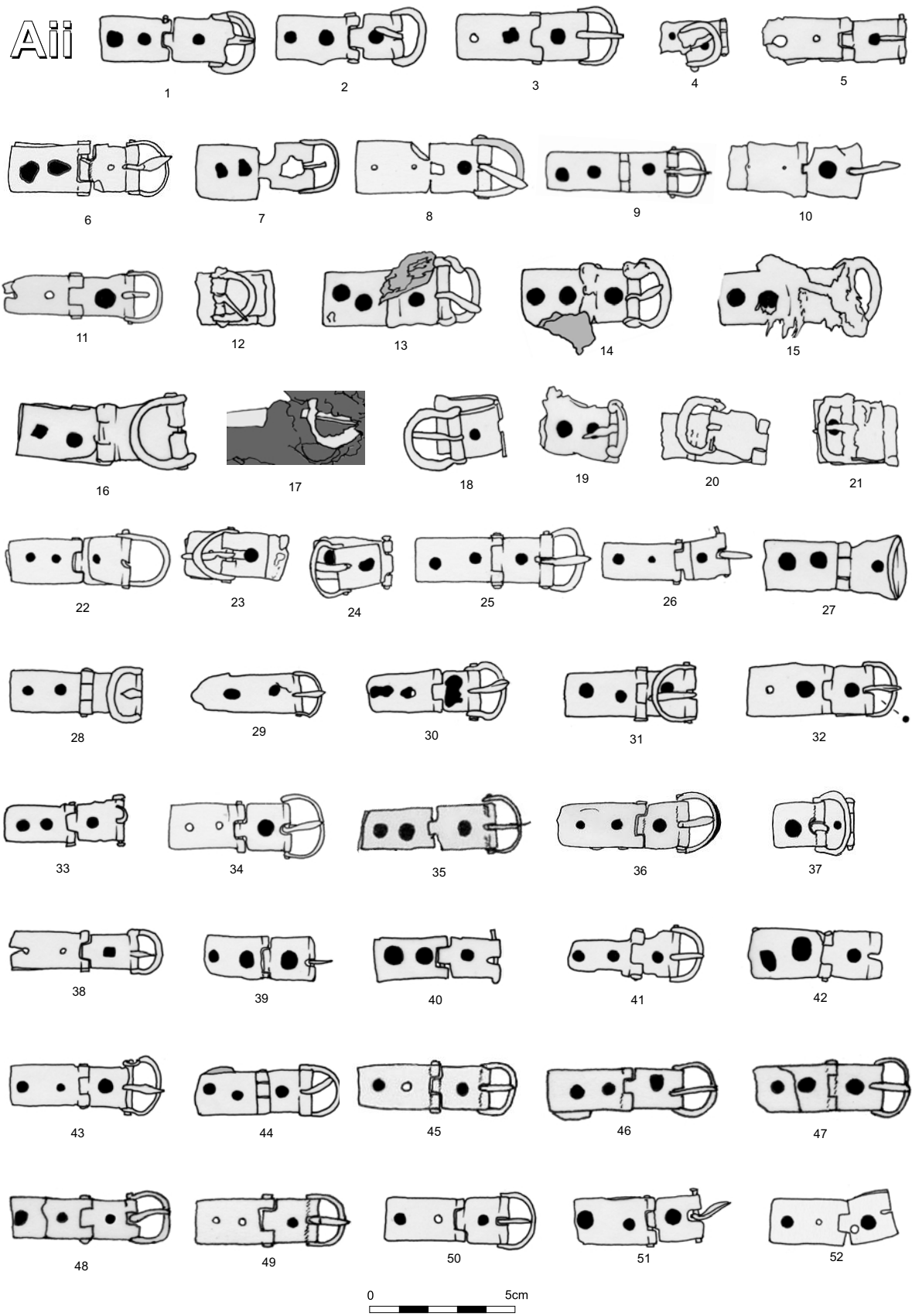
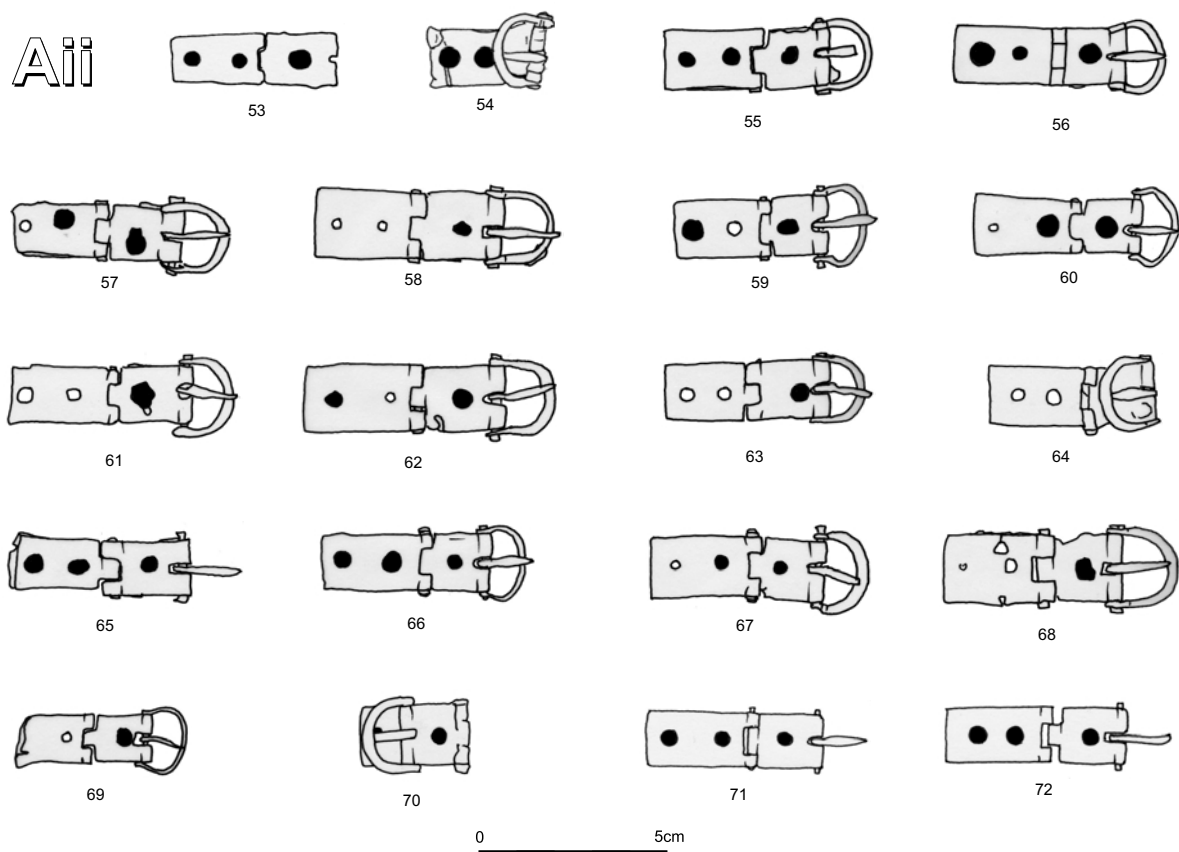


Fig.2: Category A (hinged buckles) of Type ii. Scale 1:2

- of the top girdle plate, with the buckle portion flexed downwards. On the right is a tie-hook and hanging down is a portion of textile material.
19. Corbridge *Context*: As above *Inventory No.*: 77 *Reference*: ALLASON-JONES & BISHOP 1988: Fig.55 *Dimensions (from scale drawing)*: W (approx.): 28mm *Notes*: From Cuirass ii (Type-A), upper front girdle plate. The buckle is flexed and there are two rivets on the fixed plate, one of which is shared with the adjacent tie-hook.
  20. Corbridge *Context*: As above *Inventory No.*: 78 *Reference*: ALLASON-JONES & BISHOP 1988: Fig.59 *Dimensions (from scale drawing)*: (Buckle & plate portion only) L: 32mm, W (max, buckle bow): 19mm *Notes*: From the top front girdle plate of Cuirass iii (Type-A). The buckle is flexed downwards. The dimensions of the whole fitment cannot be determined.
  21. Corbridge *Context*: As above *Inventory No.*: 79 *Reference*: ALLASON-JONES & BISHOP 1988: Fig.63 *Dimensions (from scale drawing)*: (buckle plate & bow only) L: 26mm, W: 23mm *Notes*: From Cuirass iv, upper front girdle plate. The buckle is flexed downwards, and one rivet is visible on the fixed plate.
  22. Exeter *Context*: Preston Street excavation, 1977. S corner of the fortress. *Inventory No.*: FS 37 *Reference*: HOLBROOK & BIDWELL 1991: 247 & 245, Fig.109, 28 *Dimensions*: L: 53mm, W: 17mm. *Notes*: D-shaped buckle and hinge plate. The buckle plate is a folded rectangular sheet secured by a single disc-headed rivet. The end is cut away and curled to fit between two rolled projections of a solid rectangular plate. Copper alloy hinge pin, but iron buckle hinge pin. End (fixed) plate pierced by two dome-headed rivets. The buckle pin is missing.
  23. Gloucester *Context*: Kingsholme site, Kingsholme Close *Inventory No.*: 17 50 (3.1) 6.3 *Reference*: PITTS in HURST 1985: 28 & Fig.11, 11 *Dimensions (from scale drawing)*: L (approx.): 36.5mm, W (max): 18mm *Notes*: Complete hinged buckle, folded over. The quoted length value is for the object in the flexed position.
  24. Gloucester *Context*: Pit, period 1, Gilbert School site. SF GBS 859(C), A2033 F213 *Inventory No.*: 363 *Reference*: HURST 1986: 235 & Fig.6.32 *Dimensions*: L (max): 53mm, W (at the bar of the buckle): 16mm *Notes*: Brass buckle and hinged plate. Complete, but folded over at the hinge.
  25. Hod Hill *Context*: not recorded *Inventory No.*: A54 *Reference*: BRAILSFORD 1962: 3 & Fig.3 *Dimensions (from scale drawing)*: L: 51mm, W (max, buckle bow): 19mm, W (plate): 13mm *Notes*: Flat cuirass buckle/hinge. All the elements are present.
  26. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.43A
  27. Hofheim *Context*: not recorded *Inventory No.*: 18306 *Reference*: RITTERLING 1913: Taf. XI, 12 *Dimensions (from scale photo)*: L: 48mm, W: 22mm *Notes*: Hinged buckle in a very corroded condition. The buckle bow is flexed backwards onto the plate.
  28. Hofheim *Context*: not recorded *Inventory No.*: 19517 *Reference*: RITTERLING 1913: Taf.XI,13 *Dimensions (from scale photo)*: L: 45mm, W: 18mm *Notes*: Complete hinged buckle, much corroded. The buckle bow has been flexed backwards.
  29. Kaiseraugst *Context*: Region 5, C, Period 2, t.a.q. AD 50 *Inventory No.*: 1967.4134; FK X06368 *Reference*: DESCHLER-ERB 1999: Taf.13, 165 *Dimensions*: L: 45mm, W: 16mm, Th: 5mm *Notes*: Hinged buckle where two rivets remain. The hinge appears to be a badly corroded mass. Weight: 4.15g.
  30. Kaiseraugst *Context*: Region 1, Insula 48, Period 5, t.a.q. AD 150 *Inventory No.*: 1967.18277; FK X07764 *Reference*: DESCHLER-ERB 1999: Taf.13, 166 *Dimensions*: L: 46mm, W: 18mm, Th: 3mm *Notes*: Complete hinge/buckle assembly. Two rivets remain in the fixed plate and one very misshapen one in the buckle plate. Weight: 6.33g.
  31. Kaiseraugst *Context*: Region 1, Insula 49, undated *Inventory No.*: 1968.7487; FK A00122 *Reference*: DESCHLER-ERB 1999: Taf.13, 167 *Dimensions*: L: 45mm, W: 18mm, Th: 5mm *Notes*: Complete hinged buckle. All three rivets remain. Weight: 12.24g.
  32. Kaiseraugst *Context*: not recorded *Inventory No.*: 1907.1218b *Reference*: DESCHLER-ERB 1999: Taf.13, 168 *Dimensions*: L: 51mm, W: 18mm, Th: 2mm *Notes*: Complete hinged buckle; two of the three rivets remain. Weight: 7.06g.
  33. Kaiseraugst *Context*: Region 1, Insula 31, Period 2, t.a.q. AD 50 *Inventory No.*: 1961.3825; FK X00244 *Reference*: DESCHLER-ERB 1999: Taf.13, 170 *Dimensions*: L: 41mm, W: 15MM, Th: 2mm *Notes*: Hinged buckle, where the bow of the buckle has become lost. All three rivets remain in position. Weight: 5.45g.
  34. Lincoln *Context*: Water Tower site *Inventory No.*: 759.10 *Reference*: WEBSTER 1949: 58 & Fig.4, 2 *Dimensions (from scale drawing)*: L: 52mm, W: 22mm *Notes*: Complete hinged buckle, but with only a single rivet in place.
  35. London *Context*: Found at the site of the Bank of England, 1936 *Inventory No.*: 14,283 *Reference*: WEBSTER



**Fig.3:** Category A (hinged buckles) of Type ii (contd.). Scale 1:2

- 1958: 86 & 87, Fig.6, 159 *Dimensions (from scale drawing):* L: 56mm, W: 20mm *Notes:* Hinged strap and hinged buckle arrangement in position on a chest plate. This clearly shows the relationship between these two hinges. Hinges are made of sheet brass, fixed with copper rivets to the iron plate beneath.
36. Longthorpe *Context:* praetentura, Pit 8, between barracks. *Inventory No.:* 73 II 8 *Reference:* FRERE & STJOSEPH 1974: 46 & 47, Fig.25, 16 *Dimensions (from scale drawing):* L: 55mm, W (max): 20mm *Notes:* Hinged buckle combination from the top part of the breastplate/backplate. Although drawn flat, the original was found in a flexed position.
37. Longthorpe *Context:* Building X, Pit 8 *Inventory No.:* 69 vi 3 *Reference:* FRERE & STJOSEPH 1974: 48 & 47, Fig.26, 22 *Dimensions:* L: 27mm, W: 22mm *Notes:* Hinged buckle from top part of breastplate. Complete, with all the rivets in position. Dimension is given for the length in a flexed position, as drawn.
38. Magdalensburg *Context:* Room O/5 *Inventory No.:* not recorded *Reference:* DEIMAL 1986: 288 & Taf.76/11 *Dimensions:* L: 43mm, W: 15mm. *Notes:* Complete hinged buckle assembly.
39. Neuss *Context:* not recorded *Inventory No.:* 3046 *Reference:* SIMPSON 2000: 75 & 151, Pl.25, 6 *Dimensions (from scale drawing):* L (excluding buckle pin): 36mm, W: 15mm *Notes:* Cuirass hinged buckle. The D-loop has been lost, but the tongue is still in position as are all three rivets.
40. Newstead *Context:* not recorded *Inventory No.:* not recorded *Reference:* CURLE, 1911, Pl. LXXXI, 9 *Dimensions (from scale photo):* L: 43mm, W: 18mm *Notes:* Almost complete hinged buckle fitment, only the D-bow is missing. One of the rivets is domed; the other two appear flatter.
41. Oberstimm *Context:* not recorded *Inventory No.:* 1975.18 *Reference:* SCHÖNBERGER 1978: 170 & Taf.20, B105 *Dimensions:* L: 46mm, W (buckle): 19mm, W (strap): 17mm *Notes:* Intact hinged buckle. Three rivets still in place with the rivet holes decorated with incised concentric circles on the fixed plate.
42. Oberstimm *Context:* not recorded *Inventory No.:* 1975.170 *Reference:* SCHÖNBERGER 1978: 169 & Taf.20, B104. *Dimensions:* L: 44mm, W: 16mm. *Notes:* The buckle bow, pivot bar and tongue are missing. The two large rivets on one leaf are not placed carefully, perhaps a poor repair? One other small rivet remains, on the buckle plate itself.

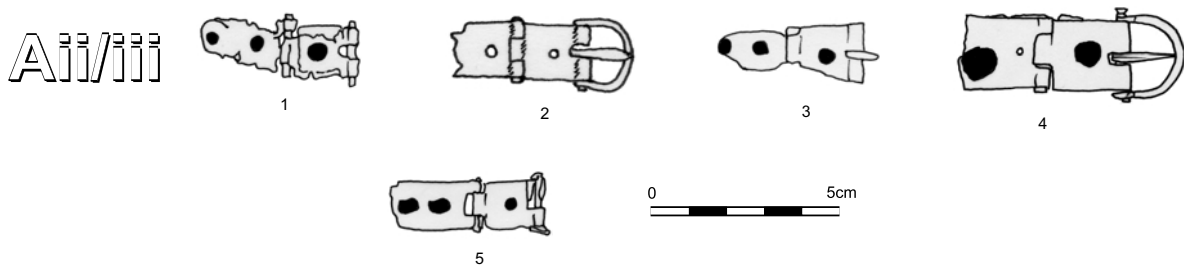
43. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 23 *Dimensions (from scale drawing)*: L: 52.5mm, W: 19.5mm *Notes*: Complete hinged buckle set.
44. Richborough *Context*: as above *Inventory No.*: not recorded *Reference*: BUSCHE-FOX 1932:, 15, 82 & Pl. XII, Fig.2, 40 *Dimensions (from scale photo)*: L: 49mm, W: 18mm *Notes*: a complete hinged buckle fitment.
45. Risstissen *Context*: not recorded *Inventory No.*: 3047 *Reference*: ULBERT 1959: 106 & Taf.61, 10. *Dimensions (from scale drawing)*: L: 51mm, W: 19mm *Notes*: Complete hinged buckle fitment made from sheet bronze, with two of the original three rivets remaining. Punched ring decorations surround the rivet holes.
46. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 25, 61 & Taf.4, 74 *Dimensions*: L: 57mm, W: 14mm *Notes*: Intact hinged buckle. There are three rivets with irregular heads. A small piece of iron plate adheres to the back of the long leaf. There are also traces of a second hinge, which shares a rivet with the fixed plate of the hinged buckle.
47. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R 68/22 *Reference*: ULBERT 1959: 25, 61 & Taf.4, 75 *Dimensions*: L: 52mm, W: 15mm *Notes*: Complete hinged buckle, still attached to the iron plate armour. All three rivets are in place. The strap portion is made from bronze sheet.
48. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R 68/22 *Reference*: ULBERT 1959: 25, 61 & Taf.4, 76 *Dimensions*: L: 54mm, W: 14mm. *Notes*: Complete hinged buckle of bronze sheet, still attached to iron armour plate. The fixed hinge plate has broken across. But all three rivets survive.
49. Risstissen *Context*: Not recorded, from the 'Schwarz collection'. *Inventory No.*: not recorded *Reference*: ULBERT 1959: 41 & Taf.23, No.341 *Dimensions*: L: 52mm, W: 15mm. *Notes*: Hinged buckle, missing only the two rivets on the portion normally attached to the armour plate.
50. Risstissen *Context*: Not recorded, from the 'Schwarz collection'. *Inventory No.*: not recorded *Reference*: ULBERT 1959: 41 & Taf.23, No.342 *Dimensions*: L: 54mm, W: 15mm *Notes*: Hinged buckle, missing only one of the two rivets on the portion normally attached to the armour plate.
51. Rottweil *Context*: Find site 15 *Inventory No.*: ZV 632/40 *Reference*: PLANCK 1975: 17 & Taf.34, 11 *Dimensions*: L: 42mm *Notes*: A complete hinged buckle assembly, apart from the bow to the buckle. All three rivets remain *in situ*.
52. St.Alban's *Context*: Insula XXII, Building 1B, floor sealing Flavian gully. AD 100-130 *Inventory No.*: 55 A XII 12 *Reference*: FRERE 1984: 33 & Fig.11, 74 *Dimensions*: L:43mm, W (max): 15mm *Notes*: Hinged buckle, hoop, pivot bar and pin missing. Lower part attached to girdle or shoulder plate by two rivets, of which one survives. There is an additional hole near the hinge in the buckle plate, perhaps a repair.
53. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1979: 67 & 68, Fig.29, 45 *Dimensions (from scale drawing)*: L: 43mm, W: 14mm *Notes*: Hinged buckle assembly, where the buckle pin and bow are missing. All three rivets are intact, however.
54. Windisch *Context*: not recorded *Inventory No.*: 1645 *Reference*: UNZ 1973: Abb.9, 86 *Dimensions*: L: 30mm *Notes*: An almost complete hinged buckle fitment, although flexed and somewhat distorted. A part of the fixed plate appears to have broken away.
55. Windisch *Context*: Find spot No.24, by *via Decumana*, Tribune's house? *Inventory No.*: 28:2681 *Reference*: UNZ & DESCHLER-ERB 1997: 28 & Taf.31, 629 *Dimensions (from scale drawing)*: L: 54mm, W: 19mm *Notes*: Hinged buckle, intact, still attached to the upper right chest plate.
56. Windisch *Context*: Excavation of 1923, from the rubbish dump. *Inventory No.*: 23:?? *Reference*: UNZ & DESCHLER-ERB 1997: 29 & Taf.31, 636 *Dimensions (from scale drawing)*: L: 54mm, W (max): 20mm, W (plate): 14mm *Notes*: Hinged buckle fitment, with all three rivets intact and still attached to the armour. This item also retains a hinged strap and a decorative rivet (see sections 'B' and 'J').
57. Windisch *Context*: rubbish dump, find spot No.41 *Inventory No.*: 4105 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 732 *Dimensions (from scale drawing)*: L: 58mm, W: 21mm *Notes*: Complete hinged buckle. The two rivets may be replacements/repairs.
58. Windisch *Context*: rubbish dump *Inventory No.*: 4113 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 733 *Dimensions (from scale drawing)*: L: 63mm, W: 21mm *Notes*: Complete hinged buckle assembly. Only one rivet (on the buckle strap) remains.
59. Windisch *Context*: rubbish dump *Inventory No.*: 4104 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 734 *Dimensions (from scale drawing)*: L: 54mm, W: 21mm *Notes*: Complete hinged buckle fitment. Two rivets remain (possibly replacements) and the holes are decorated with punched concentric rings.
60. Windisch *Context*: rubbish dump *Inventory No.*: 4111 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 735 *Dimensions (from scale drawing)*: L: 54mm, W: 21mm



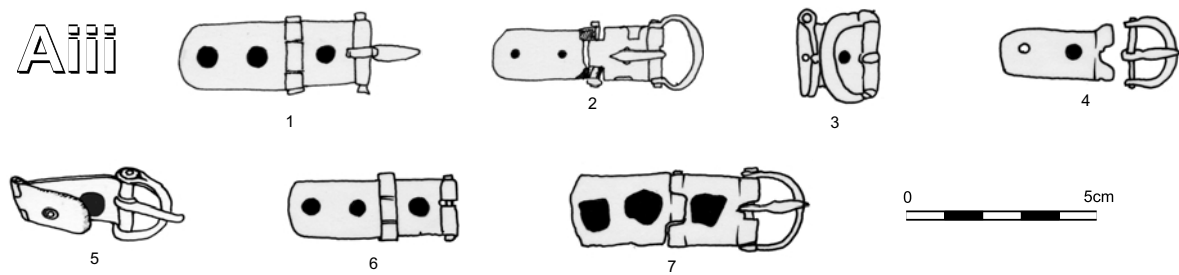
- Notes:* Complete hinged buckle fitment. Two dome-headed rivets remain.
61. Windisch *Context:* rubbish dump *Inventory No.:* 42:181 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 736 *Dimensions (from scale drawing):* L: 60mm, W: 22mm *Notes:* Complete hinged buckle fitment. Only one rivet remains and this may be a repair.
62. Windisch *Context:* not recorded *Inventory No.:* None *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 737 *Dimensions (from scale drawing):* L: 64mm, W: 22mm *Notes:* Complete hinged buckle fitment. Two rivets remain, one in each leaf.
63. Windisch *Context:* Arsenal excavation, find spot No.3 *Inventory No.:* 38:443 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 739 *Dimensions (from scale drawing):* L: 55mm, W: 19mm *Notes:* Complete hinged buckle fitment, of which the buckle sheet retains a single rivet. An unusual feature is that the buckle plate has been folded from each end towards the centre, to meet beneath the rivet.
64. Windisch *Context:* corner of *Principia* outer courtyard, find spot No.11 *Inventory No.:* 34:1284 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 740 *Dimensions (from scale drawing):* (plates only) L: 42mm, W: 20mm *Notes:* Complete hinged buckle assembly. Only two rivets (one in each leaf) remain. The bow is flexed backwards.
65. Windisch *Context:* centre of courtyard of the *Principia*? Find spot No.6 *Inventory No.:* 36:1031 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 741 *Dimensions (from scale drawing):* L: 60mm, W (at buckle bar): 18mm *Notes:* Almost complete hinged buckle, lacking the bow. Three rivets remain, almost certainly replacements. Folding the sheet in towards the centre, to meet beneath the rivet has formed the buckle plate.
66. Windisch *Context:* not recorded *Inventory No.:* None *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 742 *Dimensions (from scale drawing):* L: 52mm, W: 20mm *Notes:* Complete hinged buckle fitment. There may be traces of inscribed lines parallel to the edges. All three rivets (domed) remain in place.
67. Windisch *Context:* not recorded *Inventory No.:* 194 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 743 *Dimensions (from scale drawing):* L: 56mm, W: 22mm *Notes:* Complete hinged buckle assembly. Rivet holes carry the punched ring decoration around them. Two rivets remain, one in each plate.
68. Windisch *Context:* corner of the main courtyard of the *Principia*. *Inventory No.:* 36:3618 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 744 *Dimensions (from scale drawing):* L: 60mm, W (at buckle bar): 24mm *Notes:* Complete hinged buckle fitment; one rivet remains in the buckle leaf while the other leaf has three small rivet holes, placed in line - and a very small hole near to the end; possibly intended repairs?
69. Windisch *Context:* eastern part of the rubbish dump. *Inventory No.:* 23:442 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 747 *Dimensions (from scale drawing):* L: 44mm, W: 12.5mm *Notes:* Complete hinged buckle fitment, although the flat copper alloy sheet is bent upwards. One rivet remains in the buckle plate.
70. Windisch *Context:* east corner of the outer colonnade of the *Principia* *Inventory No.:* 35:890 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 787 *Dimensions (from scale drawing):* L: 28mm, W: 20mm *Notes:* A hinged buckle fitment. This fitment is in the flexed position.
71. Woodcock Hall *Context:* a small plateau, bordered by a stream on two sides. *Inventory No.:* 202 *Reference:* BROWN 1986: 44-5 & Fig.28, 202 *Dimensions (from scale drawing):* L (max): 58mm, W (at buckle bar, max): 17mm *Notes:* Complete hinged buckle fitment, lacking only the D-bow of the buckle. Both plates are decorated with pairs of parallel lines, near the long edges of each plate.
72. Woodcock Hall *Context:* a small plateau bordered by a stream on two sides *Inventory No.:* 205 *Reference:* BROWN 1986: 44-5 & Fig.28, 205 *Dimensions (from scale drawing):* L (max): 59mm, W (max, at buckle bow): 18mm *Notes:* Very similar to the above, except that the hinge bar is missing in this case.

### Aii/iii (Fig.4)

1. Colchester (Sheepen) *Context:* Period Ivb2, from site iii, layer 4, fine cobble surface *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 34 & 119, Fig.63, 23 *Dimen-*



**Fig.4:** Category A (hinged buckles) of Type ii/iii. Scale 1:2



**Fig.5:** Category A (hinged buckles) of Type iii. Scale 1:2

- sions*(from scale drawing): L: 41mm, W (max) 16mm. *Notes:* Hinged buckle, badly damaged. The bow and tongue are missing, but both pivot bars and the three rivets are still in place.
2. Ristissen *Context:* Beneath the soil. *Inventory No.:* R 68/40 *Reference:* ULBERT 1959: 23, 61 & Taf.3, 46 *Dimensions:* L: 47mm, W: 15mm, W (buckle): 19mm. *Notes:* Hinged buckle where the fixed plate has broken. No rivets are present.
  3. Usk *Context:* Context: 69 XD, 3rd century well *Inventory No.:* 69 XD *Reference:* MANNING *et al.*, 1995: 10 & Fig.4, 8 *Dimensions:* L: 42mm. *Notes:* Though the buckle loop is missing, the tongue remains. The drawing is flat, but the fastening, of copper alloy, has actually corroded together in a folded position.
  4. Windisch *Context:* rubbish dump *Inventory No.:* 4102 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 745 *Dimensions (from scale drawing):* L: 59mm, W: 24mm. *Notes:* Incomplete hinged buckle fitment, the end of the fixed plate being missing. Both remaining rivets are large and are probably repairs.
  5. Windisch *Context:* Pit within a barrack block of 21st legion, AD 45-69 *Inventory No.:* not recorded *Reference:* DESCHLER-ERB 1998: 4 & Fig.4, 8 *Dimensions (from scale drawing):* L: 40mm, W (max): 16mm. *Notes:* Almost complete hinged buckle fitment, lacking only the buckle bow. Two of the rivets may be poor repairs.
- Aiii**
1. Chichester *Context:* L.7, 8b *Inventory No.:* not recorded *Reference:* DOWN 1974: 141 & Fig.8.15, No.21 *Dimensions (from scale drawing):* L (overall): 63mm, L (excluding buckle pin): 50mm, W (max): 21mm. *Notes:* Bronze hinged buckle, lacking the D-loop to the buckle itself. All three rivets are in place.
  2. Chichester *Context:* X 129 *Inventory No.:* 359 *Reference:* DOWN 1981: 166 & Fig.8.30, No.4 *Dimensions (from scale drawing):* L (max): 54mm, W (max, buckle bow): 20mm, W (plate): 13mm. *Notes:* Complete hinged buckle assembly. Very well made with the rivet holes decorated with incised punched concentric circles.
3. Kaiseraugst *Context:* Region 1, Insula 22, Period 2, t.a.q. AD 50 *Inventory No.:* 1988.51.C05030 *Reference:* DESCHLER-ERB 1999: Taf.13, 169 *Dimensions:* L: 21mm, W: 23mm, Th: 4mm. *Notes:* Buckle portion of a hinged buckle assembly, a part of the fixed leaf having broken away. The buckle pin is also missing. Weight: 6.54g. Aiii-3
  4. Kaiseraugst *Context:* Region 1, Insula 30, Period 1, t.a.q. AD 50 *Inventory No.:* 1962.6731; FK X02027 *Reference:* DESCHLER-ERB 1999: Taf.13, 186 *Dimensions:* L: 41mm, W: 14mm, Th: 3mm. *Notes:* A hinged buckle, where the buckle and the fixed plate remain, but the actual buckle plate is missing. Only a single rivet remains and the rivet holes are decorated with circular punched rings. Weight: 4/64g.
  5. Mainz *Context:* 'Pav.3 *Inventory No.:* 10 *Reference:* BEHRENS 1913-14: Abb.2, 8 *Dimensions:* W: 23mm. *Notes:* Complete hinged buckle assembly. The hinge is flexed, and the plates retain at least two rivets. One of these has a large head. The fixed plate also has but a single rivet (see Axii).
  6. Richborough *Context:* Area VIII, in a deposit of heavily burnt material overlying a clay floor about 12-ins thick. It lay north of the main E/W road, immediately to the W of the defences of the 3rd century earth fort. Dated AD 55-75 *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(g) *Dimensions (from scale photo):* L: 44mm, W: 17mm. *Notes:* Hinged buckle fitment, with all three rivets intact, but lacking the buckle bow and pin.
  7. Windisch *Context:* rubbish dump *Inventory No.:* 6868 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 738 *Dimensions (from scale drawing):* L: 62mm, W: 21mm. *Notes:* Complete hinged buckle fitment. Three large and irregular rivets remain, probably repairs.
- Aiv**
1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.18, Fig.40 *Dimensions (from scale drawing):* L: 69mm, W (max): 20mm. *Notes:* Hinged buckle, of which one plate is of an ornate (lobate) form.

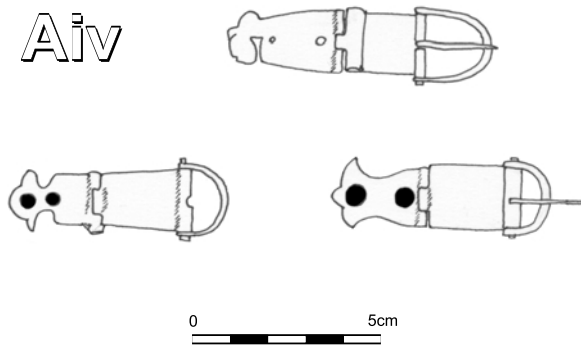


Fig. 6: Category A (hinged buckles) of Type iv. Scale 1:2

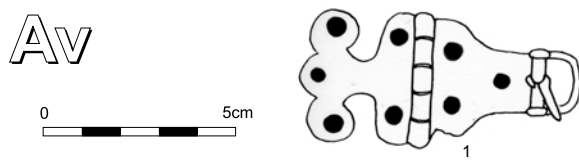


Fig. 7: Category A (hinged buckle) of Type v. Scale 1:2

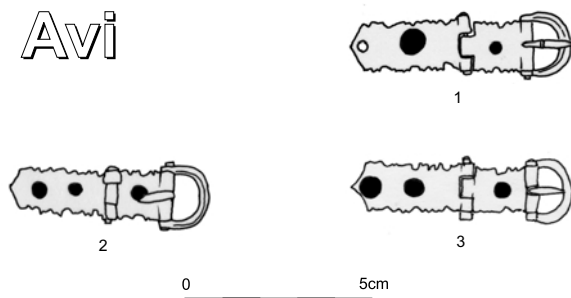


Fig. 8: Category A (hinged buckles) of Type vi. Scale 1:2

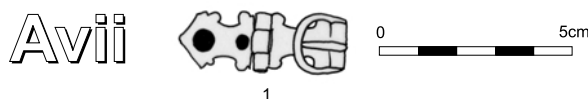


Fig. 9: Category A (hinged buckle) of Type vii. Scale 1:2

2. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.18, Fig.41 *Dimensions (from scale drawing)*: L: 56mm, W (at buckle bar): 21.5mm *Notes*: Similar to the above, but the buckle has lost the tongue. The flat plate is of an even more ornate form and retains two rivets.
3. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.18, Fig.44 *Dimensions (from scale drawing)*: L (overall): 67mm, L (excluding pin): 57mm, W (max, at buckle bar): 21mm *Notes*: Similar to the above (although here the buckle tongue is intact). Both rivets survive.

### Av

1. Baginton *Context*: Period 2, dated 64-70 AD. *Inventory No.*: not recorded *Reference*: HOBLEY 1973: Fig.23, 36 *Dimensions (from scale drawing)*: L: 73mm, W: 35mm *Notes*: An unusual arrangement. The plate that is normally attached to the armour is of a very ornate lobate form, normally seen on the shoulder guards. The buckle portion has three rivets, while the lobate plate has the normal five rivets. All the rivets appear to be flat-headed. There is also a considerable portion of armour plate attached to the rear of the fitment.

### Avi

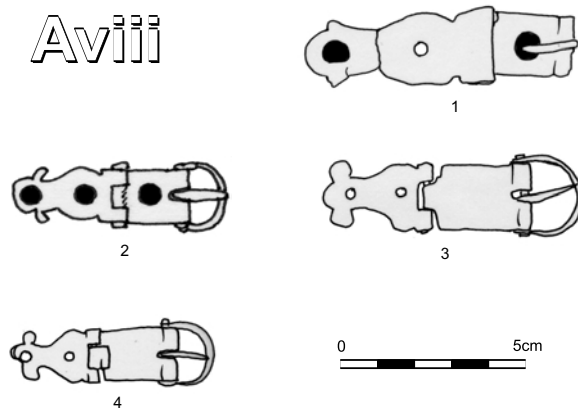
1. Kaiseraugst *Context*: Region 17, D, Period 2, t.a.q. AD 50. *Inventory No.*: 1979.7336; FK B03717 *Reference*: DESCHLER-ERB 1999: Taf.13, 164 *Dimensions*: L: 57mm, W: 17mm, rivet D: 4 & 8mm *Notes*: Complete hinged buckle. Two rivets remain. Both leaves of the hinge are decorated with parallel pairs of inscribed lines. Weight 8.0g.
2. Kalkriese *Context*: not recorded *Inventory No.*: not recorded *Reference*: FRANZIUS 1995: 76 & 79, Abb.7, 5 *Dimensions (from scale drawing)*: L: 52mm, W: 17mm *Notes*: A complete hinged buckle; the edges of the plates are cut in a 'wavy' form and a series of decorative scored lines cross the plates from side to side. All three rivets remain in place.
3. Windisch *Context*: not recorded *Inventory No.*: 1642 *Reference*: UNZ 1973: 22 & Abb.9, 90 *Dimensions*: L: 58mm *Notes*: a complete hinged buckle fitment. All three rivets remain in place and are dome-headed. The buckle plates are decorated with inscribed parallel pairs of lines across the width of each plate and in addition the plate edges have been cut in a 'dog-tooth' manner.

### Avii

1. Kalkriese *Context*: not recorded *Inventory No.*: not recorded *Reference*: FRANZIUS 1995: 76 & 79, abb.7, 3 *Dimensions (from scale drawing)*: L: 42mm, W: 15mm *Notes*: A hinged buckle, where the static plate is of a somewhat ornate form. The buckle is flexed completely. There are two disc-headed rivets in the static plate, of different sizes.

### Aviii

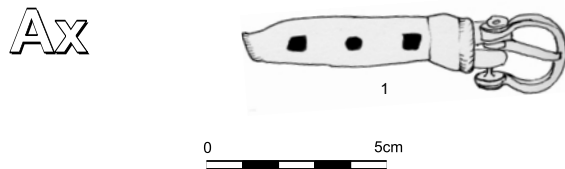
1. Colchester (Sheepen) *Context*: Period III, AD 44-9 (Claudian), Feature 138 – latrine *Inventory No.*: not recorded *Reference*: NIBLETT 1985: 32 & 118, Fig.62, 15 *Dimensions (from scale drawing)*: L: 73mm, W (max): 21mm *Notes*: Hinged buckle. The D-shaped loop is absent. The flat plate (attached to the armour) is of an ornate form, almost lobate. This retains a single rivet. The buckle bow is missing, but both the pivot bar and the tongue are present, although the latter is flexed backwards.
2. Risstissen *Context*: unstratified *Inventory No.*: R 66/244 *Reference*: ULBERT 1959: 23, 59 Taf.3, 44 *Dimensions*:



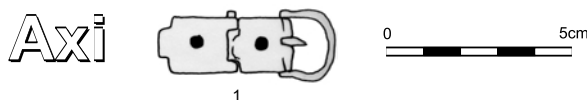
**Fig. 10:** Category A (hinged buckles) of Type viii. Scale 1:2



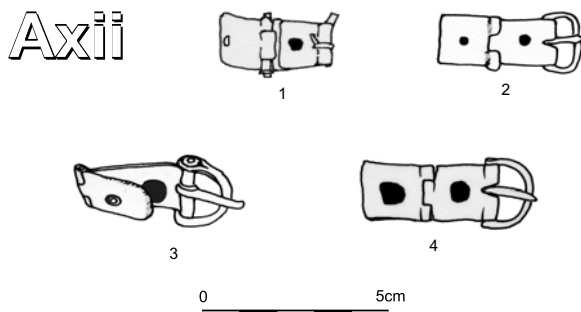
**Fig. 11:** Category A (hinged buckle) of Type ix. Scale 1:2



**Fig. 12:** Category A (hinged buckle) of Type x. Scale 1:2



**Fig. 13:** Category A (hinged buckle) of Type xi. Scale 1:2



**Fig. 14:** Category A (hinged buckles) of Type xii. Scale 1:2

L: 57mm, W (plate): 14mm, W (buckle): 19mm. *Notes:* A hinged buckle, very well made from bronze sheet. The left-hand leaf is of a very ornate form, almost lobate in fact. All three rivets survive.

3. Sisak *Context:* not recorded *Inventory No.:* not recorded *Reference:* HOFFILLER 1912: Sl.11, 2 *Dimensions:* L: 69mm *Notes:* A hinged buckle of an unusual design, where the fixed plate has a lobate form.

4. Windisch *Context:* rubbish dump *Inventory No.:* 4115 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 746 *Dimensions (from scale drawing):* L: 54mm, W: 17mm *Notes:* Hinged buckle of an ornate design. The leaf normally fixed to the armour plate is of lobate form.

#### Aix

1. Waddon Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* WEBSTER 1960b: 104 & 100, Fig.9, 53 *Dimensions (from scale drawing):* L: 53mm, W (max., at buckle bow): 16mm *Notes:* Hinged buckle fitment that lacks the pin to the buckle portion. The rivets are also missing. The end of the fixed plate appears to have been scalloped as a decorative feature.

#### Ax

1. Volubilis *Context:* not recorded *Inventory No.:* 5287 *Reference:* BOUBE-PICCOT 1994: 61 & Pl.3, 36 *Dimensions:* L (total): 88mm, L (plate): 73mm, W (plate) 11mm, Th (plate): 2mm, L (buckle): 27mm, W (buckle): 21mm, Th (buckle): 3mm. *Notes:* A very large hinged buckle, which was fixed to the armour plate with three rivets. The buckle itself is of a square cross section, maintained in position by a pivot bar whose ends were domed over. The metal of the fixed plate is thicker than normal and is not formed by folding the metal sheet in half, but only part of the way.

#### Axi

1. Aislingen *Context:* Not recorded *Inventory No.:* 6692 *Reference:* ULBERT 1959: 93 & Taf.17, 10 *Dimensions (from scale drawing):* L:38mm, W: 13mm *Notes:* Complete hinged buckle assembly. The portion normally attached to the armour plate appears to have a second hinge at the 'free' end.

#### Axii

1. Chichester *Context:* A94 *Inventory No.:* 510 *Reference:* DOWN, 1989, Fig.27.5, 84 *Dimensions (from scale drawing):* W: 16mm *Notes:* Almost complete hinged buckle assembly, although much damaged and distorted. Two rivets remain, but the buckle D-bow is missing.
2. Mainz *Context:* 'Excavation area 3' *Inventory No.:* 11 *Reference:* BEHRENS 1913-14: Abb.2, 7 *Dimensions:* W: 17mm *Notes:* Complete hinged buckle fitment, which retains two rivets.
3. Mainz *Context:* 'Pav.3' *Inventory No.:* 10 *Reference:* BEHRENS 1913-14: Abb.2, 8 *Dimensions:* W: 23mm *Notes:* Complete hinged buckle assembly. The hinge is flexed, and the plates retain at least two rivets. One of these has a large head. The fixed plate is also rounded at the end (see Aiii).
4. Site Windisch *Context:* trench at 'Neu Pavilions' site, 1906 *Inventory No.:* 337 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.33, 748 *Dimensions (from scale drawing):* L: 46.5mm, W: 13mm. *Notes:* Complete hinged buckle. Only one rivet in each leaf.

## Category 'B': Hinged Straps

### Contents

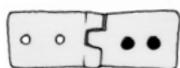
*Hinged straps from the following sites are included here:* Aislingen (DEU), Alcester (GBR), Augsburg-Oberhausen (DEU), Bad Deutsch-Altenberg (AUT), Banasa (MAR), Castleford (GBR), Chester (GBR), Colchester (GBR), Corbridge (GBR), Dangstetten (DEU), Exeter (GBR), Gloucester (GBR), Goodnestone (GBR), Haltern (DEU), Hod Hill (GBR), Hofheim (DEU), Kaiseraugst (CHE), London (GBR), Longthorpe (GBR), Loughor (GBR), Magdalensberg (DEU), Moers-Asberg (DEU), Newstead (GBR), Oberstimm (DEU), Oberwinterthur (CHE), Rheingönheim (DEU), Richborough (GBR), Rissstissen (DEU), Svistov (BUL), Taunton (GBR), Usk (GBR), Waddon Hill (GBR), Windisch (CHE)

### Bi

1. Augsburg-Oberhausen *Context:* not recorded *Inventory No.:* not recorded *Reference:* HÜBENER 1973: Taf.16, 27 *Dimensions (from scale drawing):* L (Approx.): 58mm, W: 19mm *Notes:* Much damaged hinged strap assembly. There are no surviving rivets. On one side, the hinge plate does not appear to have been folded completely back.
2. Augsburg-Oberhausen *Context:* not recorded *Inventory No.:* not recorded *Reference:* HÜBENER 1973: Taf.16, 28 *Dimensions (from scale drawing):* L: 66mm, W: 18mm *Notes:* Hinged strap assembly. There are no surviving rivets and the hinge pivot bar is also missing. One of the plates is torn through about half way and the other is also damaged, but is more intact.
3. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. XVIII, 36 *Dimensions (from scale drawing):* L: 58mm, W: 26mm *Notes:* Hinged strap fastening, with a small piece of armour plate still attached. There are three rivets, two small and one large one.
4. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.56 *Dimensions (from scale drawing):* L (top): 42mm, W: 23mm, L (beneath): 28mm, W: 21mm *Notes:* A pair of strap fittings, which share at least one rivet. Both remain attached to a small piece of armour plate. Measurements for the armour plate are not included and those quoted for the underlying plate refer only to the visible portion.
5. Castleford *Context:* not recorded *Inventory No.:* 650 T10; CN29; SF2380(C); 2 *Reference:* COOL & PHILO 1998: 68 & Fig.21, 222 *Dimensions:* L (free): 28mm, W: 14mm,; (fixed) 25mm, W: 18mm *Notes:* Hinged strap fitting. One rivet is missing from the fixed section of the hinge, which has been detached from its iron plate.
6. Colchester *Context:* Lion walk excavation, *intervallum* road west of the ditches and bordering the eastern sides of Claudian buildings, sealed beneath pre-Boudiccan structures *Inventory No.:* not recorded *Reference:* CRUMMY 1977: 67 & 68, Fig.2, 6 *Dimensions:* L: 55.5mm, W (at the hinge): 14.5mm *Notes:* Hinge made of sheet bronze. Only two rivet holes, one of which retains a massive rivet, described as a clenched copper alloy nail. Repair?
7. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site i, Feature 102. Large rubbish pit, layers 2, 3, 3a and 4 *Inventory No.:* not recorded *Reference:* NIBLETT (1985): 35 & 120, Fig.64, 33 *Dimensions (from scale drawing):* L: 48mm, W: 15mm *Notes:* As above, but in a rather more damaged condition.
8. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site i, Feature 153. Large rubbish pit cut into an earlier gravel pit. *Inventory No.:* not recorded *Reference:* NIBLETT (1985): 36 & 122, Fig.65, 58 *Dimensions (from scale drawing):* L (plate only, excluding armour): 38mm, W: 14mm *Notes:* Hinge, one portion of which has bro-



i Indeterminate, plate ends do not survive, two rivets



ii Square ended fixed plates, one or two rivets in each leaf



iii Round ended fixed plate/s, two rivets in line



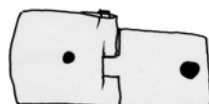
iv 'Fleur-de-lys' shaped plate or plate with curved sides



v At least one lobate-form plate



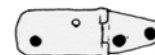
vi Indented ('saw tooth') edges to one or both plates



vii Square ended fixed plate, single rivet in each plate

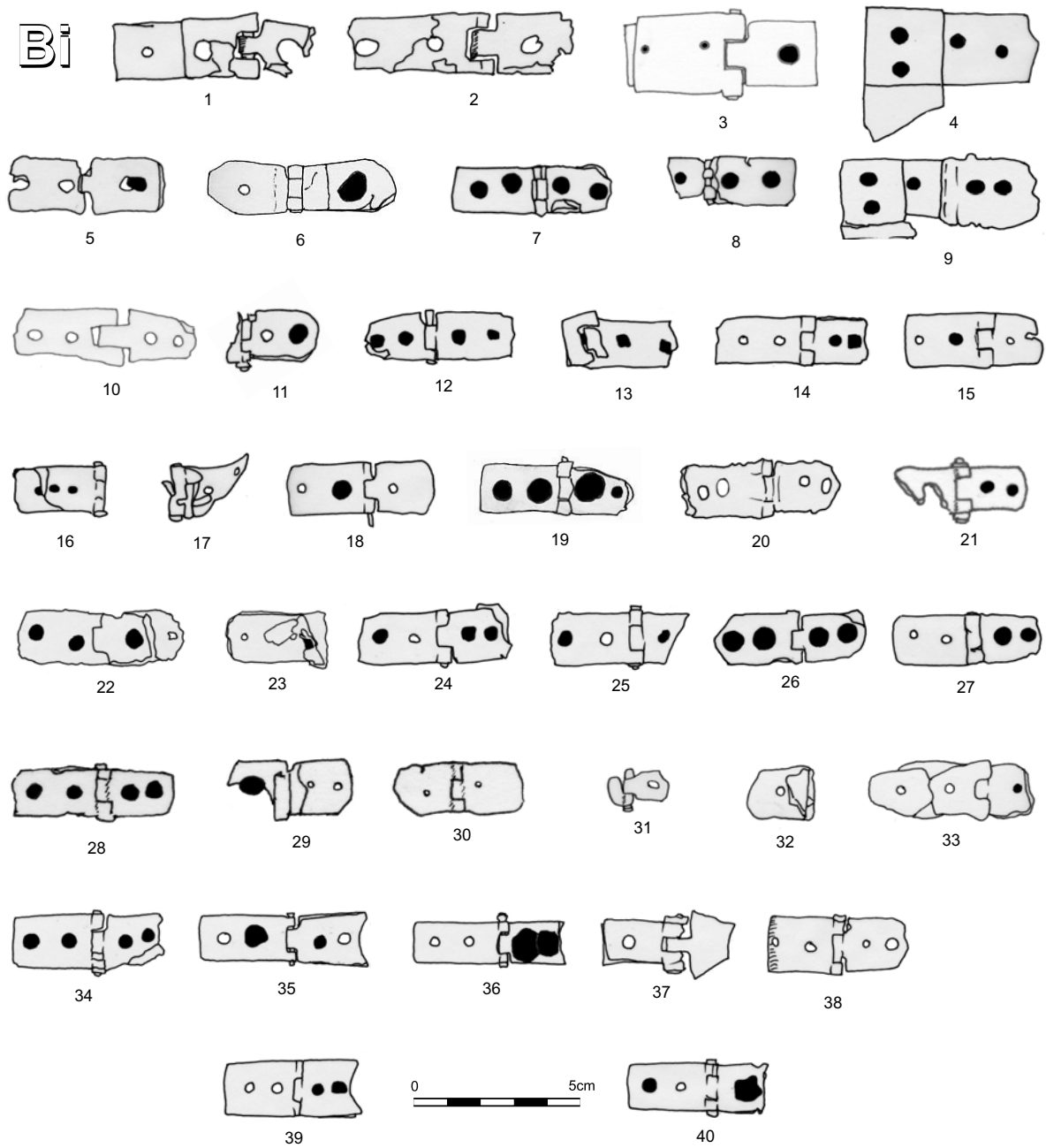


viii Square ended fixed plates, two rivets placed side by side in at least one plate



ix Triangular-form plate

- ken through the plate. Two rivets are in place on the complete leaf, but only one on the other side. Still attached to the hinge is a portion of the armour plate.
9. Corbridge *Context*: As above *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 31, Fig.31 *Dimensions (from scale drawing)*: L: 56mm, W (approx.): 22mm *Notes*: A damaged hinge combination from Cuirass 2 (Type-A) collar assembly. These two hinges share a common pair of rivets, but one hinge has an additional rivet.
  10. Dangstetten *Context*: find group 1302 *Inventory No.*: 1302, 3 *Reference*: FINGERLIN 1998: 181 & 390 *Dimensions*: L: 108mm, W: 35mm *Notes*: Hinged strap fitment, or possibly just a hinge. There are four rivet holes, but no rivets survive.
  11. Hofheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: RITTERLING 1904: Taf. III, 6 *Dimensions*: L: 26mm *Notes*: Broken hinge; the leaf is rounded at the end and retains both rivets.
  12. Kaiseraugst *Context*: Region 16, D, Period 3, t.a.q. AD 70/75 *Inventory No.*: 1979.16697; FK B03730 *Reference*: DESCHLER-ERB 1999: Taf.14, 202 *Dimensions*: L: 44mm, W: 16mm, Th: 4mm *Notes*: A complete hinged fitment, retaining all four rivets. Weight: 6.27g.
  13. Kaiseraugst *Context*: Region 1, Insula 22, undated *Inventory No.*: 1988.51.C04886 *Reference*: DESCHLER-ERB 1999: Taf.14, 203 *Dimensions*: L: 34mm, W: 15mm, Th: 2mm *Notes*: A broken hinged fitment, one leaf of which is badly damaged. Three rivets remain, which appear to be angular in shape. Weight: 7.00g.
  14. Kaiseraugst *Context*: Region 1, Insula 22, Period 5, t.a.q. AD 150 *Inventory No.*: 1988.51.C05167.28 *Reference*: DESCHLER-ERB 1999: Taf.14, 206 *Dimensions*: L: 46mm, W: 15mm, Th: 1mm *Notes*: A complete hinged fitting, which retains two rivets in the shorter leaf. Weight: 5.25g.
  15. Kaiseraugst *Context*: Region 1, Insula 22, undated *Inventory No.*: 1988.51.C04865.1.38b *Reference*: DESCHLER-ERB 1999; Taf.14, 207 *Dimensions*: L: 42mm, W: 17mm, Th: 4mm *Notes*: A hinge fitment, but with only one remaining rivet. One leaf has been torn through the second rivet hole. Weight: 6.25g.
  16. Kaiseraugst *Context*: Region 1, Insula 22, undated *Inventory No.*: 1988.51.C04865.1.36 *Reference*: DESCHLER-ERB 1999; Taf.14, 208 *Dimensions*: L: 23mm, W: 17mm, Th: 1mm *Notes*: A complete hinged strap fitment, though in a flexed position. All four rivets remain in place. Weight: 4.98g.
  17. Kaiseraugst *Context*: Region 1, Insula 22, Period 3, t.a.q. AD 70/75 *Inventory No.*: *Reference*: DESCHLER-ERB 1999; Taf.14, 209 *Dimensions*: L: 25mm, W: 17mm, Th: 1mm *Notes*: A very distorted and damaged hinge assembly. Weight: 2.23g.
  18. Kaiseraugst *Context*: Region 4, D, undated *Inventory No.*: 1966.9978; FK X05518 *Reference*: DESCHLER-ERB 1999; Taf.14, 210 *Dimensions*: L: 44mm, W: 15mm, Th: 1mm *Notes*: A hinge assembly; one leaf has only a single rivet hole while the other leaf retains only one of the original two rivets. One rivet hole appears to have a decorative ring around it. Weight: 4.09g.
  19. Longthorpe *Context*: SW of Building III, unstratified. *Inventory No.*: 68 X + *Reference*: FRERE & ST. JOSEPH 1974; 48 & Fig.26, 23. *Dimensions (from scale drawing)*: L: 46mm, W: 17mm *Notes*: All four rivets are in place, but three of them have very large heads. Iron hinge pin.
  20. Moers-Asberg *Context*: not recorded *Inventory No.*: not recorded *Reference*: BECHERT 1974: Abb.68, 5 *Dimensions*: L: 46mm *Notes*: Complete, though damaged, hinged strap assembly. There are no extant rivets, and the rivet holes are small and asymmetrically disposed in the plates.berg-01
  21. Oberstimm *Context*: not recorded *Inventory No.*: 1975.216 *Reference*: SCHÖNBERGER 1978; 169 & Taf.20, B90 *Dimensions*: L: 38mm, W: 13mm *Notes*: Once side of the hinge is broken through a rivet hole, while the other side retains both rivets. No decorations to the holes.
  22. Oberwinterthur *Context*: Field 205/11, House 20B, Layer 300, sub-level 6, AD 70/130-50 *Inventory No.*: FK 5077 *Reference*: DESCHLER-ERB 1996: 288, Taf.21, 309 *Dimensions*: L: 49mm, W: 16mm, Th: 5mm, weight: 8 g *Notes*: A complete, though damaged, flat hinge assembly. Three of the four rivets remain. The two holes in the larger leaf are asymmetrically punched.
  23. Oberwinterthur *Context*: Field 107/43, UK Baggerabtrag, Level 0, sub-level 5, AD 70/80 – 110/130 *Inventory No.*: FK 3206 *Reference*: DESCHLER-ERB 1996; 288-9, Taf.21, 310 *Dimensions*: L: 28mm, W: 17mm, Th: 5, weight: 4 g *Notes*: A complete hinged unit, although in a flexed position. There appears to be only a single rivet remaining.
  24. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969; Taf.34, 3 *Dimensions (from scale drawing)*: L: 45mm, W: 17mm *Notes*: Similar to the above, one rivet remains in one leaf and two in the other. Rivet holes have the punched decoration.
  25. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969; Taf.34, 5 *Dimensions (from scale drawing)*: L: 41mm, W: 18mm *Notes*: Hinged fitment. The larger leaf retains a single rivet, but the smaller has been broken across.



**Fig. 14:** Category B (hinged straps) of Type i. Scale 1:2

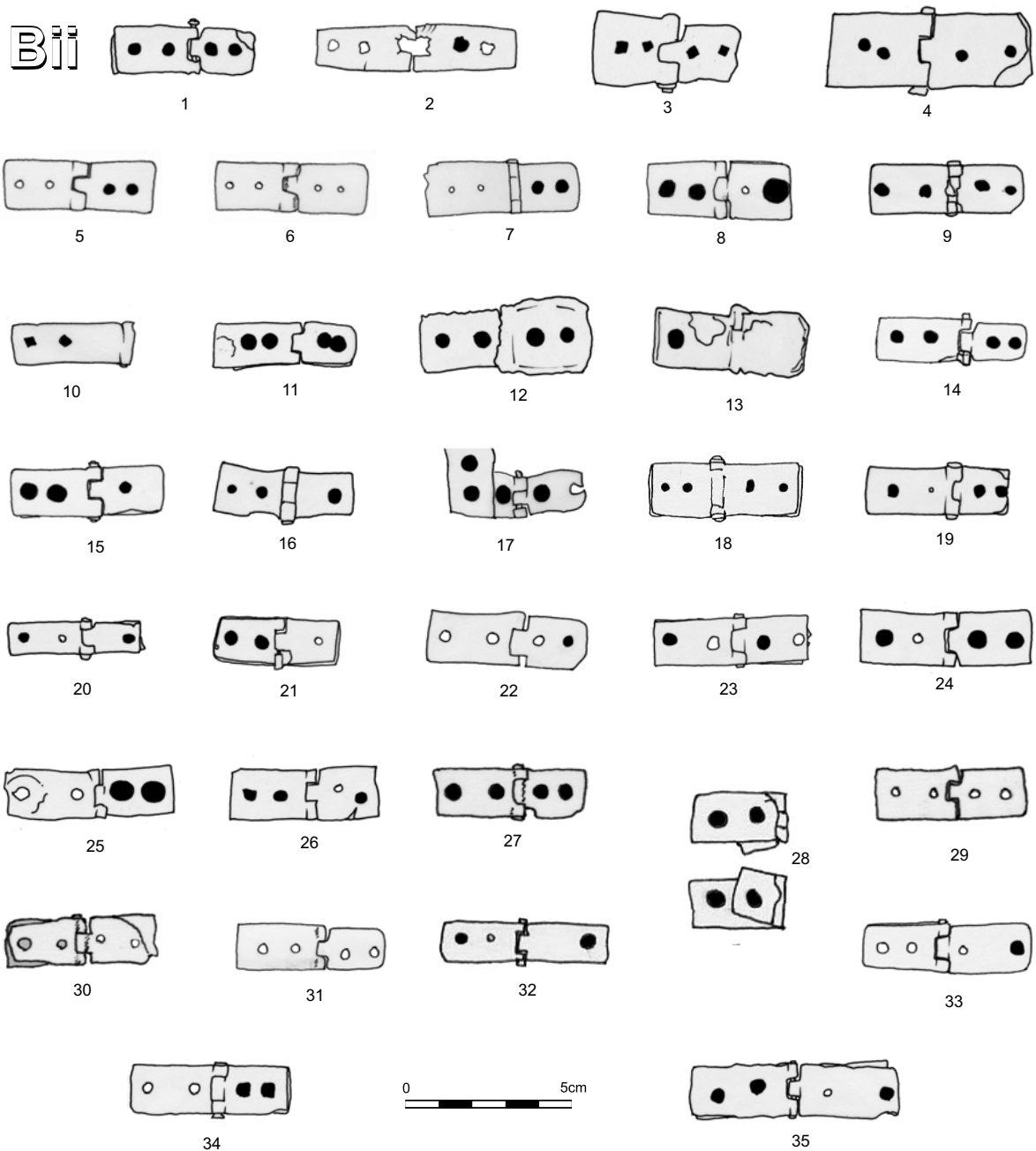
26. Richborough *Context:* Area VIII, in a deposit of heavily burnt material overlying a clay floor about 12-ins thick. It lay N of the main E/W road, immediately to the W of the defences of the 3rd century earth fort. Dated AD 55-75 *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(d) *Dimensions (from scale photo):* L: 45mm, W: 17mm *Notes:* Hinged strap fitment, damaged by essentially intact with four large domed rivets.
27. Richborough *Context:* as above *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(j) *Dimensions (from scale photo):* L: 44mm, W: 15mm *Notes:* Hinged strap fitment, slightly damaged. Two rivets remain in one leaf. The rivet holes are not symmetrically placed.
28. Risstissen *Context:* Fortress 1/2, level 158, immediately below the soil level. *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 25, 61 & Taf.4, 79. *Dimensions:* L: 48mm, W: 13mm. *Notes:* Hinge fitting of bronze sheet. There is some armour plate adhering to the hinge.

29. *Risstissen Context:* At a depth of 0-20cm beneath the surface soil level (level 22). *Fortress 1/2. Inventory No.:* R 66/71 *Reference:* ULBERT 1970: 23, Taf.3, 50 *Dimensions:* L: 37mm, W: 15mm *Notes:* Hinged fitting formed from bronze sheet. It remains attached to the armour plate by means of a single, large, rivet.
30. *Risstissen Context:* At a depth of 90-110 cm, level 73. *Inventory No.:* R 66/205 *Reference:* ULBERT 1970: 23, 58 & Taf.3, 51 *Dimensions:* L: 38mm, W: 16mm. *Notes:* Hinged fitment in a somewhat damaged condition. Made from sheet bronze, none of the rivets survive. Only one rivet hole in each leaf.
31. *Usk Context:* fortress pit, Manning 1989, 20 *Inventory No.:* HFN 3 *Reference:* MANNING 1993: 10 & Fig.4, 12 *Dimensions:* L: 18mm *Notes:* Copper alloy hinged fitting, much damaged.
32. *Usk Context:*, fortress pit, pre-Flavian, Manning 1989, 20 *Inventory No.:* HFN 3 *Reference:* MANNING 1993: 10 & Fig.4, 10 *Dimensions:* L: 21mm. *Notes:* A folded hinge fitting, which was associated with a scrap of leather.
33. *Usk Context:* fortress pit, pre-Flavian, Manning 1989 *Inventory No.:* HFN 3 *Reference:* MANNING 1993: 10 & Fig.4, 11 *Dimensions:* L: 49mm *Notes:* Copper alloy hinged fitting. One leaf retains a single rivet.
34. *Windisch Context:* Trench of 1955 *Inventory No.:* 55:?? *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 714 *Dimensions (from scale drawing):* L: 45mm W: 19mm *Notes:* Hinged strap assembly, one end of which is damaged. All four rivets are still intact.
35. *Windisch Context:* *via Principalis*, Find spot No.24. *Inventory No.:* 28:3589 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 716 *Dimensions (from scale drawing):* L: 50mm, W: 17mm *Notes:* The two rivets remaining may be repairs. One end of the hinge plate appears broken, or deliberately cut into a concave shape.
36. *Windisch Context:* part of the Baths complex, by the *via Principalis*. Find spot No.28 *Inventory No.:* 27:1662 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 718 *Dimensions (from scale drawing):* L: 45mm, W: 15mm *Notes:* One end of this hinge has broken off. This broken part contains two large rivets that may be repairs.
37. *Windisch Context:* rubbish dump *Inventory No.:* 4527 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 719 *Dimensions (from scale drawing):* L: 39mm, W: 20mm *Notes:* Broken hinge. One leaf is holed for a single rivet; the other leaf is badly damaged.
38. *Windisch Context:* rubbish dump? *Inventory No.:* 13:7?? *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 724 *Dimensions (from scale drawing):* L (approx.): 45mm, W: 17mm *Notes:* One end of this hinge is rounded off. There are no surviving rivets. The holes on the longer leaf are decorated with a single inscribed concentric line. This leaf is bent into a curve.
39. *Windisch Context:* Trench of 1914 *Inventory No.:* 14:71 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 729 *Dimensions (from scale drawing):* L: 41mm, W: 17mm *Notes:* One leaf of the hinge has a concave end and this leaf retains both rivets. The other leaf may be damaged and has no remaining rivets.
40. *Windisch Context:* eastern part of the rubbish dump. *Inventory No.:* 23:269 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 730 *Dimensions (from scale drawing):* L: 41mm, W: 16.5mm *Notes:* Hinge, of which one leaf may have broken. This leaf has a single large rivet, which may be a repair. The larger leaf also has a single rivet.

## Bii

1. *Aislingen Context:* not recorded *Inventory No.:* 6771a *Reference:* ULBERT 1959: 93, Taf.17, 18 *Dimensions (from scale drawing):* L: 42mm, W: 16mm *Notes:* Hinge assembly, with all rivets in place.
2. *Alcester Context:* unphased *Inventory No.:* CA23, AA II 1 & CA33, A IX 19 *Reference:* LLOYD-MORGAN in CRACKNELL & MAHANEY 1994: 182 & Fig.90, 135, 136 *Dimensions:* (left) L: 29.8mm, W (max): 14.2mm, (right) L: 31.5mm, W (max): 14.4mm *Notes:* Somewhat crudely made hinged fitment plate. Both these items seem to belong to the same plate, having broken through the fold of the sheet of metal. One rivet remains.
3. *Bad Deutsch-Altenberg Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.47 *Dimensions (from scale drawing):* L: 43mm, W: 22mm *Notes:* A hinged strap fitment. All four rivets, which are square-headed, remain together with a small portion of armour plate to which the fitment remains attached. Measurements for the fitment only.
4. *Bad Deutsch-Altenberg Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig. 55 *Dimensions (from scale drawing):* L (top): 34mm, W: 23mm, L (bottom): 62mm, W: 26mm *Notes:* A pair of hinged strap fitments, still attached to armour plate. Both rivets on the top leaf of the lower fitment pierce the plate of the second (underlying) fitment. Measurements are given for the fitments only and exclude the armour plate attached.
5. *Banasa Context:* not recorded *Inventory No.:* not recorded *Reference:* BOUBE-PICCOT 1994: 59 & Pl.3, 31 *Dimensions:* L: 45mm, W: 15mm *Notes:* Complete hinge strap fitment. Two rivets remain on one side, none of the other.
6. *Banasa Context:* not recorded *Inventory No.:* not recorded *Reference:* BOUBE-PICCOT 1994: 60 & Pl.3, 32 *Dimen-*





**Fig.15:** Category B (hinged straps) of Type ii. Scale 1:2

1. *Dimensions:* L: 44mm, W: 15mm *Notes:* Complete hinged strap fitting, although there are no surviving rivets.
7. Colchester *Context:* W. entrance area of Region 3/filling of Site 4 *Inventory No.:* not recorded *Reference:* HAWKES & HULL (1947): Pl. CII, No.15 *Dimensions (from scale drawing):* L: 46mm, W: 16mm *Notes:* Hinged strap fitting, retaining two rivets on one leaf.
8. Colchester *Context:* SF BKC 605(C), A116 (L17), in fortress ditch F39, Period 1 *Inventory No.:* 4186 *Reference:* CRUMMY (1983): 130 & Fig.145 *Dimensions:* L: 42mm, W: 17.5mm *Notes:* A hinged cuirass strap fitting, the two rivets on the side of the hinge are domed, the other side one rivet is missing and the other is flat headed and rough.
9. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site I, Feature 102. Large rubbish pit, layers 2, 3, 3a and 4. *Inventory No.:* not recorded *Reference:* NIBLETT (1985):, 35 & 120, Fig.64, 32 *Dimensions (from scale drawing):* L: 46mm, W: 17mm *Notes:* Hinge, one leaf of which is rectangular and the other of which has a rounded end. All four rivets remain.

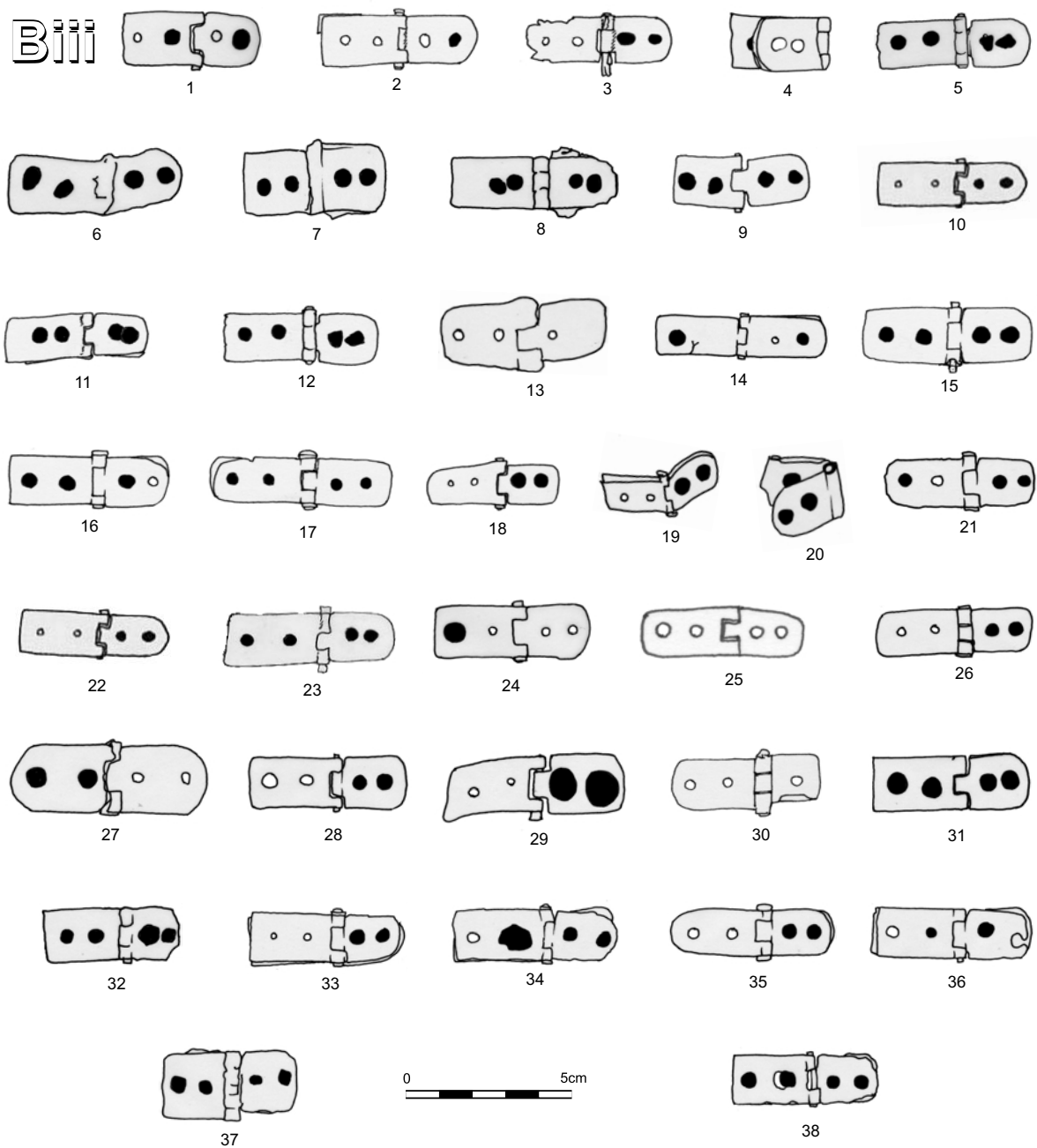
10. Colchester (Sheepen) *Context*: Period IVb, Neronian, Site I, Feature 153. Large rubbish pit cut into an earlier gravel pit. *Inventory No.*: not recorded *Reference*: NIBLETT (1985): 36 & 122, Fig.65, 52 *Dimensions (from scale drawing)*: L: 36mm, W: 13mm *Notes*: Hinge, folded together. There are two rivets on one leaf, and one in the other. The top leaf appears to be decorated across its width with a number of incised parallel lines.
11. Colchester *Context*: Temporary hearth? Period 1? *Inventory No.*: SF 1.81 2542(C), B2405 F820 *Reference*: CRUMMY 1992: 189 & Fig.5.53, 1681 *Dimensions*: L: 41mm, W: 14mm *Notes*: Hinged strap fitment with all four rivets in place.
12. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 26, Fig.26 *Dimensions (from scale drawing)*: L: 51mm, W: 22mm *Notes*: From Cuirass 1, strap hinge/hinged buckle combination. In this case, however, the two fitments do not share a common rivet(s).
13. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 37, Fig.39 *Dimensions (from scale drawing)*: L: 45mm, W: 19mm *Notes*: Vertical strap fastener from the breastplate of Cuirass 4, left hand side collar plate assembly. Only one of the four rivets appears to be retained. On the left of this fitment there is a hinged buckle plate, but the two fitments do not share any rivets.
14. Hod Hill *Context*: From topsoil, Barrack 1, Room 2 or 3 *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Pl.56. 11 *Dimensions (from scale drawing)*: L: 44mm, W (max, hinge only): 15mm *Notes*: Cuirass hinge with all four rivets in place. Small piece of armour plate adhering to one side.
15. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.43A *Dimensions (from scaled photo, fitment only, approx.)*: L: 45mm, W: 18mm *Notes*: Material from the Ranston Collection. A complete hinge with all four rivets in place.
16. Hofheim *Context*: not recorded *Inventory No.*: 17556 *Reference*: RITTERLING 1913:, Taf. XI, 9 *Dimensions (from scale photo)*: L: 41mm, W: 17mm *Notes*: A complete hinged fitment, all three rivets are retained.
17. London *Context*: Found at the site of the Bank of England, 1936. *Inventory No.*: 14,283 *Reference*: WEBSTER 1958: 86-7, Fig.6, 159 *Dimensions (from scale drawing)*: L (approx.): 40mm, W (approx.): 13mm *Notes*: Hinged fitting and hinged buckle arrangement in position on a chest plate. This clearly shows the relationship between these two hinges. Hinges are made of sheet brass, fixed with copper rivets to the iron plate beneath. One of the rivets on the strap portion is missing.
18. Longthorpe *Context*: Green-grey deposit in gully on working surface (Pit 7), Claudio-Neronian moved in the late 2nd century. *Inventory No.*: 71.56.9 SF 66 *Reference*: DANNELL & WILD 1987: 87-9 & Fig.22, 20 *Dimensions (from scale drawing)*: L: 46mm, W: 19mm *Notes*: A complete strap hinge unit, which retains all four of the rivets.
19. Magdalensberg *Context*: OR/40 *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 290 & Fig.Taf.76/18. *Dimensions*: L: 42mm, W: 14mm. *Notes*: Both portions of a strap hinged fitment retaining three of the four original rivets.
20. Magdalensberg *Context*: East temple, NE, 2nd terrace *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 290 & Fig.Taf.76/19. *Dimensions*: L: 40mm, W: 9mm. *Notes*: Both halves of a hinged fitment, one half is broken through the hinge plate. Two rivets remain.
21. Neuss *Context*: not recorded *Inventory No.*: 15435a *Reference*: SIMPSON 2000: 75 & 151, Pl.25.2. *Dimensions (from scale drawing)*: L: 37mm, W: 15mm *Notes*: Cuirass strap hinge, with two rivets remaining in one leaf. The other leaf has a hole for only a single rivet.
22. Neuss *Context*: not recorded *Inventory No.*: 15435b *Reference*: SIMPSON 2000:, 75 & 151, Pl.25.3 *Dimensions (from scale drawing)*: L: 47mm, 16W: mm *Notes*: Cuirass hinged strap fitment. Concentric ring incised decoration around the rivet holes on hinge plates. One rivet remains.
23. Oberwinterthur *Context*: stray surface find *Inventory No.*: FK 6581 *Reference*: DESCHLER-ERB 1996: 289, Taf.21, 311 *Dimensions*: L: 46mm, W: 16mm, Th: 1mm, weight: 5 g. *Notes*: Complete hinged strap assembly, with two remaining rivets. The rivet holes on the larger leaf are arranged asymmetrically.
24. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 1 *Dimensions (from scale drawing)*: L: 50mm, W: 16mm *Notes*: Hinge fitting, both leaves of which are rectangular. One leaf retains a single rivet, the other both. The rivet holes have the punched concentric ring decoration.
25. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 2 *Dimensions (from scale drawing)*: L: 50mm, W: 14mm *Notes*: Similar to the above, although here only two rivets remain, in one leaf only. Ring decoration around the rivet holes is absent.
26. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 4 *Dimensions (from scale drawing)*: L: 44mm, W: 16mm *Notes*: Slightly distorted hinged fitment, with three rivets remaining. The rivet holes in the shorter leaf are not symmetrically arranged.

27. Risstissen *Context*: Fortress 1/2, level 158, immediately below the soil level. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 25, 61 & Taf.4, 78. *Dimensions*: L: 45mm, W: 14mm. *Notes*: Hinged fitment made of sheet bronze. All four rivets remain intact.
28. Risstissen *Context*: Fortress 1/2, level 158, immediately below the soil level. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 25, 61 & Taf.4, 80. *Dimensions*: L (max): 25mm, L (smaller fragment): 15mm *Notes*: Bronze sheet hinge fitment. This hinge is in a flexed position and all three rivets survive intact.
29. Risstissen *Context*: Beneath the soil surface, level 171 *Inventory No.*: R 68/39 *Reference*: ULBERT 1970: 23, Taf.3, 49 *Dimensions*: L: 45mm, W: 15mm *Notes*: Made from sheet bronze, two rivet holes in each leaf (no rivets remain).
30. Risstissen *Context*: Soil level (level 158) *Inventory No.*: R 68/21 *Reference*: ULBERT 1970: 23, 60 & Taf.3, 52 *Dimensions*: L: 45mm, W: 14mm. *Notes*: Hinged fitment formed from bronze sheet. Each half contains two rivet holes. None of the rivets are present.
31. Silchester *Context*: Insula XXIII, Pit 10, dated late 1st CAD. *Inventory No.*: not recorded *Reference*: BOON 1969: 44 & 45, Fig.5, 1 *Dimensions (from scale drawing)*: L: 44mm, W: 13mm *Notes*: There are the usual four holes, but no rivets remain in place.
32. Taunton *Context*: not recorded *Inventory No.*: A 1320 *Reference*: WEBSTER 1958: 82 & 81, Rig.5, 126 *Dimensions (from scale drawing)*: L: 50mm, W: 13.5mm *Notes*: Shown as being in Taunton Museum, but there is no information as to the find location. Two rivets survive, one in each leaf of this hinge.
33. Windisch *Context*: not recorded *Inventory No.*: 435, 34 *Reference*: UNZ 1973: 23 & 37, Abb.9, 88 *Dimensions*: L: 49mm *Notes*: Hinged strap assembly complete, with a single remaining rivet in one plate.
34. Windisch *Context*: trench? *Inventory No.*: 383 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 723 *Dimensions (from scale drawing)*: L: 47mm, W: 16mm *Notes*: Hinge with the rivet holes decorated with concentric punched rings; the smaller leaf retains the two rivets.
35. Windisch *Context*: western part of the rubbish dump. *Inventory No.*: 23:403 *Reference*: UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 728 *Dimensions (from scale drawing)*: L: 62mm, W: 17mm *Notes*: One leaf of this hinge retains both rivets (which are not symmetrically placed), the other only one.
2. Chichester *Context*: Area 2, Pit E.90 *Inventory No.*: not recorded *Reference*: DOWN 1978: 293 & Fig.10.30, 18 *Dimensions (from scale drawing)*: L: 47mm, W: 18mm *Notes*: Bronze hinge, one end of which is rounded off. This portion retains both rivets; those from the other half are missing.
3. Chichester *Context*: Area 2, Slot 14(b) *Inventory No.*: not recorded *Reference*: DOWN 1978: 293 & Fig.10.30, 25 *Dimensions (from scale drawing)*: L: 43mm, W (plate): 14mm *Notes*: Flat hinge. Pivot bar is still in place. One end is rounded off; the other end is badly damaged. One rivet is still in place.
4. Colchester (Sheepen) *Context*: Period III, AD 44-9 (Claudian), Feature 138 – latrine. *Inventory No.*: not recorded *Reference*: NIBLETT (1985): 32 & 118, Fig.62, 18 *Dimensions (from scale drawing)*: L: 46mm, W: 15mm *Notes*: Folded over hinge. One leaf (the smaller) has a rounded off end. The larger leaf retains both rivets.
5. Colchester *Context*: unstratified, Period 3a *Inventory No.*: SF GBS 1008(C), B60 *Reference*: CRUMMY 1992: Fig.6.32, 364 *Dimensions*: L: 45mm, W (max, at hinge): 17mm *Notes*: A strap hinge fitment, where all four rivets are in place. One leaf (the longer) has two incised parallel lines down each long edge, while the other, shorter, leaf is rounded off at the end.
6. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1 hospital or workshop. Deposited during Phase 2, dated AD 122–38. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 26, Fig.16 *Dimensions (from scale drawing)*: L: 52mm, W (max, at hinge): 17mm *Notes*: A hinged strap fitting, that retains all its rivets. It is positioned on the upper back plate of Cuirass 1. All four rivets are retained, but the fitment is somewhat distorted, so the measurements can be approximate only.
7. Corbridge *Context*: As above *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 31, Fig.31 *Dimensions (from scale drawing)*: L: 41mm, W (max, at hinge): 23mm *Notes*: From Cuirass 2 (Type-A) collar plate. A combination hinged fitment. One portion (the vertical one) is a strap hinge; the other is indeterminate, though probably (from its position) a hinged buckle fitment. These two hinges appear to share a common pair of rivets, but the horizontal hinge has an additional rivet. A decorated boss is located in the angle between the two hinges.
8. Corbridge *Context*: As above *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 31, Fig.31 *Dimensions (from scale drawing)*: L: 49mm, W (max, at hinge): 18mm *Notes*: A hinged strap fitment from the upper back-plate of Cuirass 2 (Type-A). The four rivets

### Biii

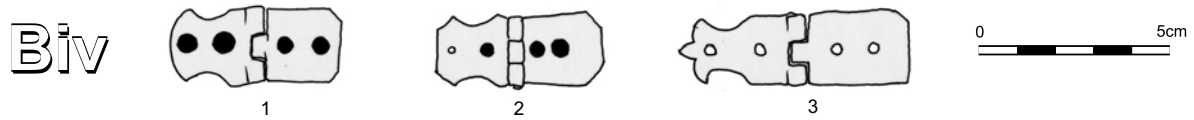
1. Aisligen *Context*: not recorded *Inventory No.*: 643r *Reference*: ULBERT 1959: 93, Taf.17, 19. *Dimensions (from scale drawing)*: L: 41mm, W: 17mm *Notes*: Hinge assem-

- have not been placed symmetrically and there may be traces of another fitment beneath the fitment.
9. Exeter *Context*: unstratified *Inventory No.*: MY + *Reference*: HOLBROOK & BIDWELL 1991: 247 & 245, Fig.110, 31 *Dimensions*: L (total): 40mm, W: 18mm *Notes*: Hinged strap fitting formed by two strips of copper alloy, both folded in half and cut away so that the fold of one piece fits into the fold of the other and both held in place by a short copper alloy rod. Two rivets secure both, although those of the smaller section are dome-headed, while those on the second section have thick disc heads. The smaller piece also has a rounded end and is decorated by two lightly incised transverse grooves.
  10. Gloucester Kingsholme *Context*: found in later, disturbed, levels. *Inventory No.*: 2 31 6.3 *Reference*: PITTS in HURST 1985: Fig.11, 5 *Dimensions (from scale drawing)*: L: 48.5mm, W: 17mm *Notes*: a complete hinged strap assembly; one leaf (the smaller) retains both dome-headed rivets and has the end rounded off.
  11. Gloucester *Context*: Temporary hearth, Period 1? Culver Street site. SF 1.81 2542 (C), B2405 F820 *Inventory No.*: 1681 *Reference*: HURST (1986): 189, & Fig.5.53 *Dimensions*: L: 41mm, W: 14mm. *Notes*: Hinged cuirass plate with all four dome-headed rivets surviving.
  12. Gloucester *Context*: SF GBS 1008(C), B60. Unstratified, period 3a), Gilbert School site. *Inventory No.*: 364 *Reference*: HURST (1986): 235 & Fig.6.32 *Dimensions*: L: 45mm, W (max): 17mm. *Notes*: One half of this hinge is rectangular, the upper and lower plates held closely together by dome-headed rivets. The other half is an elongated D-shape; its upper and lower plates are further apart and still hold a fragment of leather strap. The two rivets holding this section have crude heads. On the rectangular plate, a pair of grooves marks each long edge, matched by a pair of grooves running round the D-shaped plate. A circular washer lies between each rivetted end of the hinge pin and the folded over plates.
  13. Haltern *Context*: not recorded *Inventory No.*: not recorded *Reference*: MAKW 6, Taf. XIX, A11 *Dimensions*: L: 38mm, W: 18mm *Notes*: Hinged strap fitment, in a partially flexed position (so true length cannot be determined). No rivets remain.
  14. Ham Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1958: 81, Fig.5, 126 *Dimensions (from scale drawing)*: L: 50mm, W: 13mm *Notes*: Hinged fitment, with two surviving rivets.
  15. Hod Hill *Context*: not recorded *Inventory No.*: A64 *Reference*: BRAILSFORD 1962: 3 & Fig.3 A64 *Dimensions (from scale drawing)*: L: 50mm, W: 20mm *Notes*: Flat cuirass hinge, all four rivets are still in place.
  16. Hod Hill *Context*: Foundation trench, Barrack 1, Room 1 *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Pl.56. 10 *Dimensions (from scale drawing)*: L: 47mm, W: 17mm. *Notes*: Cuirass hinge with three of the four rivets in place. One end is rounded.
  17. Hod Hill *Context*: From a hollow post-dating the cookhouse *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Pl.56. 12 *Dimensions (from scale drawing)*: L: 54mm, W: 18mm *Notes*: Hinged strap fitment with all four rivets in place. The rivet holes are decorated with punched/incised concentric circles.
  18. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L: 39mm, W: 15mm *Notes*: Material from the Durden Collection. A complete strap hinged fitting, both leaves being rounded off at the ends. The shorter leaf retains two dome-headed rivets.
  19. Hofheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: RITTERLING 1904: Taf. III, 5 *Dimensions*: L: 34mm (flexed) *Notes*: Complete hinged fitment. One leaf has a rounded end and this leaf retains both dome-headed rivets.
  20. Hofheim *Context*: not recorded *Inventory No.*: 17035 *Reference*: RITTERLING 1913: Taf. XI, 8 *Dimensions (from scale photo)*: L (flexed.): 40mm, W: 14mm *Notes*: A complete hinged fitment, though in a flexed position. One leaf has a rounded off end and retains both rivets. Dimensions are only approximate because of the flexed position in the illustration.
  21. Kaiseraugst *Context*: Region 16, D, Period 3, t.a.q. AD 70/75 *Inventory No.*: 1979.8935; FK B03755 *Reference*: DESCHLER-ERB 1999: Taf.14, 201 *Dimensions*: L: 44mm, W: 18mm, Th: 4mm *Notes*: A complete hinged fitment, which retains three of the four original rivets. The rivet holes are decorated with punched concentric rings. Weight 5.60g.
  22. London *Context*: Found at Barge Yard? *Inventory No.*: 1891 *Reference*: WEBSTER 1958: 86 & 87, Fig.6, 162 *Dimensions (from scale drawing)*: L: 44mm, W: 12mm *Notes*: Hinged fitting with the end of one leaf rounded off. Two rivets remain on the rounded-off side.
  23. Longthorpe *Context*: *praetentura*, Pit 18, between barracks. *Inventory No.*: 73 II 8 *Reference*: FRERE & STJOSEPH 1974: 46 & Fig.25, 16 *Dimensions (from scale drawing)*: L: 50mm, W: 20mm *Notes*: 'Bronze' hinged fitment, still attached to the breastplate armour piece. All four rivets are in place. The end of one leaf is rounded off.
  24. Oberstimm *Context*: not recorded *Inventory No.*: 1975.187 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B88 *Dimensions*: L: 47mm, W: 15mm *Notes*: Only one rivet survives, but the rivet holes are deco-



**Fig. 16:** Category B (hinged straps) of Type iii. Scale 1:2

- rated with incised concentric circles and there are incised parallel lines down each long side.
25. Oberstimm *Context:* not recorded *Inventory No.:* 1975.36 *Reference:* SCHÖNBERGER 1978:, 169 & Taf.20, B89 *Dimensions:* L: 47mm, W: 14mm *Notes:* There are no surviving rivets, but the holes are decorated with incised concentric circles.
26. Richborough *Context:* as above *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(h) *Dimensions (from scale photo):* L: 46mm, W: 15mm *Notes:* Hinged strap assembly, complete but for two rivets in one half of the hinge.
27. Risstissen *Context:* not recorded *Inventory No.:* 2998 *Reference:* ULBERT 1970: 106 & Taf.61, 9 *Dimensions (from scale drawing):* L: 58mm, W: 22mm *Notes:* Hinged strap fitment, where both plates have rounded off ends and two rivets remain on one.
28. Risstissen *Context:* not recorded *Inventory No.:* 3060 *Reference:* ULBERT 1970: 106 & Taf.61, 14. *Dimensions (from scale drawing):* L: 46mm, W: 17mm *Notes:* Hinged strap



**Fig.17:** Category B (hinged straps) of Type iv. Scale 1:2

- fitment, of which the smaller plate retains both rivets. This plate is also rounded at the end.
29. Svistov *Context:* buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.:* not recorded *Reference:* GENTSCHEVA 1999: 28 & 29, Abb.7, 10 *Dimensions (from scale drawing):* L: 54mm, W: 18mm *Notes:* Complete hinged strap fitment. Two very large flat-headed rivets remain in one leaf, none in the other.
30. Windisch *Context:* not recorded *Inventory No.:* 1649 *Reference:* UNZ 1973: 22 & 37, Abb.9, 85 *Dimensions:* L: 43mm *Notes:* A hinged strap assembly. No rivets remain. In the larger leaf, both rivet holes are decorated with concentric punched rings. There is only a single hole in the smaller leaf.
31. Windisch *Context:* unstratified *Inventory No.:* not recorded *Reference:* UNZ & DESCHLER-ERB 1997: 28 & Taf.31, 631 *Dimensions (from scale drawing):* L: 47mm, W: 16mm *Notes:* Copper alloy hinge, still attached to a portion of the armour plate. Rivet holes have the punched ring decoration with all four rivets surviving. One of the plates (the shorter) is rounded at the end.
32. Windisch *Context:* Königsfelden, Porter's House I. *Inventory No.:* 8442 *Reference:* UNZ & DESCHLER-ERB 1997: 28 & Taf.31, 632 *Dimensions (from scale drawing):* (left hinge) L: 40mm, W: 15mm, (right hinge) L: 26mm, W: 16mm *Notes:* Two hinged assemblies, arranged at a right angle and still rivetted to the iron armour plate, though they are not joined by a common rivet. The presumed buckle portion of the vertical component is missing.
33. Windisch *Context:* North gate, Find spot No.1 *Inventory No.:* 1141 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 715 *Dimensions (from scale drawing):* L: 45mm, W: 17mm *Notes:* One end (the shorter) of this hinge is rounded off. This portion retains the two rivets.
34. Windisch *Context:* west corner of the outer courtyard of the *Principia* building, find spot No.8. *Inventory No.:* 32:729 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 717 *Dimensions (from scale drawing):* L: 49mm, W: 17mm *Notes:* Hinge fitment, retaining two small rivets in a rounded plate and one large rivet in the other plate. This latter may be a repair.
35. Windisch *Context:* Trench of 1954. *Inventory No.:* 54:87 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 720 *Dimensions (from scale drawing):* L: 49mm, W: 17mm *Notes:* Both leaves of this hinge have rounded ends. The shorter retains two rivets.
36. Windisch *Context:* corner of the main courtyard of the *Principia* building, find spot No.13 *Inventory No.:* 31:590 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 721 *Dimensions (from scale drawing):* L: 47mm, W: 16mm *Notes:* The shorter end of the hinge is rounded off and one of the holes has punched ring decoration. Both leaves retain a rivet.
37. Windisch *Context:* by *via Principalis*, Tribune's house? Find spot No.23 *Inventory No.:* 25:742 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 725 *Dimensions (from scale drawing):* L: 40mm, W: 20mm *Notes:* One end of this hinge is rounded off. All four rivets survive. One leaf is narrower than the other one.
38. Windisch *Context:* Arsenal excavation, 1938, find spot No.3. *Inventory No.:* 38:442 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 726 *Dimensions (from scale drawing):* L: 43mm, W: 16mm *Notes:* Very similar to the above item. All four rivets are present.

### Biv

1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.46 *Dimensions (from scale drawing):* L: 44mm, W: 20mm *Notes:* A hinged strap fitment, where one leaf is of a lobate form. All four rivets remain and there is a small portion of armour plate adhering as well. Measurements for the fitment only.
2. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.49 *Dimensions (from scale drawing):* L: 43mm, W: 18mm *Notes:* A hinged strap fitment. One leaf is somewhat lobate in form. Three of the four rivets remain.
3. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.50 *Dimensions (from scale drawing):* L: 60mm, W: 19mm *Notes:* A hinged strap fitment in which no rivets remain. One leaf of the fitment is of a very ornate, lobate, design, the other is simply rectangular, though with the corners removed.

### Bv

1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.54 *Dimensions (from scale drawing):* L (upper): 30mm,

W: 18mm, L (lower): 44mm, W: 18mm *Notes:* Two hinged strap fittings, still attached to a small portion of armour plate. Both elements here have a leaf of an ornate, lobate form. The bottom element has both leaves in place and retains all four rivets, while the top fitment has only the one leaf, albeit with both rivets intact. Dimensions given are those for the fittings alone, excluding the armour plate.

2. Oberstimm *Context:* not recorded *Inventory No.:* 1975.154 *Reference:* SCHÖNBERGER 1978: 169 & Taf.20, B91 *Dimensions:* L: 49mm, W: 14mm *Notes:* One side of the hinge fitting has a very ornate plate, almost lobate in form. All four rivets are in place.

**Bvi**

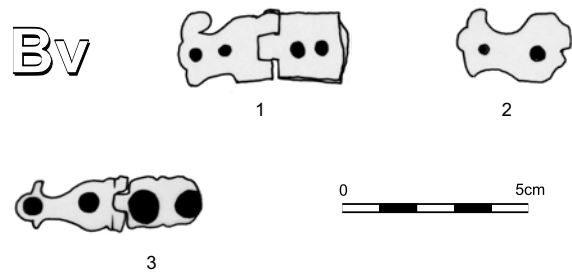
1. Hod Hill *Context:* not recorded *Inventory No.:* A72 *Reference:* BRAILSFORD 1962: 3 & Fig.3 A72. *Dimensions (from scale drawing):* L: 55mm, W: 18mm *Notes:* Cuirass hinged strap fitment. One half is plain but the other side is of a very fancy design, with a large oval-headed rivet in place. Only one rivet survives on the plain side. This hinge is also tinned or silvered.
2. Hofheim *Context:* not recorded *Inventory No.:* 18305 *Reference:* RITTERLING 1913: Taf. XI, 10 *Dimensions (from scale photo):* L: 36mm, W: 20mm *Notes:* A complete hinged strap fitment, one leaf of which is of an ornate form.
3. Windisch *Context:* Königsfelden, fire brigade warehouse *Inventory No.:* V76/359.22 *Reference:* UNZ & DESCHLER-ERB 1997: 30 & Taf.32, 731 *Dimensions (from scale drawing):* L: 40mm, W: 15mm *Notes:* Very unusual hinge. The long edges are scalloped and a series of inscribed parallel lines decorate the hinge plates, from side to side.

**Bvii**

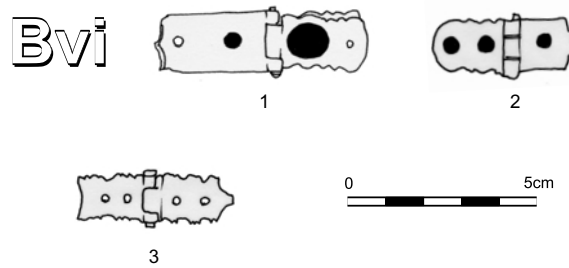
1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.48 *Dimensions (from scale drawing):* L: 52mm, W: 26mm *Notes:* Both elements of a hinged strap fitment, each of which retains one small rivet. This hinge is rather asymmetrically disposed. Measurements are for the fitment alone.
2. Kaiseraugst *Context:* Region 4, D, undated *Inventory No.:* 1966.14646; FK X05536 *Reference:* DESCHLER-ERB 1999: Taf.14, 211 *Dimensions:* L: 40mm, W: 19mm, Th: 2mm *Notes:* Each leaf has only a single rivet hole. No rivets remain. Weight: 7.71g.

**Bviii**

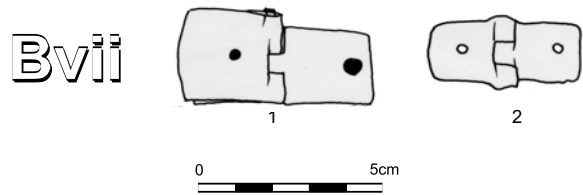
1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. 19, Fig.52 *Dimensions (from scale drawing):* L: 58mm, W: 28mm *Notes:* Two hinged strap fittings, together with a small amount of armour plate. The bottom fitment retains three rivets; two on one side and one on the other, while the single leaf of the top element has both



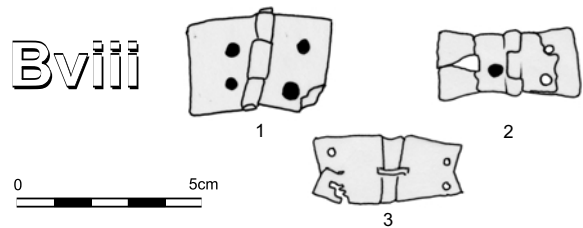
**Fig.18:** Category B (hinged straps) of Type v. Scale 1:2



**Fig.19:** Category B (hinged straps) of Type vi. Scale 1:2



**Fig.20:** Category B (hinged straps) of Type vii. Scale 1:2



**Fig.21:** Category B (hinged straps) of Type viii. Scale 1:2

rivets remaining. Dimensions recorded are for the fittings alone, and do not include the armour plate backing.

2. Dangstetten *Context:* find spot, level 333 *Inventory No.:* 333.2 *Reference:* FINGERLIN 1986: 119, 336 & 475, Taf.7 *Dimensions (from scale drawing):* L: 37mm, W: 18mm *Notes:* The hinge plates have been folded only partially back on each side. One leaf has two rivet holes, arranged side-by-side while the other retains only a single rivet (there may have been a second one, but the plate is torn through).
3. Dangstetten *Context:* find group 448 *Inventory No.:* 333.2 *Reference:* FINGERLIN 1986: 160, 386 & 475, Taf.7 *Dimensions:* L: 39mm *Notes:* Hinged strap fitment. Each

leaf has two rivet holes, but these are unusually arranged side-by-side. No rivets remain and one leaf is slightly damaged.



**Fig.22:** Category B (hinged straps) of Type ix. Scale 1:2

### **Bix**

1. Waddon Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* WEBSTER 1979: 67 & 68, Fig.29, 46 *Dimensions (from scale drawing):* L: 38mm, W: 13mm *Notes:* A hinge unit, where the smaller leaf has a triangular shape. The longer leaf retains one of the two

rivets, while both are present in the smaller leaf. In both halves, the rivets are disposed asymmetrically.



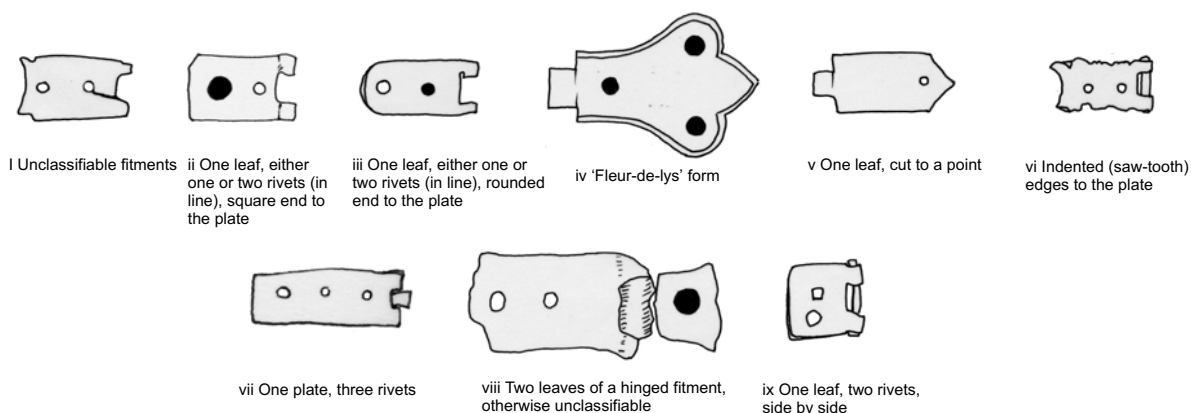
# Category 'C': Hinged Fittings

## Contents

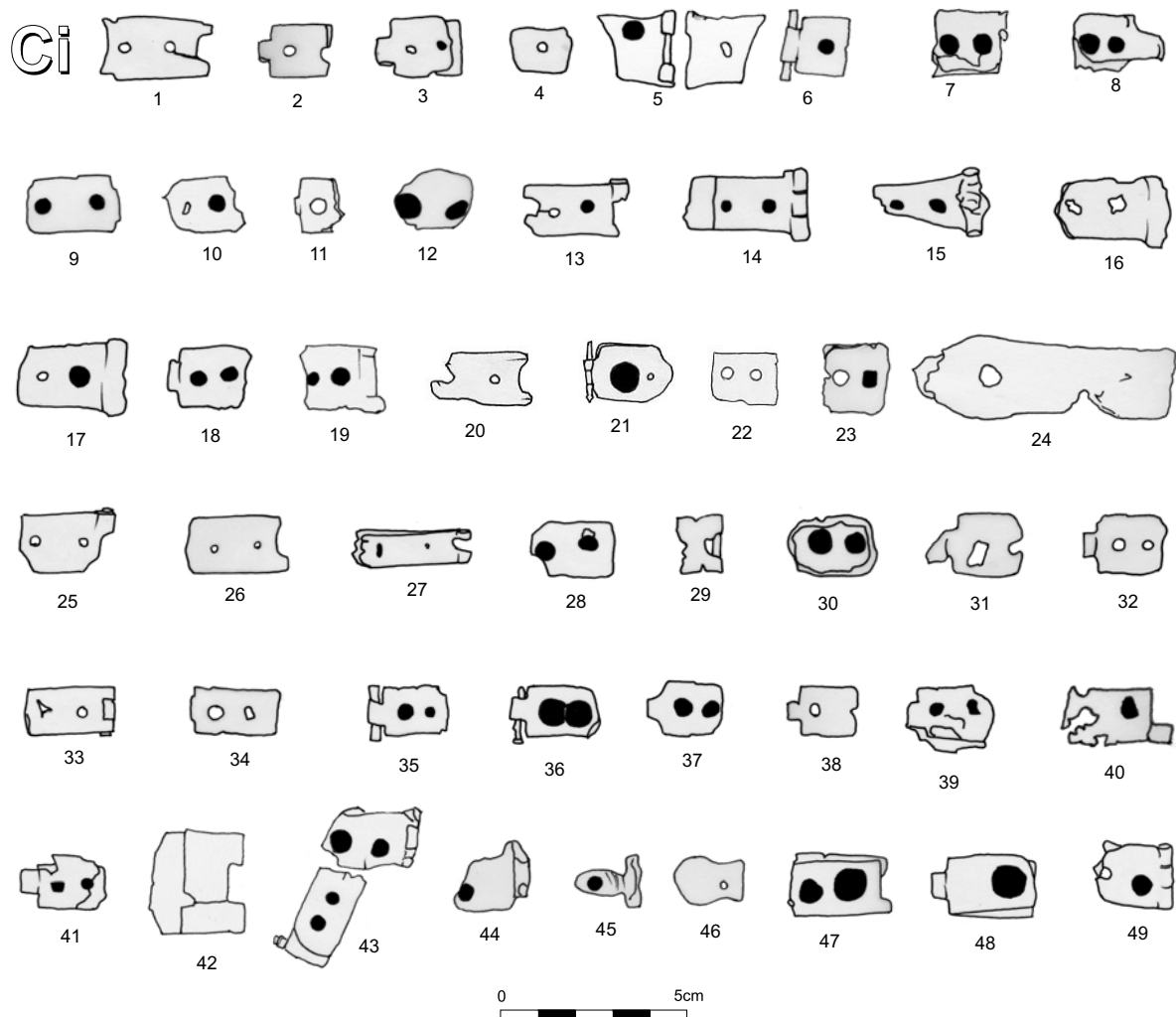
*Hinged fittings from the following sites are included here:* Aislingen (DEU), Alcester (GBR), Bad Deutsch-Altenberg (AUT), Buciumi (ROM), Caerleon (GBR), Caernarfon (GBR), Camerton (GBR), Castleford (GBR), Colchester (GBR), Exeter (GBR), Gloucester (GBR), Hod Hill (GBR), Heddernheim (DEU), Kaiseraugst (CHE), Kalkriese (DEU), Longthorpe (GBR), Loughor (GBR), Magdalensburg (DEU), Mautern (AUT), Neuss (DEU), Newstead (GBR), Oberstimm (DEU), Oescus (ROM), Rheingönheim (DEU), Richborough (GBR), Rissstissen (DEU), Santon (GBR), Silchester (GBR), South Shields (GBR), Strasbourg (F), Svistov (BUL), Usk (GBR), Waddon Hill (GBR), Wall (GBR), Windisch (CHE), Woodcock Hall (GBR), Wroxeter (GBR), York (GBR)

## Ci

1. Aislingen *Context:* not recorded *Inventory No.:* 7900 *Reference:* ULBERT 1959: 93, Taf.17, 13 *Dimensions (from scale drawing):* L: 29mm, W: 16mm *Notes:* Part of a flat hinged fitting. No rivets remain and the pivot bar is also absent.
2. Aislingen *Context:* not recorded *Inventory No.:* 7661b *Reference:* ULBERT 1959: 93, Taf.17, 12. *Dimensions (from scale drawing):* L: 19mm, W: 14mm *Notes:* One half of a hinged fitment, which retains one rivet. The rivet hole has the punched decoration around it.
3. Aislingen *Context:* not recorded *Inventory No.:* 7765 *Reference:* ULBERT 1959: 93, Taf.17, 20 *Dimensions (from scale drawing):* L: 22mm, W: 15mm *Notes:* Part of a hinge plate, one rivet retained.
4. Aislingen *Context:* not recorded *Inventory No.:* 6703 *Reference:* ULBERT 1959: 93, Taf.17, 21 *Dimensions (from scale drawing):* L: 16mm, W: 12mm *Notes:* Small piece of flat sheet bronze that may have formed a part of a hinge.
5. Bad Deutsch-Altenberg *Context:* PQ/1, 137-140 *Inventory No.:* 474/72, *Reference:* GRÜNEWALD 1981: 23, Taf.18, No.18. *Dimensions (from scale drawing):* L: 21mm, W: 21mm *Notes:* Badly distorted hinged fitment, which retains the pivot bar and a single, off centre, rivet on one side.
6. Banasa *Context:* not recorded *Inventory No.:* not recorded *Reference:* *Ibid*, 60 & Pl.3, 34 *Dimensions:* L: 16mm, W: 15mm *Notes:* One plate of a hinged fitment. There is a single large dome-headed rivet and the rivet hole has two incised rings around it. The pivot pin also remains in place.
7. Castleford *Context:* not recorded *Inventory No.:* 650 T10; CN29; SF2380(C); 2 *Reference:* COOL & PHILO 1998: 68 & Fig.21, 221 *Dimensions:* L: 27mm, W: 26mm, L (fitting): 22mm, W (fitting): 19mm *Notes:* Brass fitting with gunmetal rivet. The hinged strap is still attached to the iron plate, with two small dome-headed rivets still in place.
8. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site i, Feature 102. Large rubbish pit, layers 2, 3, 3a and 4. *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 35 & 120, Fig.64, 34 *Dimensions (from scale drawing):* L: 24mm, W: 13mm *Notes:* Part of a hinge plate with two rivets still in place.
9. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site i, Feature 153. Large rubbish pit cut into an earlier gravel pit. *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 36 & 122, Fig.65, 53 *Dimensions (from scale drawing):* L: 24mm, W: 14mm *Notes:* Broken hinge plate, retaining both rivets.
10. Exeter *Context:* trough *Inventory No.:* TS 1167 *Reference:* HOLBROOK & BIDWELL 1991: 244 & 243, Fig.108, 7 *Dimensions:* L: 20mm, W: 14mm *Notes:* Fragment of a small plate consisting of two rectangular



- sheets held together by two dome-headed rivets, one of which is now missing.
11. Exeter *Context*: slot *Inventory No.*: TS 1003 *Reference*: HOLBROOK & BIDWELL 1991: 244 & 243, Fig.108, 5 *Dimensions*: L: 12mm, W: 14.5mm *Notes*: Fragment of a brass cuirass plate, pierced by a rivet with hammered ends.
  12. Goodnestone *Context*: GST94/SF144 *Inventory No.*: GST94/SF144 *Reference*: BISHOP 1995: 17 & 18, Fig.1, 5 *Dimensions*: L: 21mm, W: 15mm, Th: 0.5mm. *Notes*: Part of the free-moving element from a hinged strap fitting. It has a rounded end; the opposite end is badly damaged. The two ovoid flat-headed rivets are still in place.
  13. Kaiseraugst *Context*: Region 1, Insula 31, Period 2, t.a.q. AD 50 *Inventory No.*: 1978.5086c; FK B01636 *Reference*: DESCHLER-ERB 1999: Taf.14, 215 *Dimensions*: L: 30mm, W: 15mm, Th: 2mm *Notes*: Flat plate, which retains a single rivet. The rivet holes are not placed symmetrically. Weight: 2.40g.
  14. Kaiseraugst *Context*: Region 1, Insula 22 – undated *Inventory No.*: 1988.51.C04865.137 *Reference*: DESCHLER-ERB 1999: Taf.14, 216 *Dimensions*: L: 21mm, W: 18mm, Th: 4mm *Notes*: Flat plate of a hinged fitting, which retains both rivets as well as the hinge bar. The metal sheet has not been folded symmetrically. Weight: 2.17g.
  15. Kaiseraugst *Context*: Region 1, Insula 22, Period 2, t.a.q. AD 50 *Inventory No.*: 1988.51.C05030.12 *Reference*: DESCHLER-ERB 1999: Taf.14, 218 *Dimensions*: L: 31mm, W: 18mm, Th: 4mm *Notes*: Flat plate of a hinged fitting, much distorted. Both rivets and the hinge bar are still in place. Weight: 2.70g.
  16. Kaiseraugst *Context*: Region 1, Insula 22, Period 3, t.a.q. AD 70/75 *Inventory No.*: 1988.51.C04967.81 *Reference*: DESCHLER-ERB 1999: Taf.14, 221 *Dimensions*: L: 30mm, W: 19mm, Th: 5mm *Notes*: Flat plate of a hinge fitting, badly damaged and distorted. No rivets remain, but the hinge bar is still in place. Weight: 3.07g.
  17. Kaiseraugst *Context*: Region 1, Insula 22, undated *Inventory No.*: 1988.51.C04852.21 *Reference*: DESCHLER-ERB 1999: Taf.14, 222 *Dimensions*: L: 28mm, W: 21mm, Th: 5mm *Notes*: Flat hinge fitment; the hinge bar and one dome-headed rivet remain. Weight: 3.64g.
  18. Kaiseraugst *Context*: Region 1, Insula 22, Period 5, t.a.q. AD 150 *Inventory No.*: 1988.51.C05109 *Reference*: DESCHLER-ERB 1999: Taf.14, 219 *Dimensions*: L: 21mm, W: 16mm, Th: 1mm *Notes*: One leaf of a hinged strap fitting, retaining both rivets. One of the rivet holes appears to have some decorative work around it. Weight: 1.98g.
  19. Kalkriese *Context*: not recorded *Inventory no.*: not recorded *Reference*: FRANZIUS 1992: 362-4 & Abb.9, 7 *Dimensions (from scale drawing)*: L: 23mm, W: 18mm *Notes*: The static plate from a hinged fitment. Two rivets remain, as does the pivot bar of the hinge.
  20. Longthorpe *Context*: Pit a in *via principalis*, south of *principia*. *Inventory No.*: 71 III 3 *Reference*: FRERE & STJOSEPH 1974: 48 & Fig.26, 25 *Dimensions (from scale drawing)*: L: 26mm, W: 14mm *Notes*: There are no remaining rivets. The edges of the plate as well as the rivet holes are decorated with incised lines.
  21. Longthorpe *Context*: Building XI, Pit 12. *Inventory No.*: 69 XVIII 3 *Reference*: FRERE & STJOSEPH 1974: 47 & Fig.26, 30. *Dimensions (from scale drawing)*: L: 23mm, W: 15mm *Notes*: Cuirass hinge plate with a bronze pin. One (large) flat-headed rivet remains.
  22. Longthorpe *Context*: Filling of gully in Yard 1, with Dog Burial 2, (Claudio-Neronian) *Inventory No.*: 70.XII.1 SF 9 *Reference*: FRERE & STJOSEPH 1974: Fig.22,23 *Dimensions (from scale drawing) I L*: 17mm, W: 13mm *Notes*: One leaf of a flat hinge assembly. There are no rivets, but the rivet holes are decorated with heavily incised concentric rings.
  23. Loughor *Context*: Phase 11, Site 53 *Inventory No.*: 120.53\568 (198) *Reference*: MARVELL & OWEN-JOHN 1997: 262 & 261, Fig.98, 120 *Dimensions*: L: 17.6mm, W: 18.7mm *Notes*: Part of a hinged section from a strap and buckle fitting. One square-headed rivet remains.
  24. Loughor *Context*: Phase 13, layers filling Pits 337, 2029/3275. (Context Group No.4234) *Inventory No.*: 77.53\2027 (558) *Reference*: MARVELL & OWEN-JOHN 1997: 284 & 275, Fig.103, 77 *Dimensions*: L: 68mm *Notes*: Large hinge from a cuirass, only one plate survives in which there is a single rivet hole.
  25. Magdalensberg *Context*: OR/1 *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 291 & Taf.76/22. *Dimensions*: L: 24mm, W: 15mm. *Notes*: Rectangular hinge plate with two rivet holes. One end is rolled around a broken hinge pivot bar
  26. Magdalensberg *Context*: OR/1 *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 291 & Taf.76/24 *Dimensions*: L: 27mm, W: 15mm *Notes*: Rectangular hinged plate with two rivet holes.
  27. Magdalensberg *Context*: M, upper half of the burned layer. *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 291 & Taf.76/26 *Dimensions*: L: 30mm, W: 10mm *Notes*: A tinned hinge, very elongated. There are two rivet holes.
  28. Oberstimm *Context*: not recorded *Inventory No.*: 1975.159 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B96 *Dimensions*: L: 30mm, W: 17mm *Notes*: One



**Fig.22:** Category C (hinged fittings) of Type i. Scale 1:2

- half of a hinge fitting. It retains both rivets, but the pivot bar is missing. The holes have a concentric punched ring decoration and there is an incised line down each long side.
29. Oberstimm *Context:* not recorded *Inventory No.:* 1975.145 *Reference:* SCHÖNBERGER 1978: 169 & Taf.20, B99 *Dimensions:* L: 17mm, W: 15mm *Notes:* Small fragment of a hinge, which retains the pivot bar.
30. Oberstimm *Context:* not recorded *Inventory No.:* 1975.155 *Reference:* SCHÖNBERGER 1978: 169 & Taf.20, B100 *Dimensions:* L: 22mm, W: 16mm *Notes:* Part of a rectangular hinged fitting, much damaged. It retains both rivets.
31. Oberstimm *Context:* not recorded *Inventory No.:* 1975.270 *Reference:* SCHÖNBERGER 1978: 169 & Taf.20, B97 *Dimensions:* L: 25, W: 16mm *Notes:* Much damaged half of a hinge assembly.
32. Oberstimm *Context:* not recorded *Inventory No.:* 1975.273 *Reference:* SCHÖNBERGER 1978: 169 & Taf.20, B101 *Dimensions:* L: 22mm, W: 16mm *Notes:* Part of a rectangular plate hinge. There are no surviving rivets.
33. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.34, 22 *Dimensions (from scale drawing):* L: 23mm, W: 13mm *Notes:* One leaf of a hinge fitting, with no rivets in place.
34. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.34, 43 *Dimensions (from scale drawing):* L: 23mm, W: 12mm *Notes:* As above.
35. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.34, 21 *Dimensions (from scale drawing):* L: 21mm, W (pivot bar): 14mm *Notes:* One leaf of a hinged fitting, with both rivets. Pivot bar in place.

36. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 32 *Dimensions (from scale drawing)*: L: 23mm, W: 13mm. *Notes*: One leaf of a hinged fitment, with both rivets and the pivot bar.
37. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 33 *Dimensions (from scale drawing)*: L: 20mm, W: 14mm. *Notes*: One leaf of a hinged strap assembly, with both rivets.
38. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 34 *Dimensions (from scale drawing)*: L: 19mm, W: 13mm. *Notes*: One leaf of a hinged fitment, with no rivets. Damaged.
39. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: *id*, Taf.34, 38 *Dimensions (from scale drawing)*: L: 22mm, W: 15mm. *Notes*: One leaf of a hinge fitment, with two rivets.
40. Ristissen *Context*: At a depth of 60-90cm, in the western half of the level (12). *Inventory No.*: R 66/39 *Reference*: ULBERT 1970: 24, 52 & Taf.3, 58 *Dimensions*: L: 30, W: 15mm. *Notes*: Part of a hinged fitment, much damaged having torn through one of the rivet holes. One rivet remains.
41. Silchester *Context*: Period 5, ca. AD 80/5-120/50 *Inventory No.*: (1662), 4.14, SF 2489 *Reference*: FULFORD & TIMBY 2000: 345 & 344, Fig.159, 48 *Dimensions (from scale drawing)*: L: 22mm, W: 14mm. *Notes*: One leaf of a hinged assembly, retaining both rivets. The rivets holes are decorated with punched concentric rings and there may be traces of inscribed parallel lines along each long edge.
42. South Shields *Context*: not recorded *Inventory No.*: MA.1925.35 & 37(7) *Reference*: ALLASON-JONES & MIKET 1984: 208 & 3.696 *Dimensions*: L: 26mm, W: 27mm. *Notes*: Typical bronze cuirass hinge, formed by folding a sheet of metal in half.
43. Usk *Context*: fortress pit, pre-Flavian *Inventory No.*: 1976B RFC *Reference*: MANNING, PRICE & WEBSTER 1995: 7 & Fig.2, 4c *Dimensions*: L (overall): 86mm, (top hinge) L: 25mm, W: 15mm, (bottom hinge) L: 25mm, W (max): 15mm. *Notes*: Fragment of iron equipped with two copper alloy hinges, approximately at right angles to each other. They are either the two strap holders of a right-handed breastplate or the hinged buckle and strap holder of the left breastplate (Corbridge 'A' type).
44. Usk *Context*: fortress pit, Neronian-early Flavian *Inventory No.*: INL 1, Manning 1989, 22 *Reference*: MANNING, PRICE & WEBSTER 1995: 10 & Fig.4, 14. *Dimensions*: L: 18mm. *Notes*: Fragment of copper alloy hinged fitting.
45. Usk *Context*: fortress pit, pre-Flavian *Inventory No.*: DSI 1, Manning 1981, 200 *Reference*: MANNING, PRICE & WEBSTER 1995: 10 & Fig.4, 13 *Dimensions*: L: 20mm. *Notes*: Part of a copper alloy hinged fitment, which now consists of only a single bronze plate, rolled at one end.
46. Usk *Context*: unstratified *Inventory No.*: 70, + *Reference*: MANNING, PRICE & WEBSTER 1995: 10 & Fig.4, 15. *Dimensions*: L: 17mm. *Notes*: Small part of a hinged fitment. There is one small rivet hole remaining.
47. Windisch *Context*: 1962 excavation? *Inventory No.*: 62:40 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 814 *Dimensions (from scale drawing)*: L: 27mm, W: 14mm. *Notes*: Plate portion of a hinged fitment. Two large rivets are repairs. Dimensions are given for the plate only, not the total width.
48. Windisch *Context*: rubbish dump *Inventory No.*: 29:710 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 800 *Dimensions (from scale drawing)*: L: 27mm, W: 15.5mm. *Notes*: This fragment contains a single large rivet, probably a repair.
49. York *Context*: Purey Cust Nuffield Hospital site, context 3081 *Inventory No.*: 6529 *Reference*: COOL *et al* 1995: 1620 & 1622, Fig.773.6529 *Dimensions*: L: 21mm, W: 16mm, Th: 1.5mm, D (rivet head): 5.5mm. *Notes*: Hinge fitment retaining a single large dome-headed rivet.

## Cii

1. Aislingen *Context*: not recorded *Inventory No.*: 7661b *Reference*: ULBERT 1959: 93 & Taf.17, 12 *Dimensions (from scale drawing)*: L: 16mm, W: 12mm. *Notes*: One half of a hinged fitment, which retains one rivet.
2. Alcester *Context*: unphased *Inventory No.*: CA23, AA II 1 & CA33, A IX 19 *Reference*: LLOYD-MORGAN in CRACKNELL & MAHANEY 1994: 182 & Fig.90, 135, 136 *Dimensions*: (left) L: 29.8mm, W (max): 14.2mm, (right) L: 31.5mm, W (max): 14.4mm. *Notes*: Both these items seem to belong to the same plate, having broken through the fold of the sheet of metal. One rivet remains.
3. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. 19, Fig.53 *Dimensions (from scale drawing)*: L: 28mm, W: 22mm. *Notes*: One of two hinged fitments, attached to the same piece of armour plate. Measurements are given for the fitment alone.
4. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. 19, Fig.53 *Dimensions (from scale drawing)*: L: 32mm, W: 30mm. *Notes*: One of two hinged fitments, attached to the same piece of armour plate. This, the underlying fitment, may be a hinged buckle, which lacks the bow and tongue of this. It appears to have but a single rivet,

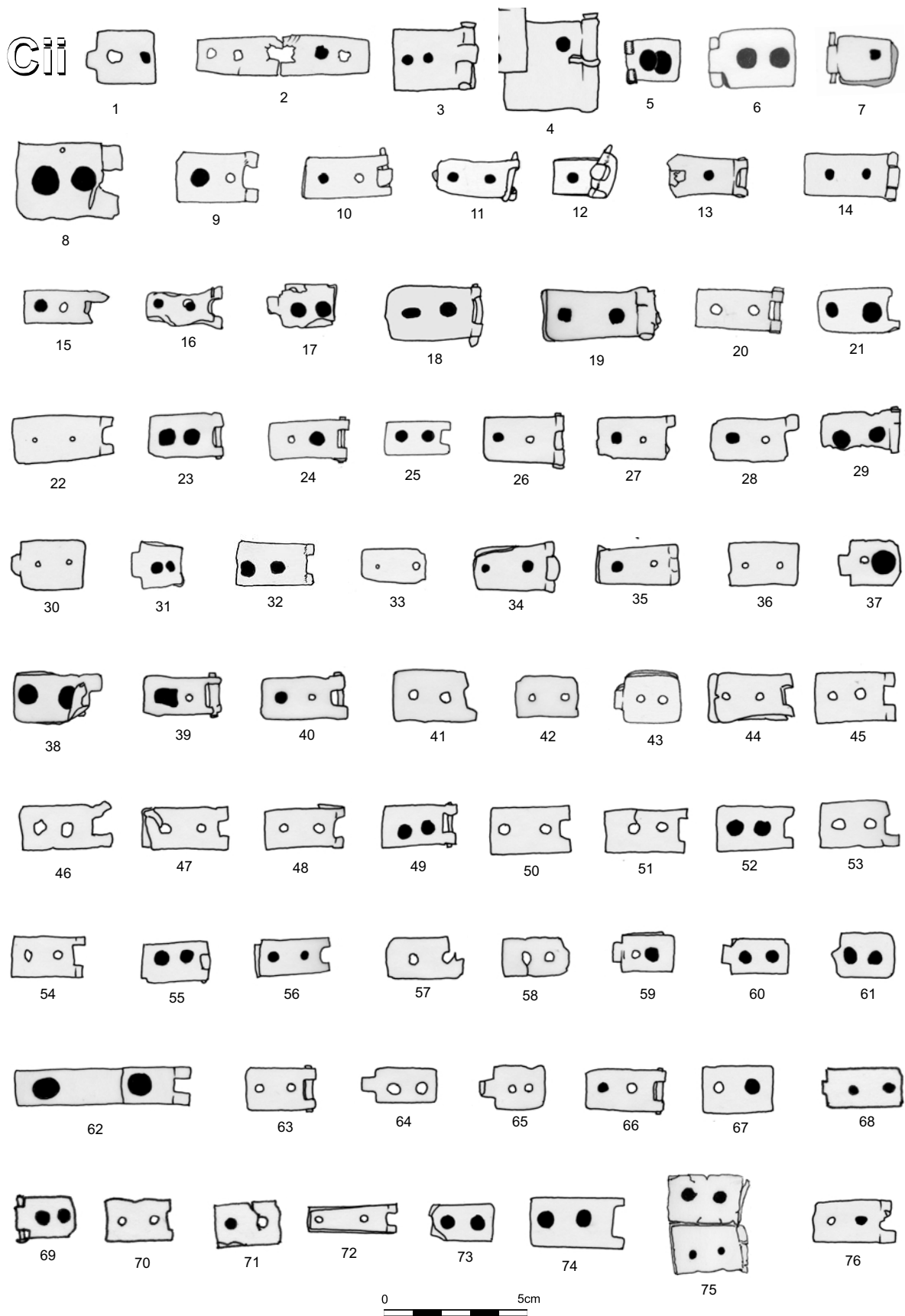
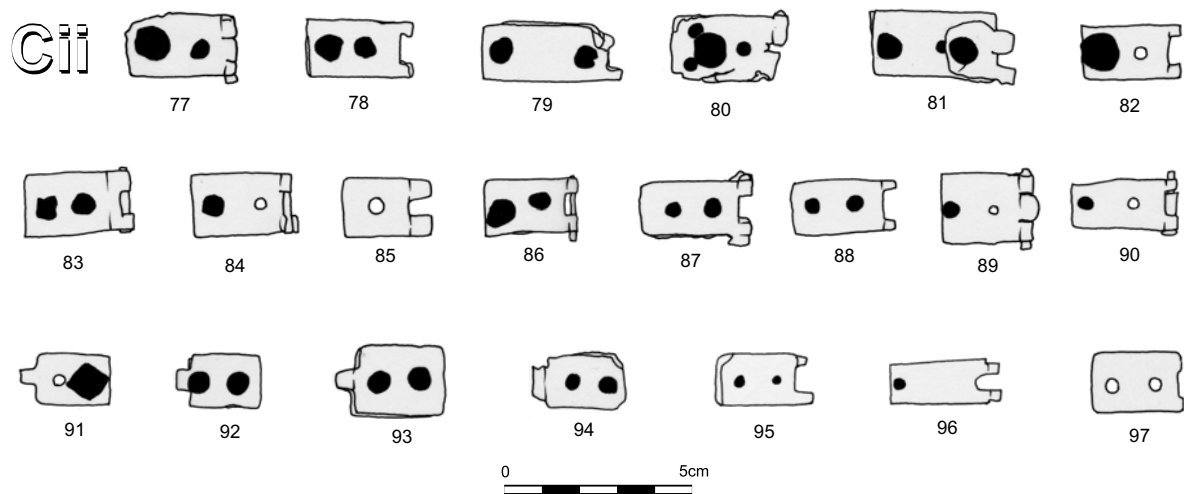


Fig.23: Category C (hinged fittings) of Type ii. Scale 1:2

- the plate being retained by the overlying fitment. Measurements are given for the fitment alone.<sup>b</sup>
5. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. 19, Fig.54 *Dimensions (from scale drawing)*: L: 20mm, W: 14mm *Notes*: Part of a hinged fitment sharing a piece of armour and a rivet with a tie-loop (see Section 'H').
  6. Bad Deutsch-Altenberg *Context*: V/70, Fl.1, 120-145 N, 150 S *Inventory No.*: 1427/72, *Reference*: GRÜNEWALD 1981: 23, Taf.18, No.17 *Dimensions (from scale drawing)*: L: 30mm, W: 20mm *Notes*: One half of a hinge fitment with two rivets with large flat heads. The pivot bar is still in place.
  7. Banasa *Context*: not recorded *Inventory No.*: not recorded *Reference*: *Ibid*, 60 & Pl.3, 33 *Dimensions*: L: 24mm, W: 16mm *Notes*: Fixed plate from a hinged strap fitment. There is a single large rivet and a small piece of armour plate is also attached to the rear of the copper alloy plate.
  8. Buciumi *Context*: not recorded *Inventory No.*: not recorded *Reference*: CHIRILA *et al.*, 1972, Pl. CXVIIIa, 5 *Dimensions*: L: 36mm *Notes*: Part of a hinge fitment. Two large rivets remain, which are flat-headed, rather than being domed.
  9. Caerleon *Context*: 1180:B, earlier than Phase III, c. AD 100/110 *Inventory No.*: 1180:B *Reference*: ZIENKIEWICZ 1986: 173-4 & Fig.56, 2 *Dimensions*: L: 27mm, W: 17mm *Notes*: Only one of the domed rivets survives.
  10. Caerleon *Context*: earlier than Phase III, c. AD 100/110 *Inventory No.*: S48.13 *Reference*: ZIENKIEWICZ 1986: 173-4 & Fig.56.5. *Dimensions*: L: 36mm, W: 15mm *Notes*: One side of this hinged fitment retains a single dome-headed rivet. The other side is very badly damaged.
  11. Camerton *Context*: not recorded, detector find *Inventory No.*: 26767V *Reference*: JACKSON 1990: 28 & Pl.3, 17 *Dimensions*: L: 28mm *Notes*: Hinged fitment, which retains both rivets as well as the hinge bar. There are fragments of iron plate on one side. Weight: 5.5g.
  12. Camerton *Context*: not recorded, detector find *Inventory No.*: 26768T *Reference*: JACKSON 1990: 29, 74 & Pl.3, 18 *Dimensions*: L: 21mm *Notes*: Part of a hinge fitting. Both rivets are present, as is the hinge bar. This fitment is much distorted. Analysis shows a composition of Cu, 76.7%; Zn, 21.8% with traces of tin and iron. Weight: 3.7g.
  13. Castleford *Context*: 113 Site (74) *Inventory No.*: CN28; SF116(C); 1 *Reference*: COOL & PHILO 1998: 68 & Fig.21,220 *Dimensions*: L: 28mm, W: 15mm, L (rod): 33mm, Th (rod): 1mm. *Notes*: The corners of the plate are trimmed off and one small domed rivet survives.
  14. Chester *Context*: Site LXXXVI, King's Buildings *Inventory No.*: not recorded *Reference*: NEWSTEAD 1928: 91 & Pl. IX, 6 *Dimensions (from scale drawing)*: L: 32mm, W: 16mm *Notes*: One half of a hinged fitment. Two rivets still attach it to the armour plate beneath.
  15. Colchester *Context*: Dump, late Period 2 or Period 3 *Inventory No.*: SF COC 183, 845 L245. *Reference*: CRUMMY 1983: 134, & Fig.152, No.4226. *Dimensions*: L: 27.5mm, W: 11 mm. *Notes*: A fragment of a hinge fitting. The lower of the two plates is either missing or is hidden in the mass of iron corrosion products, which adheres to the surviving rivet.
  16. Colchester (Sheepen) *Context*: Period III, AD 44-9 (Claudian), Feature 156 - small patch of white clay, possibly the weathered remains of a surface. *Inventory No.*: not recorded *Reference*: NIBLETT 1985: 29 & 117, Fig.61, No.5. *Dimensions (from scale drawing)*: L: 25mm, W: 15mm *Notes*: Part of a flat hinged fitment of which only one plate remains. This retains both rivets.
  17. Colchester (Sheepen) *Context*: Period III, AD 44-9 (Claudian), Feature 156 - small patch of white clay, possibly the weathered remains of a surface. *Inventory No.*: not recorded *Reference*: NIBLETT 1985: 29 & 117, Fig.61, 6 *Dimensions (from scale drawing)*: L: 23mm, W: 14mm *Notes*: Small copper alloy plate from a hinged fitment. This retains two, rivets.
  18. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 37, Fig.39 *Dimensions (from scale drawing)*: L: 33mm, W (max, at pivot bar): 22mm *Notes*: Portion of a hinged fitting from the upper back-plate of Cuirass 4. The pivot bar remains, as do both rivets.
  19. Corbridge *Context*: As above *Inventory No.* 74: *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions (from scale drawing)*: L: 39mm, W (max, at hinge): 18mm *Notes*: From Cuirass 5, part of a hinged fitment, one leaf only. Both rivets are in position. This fitment is found on the upper back plate. (At the top right corner is the remains of a decorative washer).
  20. Exeter *Context*: unstratified *Inventory No.*: GS + *Reference*: HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110, 33 *Dimensions*: L: 28mm, W: 13.5mm. *Notes*: Rectangular buckle plate made from a single strip folded over a disc-ended hinge-pin. Two rivet holes are countersunk and surrounded by deeply incised concentric circles.
  21. Exeter *Context*: post-hole *Inventory No.*: TS 1175 *Reference*: HOLBROOK & BIDWELL 1991: 244 & 243, Fig.108, 8 *Dimensions*: L: 26mm, W: 14mm, Th: 0.5mm.



**Fig.24:** Category C (hinged fittings) of Type ii (contd.). Scale 1:2

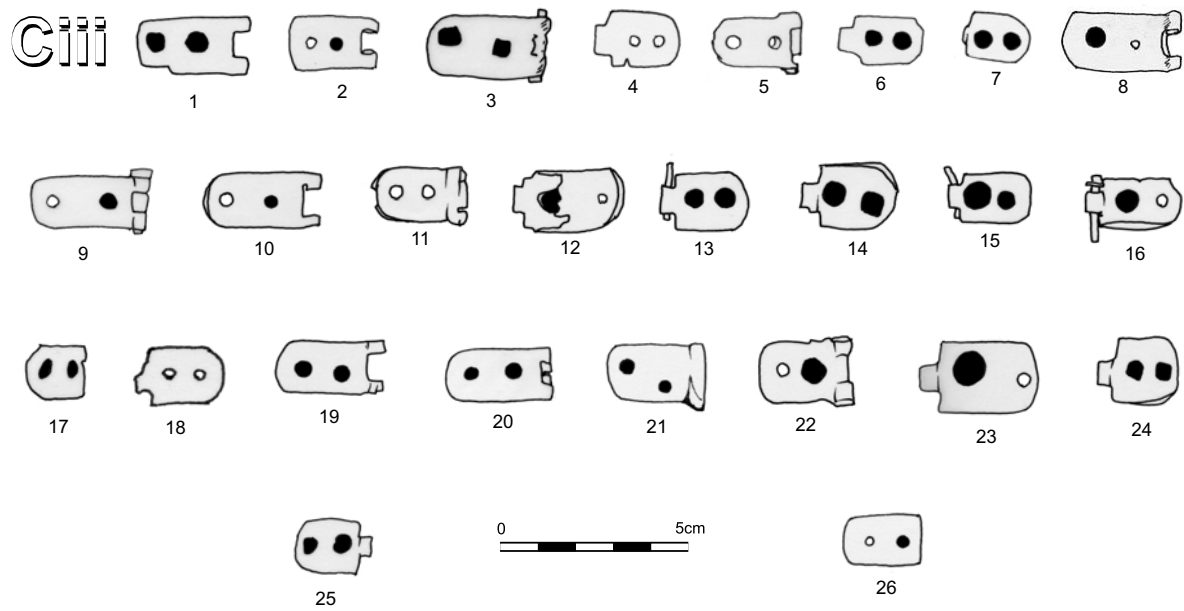
- Notes:* Cuirass hinged fitting, with a rounded end. The plate is pierced for two disc-headed rivets, with incised double circles round the holes.
22. Gloucester Kingsholme *Context:* from the later disturbed levels *Inventory No.:* 2, 19 6.3 *Reference:* PITTS in HURST 1985: Fig.11, 10 *Dimensions:* W: 15mm *Notes:* Part of a hinged fitment. There are two small rivet holes, but no rivets survive.
23. Heddernheim *Context:* Period 1 *Inventory No.:* not recorded *Reference:* FISCHER 1973: Abb.18, 17 *Dimensions:* L: 25mm *Notes:* Part of a hinged assembly. The pivot bar remains, as do two rivets.
24. Hod Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* RICHMOND 1968: Pl.43A *Dimensions (from scaled photo, approx.):* L: 27mm, W: 16mm *Notes:* One leaf of a hinged fitting. The pivot bar remains, as does one of the rivets.
25. Hod Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.):* L: 22mm, W: 11mm *Notes:* One half of a hinged fitment. The pivot bar is missing, but two dome-headed rivets remain in place.
26. Kaiseraugst *Context:* Region 17, D – undated *Inventory No.:* 1979.7271; FK B03721 *Reference:* DESCHLER-ERB 1999: Taf.14, 212 *Dimensions:* L: 28mm, W: 18mm, Th: 4mm *Notes:* Hinge plate with two rivet holes, one with a rivet in place. The hinge bar is also retained. Weight: 4.22g.
27. Kaiseraugst *Context:* Region 1, Insula 31, Period 2, t.a.q. AD 50 *Inventory No.:* 1978.5086a; FK B01636 *Reference:* DESCHLER-ERB 1999: Taf.14, 213 *Dimensions:* L: 27mm, W: 16mm, Th: 2mm *Notes:* Flat hinge plate with two rivet holes and a single rivet. The hinge bar is missing. Weight: 2.23g.
28. Kaiseraugst *Context:* Region 1, Insula 31, Period 2, t.a.q. AD 50 *Inventory No.:* 1978.5086b; FK B01636 *Reference:* DESCHLER-ERB 1999: Taf.14, 214 *Dimensions:* L: 27mm, W: 14mm, Th: 2mm *Notes:* Flat plate in a similar condition to that shown above. One rivet remains. Weight: 2.49g.
29. Kaiseraugst *Context:* Region 1, Insula 22 – undated *Inventory No.:* 1988.C05134.11 *Reference:* DESCHLER-ERB 1999: Taf.14, 217 *Dimensions:* L: 28mm, W: 16mm, Th: 1mm *Notes:* Flat plate of a hinged fitting. The hinge bar is still present, as are the two rivets, which are large and dome-headed. Weight: 1.97g.
30. Kaiseraugst *Context:* Region 17, C, undated *Inventory No.:* 1974.8696; FK A06140 *Reference:* DESCHLER-ERB 1999: Taf.14, 220 *Dimensions:* L: 25mm, W: 17mm, Th: 1mm *Notes:* One leaf of a hinged fitment, with two very small rivet holes. Weight: 1.42g.
31. Kalkriese *Context:* not recorded, dated to 9AD *Inventory No.:* not recorded *Reference:* FRANZIUS 1992: 362-4 & 363, Fig.9, 6 *Dimensions (from scale drawing):* L: 18mm, W: 16mm *Notes:* Plate from a hinged strap fitment. Two dome-headed rivets remain in place.
32. Longthorpe *Context:* praetentura, Barrack 1, north wall trench of Room 1A *Inventory No.:* 73 XI 4 *Reference:* FRERE & STJOSEPH 1974: 47 & Fig.26, 29 *Dimensions (from scale drawing):* L: 26mm, W: 15mm *Notes:* Cuirass hinged fitting with two flat-headed rivets still in position. There is also a decoration of a pair of widely spaced, grooves, parallel to each long edge.
33. Loughor *Context:* Post Roman context. *Inventory No.:* 116.57\006 (013) *Reference:* MARVELL & OWEN-JOHN 1997: 261, Fig.98.116 & 262 *Dimensions:* L: 22.6mm, W: 12mm, Th: 0.8mm. *Notes:* Buckle

- plate, with the remains of the buckle hole. The hole in the upper section is for the loop of the pin to pass through.
34. Magdalensberg *Context*: NG/7, Cellar, 0.80m beneath level II, Period 2, complex 4, c. 0 to 15 AD *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 290 & Fig.Taf.76/17 *Dimensions*: L: 28mm, W: 17mm. *Notes*: Rectangular hinged plate with two rivets.
35. Magdalensberg *Context*: not recorded *Inventory No.*: OR/1 *Reference*: DEIMAL 1986: 290 & Taf.76/21 *Dimensions*: L: 28mm, W: 13mm *Notes*: Hinged fitment plate with two holes, one of which retains the rivet.
36. Magdalensberg *Context*: OR/1 *Inventory No.*: not recorded *Reference*: DEIMAL 1986: p.291 & Taf.76/25 *Dimensions*: L: 24mm, W: 15mm *Notes*: Similar to the above.
37. Newstead *Context*: Pit LXXV *Inventory No.*: not recorded *Reference*: CURLE 1911: Pl. LXXVI, 11 *Dimensions (from scale photo)*: L: 20mm, W: 15mm *Notes*: One half of a hinged fitment. There is a single rivet, with a very large domed head.
38. Oberstimm *Context*: not recorded *Inventory No.*: 1975.159 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B92 *Dimensions*: L: 22mm, W: 15mm *Notes*: Rectangular hinged fitting, of which one side has disappeared. Both rivets on the surviving plate are extant.
39. Oberstimm *Context*: not recorded *Inventory No.*: 1975.346 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B93 *Dimensions*: L: 26mm, W: 14mm. *Notes*: Hinged plate fitting, the companion piece is missing. The pivot bar is intact, together with one misshapen rivet.
40. Oberstimm *Context*: not recorded *Inventory No.*: 1975.185 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B94 *Dimensions*: L: 29mm, W: 15mm *Notes*: Hinge plate, the companion piece is missing.
41. Oberstimm *Context*: not recorded *Inventory No.*: 1975.224 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B95 *Dimensions*: L: 28mm, W: 17mm. *Notes*: One half of a hinged fitment. It lacks the pivot bar and is damaged. The rivet holes are decorated with punched rings.
42. Oberstimm *Context*: not recorded *Inventory No.*: 1975.185 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B98 *Dimensions*: L: 21mm, W: 15mm *Notes*: There are no rivets remaining, but the holes are carefully decorated with punched rings.
43. Oescus *Context*: *Context*: not recorded, dated to early Flavian by comparison *Inventory No.*: not recorded *Reference*: KABAKCIEVA 1996: 103, Fig.6, 2 *Dimensions (from scale drawing)*: L: 22.5mm, W: 16mm *Notes*: One side of a hinged fitting, with two rivet holes, but no surviving rivets.
44. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 7 *Dimensions (from scale drawing)*: L: 29mm, W: 17mm *Notes*: One leaf of a hinged fitment, with no rivets.
45. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 8 *Dimensions (from scale drawing)*: L: 28mm, W: 16.5mm *Notes*: The rivet holes have punched concentric ring decoration, but no rivets remain.
46. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 9 *Dimensions (from scale drawing)*: L: 32mm, W: 15mm *Notes*: One leaf of a hinged fitment, with no rivets remaining.
47. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 11 *Dimensions (from scale drawing)*: L: 29mm, W: 14mm *Notes*: One leaf of a hinged fitment, with no extant rivets.
48. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 12 *Dimensions (from scale drawing)*: L: 27mm, W: 14mm *Notes*: One leaf of a hinged assembly, with no rivets.
49. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 13 *Dimensions (from scale drawing)*: L: 25mm, W: 14mm *Notes*: One leaf of a hinge fitment, with both rivets and pivot bar.
50. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 14 *Dimensions (from scale drawing)*: L: 28mm, W: 16mm *Notes*: One leaf of a hinge fitment, with no rivets remaining.
51. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 15 *Dimensions (from scale drawing)*: L: 28mm, W: 15mm *Notes*: One leaf of a hinged fitment, with no rivets.
52. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 16 *Dimensions (from scale drawing)*: L: 27mm, W: 15mm *Notes*: As above, but with both rivets in place.
53. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 17 *Dimensions (from scale drawing)*: L: 28mm, W: 15mm *Notes*: As above, though with no rivets in place.
54. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 18 *Dimensions (from scale drawing)*: L: 25mm, W: 14mm *Notes*: As above.
55. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 19 *Dimen-*



- sions (from scale drawing): L: 24mm, W: 13mm Notes: As above.
56. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 23 *Dimensions (from scale drawing)*: L: 26mm, W: 12mm *Notes*: As above.
57. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 37 *Dimensions (from scale drawing)*: L: 26mm, W: 13.5mm *Notes*: One leaf of a hinged fitment, damaged and with no rivets remaining.
58. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 41 *Dimensions (from scale drawing)*: L: 23mm, W: 13mm *Notes*: One leaf of a hinge fitment, with no extant rivets.
59. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 20 *Dimensions (from scale drawing)*: L: 21mm, W: 12mm *Notes*: One leaf of a hinged fitment, with one rivet.
60. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 24 *Dimensions (from scale drawing)*: L: 22mm, W: 11.5mm *Notes*: One leaf of a hinged fitment, with both rivets.
61. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf 34. 35 *Dimensions (from scale drawing)*: L: 21mm, W: 15mm *Notes*: One leaf of a hinged fitment, with both rivets.
62. Richborough *Context*: Area XVII, West extension, south of Chalk House, surface. *Inventory No.*: 4733 *Reference*: WILSON in CUNLIFFE 1968: 95 & fig.116 *Dimensions (from scale drawing)*: L: 60mm, W: 13mm *Notes*: One half of a hinged fitment, though with a much elongated plate. Two very large flat-headed rivets remain in the plate, which has been folded only part way back to form the hinge.
63. Risstissen *Context*: not recorded *Inventory No.*: 3040 *Reference*: ULBERT 1959: 106 & Taf.61, 4 *Dimensions (from scale drawing)*: L: 24mm, W: 16mm *Notes*: Part of a hinged fitment. Pivot bare still in place, but no rivets remain.
64. Risstissen *Context*: not recorded *Inventory No.*: 3038 *Reference*: ULBERT 1959: 106 & Taf.61, 5 *Dimensions (from scale drawing)*: L: 26mm, W: 12mm *Notes*: One half of a hinged fitment, lacking any rivets.
65. Risstissen *Context*: not recorded *Inventory No.*: 3042 *Reference*: ULBERT 1959: 106 & Taf.61, 6 *Dimensions (from scale drawing)*: L: 22mm, W: 15mm *Notes*: As above.
66. Risstissen *Context*: not recorded *Inventory No.*: 3039 *Reference*: ULBERT 1959: 106 & Taf.61, 7 *Dimensions (from scale drawing)*: L: 27mm, W: 15mm *Notes*: As above, except that there is a single rivet remaining.
67. Risstissen *Context*: not recorded *Inventory No.*: 2961 *Reference*: ULBERT 1959: 106 & Taf.61, 13 *Dimensions (from scale drawing)*: L: 25mm, W: 16mm *Notes*: Single plate from a hinged fitment, which retains one of the two rivets.
68. Risstissen *Context*: At a depth of 60-90 cm in the western half of the level (12). *Inventory No.*: R 66/39 *Reference*: ULBERT 1970: 24, 52 & Taf.3, 54. *Dimensions*: L: 36mm, W: 14mm *Notes*: Both rivets are still in place and punched concentric rings decorate the rivet holes.
69. Risstissen *Context*: At a depth of 60-90 cm in the western half of the level (12). *Inventory No.*: R 66/39 *Reference*: ULBERT 1970: 24, 52 & Taf.3, 55 *Dimensions*: L: 20mm, W: 14mm *Notes*: Both rivets remain, as does the hinge bar.
70. Risstissen *Context*: Beneath soil level (172). *Inventory No.*: R 68/40 *Reference*: ULBERT 1970: 24, 52 & Taf.3, 56 *Dimensions*: L: 21mm, W: 14mm *Notes*: One half of a hinge. There are no rivets remaining.
71. Risstissen *Context*: At a depth of 60-90cm, western half of the level (12). *Inventory No.*: R 66/39 *Reference*: ULBERT 1970: 24, 52 & Taf.3, 60. *Dimensions*: L: 23mm, W: 15mm. *Notes*: Bronze sheet of hinge plate. One rivet remains.
72. Santon *Context*: possibly AD 50-60 from association with brooches, characteristic of the 1<sup>st</sup> CAD. *Inventory No.*: not recorded *Reference*: SMITH 1909: 153, Pl. XVI, No.2 & SPRATLING 1975: 206-7, Fig.1, 2 *Dimensions*: L: 33mm, W: 11mm *Notes*: A long, hinged fitment, pierced by two rivet holes, although no rivets remain.
73. Silchester *Context*: Period 5, ca. AD 80/5-120/50 *Inventory No.*: (903), 4.14, SF 1548 *Reference*: FULFORD & TIMBY 2000: 345 & 344, Fig.159, 49 *Dimensions (from scale drawing)*: L: 22mm, W: 13mm *Notes*: One leaf of a hinged fitment, retaining two dome-headed rivets. No decorative features.
74. Svistov *Context*: buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.*: not recorded *Reference*: GENTSCHEVA 1999: 28 & 29, Abb.7, 12 *Dimensions (from scale drawing)*: L: 33 mm, W: 18mm *Notes*: One half of a hinged strap fitment. Both rivets are in place.
75. Usk *Context*: fortress pit, pre-Flavian *Inventory No.*: GBY, Manning 1981, 200 *Reference*: MANNING, PRICE & WEBSTER 1995: 8 & Fig.3, 6 *Dimensions*: L (overall): 60mm, L (hinges): 27mm, W (hinges): 15-16mm *Notes*: A pair of hinged plates, which are on a girdle plate (as shown by the hook, positioned below them). One of these hinges is positioned so that its edges align with the

- rivets of the loop plate, while the other is immediately adjacent to the first hinge plate and above the squashed hook ring. One hinge plate is clearly a replacement for the other since the use of two hinge plates adjacent to each other on the same alignment is not a part of any known standard fitting. From the front, upper, right hand girdle plate.
76. Windisch *Context*: Not known *Inventory No.*: not recorded *Reference*: UNZ & DESCHLER-ERB 1997: 28 & Taf.30, 616 *Dimensions (from scale drawing)*: L: 28mm, W: 15mm *Notes*: Part of a hinged fitment, still attached to the upper chest armoured plate. Only one rivet survives and the holes are surrounded by punched ring decorations.
  77. Windisch *Context*: rubbish dump *Inventory No.*: 22:17 *Reference*: UNZ & DESCHLER-ERB 1997: 29 & Taf.31, 635 *Dimensions (from scale drawing)*: L: 29mm, W: 15mm *Notes*: Part of a hinged fitting, still attached to the iron armour plate. One rivet looks to be a repair. Incised parallel lines along the long edges and concentric rings around the small rivet decorate the plate.
  78. Windisch *Context*: rubbish dump *Inventory No.*: 9475 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 791 *Dimensions (from scale drawing)*: L: 27mm, W: 15mm *Notes*: A hinged fitment, with two repaired rivets.
  79. Windisch *Context*: via *Decumana*, Tribune's house? *Inventory No.*: 28:3619 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 792 *Dimensions (from scale drawing)*: L: 38mm, W: 15mm *Notes*: Hinged fitment, the buckle having broken away. Both rivets are repairs.
  80. Windisch *Context*: not recorded *Inventory No.*: None *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 793 *Dimensions (from scale drawing)*: L: 31mm, W: 19mm *Notes*: The plate has a very large rivet as a repair. There appear to be three smaller rivets surrounding the large one.
  81. Windisch *Context*: rubbish dump *Inventory No.*: 4128 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 794 *Dimensions (from scale drawing)*: L: 39mm, W: 19mm *Notes*: The plate of this hinged fitment has two repaired rivets.
  82. Windisch *Context*: rubbish dump *Inventory No.*: 4388 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 795 *Dimensions (from scale drawing)*: L: 26mm, W: 14.5mm *Notes*: Portion of a hinged fitment. A large replacement rivet is in place and at least one of the rivet holes has the punched ring decoration.
  83. Windisch *Context*: rubbish dump *Inventory No.*: 4535 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 796 *Dimensions (from scale drawing)*: L: 28mm, W: 16.5mm *Notes*: A hinged fitment. Both rivets are repairs.
  84. Windisch *Context*: NE corner of courtyard building, southern area *Inventory No.*: 60:953 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 798 *Dimensions (from scale drawing)*: L: 28mm, W: 16mm *Notes*: Portion of a hinged fitment. Rivet holes have the concentric ring decoration. One rivet remains.
  85. Windisch *Context*: rubbish dump, 1913 excavation *Inventory No.*: 13:735 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 801 *Dimensions (from scale drawing)*: L: 23mm, W: 15mm *Notes*: Portion of a hinged fitment. The plate may have broken across, as there is only a single rivet hole in it.
  86. Windisch *Context*: rubbish dump *Inventory No.*: 9476 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 806 *Dimensions (from scale drawing)*: L: 24mm, W: 17mm *Notes*: Plate portion of a hinged fitment. Both rivets are repairs. There may be decoration around one of the rivet holes and the pivot bar also remains in place.
  87. Windisch *Context*: Königsfelden site *Inventory No.*: 62:1808 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 809 *Dimensions (from scale drawing)*: L: 29mm, W: 20mm *Notes*: Plate portion of a hinged fitment; both rivets survive.
  88. Windisch *Context*: SW corner of the courtyard building, southern area, find site No.21 *Inventory No.*: 59:53 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 810 *Dimensions (from scale drawing)*: L: 27mm, W: 14mm *Notes*: Plate portion of a hinged fitment; both rivets remain.
  89. Windisch *Context*: rubbish dump *Inventory No.*: 4134 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 811 *Dimensions (from scale drawing)*: L: 25mm, W: 21mm *Notes*: Plate portion of a hinged fitment. One rivet remains, close to the edge where the plate appears to have broken.
  90. Windisch *Context*: rubbish dump *Inventory No.*: 51:296 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 812 *Dimensions (from scale drawing)*: L: 28mm, W: 17mm *Notes*: Plate portion of a hinged fitment. Only one rivet remains, as does the hinge pivot bar.
  91. Windisch *Context*: rubbish dump *Inventory No.*: 22:178 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 802 *Dimensions (from scale drawing)*: L: 24mm, W: 13mm *Notes*: There is a single repaired rivet (with a very square head) and the rivet holes are decorated with incised punched rings.
  92. Windisch *Context*: eastern part of the rubbish dump *Inventory No.*: 23:419 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 805 *Dimensions (from scale drawing)*: L: 22mm, W: 14mm *Notes*: Portion of a hinged fitment, retaining both rivets.



**Fig.25:** Category C (hinged fittings) of Type iii. Scale 1:2

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| <p>93. Windisch <i>Context:</i> SW corner of the courtyard building, southern area, Find site No.21 <i>Inventory No.:</i> 59:1425 <i>Reference:</i> UNZ &amp; DESCHLER-ERB 1997: 31 &amp; Taf.34, 808 <i>Dimensions (from scale drawing):</i> L: 28mm, W: 18mm <i>Notes:</i> Both rivets remain.</p> <p>94. Windisch <i>Context:</i> rubbish dump <i>Inventory No.:</i> 4131 <i>Reference:</i> UNZ &amp; DESCHLER-ERB 1997: 31 &amp; Taf.34, 813 <i>Dimensions (from scale drawing):</i> L: 24mm, W: 14mm <i>Notes:</i> Both rivets are repairs.</p> <p>95. Woodcock Hall <i>Context:</i> small plateau between two streams, south of the river. <i>Inventory No.:</i> 226 <i>Reference:</i> BROWN 1986: 49 &amp; 48, Fig.30, 226 <i>Dimensions (from scale drawing):</i> L: 25mm, W: 13mm. <i>Notes:</i> Part of a hinge assembly. There is one small rivet remaining.</p> <p>96. Woodcock Hall <i>Context:</i> small plateau between two streams, south of the river. <i>Inventory No.:</i> 231 <i>Reference:</i> BROWN 1986: 49 &amp; 48, Fig.31, 231 <i>Dimensions (from scale drawing):</i> L: 21mm, W: 10mm. <i>Notes:</i> Part of a hinge fitment, retaining a single rivet (there is apparently only one rivet hole).</p> <p>97. Wroxeter <i>Context:</i> Insula 5, <i>macellum</i>, Period WR 3.1 <i>Inventory No.:</i> not recorded <i>Reference:</i> ELLIS 2000: 108 &amp; 109, Fig.4.6, 5 <i>Dimensions (from scale drawing):</i> L: 24mm, W: 15mm <i>Notes:</i> Fixed plate of a hinged assembly, punched for two rivets although none survive.</p> | <p>2. Castleford <i>Context:</i> not recorded <i>Inventory No.:</i> 108/C T14; CN27; SF339; 1c <i>Reference:</i> COOL &amp; PHILO 1998: 68 &amp; Fig.21, 219 <i>Dimensions:</i> L: 26mm, W: 15mm <i>Notes:</i> half of a hinged fitting. Only one rivet remains and the hinge bar is also missing.</p> <p>3. Corbridge <i>Context:</i> As above <i>Inventory No.:</i> 75 <i>Reference:</i> ALLASON-JONES &amp; BISHOP 1988: 43 &amp; 47, Fig.49 <i>Dimensions (from scale drawing):</i> L: 32mm, W (max, at hinge): 20mm. <i>Notes:</i> Part of a flat hinged fitment found on the breastplate of Cuirass 6, which retains the pivot bar and both rivets.</p> <p>4. Exeter <i>Context:</i> not closely dated <i>Inventory No.:</i> MY 844 <i>Reference:</i> HOLBROOK &amp; BIDWELL 1991: 247 &amp; 246, Fig.110, 34. <i>Dimensions:</i> L: 22mm; W: 14mm. <i>Notes:</i> Strap plate with straight sides, a rounded end and a curled hinge loop. Two rivet holes have been carefully drilled.</p> <p>5. Hod Hill <i>Context:</i> not recorded <i>Inventory No.:</i> not recorded <i>Reference:</i> RICHMOND 1968: Pl.43A <i>Dimensions (from scaled photo, approx.):</i> L: 23mm, W: 16mm. <i>Notes:</i> One leaf of a hinged fitment. The pivot bar remains, but neither rivet has survived.</p> <p>6. Hod Hill <i>Context:</i> not recorded <i>Inventory No.:</i> <i>Reference:</i> RICHMOND 1968: Pl.43A <i>Dimensions (from scaled photo, approx.):</i> L: 22mm, W: 12mm. <i>Notes:</i> Material from the Ranston Collection. Part of a hinged fitment (one leaf only) but retaining both rivets.</p> <p>7. Hod Hill <i>Context:</i> not recorded <i>Inventory No.:</i> not recorded <i>Reference:</i> RICHMOND 1968: Pl.42 <i>Dimensions (from scaled photo, approx.):</i> L: 17mm, W: 12mm. <i>Notes:</i> Material from the Durden Collection. One leaf of a</p> |
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**Ciii**

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| <p>1. Aislingen <i>Context:</i> not recorded <i>Inventory No.:</i> 643 <i>Reference:</i> ULBERT 1959: 93, Taf.17, 15 <i>Dimensions (from scale drawing):</i> L: 29mm, W: 15mm. <i>Notes:</i> Part of a flat hinged fitment that retains two rivets.</p> | <p>7. Hod Hill <i>Context:</i> not recorded <i>Inventory No.:</i> not recorded <i>Reference:</i> RICHMOND 1968: Pl.42 <i>Dimensions (from scaled photo, approx.):</i> L: 17mm, W: 12mm. <i>Notes:</i> Material from the Durden Collection. One leaf of a</p> |
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- hinged fitment, rounded at one end and retaining both rivets.
8. Longthorpe *Context*: Building III, well. *Inventory No.*: 68 XI 6 *Reference*: FRERE & STJOSEPH 1974: 48 & Fig.26, 24 *Dimensions (from scale drawing)*: L: 31mm, W: 15mm *Notes*: Part of a hinged fitting. One rivet remains and the rivet holes are decorated with punched circles.
  9. Neuss *Context*: not recorded *Inventory No.*: 15435c *Reference*: SIMPSON 2000: 75 & 151, Pl.25.4. *Dimensions (from scale drawing)*: L: 31mm, W: 17mm. *Notes*: Only one side of this fitment survives, together with the pivot bar and a single rivet.
  10. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 28 *Dimensions (from scale drawing)*: L: 30mm, W: 14mm. *Notes*: One leaf of a hinge fitment, with one extant rivets.
  11. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969:, Taf.34, 29 *Dimensions (from scale drawing)*: L: 25mm, W: 15mm *Notes*: As above.
  12. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 25 *Dimensions (from scale drawing)*: L: 29mm, W: 16mm. *Notes*: One leaf of a hinged fitment, with one rivet. The end appears to have been rounded off. Damage?
  13. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 26 *Dimensions (from scale drawing)*: L: 23mm, W: 15mm. *Notes*: One leaf of a hinged fitting, with both rivets. The pivot bar remains and the end is rounded off. Circular punch rings decoration to the rivet holes.
  14. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 27 *Dimensions (from scale drawing)*: L: 25mm, W: 17mm. *Notes*: One leaf of a hinged strap fitment, with both rivets and a rounded end.
  15. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 30 *Dimensions (from scale drawing)*: L: 21mm, W: 13mm. *Notes*: One leaf of a hinged fitment, with both rivets and the pivot bar.
  16. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 31 *Dimensions (from scale drawing)*: L: 24mm, W: 12mm. *Notes*: One leaf of a hinged fitment, with one rivet and the pivot bar.
  17. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 42 *Dimensions (from scale drawing)*: L: 15mm, W: 14mm. *Notes*: One leaf of a hinge fitment, with both rivets.
  18. Risstissen *Context*: Rubbish pit *Inventory No.*: R 66/244 *Reference*: ULBERT 1970: 24, 59 & Taf.3, 59 *Dimensions*: L: 23mm, W: 15mm *Notes*: No rivets remain but the rivet holes are decorated with punched concentric rings.
  19. Silchester *Context*: Period 5, ca. AD 80/5-120/50 *Inventory No.*: (131), 7.2, SF 1126 *Reference*: FULFORD & TIMBY 2000: 353 & 352, Fig.165, 104 *Dimensions (from scale drawing)*: L: 28mm, W: 14mm *Notes*: One leaf of a hinged fitment retaining both rivets. The rivet holes have the punched concentric ring decoration and there is a single inscribed line down the long side.
  20. Strasbourg *Context*: from Brandgasse No.4 *Inventory No.*: 6054 *Reference*: FORRER 1927: Taf. LXXVII, 27 *Dimensions*: L: 27mm *Notes*: Part of a hinged fitment, retaining both rivets. The end of the plate is rounded off.
  21. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1979: 67 & 68, Fig.29, 44 *Dimensions (from scale drawing)*: L: 43mm, W: 13mm *Notes*: A hinge assembly in a flexed position. All four rivets remain, including one very large one. The two rivets in the large leaf are asymmetrically disposed.
  22. Windisch *Context*: centre of the outer colonnade of the *Principia* *Inventory No.*: 33:2242 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 804 *Dimensions (from scale drawing)*: L: 25mm, W: 18mm. *Notes*: A portion of a hinged fitment. One of the rivets is a repair and one hole has the punched ring decoration.
  23. Windisch *Context*: rubbish dump *Inventory No.*: 4127 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 799 *Dimensions (from scale drawing)*: L: 31mm, W: 18mm *Notes*: This plate has a rounded off end and a single repaired rivet.
  24. Windisch *Context*: SW corner of the courtyard building, southern area, Find site No.21. *Inventory No.*: 59:54 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 807 *Dimensions (from scale drawing)*: L: 21mm, W: 17mm *Notes*: Both remaining rivets are repairs and both rivet holes have a punched ring decoration.
  25. Windisch *Context*: corner of *Principia* building *Inventory No.*: 34:1251 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 815 *Dimensions (from scale drawing)*: L: 20mm, W: 14mm *Notes*: Both rivets are repairs and the rivet holes are decorated with the incised concentric circles.
  26. Woodcock Hall *Context*: small plateau between two streams, south of the river. *Inventory No.*: 232 *Reference*: BROWN 1986: 49 & 48, Fig.31, 232 *Dimensions (from scale drawing)*: L: 20mm, W: 13mm *Notes*: Plate from a hinge fitment. One rivet remains and the holes have punched concentric ring decorations surrounding them.

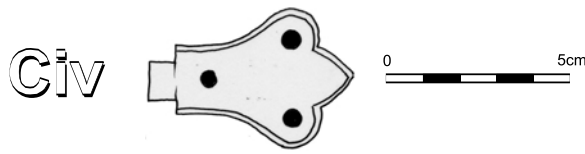


Fig. 26: Category C (hinged fitting) of Type iv. Scale 1:2

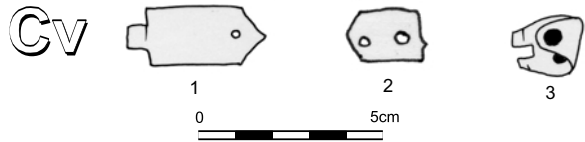


Fig. 27: Category C (hinged fittings) of Type v. Scale 1:2

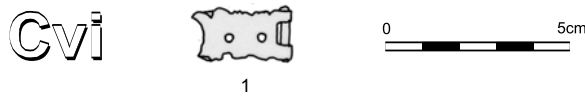


Fig. 28: Category C (hinged fitting) of Type vi. Scale 1:2

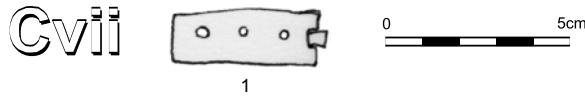


Fig. 29: Category C (hinged fittings) of Type vii. Scale 1:2

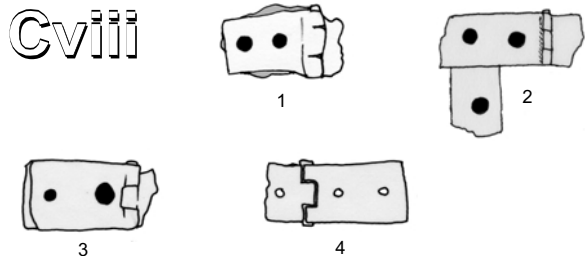


Fig. 30: Category C (hinged fittings) of Type viii. Scale 1:2

**Civ**

1. Bad Deutsch-Altenberg *Context:* not recorded *Inventory No.:* not recorded *Reference:* von GROLLER 1919: 22, Fig.12, 7 *Dimensions (from scale drawing):* L: 54mm, W: 37mm *Notes:* Part of a hinge fitting of lobate form. There are three remaining rivets. The fitting is very symmetrical and appears to have a chamfered edge.

**Cv**

1. Magdalensberg *Context:* East temple, NE, 2<sup>nd</sup> terrace *Inventory No.:* not recorded *Reference:* DEIMAL (1986): 289 & Taf.76/15 *Dimensions:* L: 16mm, W: 21mm *Notes:* Hinge fragment with a small hole at one end; the end appears to have been deliberately cut to a point and the

plate has been folded only part of the way back after forming the hinge.

2. Risstissen *Context:* unstratified find. *Inventory No.:* R 68/149 *Reference:* ULBERT 1970: 24, 64 & Taf.3, 57 *Dimensions:* L: 20mm, W: 14mm *Notes:* Small piece of bronze sheet from a hinged fitting. There are two rivet holes, but no rivets remain.

3. Wall *Context:* From the contents of the flat-bottomed ditch. *Inventory No.:* not recorded *Reference:* GOULD 1966: 33 & Fig.15, 7 *Dimensions (from scale drawing):* W: 16mm *Notes:* Part of a hinged fitting from a cuirass. One rivet remains and, although bent, the plate is of a curious shape, almost triangular.

**Cvi**

1. Magdalensberg *Context:* NG/39, ground level *Inventory No.:* not recorded *Reference:* *Ibid*, 291 & Taf.76/27 *Dimensions:* L: 28mm, W: 15mm. *Notes:* Rectangular hinged fitting, retaining the pivot bar, with two rivet holes. The plate is decorated with three inscribed transverse doubled lines.

**Cvii**

1. Risstissen *Context:* Soil level (level 158) *Inventory No.:* R 68/21 *Reference:* ULBERT 1970: 23, 60 & Taf.3, 53 *Dimensions:* L: 40mm, W: 14mm. *Notes:* Flat hinge formed from bronze sheet. Each half contains two rivet holes. None of the rivets are present.

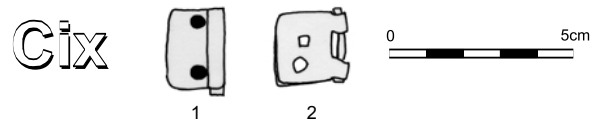
**Cviii**

1. Camerton *Context:* not recorded, detector find *Inventory No.:* 26766X *Reference:* JACKSON 1990: 28 & Pl.3, 16 *Dimensions:* L: 26mm *Notes:* Hinged fitting; one side is intact (including a pair of dome-headed rivets) and there are traces of the other side, together with the hinge bar. Weight: 6.0g.
2. Colchester *Context:* W. entrance area of Region 3/filling of Site 4 *Inventory No.:* not recorded *Reference:* HAWKES & HULL (1947): Pl.CII, No.14 *Dimensions (from scale drawing):* L: 39mm, W: 34mm *Notes:* Hinged strap fitting, retaining two rivets on one leaf. There is a second fitting, also with two rivets (one shared with the hinge piece) and a some armour plate remains attached.

3. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.34, 6 *Dimensions (from scale drawing):* L: 35mm, W: 17mm *Notes:* One leaf of a hinged fitting, in which one rivet remains, as well as a pivot bar. There is the vestige of a second leaf.

4. Risstissen *Context:* not recorded *Inventory No.:* 3634 *Reference:* ULBERT 1959: 106 & Taf.61, 8 *Dimensions (from scale drawing):* L: 38mm, W: 17mm *Notes:* Hinged fitting made from sheet bronze. One half has been torn through a rivet hole.

5. Wall *Context*: From the metal working layer, Phase 2 *Inventory No.*: not recorded *Reference*: ROUND 1969: 28 & 29, Fig.9, 14 *Dimensions (from scale drawing)*: L: 64mm, W: 28mm *Notes*: Part of a hinged fitment from a cuirass. One rivet remains in the smaller portion.



**Fig.31:** Category C (hinged fittings) of Type ix. Scale 1:2

### Cix

1. Caernarfon *Context*: From a pit (2172), at the end of Period 6A, sealed beneath a Period 7 floor. Room X of the courtyard building SS2. Hadrianic-?early Antonine. *Inventory No.*: 415 *Reference*: *Reference*: CASEY, DAVIES & EVANS 1993: 198-200, Fig.10.18, 415(g) *Dimensions*: Rivets, D: 3 & 5mm *Notes*: One of three small portions of iron armour. This one carries a rectangular plate of copper alloy, fixed with two dome-headed rivets. Only one section of the tubular hinge survives. Backplate?
2. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 10 *Dimensions (from scale drawing)*: L: 18mm, W: 220mm *Notes*: One leaf of a hinge fitment with the pivot bar, with no rivets remaining.

# Category 'D': Hingeless Buckles

## Contents

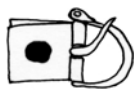
*Hingeless buckles from the following sites are included here:* Aislingen (DEU), Augsburg-Oberhausen (DEU), Bad Deutsch-Altenberg (AUT), Baden (CHE), Burghöfe (AUT), Caerleon (GBR), Camerton (GBR), Chester (GBR), Cirencester (GBR), Colchester (GBR), Dangstetten (DEU), Exeter (GBR), Fishbourne (GBR), Häsenbühl (DEU), Herrera de Pisuerga (E), Hod Hill (GBR), Hofheim (DEU), Hüfingen (DEU), Kaiseraugst (CHE), Kalkriese (DEU), Loughor (GBR), Magdalensburg (DEU), Mainz (DEU), Nijmegen (NLD), Oberstimm (DEU), Oberwinterthur (CHE), Richborough (GBR), Rheingönheim (DEU), Risstissen (DEU), Rottweil (DEU), Sarmizegetusa (ROM), Skeleton Green (GBR), South Shields (GBR), St. Albans (GBR), Strageath (GBR), Svistov (BU), Urspring (DEU), Usk (GBR), Waddon Hill (GBR), Wimbourne (GBR), Windisch (CHE), Woodcock Hall (GBR)

## Di

1. Aislingen *Context:* not recorded *Inventory No.:* 6913 *Reference:* ULBERT 1959: 93, Taf.17, 16 *Dimensions (from scale drawing):* L: 20mm, W: 17mm *Notes:* D-shaped buckle with tongue, pivot bar and flat plate, but no rivet.
2. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.18, Fig.37 *Dimensions (from scale drawing):* L (plate only): 27mm, W: 22mm *Notes:* Similar to the above. Only one rivet in the plate.
3. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.18, Fig.39 *Dimensions (from scale drawing):* L: 32mm, W: 21mm *Notes:* A buckle, still fastened to the iron armour plate by a single large rivet.
4. Chester *Context:* not recorded *Inventory No.:* not recorded *Reference:* NEWSTEAD 1928: Pl. VIII, 11

*Dimensions (from scale drawing):* L: 27mm, W: 17mm  
*Notes:* Strap buckle fitment, still fixed to a piece of armour plate by the single rivet.

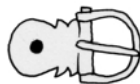
5. Colchester *Context:* Ditch 1A, upper filling of Section 70, Period III *Inventory No.:* not recorded *Reference:* HAWKES & HULL 1947: 335 & Pl.CII, No.9 *Dimensions (from scale drawing):* L: 30mm, W: 18mm *Notes:* A complete buckle, with the rivet still in place.
6. Colchester (Sheepen) *Context:* Period IVb, Neronian, Site I, Feature 153. Large rubbish pit cut into an earlier gravel pit *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 36 & 122, Fig.65, 54 *Dimensions (from scale drawing):* L: 25mm, W (buckle): 18mm *Notes:* D-shaped buckle strap fitment. The tongue of the buckle is missing.
7. Colchester (Sheepen) *Context:* unstratified, from ploughsoil *Inventory No.:* *Reference:* NIBLETT 1985: 127, Fig.71, 98 *Dimensions (from scale drawing):* L (approx.): 23mm, W (buckle bow): 17mm *Notes:* D-shaped armour buckle. This retains the bow and tongue as well as the small copper alloy plate, complete with rivet.
8. Dangstetten *Context:* find group 285 *Inventory No.:* 285, 5 *Reference:* FINGERLIN 1970: 224, Fig.11, 8 & FINGERLIN 1986: 102, 317 & 475, Taf.7 *Dimensions:* L: 27mm *Notes:* Complete D-shaped buckle strap fitting, although it lacks the rivet through the plate.
9. Dangstetten *Context:* find group 332 *Inventory No.:* 332.2 *Reference:* FINGERLIN 1986: 118 & 334 *Dimensions:* L: 25mm *Notes:* Complete D-shaped buckle strap fitting, the buckle bow is flexed to one side of the plate, and the tongue to the other. There is a single, off centre, rivet hole but the rivet is missing.
10. Dangstetten *Context:* find group 681 *Inventory No.:* 681, 2 *Reference:* FINGERLIN 1998: 31 & 216 *Dimensions:* Length 33mm *Notes:* Complete strap buckle. The bow



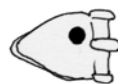
i Single rivet, rectangular plate



ii Iron fitments (inside fixed buckles from 'Corbridge-A' girdle plates)



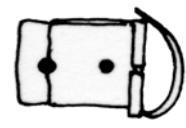
iii Single rivet, 'lobate' plate



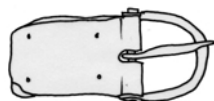
iv Single rivet, tapering plate



v Two rivets, side by side



vi Two rivets, in line



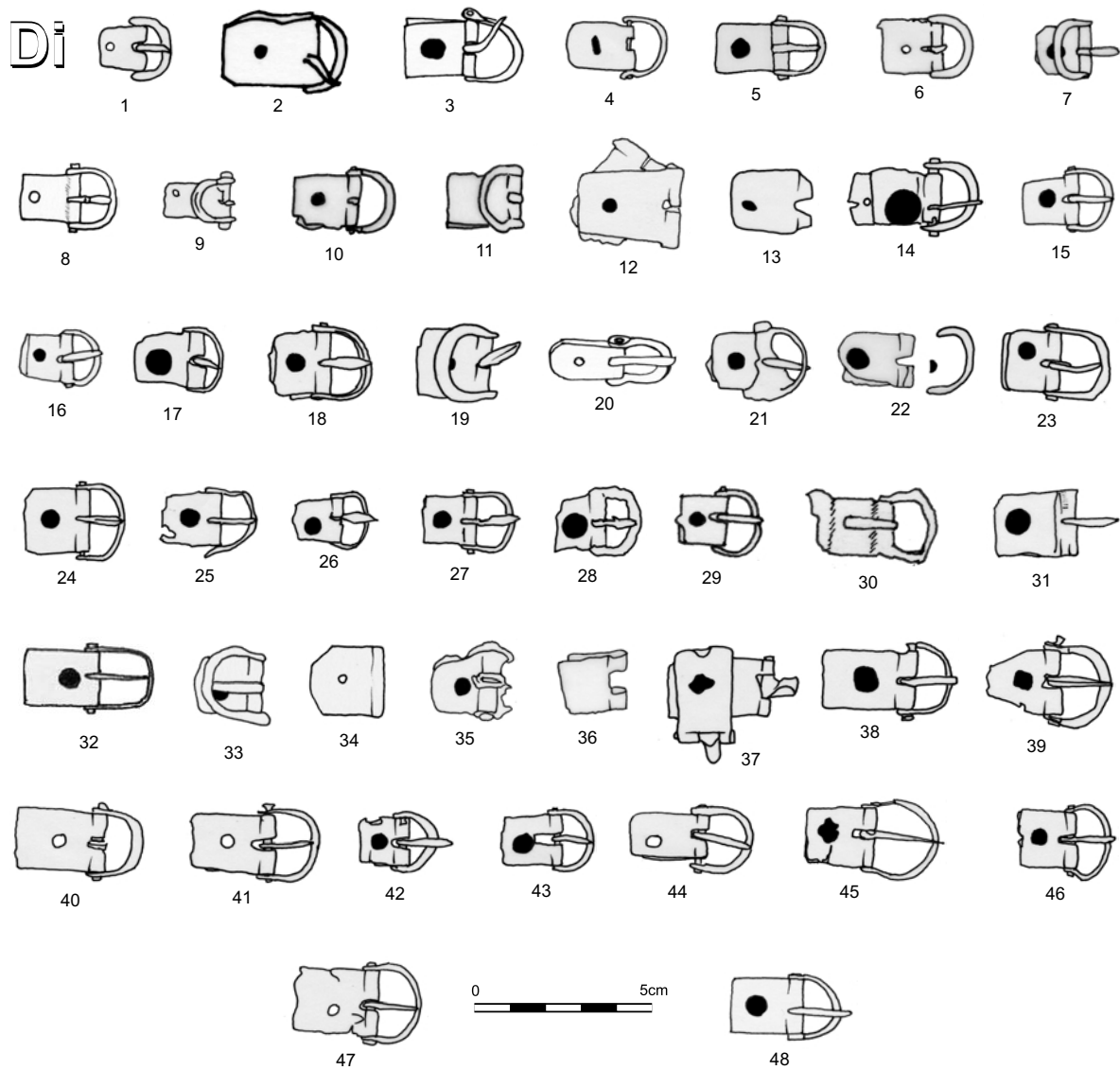
vii Four rivets



viii Unclassifiable types

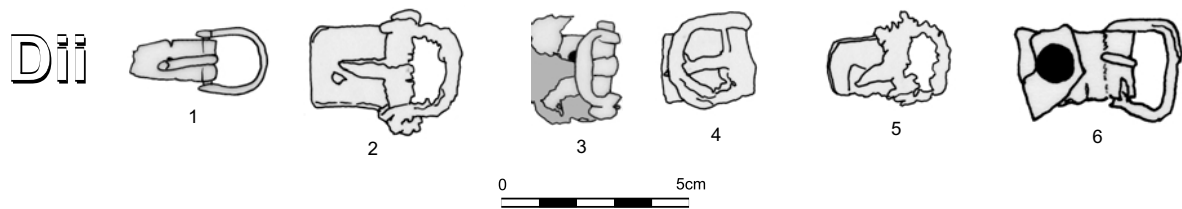
- is in copper alloy, but the pivot bar is iron. Rectangular buckle plate with a single rivet.
11. Dangstetten *Context*: find group 1003 *Inventory No.*: 1003, 1 *Reference*: FINGERLIN 1998: 116 & 313 *Dimensions (from scale drawing)*: L (plate only): 14mm, W: 12mm *Notes*: Complete strap buckle, except for the tongue. The buckle bow is fully flexed.
  12. Exeter *Context*: late 2nd-early 3rd century, MY 1161 *Inventory No.*: not recorded *Reference*: HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110.30 *Dimensions*: L: 28 & 27mm, W: 17 & 20mm. *Notes*: Two buckle plates, each folded in half over the iron hinge pins and secured by single disc-headed rivets. One has a blunt end; the other is more pointed. Corrosion products join the two plates.
  13. Fishbourne *Context*: plough soil *Inventory No.*: not recorded *Reference*: CUNLIFFE 1971: 112 & 113, Fig.44, 98 *Dimensions (from scale drawing)*: L: 22mm, W: 17.5mm *Notes*: Strap buckle fitment, damaged and with the single rivet in place.
  14. Häsenbühl *Context*: not recorded *Inventory No.*: not recorded *Reference*: HEILIGMANN 1990: Taf.42, 20 *Dimensions*: L: 35mm *Notes*: Hingeless buckle. There is a single, massive rivet, positioned off-centre. Repair, possibly?
  15. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.43a *Dimensions (from scaled photo, approx.)*: L: 25mm, W: 17mm *Notes*: Strap buckle fitment, retaining the rivet in the plate.
  16. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L: 22mm, W: 16mm *Notes*: As above.
  17. Hofheim *Context*: not recorded *Inventory No.*: 18887 *Reference*: RITTERLING 1913: Pl. IX, 18 *Dimensions (from scale photo)*: L: 25mm, W: 17mm *Notes*: Strap buckle fitment, retaining all the elements.
  18. Kaiseraugst *Context*: not recorded *Inventory No.*: 1907.1218c *Reference*: DESCHLER-ERB 1999: Taf.13, 181 *Dimensions*: L: 28mm, W: 22mm, Th: 4mm *Notes*: Strap buckle fitment, retaining the single domed rivet. Weight: 4.13g.
  19. Kaiseraugst *Context*: Region 1, Insula 42 – undated *Inventory No.*: 1972.6684; FK A03818 *Reference*: DESCHLER-ERB 1999: Taf.13, 190 *Dimensions*: L: 27mm, W: 21mm, Th: 1mm *Notes*: Strap buckle fitment, which retains its single rivet. Weight: 7.35g.
  20. Mainz *Context*: ‘Trench 3’ *Inventory No.*: not recorded *Reference*: BEHRENS 1912: 87, Abb.3, 12 *Dimensions*: L: 36mm *Notes*: Complete hingeless buckle. The rivet is missing, however.
  21. Moers-Asberg *Context*: not recorded *Inventory No.*: not recorded *Reference*: BECHERT 1974: Abb.68, 6 *Dimensions*: L: 27mm *Notes*: Somewhat corroded strap buckle fitment, although all the elements are present.
  22. Oberstimm *Context*: not recorded *Inventory No.*: 1975.154 *Reference*: SCHÖNBERGER 1978: 169 & Taf.20, B103 *Dimensions*: L: 22mm, W: 15mm *Notes*: Buckle bow (separate) and plate from a hingeless buckle. The plate retains one large rivet.
  23. Oberstimm *Context*: not recorded *Inventory No.*: 1975.356 *Reference*: SCHÖNBERGER 1978: Taf.20, B108 *Dimensions*: L: 30mm, W: 16mm. *Notes*: Intact D-shaped hingeless buckle. There is a single off-centred rivet.
  24. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 25 *Dimensions (from scale drawing)*: L: 28mm, W: 21mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present.
  25. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 27 *Dimensions (from scale drawing)*: L: 26mm, W: 19mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present. Badly damaged and distorted.
  26. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 30 *Dimensions (from scale drawing)*: L: 22.5mm, W: 15mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present. The rivet is not symmetrically placed in the plate.
  27. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 31 *Dimensions (from scale drawing)*: L: 26mm, W: 16.5mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present as is the single rivet.
  28. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 34 *Dimensions (from scale drawing)*: L: 25mm, W: 18mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present as is a single large flat rivet. Very corroded example.
  29. Risstissen *Context*: Rubbish pit *Inventory No.*: R 66/244 *Reference*: ULBERT 1970: 23, 59 & Taf.3, 47 *Dimensions*: L: 23mm, W: 14mm *Notes*: Buckle portion of a hinged-buckle fitment. The rivet is present and the rivet hole is decorated with punched rings.
  30. Risstissen *Context*: Depth of 0-30cm beneath the surface, level 41. *Inventory No.*: R 66/126 *Reference*: ULBERT 1970: 23, 55 & Taf.3, 48. *Dimensions*: L:





**Fig.32:** Category D (hingeless buckles) of Type i. Scale 1:2

- 35mm, W: 15mm. *Notes:* Hingeless buckle, where a part of the fold of the plate has broken off. The rivet remains.
31. Rottweil *Context:* Find site 15 *Inventory No.:* ZV632/40 *Reference:* PLANCK 1975: 17 & Taf.34, 12 *Dimensions:* L: 22mm. *Notes:* Strap buckle fitment, lacking the buckle bow but retaining the rivet.
32. St.Albans *Context:* not recorded *Inventory No.:* V.31, 431 *Reference:* WEBSTER 1958: 93, Fig.7, 207 *Dimensions (from scale drawing):* L: 36mm, W: 16mm. *Notes:* D-shaped buckle with rectangular plate.
33. St.Alban's *Context:* Insula XXVIII, 2, on floor of Room 1 *Inventory No.:* 55 F VI 1A, AD 240-300 *Reference:* FRERE 1984: 33 & Fig.11.75 *Dimensions (from scale drawing):* L: 24mm, W: 11mm. *Notes:* The buckle bow, pin and pivot are all present, as is a single rivet. The buckle bow is, however, flexed.
34. South Shields *Context:* not recorded *Inventory No.:* SS.1900.17(4); TWMCS B10255 *Reference:* ALLASON-JONES & MIKET 1984: 208 & 3.696 *Dimensions:* L: 20mm, W: 19mm, Th: 2mm. *Notes:* Bronze cuirass buckle, of which just the plate remains. There is a single rivet hole, but no remaining rivet.
35. Strageath *Context:* Demolition pit in Antonine I, Building I, 1982, G I 28 *Inventory No.:* not recorded *Reference:* FRERE & WILES 1989: 142 & 147, Fig.72, 28. *Dimensions (from scale drawing):* L: 22mm, W: 21mm. *Notes:* Badly damaged buckle, with a considerable amount of corrosion adhering to it.



**Fig.33:** Category D (hingeless buckles) of Type ii. Scale 1:2

36. Urspring *Context:* found in room F of the western building. *Inventory No.:* not recorded *Reference:* DRÜCK *et al* 1904: 36 & Taf.IV, Fig.12 *Dimensions:* L: 20mm, W: 18mm. *Notes:* Portion of a strap buckle plate. There is no rivet hole in the plate.
37. Windisch *Context:* rubbish dump excavation, 1929 *Inventory No.:* 29:1684 *Reference:* UNZ & DESCHLER-ERB 1997: 28 & Taf.31, 633 *Dimensions (from scale drawing):* L (top): 33mm, W: 16mm. *Notes:* Two fittings on a chest plate, linked together by a common, misshapen rivet. The top item is a hingeless buckle, where the buckle pin has broken. (The bottom one is a hinged fitment, but is otherwise undetermined).
38. Windisch *Context:* rubbish dump *Inventory No.:* 4118 *Reference:* UNZ 1973: 30 & Taf.33, 755 *Dimensions (from scale drawing):* L: 37mm, W: 22mm *Notes:* Buckle fitment, retaining the single rivet.
39. Windisch *Context:* rubbish dump *Inventory No.:* 28:3066 *Reference:* UNZ 1973: 30 & Taf.33, 759 *Dimensions (from scale drawing):* L: 34mm, W: 22mm *Notes:* Buckle fitment. This has been badly damaged, but still retains the rivet through the copper alloy sheet. The rivet may be a repair. The plate is not tapered, but the sides are folded back beneath.
40. Windisch *Context:* corner of the main courtyard of the *Principia* *Inventory No.:* 31:1591 *Reference:* UNZ 1973: 30 & Taf.33, 760 *Dimensions (from scale drawing):* L: 35mm, W: 21mm *Notes:* Buckle fitment. The tongue is missing, as is the rivet.
41. Windisch *Context:* rubbish dump *Inventory No.:* 13:732 *Reference:* UNZ 1973: 30 & Taf.33, 762 *Dimensions (from scale drawing):* L: 35mm, W: 22mm *Notes:* Buckle fitment. The rivet is missing.
42. Windisch *Context:* centre of the outer colonnade of the *Principia* building *Inventory No.:* 33:4084, *Reference:* UNZ 1973: 30 & Taf.33, 767 *Dimensions (from scale drawing):* L: 26mm, W: 17mm *Notes:* Buckle fitment. The rivet remains in position.
43. Windisch *Context:* trench of 1936, courtyard centre of the *Praesidium*. Find spit No.6. *Inventory No.:* 36:420 *Reference:* UNZ 1973: 30 & Taf.33, 769 *Dimensions (from scale drawing):* L: 25mm, W: 17mm *Notes:* Buckle fitment.
44. Windisch *Context:* SW corner of courtyard building, southern area. Find spot No.21 *Inventory No.:* 59:1576 *Reference:* UNZ 1973: 30 & Taf.33, 771 *Dimensions (from scale drawing):* L: 34mm, W: 19mm *Notes:* Buckle fitment. Rivet is probably a repair.
45. Windisch *Context:* rubbish dump *Inventory No.:* 13:731 *Reference:* UNZ 1973: 30 & Taf.33, 772 *Dimensions (from scale drawing):* L: 39mm, W: 22mm *Notes:* Buckle fitment. Rivet is a repair.
46. Windisch *Context:* part of the Baths complex, by the *via Decumana*. *Inventory No.:* 29:980 *Reference:* UNZ 1973: 31 & Taf.33, 781 *Dimensions (from scale drawing):* L: 28mm, W: 21mm *Notes:* Strap buckle fitment. The rivet hole has a concentric punched ring decoration and the rivet remains.
47. Windisch *Context:* rubbish dump *Inventory No.:* 21891 *Reference:* UNZ 1973: 31 & Taf.34, 790 *Dimensions (from scale drawing):* L: 35mm, W: 23mm *Notes:* Buckle fitment. This may be incomplete. There is one small hole in the plate, but not in the usual central position.
48. Woodcock Hall *Context:* small plateau, bordered on two sides by a stream and south of the river. *Inventory No.:* 200 *Reference:* BROWN 1986: 44 & Fig.28,2 00 *Dimensions (from scale drawing):* L (total): 33mm, W: 18mm. *Notes:* Complete strap buckle fitment. The rivet hole is surrounded by concentric punched ring decoration.

## Dii

1. Corbridge *Context:* not recorded *Inventory No.:* KE67 (75.3398) *Reference:* BISHOP & DORE 1989: 177 & 176, Fig.84, 143 *Dimensions:* (overall) L: 17mm, W: 18mm, (plate) L: 22mm, W: 11mm *Notes:* Small D-shaped buckle of oval section. Pin and pivot rod of iron. Buckle plate has a single rivet.
2. Corbridge *Context:* SE corner of Site 11, Phase II, AD 122-38 contained in a wooden chest. This chest was later placed within a hole, dug into and beneath the floor of an earlier Phase I building. *Inventory No.:* 76 *Reference:* ALLASON-JONES & BISHOP 1988: 43 & Fig.52 *Dimensions (from scale drawing):* L: 40mm, W: 33mm *Notes:* From the inside of the upper back plate of *Cuirass i* (Type-A). The pin of the buckle is flexed downwards and the fitment is badly corroded. The iron buckle is on the inside of the armour plate, fixed with a single rivet.



Fig. 34: Category D (hingeless buckles) of Type iii. Scale 1:2

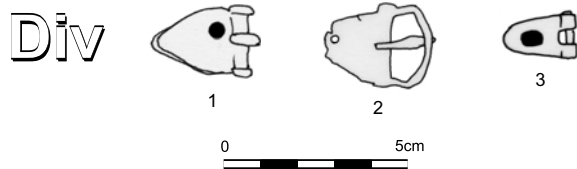


Fig. 35: Category D (hingeless buckles) of Type iv. Scale 1:2

3. Corbridge Context: as above Inventory No.: 76 Reference: ALLASON-JONES & BISHOP 1988: 43 & Fig.52 Dimensions (from scale drawing): W (max, buckle pivot): 33mm Notes: From the inside of the upper back plate of Cuirass i (Type-A), the companion buckle to the one above. The pin and bow of the buckle are flexed downwards and there is a certain amount of corrosion evident. The single rivet attaches this iron buckle to the rear of the girdle plate.
4. Corbridge Context: as above Inventory No.: 78 Reference: ALLASON-JONES & BISHOP 1988: Fig.59 Dimensions (from scale drawing): L: 24mm, W: 24mm Notes: From Cuirass iii, (Type-A), from the inside of the upper back girdle plate. The buckle is flexed downwards and is heavily corroded.
5. Corbridge Context: as above Inventory No.: 78 Reference: ALLASON-JONES & BISHOP 1988: Fig.59 Dimensions (from scale drawing): L (approx.): 32mm, W (approx.): 23mm Notes: From Cuirass iii, (Type-A) from the inside of the upper back girdle plate. The buckle bow is heavily corroded.
6. Risstissen Context: Fortress 1/2, immediately beneath the soil level (level 158). Inventory No.: R 68/22 Reference: ULBERT 1970: 25, Taf.4, 77 Dimensions: L: 43mm, W: 26mm Notes: Iron strap with rectangular-shaped buckle. The strap is secured with a large, domed bronze rivet. This is an internal backplate buckle.

### Diii

1. Richborough Context: Diagonal trench IV, in chalk layer Inventory No.: 4733 Reference: CUNLIFFE 1968: 95 & Pl. XXXIV, 112 Dimensions (from scale drawing): L: 34mm, W: 20mm Notes: A strap buckle fitment with a very ornate buckle plate, cut in a lobate form. The plate rivet is missing.

### Div

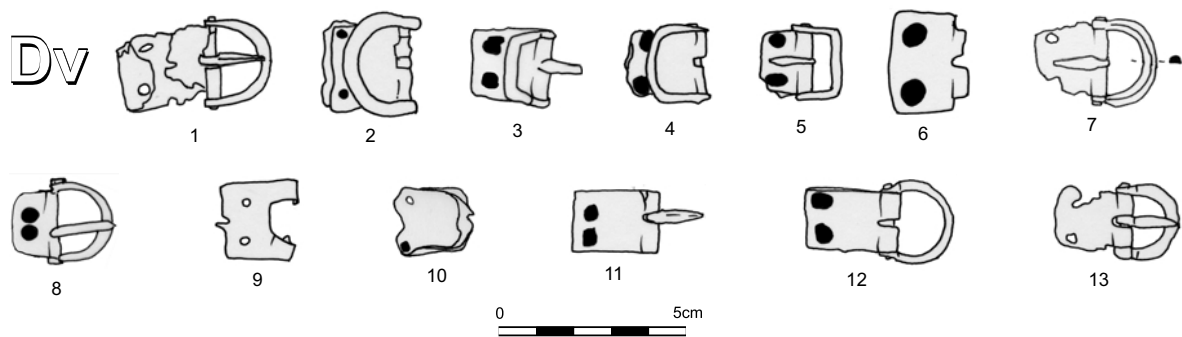
1. Kalkriese Context: not recorded, dated at AD 9 Inventory No.: Reference: FRANZIUS 1992: 362-4 & 363, Fig.9, 4 Dimensions (from scale drawing): L: 29mm, W: 18mm Notes: Part of a buckle. The D-shaped bow has van-

ished, as has most of the tongue but the pivot bar remains in the flat metal plate.

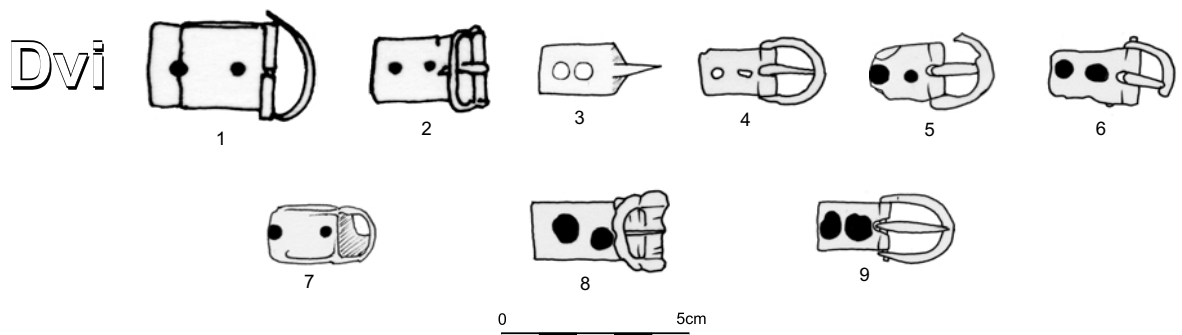
2. Loughor Context: Phase 9, Building 3.9 demolition debris (Context Group No. 4213) Inventory No.: 124.53\1822 (524) Reference: MARVELL & OWEN-JOHN 1997: 261 & 263, Fig.98.124 Dimensions: L: 29mm, W (max): 22.5mm. Notes: Buckle and part of the buckle plate, complete with pin.
3. Magdalensberg Context: between ground levels 2 & 3 Inventory No.: NG/33 Reference: DEIMAL 1986: 291 & Taf.76/29 Dimensions: L: 19mm, W: 12mm. Notes: Plate portion of a buckle, damaged, but which retains the pivot bar. There is a single dome-headed rivet in place.

### Dv

1. Augsburg-Oberhausen Context: not recorded Inventory No.: not recorded Reference: HÜBENER 1973: Taf.14, 22 Dimensions (from scale drawing): L: 40mm, W: 24mm Notes: Complete hingeless buckle assembly, though seemingly lacking the rivet in the plate.
2. Baden Context: not recorded Inventory No.: 481 Reference: UNZ 1971: Abb.4, 25 Dimensions: L: 24mm Notes: Strap buckle fitment, with two side-by-side rivets through the plate. The buckle bow is completely flexed, while the tongue is flexed to the other side of the plate.
3. Herrera de Pisuerga Context: not recorded Inventory No.: not recorded Reference: FERNANDEZ 1992: Lam.VI Dimensions (from scale drawing): 29mm Notes: Strap buckle fitment with two rivets arranged side-by-side on the buckle plate. The buckle bow is very angular and is flexed.
4. Kaiseraugst Context: Region 1, Insula 22 – undated Inventory No.: 1970.9321; FK A02435 Reference: DESCHLER-ERB 1999: Taf.13, 191 Dimensions: L: 22mm, W: 21mm, Th: 1mm Notes: Strap buckle fitment. There are two rivets, arranged side-by-side. The buckle pin is missing. Weight: 3.72g.
5. Kaiseraugst Context: Region 17, C - Period 4, t.a.q. AD 110 Inventory No.: 1974.8723; FK A06825 Reference: DESCHLER-ERB 1999: Taf.13, 192 Dimensions: L: 20mm, W: 20mm, Th: 5mm Notes: Strap buckle with an arrangement of two side-by-side rivets. Weight: 4.19g.
6. Kaiseraugst Context: Region 1 Inventory No.: 1963.1780; FK X02432 Reference: DESCHLER-ERB 1999: Taf.14, 235 Dimensions: L: 21mm, W: 28mm, Th: 1mm Notes: Strap buckle plate, with a side-by-side arrangement for two rivets. The buckle bow and tongue are missing, as is the pivot bar. Weight: 3.93g.
7. Kalkriese Context: not recorded, dated at AD 9 Inventory No.: not recorded Reference: FRANZIUS 1992: 362-4 & 363, Fig.9, 1 Dimensions (from scale drawing): L: 32mm, W:



**Fig. 36:** Category D (hingeless buckles) of Type v. Scale 1:2



**Fig. 37:** Category D (hingeless buckles) of Type vi. Scale 1:2

- 24mm *Notes:* Buckle, complete with pivot bar and tongue. A small portion of the plate remains.
8. Kalkriese *Context:* not recorded *Inventory No.:* not recorded *Reference:* FRANZIUS 1992: 76 & 71, Abb.2 *Dimensions (from scale photograph, approx. measurements only):* L: 68mm, W: 23mm *Notes:* A complete hinged buckle, still *in situ* on the breastplate. The buckle plate has two large, flat-headed rivets; unusually these are placed side-by-side. The buckle plate is attached directly to a leather strap, now mineralised, which is itself riveted directly to the breastplate.
9. Magdalensberg *Context:* Q/1, Fire rubble *Inventory No.:* not recorded *Reference:* DEIMAL 1986: 289 & Taf.76/16 *Dimensions:* L: 21mm, W: 20mm. *Notes:* Strap buckle plate, damaged, with two rivet holes.
10. Usk *Context:* PGC 1, drainage ditch by the *via principalis* of the fortress, containing Flavian and pre-Flavian material *Inventory No.:* Manning 1981, 138. *Reference:* MANNING, PRICE & WEBSTER 1995: 12 & Fig.4, 16 *Dimensions:* L: 21mm. *Notes:* Fragment of a buckle or strap holder, consisting of three copper alloy sheets rivetted together. The rivet holes (one of which retains a rivet) are arranged side-by-side.
11. Windisch *Context:* corner of the main courtyard of the *Principia*. *Inventory No.:* 31:1820 *Reference:* UNZ 1973: 30 & Taf.33, 764 *Dimensions (from scale drawing):* L: 35mm, W: 16.5mm *Notes:* Buckle fitment. The bow has disappeared and there are two rivet holes, side by side - an unusual arrangement.
12. Windisch *Context:* trench of 1899, by *via Principalis*, Tribune's house? *Inventory No.:* 270e *Reference:* UNZ 1973: 30 & Taf.33, 775 *Dimensions (from scale drawing):* L: 38mm, W: 22mm *Notes:* Buckle fitment. Unusual arrangement of the rivets, two of which are present, side by side. The buckle pin is missing.
13. Windisch *Context:* Windisch Restaurant Cardinal, find site open field to the west of the fortress. *Inventory No.:* 31:4?? *Reference:* UNZ 1973: 30 & Taf.33, 779 *Dimensions (from scale drawing):* L: 33mm, W: 20mm *Notes:* Strap buckle fitment. Some damage, two rivet holes, side by side.

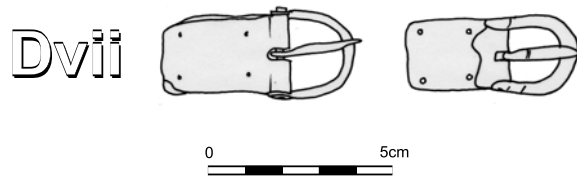
### Dvi

1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.18, Fig.35 *Dimensions (from scale drawing):* L (plate only): 32mm, W: 28mm *Notes:* Buckle, the flat leaf having broken off. Still attached to the armour plate. The buckle bow is flexed upwards, so the overall length cannot be determined from the drawing.
2. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.18, Fig.38 *Dimensions (from scale drawing):* L (plate only): 30mm, W: 22mm *Notes:* Similar to the above, although the buckle bow is rather more square in shape. Two rivets survive. Again, the overall dimension cannot be given because the buckle bow is flexed backwards in the drawing.

3. Burghöfe *Context*: not recorded *Inventory No.*: 1958/600 *Reference*: ULBERT 1959: 93, Taf.51, 2 *Dimensions (from scale drawing)*: L: 32mm, W: 13mm *Notes*: Flat buckle plate with two rivet holes. It retains the pivot bar and the tongue, but the D-loop has disappeared.
4. Kaiseraugst *Context*: Region 1, Insula 18 - Period 3, t.a.q. AD 70/75 *Inventory No.*: 1963.4391a; FK X02533 *Reference*: DESCHLER-ERB 1999: Taf.13, 187 *Dimensions*: L: 34mm, W: 18mm, Th: 6mm *Notes*: Strap buckle fitment where, unusually, there are two holes in the buckle plate. Weight: 4.70g.
5. Nijmegen *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOGAERS & HAALBOS 1975: Fig.11, 1 *Dimensions (from scale drawing)*: L: 34mm, W: 20mm *Notes*: Damaged buckle of a hinged buckle fitment, where a portion of the D-bow has been destroyed. There are two rivets, of different sizes.
6. Oberstimm *Context*: not recorded *Inventory No.*: 1975.302 *Reference*: SCHÖNBERGER 1978: 170 & Taf.20, B107 *Dimensions*: L: 33mm, W: 12mm. *Notes*: Bronze buckle, whose D-loop is partially broken. Two rivets in place, one of which is oval in shape.
7. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1979: 67 & 68, Fig.29, 49 *Dimensions (from scale drawing)*: L: 27mm, W: 16mm *Notes*: Much corroded strap buckle fitment, which appears to retain two rivets.
8. Windisch *Context*: by the *via Decumana*, Find spot No.24 *Inventory No.*: 28:1351 *Reference*: UNZ 1973: 28 & Taf.31, 634 *Dimensions (from scale drawing)*: W (max): 21mm *Notes*: Intact buckle, still attached to a piece of iron armour plate. One rivet looks to be a repair. The buckle appears to be heavily corroded and is flexed backwards.
9. Windisch *Context*: rubbish dump *Inventory No.*: 33:54 *Reference*: UNZ 1973: 30 & Taf.33, 750 *Dimensions (from scale drawing)*: L: 36mm, W: 18mm *Notes*: Buckle fitment. Two large rivets in place - repairs possibly.

### Dvii

1. Magdalensberg *Context*: NG/32a, from ground level *Inventory No.*: not recorded *Reference*: DEIMEL 1986: 287 & Taf.76/3 *Dimensions*: Length 52mm overall, width 24mm. *Notes*: D-shaped buckle with intact plate, pierced with four small holes.
2. Magdalensberg *Context*: OR/17, from pit 2 by the south wall, 7.5 west of the east wall and 1.4m beneath the pavement level *Inventory No.*: not recorded *Reference*: DEIMEL 1986: 287 & Taf.76/4. *Dimensions*: L (max): 45mm, W: 22mm. *Notes*: Circle cross section D-shaped buckle, attached to the plate, the latter with four small holes.

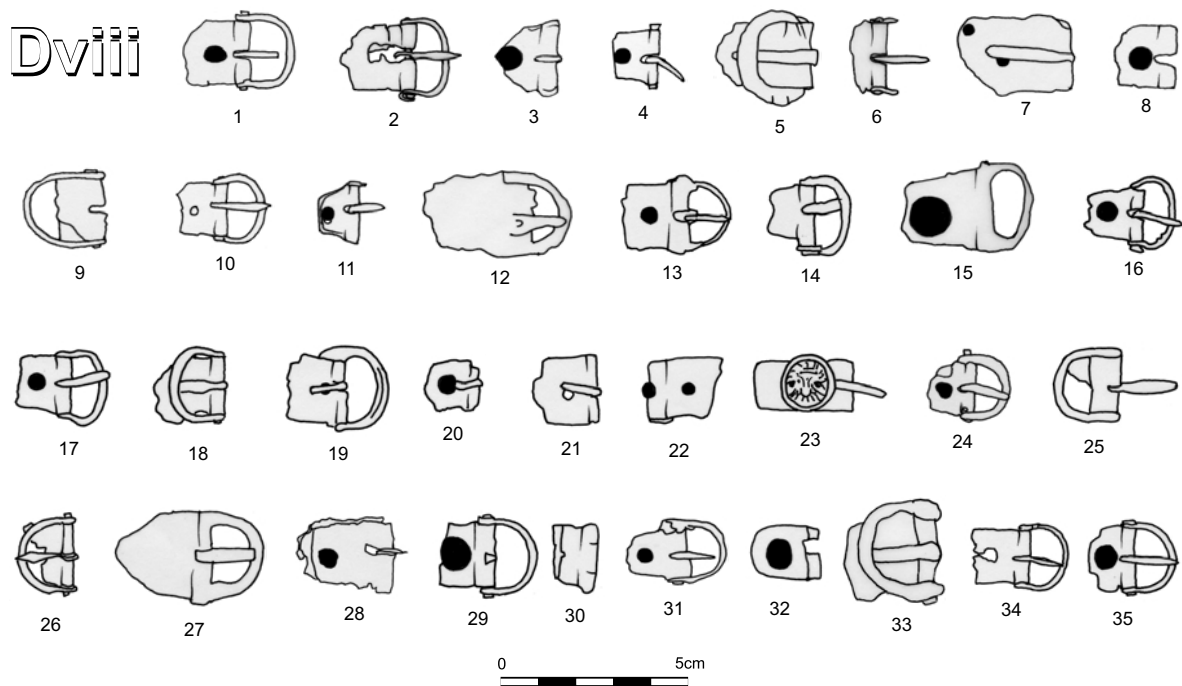


**Fig.38:** Category D (hingeless buckles) of Type vii. Scale 1:2

### Dviii

1. Caerleon *Context*: Period 1 *Inventory No.*: not recorded *Reference*: MURRAY-THREIPLAND 1969: 109 & 110, Fig.9, 9 *Dimensions (from scale drawing)*: L: 29mm, W: 20mm *Notes*: Virtually intact hingeless buckle with one corner of the buckle plate broken away. A single, oval-shaped, rivet remains.
2. Caerleon *Context*: Phase I/II, filling of Well 2 *Inventory No.*: not recorded *Reference*: ZIENKIEWICZ 1986a: 108 & 107, Fig.37, 6 *Dimensions*: L: 32mm *Notes*: Buckle with D-shaped loop, separate spindle, pin and folded plate. The rivet is missing.
3. Caerleon *Context*: Block A, Phase I/II *Inventory No.*: 552 (616) *Reference*: EVANS & METCALF 1992: 115, No.32. *Dimensions (from scale drawing)*: L: 21mm, W: 17mm *Notes*: Fragment of a buckle fitting. It comprises part of the hinged portion of the fitment and includes a pivot bar, which secured the buckle loop and tongue. A single domed rivet remains.
4. Camerton *Context*: not recorded, detector find *Inventory No.*: 26774X *Reference*: JACKSON 1990: 29 & Pl.3,24 *Dimensions*: L: 13mm *Notes*: Strap buckle fitment, damaged and missing the buckle bow. The rivet remains in place and a punched ring circles this. The buckle pin is bent and the plate is distorted and broken just beyond the rivet. Weight: 1.9g.
5. Cirencester *Context*: DHII 1, after ca. AD 270 *Inventory No.*: 64 *Reference*: HOLBROOK 1998: 321 & 322, Fig.195, 64 *Dimensions*: L: 25mm, W: 25mm, Th: 8mm *Notes*: Described as a 'belt buckle' in report, but of the same general shape and dimensions as an armour buckle. However, the late date probably precludes it as coming from a cuirass, unless it is a residual deposit. The plate carries a repouseé decorative feature in the form of punched dots.
6. Corbridge *Context*: unstratified *Inventory No.*: 75.3622 *Reference*: BISHOP & DORE 1989: 177 & 176, Fig.84, 145 *Dimensions*: L: 12mm, W: 22mm *Notes*: Buckle fragment, retaining the pin and pivot but with most of the bow missing.
7. Dangstetten *Context*: find group 318 *Inventory No.*: 318.4 *Reference*: FINGERLIN 1986: 112 & 327 *Dimensions (from scale drawing)*: L: 30mm, W: 21mm *Notes*: Buckle plate, complete with tongue but lacking the bow. There

- are two small rivets, one of which is positioned off-centre.
8. Exeter *Context*: 'military' - no further information *Inventory No.*: TS 892 *Reference*: HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110, 35 *Dimensions*: L: 15mm, W: 15mm. *Notes* Fragment of a cuirass hinge strap fitting. Narrowness of the slot suggests this held a buckle.
  9. Exeter *Context*: Rack Street excavation, 1975-78, S corner of the fortress, c. AD 75-80 *Inventory No.*: RS 1181 *Reference*: HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110, 37 *Dimensions*: L: 20mm, W: 19mm, T: 1.75mm. *Notes*: D-shaped buckle of oval section with a copper alloy hinge pin around which is folded a rectangular buckle plate.
  10. Hod Hill *Context*: Roman pit in the hospital *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Pl.56.8 *Dimensions (from scale drawing)*: L: 25mm, W: 18mm *Notes*: Buckle, with D-loop, pivot bar and tongue. The buckle plate has a single rivet hole, but no rivet remains.
  11. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L (overall): 17mm, L (plate only): 10.5mm, W: 16mm *Notes*: Much damaged strap buckle fitment. Although it retains the rivet, the buckle bow is missing.
  12. Hofheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: RITTERLING 1904: Taf. III, 10 *Dimensions*: L: 36mm *Notes*: Strap buckle fitment, much corroded.
  13. Hofheim *Context*: not recorded *Inventory No.*: 18888 *Reference*: RITTERLING 1913: Taf.XI,15 *Dimensions (from scale photo)*: L: 29mm, W: 20mm *Notes*: A buckle fitment, much corroded.
  14. Hofheim *Context*: not recorded *Inventory No.*: 08.455 *Reference*: RITTERLING 1913: Pl. IX, 19 *Dimensions (from scale photo)*: L: 21mm, W: 21mm *Notes*: Strap buckle fitment, lacking the plate rivet.
  15. Hüfingen *Context*: Barrack Ib *Inventory No.*: not recorded *Reference*: REVELLIO 1937: 42 & Taf. XI, 42 *Dimensions (from scale photo)*: L: 33mm, W: 24mm *Notes*: Strap buckle fitment, complete but for the buckle pin. One large, off-centre rivet remains.
  16. Kaiseraugst *Context*: Region 17, D - Period 3, t.a.q. AD 70/75 *Inventory No.*: 1979.10270; FK B03814 *Reference*: DESCHLER-ERB 1999: Taf.13, 175 *Dimensions*: L: 27mm, W: 19mm; Th: 4mm *Notes*: Strap buckle, which retains a single domed rivet. The rivet hole has the punched ring decoration. Weight: 2.03g.
  17. Kaiseraugst *Context*: Region 5, C - Period 4, t.a.q. AD 110 *Inventory No.*: 1966.7654; FK X05732 *Reference*: DESCHLER-ERB 1999: Taf.13, 176 *Dimensions*: L: 23mm, W: 20mm, Th: 5mm *Notes*: As above, except that there is no decoration to the plate. Weight: 3.19g.
  18. Kaiseraugst *Context*: Region 1, Insula 22 – undated *Inventory No.*: 1988.51.C04856 *Reference*: DESCHLER-ERB 1999: Taf.13, 177 *Dimensions*: L: 19mm, W: 18mm, Th: 2mm *Notes*: Strap buckle. The buckle plate has been badly damaged and is torn. Weight: 2.24 g.
  19. Kaiseraugst *Context*: Region 16, D - Period 3, t.a.q. AD 70/75 *Inventory No.*: 1979.6834; FK B04948 *Reference*: DESCHLER-ERB 1999: Taf.13, 180 *Dimensions*: L: 25mm, W: 20mm, Th: 5mm *Notes*: Strap buckle fitment, somewhat damaged and retaining the rivet. Weight: 2.70g.
  20. Kaiseraugst *Context*: Region 5, C - Period 2, t.a.q. AD 50 *Inventory No.*: 1967.4131; FK X06368 *Reference*: DESCHLER-ERB 1999: Taf.13, 183 *Dimensions*: L: 15mm, W: 14mm, Th: 1mm *Notes*: Strap buckle where the buckle bow is missing, although the rivet remains. Weight: 1.09g.
  21. Kaiseraugst *Context*: Region 1, Insula 9 – undated *Inventory No.*: 1989.55.C01873 *Reference*: DESCHLER-ERB 1999: Taf.13, 184 *Dimensions*: L: 18mm, W: 18mm, Th: 2mm *Notes*: Strap buckle plate. The buckle bow is missing, but the rivet remains. Weight: 3.33g.
  22. Kaiseraugst *Context*: Region 1, Insula 22 - Period 2, t.a.q. AD 50 *Inventory No.*: 1988.51.C04830.42 *Reference*: DESCHLER-ERB 1999: Taf.13, 185 *Dimensions*: L: 21mm, W: 18mm, Th: 4mm *Notes*: Possibly a strap buckle fitment, though much damaged. Weight: 2.17g.
  23. Kaiseraugst *Context*: Region 1, Insula 30 - Period 1, t.a.q. AD 50 *Inventory No.*: 1960.511; FK V03501 *Reference*: DESCHLER-ERB 1999: Taf.13, 188 *Dimensions*: L: 35mm, W: 13mm, Th: 2mm *Notes*: Strap buckle, which appears to be carrying a decorative stud through the plate. Weight: 10.08g.
  24. Loughor *Context*: Land to the rear of Dock Street. Dumps underlying Building 2.13 and adjacent *via Sagularis* surfaces, Phase 10. (Context Group No.574.) *Inventory No.*: 117.57\063 (198) *Reference*: MARVELL & OWEN-JOHN 1997: 262 & 261, Fig.98.117 *Dimensions*: L: 22.1mm, W: 19.8mm. *Notes*: Buckle and pin with a part of the rivetted buckle plate.
  25. Magdalensberg *Context*: west of the southern wall *Inventory No.*: NG/37 *Reference*: DEIMEL 1986: 288 & Taf.76/7 *Dimensions*: L: 17mm, W: 19mm *Notes*: D-shaped plain buckle with only a part of the buckle plate remaining.
  26. Magdalensberg *Context*: not recorded *Inventory No.*: OR/21 *Reference*: DEIMAL 1986: 288 & Taf.76/10 *Di-*



**Fig. 39:** Category D (hingeless buckles) of Type viii. Scale 1:2

- mensions:* L: 15mm, W: 20mm *Notes:* D-shaped buckle retaining a portion of the buckle plate.
27. Nijmegen *Context:* not recorded *Inventory No.:* Nijm.254-370 *Reference:* BELIËN 1996: Ill.28 *Dimensions:* L: 39mm *Notes:* Strap buckle fitment; the plate appears to be triangular in shape and to retain two small rivets, in line.
28. Oberwinterthur *Context:* Field 115, House 20C, Layer 0, sub-level 5, Ad 70-110 *Inventory No.:* FK 2840 *Reference:* DESCHLER-ERB 1996: Taf.21, 308 *Dimensions:* L: 27mm, W: 20mm, Th: 5mm, weight: 2 g. *Notes:* Strap buckle fitment, much damaged. The plate is badly torn, and the buckle bow and pin are missing. The single rivet is still in place, however.
29. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.33, 28 *Dimensions (from scale drawing):* L: 26mm, W: 22mm *Notes:* D-shaped buckle fitment. The buckle bow and pivot are present, but the pin is missing. Leaf portion is torn through and there is a single large domed rivet in place.
30. Sarmizegetusa *Context:* Dated to 2nd to 3rd century. *Inventory No.:* not recorded *Reference:* ALICU *et al* 50 & Pl.54, 694 *Dimensions:* L: 19mm, W: 18mm *Notes:* The remains of the bronze sheet strap part of a buckle. The pivot pin is retained, but not the tongue or the bow.
31. Skeleton Green *Context:* layer of burnt debris, N of Building VII, Period I/II, G41(5) *Inventory No.:* 722 *Reference:* PARTRIDGE 1981: 105 & 106, Fig.54, 2 *Dimensions (from scale drawing):* L: 26mm, W: 17mm *Notes:* Complete hingeless buckle, with the bow and tongue intact and retaining the rivet.
32. Svistov *Context:* buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.:* not recorded *Reference:* GENTSCHEVA 1999: 28 & 29, Abb.7, 11 *Dimensions (from scale drawing):* L: 19mm, W: 15mm *Notes:* Buckle plate, retaining the rivet.
33. Wimborne *Context:* not recorded *Inventory No.:* not recorded *Reference:* FIELD 1992: 21, Fig.2.2, *Dimensions (approx. from photo):* W: 28mm *Notes:* Part of a strap buckle. It consists of the D-shaped bow, pivot bar and pin, together with the copper alloy strap.
34. Windisch *Context:* rubbish dump *Inventory No.:* 33:12 *Reference:* UNZ 1973: 30 & Taf.33, 766 *Dimensions (from scale drawing):* L: 25mm, W: 17mm *Notes:* Buckle portion of a hinged buckle fitment. The rivet hole is decorated with a punched circle.
35. Windisch *Context:* trench of 1900 *Inventory No.:* 256b *Reference:* UNZ 1973: 31 & Taf.34, 783 *Dimensions (from scale drawing):* L: 23mm, W: 20mm *Notes:* Strap buckle fitment. The buckle plate is badly damaged, but retains the rivet.

# Category 'E': Buckles

## Contents

*Buckles from the following sites are included here:* Aislingen (DEU), Augsburg-Oberhausen (DEU), Aulnay-de-Saintonge (FRA), Bad Deutsch-Altenberg (AUT), Caerleon (GBR), Castleford (GBR), Colchester (GBR), Dangstetten (DEU), Exeter (GBR), Fishbourne (GBR), Hofheim (DEU), Hüfingen (DEU), Kaiseraugst (CHE), Kalkriese (DEU), Lorch-bei-Enns (AUT), Loupain (FRA), Magdalensburg (DEU), Neuss (DEU), Nijmegen (NL), Oberstimm (DEU), Oberwinterthur (CHE), Rheingönheim (DEU), Risstissen (DEU), Scole (GBR), Silchester (GBR), Thamusida (MAR), Usk (GBR), Vaison-la-Romaine (FRA), Volubilis (MAR), Wiesbaden (DEU)

## Ei

1. Aislingen *Context:* not recorded *Inventory No.:* 7860 *Reference:* ULBERT 1959: 93, Taf.17, 23. *Dimensions (from scale drawing):* L: 27mm, W: 20mm *Notes:* Buckle bow, square cross section.
2. Aislingen *Context:* not recorded *Inventory No.:* 7467 *Reference:* ULBERT 1959: 93, Taf.17, 26 *Dimensions (from scale drawing):* L: 20mm, W: 17mm *Notes:* Buckle, with surviving pivot bar and tongue.
3. Castleford *Context:* not recorded *Inventory No.:* 056 T10; ASF1423; <sup>3</sup>/<sub>4</sub> *Reference:* COOL & PHILO 1998: 80 & Fig.27, 327 *Dimensions:* L: 25mm, W: 14mm, loop section 3.5 x 2mm *Notes:* Rectangular-sections C-shaped loop with expanded perforated disc-shaped ends. An iron square-sectioned bar is inserted into the perforations and a rectangular-sectioned tongue is wrapped around the bar.
4. Castleford *Context:* not recorded *Inventory No.:* 1067 T10; SF2298; 1 *Reference:* COOL & PHILO 1998: 80 & Fig.27, 328 *Dimensions:* L: 27mm, W: 24mm, loop section 5 x 2.5mm *Notes:* Stumps only of the cross-bar remain and the tongue is missing.
5. Exeter *Context:* late 1st-mid 2nd century *Inventory No.:* CR 352 *Reference:* HOLBROOK & BIDWELL 1991: 247 & 246, Fig.110, 38 *Dimensions:* L: 21mm, W: 23mm. *Notes:* D-shaped buckle-bow of rectangular section ending in oval loops.
6. Magdalensberg *Context:* level 3, in the SE of the room *Inventory No.:* NG/33 *Reference:* DEIMEL 1986: 288 & Taf.76/8 *Dimensions:* L: 18mm, W: 19mm *Notes:* Buckle bow only, square section.
7. Nijmegen *Context:* not recorded *Inventory No.:* not recorded *Reference:* BOGAERS & HAALBOS 1977: 138, Fig.27, 6 *Dimensions (from scale drawing):* L: 33mm, W: 21mm *Notes:* Large buckle bow with a square cross section.
8. Oberstimm *Context:* not recorded *Inventory No.:* 1975.181 *Reference:* SCHÖNBERGER 1978: Taf.20, B114 *Dimensions:* L: 19mm, W: 22mm. *Notes:* Bow of a D-shaped buckle.
9. Risstissen *Context:* not recorded *Inventory No.:* 2986 *Reference:* ULBERT 1959: 106 & Taf.51, 27 *Dimensions (from scale drawing):* L: 28mm, W: 22mm *Notes:* Buckle bow, flat cross section.
10. Scole *Context:* Pit 97, Period IV *Inventory No.:* not recorded *Reference:* ROGERSON 1977: 136 & 137, Fig.57, 22 *Dimensions (from scale drawing):* L: 27mm, W: 23mm *Notes:* Intact buckle, of flat cross section.
11. Wiesbaden *Context:* not recorded *Inventory No.:* 18089 *Reference:* RITTERLING 1909: Taf.10, 30 *Dimensions (from scale drawing):* L (buckle bow only): 24mm, W: 28mm *Notes:* Circular buckle with pin and pivot bar. Buckle bow appears to be of a rectangular cross section.

## Eii

1. Aislingen *Context:* not recorded *Inventory No.:* 7797 *Reference:* ULBERT 1959: 93, Taf.17, 22 *Dimensions (from*

*Note:* Buckles are common elements of several items of military and civilian wear and need not necessarily come from sets of *lorica segmentata* armour. Here, an attempt has been made to include only those buckles that have a defi-

nite association with the armour, or whose form suggests that they may be armour buckles, while excluding those whose size suggests that they are merely belt buckles.



i Buckle bow has square or rectangular cross section



ii Buckle bow has triangular cross section



iii Buckle bow has circular cross section

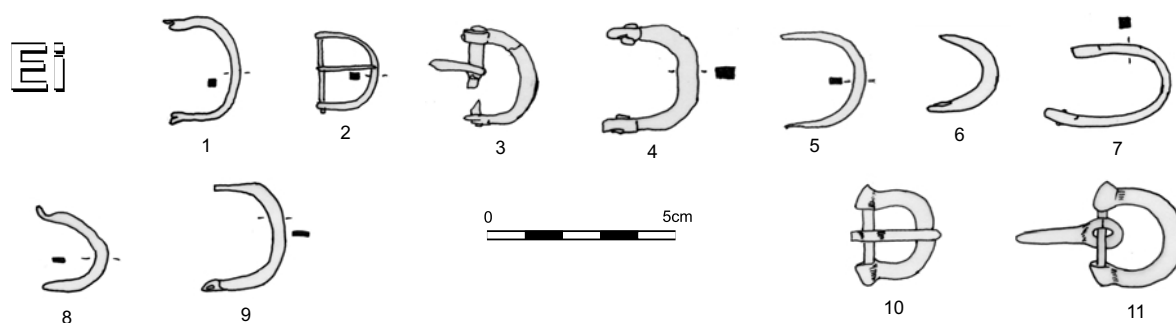


iv Buckle bow has semi-circular cross section

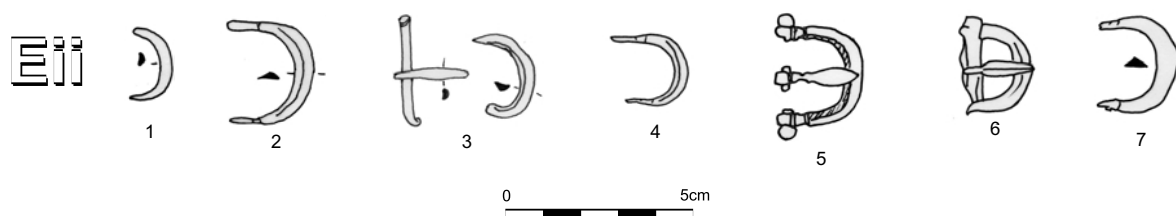


v Unclassifiable types

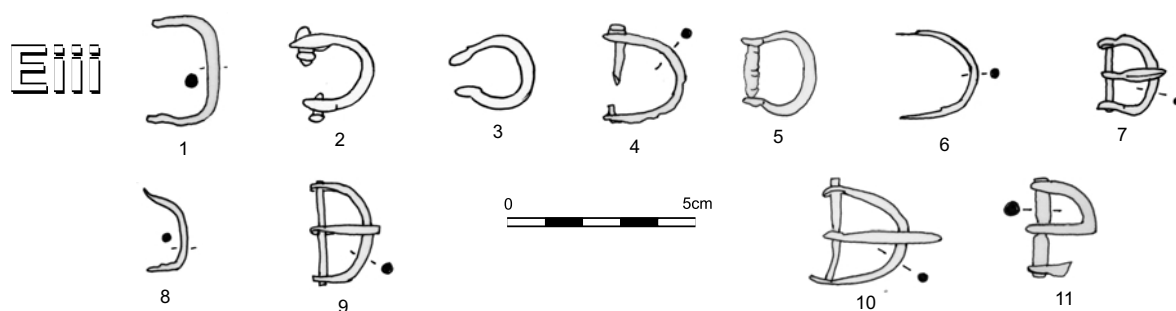




**Fig. 40:** Category E (buckles) of Type i. Scale 1:2

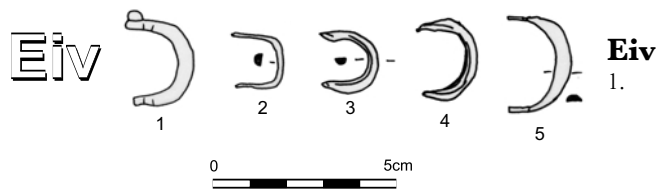


**Fig. 41:** Category E (buckles) of Type ii. Scale 1:2



**Fig. 42:** Category E (buckles) of Type iii. Scale 1:2

- |  |  |
|--|--|
| <p><i>scale drawing</i>): L: 19mm, W: 10mm <i>Notes</i>: Bow of a buckle, triangular cross section.</p> <p>2. Aislingen <i>Context</i>: not recorded <i>Inventory No.</i>: 7738a <i>Reference</i>: ULBERT 1959: 93, Taf.17, 25. <i>Dimensions (from scale drawing)</i>: L: 22mm, W: 27mm <i>Notes</i>: Buckle D-shaped bow, semi-circular cross section.</p> <p>3. Colchester <i>Context</i>: Floor, Period 2 <i>Inventory No.</i>: SF LWC 1189(C), B648 <i>Reference</i>: CRUMMY 1983: 130 &amp; Fig.145, 4183 <i>Dimensions</i>: L (bar): 28mm <i>Notes</i>: Two separated fragments from a buckle. The loop is distorted and the flattened terminals are damaged.</p> <p>4. Dangstetten <i>Context</i>: find group 552 <i>Inventory No.</i>: 552, 4 <i>Reference</i>: FINGERLIN 1970: 193 &amp; 425 <i>Dimensions</i>: W: 19mm <i>Notes</i>: Small buckle bow with a triangular cross-section, flat beneath.</p> <p>5. Dangstetten <i>Context</i>: find group 1258 <i>Inventory No.</i>: 1258, 1 <i>Reference</i>: FINGERLIN 1998: 175 &amp; 384 <i>Dimensions (from scale drawing)</i>: L: 23mm, W: 33mm <i>Notes</i>:</p> | <p>Buckle bow and tongue. The pivot bar appears to have broken away completely.</p> <p>6. Magdalensberg <i>Context</i>: OR/27 <i>Inventory No.</i>: not recorded <i>Reference</i>: DEIMEL 1986: 286 &amp; Taf.76/1 <i>Dimensions</i>: L: 18mm, W: 23mm <i>Notes</i>: Buckle D-ring, bow and spike with a triangular cross section.</p> <p>7. Magdalensberg <i>Context</i>: from ground level <i>Inventory No.</i>: NG/32a <i>Reference</i>: DEIMEL 1986: 287 &amp; Taf.76/2 <i>Dimensions</i>: L: 21mm, W: 26mm. <i>Notes</i>: Buckle bow with a triangular cross section.</p> <p><b>Eiii</b></p> <p>1. Aislingen <i>Context</i>: not recorded <i>Inventory No.</i>: 7732 <i>Reference</i>: ULBERT 1959: 93, Taf.17, 24. <i>Dimensions (from scale drawing)</i>: L: 29mm, W: 19mm <i>Notes</i>: Buckle bow of circular cross section.</p> <p>2. Camerton <i>Context</i>: not recorded, detector find <i>Inventory No.</i>: 26775V <i>Reference</i>: JACKSON 1990: 29, 74 &amp; Pl.3, 25 <i>Dimensions</i>: L: 23mm <i>Notes</i>: The D-shaped hoop is slightly distorted and the pin (which is broken in the</p> |
|--|--|



**Fig. 43:** Category E (buckles) of Type iv. Scale 1:2

centre) has a burred head at each end. The loop is missing the buckle pin. Analysis shows the loop is almost pure copper. Weight: 3.2 g.

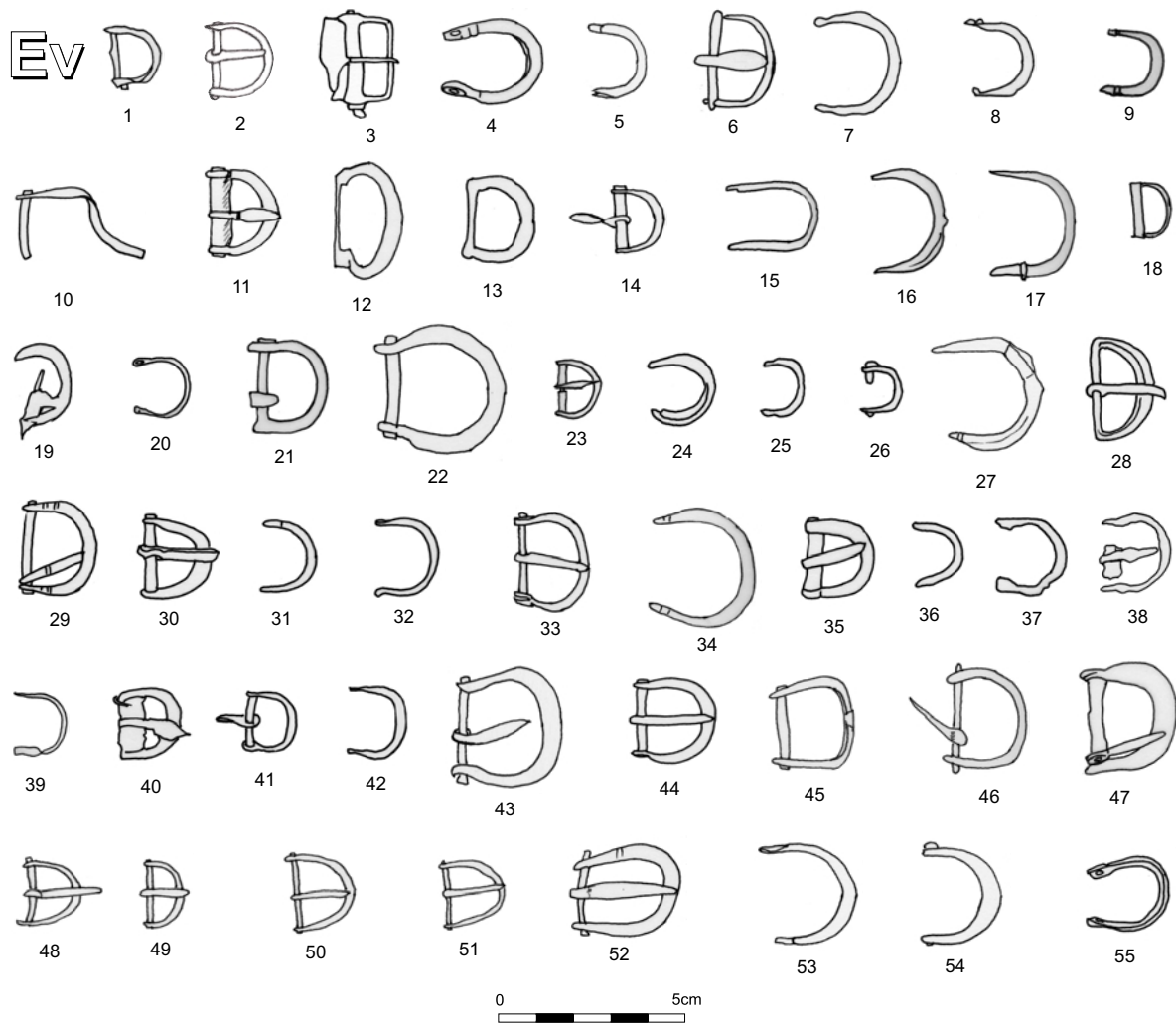
3. Camerton *Context:* not recorded, detector find *Inventory No.:* 26776T *Reference:* JACKSON 1990: 29, 74 & Pl.3, 26 *Dimensions:* L: 20mm *Notes:* This hoop is distorted and cracked. Analysis shows it to be brass, with Cu; 74.7%, Zn; 24.2%. Weight: 2.6g.
4. Castleford *Context:* not recorded *Inventory No.:* 891 T10; CN131; SF2181 (C); 2 *Reference:* COOL & PHILO 1998: 80 & Fig.27, 326 *Dimensions:* L: 21mm, W: 14mm, Th: 2.5mm *Notes:* D-shaped buckle
5. Colchester *Context:* Dump, demolition of building 131, Period 2. *Inventory No.:* SF GBS 981(C), A2338 L101 *Reference:* CRUMMY 1992: Fig.6.32, 361 *Dimensions:* W (at bar): 18mm *Notes:* Brass buckle bow, with iron pivot bar.
6. Nijmegen (NL) *Context:* not recorded *Inventory No.:* not recorded *Reference:* BOGAERS & HAALEBOS 1977: 138, Fig.27, 5 *Dimensions (from scale drawing):* L: 21mm, W: 21mm. *Notes:* Buckle bow, with a round cross section.
7. Oberstimm *Context:* not recorded *Inventory No.:* 1975.294 *Reference:* SCHÖNBERGER 1978: Taf.20, B110 *Dimensions:* L: 15mm, W: 21mm. *Notes:* D-shaped buckle, intact.
8. Risstissen *Context:* not recorded *Inventory No.:* A 787 *Reference:* ULBERT 1959: 106 & Taf.51, 25 *Dimensions (from scale drawing):* L: 22mm, W: 10mm *Notes:* D-loop of a buckle, somewhat damaged and of circular cross section.
9. Rottweil *Context:* Find site 17 *Inventory No.:* ZV 632/48 *Reference:* PLANCK 1975: 17 & Taf.34, 13 *Dimensions:* L: 26mm *Notes:* Buckle, complete though lacking the plate.
10. Rottweil *Context:* Villa 'C' *Inventory No.:* 115 *Reference:* PLANCK 1975: 30 & Taf.72, 6 *Dimensions:* L: 26mm *Notes:* Buckle, complete though lacking the plate.
11. Usk *Context:* fortress pit, pre-Flavian.] *Inventory No.:* LAB 1 *Reference:* MANNING, PRICE & WEBSTER 1995: 12 & Fig.4, 18 *Dimensions:* L: 25mm. *Notes:* D-shaped buckle, although unusually the pivot bar is thick, and narrows in the centre.

## Eiv

1. Dangstetten *Context:* find group 404 *Inventory No.:* 404, 7 *Reference:* FINGERLIN 1970: 149 & 375 *Dimensions:* L: 26mm *Notes:* Semi-circular buckle bow, flat on one side and curved on the other.
2. Dangstetten *Context:* find group 552 *Inventory No.:* 552, 5 *Reference:* FINGERLIN 1970: 193 & 425 *Dimensions:* W: 15mm *Notes:* a small buckle with a rectangular profile and a semi-circular cross-section.
3. Kaiseraugst *Context:* Region 1, Insula 28. *Inventory No.:* 1965.2069a; FK X04761 *Reference:* DESCHLER-ERB 1999:, Taf.13, 194 *Dimensions:* L: 17mm, W: 16mm, Th: 2mm. *Notes:* Buckle bow. Weight 0.77g.
4. Kaiseraugst *Context:* Region 16, D *Inventory No.:* 1979.20146 FK B03891 *Reference:* DESCHLER-ERB 1999:, Taf.13, 195 *Dimensions:* L: 16mm, W: 22mm, Th: 2mm *Notes:* Buckle bow. Weight 0.60g.
5. Risstissen *Context:* not recorded *Inventory No.:* 9663 *Reference:* ULBERT 1959: 106 & Taf.51, 26. *Dimensions (from scale drawing):* L: 27mm, W: 17mm. *Notes:* Buckle bow, of semi-circular cross section.

## Ev

1. Augsburg-Oberhausen *Context:* not recorded *Inventory No.:* not recorded *Reference:* HÜBENER 1973: Taf.14, 16 *Dimensions (from scale drawing):* L: 17mm, W: 13mm *Notes:* Small buckle, lacking the pin.
2. Aulnay-de-Saintonge *Context:* not recorded *Inventory No.:* not recorded *Reference:* FEUGÈRE 1993: 30, Fig.18, 3 *Dimensions (from scale drawing):* L: 18mm, W: 20mm *Notes:* A complete buckle bow and pin, together with the pivot bar.
3. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf. 19, Fig.42 *Dimensions (from scale drawing):* L: 28mm, W: 21mm *Notes:* Large buckle, with a somewhat rectangular cross section for the bow.
4. Caerleon *Context:* Phase IIIb *Inventory No.:* 95 *Reference:* ZIENKIEWICZ 1986a: 111 & 110, Fig.39, 19 *Dimensions (from scale drawing):* W (across loop): 21mm *Notes:* D-shaped buckle bow.
5. Caerleon *Context:* unstratified, from 1969 excavations *Inventory No.:* not recorded *Reference:* ZIENKIEWICZ 1986b: 187-8 & Fig.63, 177 *Dimensions (from scale drawing):* W: 19mm. *Notes:* Buckle D-loop. The bar is missing. Bronze.
6. Colchester (Sheepen) *Context:* Period III, AD 44-9 (Claudian), Feature 156 - small patch of white clay, possibly the weathered remains of a surface. *Inventory No.:* not recorded *Reference:* NIBLETT (1985): 29 &



**Fig.44:** Category E (buckles) of Type v. Scale 1:2

- 117, Fig.61, 4 *Dimensions (from scale drawing)*: L: 26mm, W: 20mm *Notes*: Intact D-shaped buckle.
7. Dangstetten *Context*: find group 318 *Inventory No.*: 318, 3 *Reference*: FINGERLIN 1970: 112 & 327 *Dimensions*: W: 26mm *Notes*: Semi-circular buckle bow with the ends pierced for the pivot bar.
8. Dangstetten *Context*: find group 450 *Inventory No.*: 450, 3 *Reference*: FINGERLIN 1970: 162 & 389 *Dimensions*: L: 21mm *Notes*: Small semi-circular buckle bow.
9. Dangstetten *Context*: find group 944 *Inventory No.*: 944, 1 *Reference*: FINGERLIN 1998: 101 & 296 *Dimensions (from scale drawing)*: L: 18mm, W: 17mm *Notes*: Bow of a buckle, lacking the pivot bar and tongue.
10. Dangstetten *Context*: find group 1043 *Inventory No.*: 1043, 3 *Reference*: FINGERLIN 1998: 128 & 329 *Dimensions (from scale drawing)*: W (pivot bar): 18mm *Notes*: Much damaged buckle. The loop has been pulled out away from the pivot bar.
11. Dangstetten *Context*: find group 1337 *Inventory No.*: 1337, 4 *Reference*: FINGERLIN 1998: 186 & 395 *Dimensions*: W: 23mm. *Notes*: Buckle, with pivot bar and tongue intact.
12. Fishbourne *Context*: unstratified, from plough soil *Inventory No.*: not recorded *Reference*: CUNLIFFE 1971: 111, Fig.43, 87 *Dimensions (from scale drawing)*: L: 30mm, W: 17mm *Notes*: Corroded buckle loop and pivot bar. The tongue is missing.
13. Fishbourne *Context*: unstratified, from plough soil *Inventory No.*: not recorded *Reference*: CUNLIFFE 1971: 111, Fig.43, 88 *Dimensions (from scale drawing)*: L: 22mm, W: 17mm *Notes*: Corroded buckle loop and pivot bar. The tongue is missing.
14. Fishbourne *Context*: not recorded *Inventory No.*: not recorded *Reference*: CUNLIFFE 1971: 113, Fig.44, 89 *Dimensions (from scale drawing)*: L: 17mm, W (buckle bow only, excluding flexed pin): 13mm *Notes*: D-loop, pivot pin and tongue of a buckle. Copper alloy.

15. Hofheim *Context*: not recorded *Inventory No.*: 18890 *Reference*: RITTERLING 1913: Pl. IX, 22 *Dimensions*: (from scale photo): L: 24mm, W: 18mm *Notes*: D-shaped buckle bow.
16. Hofheim *Context*: not recorded *Inventory No.*: 18891 *Reference*: RITTERLING 1913: Pl. IX, 23 *Dimensions*: (from scale photo): L: 27mm, W: 20mm *Notes*: D-shaped buckle bow.
17. Hofheim *Context*: not recorded *Inventory No.*: 18891 *Reference*: RITTERLING 1913: Pl. IX, 24 *Dimensions*: (from scale photo): L: 27mm, W: 23mm *Notes*: D-shaped buckle.
18. Hofheim *Context*: not recorded *Inventory No.*: 18892 *Reference*: RITTERLING 1913: Pl. IX, 25 *Dimensions*: (from scale photo): L: 15mm, W: 10mm *Notes*: Small buckle, which retains the pivot bar but has lost the pin.
19. Hofheim *Context*: not recorded *Inventory No.*: 18889 *Reference*: RITTERLING 1913: Pl. IX, 27 *Dimensions*: (from scale photo): L: 20mm, W: 15mm *Notes*: Damaged buckle, where the pivot bar has been broken. The dimensions are only approximate, owing to the distortion of the illustration.
20. Hofheim *Context*: not recorded *Inventory No.*: 08.456 *Reference*: RITTERLING 1913: Pl. IX, 29 *Dimensions*: (from scale photo): L: 16mm, W: 15mm *Notes*: Small buckle bow
21. Hüfingen *Context*: Barrack Ib *Inventory No.*: not recorded *Reference*: REVELLIO 1937: 42 & Taf. XI, 43 *Dimensions* (from scale photo): L: 18mm, W: 22mm *Notes*: A buckle, which consists of the bow and pivot bar, also the remains of the tongue.
22. Iža *Context*: not recorded *Inventory No.*: not recorded *Reference*: RAJTAR 1992: Abb.14, 17 & RAJTAR 1994: 90 & 91, Abb.7, 3 *Dimensions* (from scale drawing): L: 33mm, W: 34mm *Notes*: Large D-shaped buckle. Found with armour fragments, so possibly from armour. Buckle pin missing.
23. Kaiseraugst *Context*: Region 1, Insula 31 – undated *Inventory No.*: 1964.10328; FK X03829 *Reference*: DESCHLER-ERB 1999: Taf.13, 193 *Dimensions*: L: 12mm, W: 15mm, Th: 3mm *Notes*: A buckle, consisting of the bow, pivot bar and tongue, only. Weight: 0.77g.
24. Kaiseraugst *Context*: Region 1, Insula 9 – undated *Inventory No.*: 1989.55.C01873 *Reference*: *Ibid*, Taf.13, 196 *Dimensions*: L: 17mm, W: 18mm, Th: 3mm *Notes*: Buckle bow. Weight: 1.02g.
25. Kaiseraugst *Context*: Region 1, Insula 42 - Period 4, t.a.q. AD 110 *Inventory No.*: 1968.2155; FK X07910 *Reference*: DESCHLER-ERB 1999: Taf.13, 199 *Dimensions*: L: 12mm, W: 16mm, Th: 2mm *Notes*: Buckle bow, damaged. Weight: 0.71g.
26. Kaiseraugst *Context*: Region 1, Insula 17- undated *Inventory No.*: 1990.51.C05535 *Reference*: DESCHLER-ERB 1999: Taf.13, 200 *Dimensions*: L: 12mm, W: 15mm, Th: 1mm *Notes*: Buckle bow, retaining a small part of the pivot bar. Weight: 0.50g.
27. Kalkriese *Context*: not recorded, dated at AD 9 *Inventory No.*: not recorded *Reference*: FRANZIUS 1992: 362-4 & p.363, Fig.9, 2 *Dimensions* (from scale drawing): L: 29mm, W: 30mm *Notes*: D-bow of a buckle.
28. Lorch-bei-Enns *Context*: not recorded *Inventory No.*: not recorded *Reference*: von GROLLER 1910: 40 & Fig.14, 8 *Dimensions* (from scale drawing): L: 26mm, W: 21mm *Notes*: Buckle loop, pivot bar and tongue, apparently of iron.
29. Loupain (Mèze) *Context*: c.AD 50-80 *Inventory No.*: us 10023, 1998 *Reference*: FEUGÈRE & PELLECUER 1998: 5 & 6, Fig.1 *Dimensions*: L: 38.5mm, W: 29mm *Notes*: Bronze buckle with an iron axis bar. The extreme ends of the bar have small round bronze caps. The ends of the bow are decorated with incised lines and the bow is of triangular cross-section.
30. Magdalensberg *Context*: Q/1 *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 287 & Taf.76/6 *Dimensions*: L: 17mm, W: 21mm *Notes*: D-shaped buckle with pin and pivot bar in position, but the buckle plate is missing.
31. Magdalensberg *Context*: scattered find, unstratified *Inventory No.*: not recorded *Reference*: DEIMAL 1986: 289 & Taf.76/13 *Dimensions*: L: 14mm, W: 19mm *Notes*: D-bow of a buckle.
32. Magdalensberg *Context*: cellar, period 2, complex 4, c.AD 1-15 *Inventory No.*: OR/40 *Reference*: DEIMAL 1986: 289 & Taf.76/14. *Dimensions*: L: 16mm, W: 21mm. *Notes*: D-bow of buckle.
33. Neuss *Context*: not recorded *Inventory No.*: 5939 *Reference*: SIMPSON 2000: 76 & 151, Pl.25, 13 *Dimensions* (from scale drawing): L: 25.5mm, W: 20mm *Notes*: Complete buckle with bow, pin and axle bar.
34. Neuss *Context*: not recorded *Inventory No.*: 2082 *Reference*: SIMPSON 2000: 76 & 151, Pl.25, 15 *Dimensions* (from scale drawing): L: 32mm, W: 28mm *Notes*: Large buckle bow.
35. Oberstimm *Context*: not recorded *Inventory No.*: 1975.123 *Reference*: SCHÖNBERGER 1978: Taf.20, B111. *Dimensions*: L: 19mm, W: 21mm. *Notes*: D-shaped buckle, intact.
36. Oberstimm *Context*: not recorded *Inventory No.*: 1975.216 *Reference*: SCHÖNBERGER 1978: Taf.20, B112. *Dimensions*: L: 13mm, W: 17mm. *Notes*: Bow of a D-shaped buckle.

37. Oberstimm *Context*: not recorded *Inventory No.*: 1975.185 *Reference*: SCHÖNBERGER 1978: Taf.20, B113 *Dimensions*: L: 19mm, W: 20mm. *Notes*: Bow of a D-shaped buckle.
38. Oberwinterthur *Context*: Field 101/36, House 12A, Layer 360, sub-level 7, AD 110-70 *Inventory No.*: FK 4460 *Reference*: DESCHLER-ERB 1996: 288, Taf.21, 306 *Dimensions*: L: 20mm, W: 20mm, Th: 3mm, weight: 1g. *Notes*: Buckle bow and buckle tongue.
39. Oberwinterthur *Context*: Field 122/25, House 14C, Layer 260, sub-level 5, AD 70-130 *Inventory No.*: FK 5116 *Reference*: DESCHLER-ERB 1996: 188, Taf.21, 307 *Dimensions*: L: 17mm, W: 16mm, Th: 3mm, weight: 1g. *Notes*: Buckle bow only.
40. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 36 *Dimensions (from scale drawing)*: L: 18mm, W: 19mm *Notes*: D-shaped buckle fitment. The buckle bow, pin and pivot are all present. Fitment is badly corroded.
41. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 37 *Dimensions (from scale drawing)*: L: 13mm, W: 16mm *Notes*: D-shaped buckle bow, with pin and pivot bar. The length quoted does not include the backward flexed buckle pin.
42. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 38 *Dimensions (from scale drawing)*: L: 15mm, W: 19mm *Notes*: D-shaped buckle bow.
43. Silchester *Context*: Insula XXIII, Pit 10, dated late 1st CAD *Inventory No.*: not recorded *Reference*: BOON 1969: 44 & 45, Fig.5, 9 *Dimensions (from scale drawing)*: L: 30mm, W: 28mm *Notes*: Buckle bow, pivot bar and tongue from a common type of military buckle.
44. Silchester *Context*: Period 5, ca. AD 80/5-120/50 *Inventory No.*: (1356), 5.5, SF 2310 *Reference*: FULFORD & TIMBY 2000: 345 & 344, Fig.159, 51 *Dimensions (from scale drawing)*: L: 22mm, W: 22mm *Notes*: Complete buckle, though lacking the plate.
45. Thamusida *Context*: not recorded *Inventory No.*: Th.16 *Reference*: BOUBE-PICCOT 1994: 62 & Pl.4, 41 *Dimensions*: L: 29mm, W: 24mm, Th: 3mm *Notes*: A buckle bow of almost square cross section. The pin is missing, but the pivot bar remains in place.
46. Usk *Context*: fortress latrine pit, contained pottery ranging from pre-Flavian to late 2nd century *Inventory No.*: EM 1 *Reference*: MANNING, PRICE & WEBSTER 1995: 12 & Fig 4, 17 *Dimensions*: L: 26mm. *Notes*: D-loop buckle, complete with pivot bar and tongue.
47. Vaison-la-Romaine *Context*: found at 'Portique de Pompée' *Inventory No.*: 990.12.001 (61.04) *Reference*: FEUGERE 1997: 3-4, Fig.2, 5 *Dimensions*: L: 28mm, W: 26mm. *Notes*: Bronze buckle bow, with pivot bar of iron.
48. Volubilis *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 62 & Pl.4, 37 *Dimensions*: L: 27mm, W: 17mm, Th: 2mm *Notes*: D-shaped buckle with pivot bar and tongue.
49. Volubilis *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 62 & Pl.4, 38 *Dimensions*: L: 17mm, W: 10mm, Th: 2mm *Notes*: D-shaped buckle bow, which retains the pivot bar and tongue.
50. Volubilis *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 62 & Pl.4, 39 *Dimensions*: L: 20mm, W: 16mm, Th: 2mm *Notes*: Very similar to the above.
51. Volubilis *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 62 & Pl.4, 40 *Dimensions*: L: 18mm, W: 16mm, TH: 2mm *Notes*: Very similar to the above.
52. Windisch *Context*: 1936 excavation *Inventory No.*: 35:676 *Reference*: UNZ & DESCHLER-ERB 1997: 53 & Taf.70, 2050 *Dimensions (from scale drawing)*: L: 29mm, W: 24mm *Notes*: Possibly from armour, this fitment retains the buckle pivot bar, pin and bow.
53. Woodcock Hall *Context*: small plateau between two streams, south of the river. *Inventory No.*: 203 *Reference*: BROWN 1986: 44 & 45, Fig.28, 203 *Dimensions (from scale drawing)*: L: 27mm, W: 23mm *Notes*: Bow of a buckle.
54. Woodcock Hall *Context*: small plateau between two streams, south of the river. *Inventory No.*: 204 *Reference*: BROWN 1986: 44 & 45, Fig.28, 204 *Dimensions (from scale drawing)*: L: 26mm, W: 20mm *Notes*: Bow of a buckle.
55. Wroxeter *Context*: Insula 5, *macellum*, Period WR 3.1 *Inventory No.*: not recorded *Reference*: ELLIS 2000: 108 & 109, Fig.4.6, 8 *Dimensions (from scale drawing)*: L: 21mm, W: 19mm *Notes*: Bow of a buckle.

# Category 'F': Shoulder Hinges

## Contents

*Shoulder hinges from the following sites are included in this section:*

Alchester (GBR), Aulnay-de-Saintonge (FRA), Bad Deutsch-Altenburg (AUT), Baginton (GBR), Banasa (MAR), Broxtowe (GBR), Buciumi (ROM), Burghöfe (DEU), Caerleon (GBR), Caernarfon (GBR), Caistor St. Edmond's (GBR), Camerton (GBR), Carlisle (GBR), Castleford (GBR), Chester (GBR), Chesterholm (GBR), Chichester (GBR), Colchester (GBR), Corbridge (GBR), Exeter (GBR), Gloucester (GBR), Great Casterton (GBR), Great Chesters (GBR), Grobbendonk (NLD), Harlow (GBR), Hod Hill (GBR), Hofheim (DEU), Iruña (ESP), Kaiseraugst (CHE), Kalkriese (DEU), London (GBR), Longthorpe (GBR), Loughor (GBR), Lincoln (GBR), Moers-Asberg (DEU), Neuss (DEU), Nijmegen (NLD), Oberstimm (DEU), Oberwinterthur (CHE), Oescus (ROM), Puckeridge (GBR), Rheingönheim (DEU), Rheinzaubern (DEU), Richborough (GBR), Risstissen (DEU), Rottweil (DEU), Santon (GBR), Scole (GBR), Silchester (GBR), South Cadbury (GBR), St.Alban's (GBR), Strasbourg (FRA), Svistov (BUL), Thamusida (MAR), Usk (GBR), Valkenburg (NLD), Waddon Hill (GBR), Wiesbaden (DEU), Windisch (CHE), Wroxeter (GBR)

## Fi

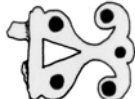
1. Kaiseraugst *Context:* Region 1, Insula 22. Period 2, t.a.q. AD 50 *Inventory No.:* 1988.51.C04887.65 *Reference:* DESCHLER-ERB 1999: Taf.14, 241 *Dimensions:* L: 23mm; W: 26mm, Th: 2mm *Notes:* One leaf, damaged, of a sub-lobate shoulder hinge. There are two small rivets remaining, but otherwise no decorative features. Weight: 3.70g.
2. Kaiseraugst *Context:* Region 1, Insula 22. Undated. *Inventory No.:* 1988.51.C04856.150 *Reference:* DESCHLER-ERB 1999: Taf.15, 240 *Dimensions:* L: 26mm, W: 26mm, Th: 7mm *Notes:* A badly damaged sub-lobate shoulder-hinge leaf with three rivets of uneven size. Weight: 8.88g.
3. Kaiseraugst *Context:* Region 1, Insula 22. Undated *Inventory No.:* 1988.51.C04865.143 *Reference:* DESCHLER-ERB 1999: Taf.15, 239 *Dimensions:* L: 25mm, W: 29mm, Th: 4mm *Notes:* One damaged half of a shoulder hinge. There are three rivet holes, disposed asymmetrically in this sub-lobate hinge plate, one of which retains a small dome-headed rivet. The pivot bar is still *in situ*. Weight: 6.34g.
4. Kaiseraugst *Context:* Region 1, Insula 22. Period 5, t.a.q. AD 150 *Inventory No.:* 1988.51.C05111.40 *Reference:* DESCHLER-ERB 1999: Taf.15, 238 *Dimensions:* L: 20mm, W: 28mm, Th: 2mm *Notes:* Part of a hinge, somewhat damaged. It retains three small flat-headed rivets, together with the pivot bar. Weight: 4.15g.
5. Kaiseraugst *Context:* Region 1, Insula 22. Undated. *Inventory No.:* 1988.51. C04851.32 *Reference:* DESCHLER-ERB 1999: Taf.15, 237 *Dimensions:* L: 21mm, W: 25mm, Th: 4mm *Notes:* Part of a hinge, damaged. There are three rivet holes, not disposed symmetrically. No rivets remain. Weight: 2.97g.
6. Kalkriese *Context:* not recorded *Inventory no.:* not recorded *Reference:* FRANZIUS 1995: 71 & 76, Abb. 2 *Dimensions (from scale photograph, approx. only):* L: 28mm, W: 23mm *Notes:* One leaf of a shoulder hinge from the



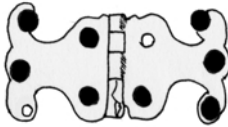
i 'Kalkriese' type  
- sub-lobate, three  
rivets, scalloped end



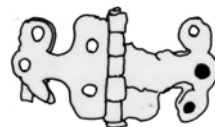
ii 'Kalkriese' type  
- sub-lobate with  
'rounded' scalloped  
ends



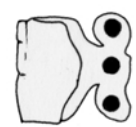
iii Fully lobate, two  
volutes at the top  
outer positions and  
a triangular fret in  
the centre



iv Fully lobate, with volutes at the  
top outside positions but no central  
fret in the plate



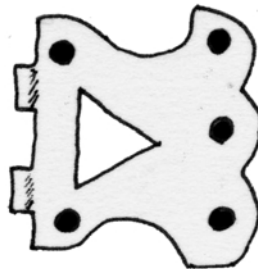
v Fully lobate, with simple lobes  
but no fret in the plate



vi Three lobes at the  
top, while at the hinge  
the plate is cut square



vii Crude - no lobes  
as such



viii 'Newstead' type - angular volutes  
with triangular fret



ix Indeterminate types,  
either only part of hinge  
plate only or too damaged  
to classify

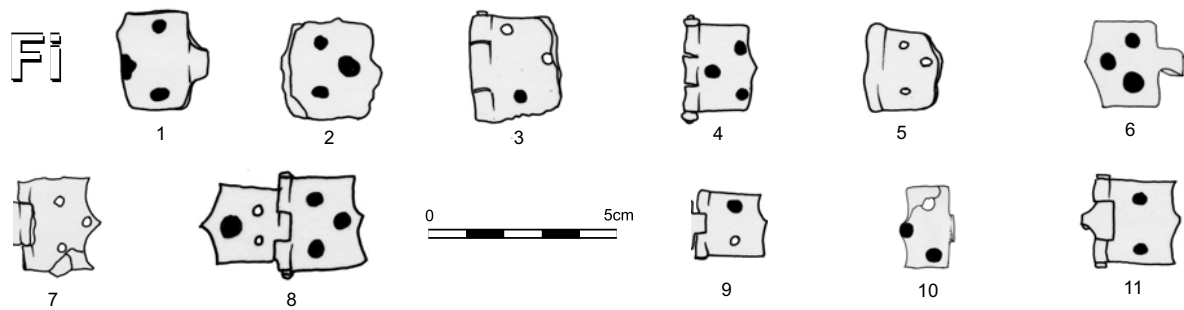


Fig. 45: Category F (shoulder hinges) of Type i. Scale 1:2

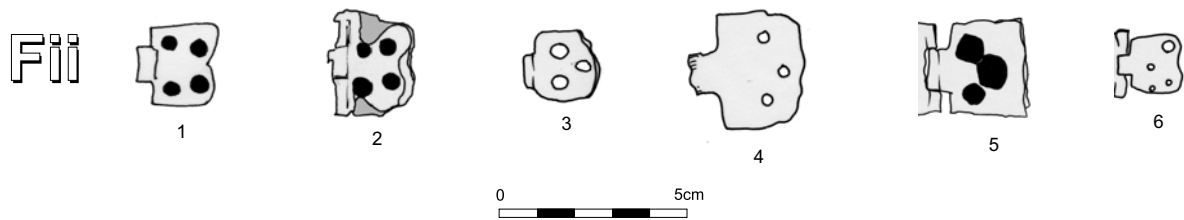


Fig. 46: Category F (shoulder hinges) of Type ii. Scale 1:2

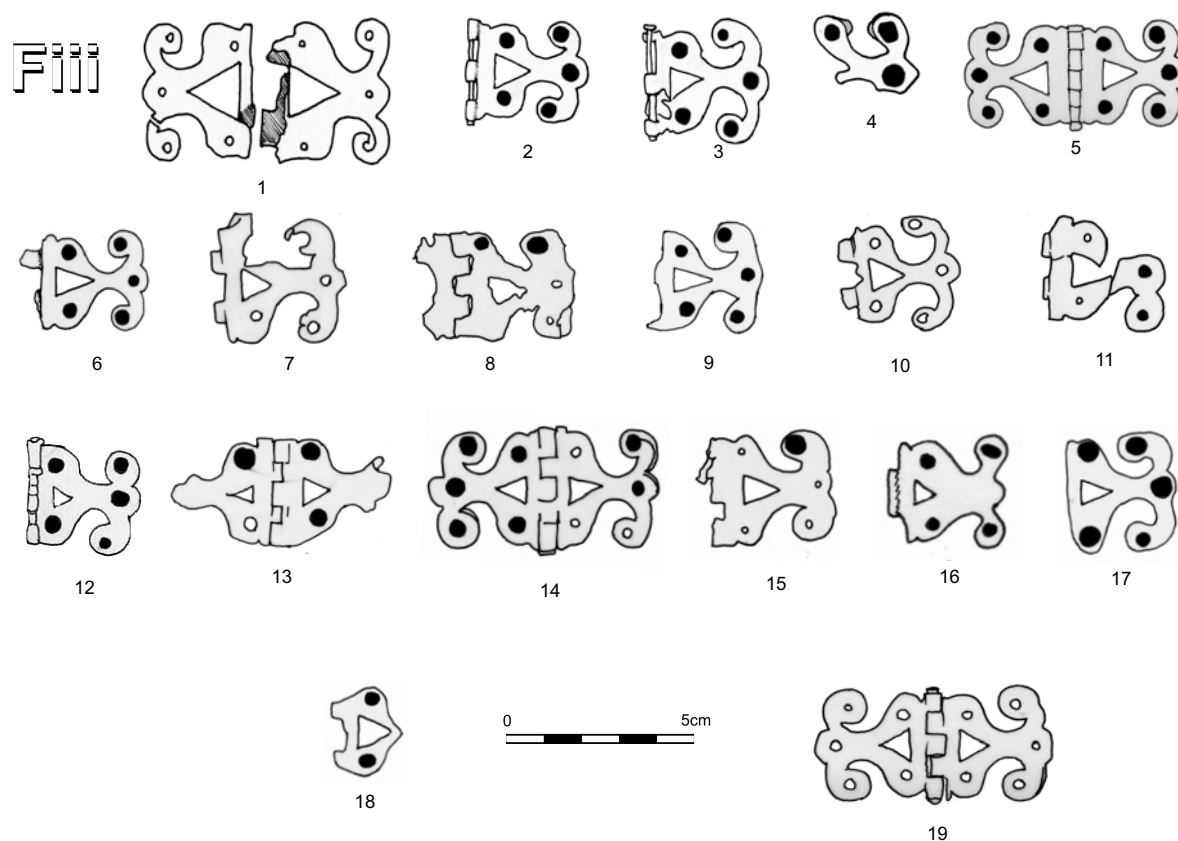
- top of the breastplate, to which it is still attached. This leaf is of sub-lobate form, having the bottom end cut into a scallop shape. There are three dome-headed rivets remaining, disposed in a triangle.
7. Oberwinterthur *Context*: Field 107/43, House 24B, Layer 0 *Inventory No.*: FK 3558 *Reference*: DESCHLER-ERB 1996: 289, Taf.21, 312 *Dimensions*: L: 45mm, W: 26mm, Th: 2mm, Weight: 9g. *Notes*: This is a 'Kalkriese' type hinge of sub-lobate form. No rivets remain in this plate. The companion leaf may be found at Fii-05. Measurements are those given for the entire assembly.
  8. Strasbourg *Context*: from Blauwolkengasse No.14 *Inventory No.*: 3428 *Reference*: FORRER 1927: Pl. LXXVII, 25 *Dimensions*: L: 43mm *Notes*: 'Kalkriese'-type hinge, with scalloped ends to each leaf. Each leaf has three rivet holes. The two halves of the hinge are also of different widths.
  9. Strasbourg *Context*: from Brandgasse No.4 *Inventory No.*: 3281 *Reference*: FORRER 1927: Pl. LXXVII, 26 *Dimensions*: L: 32mm *Notes*: A 'Kalkriese'-type shoulder hinge assembly. This leaf originally had but two rivets (of which only one remains) and the ends are cut in a scalloped fashion. The other hinge plate may be seen at Fii-06.
  10. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1965: 145 & Fig.6, 13 *Dimensions (from scale drawing)*: L: 42mm, W: 28mm *Notes*: Remnants of a shoulder hinge, still attached to armour plate, only one half of the hinge (of the 'Kalkriese' type) survives. Two dome-headed rivets remain and one of the holes shows signs of decorative punching around it.
  11. Windisch *Context*: rubbish dump excavation of 1923. *Inventory No.*: 23.4125 *Reference*: UNZ & DESCHLER-ERB 1997: 28 & Taf.30, 615 *Dimensions (from scale drawing)*: L: 25mm, W: 24mm *Notes*: Broken hinged fitment, still attached to the armour plate. This fitment is from a 'Kalkriese'-type armour set. Two rivets remain.
- Fii**
1. Chichester *Context*: Cattle market site, B83 *Inventory No.*: 1275 *Reference*: DOWN 1989: 202 & Fig.27.5, 80 *Dimensions (from scale drawing)*: L: 21mm, W: 21mm *Notes*: Hinged sub-lobate plate of the 'Kalkriese' type. There are four rivets, disposed in two parallel rows, the rivet holes being surrounded by incised ring decoration.
  2. Iruña *Context*: 2nd half, 1st to 2nd century AD *Inventory No.*: Iruña 1994-7, Sector 1, U.E. 1001D *Reference*: FILLOY NIEVA & GIL ZUBILLAGA 1998: 266 No.353 *Dimensions*: L: 28mm *Notes*: Sub-lobate type 1/2-hinge, which retains all four rivets.
  3. Kaiseraugst *Context*: Region 1, Insula 22. Period 3, t.a.q. AD 70/75 *Inventory No.*: 1988.51.C05168 *Reference*: DESCHLER-ERB 1999: Taf.14, 244 *Dimensions*: L: 20mm, W: 19mm, Th: 2mm *Notes*: Broken portion of a sub-lobate shoulder hinge leaf, with three large rivet holes. No rivets remain, however. Weight: 1.96g.
  4. Kaiseraugst *Context*: Region 5C, undated. *Inventory No.*: 1973.1720; FK A03966 *Reference*: DESCHLER-ERB 1999: Taf.14, 243 *Dimensions*: L: 31mm, W: 31mm, Th: 1mm *Notes*: Part of one leaf of a sub-lobate shoulder

- hinge. There are three small rivet holes, asymmetrically punched. Weight: 3.25g.
5. Oberwinterthur *Context*: Field 107/43, House 24B, Layer 0 *Inventory No.*: FK 3558 *Reference*: DESCHLER-ERB 1996: 289, Taf.21, 312 *Dimensions*: L: 45mm, W: 26mm, Th: 2mm, Weight: 9g. *Notes*: Hinge of a very crude manufacture. There are three large and crude rivets, placed very close together (overlapping in one case). Measurements are those given for the entire assembly. The companion plate may be seen at Fi-07.
  6. Strasbourg *Context*: from Brandgasse No.4 *Inventory No.*: 3281 *Reference*: FORRER 1927: Pl. LXXVII, 26 *Dimensions*: L: 32mm *Notes*: A 'Kalkriese'-type shoulder hinge. This leaf is of sub-lobate form, with rounded ends. The other half may be seen at Fi-09.

### Fiii

1. Caerleon *Context*: surface find, location unknown *Inventory No.*: not recorded *Reference*: THOMAS (forthcoming) *Dimensions*: L (max): 33mm, W (max): 37mm *Notes*: The metal sheet of this 1/2-hinge has broken across the fold. It is very delicately made, with a large triangular fret. There are no surviving rivets.
2. Camerton *Context*: not recorded, detector find *Inventory No.*: 26756Q *Reference*: JACKSON 1990: 27 & Pl.2, No.6 *Dimensions (from scale drawing)*: L: 33 mm, W: 28mm *Notes*: Normal lobate form with triangular piercing and neatly scrolled ends. The hinge includes all of the neat domed-head rivets as well as some of the attached iron plate at the rear. Weight: 10.4 g.
3. Camerton *Context*: not recorded, detector find *Inventory No.*: 26757Z *Reference*: JACKSON 1990: 27 & Pl.2, No.7 *Dimensions (from scale drawing)*: L: 34mm, W: 32mm *Notes*: Very similar to the above. A torn fragment of the opposing side hinge plate survives on one side of the hinge pin. The pin itself retains a neat head. Fragments of the iron armour plate remain.
4. Camerton *Context*: not recorded, detector find *Inventory No.*: 26759V *Reference*: JACKSON 1990: 28 & Pl.2, No.9 *Dimensions (from scale drawing)*: L: 28mm, W: 20mm *Notes*: Fragment, the hinge and one lobate terminal is missing. Three domed-head rivets and small fragments of the iron plate remain. The plate clearly retains evidence for the triangular fret. Weight: 3.6g.
5. Colchester *Context*: Dated to AD 61 level. *Inventory No.*: not recorded *Reference*: HAWKES & HULL 1947: 337-8, & Pl. Cii, 10 *Dimensions (from scale drawing)*: L: 60mm, W (hinge only): 29mm, W (overall): 31mm *Notes*: Intact hinge, very well made with concentric ring decoration around the rivet holes. There is a triangular cut out to both leaves of the hinge. Some iron plate still adhering to one half. All ten rivets are *in situ*.
6. Colchester *Context*: Dated to AD 61 level. *Inventory No.*: not recorded *Reference*: HAWKES & HULL 1947: Pl. CII, 12 *Dimensions (from scale drawing)*: L: 33mm, W: 25mm *Notes*: Well made 1/2-hinge with very narrow waist. Triangular cut-out, but no ring decoration. All five rivets remain in place.
7. Colchester (Sheepen) *Context*: From feature 153, a large rubbish pit cut into an earlier gravel pit (Period IVb, Neronian) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 36 & 121, Fig.65, 48 also Pl.12 *Dimension: (from scale drawing)*: L: 35mm, W: 32mm *Notes*: Very well-made 1/2-hinge, showing triangular fret. There are no surviving rivets and the plate is badly torn on one side.
8. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 231 *Reference*: ALLASON-JONES & BISHOP 1988: 75 & 76, Fig.94, 231 *Dimensions*: L: 44mm, W: 29mm. *Notes*: Unlike the others from the Corbridge Hoard, this one is a separate hinge. No decoration to the rivet holes but hinge seems to have a triangular fret. Two rivets remain in the more intact leaf.
9. Hod Hill *Context*: From trench, Latrine and Ablutions building; Claudian date, AD 43-56 *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Fig.56, 9 *Dimensions (from scale drawing)*: L: 34.5mm, W: 33mm *Notes*: Narrow-waisted 1/2-hinge, with diamond cut out section. The hinge is damaged near the junction end.
10. Hofheim *Context*: not recorded *Inventory No.*: 19234 *Reference*: RITTERLING 1913: 147 & Taf.11-14 *Dimensions (from scale photo)*: L: 31.5mm, W: 28.5mm *Notes*: This is a very delicate and unusual 1/2-hinge. The lobes are very narrow. There are no surviving rivets, but the holes are all decorated with punched rings. There is a triangular fret at the base.
11. Kaiseraugst *Context*: Region 1, Insula 31. Period 2, t.a.q. of AD 50. *Inventory No.*: 1961.4899; FK X00308 *Reference*: DESCHLER-ERB 1999: Taf.14, 250 *Dimensions*: L: 32mm, W: 27mm, Th: 3mm *Notes*: 1/2-shoulder hinge of lobate form, very delicately made. Four small rivets remain and the rivet holes nearest the hinge are decorated with punched rings. The plate also has the triangular cut-out feature. Weight: 3.85g.
12. Longthorpe *Context*: old plough soil, in SW angle of officers' block, Building viii *Inventory No.*: 70 VI 5 *Reference*: FRERE & STJOSEPH 1974: 48 *Dimensions (from scale drawing)*: L: 30mm, W: 29mm *Notes*: Cuirass 1/2-hinge plate of lobated form with a triangular perforation. Hinge bar and fragments of iron shoulder plate remain. There are concentric punched ring decorations around the rivet holes.
13. Neuss *Context*: not recorded, found with a coin of Augustus. *Inventory No.*: 15077c *Reference*: SIMPSON 2000:



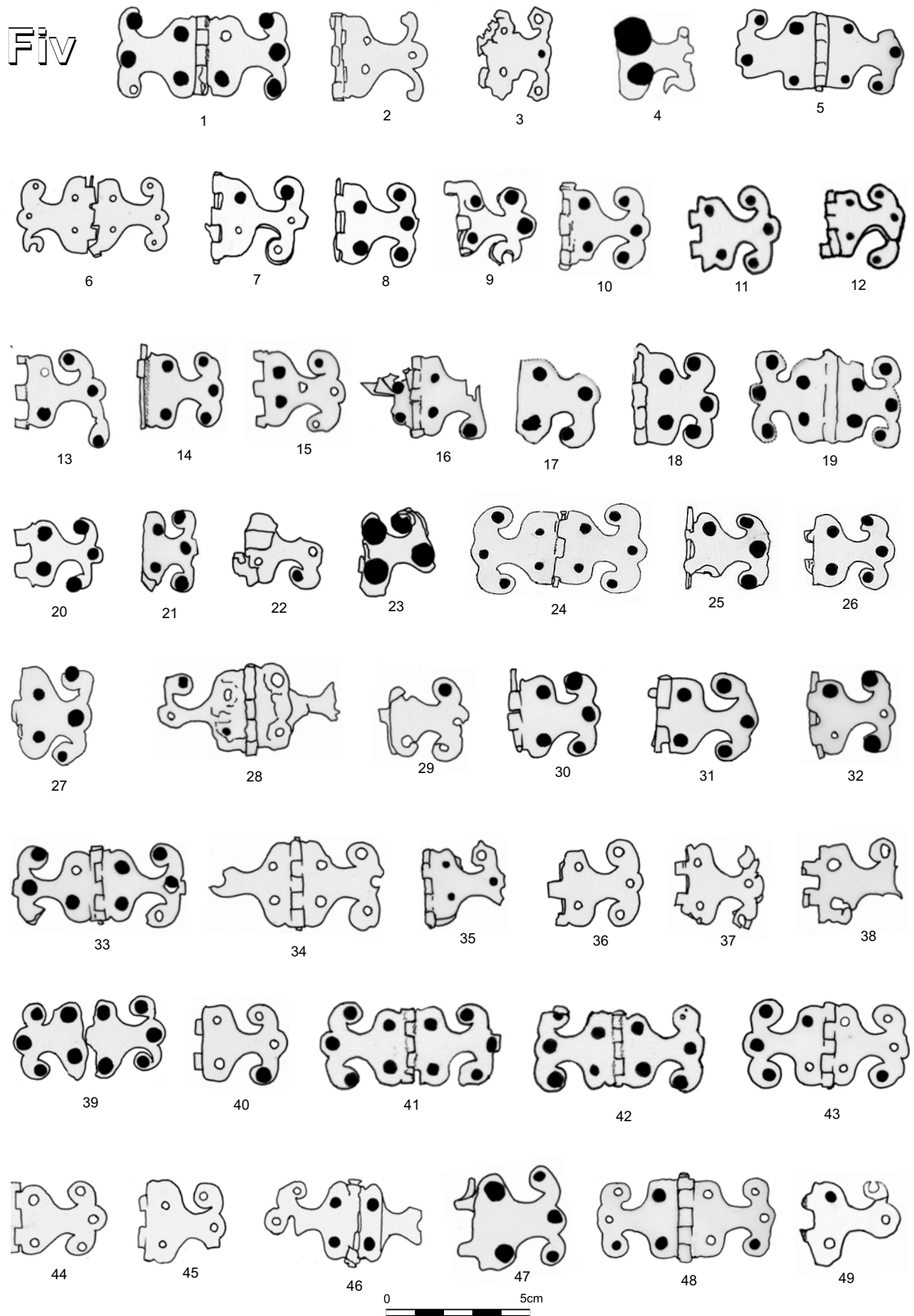


**Fig. 47:** Category F (shoulder hinges) of Type iii. Scale 1:2

- 75 & Pl.25, 8 *Dimensions (from scale drawing):* L: 56mm, W: 28mm *Notes:* Large hinge, badly damaged but clearly well made, with a triangular fret. Three rivets remain, one on leaf and two on the other.
14. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.33, 1 *Dimensions (from scale drawing):* L: 60mm, W: 34mm *Notes:* Triangular 'cut out' decoration, near the hinge. Very well made hinge, skilfully formed. Concentric ring decoration to the rivet holes. All five rivets remain on one leaf and two on the other.
15. Richborough *Context:* as above *Inventory No.:* not recorded *Reference:* BUSCHE-FOX 1932: 15, 82 & Pl. XII, Fig.39(k) *Dimensions (from scale photo):* L: 35mm, W: 28mm *Notes:* Very delicately formed 1/2-hinge, with one rivet still *in situ*, and a triangular cut-out in the centre.
16. Risstissen *Context:* Fortress No.1? 60-90 cm beneath the ground level, Level 12. *Inventory No.:* R66/39 *Reference:* ULBERT 1970: 24, 52 & Taf 3, 63 *Dimensions:* L: 31mm, W: 22mm *Notes:* Lobate 1/2-hinge, with the triangular 'cut out' section near the base. There are only four rivets; the central one at the top does not appear to have been fitted.
17. Waddon Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* WEBSTER 1979: 65 & 66, Fig.29, 22 & WEBSTER 1985: 59-60 *Dimensions (from scale drawing):* L: 29mm, W: 31mm *Notes:* Lobate-form 1/2-hinge. The top lobes are very elongated. All five domed rivets are present and the plate has the triangular fret.
18. Waddon Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* WEBSTER 1979: 65 & 66, Fig.29, 22 *Dimensions (from scale drawing):* L: 19mm, W: 23mm *Notes:* The bottom portion of a lobate-form 1/2-hinge. Two rivets remain and there is a triangular fret in the plate.
19. Windisch *Context:* rubbish dump *Inventory No.:* 41:8 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 832 *Dimensions (from scale drawing):* L: 61mm, W: 30mm *Notes:* A complete and very well-formed lobate hinge. It has the triangular cut-away portion in the base, the leaves are symmetrical and the rivet holes have the punched ring decoration, very carefully applied.
- Fiv**
1. Bad Deutsch-Altenburg *Context:* Legionary camp rubbish dump, 700m from the fortress and dating to 1st fortress period (Tiberio-Claudian). All finds are from the same midden layer. *Inventory No.:* not recorded *Reference:* GRÜNEWALD 1983: Taf.66, 14.1 *Dimensions:* L: 60mm *Notes:* Complete and well-made lobate-form shoulder hinge. The rivet holes are decorated with in-

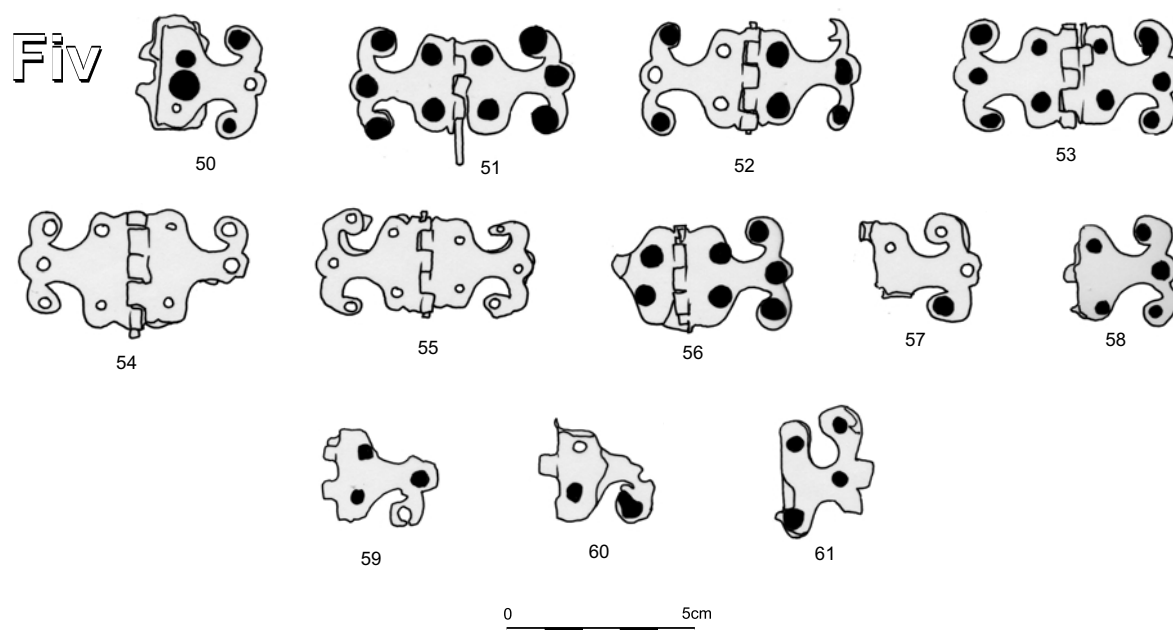
- cised rings and all but two of the rivets remain. This hinge was badly encrusted with lime when found.
2. Baden *Context*: not recorded *Inventory No.*: 482 *Reference*: UNZ 1972: Abb.4, 29 *Dimensions*: L: 31mm *Notes*: One half of a lobate hinge fitment. The top outer lobes are virtually non-existent and (curiously) have no rivet holes. In effect, this hinge leaf is only a triangle of metal. The pivot bar also remains in place.
  3. Buciumi *Context*: not recorded *Inventory No.*: not recorded *Reference*: CHIRILA *et al.* 1972: Pl. CXIII, 38 *Dimensions*: L: 24mm *Notes*: Much damaged 1/2-hinge, which retains a single rivet in the plate.
  4. Caerleon *Context*: Museum street site, lowest metallurgy of the pavement, SE of the street. *Inventory No.*: not recorded *Reference*: MURRAY- THREIPLAND 1967: 139-40, Fig.4, 1 *Dimensions*: L: 27mm, W: 25mm *Notes*: Lobate 1/2-hinge. The hinge showed signs of repair; three rivet holes in the tip have been broken out, and the large headed rivets are not original.
  5. Caernarfon *Context*: See above *Inventory No.*: 415(c) *Reference*: CASEY, DAVIES & EVANS 1993: 199-200, Fig. 10.18, 415(c) *Dimensions*: Total L (max): 55mm, W (max): 25mm, Th (of the plates): 1mm. *Notes*: Part of two iron cuirass plates joined by a copper alloy lobate hinge. Each part retains four of the original five dome-headed rivets. The hinge pin is of iron. Upper shoulder guard.
  6. Caistor St Edmunds *Context*: unstratified, ploughsoil *Inventory No.*: not recorded *Reference*: WEBSTER 1980a: 136 *Dimensions*: not recorded, drawing not scaled *Notes*: Complete hinge, with concentric ring decoration around the rivet holes. No rivets remain, however.
  7. Camerton *Context*: not recorded, detector find *Inventory No.*: 26760Y *Reference*: JACKSON 1990: 28 & Pl.2, No.11 *Dimensions (from scale drawing)*: L: 32 mm, W: 31mm *Notes*: This finely made plate is of 'fold-over' construction and has a narrow waist. Punched concentric rings surround three of the rivet holes, and the two surviving rivets have neatly domed heads. Weight: 9.3 g
  8. Camerton *Context*: not recorded, detector find *Inventory No.*: 26762U *Reference*: JACKSON 1990: 28 & Pl.2, No.12 *Dimensions (from scale drawing)*: L: 30 mm, W: 28mm, Th (iron plate): 1.5 mm *Notes*: Similar to the above in form and construction, but with a much broader waist. All five domed-headed rivets remain in position. Iron plate fragments survive on the back. Punched concentric rings circle the rivet holes. Weight: 7.4g
  9. Camerton *Context*: not recorded, detector find *Inventory No.*: 26763S *Reference*: JACKSON 1990: 28 & Pl.2, No.13 *Dimensions (from scale drawing)*: L: 32 mm, W: 29mm *Notes*: Form and construction as for the above. The plate has been wrenched from its armour backing, causing distortion and damage to the hinge. Subsequently, the hinge section and rivets were hammered flat. Weight 5.4 g.
  10. Chichester *Context*: Cattle market site, A124 *Inventory No.*: 590 *Reference*: DOWN 1989: 202 & Fig.27.6, 85 *Dimensions (from scale drawing)*: L: 31mm, W (at hinge bar): 30mm *Notes*: Intact 1/2-hinge from the shoulder plate of the *lorica*. Considerable portion of the iron plate still attached. Central lobe is almost not present. There is some concentric decoration around the rivet holes and all five rivets remain in place.
  11. Chichester *Context*: 536 *Inventory No.*: X 184 *Reference*: DOWN 1981: 163 & Fig. 8.28, 2 *Dimensions (from scale drawing)*: L: 32mm, W: 29mm *Notes*: From the top part of the neck segment of a *lorica segmentata* plate. The plate is intact, and has two 1/2-hinges, the other being shown below.
  12. Chichester *Context*: Area 2, Pit L.101 *Inventory No.*: 85B *Reference*: DOWN 1978: 299 & Fig.10.36, 85 B(i) *Dimensions (from scale drawing)*: L: 26mm, W: 14mm *Notes*: Half a lobate hinge still attached to piece of armour plate from a shoulder plate. There is also a decorative washer attached. A portion of one side of the hinge has broken away, exposing the underlying sheet of metal.
  13. Chichester *Context*: Area 2 *Inventory No.*: E.104 *Reference*: DOWN 1978: 293 & Fig.10.30, 17 *Dimensions (from scale drawing)*: L: 30mm, W: 25mm *Notes*: Bronze lobate 1/2-hinge from *lorica segmentata*. Concentric ring decoration around the rivet holes. Four of the five rivets are still in place.
  14. Colchester *Context*: Dated to AD 61 level. *Inventory No.*: not recorded *Reference*: HAWKES & HULL 1947: Pl. cii, 11 *Dimensions (from scale drawing)*: L: 29mm, W (plate only): 25mm *Notes*: Well made 1/2-hinge, but with wider shoulders than No.10 above. Concentric ring decoration to the rivet holes is evident, but there is no cut-out.
  15. Colchester (Sheepen) *Context*: From feature 153, a large rubbish pit, cut into an earlier gravel pit (Period IVb, Neronian) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 36 & 122, Fig.66, 51 also Pl.12 *Dimensions (from scale drawing)*: L: 31mm, W: 28mm *Notes*: Extremely well-made 1/2-hinge, showing ring decoration to the rivet holes, in which three rivets remain.
  16. Colchester ( Sheepen) *Context*: From ploughsoil (unstratified) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 127, Fig.71, 94 & Pl. 12 *Dimensions (from scale drawing)*: L: 43mm, W: 27mm *Notes*: Damaged but well-made hinge with rivet hole concentric ring decoration. There are five rivets, split 2:3 between the two hinge plates.
  17. Corbridge *Context*: As above *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 26, Fig.26

- Dimensions (from scale drawing):* (approx. only) L: 28mm, W: 30mm *Notes:* Cuirass 1, collar plate hinge, only one half remains. Only four rivets remain.
18. Corbridge *Context:* ALLASON-JONES & BISHOP 1988: *Inventory No.:* 71 *Reference:* *Ibid*, 29 & 31, Fig.31 *Dimensions (from scale drawing):* (approx. only) L: 53mm, W: 34mm *Notes:* Cuirass 2, collar plate. One half of a complete hinge (the other half is shown at Fv-12). Top lobes have volutes, but cut somewhat square to the hinge. No decorative features are present but all five rivets survive.
  19. Corbridge *Context:* As above *Inventory No.:* 71 *Reference:* ALLASON-JONES & BISHOP 1988: 29 & 32, Fig.32 *Dimensions (from scale drawing):* (approx. only) L: 53mm, W: 30mm *Notes:* Cuirass 2, upper shoulder guard. Complete hinge with carefully made outer upper lobes. Cut square to the base, however. No decorative features. All ten rivets remain in place.
  20. Exeter *Context:* Not closely dated, although thought to date from the period of military occupation, i.e. 55/60-75/80. *Inventory No.:* H33 *Reference:* HOLBROOK & BIDWELL 1991: 244-5 & 247, Fig.109, 25 *Dimensions:* L: 31mm; W: 25mm. *Notes:* Top half of a lobate cuirass hinge with a very narrow waist. The central lobe is relatively small. All five rivets are in position, the two in the body having thick disc heads while the three in the lobes have domed heads. Fragments of the collar plate or upper shoulder guard are still in position.
  21. Grobbendonk *Context:* Found in 1st CAD context. *Inventory No.:* 73.GRO.46 *Reference:* BERGHE 1996: 59-93. *Dimensions:* L: 37mm *Notes:* Symmetrically-formed 1/2-hinge, with some iron plate remaining. All five rivets extant.
  22. Kaiseraugst *Context:* Region 17, B. Period 2, t.a.q. AD 50 *Inventory No.:* 1978.15359; FK B02605 *Reference:* DESCHLER-ERB 1999: Taf.15, 256 *Dimensions:* L: 30mm, W: 25mm, Th: 1mm *Notes:* Part of a shoulder hinge of lobate form, retaining a small amount of armour plate. No rivets remain. The holes have the punched ring decoration. Weight: 4.02g.
  23. Kaiseraugst *Context:* Region 1, Insula 31, undated *Inventory No.:* 1977.17725; FK B00344 *Reference:* DESCHLER-ERB 1999: Taf.15, 255 *Dimensions:* L: 25mm, W: 29mm, Th.: 2mm *Notes:* Shoulder 1/2-hinge with some armour plate still adhering. There are four very large rivets, perhaps suggesting that this is a repair. Weight 4.95g.
  24. Longthorpe *Context:* *praetentura*, Pit 8, between barracks. *Inventory No.:* 73 II 8 *Reference:* FRERE & STJOSEPH 1974: 46 & 47, Fig.25, 16 *Dimensions (from scale drawing):* L: 60mm, W: 30mm *Notes:* Uppermost plate from right side of *lorica*, with lobated hinge attached. The hinge is attached by dome-headed rivets, each hole for which lies within a concentric groove to the uppermost back plate and the small horizontal shoulder plate. Hinge pin has a disc-shaped stop, flattened at one end to hold it in place.
  25. Longthorpe *Context:* Pit A, in *via Principalis*, S of *Principia* *Inventory No.:* 71 III 3 *Reference:* FRERE & STJOSEPH 1974: 48 & 49, Fig.26, 18 *Dimensions (from scale drawing):* L: 29mm, W: 28mm *Notes:* Cuirass 1/2-hinge plate with bar. Holes for the rivets are decorated with three concentric grooves around each. Four of the original five rivets survive.
  26. Longthorpe *Context:* Buildings ix-x, unstratified *Inventory No.:* 69 II *Reference:* FRERE & STJOSEPH 1974: 48 & 49, Fig.26, 20 *Dimensions (from scale drawing):* L: 31mm, W: 26mm *Notes:* Cuirass 1/2-hinge plate similar to the above. There is some evidence of concentric ring decoration around the rivet holes.
  27. Loughor *Context:* Building 3.10, west range (possible *praetorium* building), Phase 12, AD 100/5 to 105/10. *Inventory No.:* 53\431 (170) *Reference:* MARVELL & OWEN-JOHN 1997: 275, & 283, Fig.103, 76 *Dimensions:* L (max): 42, W: 37 mm. *Notes:* Lobate hinge of *lorica segmentata*, still attached to plate armour, folded in antiquity.
  28. Moers-Asberg *Context:* not recorded *Inventory No.:* not recorded *Reference:* BECHERT, 1974, Abb.68,2 *Dimensions:* L: 60mm *Notes:* A damaged, but very delicately made, complete lobate-form hinge. Possibly two rivets remain in one leaf.
  29. Nijmegen *Context:* from the level of Period 5 *Inventory No.:* CA.1975.526.n, XVII, 6 *Reference:* BOGAERS & HAALBOS 1977: 136 & 138, Fig.27, 2 *Dimensions (from scale drawing):* L: 30mm, W: 29mm *Notes:* Almost intact lobate 1/2-hinge, symmetrical in form. It retains only a single rivet of a flat-headed form.
  30. Oberstimm *Context:* not recorded *Inventory No.:* 1975, 204 *Reference:* SCHÖNBERGER 1978: 168 & Taf.20, B80 *Dimensions:* L: 31mm, W: 28mm. *Notes:* Bronze lobate-form 1/2-hinge, with some iron plate remaining. There are also all five rivets in place.
  31. Oberstimm *Context:* not recorded *Inventory No.:* 1975, 145 *Reference:* SCHÖNBERGER 1978: 168 & Taf.20, B83 *Dimensions:* L: 34mm, W: 25mm. *Notes:* Bronze lobate-form 1/2-hinge, with some iron still attached. Concentric ring decoration around the rivet holes in three cases. Hinge pivot bar still in place.
  32. Oberstimm *Context:* not recorded *Inventory No.:* 1975, 3 *Reference:* SCHÖNBERGER 1978: 168 & Taf.20, B86 *Dimensions:* L: 30mm, W: 26mm. *Notes:* Bronze 1/2-hinge. Attached with five rivets, of which only three remain. Pivot bar present. Rivets hammered flat on the underside. Rivet holes decorated with punched rings.



**Fig. 48:** Category F (shoulder hinges) of Type iv. Scale 1:2

33. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 2 *Dimensions (from scale drawing)*: L: 60mm, W: 28mm *Notes*: Concentric ring decoration around the rivet holes. A very well-made and delicate hinge.
34. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 3 *Dimensions (from scale drawing)*: L: 59mm, W: 32mm *Notes*: There may be a suggestion of the concentric decoration around the rivet holes. No rivets survive.
35. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 4 *Dimensions (from scale drawing)*: L: 27mm, W: 28mm *Notes*: Hinge folded over, partially broken away. There are three surviving rivets.
36. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 6 *Dimensions (from scale drawing)*: L: 33mm, W: 29mm *Notes*: Concentric decoration surrounds the rivet holes, though no rivets survive.
37. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 11 *Dimensions (from scale drawing)*: L: 31mm, W: 28mm *Notes*: Almost complete  $\frac{1}{2}$ -hinge. The lobes are clearly formed at the base. No rivets survive.
38. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 15 *Dimensions (from scale drawing)*: L: 35mm, W: 28mm *Notes*: Damaged  $\frac{1}{2}$ -hinge. The lobes are carefully formed and clearly cut at the base. No rivets remain.
39. Richborough *Context*: Area VIII, in a deposit of heavily burnt material overlying a clay floor about 12-ins thick. It lay north of the main E/W road, immediately to the W of the defences of the 3rd century earth fort. Dated AD 55-75 *Inventory No.*: not recorded *Reference*: BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(ESP) *Dimensions (from scale photo)*: (fitment only, excluding armour plate) L: 54mm, W: 26mm *Notes*: Two half hinges, all five rivets present on both  $\frac{1}{2}$ -hingeplates. Fragments of the iron plate still adhere to both leaves.
40. Risttissen *Context*: not recorded *Inventory No.*: A 878 *Reference*: ULBERT 1959: 106 & Taf.61, 15 *Dimensions (from scale drawing)*: L: 32mm, W: 27mm *Notes*: The rivet holes are decorated with punched concentric circles. This plate retains only a single rivet. The companion plate may be seen at Fv-35.
41. Risttissen *Context*: Depth of 35-60cm, from the fire rubble of the older fortress? *Inventory No.*: R66/38 *Reference*: ULBERT 1970: 24, 51 & Taf.3, 61 *Dimensions*: L: 63mm; W: 26mm. *Notes*: Complete lobate hinge with a small amount of damage. Rivet holes are surrounded by punched concentric ring decoration.
42. Risttissen *Context*: Fortress  $\frac{1}{2}$ , immediately beneath the soil surface, level 158. *Inventory No.*: R68/22 *Reference*: ULBERT 1970: 25 & Taf 4, 81 *Dimensions*: L: 58mm, W: 27mm. *Notes*: Complete hinge, well made and with some iron armour plate still adhering. There are no decorative features, but the hinge is very carefully made. Nine of the ten rivets survive.
43. Santon *Context*: possibly AD 50-60 from association with brooches, characteristic of the 1st CAD. *Inventory No.*: not recorded *Reference*: ALCOCK 1909: 146-63 & SPRATLING 1975: 206-7, Fig.1, 1 *Dimensions*: L: 56mm, W: 30mm *Notes*: A slightly damaged bronze hinge of lobate form. Both the halves are made of sheet metal, bent double, and are hinged on a bronze pin. The holes are ringed by concentric grooves, and five of them still hold domed rivets.
44. Silchester *Context*: Insula XXIII, Pit 10, dated late 1st CAD *Inventory No.*: not recorded *Reference*: BOON 1969: 44 & 45, Fig.5, 1 *Dimensions (from scale drawing)*: L: 30mm, W: 26mm *Notes*: This plate is of a different design to the companion piece (which may be seen at Fvi-39) and forms one half of a complete lobate-form hinge assembly. No rivets remain here. The lobes are much more curved than for the other hinge half.
45. South Cadbury *Context*: Found with a Republican *denarius* coin, but dated to ca. AD 45. *Inventory No.*: not recorded *Reference*: ALCOCK 1967: Pl. XIV, 4 *Dimensions (from scale photo)*: L: 30mm, W: 28mm *Notes*: Lobate  $\frac{1}{2}$ -hinge, in a somewhat damaged condition (missing one top lobe). Nevertheless, the hinge is very symmetrical and well made. There may be traces of punched decoration around the rivet holes. No rivets remain.
46. St. Albans *Context*: Insula XXII, upper filling of Flavian gully below Building 1B, Invoice. Dated AD 100-120 *Inventory No.*: 55 A XIII, 11 *Reference*: FRERE 1984: 34 & 32 Fig.11, 77. *Dimensions (from scale drawing)*: L: 53mm, W: 30mm *Notes*: A well-made hinge. The rivet holes have the ring decoration. One leaf has the sheet folded only so far as the first pair of rivets, so saving on metal.
47. Svistov *Context*: buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.*: not recorded *Reference*: GENTSCHEVA 1999: 28 & 29, Abb.7, 2 *Dimensions (from scale drawing)*: L: 37.5mm, W: 32mm *Notes*: One half of a lobate-form shoulder hinge. All five rivets are present.
48. Valkenburg *Context*: 'found in Valkenburg' as only context *Inventory No.*: H.2991/0/4144 *Reference*: BELIËN, 1996, Ill.37 *Dimensions*: L: 61mm *Notes*: A complete and well-formed lobate hinge; three rivets remain in one leaf and only one in the other.
49. Wiesbaden *Context*: not recorded *Inventory No.*: 17409 *Reference*: RITTERLING 1909: 94 & Taf. X, 49 *Dimensions (from scale drawing)*: L: 34mm, W: 30mm *Notes*:



**Fig. 49:** Category F (shoulder hinges) of Type iv (contd.). Scale 1:2

- Fragment of lobate  $\frac{1}{2}$ -hinge. One of the top lobes is missing on one side and both are absent on the other side. The rivet holes are decorated with punched concentric rings. One rivet remains.
50. Windisch *Context:* unstratified *Inventory No.:* 383 *Reference:* UNZ & DESCHLER-ERB 1997: 31, & Taf.34, 817 *Dimensions (from scale drawing):* L: 33mm, W: 31mm *Notes:* One half of a lobate hinge, which has been formed by folding the metal sheet only half way at the rear, so saving on metal. The hinge is well formed and the rivet holes are decorated with the punched concentric rings. There are four surviving rivets, all repairs. One of these is a large rivet, punched through the centre of the lobate hinge plate.
51. Windisch *Context:* part of the Baths complex, by the *via Principalis* *Inventory No.:* 27:1702 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 818 *Dimensions (from scale drawing):* L: 58mm, W: 30mm *Notes:* A complete lobate hinge, very well formed, with all ten rivets still in place.
52. Windisch *Context:* unstratified *Inventory No.:* None *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 819 *Dimensions (from scale drawing):* L: 57mm, W: 29mm *Notes:* A very fine and elegant lobate hinge. The holes are decorated with punched concentric rings. Two rivets remain on one side, three of the other leaf.
53. Windisch *Context:* part of the Baths complex, by the *via Principalis* *Inventory No.:* 27:563 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 821 *Dimensions (from scale drawing):* (fitment only) L: 58mm, W: 28mm *Notes:* A complete lobate hinge, with the iron armour plate still adhering. A well-formed hinge that retains all ten rivets.
54. Windisch *Context:* rubbish dump *Inventory No.:* 4123 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 822 *Dimensions (from scale drawing):* L: 69mm, W: 33mm *Notes:* A complete lobate hinge, very well-formed. The holes are decorated in the usual manner. No rivets survive and one of the top lobes on one side has broken off.
55. Windisch *Context:* barrack block bordering the *via Decumana*. *Inventory No.:* 53:149 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 823 *Dimensions (from scale drawing):* L: 57mm, W: 28mm *Notes:* Complete lobate hinge, with the holes decorated with the punched ring circles. No rivets are evident.
56. Windisch *Context:* rubbish dump *Inventory No.:* 4121 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 824 *Dimensions (from scale drawing):* L: 47mm, W: 30mm *Notes:* Complete lobate hinge, although the top portion of one half has broken away. A well-shaped hinge with all the possible rivets surviving.
57. Windisch *Context:* Legat Meyer excavation. *Inventory No.:* 1689 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 831 *Dimensions (from scale drawing):* L: 32mm, W: 28mm *Notes:* Part of one half of a lobate hinge. It is very well formed and all the holes are surrounded by carefully incised concentric circles. Only one rivet remains, however.
58. Windisch *Context:* by the *via Principalis* *Inventory No.:* 25:1132 *Reference:* UNZ & DESCHLER-ERB 1997: 31, & Taf.34, 834 *Dimensions (from scale drawing):* L:

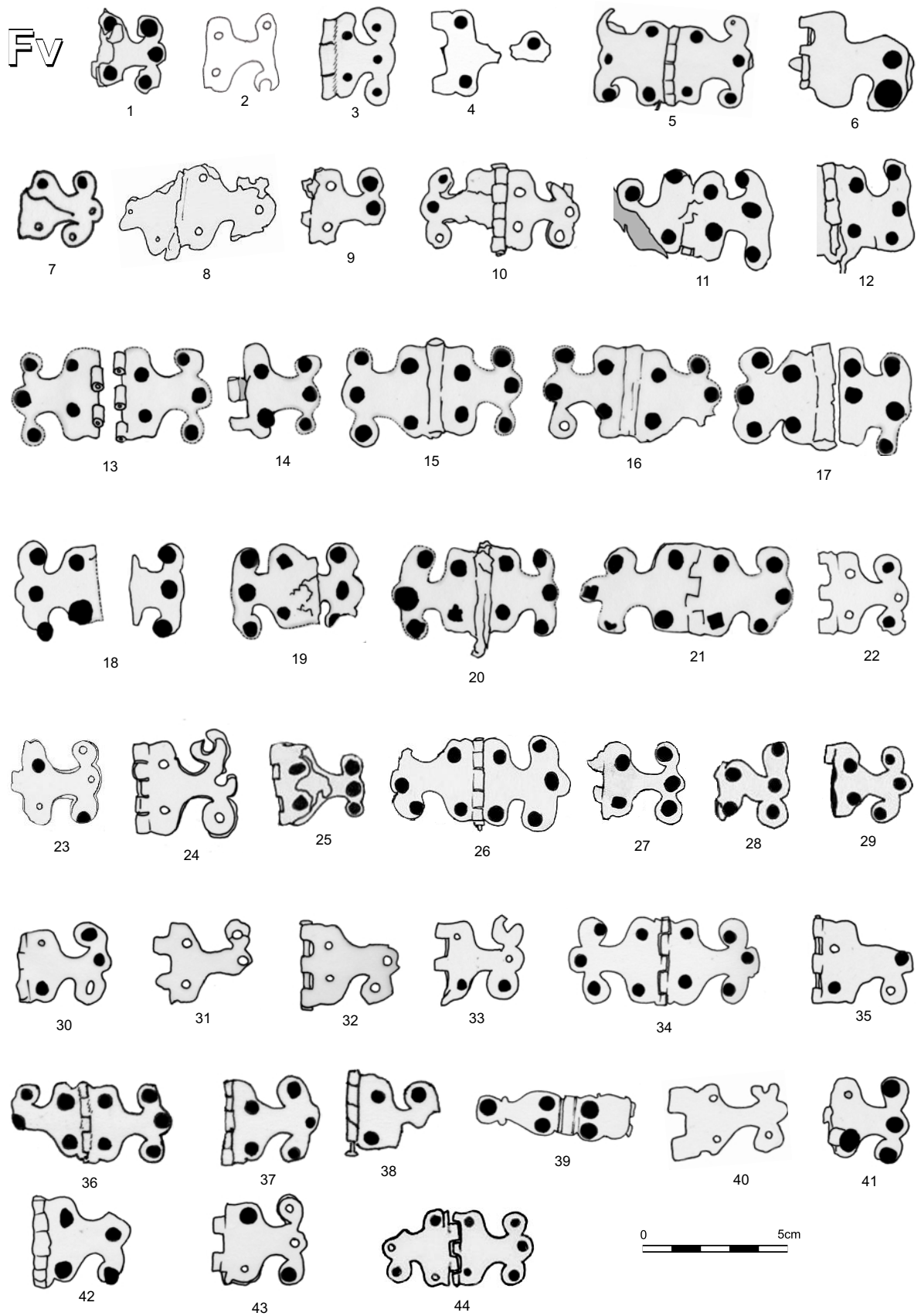
- 29mm, W: 29mm *Notes*: One half of a lobate hinge, quite well-formed. There are traces of concentric ring decoration around some of the rivet holes. All five rivets survive.
59. Windisch *Context*: Excavation of 1900 *Inventory No.*: 256i *Reference*: UNZ & DESCHLER-ERB 1997: 32 & Taf.35, 838 *Dimensions (from scale drawing)*: L: 30mm, W: 27mm *Notes*: Badly damaged half of a lobate hinge. Three rivets remain, hammered flat and clearly repairs.
60. Windisch *Context*: Excavation of 1966 *Inventory No.*: 66:788 *Reference*: UNZ & DESCHLER-ERB 1997: 32 & Taf.35, 840 *Dimensions (from scale drawing)*: L: 30mm, W: 26mm *Notes*: Badly damaged half of a lobate hinge. Two rivets remain, hammered flat and clearly repairs. The sheet may have been folded only partly to save on metal.
61. Windisch *Context*: via *Decumana*, by the Tribune's houses? *Inventory No.*: 28:2899 *Reference*: UNZ & DESCHLER-ERB 1997: 31, & Taf.35, 841 *Dimensions (from scale drawing)*: L: 23mm, W: 34mm *Notes*: Part of one half of a lobate hinge. Iron plate armour is still adhering to the rear. The top lobe of the hinge plate has broken away. Four of the rivets survive. A very eccentric shape for this hinge.
- Fv**
1. Alchester *Context*: not recorded *Inventory No.*: 22.33 *Reference*: SAUER 2000: 25, Fig.10, 5 *Dimensions (from scale drawing)*: L: 26mm, W: 27mm *Notes*: Lobate-form 1/2-hinge plate, retaining all five dome-headed rivets.
2. Aulnay-de-Saintonge *Context*: not recorded *Inventory No.*: not recorded *Reference*: FEUGERE 1993: 30, Fig.18, 2 *Dimensions (from scale drawing)*: L: 25mm, W: 26mm *Notes*: Part of a plate from a lobate-form hinge. No rivets survive and the top central lobe is missing.
3. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. XIX, 60 & 61 *Dimensions (from scale drawing)*: (left hinge) L: 30mm, W: 41mm; (right hinge) L: 28mm, W: 35mm *Notes*: The two halves of this hinge are dissimilar. This plate is fully lobate, with all five rivets in place. Much of the iron plate remains attached, with the edge rolled. The companion hinge plate is Fix-01
4. Baginton *Context*: Pit 15, 15ft S of the southern *ascensus* E gateway. *Inventory No.*: not recorded *Reference*: HOBLEY 1972: Fig.23, 37 *Dimensions (from scale drawing)*: (large fragment) L: 23.5mm, W: 29mm; (small fragment) L: 13.5mm, W: 10mm *Notes*: One half of a shoulder hinge, broken into two pieces. Three rivets remain, and the rivet holes have the punched concentric ring decoration surrounding them.
5. Caernarfon *Context*: From a pit (2172), at the end of Period 6A, sealed beneath a Period 7 floor. Room X of the courtyard building SS2. Hadrianic-?early Antonine. *Inventory No.*: 415 *Reference*: CASEY, DAVIES & EVANS 1993: 198-200, Fig.10.18, 415 *Dimensions*: L (of hinge, max): 56mm, W (max): 30.5mm, W (of hinge): 28mm. *Notes*: Two pieces of iron cuirass plates joined by a copper alloy lobate hinge. The plates are flexed at a 90° angle and there is a break along the hinge. Each part has had five rivets (though only four remain in each leaf) now, each with a thick disc head. Mid-collar plate/breast - or back plate.
6. Caernarfon *Context*: See above *Inventory No.*: 415(b) *Reference*: CASEY, DAVIES & EVANS 1993: 199-200, Fig.10.18, 415(b) *Dimensions*: L (of hinge): 25mm, L (total): 35.5mm. *Notes*: Part of a copper alloy lobate hinge with the iron hinge pin showing clearly. One dome-headed rivet survives (D: 5mm) and a second larger disc headed rivet may be a repair (D: 10mm). Several fragments of iron cuirass plate were with this hinge.
7. Chichester *Context*: 536 *Inventory No.*: X 184 *Reference*: DOWN 1981: 163 & Fig.8.28, 2 *Dimensions (from scale drawing)*: L: 28mm, W: 27mm *Notes*: From the bottom part of the neck segment of a *lorica segmentata* plate. The plate is intact, and has two 1/2-hinges, (see above).
8. Colchester *Context*: From the destruction debris, Period 1, (AD 60/61) *Inventory No.*: SF LWC 938(C), A309 *Reference*: CRUMMY 1977: 67 & 68, Fig.2, 7 and CRUMMY 1983, 130 & Fig.145, 4182 *Dimensions*: L (max): 55.5mm, W (max): 30.3mm *Notes*: Central iron hinge bar. Both sides of the hinge are damaged and distorted. There is evidence of punched ring decoration to the rivet holes, but no rivets remain.
9. Colchester (Sheepen) *Context*: Feature 102, large rubbish pit (Period IVb, Neronian) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 30 & 120, Fig.64, also Pl. 12 *Dimensions (from scale drawing)*: L: 28mm, W: 26mm *Notes*: Damaged 1/2-hinge showing ring decoration to rivet holes. Only two rivets remain.
10. Colchester (Sheepen) *Context*: From feature 102, large rubbish pit (Period IVb, Neronian). *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 35 & 120, Fig.64, 30 *Dimensions (from scale drawing)*: L: 54mm, W: 32mm *Notes*: Almost intact hinge, with two rivets still intact as well as the axis bar. Rivet holes are surrounded by concentric ring decoration.
11. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 26, Fig.26 *Dimensions (from scale drawing)*: L (max. visible): 54mm, W (max): 33mm *Notes*: Cuirass 1, collar plate hinge, somewhat damaged. Five rivets survive on one half, only three on the other. The central lobe of the top half is barely present.

12. Corbridge *Context*: As above *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 31, Fig.31 *Dimensions (from scale drawing)*: (approx. only) L: 53mm, W: 34mm *Notes*: Cuirass 2, collar plate. Complete hinge but with different levels of skill evident. This hinge half has poorly formed lobes at the top and cut square to the axis at the base. No decorative features are present but all five rivets survive. The other half of the hinge is shown at Fiv-18.
13. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 33, Fig.34 *Dimensions (from scale drawing)*: (approx. only) L: 64mm, W: 34mm *Notes*: Cuirass 3, collar plate. Complete hinge, although the two joined plates have separated as the pivot bar has broken away and is lost. All ten rivets remain in position.
14. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 33, Fig.34 *Dimensions (from scale drawing)*: (approx. only) L: 32mm, W: 32mm *Notes*: The companion hinge half to the example from the Cuirass 3 collar plate, (see Fvi-15). This half retains all five rivets.
15. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 35, Fig.36 *Dimensions (from scale drawing)*: (approx. only) L: 62mm, W: 34mm *Notes*: Cuirass 3, upper shoulder guard. Complete hinge, cut square to the base. All ten rivets are in place and there are no decorative features to the hinge plates.
16. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 35, Fig.36 *Dimensions (from scale drawing)*: (approx. only) L: 62mm, W: 33mm *Notes*: Cuirass 3, upper shoulder guard. Complete hinge, cut square to the base. Both halves of the hinge lack one of the rivets.
17. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 37, Fig.39 *Dimensions (from scale drawing)*: (approx. only) L: 62mm, W: 36mm *Notes*: Cuirass 4, collar plate. Somewhat deformed hinge, as the bottom part of one leaf appears to have broken away. All ten rivets are present, but some of those on the top plate have been badly positioned.
18. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 37, Fig.39 *Dimensions (from scale drawing)*: (approx. only) L: 59mm, W: 33mm *Notes*: Cuirass 4, collar plate. A curious repair where only half of the bottom-most hinge is visible. The central plate overlaps the end plate quite considerably because they are riveted together, removing the function of the hinge completely.
19. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 38, Fig.40 *Dimensions (from scale drawing)*: (approx. only) L: 45mm, W: 32mm *Notes*: Cuirass 4, upper shoulder guard. Again, only one half of the lower hinge is visible as the top plate has been riveted through it.
20. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 38, Fig.40 *Dimensions (from scale drawing)*: (approx. only) L: 58mm, W: 30mm *Notes*: Cuirass 4, upper shoulder guard. A complete hinge with well-formed outer 'volutes', but cut square to the base and with almost no central lobe. No decorative features.
21. Corbridge *Context*: As above *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions (from scale drawing)*: (approx. only) L: 75mm, W: 30mm *Notes*: Cuirass 5, collar plate. Complete hinge. Top lobes are crude and the base is cut square to the axis bar. All ten rivets are in place, but at least two appear to have a square head.
22. Exeter *Context*: late 1st - mid 2nd CAD date. *Inventory No.*: CR 312 *Reference*: HOLBROOK & BIDWELL 1991: 244-5 & 247, Fig.109, 26 *Dimensions*: L: 29mm; W: 27mm *Notes*: Lower half of a lobate cuirass hinge. The central lobe hardly projects clear of the wings and its rivet hole is off centre. Only two domed-headed rivets survive but all five rivet holes have concentric grooves around them.
23. Great Casterton *Context*: not recorded *Inventory No.*: not recorded *Reference*: TODD 1981: 297-8. *Dimensions (from scale drawing)*: L: 30.5mm, W: 29mm *Notes*: The central lobe of this  $\frac{1}{2}$ -hinge is virtually absent. Two rivets remain, although the one in one of the top lobes is positioned off-centre, and is damaged. This hinge is not symmetrically cut and appears to be of crude workmanship.
24. Kaiseraugst *Context*: Region 1, Insula 34, Period 3, t.a.q. of AD 70/75 *Inventory No.*: 1977.16196; FK B00607 *Reference*: DESCHLER-ERB 1999: Taf.15, 253 *Dimensions*: L: 36mm, W: 32mm, Th: 3mm *Notes*: Half a shoulder hinge of lobate form. There are no surviving rivets. This hinge is very well formed but there are no decorative features. Weight: 7.51g.
25. London *Context*: From the site of the Bank of England. *Inventory No.*: 14,283 *Reference*: WEBSTER 1958: 124 *Dimensions (from scale drawing)*: L: 30mm, W: 24mm *Notes*: This  $\frac{1}{2}$ -hinge is attached to the remains of one of the breast plates, which also has a right-angle hinge. The central top-lobe is virtually absent.
26. Longthorpe *Context*: Pit A, in *via Principalis*, S of *Principia*. *Inventory No.*: 71 III 3 X310 *Reference*: FRERE & STJOSEPH 1974: 46 & 49, Fig.26, 17 *Dimensions (from scale drawing)*: L: 61mm, W: 31mm *Notes*: Cuirass hinge, complete with fragments of the iron shoulder plates still attached. (The hinge has rusted in the flexed position, but has been drawn flat.)

The elemental composition of the hinge (BISHOP



- 1989) was shown to be Cu=78%, Zn=14% while that for one of the rivets was given as Cu=88%, Zn=4%. There were only traces (1-2%) of tin present. Another cuirass hinge (not illustrated, p.48, No.26) showed a composition of Cu=77%, Zn=16% for the hinge plate and Cu=88%, Zn=9% for the rivet.
27. Longthorpe *Context*: Pit C, E of Building viii *Inventory No.*: 70 III 3 *Reference*: FRERE & ST.JOSEPH 1974: 48 & 49, Fig.26, 19 *Dimensions (from scale drawing)*: L: 33mm, W: 27mm *Notes*: Cuirass 1/2-hinge plate similar to the one above. Fragments of iron shoulder plate are still attached and all five rivets remain in place.
28. Longthorpe *Context*: Dated Claudio-Neronian, from sand at bottom of Kiln 20 stoke hole. *Inventory No.*: 72.18 SF 2 *Reference*: DANNELL & WILD 1987: 101 & 102, Fig.28, 122 *Dimensions (from scale drawing)*: L: 25mm, W: 30mm *Notes*: Two pieces of *lorica segmentata* with an attached bronze hinge. These belong to the shoulder straps, which have hinges at the top. These strips were quite broad, and one is tapered.
29. Longthorpe *Context*: spoilheap. *Inventory No.*: 72 SF 7 *Reference*: DANNELL & WILD 1987: 101& 1902, Fig.28, 123 *Dimensions (from scale drawing)*: L: 30mm, W: 25mm *Notes*: Corner piece of a shoulder strip from *lorica segmentata*, with a bronze hinge attached. There is no ring decoration surrounding the rivet holes. This hinge is crudely formed, with rivet holes not centralised.
30. Oberstimm *Context*: not recorded *Inventory No.*: 1975, 204 *Reference*: SCHÖNBERGER 1978: 168 & Taf.20, B79 *Dimensions*: L: 31mm, W: 25mm. *Notes*: Bronze 1/2-hinge, with some iron plate remaining. There are also three remaining rivets.
31. Oberstimm *Context*: not recorded *Inventory No.*: 1975, 114 *Reference*: SCHÖNBERGER 1978: 168 & Taf.20, B82 *Dimensions*: L: 34mm, W: 27mm *Notes*: Broken lobate-form 1/2-hinge. One of the top lobes is missing and there are no remaining rivets.
32. Oberstimm *Context*: not recorded *Inventory No.*: 1975, 216 *Reference*: SCHÖNBERGER 1978: 168 & Taf.20, B85 *Dimensions*: L: 30mm, W: 32mm. *Notes*: Bronze *lorica* 1/2-hinge, where one of the top lobes has broken away. Hinge pivot bar is still present, but no rivets remain.
33. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33,10 *Dimensions (from scale drawing)*: L: 31mm, W: 28mm *Notes*: Almost complete 1/2-hinge, although cut rather square at the base. Two rivets remain.
34. Rheinzabern *Context*: not recorded *Inventory No.*: not recorded *Reference*: BERNHARD 1981: 135 & Abb.9, 4 *Dimensions (from scale drawing)*: L: 66mm, W: 30mm
- Notes*: A complete lobate-form hinge, very well made. All ten rivets are in position.
35. Risstissen *Context*: not recorded *Inventory No.*: A 878 *Reference*: ULBERT 1959: 106 & Taf.61, 15 *Dimensions (from scale drawing)*: L: 34mm, W: 29mm *Notes*: The rivet holes are decorated with punched concentric circles. This top half hinge has two intact rivets. The other half plate may be seen at Fiv-40.
36. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R68/22 *Reference*: ULBERT 1970: 25 & Taf 4, 82 *Dimensions*: L: 55mm, W: 28mm *Notes*: Concentric decoration around the rivet holes is clearly visible. Some of the armour plate still adheres to the back of the hinge. There are nine surviving rivets.
37. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R68/22 *Reference*: ULBERT 1970: 25, 61 & Taf 4, 83 *Dimensions*: L: 33mm, W: 31mm *Notes*: Some iron plate still adheres to this 1/2-hinge. The pivot bar is also still in position, as are all five rivets. There are, however, no decorative features.
38. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R68/22 *Reference*: ULBERT 1970: 25, 61 & Taf 4, 84 *Dimensions*: L: 35mm, W: 29mm. *Notes*: Fragmentary 1/2-hinge. There may be an indication of the presence decorative punched rings around the rivet holes, three of which survive.
39. Thamusida *Context*: east quarter of the 1932-34 excavation *Invoice No.*: 516 *Reference*: BOUBE-PICCOT 1994: 61 & Pl.3, 34 *Dimensions*: L: 56mm, W: 15mm *Notes*: A shoulder 1/2-hinge of a unique design. It appears to be a derivative of the normal five-fold lobate form, but much elongated. Across the centre of the leaf is a decorative panel and five large dome-headed rivets are in place.
40. Windisch *Context*: not recorded *Inventory No.*: 435, 8 *Reference*: UNZ, 1973: 22 & 37, Abb.9, 87 *Dimensions*: L: 41mm *Notes*: Remains of one half of a lobate-form hinge. There are only four rivet holes, the centre-top one being absent in this case.
41. Windisch *Context*: not recorded *Inventory No.*: None *Reference*: UNZ & DESCHLER-ERB 1997: 28 Taf.30, 616 *Dimensions (from scale drawing)*: L: 29mm, W: 29mm *Notes*: This hinge is unique from this site in being still attached to an iron breastplate. The hinge appears to be well formed, although devoid of decorative motifs. Four large rivets remain.
42. Windisch *Context*: Find site No.24, by the *via Decumana*, Tribune's house? *Inventory No.*: 28:1349 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 816 *Dimensions (from scale drawing)*: L: 32mm, W: 32mm *Notes*: One

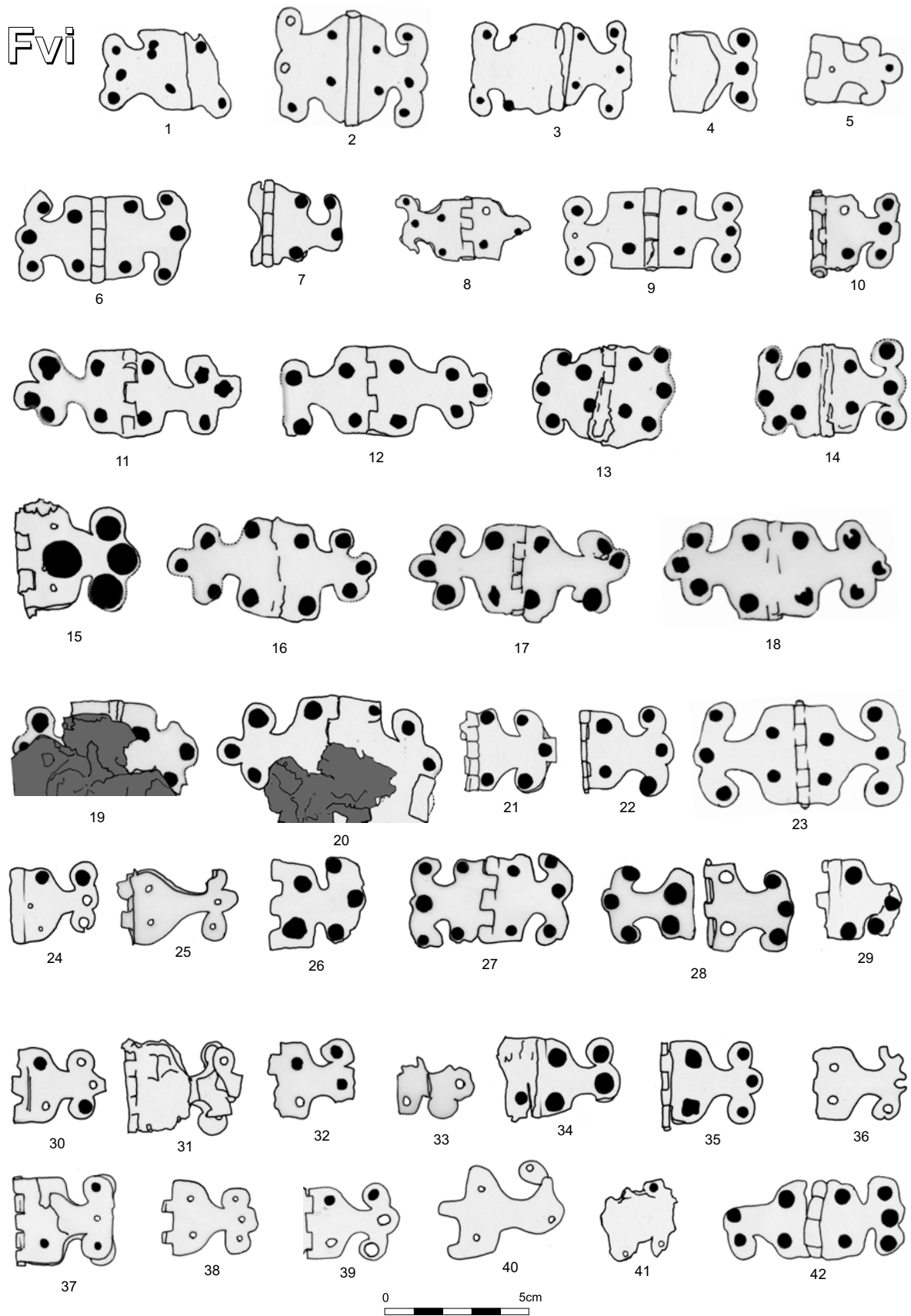


**Fig.50:** Category F (shoulder hinges) of Type v. Scale 1:2

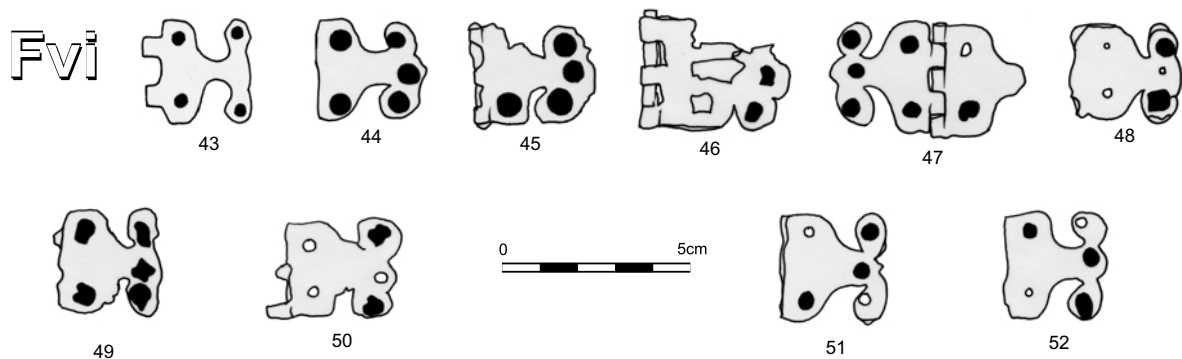
- half of a lobate hinge, somewhat damaged. The four surviving rivets are probably repairs. Some armour plate remains attached.
43. Windisch *Context*: rubbish dump *Inventory No.*: 23:4484 *Reference*: UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 828 *Dimensions (from scale drawing)*: L: 31mm, W: 31mm *Notes*: One half of a lobate hinge. It is quite well formed, but carries no decorative features. Two rivets only remain. One very unusual feature is that the sheet of brass has been cut vertically on the rear side.
44. Wroxeter *Context*: Excavated from the area south of the baths. *Inventory No.*: not recorded *Reference*: WEBSTER 1958: 98 & 97, Fig.8, 257 *Dimensions (from scale drawing)*: L: 51mm, W: 26mm *Notes*: Bronze shoulder hinge with 'copper' rivets, all five on the undamaged side and two on the other, damaged, half (which lacks a top lobe).
- Fvi**
1. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: 15-84 & 85-132. Taf.XVII, 23 *Dimensions (from scale drawing)*: L (max): 60mm, W: 36mm *Notes*: The hinge is somewhat distorted, with a second pair of holes drilled through, which suggests a previous temporary repair. The top leaf, as displayed here, is in fact bent backwards.
2. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. XVII, 24 *Dimensions (from scale drawing)*: L: 52mm, W (max, at hinge): 38mm *Notes*: Very crudely made hinge, with no decoration around the rivet holes. The shoulders of the hinge halves are very much sloped. The positions of the rivets are not symmetrical. Armour plate fragments are still attached, as are all ten rivets.
3. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.XIX, 62 *Dimensions (from scale drawing)*: L (total): 68mm, W: 42mm *Notes*: The two halves of the hinge do not appear to be of the same form, which may imply a service repair. The bottom 1/2-hinge is almost of square shape and the rivets are positioned very oddly. Although not shown in the drawing, the armour plate at the top has a rolled edge.
4. Broxtowe *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1958: 70 & 71, Fig.3, 8 *Dimensions (from scale drawing)*: L: 30mm, W: 28.5mm *Notes*: Bronze cuirass hinge, folded over and partly broken on one half.
5. Caerleon *Context*: not recorded *Inventory No.*: not recorded *Reference*: MURRAY-THREIPLAND 1967: 139-40, Fig.4, 2 *Dimensions (from scale drawing)*: L: 32mm, W: 25mm *Notes*: This 1/2-hinge consists of a lobate-form plate. The companion plate is completely different and may be seen at Fvii-01. This half contains only two rivet holes, only one rivet being present.
6. Caernarfon *Context*: See above *Inventory No.*: 415 *Reference*: CASEY, DAVIES & EVANS 1993: 199-200, Fig.10.18, 415 *Dimensions*: L (total): 59mm; W (max): 28mm; W (across plates): 36mm *Notes*: Copper alloy lobate hinge with an iron hinge pin. Each part has five dome-headed rivets of varying sizes, not very carefully placed. The plates are fixed at a slight angle. The edges of the two iron cuirass plates are visible. Upper shoulder guard.
7. Caernarfon *Context*: See above *Inventory No.*: 415 *Reference*: CASEY, DAVIES & EVANS 1993: 199-200, Fig.10.18, 415 *Dimensions*: L: 29mm *Notes*: One of two pieces of iron cuirass plate with fragments of a lobate hinge. The hinge is attached to the armour plate with four surviving dome-headed rivets. Mid-collar breast or back plate.
8. Castleford *Context*: not recorded *Inventory No.*: 101 T14; CN26; SF18(C) II *Reference*: COOL & PHILO 1998: 68 & Fig.21, 218 *Dimensions*: L: 52mm, W: 26mm *Notes*: Damaged hinge, quite crudely formed, with very square 'shoulders'. It retains a number of rivets. The central rivet at the lobe end of one half of the hinge is unusually placed.
9. Chester *Context*: Site LXXXVI, King's Buildings *Inventory No.*: not recorded *Reference*: NEWSTEAD 1928: 91 & Pl. IX, 3 *Dimensions (from scale drawing)*: L: 60mm, W: 28mm *Notes*: Unusual, though well-made, hinge. The portion near to the hinge is cut extremely square and the top three rivets are virtually in a straight line. Nine or ten rivets remain in place and the rivet holes are decorated with punched concentric rings.
10. Colchester (Sheepen) *Context*: From ploughsoil (unstratified) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 127, Fig.71, 93 *Dimensions (from scale drawing)*: L: 31mm, W: 30 mm *Notes*: Well-made 1/2-hinge with ring decoration and retaining the axis bar. Four of the five rivets are extant, as well as the hinge bar.
11. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 28, Fig.28 *Dimensions (from scale drawing)*: (approx. only, excluding iron plate) L: 78mm, W: 30mm *Notes*: Cuirass 1, upper shoulder guard. Complete hinge, cut square to the hinge axis. All ten rivets are in position.
12. Corbridge *Context*: As above. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23 & 28, Fig.28 *Dimensions (from scale drawing)*: (approx. only, excluding iron plate) L: 70mm, W: 30mm *Notes*: Cuirass 1, upper shoulder guard. Complete hinge, cut square to the hinge axis. Some damage in that the central lobe of the bottom 1/2-hinge is missing. All five rivets remain for the top leaf, four on the bottom leaf.

13. Corbridge *Context*: As above. *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 31, Fig.31 *Dimensions (from scale drawing)*: (approx. only) L: 50mm, W: 33mm. *Notes*: Cuirass 2, collar plate. Complete hinge cut square to the axis at the base. No decorative features are present. All ten rivets survive in place.
14. Corbridge *Context*: As above. *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 32, Fig.32 *Dimensions (from scale drawing)*: (approx. only) L: 53mm, W: 32mm. *Notes*: Cuirass 2, upper shoulder guard. Complete hinge with carefully made upper lobes. Cut square to the base, however. All ten rivets survive.
15. Corbridge *Context*: As above. *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 33, Fig.34 *Dimensions (from scale drawing)*: (approx. only) (top) L: 40mm, W: 36mm. *Notes*: Cuirass 3, collar plate. The lower half of this hinge is described at Fv-13, but the upper half is of a completely different type, being much larger than its companion and is unparalleled elsewhere in the hoard. It has crude lobes and square shoulders, as well as a triangular piercing at the centre. Fixed to the mid-collar plate by four large dome-headed rivets, one of which goes through the hole in the centre. This suggests a repair.
16. Corbridge *Context*: As above. *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions (from scale drawing)*: (approx. only) L: 72mm, W: 35mm. *Notes*: Cuirass 5, collar plate. Complete hinge. Top lobes are crudely formed and hinge is cut square to the base.
17. Corbridge *Context*: As above. *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 42, Fig.44 *Dimensions (from scale drawing)*: (approx. only) L: 75mm, W: 33mm. *Notes*: Cuirass 5, upper shoulder guard. Complete hinge, cut square to the hinge and with poorly formed top lobes on one side. All ten rivets remain in place.
18. Corbridge *Context*: As above. *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 42, Fig.44 *Dimensions (from scale drawing)*: (approx. only) L: 78mm, W: 35mm. *Notes*: Cuirass 5, upper shoulder guard. Crude lobate hinge, with simple lobes and bulbous heads. The rivets are also badly formed and several may be repairs. Nevertheless, all ten rivets are in place.
19. Corbridge *Context*: As above. *Inventory No.*: 75 *Reference*: *Ibid*, 43 & 47, Fig.49 *Dimensions (from scale drawing)*: (approx. only) L: 63mm. *Notes*: Cuirass 6, collar plate. Very crudely made hinge, partially covered with traces of textile (shown here as a dark grey shade). The top lobes are almost formed as one. Five of the ten rivets are visible.
20. Corbridge *Context*: As above. *Inventory No.*: 75 *Reference*: *Ibid*, 43 & 47, Fig.49 *Dimensions (from scale drawing)*: (approx. only) L: 77mm, W: 30mm. *Notes*: Cuirass 6, collar plate. Very crudely made hinge. The lobes are poorly formed and very square cut. No decorative features apparent. Three rivets are visible on the top 1/2-hinge plate and four on the lower one. As with the previous example, traces of textile overly the hinge (shown as dark grey shading here).
21. Harlow *Context*: Period V *Inventory No.*: 597-H.29-9 *Reference*: FRANCE & GOBEL 1985: Fig.46, 123 *Dimensions (from scale drawing)*: L: 31mm, W: 27mm. *Notes*: A lobate-form shoulder 1/2-hinge, which retains all five rivets. The plate is symmetrically cut and has a very angular appearance, particularly for the top 'lobe'.
22. Harlow *Context*: Period I *Inventory No.*: 782-F.21-18 *Reference*: FRANCE & GOBEL 1985: Fig.46, 124 *Dimensions (from scale drawing)*: L (plate only): 31mm, W: 32mm. *Notes*: A lobate form 1/2-hinge plate, still attached to the armour plate. The plate is well-formed, with the rivet holes decorated with punched concentric rings. All five rivets, together with the hinge bar, survive.
23. Hod Hill *Context*: Unstratified, ploughsoil *Inventory No.*: not recorded *Reference*: BRAILSFORD 1962: 3 & Fig.3, A74 *Dimensions (from scale drawing)*: L: 73mm, W: 38mm. *Notes*: Rather crude hinge. All five rivets in each half are present. Wide shoulders, with no decoration around the holes. Some iron plate still adhering.
24. Kaiseraugst *Context*: Region 1, Insula 30. Period 2, t.a.q. of AD 70/75. *Inventory No.*: 1962.814; FK X01372 *Reference*: DESCHLER-ERB 1999: Taf.15, 254 *Dimensions*: L: 30mm, W: 25mm, Th.: 3mm. *Notes*: Shoulder hinge of lobate form, which retains two domed rivets. The hinge does not appear to have been cut out. Weight: 5.02g.
25. Neuss *Context*: not recorded *Inventory No.*: not recorded *Reference*: LEHNER in NISSEN *et al* 1904: Taf.30B, 81 *Dimensions (from scale drawing)*: L: 41mm, W: 26mm. *Notes*: Very unusual shape to this hinge, with circular punched decoration to the holes. No rivets remain in place.
26. Nijmegen *Context*: from the level of Period 5 *Inventory No.*: not recorded *Reference*: BOGAERS & HAALBOS 1977: Fig.34, 4 *Dimensions*: L: 33mm. *Notes*: Lobate form 1/2-hinge. Very crude in form, but with all five rivets still in place.
27. Oberstimm *Context*: not recorded *Inventory No.*: 1975, 159 *Reference*: SCHÖNBERGER 1978: 168 & Taf.20, B78 *Dimensions*: L: 55mm, W: 30mm. *Notes*: Bronze hinge from lorica shoulder plate, in the form of a stylised palmette, central lobe not used here. Hinges attached to iron backing with five dome headed rivets, all of which are present.
28. Oberstimm *Context*: not recorded *Inventory No.*: 1975, 10 *Reference*: SCHÖNBERGER 1978: 168 & Taf.20, B81

- Dimensions:* Two parts; L: 31 and 32mm; W: 30mm. *Notes:* Bronze hinge from the shoulder protection. Some of the armour is still present beneath each leaf. One side retains the hinge bar and three rivets, while the other has all five rivets intact.
29. Puckeridge *Context:* Area D11 (AL), unstratified subsoil. Possibly early 1st CAD (Claudian) *Inventory No.:* 71.230 *Reference:* POTTER & TROW 2000: 58 & Fig.23.1 *Dimensions (from scale drawing):* L: 29mm, W: 27mm *Notes:* Cuirass plate with four of the original five rivets intact, together with two of the three loops that accommodate the axis bar.
  30. Rheingönheim *Context:* not recorded *Inventory No.:* ULBERT 1969: Taf.33, 5 *Reference:* not recorded *Dimensions (from scale drawing):* L: 32mm, W: 25mm *Notes:* Concentric decoration around the rivet holes, with two surviving rivets.
  31. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.33, 7 *Dimensions (from scale drawing):* L: 40mm, W: 32mm *Notes:* Hinge folded over. Decoration to rivet holes can just be seen and there are clear lobes at the axle pin.
  32. Rheingönheim *Context:* not recorded *Inventory No.:* not recorded *Reference:* ULBERT 1969: Taf.33, 14 *Dimensions (from scale drawing):* L: 30mm, W: 27mm *Notes:* Damaged 1/2-hinge. The lobes are carefully formed and clearly cut at the base. Three rivets remain in place.
  33. Rheingönheim *Context:* not recorded *Inventory No.* not recorded *Reference:* ULBERT 1969: Taf.33, 16 *Dimensions (from scale drawing):* L: 26mm, W: 19mm *Notes:* Damaged 1/2-hinge. Square cut at the base. There are no surviving rivets and possibly the hinge plate has only been folded back half way to save on metal.
  34. Richborough *Context:* as above *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.9 *Dimensions (from scale photo):* L: 38mm, W: 27mm *Notes:* Partially broken 1/2-hinge, with a part of the other half adhering. Some iron backing plate remains. Four rivets remain on one half, one (possibly two) on the other.
  35. Risstissen *Context:* not recorded *Inventory No.:* 2985 *Reference:* ULBERT 1959: 106 & Taf.61, 16 *Dimensions (from scale drawing):* L: 34mm, W: 28mm *Notes:* One half of a lobate hinge. The hinge bar is still in place, as are the five rivets. No evidence of decorative features.
  36. Risstissen *Context:* not recorded *Inventory No.:* A 878 *Reference:* ULBERT 1959: 106 & Taf.61, 19 *Dimensions (from scale drawing):* L: 32mm, W: 25mm *Notes:* One half of a lobate hinge, broken off at the hinge and with some damage to the top lobes. No rivets remain and there is no evidence of decorative features.
  37. Rottweil *Context:* not recorded *Inventory No.:* 1839 *Reference:* PLANCK 1975: 30 & Taf.72, 9 *Dimensions:* L: 33mm *Notes:* A lobate-form hinge. This is cut very square in shape, the central top lobe being missing altogether, so that the three top rivet holes are in a straight line. Three rivets remain. The hinge is flexed so both leaves are together.
  38. Scole *Context:* Layer 79, Period III *Inventory No.:* not recorded *Reference:* ROGERSON 1977: 136 & 137, Fig.57, 26 *Dimensions (from scale drawing):* L: 33mm, W: 25mm *Notes:* One plate from a lobate hinge, well formed and with the rivet holes decorated by inscribed rings. No rivets remain.
  39. Silchester *Context:* Insula XXIII, Pit 10, dated late 1st CAD *Inventory No.:* not recorded *Reference:* BOON 1969: 44 & 45, Fig.5, 1 *Dimensions (from scale drawing):* L: 30mm, W: 26mm *Notes:* One half of a complete lobate hinge (the other half is of a different design, and may be found at Fiv-43). This half retains only two of the five rivets and although the lobes are somewhat voluted at the top, it is cut very square at the base.
  40. Svistov *Context:* buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.:* not recorded *Reference:* GENTSCHEVA 1999: 28 & 29, Abb.7, 1 *Dimensions (from scale drawing):* L: 43.5mm, W: 37.5mm *Notes:* One half of a lobate-form shoulder hinge. One of the top lobes has broken away completely and there are no rivets present.
  41. Usk *Context:* Fortress latrine, pre-Flavian. *Inventory No.:* FFB (1), Manning 1981, 190 *Reference:* MANNING, PRICE & WEBSTER 1995: 8-10 *Dimensions:* L: 30mm *Notes:* Part of a lobate bronze 1/2-hinge on an iron plate. Three visible rivets and traces of two more. Position of the central hole (away from the hinge) suggests that the lobe projected a considerable distance beyond the line of its two neighbours. No openwork ornament, but the tongue between the inner and outer lobes is broad and sturdy, but gently curved.
  42. Volubilis *Context:* 'house of the cistern' *Inventory No.* 10,755 *Reference:* BOUBE-PICCOT 1994: 59 & Pl.3, 30 *Dimensions:* L: 63mm, W: 29mm *Notes:* An almost complete shoulder hinge of lobate form. Nine of the ten rivets are still in place and there is a small piece of armour plate still attached to the rear of one of the hinge halves.
  43. Waddon Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* WEBSTER 1979: 65 & 66, Fig.29, 22 *Dimensions (from scale drawing):* L: 29mm, W: 27mm *Notes:* A lobate-form 1/2-hinge. This has a very narrow waist and the central lobe at the top is virtually absent. There are only four rivets, the top central one being omitted in this case.
  44. Windisch *Context:* Legat Meyer excavation *Inventory No.:* 1688 *Reference:* UNZ & DESCHLER-ERB 1997: 31 &



**Fig.51:** Category F (shoulder hinges) of Type vi. Scale 1:2



**Fig.52:** Category F (shoulder hinges) of Type vi (contd.). Scale 1:2

- Taf.34, 820 *Dimensions (from scale drawing):* L: 30mm, W: 27mm *Notes:* One half of a lobate hinge, where the hinge portion is missing. There is still some armour plate adhering to the rear. All five rivets remain - probably the originals. The rivet holes are decorated with the punched concentric ring feature, except for the top centre one.
45. Windisch *Context:* by the *via Decumana* *Inventory No.:* 28:1016 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 825 *Dimensions (from scale drawing):* L: 32mm, W: 265mm *Notes:* One half of a lobate hinge, somewhat damaged. The armour plate is still adhering to the rear but there are only four surviving rivets.
46. Windisch *Context:* rubbish dump *Inventory No.:* 4122 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 826 *Dimensions (from scale drawing):* L: 39mm, W: 31mm *Notes:* One half of a lobate shoulder hinge, much damaged. The pivot bar remains, but there are no remaining rivets. This hinge plate is either poorly formed or heavily corroded, probably the former as the rivet holes do not appear to have been very carefully positioned and the shape is very crudely fashioned.
47. Windisch *Context:* corner of the main courtyard of the *Principia*. Find spot No.15.] *Inventory No.:* 31:5967 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 827 *Dimensions (from scale drawing):* L: 51mm, W: 30mm *Notes:* Complete lobate shoulder hinge, although one leaf has broken off at the waist. Iron armour plate is still in position on one side. Five rivets remain on the one side, only one on the other.
48. Windisch *Context:* rubbish dump *Inventory No.:* 4124 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 829 *Dimensions (from scale drawing):* L: 29mm, W: 25mm *Notes:* One half of a lobate hinge. This is very poorly formed and although broken away through the hinge, has only two very large rivets (repairs?) in place.
49. Windisch *Context:* 1900 excavation? *Inventory No.:* 527 *Reference:* UNZ & DESCHLER-ERB 1997: 31 & Taf.34, 830 *Dimensions (from scale drawing):* (fitment only) L: 27mm, W: 29mm *Notes:* One half of a lobate hinge, very poorly formed. There is iron plate armour still adhering. All five rivets survive, but they all appear to be repairs and are very crudely formed.
50. Windisch *Context:* rubbish dump *Inventory No.:* 4129 *Reference:* UNZ & DESCHLER-ERB 1997: 32 & Taf.35, 839 *Dimensions (from scale drawing):* L: 34mm, W: 25mm *Notes:* Badly damaged half of a lobate hinge. Two rivets remain, hammered flat and clearly repairs.
51. Windisch *Context:* *via Principalis*, SW corner of the *Principia*. Find site No.13. *Inventory No.:* 13:437 *Reference:* UNZ & DESCHLER-ERB 1997: 32, Taf.35, 842 *Dimensions (from scale drawing):* L: 26mm, W: 28mm *Notes:* One half of a lobate shoulder hinge. The central top lobe is vestigial. Three rivets survive.
52. Windisch *Context:* *via Decumana*, Tribune's house? *Inventory No.:* 25:68 *Reference:* UNZ & DESCHLER-ERB 1997: 32, Taf.35, 843 *Dimensions (from scale drawing):* L: 26mm, W: 28mm *Notes:* One half of a lobate hinge. It has broken through the hinge part. At least two of the rivet holes have the punched ring decoration. Three of the rivets survive.

### Fvii

1. Caerleon *Context:* not recorded *Inventory No.:* not recorded *Reference:* MURRAY-THREIPLAND 1967: 139-40, Fig.4, 2 *Dimensions (from scale drawing):* L: 30mm, W: 20mm *Notes:* This plate of the hinge is virtually rectangular. It has but a single rivet hole. Its more lobate companion plate is described at Fvi-05.
2. Rheingönheim *Context:* not recorded *Inventory No* not recorded *Reference:* ULBERT 1969: Taf.33, 17 *Dimensions (from scale drawing):* L: 35mm, W: 29.5mm *Notes:* A very crude hinge, cut square. There are no lobes evident at all and the three top rivets are in a straight line.
3. Windisch *Context:* rubbish dump *Inventory No.:* 19:191 *Reference:* UNZ & DESCHLER-ERB 1997: 31, & Taf.34, 836 *Dimensions (from scale drawing):* L: 40mm, W: 31mm *Notes:* Shoulder hinge, much damaged. The rivet holes are inserted randomly. Conceivably, this is from a 'Kalkriese' armour set although insufficient remains of the plates to be certain of this. One plate at

least is cut square in shape and neither plate shows any evidence of a lobate structure.

### Fviii

1. Bad Deutsch-Altenberg *Context*: Armoury? *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. XIX, 57 *Dimensions (from scale drawing)*: L: 56mm, W: 50mm *Notes*: Very angular, 1/2-hinge, with diamond cut out section. There is a substantial section of iron plate still adhering.
2. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. XIX, 58 *Dimensions (from scale drawing)*: L: 60mm, W: 70mm *Notes*: This very large 1/2-hinge has angular lobes rather than curved ones at the top, and with a diamond cut out section. Some iron plate still attached to the hinge. There also appears to be a reinforcing piece behind the hinge, giving a total of six rivets instead of the more usual five.
3. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. XIX, 59 *Dimensions (from scale drawing)*: L: 46mm, W (max): 48mm *Notes*: Very angular appearance of the 1/2-hinge, together with the diamond 'cut out'. Iron plate still adhering.
4. Caerleon *Context*: From Block B, Phase III, ca. AD 100 *Inventory No.*: 1731 (1377) *Reference*: EVANS & METCALF 1992: 114-5 *Dimensions (from scale drawing)*: L (approx.): 37mm, W (approx.): 44mm *Notes*: Lobate-form 1/2-hinge, with the triangular piercing, and original scrolled ends. The hinge remains attached to its iron backing. The rivet close to the hinge mechanism has a flat, more or less circular, head, while the two at the outer edges have domed heads. The shafts of the rivets are of a stout rectangular cross-section. On the rear is a small rectangular plate of iron, which (if used to secure internal leathers) is an unusual arrangement. Although it is clearly incomplete, the size of this plate, together with the triangular cut-out, suggests a hinge from a 'Newstead' cuirass.
5. Carlisle *Context*: 2nd stone fort (AD 183-320/30), from a soil deposit in the *intervallum* area, 4th and final phase *Inventory No.*: not recorded *Reference*: CARUANA 1993: 15-17 *Dimensions*: L: 50mm, W: 64mm. *Notes*: It appears to be on a back plate from a 'Newstead' armour set. It has the diamond 'cut-out', but is square cut on the shoulders, and of a crude appearance. There are four bronze rivets. This is a very large shoulder hinge, approximately twice the normal size.
6. Colchester *Context*: Timber-lined drain, backfilled Period 5b2 or early 6. *Inventory No.*: 4088 SF BKC 4234 N218 F75 *Reference*: CRUMMY 1983: 121 & Fig.130, 4088 *Dimensions*: L: 67mm, W: 27mm. *Notes*: Possibly the remains of a 'Newstead' type hinge, it retains two rivets. There is the suggestion of the base of a large triangular 'fret' on the right.

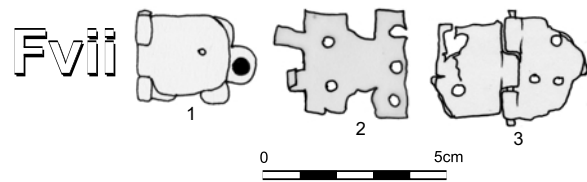


Fig.53: Category F (shoulder hinges) of Type vii. Scale 1:2

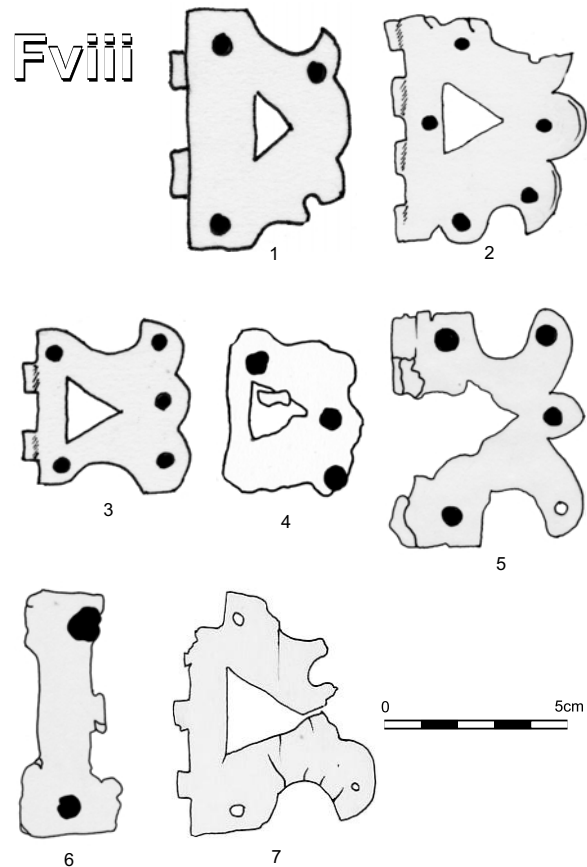


Fig.54: Category F (shoulder hinges) of Type viii. Scale 1:2

7. Great Chesters *Context*: not recorded *Inventory No.*: not recorded *Reference*: ALLASON-JONES 1994: 187-214 *Dimensions (from scale drawing)*: L: 54mm, W: 66mm *Notes*: The hinge has a large triangular 'cut out' decoration. The surviving top lobe shows the very angular shape observed on some of the *Carnuntum* examples. This is an exceptionally large shoulder hinge, from the 'Newstead' armour type.

### Fix

1. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf. XIX, 60 & 61 *Dimensions (from scale drawing)*: (left hinge) L: 30mm, W: 41mm; (right hinge) L: 28mm, W: 35mm *Notes*: The companion hinge plate to that shown at Fv-02. The hinge is crudely formed and there are only four rivets. Much of the iron plate remains attached, with the edge rolled. The neighbouring plate is found at Fv-03.



2. Baden du Parc *Context*: not recorded *Inventory No.*: B87.2:116.236 *Reference*: DESCHLER-ERB 1999: Abb.70 *Dimensions*: L: 56mm, W: 34mm *Notes*: A lobate hinge of most unusual shape. Also, instead of two rivets at the base, there is only a central one. Fitment is tinned or silvered.
3. Baginton *Context*: Pit 58, N side *Inventory No.*: Not recorded *Reference*: HOBLEY 1972: Fig.22, 18 *Dimensions (from scale drawing)*: L: 32mm, W: 25mm *Notes*: A small piece of armour plate with a corroded lobate-form hinge attached by four rivets.
4. Banasa *Context*: not recorded *Inventory No.*: Not recorded *Reference*: BOUBE-PICCOT 1994: 58 & Pl.3, 28 *Dimensions*: L: 50mm, W: 33mm *Notes*: This fitment has broken through the neck on both sides, close to where the top lobes normally begin. Four dome-headed rivets remain, though not placed symmetrically.
5. Banasa *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 59 & Pl.3, 29 *Dimensions*: L: 33mm, W: 29mm, Th: 2-3mm *Notes*: Broken half of a lobate hinge. It retains three dome-headed rivets. There appears to be a small portion of armour plate adhering beneath one rivet.
6. Burghöfe *Context*: not recorded *Inventory No.*: 1958/600 *Reference*: ULBERT 1959: 103 & Taf. 51, 1 *Dimensions (from scale drawing)*: L: 20mm, W: 28mm *Notes*: Bottom portion of one leaf of a lobate-form shoulder hinge. There remains one very large dome-headed rivet.
7. Caerleon *Context*: unstratified, 1969 excavations *Inventory No.*: not recorded *Reference*: ZIENKIEWICZ 1986: 187-8 & Fig.63, 175 *Dimensions*: L: 24mm, L (bronze spindle): 300mm, W: 21mm *Notes*: Broken lobate-form hinge plate, with one dome-headed rivet remaining. The spindle is too large for the hinge and it is thought possible that the item was being repaired.
8. Caerleon *Context*: From Block B, Phase III, ca. AD 100 *Inventory No.*: 1731 (1377) *Reference*: EVANS & METCALF 1992: 114-5 *Dimensions (from scale drawing)*: L (approx.): 30mm, W (approx.): 22mm *Notes*: Fragment of a lobate 1/2-hinge on an iron backing. The hinge is elaborate, with curved ends, but with no central piercing. It was asymmetrical. The surviving rivets are domed. Close to the lower extant rivet is a small circular hole pierced through the bronze, perhaps to accommodate a piece of wire making a temporary repair to the hinge?
9. Caerleon *Context*: From Block B, Phase III, ca. AD 100 *Inventory No.*: 1731 (1377) *Reference*: EVANS & METCALF 1992: 114-5 *Dimensions*: L (approx.) 40mm, W (approx.) 22mm *Notes*: Fragment of lobate 1/2-hinge on its iron backing. There is a small circular hole in the bronze close to the lower extant rivet.
10. Caerleon *Context*: Building 3, within the destruction layer of Building 1, mid or late 2nd CAD. S end of Mill Street. *Inventory No.*: [7.64] 2405/SG72 (2612) *Reference*: EVANS et al 2000: 371 & 372, Fig.90, 129 *Dimensions*: L: 71mm, W (max): 32.4mm *Notes*: A hinge, which appears to be cut very square at the base. One half of the hinge is very badly corroded. Armour plate is still attached to the rear of the hinge, and there are still a number of very corroded rivets in place.
11. Caernarfon *Context*: See above *Inventory No.*: 415(ESP) *Reference*: CASEY, DAVIES & EVANS 1993: 199-200, Fig.10.18, 415(ESP) *Dimensions*: L: 28mm *Notes*: One of two pieces of iron cuirass plate (see above) with fragments of lobate hinges. The hinge is attached with dome-headed rivets, three on one side and two on the other. Mid-collar plate/breast or back plate.
12. Camerton *Context*: not recorded, detector find *Inventory No.*: 26758X *Reference*: JACKSON 1990: 27 & Pl. 2, No.8 *Dimensions (from scale drawing)*: L: 20mm, W: 30.5 mm. *Notes*: Part only, broken at the waist. This plate had been repaired after an earlier breakage, also at the waist. Unlike the stub of the original hinge plate, the replacement plate has a triangular piercing. Weight: 4.7g.
13. Camerton *Context*: not recorded, detector find *Inventory No.*: 26760Y *Reference*: JACKSON 1990: 28 & Pl.2, No.10 *Dimensions (From scale drawing)*: L: 23mm, W: 15mm *Notes*: Fragment, comprising only two of the lobate terminals and a part of the waist. There is a small amount of armour plate remaining, but no rivets survive. It has a 'folded-over' construction. Weight: 1.4g.
14. Camerton *Context*: not recorded, detector find *Inventory No.*: 26764Q *Reference*: JACKSON 1990: 28 & Pl.2, No.14 *Dimensions (from scale drawing)*: L: 29 mm, W: 24mm *Notes*: A distorted fragment, lacking much of the lobate end and most of the hinge. Constructed by the 'fold-over' technique, but here the plate on one side terminates at the waist - so saving a small amount of metal. Shows a shallow rounded triangular piercing, a variant of the triangular one. Weight 4.3 g
15. Camerton *Context*: not recorded, detector find *Inventory No.*: 26765Z *Reference*: JACKSON 1990: 28 & Pl.3, No.15 *Dimensions (from scale drawing)*: L: 27mm, W: 22mm *Notes*: A distorted fragment, lacking the hinge and one side. Three domed rivets remain. Weight: 2.1g.
16. Chichester *Context*: Area 2, G.59 *Inventory No.*: 85B *Reference*: DOWN 1978: 299 & Fig.10.36, 85B(ii) *Dimensions (from sale drawing)*: L (surviving portion): 14mm, W: 26mm *Notes*: Fragment of a lobate hinge still adhering to armour plate (five fragments in all), possibly from front shoulder plate.

17. Colchester (Sheepen) *Context*: From feature 153, a large rubbish pit cut into an earlier gravel pit (Period IVb, Neronian) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 36 & 121, Fig.65, 49 *Dimensions (from scale drawing)*: L: 29mm, W: 24mm *Notes*: Much damaged and rather crude 1/2-hinge fragment. Three very large intact rivets, but no decoration to the plate is evident.
18. Colchester (Sheepen) *Context*: From feature 153, a large rubbish pit cut into an earlier gravel pit (Period IVb, Neronian) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 36 & 121, Fig.65, 50 *Dimensions (from scale drawing)*: L: 28mm, W: 25mm *Notes*: Much damaged 1/2-hinge. Although with a fine 'waist', there is no trace of any decorative feature.
19. Colchester (Sheepen) *Context*: From ploughsoil (unstratified) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 127, Fig.71, 92 *Dimensions (from scale drawing)*: L: 22mm, W: 13mm *Notes*: Remnant of a lobate-form hinge. A small portion of each of the two plates is present, together with the hinge bar and a pair of rivets in each plate.
20. Colchester (Sheepen), *Context*: From ploughsoil (unstratified) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 127, Fig.71, 93 & Pl. 12 *Dimensions (from scale drawing)*: L: 31mm, W: 24mm *Notes*: Badly damaged 1/2-hinge. No decorative features. There are two very large rivets, which may suggest a poor repair.
21. Colchester (Sheepen) *Context*: From ploughsoil (unstratified) *Inventory No.*: not recorded *Reference*: WEBSTER in NIBLETT 1985: 127, Fig.71, 94 *Dimensions (from scale drawing)*: L: 28mm, W: 23mm *Notes*: Badly damaged 1/2-hinge with no decorative features, but retaining three rivets - one of which has a very elongated shape.
22. Exeter *Context*: Hadrianic-early Antonine date *Inventory No.*: RS 977 *Reference*: HOLBROOK & BIDWELL 1991: 244-5 & 247, Fig.109, 27 *Dimensions*: L: 10mm; W: 28mm *Notes*: Fragment of a lobate-form hinge. No decorative features and no rivets survive.
23. Gloucester (Kingsholme) *Context*: not recorded *Inventory No.*: 2A 37 6.3 *Reference*: HURST 1985: Fig.11, 6 *Dimensions (from scale drawing)*: L: 20mm, W: 9mm *Notes*: One of the outer lobate arms of a hinge, retaining a large dome-headed rivet.
24. Häsenbühl *Context*: not recorded *Inventory No.*: not recorded *Reference*: HEILIGMANN 1990: Taf.42, 19 *Dimensions*: L: 47mm *Notes*: A somewhat damaged hinge, with two rivet holes on one side and three on the other. No rivets remain, however.
25. Kaiseraugst *Context*: Region 1, Insula 50. Undated. *Inventory No.*: 1968.7714b; FK Q00143 *Reference*: DESCHLER-ERB 1999: Taf.15, 252 *Dimensions*: L: 34mm, W: 26mm, Th: 2mm *Notes*: Shoulder hinge, badly damaged. The top half lacks the two top outer lobes and is bent backwards. The bottom half has broken through the neck. The rivet holes are decorated with punched concentric rings. Weight: 2.90g.
26. Kaiseraugst *Context*: Region 1, Insula 30. Undated. *Inventory No.*: 1959.4521; FK V02651 *Reference*: DESCHLER-ERB 1999: Taf.14, 251 *Dimensions*: L: 27mm, W: 20mm, Th: 1mm *Notes*: Badly damaged shoulder hinge of lobate form. Only the central portion of one half remains and there are no rivets present. The rivet holes, however, are decorated with the punched concentric ring design. Weight: 0.53g.
27. Kaiseraugst *Context*: Region 1, Insula 22. Period 3, t.a.q. AD 70/75 *Inventory No.*: 1988.51.C04967.79 *Reference*: DESCHLER-ERB 1999: Taf.14, 242 *Dimensions*: L: 26mm; W: 24mm, Th: 2mm *Notes*: Badly damaged leaf of a shoulder hinge. There are two very large flattened rivets, suggesting a repair. Weight: 4.38g.
28. Kaiseraugst *Context*: Region 1, Insula 42. Undated *Inventory No.*: 1972.3357; FK A03558 *Reference*: DESCHLER-ERB 1999: Taf.14, 234 *Dimensions*: L: 17mm, W: 17mm, Th: 1mm *Notes*: A hinge plate with two side-by-side rivet holes, though no rivets survive. Weight: 1.02g.
29. Kalkriese *Context*: not recorded, dated at 9 AD *Inventory No.*: not recorded *Reference*: FRANZIUS 1992: 362-4 & 363, Fig.9, 3. *Dimensions (from scale drawing)*: L: 21mm, W: 16mm *Notes*: Part of the plate of a lobate hinged fitment, with three rivets attached. Much damaged.
30. Lincoln *Context*: from St. Paul-in-the-Bail *Inventory No.*: not recorded *Reference*: MANN 1981: Fig.11, c *Dimensions*: L: 33mm *Notes*: Finely made lobate 1/2-hinge, where the top two outer lobes are missing. The remaining rivet holes can be seen to be decorated with punched concentric rings.
31. Nijmegen *Context*: not recorded *Inventory No.*: CA.1973.95.mc *Reference*: BOGAERS & HAALEBOS 1977: 186-7, Fig.23, 2 *Dimensions (from scale drawing)*: L: 30mm, W: 31mm *Notes*: Fragmentary lobate-form 1/2-hinge. There are four remaining rivets and a small portion of armour plate.
32. Nijmegen *Context*: from the level of Period 5 *Inventory No.*: CA.1976.677.m *Reference*: BOGAERS & HAALEBOS 1977: Fig.32, 1 *Dimensions*: L: 35mm *Notes*: One half of a lobate hinge. The hinge is poorly formed and retains only three rivets. However, these are asymmetrically disposed; possibly repairs.
33. Nijmegen *Context*: from the level of Period 5 *Inventory No.*: not recorded *Reference*: BOGAERS & HAALEBOS 1977: Fig.34, 3 *Dimensions*: L: 32mm *Notes*: A broken

- 1/2-hinge of lobate form. It retains four of the five rivets, but these are irregular in size and also in position.
34. Nijmegen *Context*: from the level of Period 5 *Inventory No.*: not recorded *Reference*: BOGAERS & HAALEBOS 1977: Fig.34, 5 *Dimensions*: L: 21mm *Notes*: Fragment of a 1/2-hinge, retaining the two base rivets, together with the hinge pivot bar.
35. Oberwinterthur *Context*: Field 103/11, House 14B, Layer 134/148, sub-level 3, AD 40-60 *Inventory No.*: FK 6085 *Reference*: DESCHLER-ERB 1996: 289, Taf.21, 313 *Dimensions*: L: 28mm, W: 27mm, Th: 6mm, weight: 6g. *Notes*: A lobate-form hinge, much damaged. The two opposing plates are folded over together with a single rivet remaining on each side.
36. Oescus *Context*: Dated 1st CAD. *Inventory No.*: 99/90 *Reference*: KABAKCIEVA 1996: 103, Fig.6, 3 *Dimensions (from scale drawing)*: L: 30mm, W: 29mm *Notes*: Fragment of a lobate hinge. Three rivets remain in place.
37. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 8 *Dimensions (from scale drawing)*: L: 12mm, W: 30mm *Notes*: Top part of the hinge only. However, the lobes are very well formed. There are three rivets and a small piece of armour plate remains. Dimensions given are for the fitment only.
38. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 9 *Dimensions (from scale drawing)*: L: 26mm, W: 25mm *Notes*: Much damaged hinge. Although distorted, the hinge is clearly lobate near the hinge axis.
39. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 12 *Dimensions (from scale drawing)*: L: 38mm, W: 35mm *Notes*: Badly distorted and damaged 1/2-hinge. No rivets survive.
40. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.33, 13 *Dimensions (from scale drawing)*: L: 30mm, W: 33mm *Notes*: Badly damaged 1/2-hinge, somewhat crudely formed. The hinge plate appears to have been folded back only about half way, possibly as a way to save on metal.
41. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 18 *Dimensions (from scale drawing)*: L: 25mm, W: 13mm *Notes*: Only the top lobes remain here. Nevertheless, the decoration around the rivet hole is clearly visible. One large rivet remains.
42. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 19 *Dimensions (from scale drawing)*: L: 12mm, W: 18mm *Notes*: Only a portion of the top lobes remain here. Nevertheless, the decoration around the rivet hole is clearly visible. One rivet survives.
43. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 20 *Dimensions (from scale drawing)*: L: 24mm, W: 27mm *Notes*: Very much damaged. No decoration around the holes is visible and there is one very large rivet still present.
44. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 21 *Dimensions (from scale drawing)*: L: 26mm, W: 24mm *Notes*: Much damaged 1/2-hinge. Slight evidence of lobate structure at the base but no decorative elements.
45. Rheingönheim *Context*: not recorded *Inventory No.* not recorded *Reference*: ULBERT 1969: Taf.33, 22 *Dimensions (from scale drawing)*: L: 15mm, W: 22mm *Notes*: Small fragment only of a 1/2-hinge. Decoration around the holes is visible, however.
46. Richborough *Context*: as above *Inventory No.*: not recorded *Reference*: BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.39(l) *Dimensions (from scale photo)*: L: 41mm, W: 32mm *Notes*: Broken 1/2-hinge, with a part of the lower hinge leaf still adhering. One, and possibly two, rivets remain in this portion.
47. Risstissen *Context*: not recorded *Inventory No.*: 2961 *Reference*: ULBERT 1959: 106 & Taf.61, 17 *Dimensions (from scale drawing)*: (left) L: 23mm, W: 30mm; (right) L: 20mm, W: 25mm *Notes*: Broken lobate hinge. There is evidence on one leaf of the concentric punched ring decoration to the rivet holes. The other leaf has a peculiar design, whereby instead of folding the copper alloy sheet in half, only a pair of thin strips have been used to form the hinge. This half retains two rivets, while the other half has none.
48. Risstissen *Context*: not recorded *Inventory No.*: 3060 *Reference*: ULBERT 1959: 106 & Taf.61, 18 *Dimensions (from scale drawing)*: L: 24mm, W: 14mm *Notes*: Small base portion of a lobate hinge. Although mostly missing, it has been carefully formed. The rivet hole has the concentric ring decoration around it but there are no rivets left.
49. Risstissen *Context*: not recorded *Inventory No.*: 4502 *Reference*: ULBERT 1959: 106 & Taf.61, 20 *Dimensions (from scale drawing)*: L: 27mm, W: 28mm *Notes*: Portion of a broken lobate hinge, comprising just the hinge section of one side. Two rivets remain.
50. Risstissen *Context*: depth of 40-70 cm. From the fire-damaged level of the oldest fortress. *Inventory No.*: R66/116 *Reference*: ULBERT 1970: 24, 55 & Taf.3, 62 *Dimensions*: L: 44mm, W: 30mm. *Notes*: Rivet holes surrounded by the punched circular decoration.
51. Risstissen *Context*: Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.*: R68/22 *Reference*: ULBERT 1970: 26 & Taf 4, 85 *Dimensions*: L: 14mm, W: 26mm. *Notes*: Fragmentary 1/2-hinge. Two base rivets survive; no decorative features visible.

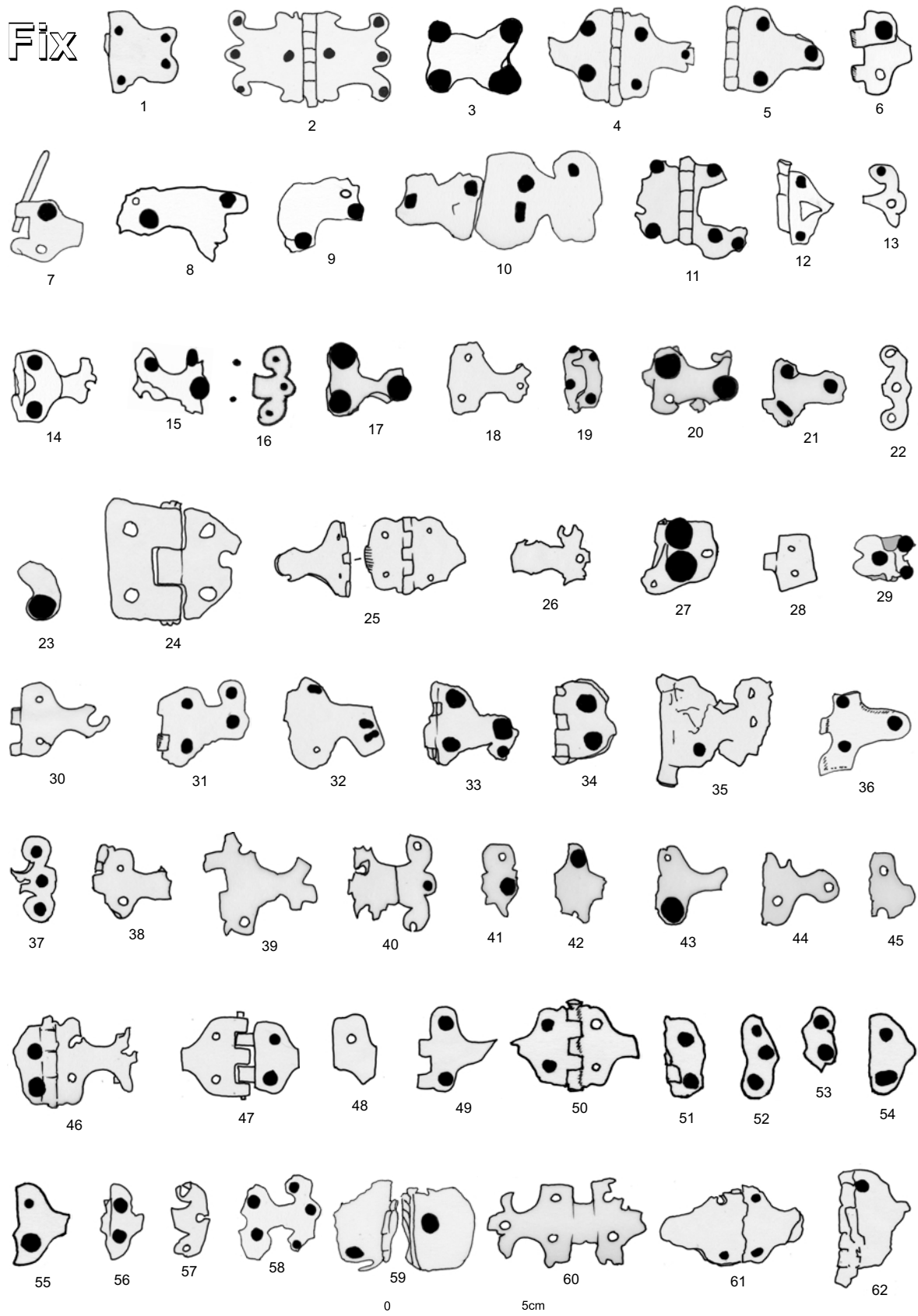


Fig.55: Category F (shoulder hinges) of Type ix. Scale 1:2

52. Risstissen *Context:* Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.:* R68/22 *Reference:* ULBERT 1970: 25 & Taf 4, 86 *Dimensions:* L: 12mm, W: 28mm. *Notes:* Fragmentary 1/2-hinge, from the top part. There are three intact dome-headed rivets.
53. Risstissen *Context:* Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.:* R68/22 *Reference:* ULBERT 1970: 26 & Taf 4, 87 *Dimensions:* W: 20mm. *Notes:* Fragmentary 1/2-hinge. Two rivets survive.
54. Risstissen *Context:* Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.:* R68/22 *Reference:* ULBERT 1970: 26 & Taf 4, 88 *Dimensions:* W: 28mm. *Notes:* Fragmentary 1/2-hinge. There are two surviving rivets, one very irregular in shape and a small portion of armour plate is attached.
55. Risstissen *Context:* Fortress 1/2, immediately beneath the soil surface, level 158. *Inventory No.:* R68/22 *Reference:* ULBERT 1970: 26 & Taf 4, 89 *Dimensions:* L: 18mm, W: 27mm. *Notes:* Fragmentary 1/2-hinge. There is some armour plate attached and, of the two surviving rivets, one is very much larger than the other is.
56. Silchester *Context:* Period 9 (Victorian excavations backfill) *Inventory No.:* (136), 9, SF 668 *Reference:* FULFORD & TIMBY 2000: 353-4 & Fig.166, 119 *Dimensions (from scale drawing):* L: 25mm, W: 14mm *Notes:* Bottom portion of a lobate cuirass shoulder hinge, retaining two flat-headed rivets.
57. Silchester *Context:* Period 9 (Victorian excavations backfill) *Inventory No.:* (136), 9, SF 706 *Reference:* FULFORD & TIMBY 2000: 353-4 & Fig.166, 120 *Dimensions (from scale drawing):* L: 25mm, W: 13mm *Notes:* top portion of a cuirass shoulder hinge, broken through the neck. There are no remaining rivets.
58. Usk *Context:* Pre-Flavian date, Fortress pit. *Inventory No.:* 1976B RFC *Reference:* MANNING, PRICE & WEBSTER 1995: 6-7 & Fig.2, 4a *Dimensions:* L: 53mm *Notes:* Bronze lobate 1/2-hinge. Similar to Corbridge Type A. The plate is still attached to the iron armour by all five rivets.
59. Usk *Context:* Late 1st century, Pit. *Inventory No.:* HBS (2) *Reference:* MANNING, PRICE & WEBSTER 1995: 7, 9 & Fig.3, 5a-c *Dimensions (from scale drawing):* (left leaf) L: 30mm, W: 22mm, (right leaf) L: 27mm, W: 24mm *Notes:* Two iron plates, each with half a bronze hinge. One hinge plate is rectangular, with rounded outer corners, secured by rivets. Opposite hinge is much damaged, but is of the familiar lobate form although this can only be inferred from the rivet positions on the iron plate.
60. Windisch *Context:* east corner of the outer colonnade of the *Principia*. *Inventory No.:* 35:2221 *Reference:* UNZ & DESCHLER-ERB 1997: 32, & Taf.34, 833 *Dimensions (from scale drawing):* L: 53mm, W: 30mm *Notes:* One half of a lobate hinge. Here, the folded over sheet of copper alloy has opened out. There are no rivets surviving and the hinge is much damaged.
61. Windisch *Context:* 'Neue Pavilions' excavation, 1936 *Inventory No.:* 340 *Reference:* UNZ & DESCHLER-ERB 1997: 31, & Taf.34, 835 *Dimensions (from scale drawing):* L: 48mm, W: 29mm *Notes:* Badly damaged lobate hinge. Both leaves have broken through the waist. There are three very badly inserted rivets and very little trace of the lobate form itself to the hinge.
62. Windisch *Context:* via *Principalis*, Tribune's house? *Inventory No.:* 238:1350 *Reference:* UNZ & DESCHLER-ERB 1997: 31, & Taf.34, 837 *Dimensions (from scale drawing):* L: 24mm, W: 40mm *Notes:* Much damaged portion of one side of a lobate hinge, of which only the base remains. There is a small portion of the armour plate still in position. Two rivets survive (visible only on the rear side) as does the hinge pivot bar. This hinge is very wide.

# Category 'G': Vertical Fasteners

## Contents

*Vertical fastening hooks and loops from the 'Corbridge Type-B/C' cuirass from the following sites are included here: Alcester (GBR), Bad Deutsch-Altenberg (AUT), Buciumi (ROM), Caerleon (GBR), Caernarfon (GBR), Carlisle (GBR), Corbridge (GBR), Iža (SVK), Kaiseraugst (CH), Neuss (GEU), Nijmegen (NLD), Richborough (GBR), Waddon Hill (GBR), Windisch (CHE), Wroxeter (GBR)*

## Gi

1. Bad Deutsch-Altenberg *Context: Armoury Inventory No.: not recorded Reference: von GROLLER 1901: Taf. XVIII, 33 Dimensions (from scale drawing): L: 30mm, W: 9mm Notes: The hook element of the vertical fastener system from a Corbridge Type-B/C cuirass, the hook belonging to the top girdle plate and the loop to the bottom of the upper chest guard (see Giii-02). Two rivets survive. There is also a small portion of armour plate adhering to the hook fitment. Approximate dimensions only, taken from a perspective drawing.*
2. Caernarfon *Context: Period 6A Inventory No.: 2172, SF1100 Reference: CASEY, DAVIES & EVANS 1993: 174 & Fig.10.7, No.85 Dimensions: L: 32mm, W: 12mm. Notes: The sides of the plate taper slightly away from the hook and the plate is pierced by two holes, one punched from the front and the other, which still retains the rivet, punched from the back.*
3. Corbridge *Context: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. Inventory No.: 80 Reference: ALLASON-JONES & BISHOP 1988: Fig.66 Dimensions (from scale drawing): L: 45mm, W: 13mm Notes: The vertical hook from the top girdle plate from Cuirass v. This vertical fastener shares one of its two rivets with an underlying tie-hook.*
4. Corbridge *Context: As above. Inventory No.: 80 Reference: ALLASON-JONES & BISHOP 1988: 50, Fig.66 Dimensions (from scale drawing): L: 48mm, W: 13mm Notes:*
  5. From Cuirass v, rear top girdle plate. One of two vertical fastening hooks. Both rivets remain, the bottom one of which is shared with the front tie-hook for this plate.
  6. Corbridge *Context: As above. Inventory No.: 81 Reference: ALLASON-JONES & BISHOP 1988: Fig.66 Dimensions (from scale drawing): L: 45mm, W: 14mm Notes: From Cuirass v, rear top girdle plate. The companion hook to the one above. Both rivets survive.*
  7. Corbridge *Context: As above. Inventory No.: 81 Reference: ALLASON-JONES & BISHOP 1988: Fig.70 Dimensions (from scale drawing): L: 43mm, W: 13mm Notes: From Cuirass vi, front of the top plate. The hook of this fastener has broken off. There are two rivets, the bottom one of which is shared with the underlying tie-hook.*
  8. Corbridge *Context: As above. Inventory No.: 81 Reference: ALLASON-JONES & BISHOP 1988: Fig.70 Dimensions (from scale drawing): L: 44mm, W: 13mm Notes: From Cuirass vi, (Type-B/C), rear of the top plate. One of two vertical fasteners. This one retains both the rivets.*
  9. Corbridge *Context: As above. Inventory No.: 81 Reference: ALLASON-JONES & BISHOP 1988: Fig.70 Dimensions (from scale drawing): L: 42mm, W: 16mm Notes: Cuirass vi (Type-B/C), rear of the top plate. This is the companion hook to the one described above. It shared one of its two rivets with the underlying tie-hook of this top girdle plate.*
  10. Kaiseraugst *Context: Region 1, Insula 24, Period 4 Inventory No.: 1958.7607; FK V01948 Reference: DESCHLER-ERB 1999: Taf.15, 262 Dimensions: L: 38mm, W: 9mm, Th: 3mm Notes: Hook with a single large rivet in place. Bending the plate has formed the hook. Weight 4.37g.*
  11. Neuss *Context: not recorded Inventory No.: 6962 Reference: SIMPSON 2000: 70 & 149, Pl.23, 7 Dimensions (from*



i Hook component, two rivets



ii Hook component, one rivet



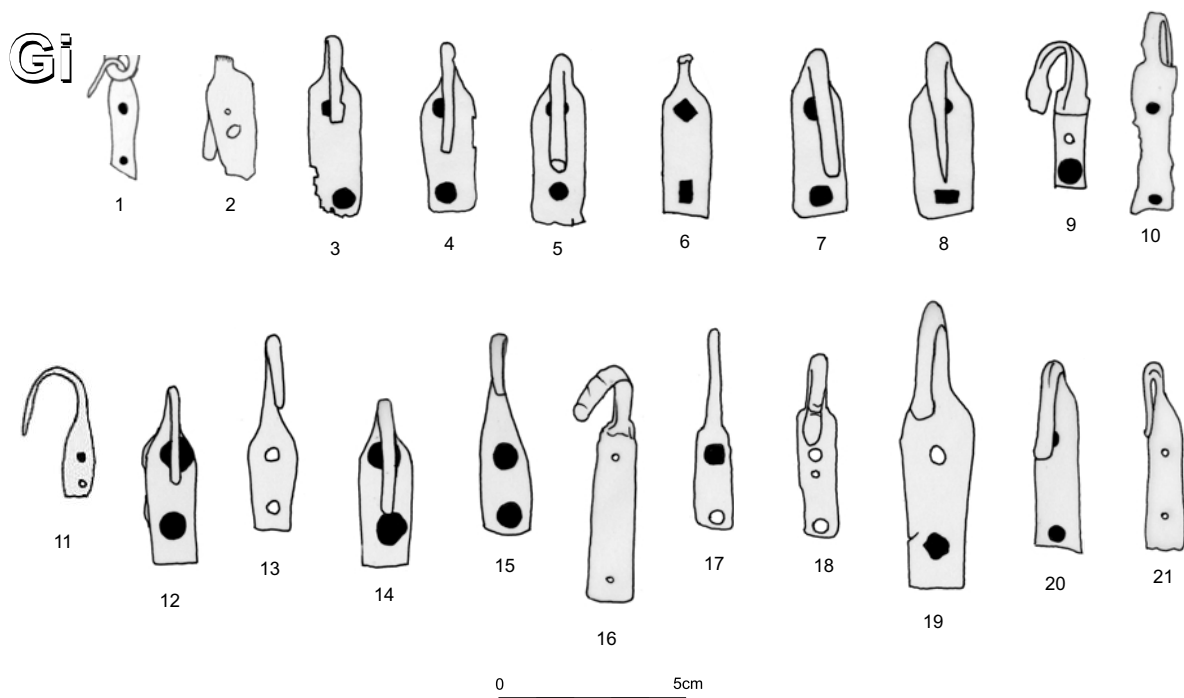
iii 'Corbridge' style eye component



iv 'Newstead' style eye fitments

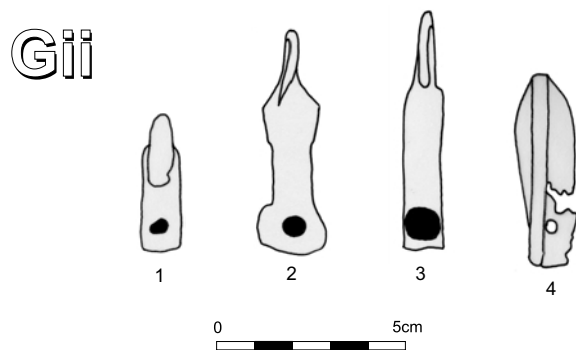


v Unidentifiable fitments

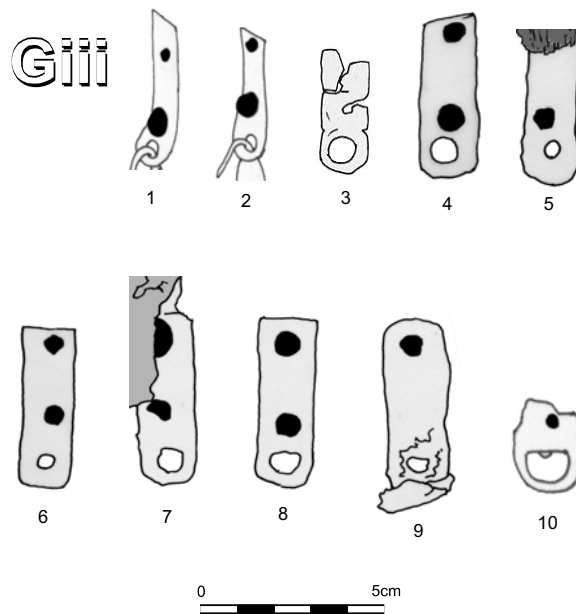


**Fig.56:** Category G (vertical fasteners) of Type i. Scale 1:2

- scale drawing): L: 53mm, W: 11mm *Notes:* Although identified as a cuirass tie-hook, the hook portion here shows no evidence of ever having been formed into a loop and is therefore more likely to be a vertical fastener.
11. Wadden Hill *Context:* not recorded *Inventory No.:* not recorded *Reference:* WEBSTER 1958: 93, Fig.7, 215 *Dimensions (from scale drawing):* L: 35mm, W (plate only): 7.5mm *Notes:* The hook of this vertical fastener is pushed slightly to one side. There is at least one remaining rivet, possibly two. The plate of this hook is much smaller than is the norm.
12. Windisch *Context:* Spillman excavation, 1929 *Inventory No.:* 29.976 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 659 *Dimensions (from scale drawing):* L: 47mm, W: 13mm *Notes:* Copper alloy vertical fastener from a 'Corbridge Type-B/C' cuirass. Two rivets remain on the plate.
13. Windisch *Context:* Amphitheatre, 1915 excavation *Inventory No.:* 18.198 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 661 *Dimensions (from scale drawing):* L: 51mm, W: 13mm *Notes:* Vertical fastener from a 'Corbridge type B/C' cuirass. No rivets survive and the hook is bent upwards to a considerable degree.
14. Windisch *Context:* Trench of 1926 excavation, *Praesidium?*, find location No.27 *Inventory No.:* 26.90 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 662. *Dimensions (from scale drawing):* L: 44mm, W (fitment plate only): 13mm *Notes:* Vertical fastener with two intact rivets. Portion of armour plate still in position.
15. Windisch *Context:* rubbish dump *Inventory No.:* 2189u *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 663 *Dimensions (from scale drawing):* L: 52mm, W: 13mm *Notes:* 'Bottle-shaped' possible vertical fastener. Both rivets still in place.
16. Windisch *Context:* Legat Meyer excavation *Inventory No.:* 1667 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 664 *Dimensions (from scale drawing):* L: 62mm, W: 11mm *Notes:* Parallel-sided possible vertical fastener, with no rivets surviving. The hook portion is much thicker than the plate.
17. Windisch *Context:* Königsfelden (barrack block, close to modern church). *Inventory No.:* 62:2393 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 665. *Dimensions (from scale drawing):* L: 53mm, W: 10mm *Notes:* Vertical fastener with one surviving rivet. The hook unusual in that it is a continuation of the plate, rather than being bent back over it. It may be unfinished or merely damaged.
18. Windisch *Context:* Unstratified *Inventory No.:* None *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 666 *Dimensions (from scale drawing):* L: 48mm, W: 10mm *Notes:* Damaged vertical fastener. There are no rivets surviving. There is a third hole in the plate, and the hook portion is much thicker than the plate.
19. Windisch (CH) *Context:* Königsfelden (barrack block, close to modern church) *Inventory No.:* 62.2115 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 667 *Dimensions (from scale drawing):* L: 75mm, W: 19mm *Notes:* 'Bottle-shaped' vertical fastener hook, with a single sur-



**Fig. 57:** Category G (vertical fasteners) of Type ii. Scale 1:2



**Fig. 58:** Category G (vertical fasteners) of Type iii. Scale 1:2

- living rivet. The hook (which is much thicker than the plate) has an unusual bulge at the end. This is a larger than normal example.
20. Windisch *Context:* via *Principalis*, by the *Principia*, find location No.13 *Inventory No.:* 13.1402 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 668 *Dimensions (from scale drawing):* (fitment only, excluding armour) L: 50mm, W: 11mm *Notes:* Vertical hook still attached to iron armour plate. Two surviving rivets. The metal of the hook is much thicker than that of the plate.
21. Wroxeter *Context:* not recorded *Inventory No.:* WB (3) 20 *Reference:* WEBSTER 1958: 97, Fig.8, 259 *Dimensions (from scale drawing):* L: 50mm, W: 10mm *Notes:* Vertical fastener, with no surviving rivets. The rivet holes have the concentric ring decoration and the end of the plate may have been cut into a scalloped form.

## Gii

1. Carlisle *Context:* Building I, Period 3f *Inventory No.:* BLA D275 Ae255 *Reference:* McCARTHY 1990: 120 &

Fig.109, 47 *Dimensions:* L: 36mm *Notes:* This hook has only one rivet hole in place of the more usual two. The rivet plate is rather shorter than normal, and so it may have broken off cleanly.

2. Richborough *Context:* surface find, SW area, inside fort. *Inventory No.:* 4435 *Reference:* CUNLIFFE 1968: Pl. XXXVII, 117 *Dimensions (from scale drawing):* L: 59mm, W: 17mm *Notes:* Vertical fastener hook, where the plate is of a very ornate form. There is a single rivet in place.
3. Windisch *Context:* Amphitheatre, 1915 excavation *Inventory No.:* SLM 25438 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 660 *Dimensions (from scale drawing):* L: 62mm, W: 10.5mm *Notes:* Copper alloy vertical fastener. There is only a single rivet, but in an odd position at the base of the plate away from the hook. There is no hole for a second rivet.
4. Windisch *Context:* rubbish dump *Inventory No.:* 28.4221 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.31, 669 *Dimensions (from scale drawing):* L: 51mm, W: 14mm *Notes:* 'Bottle-shaped' vertical suspension hook made of copper alloy. There are no rivets in place and only a single hole. The metal of the hook portion is very much thicker than the plate metal and it is also extraordinarily long, stretching the whole length of the plate. Possibly an unfinished item?

## Giii

1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. XVIII, 32 *Dimensions (from scale drawing):* L: 41mm, W: 10mm *Notes:* The loop (from the bottom of the upper chest/back guard) of the vertical fastener system from a Corbridge Type-B/C type cuirass. Dimensions are approximate, as the original drawing is a perspective one.
2. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. XVIII, 33 *Dimensions (from scale drawing):* L: 58mm, W: 9mm *Notes:* Two elements of the vertical fastener system from a Corbridge Type-B/C cuirass, the hook belonging to the top girdle plate and the loop to the bottom of the upper chest guard. Both rivets survive; one is very large. There is also a small portion of armour plate adhering to the hook fitment. Approximate dimensions only, taken from a perspective drawing.
3. Caerleon *Context:* Level 405 *Inventory No.:* SF 138 *Reference:* CASEY & HOFFMANN 1995: 88 & 90, Fig.11, 2 *Dimensions (from scale drawing):* L: 33mm, W: 13mm *Notes:* Vertical fastener loop from the bottom of the chest plate/back plate of a Corbridge Type-B/C cuirass. There are no surviving rivets here.
4. Corbridge *Context:* SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 39 & 41,



Fig.43 *Dimensions (from scale drawing):* L: 45mm, W: 14mm *Notes:* A vertical fastener loop from the bottom edge of the breast plate of Cuirass 5. Unlike the two fittings on the back plate (Giii-05, below), this one appears to project beneath the edge of the armour plate. Both rivets survive.

5. Corbridge *Context:* As above. *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions (from scale drawing):* L: 42mm, W: 15mm *Notes:* One of two vertical fastener loops, attached to the bottom of the lowest back plate of Cuirass 5 (Type-B). The copper alloy strip surrounds a hole in the armour plate, through which the suspension hook passes. There is some textile material adhering to the armour. The fitting has a slightly bulbous top and only one rivet is visible.

6. Corbridge *Context:* As above. *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions (from scale drawing):* L: 43mm, W: 13mm *Notes:* One of two vertical fastener loops, attached to the bottom of the lowest back plate of Cuirass 5 (Type-B). There is some textile material adhering to the armour. The fitting has two visible rivets.

7. Corbridge *Context:* As above. *Inventory No.:* 75 *Reference:* ALLASON-JONES & BISHOP 1988: 43 & 47, Fig.49 *Dimensions (from scale drawing):* L: 45mm, W: 14mm *Notes:* One of two vertical fastener loops from Cuirass 6 (Type-C), which projects below the bottom of the lower back plate. There are two rivets remaining.

8. Corbridge *Context:* As above. *Inventory No.:* 75 *Reference:* ALLASON-JONES & BISHOP 1988: 43 & 47, Fig.49 *Dimensions (from scale drawing):* L: 45mm, W: 14mm *Notes:* One of two vertical fastener loops from Cuirass 6 (Type-C). Both rivets remain in place.

9. Corbridge *Context:* As above. *Inventory No.:* 75 *Reference:* ALLASON-JONES & BISHOP 1988: 43 & 47, Fig.49 *Dimensions (from scale drawing):* L: 45mm, W: 17mm *Notes:* Suspension loop fastener from the breast plate of Cuirass 6 (Type-C). As with the two back vertical fasteners on this cuirass (Giii-7 and Giii-08, respectively), this one projects below the lower edge of the armour plate, which is therefore not holed to take the hook on the girdle plate.

10. Oberstimm *Context:* not recorded *Inventory No.:* 1975.263 *Reference:* SCHÖNBERGER 1978: 170 & Taf.20, No.109 *Dimensions:* L: 24mm, W: 18mm *Notes:* Heavily corroded when found. The fragment has a single surviving rivet. This is the bottom portion of a suspension 'eye' from a Corbridge B/C type cruiass.

## Giv

1. Caerleon *Context:* At the S end of Mill Street, post destruction use of the site of Buildings 3 & 5. Mid or late 2nd CAD to mid 3rd CAD. *Inventory No.:* [7.56] 2038/SG206 (2110) *Reference:* EVANS *et al* 2000: 371 &

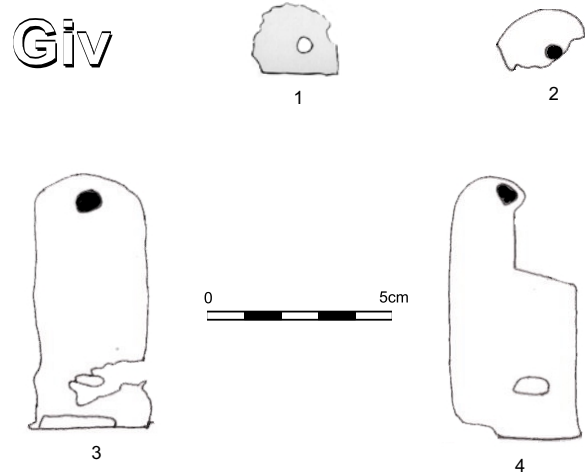


Fig.59: Category G (vertical fasteners) of Type iv. Scale 1:2

372, Fig.90, 128 *Dimensions:* L: 29.5mm, W: 26.3mm *Notes:* A square plate with a central hole, rivetted at the corners to a damaged iron sheet. This comes from a Newstead cuirass and is a part of one of the chest plates. The hole took a hook fixed to the upper girdle plate.

2. Carlisle *Context:* 2nd stone fort (AD 183-320/30), from a soil deposit in the *intervallum* area, 4th and final phase *Inventory No.:* not recorded *Reference:* CARUANA 1993: 15-17 *Dimensions (from scale drawing):* L: 16mm, W: 21mm *Notes:* The top part of a brass plate, with a single rivet, on the backplate from a Newstead type cuirass. The remainder of the plate can be seen in Section L.

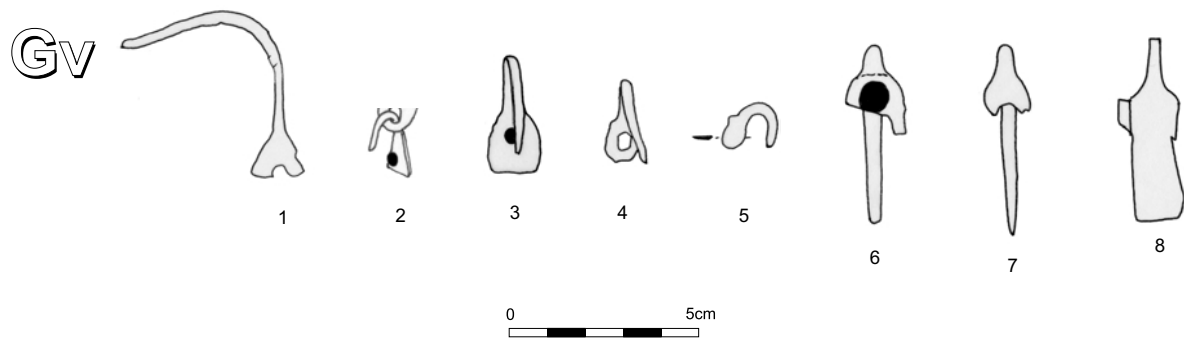
3. Newstead *Context:* Pit 1, *Principia*, chamber No.5 *Inventory No.:* FRA 117 *Reference:* CURLE 1911: 156 & Pl. XXII and BISHOP 1999: 28 & Fig.3 *Dimensions:* L: 65mm, W: 29 *Notes:* Brass plate surrounding a hole in the armour plate through which a vertical hook attached to the top girdle plate passed. This plate is folded back beneath the bottom of the armour. A single rivet remains.

4. Newstead *Context:* Pit 1, *Principia*, chamber No.5 *Inventory No.:* FRA 117 *Reference:* CURLE 1911: 156 & Pl. XXII and BISHOP 1999: 28 & Fig.3 *Dimensions:* L: 65mm, W: 31mm *Notes:* A second plate, very similar to the above. The two fitted side by side indicate this to be from a back plate on a Newstead armour set.

## Gv

1. Alcester *Context:* Phase III, Neronian-Trajanic *Inventory No.:* CA 311, E IV 23 *Reference:* LLOYD-MORGAN in CRACKNELL & MAHANEY 1994: 181 & Fig.89, 131 *Dimensions:* L: 81mm, Th: 2 x 2.8mm *Notes:* A broken suspension hook, the break occurring through the top rivet hole.

2. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. XVIII, 32 *Dimensions (from scale drawing):* L: 11mm, W:



**Fig. 60:** Category G (vertical fasteners) of Type v. Scale 1:2

- 10mm *Notes:* The hook element of the vertical fastener system from a Corbridge Type-B/C or 'Newstead' type cuirass. The hook may have been broken as only one rivet survives. Dimensions are approximate, as the original drawing is a perspective one.
3. Buciumi *Context:* not recorded *Inventory No.:* not recorded *Reference:* CHIRILA *et al.* 1982: Pl. CXIII, 42 *Dimensions:* L: 30mm *Notes:* Vertical fastener hook. The plate has broken and there is a single rivet remaining.
4. Caerleon *Context:* Block A, Phase V or later. Late 1st CAD *Inventory No.:* 480 (452) *Reference:* EVANS & METCALF 1992: 116, 43 *Dimensions (from scale drawing):* L: 21mm, W: 8mm *Notes:* The plate has an irregular hole in it, and the hook portion is angled upwards and is very straight.
5. Caerleon *Context:* Block B, Phase IV *Inventory No.:* 1432 (1116) *Reference:* EVANS & METCALF 1992: 116, No.44 *Dimensions (from scale drawing):* L (approx.): 16mm
- Notes:* This fragment is probably a connecting hook for the top girdle plate.
6. Iža *Context:* not recorded *Inventory No.:* not recorded *Reference:* RAJTAR 1992: Abb.14, 17 & RAJTAR 1994: 90 & 91, Abb.7, 4 *Dimensions (from scale drawing):* L: 47mm, W (plate): 15mm *Notes:* Fragment of vertical fastener hook, with a single rivet in place.
7. Iža *Context:* not recorded *Inventory No.:* not recorded *Reference:* RAJTAR 1992: Abb.14, 17 and Abb.7, 5 *Dimensions (from scale drawing):* L: 50mm, W (plate): 11mm *Notes:* Vertical fastener hook, broken away from the plate.
8. Nijmegen *Context:* Period 4 *Inventory No.:* CA.1973.117.mb, II *Reference:* BOGAERS & HAALBOS 1977: 186 & 187, Fig.23, 4 *Dimensions (from scale drawing):* L: 48mm, W: 15mm *Notes:* Possibly an unfinished hook (there are no rivet holes).

# Category 'H': Tie Loops

## Contents

Girdle-plate tie cuirass hooks from the following sites are included here: Aislingen (DEU), Alchester (GBR), Augsburg-Augsberg-Oberhausen (DEU), Bad Deutsch-Altenberg (AUT), Baden (DEU), Baginton (GBR), Banasa (MAR), Buciumi (ROM), Caerleon (GBR), Caernarfon (GBR), Camerton (GBR), Carlisle (GBR), Castleford (GBR), Chester (GBR), Chichester (GBR), Cirencester (GBR), Colchester (GBR), Corbridge (GBR), Dangstetten (DEU), Exeter (GBR), Gloucester (GBR), Herrera de Pisuerga (E), Hod Hill (GBR), Hofheim (DEU), Kaiseraugst (CHE), Lincoln (GBR), London (GBR), Longthorpe (GBR), Loughor (GBR), Magdalensburg (DEU), Moers-Asberg (DEU), Newstead (GBR), Nijmegen (NLD), Oberstimm (DEU), Oberwinterthur (CHE), Porolissum (ROM), Rheingönheim (DEU), Richborough (GBR), Risstissen (DEU), Silchester (GBR), South Shields (GBR), St. Albans (GBR), Straubing (AUT), Svistov (BUL), Urspring (DEU), Usk (GBR), Vechten (NLD), Volubilis (MAR), Waddon Hill (GBR), Wimbourne (GBR), Windisch (CHE), Woodcock Hall (GBR), Wroxeter (GBR)

## Hi

1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing):* L: 46mm, W: 11mm *Notes:* Tie-loop with both rivets intact. The plate sides are parallel.
2. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing):* L: 44mm, W: 16mm *Notes:* Girdle plate tie-loop with both rivets intact. The sides of the plate are parallel, but are bulbous by the hook.
3. Bad Deutsch-Altenberg *Context:* Not recorded *Inventory No.:* not recorded *Reference:* von GROLLER 1919: 22 & Fig.12,6 *Dimensions (from scale drawing):* L: 50mm, W: 16mm *Notes:* Damaged tie hook. There are no rivets surviving.
4. Banasa *Context:* not recorded *Inventory No.:* 31A *Reference:* BOUBE-PICCOT 1994: 62 & Pl.4, 42 *Dimensions:* L: 44mm, W: 12mm, Th: 8mm (plate), Th (hook): 2mm *Notes:* Complete tie-loop, retaining both rivets.
5. Banasa *Context:* not recorded *Inventory No.:* 31B *Reference:* BOUBE-PICCOT 1994: 62 & Pl.4, 43 *Dimensions:* L: 44mm, W: 12mm *Notes:* As above. The rivet heads are somewhat elongated.
6. Banasa *Context:* not recorded *Inventory No.:* 389 *Reference:* BOUBE-PICCOT 1994: 63, Pl.4, 45 *Dimensions:* L: 46mm, W: 15mm *Notes:* Slightly damaged tieloop. Only one rivet remains, but the holes show the punched ring decoration.
7. Camerton *Context:* not recorded, detector find *Inventory No.:* 26781Z *Reference:* JACKSON 1990: 30 & Pl. 3, 31 *Dimensions:* L: 48mm *Notes:* Complete tie-loop. No rivets remain, but the holes have the concentric punched ring decoration. Very well-made. Weight: 2.6g.
8. Carlisle *Context:* Building 1, Period 3f *Inventory No.:* BLA D 275 Ae 255 *Reference:* McCARTHY 1990: 120, Fig.109, 47 *Dimensions:* L: 36mm *Notes:* Portion of a tieloop. The plate has only a single rivet and only one rivet hole.
9. Chichester *Context:* Area 3, Pit Z.34 *Inventory No.:* not recorded *Reference:* DOWN 1978: 293, No.20 *Dimensions (from scale drawing):* L: 37mm, W: 12mm *Notes:* Well-formed cuirass, broken into two pieces through one of the rivet holes. The holes are surrounded by incised (punched) concentric ring decoration.
10. Colchester *Context:* Pit, medieval or post-medieval *Inventory No.:* SF 1.81 281(C), A141 F58 *Reference:* CRUMMY 1992: Fig.5.53, 1684 *Dimensions:* L: 40mm *Notes:* Complete tieloop, though lacking any rivets. The rivet holes have the punched concentric ring decoration.
11. Corbridge *Context:* SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.:* 78 *Reference:* ALLASON-JONES & BISHOP 1988: 48 & Figs.57, 59 *Dimensions (from scale drawing):* L: 47mm, W: 13mm *Notes:* From Cuirass iii, the top girdle plate at the front.
12. Corbridge *Context:* As above. *Inventory No.:* 80 *Reference:* ALLASON-JONES & BISHOP 1988: 50, Figs.66, 67 *Dimensions (from scale drawing):* (top hook only) L: 53mm, W (approx.): 13mm *Notes:* Cuirass v, rear. Portions of



i Parallel sides to plate



ii Plate tapers towards the base (away from the hook)



iii Plate tapers towards the top (near the hook)



iv Plate has a 'waist' (Coke-bottle shape)

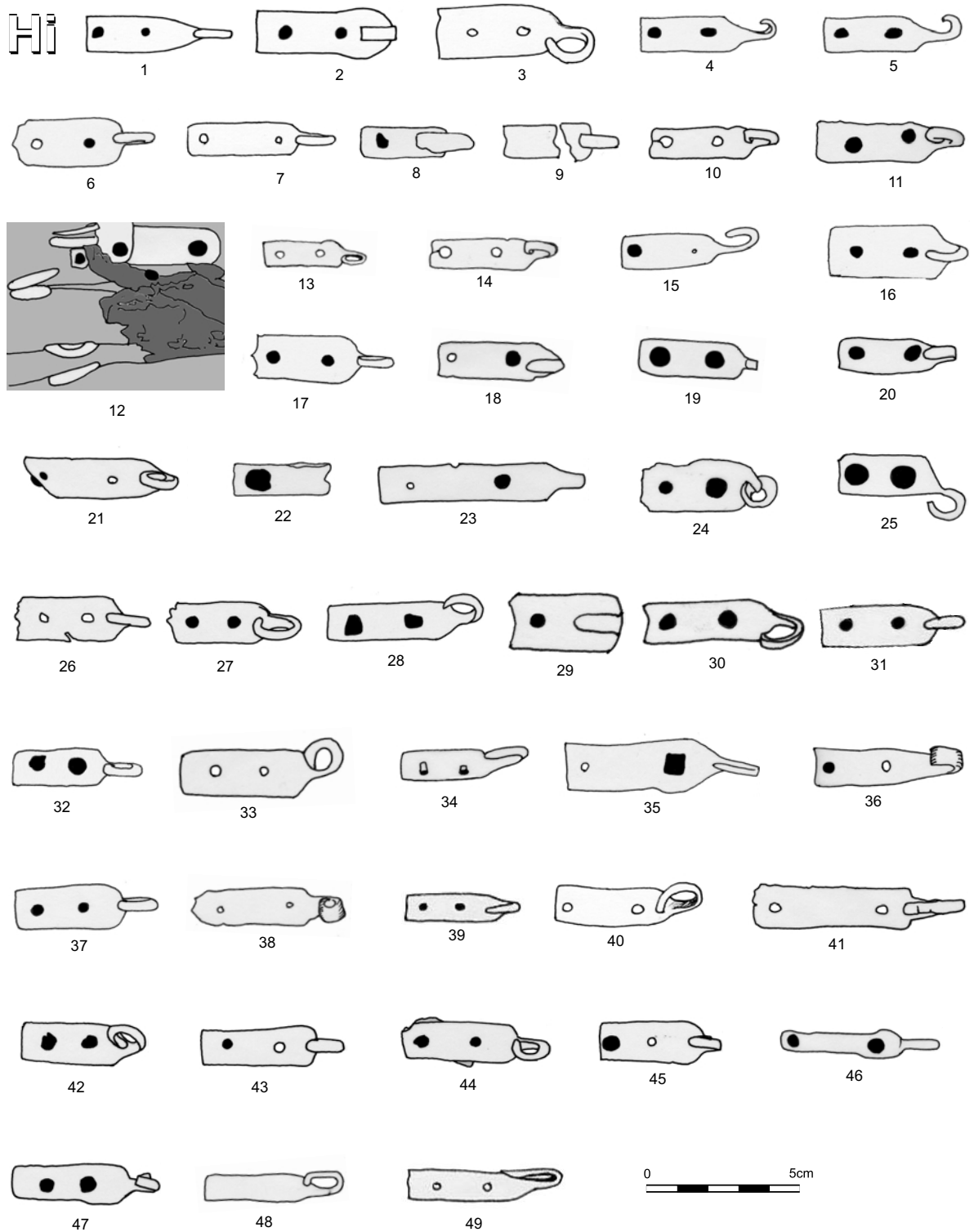


v Indeterminate shape



vi Fragments of hook, type cannot be distinguished

- five tie-hooks can be seen (measurements for the topmost one are given). Superimposed on the topmost tie-hook is a vertical fastener hook.
13. Exeter *Context*: Period IA (construction) *Inventory No.*: 16:1534 *Reference*: BIDWELL 1979: 235 & 236, Fig.73, 14 *Dimensions*: L: 50mm. *Notes*: Girdle plate tie-hook, missing both rivets.
  14. Gloucester *Context*: pit, medieval or post-medieval, i.e. disturbed layer. SF 1.81 281(C), A141 F58 *Inventory No.*: 1684 *Reference*: HURST 1986: 189 & Fig.5.53 *Dimensions*: L: 40mm. *Notes*: Girdle plate tie-hook with holes for two rivets, marked with incised circles.
  15. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L: 44mm, W: 11mm *Notes*: Complete tieloop, one rivet remains.
  16. Hod Hill *Context*: Roman pit in Barrack IX. *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Pl.56.13 *Dimensions (from scale drawing)*: (hook only) L: 45mm, W: 17mm *Notes*: Tie-hook with two rivets in place. Iron armour backing still in position.
  17. Hod Hill *Context*: From topsoil in area of Barrack IX *Inventory No.*: not recorded *Reference*: RICHMOND 1968: 113 & Pl.56.14 *Dimensions (from scale drawing)*: L: 45mm, W: 15mm *Notes*: Tie hook with two rivets in place. The rivet holes are decorated with concentric punched rings. The base of the hook may be scalloped or damaged, probably the former.
  18. Hofheim *Context*: not recorded *Inventory No.*: 18290 *Reference*: RITTERLING 1913: Taf.XI,3 *Dimensions (from scale photo)*: L: 40mm, W: 11.5mm *Notes*: Only one rivet remains in the plate. There is some evidence of decorative punched rings around one of the holes.
  19. Hofheim *Context*: not recorded *Inventory No.*: 08.506 *Reference*: RITTERLING 1913: Taf. XI, 4 *Dimensions (from scale photo)*: L: 38mm, W: 11mm *Notes*: Damaged tie-hook, lacking the loop end. However, both rivets are in place.
  20. Kaiseraugst *Context*: Region 1, Insula 30, t.a.q. 50 AD *Inventory No.*: 1960.512; FK V03501 *Reference*: DESCHLER-ERB 1999: Taf.15, 257 *Dimensions*: L: 41mm, W: 16MM, Th: 5mm *Notes*: Complete tie-hook; it retains both rivets and there is some armour plate still adhering. Weight 5.69g.
  21. Kaiseraugst *Context*: Region 2, A *Inventory No.*: 1987.54.C04165.1 *Reference*: DESCHLER-ERB 1999: Taf.15, 258 *Dimensions*: L: 50mm, w: 13MM, Th: 1mm *Notes*: Complete tie-hook, although somewhat damaged. One rivet remains. Weight 3.50g.
  22. Loughor *Context*: Phase 16, layers filling Building 3.12 robber trenches. (Context Group No. 4245). *Inventory No.*: 119.53\069 (043) *Reference*: MARVELL & OWEN-JOHN 1977: 262 & 261, Fig.98.119 *Dimensions*: L: 34mm, W (max): 10.7mm, Th: 1.2mm. *Notes*: This may possibly be a tie-hook from a girdle plate. It is a bronze strip with the remains of the head of a nail or rivet passing through one hole. The strip is broken through the second hole.
  23. Magdalensberg *Context*: re layer above the pavement *Inventory No.*: OR/23 *Reference*: DEIMEL 1986: 291 & Taf.76/32 *Dimensions*: L: 65mm, W: 11mm *Notes*: A damaged tie-hook that retains a single rivet.
  24. Moers-Asberg *Context*: not recorded *Inventory No.*: not recorded *Reference*: BECHERT 1974: Abb.68, 3 *Dimensions*: L: 42mm *Notes*: Complete tieloop, retaining both rivets and with some armour plate still adhering to the back.
  25. Site Newstead: *Context*: not recorded, not described in the text *Inventory No.*: not recorded *Reference*: CURLE 1911: Pl. XXXV, 9 *Dimensions (from scale photo)*: L (max): 42mm, W (max): 19.5mm *Notes*: Complete, though damaged, tie-hook. Both rivets remain and there is a portion of the armour plate at the rear of the fitment.
  26. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 49 *Dimensions (from scale drawing)*: L: 43mm, W: 14mm *Notes*: Tie-hook with square sides. No surviving rivets.
  27. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 50 *Dimensions (from scale drawing)*: L: 43mm, W: 14mm *Notes*: Parallel-sides tie-hook. There remain two dome-headed rivets and there is the concentric punched decoration around the rivet holes.
  28. Risstissen *Context*: not recorded *Inventory No.*: 3069 *Reference*: ULBERT 1959: 106 & Taf.61, 1 *Dimensions (from scale drawing)*: L: 49mm, W: 12mm *Notes*: Well-formed tie-hook with two intact rivets.
  29. Risstissen *Context*: Rubbish pit. *Inventory No.*: R 66/244 *Reference*: ULBERT 1970: 25, 59 & Taf.3, 71 *Dimensions*: L: 50mm, W: 18mm, D (loop) 14mm. *Notes*: Tie-hook in copper alloy with two rivets in place. The hook is bent upwards.
  30. Risstissen *Context*: Level 43, depth of 0-40cm, in the burn deposits of the oldest fortress. *Inventory No.*: R 66/135 *Reference*: ULBERT 1970: 25, 56 & Taf.3, 72 *Dimensions*: L: 50mm, W: 15mm *Notes*: This tie-hook retains two rivets. The hook portion is of rectangular cross section.
  31. Risstissen *Context*: Fortress 1/2, immediately beneath the soil level (158) *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 25, 61 & Taf.5, 90 *Dimensions*: L: 37mm, W: 12mm *Notes*: Bronze/copper alloy tie-hook, still attached by two rivets to the girdle plates. The base



**Fig. 61:** Category H (tie loops) of Type i. Scale 1:2

plate has parallel sides and the rivet holes are decorated by punched ring decoration. There is a considerable amount of armour girdle plate attached here.

32. St Albans Context: Insula XXVIII, makeup for Building 1., AD 200-235 Inventory No.: 58 D XIII 7 Reference: FRERE 1984: 33 & Fig.11.73 Dimensions (from scale drawing): L: 41mm, W: 12mm Notes: Tie-hook, two rivets still in place.

33. Svistov *Context*: buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.*: not recorded *Reference*: GENTSCHEVA 1999: 28 & 29, Abb.7, 4 *Dimensions (from scale drawing)*: L: 52.5mm, W: 15mm *Notes*: Complete tie-hook, apart from the rivets. The hook portion has been distorted from the vertical position.
34. Vaison-la-Romaine *Context*: found at 'Portique de Pompée' *Inventory No.*: 990.12.002 (59.115) *Reference*: FEUGERE 1997: 3-4 & Fig.2, 6 *Dimensions*: L: 43mm. *Notes*: Complete tie-hook with two rivets intact.
35. Vechten *Context*: ditch alongside of Rijksweg 12 in 1970 *Inventory No.*: not recorded *Reference*: KALEE 1989: Fig.20, 18 *Dimensions*: L: 62.5mm *Notes*: Complete tie-hook, retaining a single rivet, whose head is of square shape. The hook is made of copper.
36. Vechten *Context*: ditch alongside of Rijksweg 12 in 1970 *Inventory No.*: not recorded *Reference*: KALEE 1989: Fig.20, 20 *Dimensions*: L: 47mm *Notes*: Complete tie-hook, with a single rivet remaining, made of brass. The loop seems to have been formed by bending the plate, rather than hammering from each side.
37. Volubilis *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 63 & Pl.4, 46 *Dimensions*: L: 49mm, W: 15mm, Th (plate): 1mm, Th (hook): 3mm *Notes*: Complete tie-hook, which retains both the rivets. The rivet holes have a punched concentric ring decoration and there are engraved lines near the outer edges of the plate.
38. Volubilis *Context*: not recorded *Inventory No.*: not recorded *Reference*: BOUBE-PICCOT 1994: 63 & Pl.4, 47 *Dimensions*: L: 49mm, W: 15mm, Th: 2mm *Notes*: Complete tie-hook, which retains both the rivets. The rivet holes have a punched concentric ring decoration and there are engraved lines near the outer edges of the plate. The hook appears to have been made by rolling the plate up.
39. Waddon Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: WEBSTER 1958: 93, Fig.7, 215 *Dimensions (from scale drawing)*: L: 36mm, W: 7.5mm *Notes*: Bronze tie-hook, well formed and retaining both rivets.
40. Wiesbaden *Context*: not recorded *Inventory No.*: 17415 *Reference*: RITTERLING 1909: 94 & Taf. X, 43 *Dimensions (from scale drawing)*: L: 47mm, W: 12mm *Notes*: Bronze tie-hook. Two rivet holes, but no surviving rivets.
41. Windisch *Context*: unstratified *Inventory No.*: Not recorded *Reference*: UNZ & DESCHLER-ERB 1997: Taf.31, 658 *Dimensions (from scale drawing)*: L: 68mm, W: 12.5mm *Notes*: Copper alloy tie-hook. Parallel sides, two rivet holes, but no rivets. The hook portion is poorly formed and this may be a vertical fastener. It is very long for a tie-loop.
42. Windisch *Context*: Legat Meyer excavation *Inventory No.*: 1676 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 670 *Dimensions (from scale drawing)*: (fitment only) L: 39mm, W: 13mm *Notes*: Tie-hook with two rivets, still attached to the armour plate.
43. Windisch *Context*: Olhaven excavation, 1917. *Inventory No.*: 17.281 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 678 *Dimensions (from scale drawing)*: L: 46mm, W: 13mm *Notes*: Parallel-sided plate, with the rivet holes decorated by incised concentric rings. One small rivet survives.
44. Windisch *Context*: trench of 1928, open area to the south of the baths, location No.24. *Inventory No.*: 28:3644 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 681 *Dimensions (from scale drawing)*: L: 48mm, W: 13mm. *Notes*: Hook retaining a small portion of armour plate. Both rivets appear in place and the holes are decorated.
45. Windisch *Context*: rubbish dump *Inventory No.*: 6870 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 693 *Dimensions (from scale drawing)*: L: 39mm, W: 14mm *Notes*: Hook with slightly tapered sides. One rivet remains and one of the holes has the punched ring decoration.
46. Windisch *Context*: unstratified *Inventory No.*: None *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 705 *Dimensions (from scale drawing)*: L: 51mm, W: 9mm. *Notes*: Narrow tie-hook. Both rivets remain. Oddly, the hook loop is bent away from the plate, rather than over it.
47. Windisch *Context*: rubbish dump *Inventory No.*: 4310 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 708 *Dimensions (from scale drawing)*: L: 47mm, W: 13mm *Notes*: Intact tie-hook. Both rivets (dome-headed) remain. The hook is of very small diameter.
48. Windisch *Context*: via *Decumana* at the corner of the *Principia*, location No.13 *Inventory No.*: 13:447 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 712 *Dimensions (from scale drawing)*: L: 45mm, W: 8mm *Notes*: Unfinished tie-hook with no rivet holes in place.
49. Site Wroxeter: *Context*: from the baths excavation. *Inventory No.*: WB (3), 20 *Reference*: WEBSTER 1958: 98 & 97, Fig.8, 259 *Dimensions (from scale drawing)*: L: 50mm, W: 9mm *Notes*: A tie-hook where the top hook has been somewhat flattened. The rivet holes have a punched ring decoration surrounding them, but no rivets survive.

## Hii

1. Aislingen *Context*: not recorded *Inventory No.*: 683 *Reference*: ULBERT 1959: 93 & Taf.17, No.1 *Dimensions (from scale drawing)*: L: 42mm, W: 8mm *Notes*: Well-shaped

- tie-hook, which retains a single dome-headed rivet. The plate is tapered to a degree. The rivet holes have punch concentric ring decoration.
2. Aislingen *Context*: not recorded *Inventory No.*: 6710 *Reference*: ULBERT 1959: 93 & Taf.17, No.2. *Dimensions (from scale drawing)*: L: 46mm, W: 16mm *Notes*: Well-made hook, with a very tapered base plate. This retains one flat rivet and there is no decoration around the rivet holes.
  3. Aislingen *Context*: not recorded *Inventory No.*: 7863 *Reference*: ULBERT 1959: 93 & Taf.17, No.3 *Dimensions (from scale drawing)*: L: 36mm, W: 13mm *Notes*: A damaged plain hook, which can nevertheless be seen to have a tapered base plate.
  4. Aislingen *Context*: not recorded *Inventory No.*: 789b *Reference*: ULBERT 1959: 93 & Taf.17, No.4. *Dimensions (from scale drawing)*: L: 34mm, W: 14mm *Notes*: Badly damaged hook, which retains a single rivet.
  5. Aislingen *Context*: not recorded *Inventory No.*: 643i *Reference*: ULBERT 1959: 93 & Taf.17, No.5 *Dimensions (from scale drawing)*: L: 34mm, W: 12mm *Notes*: Badly damaged hook, which retains a single rivet.
  6. Alchester *Context*: not recorded *Inventory No.*: 20.81 *Reference*: SAUER 2000: 25 & Fig.11, 3 *Dimensions (from scale drawing)*: L: 47mm, W: 12.5mm *Notes*: Tie-hook, retaining both rivets. The plate is of a slightly unusual shape, pointed at one end and tapering throughout its length.
  7. Augsburg-Oberhausen *Context*: not recorded *Inventory No.*: not recorded *Reference*: HÜBENER 1973: Taf. 16, 26 *Dimensions (from scale drawing)*: L: 50mm, W: 21mm *Notes*: Complete tie-hook, although lacking any rivets. The plate sides are curved and the plate is very wide in relation to its length.
  8. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.19, Fig.51 *Dimensions (from scale drawing)*: L (total): 50mm, W (total): 23mm, L (loop only) 35mm, W (loop only): 11mm *Notes*: A girdle plate tie-hook, still in place on the armour, but with one leaf of a hinge fitment sharing one of the rivets.
  9. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing)*: L: 42mm, W: 14mm *Notes*: Girdle plate tie-hook with both rivets intact. Here, the plate is tapered towards the base.
  10. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: I von GROLLER 1901a: *id*, Taf.17, Fig.25 *Dimensions (from scale drawing)*: L: 39mm, W: 12mm *Notes*: Girdle plate tie-hook with both rivets intact.
  11. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing)*: L: 39mm, W: 12mm *Notes*: Girdle plate tie-hook with both rivets intact. The plate is tapered towards the base.
  12. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.18, Fig.35 *Dimensions (from scale drawing)*: L: 32mm, W: 8mm *Notes*: Tie-hook still attached to the armour backing. Both rivets survive. This is quite a small tie-hook.
  13. Bad Deutsch-Altenberg *Context*: PQ 11, in soil beneath the paving stones of the headquarters courtyard. *Inventory No.*: 480/73 *Reference*: GRÜNEWALD 1981: 23 & Taf. 18, 21 *Dimensions (from scale drawing)*: L: 39mm, W: 11mm *Notes*: Tie-hook with tapered sides to the plate. One rivet remains.
  14. Baden *Context*: not recorded *Inventory No.*: 579 *Reference*: UNZ 1974: 85 & Abb.1, 5 *Dimensions*: L: 38mm *Notes*: Complete tie-hook, retaining both rivets.
  15. Baginton *Context*: Pit 5 *Inventory No.*: not recorded *Reference*: HOBLEY 1972: 71 & Fig.21, 11 *Dimensions (from scale drawing)*: L: 52mm, W: 15mm *Notes*: A large tie-hook, with very tapered sides to the plate. No rivets survive.
  16. Buciumi *Context*: not recorded *Inventory No.*: not recorded *Reference*: CHIRILA *et al.*, 1972: Pl. CXIII, 47 *Dimensions*: L: 42mm *Notes*: Damaged tie-hook, retaining one of the rivets.
  17. Caerleon *Context*: Block B, Phase III *Inventory No.*: 1777 (1807) *Reference*: EVANS & METCALF 1992: 115-6, No.34 *Dimensions (from scale drawing)*: L: 44mm, W: 13mm *Notes*: 'Coke bottle' shaped hook, intact and with one (large) rivet in place.
  18. Camerton *Context*: not recorded, detector find *Inventory No.*: 26779Y *Reference*: JACKSON 1990: 29 & Pl.3, 29 *Dimensions*: L: 44mm *Notes*: Complete tie-hook, though lacking rivets. The holes have the punched ring decoration and there is an engraved line parallel to the outer edges of the plate. This is a well-made item. Weight: 3.9g.
  19. Castleford *Context*: not recorded *Inventory No.*: 108/C T14; CN31; SF333; 1c *Reference*: COOL & PHILO 1998: 68 & Fig.21, 223 *Dimensions*: L: 38mm, W: 14mm, Ht: 11mm, D (int): 7.5mm *Notes*: Broken tie-hook. There are no rivets remaining.
  20. Chester *Context*: Deanery Field *Inventory No.*: 256.R.1977 *Reference*: DROOP & NEWSTEAD 1931: Pl.48, 90 *Dimensions*: L: 48mm *Notes*: Complete tie-hook, retaining both rivets. The sides of the plate are tapered, but lack further decorative features.

21. Chester *Context*: Deanery Field *Inventory No.*: not available *Reference*: DROOP & NEWSTEAD 1931: Pl.48, 92 *Dimensions (from scale photo)*: L: 52mm, W: 11mm *Notes*: Complete tie-hook, retaining both rivets but devoid of any decorative features.
22. Chichester *Context*: not recorded *Inventory No.*: A.3, 5 *Reference*: DOWN 1974: 141, No.20 *Dimensions (from scale drawing)*: L: 38mm, W: 12mm *Notes*: Bronze cuirass hook. It retains both rivets, of dome-headed shape. There is a fragment of armour plate still adhering to the back of the fitment.
23. Colchester *Context*: Dump, early Period 3 *Inventory No.*: SF 1.81 2377(C), E1066 L106(?) *Reference*: CRUMMY 1992: Fig.5.53, 1683 *Dimensions*: L: 45mm *Notes*: Complete tie-hook. There are two dome-headed rivets, one much larger than the other, perhaps signifying a repair. The hook plate is devoid of any decorative features.
24. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 232 *Reference*: ALLASON-JONES & BISHOP 1988: 75 & 76, Fig.94, 232 *Dimensions*: L: 43mm, W: 15mm, D (hole): 3mm. *Notes*: The plate is broad shouldered with a slight dishing around the two holes, with no trace of ring decoration. A seam shows that rolling a flattened section has formed the loop.
25. Corbridge *Context*: As above. *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 43, Fig.52 & 49, Fig.54 *Dimensions (from scale drawing)*: L: 35/40mm, W (top hook only): 13mm *Notes*: These copper alloy hooks are present only on the three top plates (as the belt closed the bottom two plates).
26. Corbridge *Context*: As above. *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 43, Fig.52 *Dimensions (from scale drawing)*: L: 40/41mm, W (top hook only): 14mm *Notes*: Two tie-hooks from the other (rear) end of the girdle plate, shown above. These are from the back of the girdle plates.
27. Corbridge *Context*: As above. *Inventory No.*: 76: *Reference*: ALLASON-JONES & BISHOP 1988: 43, Fig.52 & 49, Fig.54 *Dimensions (from scale drawing)*: L: 47mm, W: 13mm *Notes*: From Cuirass i, (Type-A). This group forms the top set of three girdle plates. Three cuirass hooks are visible. The hinged buckle at the left is flexed downwards and next to it, the loop of the tie-hook is straightened and twisted upwards. On the plates behind there are the tips of two more tie hooks.
28. Corbridge *Context*: As above. *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.55 *Dimensions (from scale drawing)*: (top hook only) L: 50mm, W: 15mm *Notes*: Cuirass ii, front side, upper right hand girdle plate group. The hinged buckle on the left is flexed, and the loop of the top (adjacent) tie-hook is twisted upwards and slightly unwound. Although the other plates are fragmentary, the two tie-hooks are clearly visible.
29. Corbridge *Context*: As above. *Inventory No.*: 78 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.59 & 50, Fig.60 *Dimensions (from scale drawing)*: L: 42/46mm, W: 15/16mm *Notes*: Cuirass iii, a lower left-hand assembly from a Type-A cuirass. The rear of the bottom set of six girdle plates, with five hooks visible. The measurements given are the extreme values for the visible portions of the five hooks.
30. Corbridge *Context*: As above. *Inventory No.*: 79 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.63 *Dimensions (from scale drawing)*: L: 41mm *Notes*: Cuirass iv, the lower left-hand assembly from a Type-A cuirass, which contains the elements of eight girth loops. This is the front group of tie-loops. Portions of five tie-hooks in all are visible, three of which have had their loops broken off. The length measurement is for the lowermost hook only, as this is the only one for which a clear length is visible.
31. Corbridge *Context*: As above. *Inventory No.*: 79 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.63 *Dimensions (from scale drawing)*: L: 40/43mm, W: 12mm *Notes*: These are five of the hooks from the rear of the girdle plates of Cuirass iv. The width measurement is for the topmost hook only and the length is given for the only two hooks fully visible.
32. Corbridge *Context*: As above. *Inventory No.*: 79 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.63 *Dimensions (from scale drawing)*: L: 48mm, W: 16mm *Notes*: From the rear of the girdle plates from Cuirass iv. This hook has the 'coke-bottle' shape.
33. Corbridge *Context*: As above. *Inventory No.*: 80 *Reference*: ALLASON-JONES & BISHOP 1988: 50, Fig.66 *Dimensions (from scale drawing)*: L: 53mm, W (approx.): 15mm *Notes*: The top girdle plate from Cuirass v, at the front. Superimposed on the tie-hook is a vertical fastener; the two fitments share a common rivet. The loop of the tie-hook has some corrosion products adhering to it.
34. Corbridge *Context*: As above. *Inventory No.*: 81 *Reference*: ALLASON-JONES & BISHOP 1988: 51, Figs.70 & 71 *Dimensions (from scale drawing)*: L: 51/56mm, W: 13/14mm *Notes*: Cuirass vi, a lower left-hand assembly from a Type-B/C cuirass, rear side. The uppermost tie-hook again shares its bottom rivet with the outermost vertical hook fastener. Measurements are given for the two completely visible hooks only.
35. Exeter *Context*: charcoal deposit *Inventory No.*: TS 668 *Reference*: HOLBROOK & BIDWELL 1991: 244 & 243 Fig.108, 3 *Dimensions*: L: 41mm, W: 9mm *Notes*: Wrought rough-out for a tie hook?



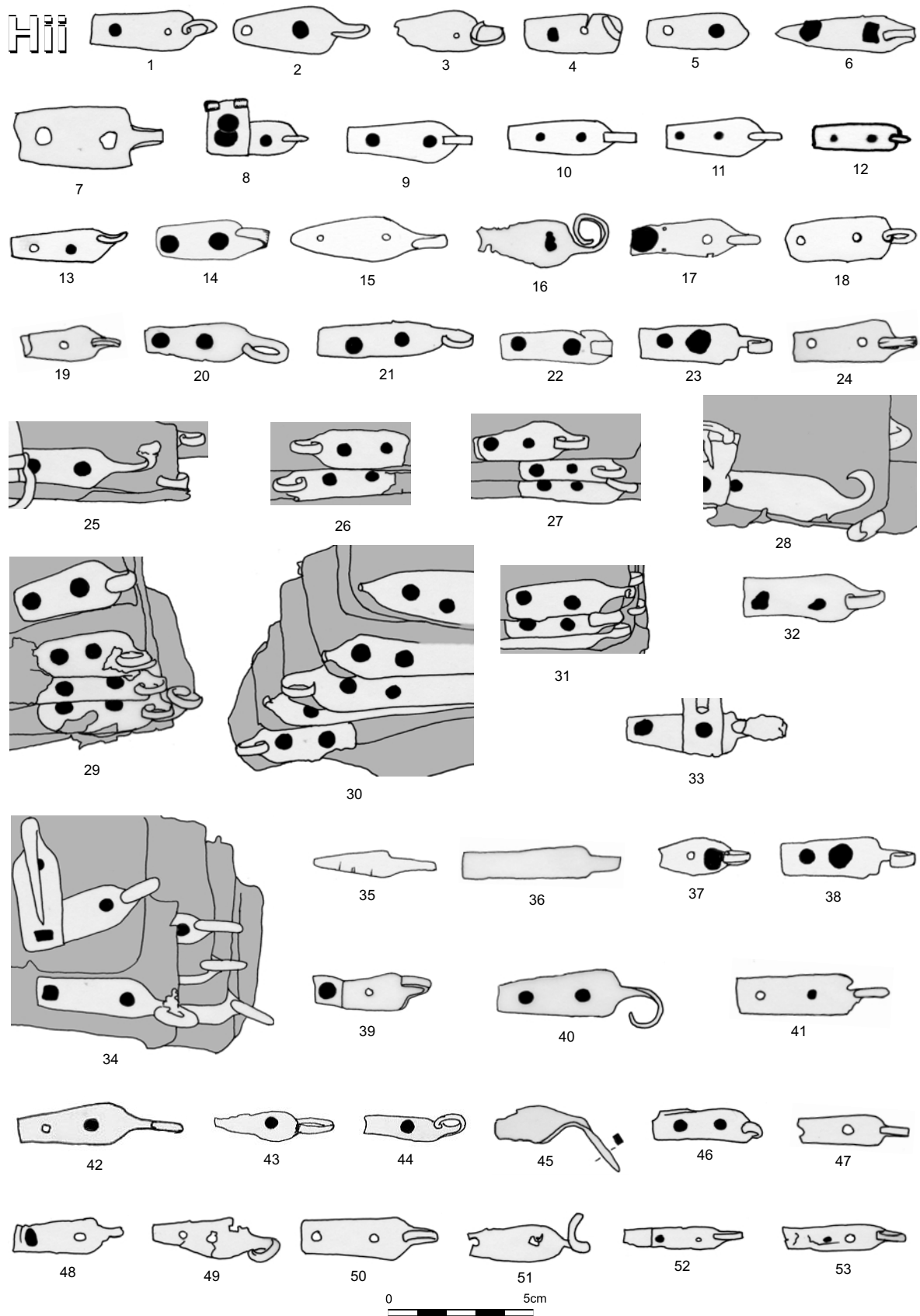


Fig. 62: Category H (tie loops) of Type ii. Scale 1:2

36. Exeter *Context*: late 2nd-3rd CAD *Inventory No.*: GS L410 *Reference*: HOLBROOK & BIDWELL 1991: 247 & 248, Fig.111, 42 *Dimensions*: L: 54mm, W: 10mm *Notes*: Tie-loop with straight parallel sides and a long incomplete loop. Two shanks project from the back instead of piercing the plate. Brass, showing signs of burning.
37. Gloucester *Context*: VI 31, A6.1 *Inventory No.*: 48 *Reference*: HURST 1986: 39 & Fig.22, 9 *Dimensions (from scale drawing)*: L: 31mm, W: 12mm *Notes*: Leaf-shaped plate with two rivet holes (one with rivet still in place) terminating at one end in an upward curving loop.
38. Gloucester *Context*: dump, early period 3, SF 1.81 2377(C), E1066 L106(?) *Inventory No.*: 1683 *Reference*: HURST 1986: 189 & Fig.5.53, No. *Dimensions*: L: 45mm. *Notes*: Girdle plate tie-hook with both rivets surviving.
39. Herrera de Pisuerga *Context*: not recorded *Inventory No.*: not recorded *Reference*: GARCÍA DÍEZ, 1999: Fig.1,6 *Dimensions*: L: 40mm *Notes*: Complete, though distorted, tie-hook, retaining a single rivet. The loop portion appears to have a square cross section suggesting that it has been beaten from a sheet, rather than being formed by folding a sheet over.
40. Hofheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: RITTERLING 1904: Taf. III, 3 *Dimensions*: L: 54mm *Notes*: Tie-hook with tapering sides, complete. A small piece of armour plate is attached to the hook plate.
41. Hofheim *Context*: not recorded *Inventory No.*: 08.457 *Reference*: RITTERLING 1913: Taf. XI, 1 *Dimensions (from scale photo)*: L: 51.5mm, W: 13mm *Notes*: Complete tie-hook, though retaining only a single rivet. The rivet holes in the plate are decorated with punched concentric rings.
42. London *Context*: from the Walbrook site. *Inventory No.*: 19,326 *Reference*: WEBSTER 1958: 85 & 87, Fig.6, 154 *Dimensions from scale drawing*: L: 57mm, W: 13mm *Notes*: Tie-hook, with tapered sides. One rivet survives.
43. Longthorpe *Context*: upper filling of NW ditch of Yard 1, Claudio-Neronian, disturbed in 4th century. *Inventory No.*: 74.B2.10 SF 38 *Reference*: DANNELL & WILD 1987: 89 & 88, Fig.22, 21 *Dimensions (from scale drawing)*: L: 41mm, W: 10mm *Notes*: Part of a bronze cuirass tie-hook, one rivet remains.
44. Longthorpe *Context*: Building XI, Pit D *Inventory No.*: 71 V 5 *Reference*: FRERE & STJOSEPH 1974: 50 & Fig.56, 31. *Dimensions (from scale drawing)*: L: 35mm, W: 8mm *Notes*: Damaged cuirass hook, retains a single rivet.
45. Oberstimm *Context*: not recorded *Inventory No.*: 1975.155 *Reference*: SCHÖNBERGER 1978: 170 & Taf.21, B117 *Dimensions*: L: 42mm, W: 14mm *Notes*: Broken and badly distorted tie-hook. Unused as there are no rivet holes.
46. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 45 *Dimensions (from scale drawing)*: L: 37mm, W: 11mm *Notes*: Tie-hook with two surviving rivets.
47. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 46 *Dimensions (from scale drawing)*: L: 37mm, W: 10mm *Notes*: Damaged tie-hook. There are no surviving rivets.
48. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 47 *Dimensions (from scale drawing)*: L: 38mm, W: 12mm *Notes*: Damaged tie-hook with one surviving rivet.
49. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 48 *Dimensions (from scale drawing)*: L: 43mm, W: 14mm *Notes*: Damaged tie-hook of the 'Coke-bottle' shape. No rivets survive.
50. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 51 *Dimensions (from scale drawing)*: L: 47mm, W: 14mm *Notes*: Well-made tie-hook with tapering sides. There are no extant rivets, but the holes have the punched ring decoration.
51. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.34, 52 *Dimensions (from scale drawing)*: L: 42mm, W: 12mm *Notes*: Badly damaged tie-hook. There are no surviving rivets, but the bottom hole shows evidence for the punched ring decoration.
52. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.52, 7 *Dimensions (from scale drawing)*: L: 40mm, W: 7mm *Notes*: This tie-hook retains a single rivet.
53. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.52, 9 *Dimensions (from scale drawing)*: L: 42mm, W: 9mm *Notes*: Well-shaped tie-hook, tending towards the 'Coke-bottle' shape. A single rivet remains.
54. Richborough *Context*: surface find, in the SW area, inside the fort *Inventory No.*: 4221 *Reference*: CUNLIFFE 1968: 93 & Pl. XXXIV, 93 *Dimensions (from scale drawing)*: L: 50mm, W: 17mm *Notes*: Broken tie-hook, which retains a single rivet. The loop portion appears to have been formed by simply curling the sheet, rather than folding it over from the side. If broken, this represents a very large tie-hook in its original form. It is described as being a 'dolabra sheath hook'. However, there is nothing to say that it is not from a *lorica segmentata* girdle plate.

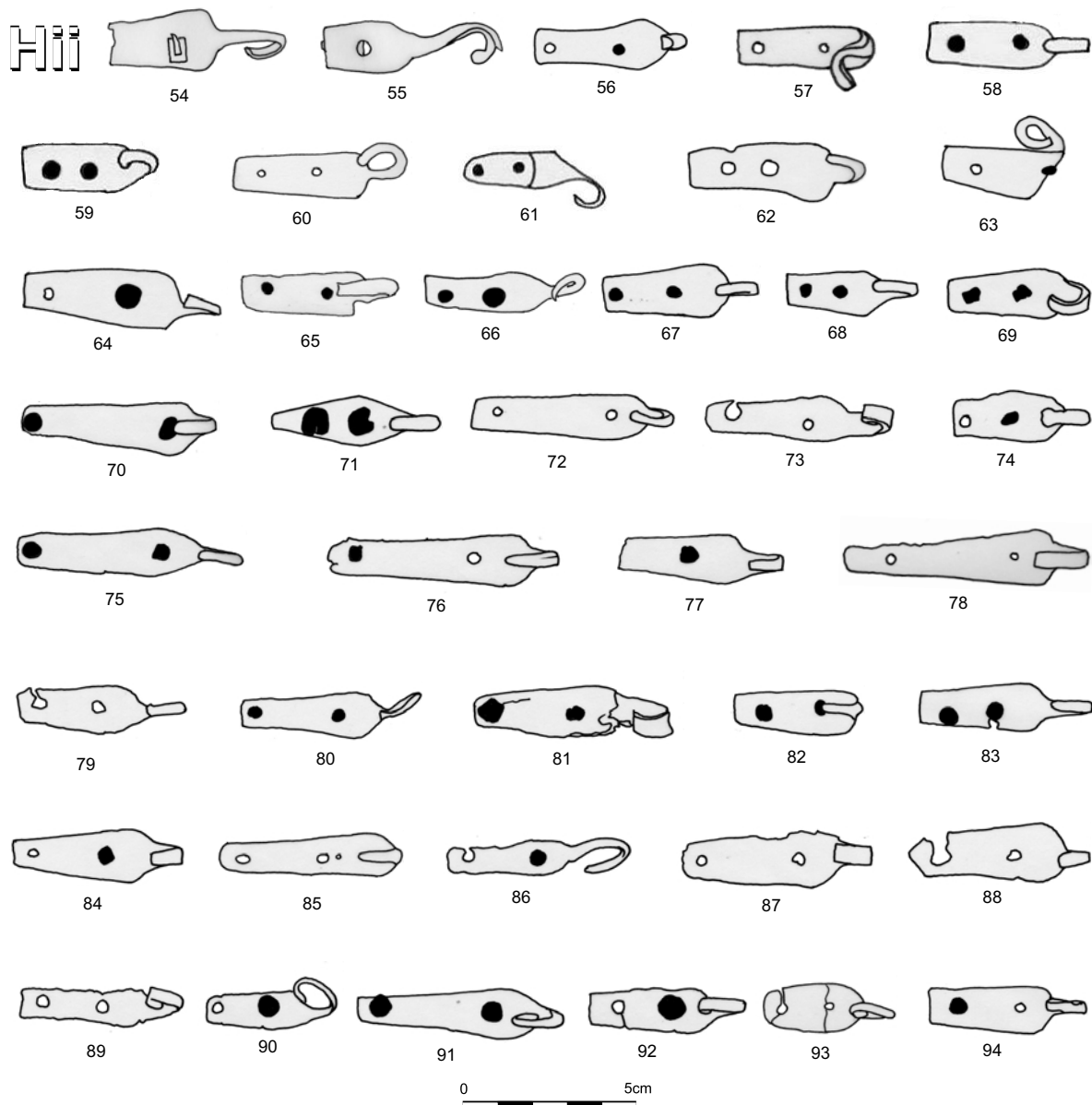


Fig. 63: Category H (tie loops) of Type ii (contd.). Scale 1:2

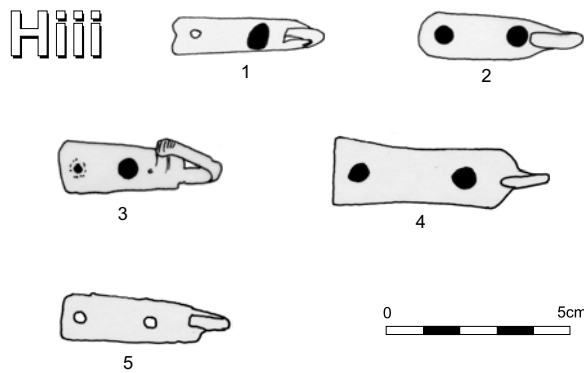
- 55. Richborough *Context:* unstratified *Inventory No.:* 5192 *Reference:* CUNLIFFE 1968: 93 & Pl. XXXIV, 94 *Dimensions (from scale drawing):* L: 51mm, W: 14mm *Notes:* Very similar to the above, crudely formed. Again, although described as a *dolabra* sheath hook, it could conceivably have come from a cuirass. There is a single rivet hole and the plate has been folded back at the bottom.
- 56. Risstissen *Context:* not recorded *Inventory No.:* A 787 *Reference:* ULBERT 1959: 106 & Taf.61, 2 *Dimensions (from scale drawing):* L: 42mm, W: 14mm *Notes:* Tie-loop with the 'Coke bottle' shape. There are no surviving rivets.
- 57. Risstissen *Context:* At a depth of 45-70cm beneath the top of level 73. *Inventory No.:* R 66/204 *Reference:* ULBERT 1970: 25, 58 & Taf.3, 73 *Dimensions:* L: 38mm, W: 10-12mm *Notes:* Damaged tie-hook. There are no surviving rivets but the rivet plate holes are decorated with concentric punched rings.
- 58. Risstissen *Context:* Fortress 1/2, immediately beneath the soil level (158) *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 26, 61 & Taf.5, 91 *Dimensions:* L: 46mm, W: 12mm *Notes:* Well-formed, parallel-sides hook with two intact rivets. On the underside is a portion of the armour plate, still adhering.
- 59. Risstissen *Context:* Fortress 1/2, immediately beneath the soil level (158) *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 26 & Taf.5, 92 *Dimensions:* L (hook): 39mm, W: 14mm. W (armour plate attached): 38mm

- Notes:* A tie-loop still attached to the armour plate by means of two rivets. There is evidence of punched ring decoration around the rivet holes.
60. Silchester *Context:* Insula XXIII, Pit 10, dated late 1st CAD. *Inventory No.:* not recorded *Reference:* BOON 1969: 44 & 45, Fig.5, 3 *Dimensions (from scale drawing):* L: 48mm, W: 12mm *Notes:* Cuirass tie-hook. The rivet holes are surrounded by the punched ring decoration, though no rivets survive in place.
  61. St Albans *Context:* excavations of the theatre. *Inventory No.:* T.34 459 *Reference:* WEBSTER 1958: 93, Fig.7, 206 *Dimensions (from scale drawing):* L: 41mm, W: 11mm *Notes:* Badly distorted cuirass hook retaining both rivets.
  62. Svistov *Context:* buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.:* not recorded *Reference:* GENTSCHEVA 1999: 28 & 29, Abb.7, 3 *Dimensions (from scale drawing):* L: 52.5mm, W: 16.5mm *Notes:* Slightly damaged tie-hook. Neither rivet survives in this case.
  63. Svistov *Context:* buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.:* not recorded *Reference:* GENTSCHEVA 1999: 28 & 29, Abb.7, 5 *Dimensions (from scale drawing):* L (max): 34.5mm, W: 13.5mm *Notes:* Tie-hook with one small rivet. The plate has been bent through the top rivet hole (which retains a small rivet).
  64. Svistov *Context:* buried beneath burn debris of barrack room, Sector IV of the excavation. *Inventory No.:* not recorded *Reference:* GENTSCHEVA 1999: 28 & 29, Abb.7, 6 *Dimensions (from scale drawing):* L: 57mm, W: 18mm *Notes:* Complete tie-hook, with a single rivet in place.
  65. Usk *Context:* GBY, fortress pit, pre-Flavian *Inventory No.:* Manning 1981, 200 *Reference:* MANNING, PRICE & WEBSTER 1995: 8 & Fig.3, 6 *Dimensions (from scale drawing):* L: 44mm, W: 12mm *Notes:* Girdle plate tie-hook with iron armour still adhering. The loop portion has now been squashed flat. Two rivets are still in position.
  66. Vechten *Context:* ditch alongside of Rijksweg 12 in 1970 *Inventory No.:* not recorded *Reference:* KALEE 1989: Fig.20, 19 *Dimensions:* L: 46mm *Notes:* Complete tie-hook, with both rivets in place, made of brass.
  67. Windisch *Context:* Western rubbish dump *Inventory No.:* 23.681 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.30, 623 *Dimensions (from scale drawing):* L: 44mm, W: 15mm *Notes:* Bronze tie-hook still attached to iron armour plate.
  68. Windisch *Context:* Rubbish dump, west, 1923 excavation. *Inventory No.:* 23.962 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.30, 625 *Dimensions (from scale drawing):* L: 36mm, W: 13mm *Notes:* Bronze tie-hook, still attached by two rivets to the armour of the girdle plate.
  69. Windisch *Context:* Rubbish dump, 1923 excavation. *Inventory No.:* 23.475 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.30, 627 *Dimensions (from scale drawing):* L: 39mm, W: 14mm *Notes:* Bronze tie-hook still attached by two rivets to the armour plate. The hook appears to have been formed by curling the flat plate, rather than by hammering from the sides.
  70. Windisch *Context:* trench of 1928, location No.24. *Inventory No.:* 28:2641 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 672 *Dimensions (from scale drawing):* (fitment only) L: 56mm, W: 15mm *Notes:* Oddly shaped plate to this hook. Both rivets remain, with the iron armour plate to the rear.
  71. Windisch *Context:* rubbish tip *Inventory No.:* 4141 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 673 *Dimensions (from scale drawing):* L: 48mm, W: 14mm *Notes:* Very angular shape to the plate of this hook. Two large headed rivets remain in place.
  72. Windisch *Context:* rubbish dump *Inventory No.:* 35:131 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 676 *Dimensions (from scale drawing):* L: 57mm, W: 13mm *Notes:* 'Bottle-shaped' tie-hook (converging sides). The rivet holes have the punched circle decoration inscribed.
  73. Windisch *Context:* rubbish dump *Inventory No.:* 13:739 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 677 *Dimensions (from scale drawing):* L: 53mm, W: 13mm *Notes:* Tapering sided tie-hook. Rivets appear torn out. Curling the plate over may have formed the hook.
  74. Windisch *Context:* Legat Meyer excavation *Inventory No.:* 1675 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 679 *Dimensions (from scale drawing):* L: 38mm, W: 14mm, Th: 2mm *Notes:* A somewhat damaged tie-hook, which retains a single rivet. The plate is much thicker than is normal, as is the hook portion, which is even thicker.
  75. Windisch *Context:* trench of 1926, part of the baths complex?, location No.27 *Inventory No.:* 26:89 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 684 *Dimensions (from scale drawing):* L: 65mm, W: 14mm *Notes:* Tapered tie-hook with both rivets in place. Very long in relation to the width.
  76. Windisch *Context:* rubbish dump *Inventory No.:* 42:179 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 685 *Dimensions (from scale drawing):* L: 66mm, W: 15mm *Notes:* Another hook with a very large width-to-length ratio. One rivet remains.
  77. Windisch *Context:* rubbish dump *Inventory No.:* 2198B *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 686

- Dimensions (from scale drawing):* L: 47mm, W: 14mm  
*Notes:* Damaged hook, broken through the second rivet hole. One rivet remains. The sides taper.
78. Windisch *Context:* fortress wall, behind the gymnasium. *Inventory No.:* 1445 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 687 *Dimensions (from scale drawing):* L: 71mm, W: 16mm *Notes:* Hook with tapered sides, somewhat corroded. No rivets remain. Extremely long in relation to its width.
79. Windisch *Context:* rubbish dump *Inventory No.:* 2189u *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 688 *Dimensions (from scale drawing):* L: 48mm, W: 13mm *Notes:* Tie-hook with tapered sides. Damaged, no rivets.
80. Windisch *Context:* trench of 1935, corner of a part of the *Principia* building, location No.10.] *Inventory No.:* 35:6117 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 689 *Dimensions (from scale drawing):* L: 51mm, W: 13mm *Notes:* Tie-hook with tapered sides. Two small rivets remain in position.
81. Windisch *Context:* rubbish tip *Inventory No.:* 13.738 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 690 *Dimensions (from scale drawing):* L: 56mm, W: 14mm: *Notes:* Tapering sided tie-hook, with two replacement rivets. The thickness of the metal on the hook portion is much greater than that for the plate.
82. Windisch *Context:* Legat Meyer excavation *Inventory No.:* 1673 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 691 *Dimensions (from scale drawing):* L: 36mm, W: 13mm *Notes:* Hook, with tapered sides and retaining both rivets.
83. Windisch *Context:* corner of southern courtyard building, location No.20 *Inventory No.:* 60:962 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 692 *Dimensions (from scale drawing):* L: 49mm, W: 13mm *Notes:* Hook with tapering sides. Both rivets remain and the holes are surrounded by punched concentric ring decorations.
84. Windisch *Context:* rubbish dump *Inventory No.:* 4138 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 694 *Dimensions (from scale drawing):* L: 49mm, W: 15mm *Notes:* Hook with tapering sides to the plate. Appears to contain a single replacement rivet.
85. Windisch *Context:* rubbish dump *Inventory No.:* 5150 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 696 *Dimensions (from scale drawing):* L: 52mm, W: 12mm *Notes:* Hook with tapering sides. No rivets remain.
86. Windisch *Context:* trench of 1936, central courtyard of the *praetorium?* location No.6 *Inventory No.:* 36:1120 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 698 *Dimensions (from scale drawing):* L: 51mm, W: 10mm *Notes:* Hook with tapering sides. A single rivet remains in place.
87. Windisch *Context:* rubbish dump *Inventory No.:* 5027 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 699 *Dimensions (from scale drawing):* L: 54mm, W: 16mm *Notes:* Hook with tapering sides. No rivets survive. The hook loop is very flat, suggesting that the plate has been curled.
88. Windisch *Context:* Königsfelden, (barracks area, close to modern church?) *Inventory No.:* 62:917 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 700 *Dimensions (from scale drawing):* L: 52mm, W: 16.5mm *Notes:* Tapering sides to the hook plate. No rivets survive, but the holes have the punched ring decoration.
89. Windisch *Context:* rubbish dump *Inventory No.:* 13:748 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 701 *Dimensions (from scale drawing):* L: 47mm, W: 10mm *Notes:* Somewhat damaged hook. No rivets survive.
90. Windisch *Context:* trench of 1936, central courtyard, *Praesidium?*, location No.6 *Inventory No.:* 36:481 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 702 *Dimensions (from scale drawing):* L: 37mm, W: 10mm *Notes:* Damaged hook, badly distorted with one surviving rivet.
91. Windisch *Context:* rubbish dump *Inventory No.:* 6871 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 703 *Dimensions (from scale drawing):* L: 58mm, W: 14.5mm *Notes:* Hook with tapering sides. Two large-headed rivets are in place. Quite long.
92. Windisch *Context:* trench of 1935, corner of part of the *principia* building *Inventory No.:* 35:1357 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 704 *Dimensions (from scale drawing):* L: 44mm, W: 13mm *Notes:* Hook with tapering sides. One large headed replacement rivet remains.
93. Windisch *Context:* Legat Meyer excavation *Inventory No.:* 1680 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 706 *Dimensions (from scale drawing):* L: 37mm, W: 14mm *Notes:* Oddly shaped plate to the hook, which is short and wide. No rivets remain.
94. Windisch *Context:* rubbish dump *Inventory No.:* 4308 *Reference:* UNZ & DESCHLER-ERB 1997: Taf.32, 709 *Dimensions (from scale drawing):* L: 45mm, W: 13mm *Notes:* Hook whose base plate has almost parallel sides. There is a single dome-headed rivet, and the holes are decorated with incised concentric rings.

### Hiïi

1. Caerleon *Context:* unstratified, 1969 excavations *Inventory No.:* not recorded *Reference:* ZIENKIEWICZ 1986b: 187-8, Fig.63, 173 *Dimensions:* L: 41mm *Notes:* Only one of the two rivets survives and this with a large, irregular head.
2. Corbridge *Context:* SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited

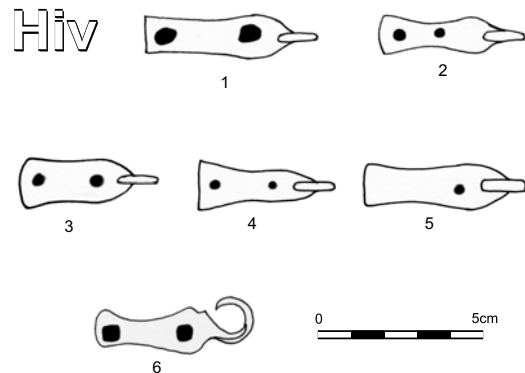


**Fig. 63:** Category H (tie loops) of Type iii. Scale 1:2

- during Phase 2, dated AD 122-38. *Inventory No.*: 80 *Reference*: ALLASON-JONES & BISHOP 1988: 50, Fig.66 *Dimensions (from scale drawing)*: L: 44mm, W: 11mm *Notes*: Cuirass v, Type-B/C. One of the surviving hooks from the front of the lower right assembly of girdle plates.
3. Neuss *Context*: not recorded *Inventory No.*: 13808 *Reference*: SIMPSON 2000: 70 & 149, Pl.23, 8 *Dimensions (from scale drawing)*: L: 45mm, W: 14mm *Notes*: Somewhat damaged cuirass tie-hook, retaining both rivets.
  4. Windisch *Context*: trench of 1937, (barrack blocks), location No.4 *Inventory No.*: 37:1705 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 671 *Dimensions (from scale drawing)*: (fitment only) L: 58mm, W: 18mm *Notes*: This hook (which retains both rivets) has a rather 'waisted' shape. Armour plate still adhering to the rear.
  5. Windisch *Context*: via Decumana, by the side of the Principia. Location No.13 *Inventory No.*: 13:440 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 675 *Dimensions (from scale drawing)*: L: 45mm, W: 12mm *Notes*: Intact tie-hook, though with no remaining rivets.

### Hiv

1. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.17, Fig.25. *Dimensions (from scale drawing)*: L: 51mm, W: 13mm *Notes*: Girdle plate tie-hook with both rivets intact.
2. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing)*: L: 43mm, W: 12mm *Notes*: Girdle plate tie-hook with both rivets intact. This specimen has a narrow waist to the plate.
3. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing)*: L: 40mm, W: 15mm *Notes*: Girdle plate tie-hook with both rivets intact. The plate has a narrow 'waist'.
4. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded: *Reference*: von GROLLER 1901a: Taf.17,



**Fig. 64:** Category H (tie loops) of Type iv. Scale 1:2

- Fig.25 *Dimensions (from scale drawing)*: L: 40mm, W: 14mm *Notes*: Girdle plate tie-hook with both rivets intact. The sides of the plate begin parallel, but then flare out.
5. Bad Deutsch-Altenberg *Context*: Armoury *Inventory No.*: not recorded *Reference*: von GROLLER 1901a: Taf.17, Fig.25 *Dimensions (from scale drawing)*: L: 48mm, W: 13mm *Notes*: Girdle plate tie-hook with only one rivet intact. The plate is 'waisted' and there does not appear to be a second rivet hole.
  6. Caerleon *Context*: unstratified, 1965 excavations *Inventory No.*: not recorded *Reference*: ZIENKIEWICZ 1986b: 187-8 & Fig.63, 174 *Dimensions*: L: 46mm. *Notes*: Tie-hook, with two rivets surviving, whose heads have a square shape.

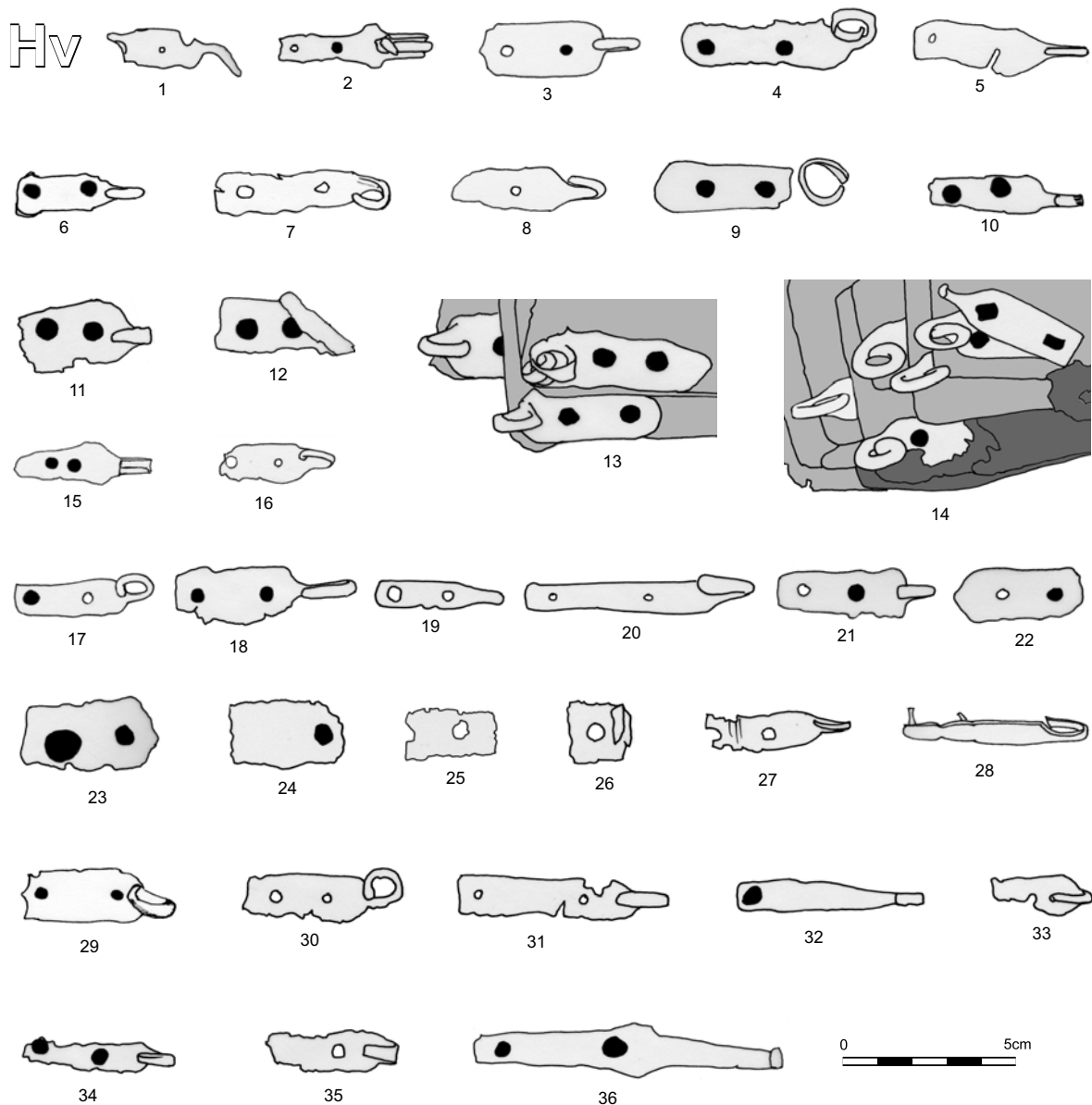
### Hv

1. Aislingen *Context*: not recorded *Inventory No.*: 7851a *Reference*: ULBERT 1959: 93 & Taf.17, No.6. *Dimensions (from scale drawing)*: L: 37mm, W: 12mm *Notes*: Much damaged hook, which has been flattened out. The rivet holes are decorated with punched concentric rings.
2. Augsburg-Oberhausen *Context*: not recorded *Inventory No.*: not recorded *Reference*: HÜBENER 1973: Taf.13, 20 *Dimensions (from scale drawing)*: L: 44mm, W: 12mm *Notes*: Somewhat damaged tie-hook. There is one extant rivet only.
3. Banasa *Context*: not recorded *Inventory No.*: 389 *Reference*: BOUBE-PICCOT 1994: 63 & Pl.4, 44 *Dimensions*: L: 42mm, W: 14mm *Notes*: Broken tie-hook, retaining only one rivet. The rivet holes are decorated with punched rings and there are also engraved lines parallel to the plate edge.
4. Buciumi *Context*: not recorded *Inventory No.*: not recorded *Reference*: CHIRILA *et al.*, 1972: Pl. CXIV, 24 *Dimensions*: L: 56mm *Notes*: Damaged and distorted tie-hook, although retaining both rivets.
5. Caerleon *Context*: Barrack V, earliest version, under cement floor with 1st century pottery. *Inventory No.*: not

- recorded *Reference*: FOX 1939: 134 & 133, Fig.7, 29 & FOX 1941, 38 & 37, Fig.7, 29 *Dimensions (from scale drawing)*: L: 49mm, W: 13mm *Notes*: Described originally as a 'bowl escutcheon', but clearly a girdle plate tie-hook. No rivets survive.
6. Camerton *Context*: not recorded, detector find *Inventory No.*: 26778P *Reference*: JACKSON 1990: Pl.3, 28 *Dimensions*: L: 35mm, Th (iron plate): 1.2mm *Notes*: Damaged and distorted tie-hook, which nevertheless retains both rivets and fragments of the iron girdle plate. There are, however, no decorative features. Weight: 3.2g.
  7. Camerton *Context*: not recorded, detector find *Inventory No.*: 26780Q *Reference*: JACKSON 1990: 30 & Pl.3, 30 *Dimensions*: L: 49mm *Notes*: Somewhat damaged tie-hook; no rivets remain. The workmanship on this loop is very poor. Weight: 2.5g.
  8. Cirencester *Context*: DM I 19 *Invoice No.*: not recorded *Reference*: VINER, in WACHER & McWHIRR 1982: 93 & 95, Fig.27, 36 *Dimensions (from scale drawing)*: L: 43mm, W: 12mm *Notes*: Damaged tie-hook. No rivets remain.
  9. Colchester *Context*: Period 2 or 3 *Inventory No.*: SF BKC 4731(C), T470 *Reference*: CRUMMY 1983: 134 & Fig.152, 4223 *Dimensions*: L (approx.): 51mm, W: 16mm *Notes*: The loop of this tie-hook has broken away from the plate, which retains both its rivets.
  10. Colchester (Sheepen) *Context*: Period IVb, Neronian, Site i, large rubbish pit cut into an earlier gravel pit *Inventory No.*: not recorded *Reference*: NIBLETT 1985: 36 & 121, Fig.65, 47 *Dimensions (from scale drawing)*: L: 44mm, W: 10.5mm *Notes*: Complete girdle plate tie hook, with both rivets still in place. These are, however, not disposed symmetrically on the plate.
  11. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 43 & Fig.52 *Dimensions (from scale drawing)*: L: 37mm, W: 17mm *Notes*: Cuirass i, from the rear of the topmost plate of the girdle assembly. This fragment has become detached from the other plates.
  12. Corbridge *Context*: As above. *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.55 *Dimensions (from scale drawing)*: W: 14mm *Notes*: Also from rear of Cuirass ii, the hook at the bottom has been badly distorted, although it does retain both rivets. Owing to the distortion, the length of the fitment cannot be determined.
  13. Corbridge *Context*: As above. *Inventory No.*: 78 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.59 *Dimensions (from scale drawing)*: L: 45/48mm, W: 15/17mm *Notes*: Cuirass iii, the set of hooks at the opposite end to the girdle plates of those shown above (i.e. the front of the plates). In this case, only four hooks are visible.
  14. Corbridge *Context*: As above. *Inventory No.*: 81 *Reference*: ALLASON-JONES & BISHOP 1988: 51, Figs.70 *Dimensions*: No hook is completely visible here. *Notes*: From cuirass vi, Type-B/C, front end. Five tie-hooks are visible. The bottom of this group is plates is obscured by textile material (shown here as dark grey). The topmost fitment visible is the vertical fastener for this cuirass, where the hook is missing. These two fitments share a common rivet.
  15. Exeter *Context*: debris on floor *Inventory No.*: TS 705 *Reference*: HOLBROOK & BIDWELL 1991: 244 & 243 Fig.108, 2 *Dimensions*: L: 38mm, W (max): 13mm *Notes*: Tie-hook with broad shoulders and converging sides - an unusual feature. Two rivets with hammered ends and no heads pierce the plate. Loop shows a clear seam indicating that rolling sheet metal, rather than being formed from a rod formed it.
  16. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L: 33mm, W: 11mm *Notes*: The plate is torn and no rivets remain.
  17. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L: 40mm, W: 10mm *Notes*: Complete tie-hook, retaining a single rivet. The plate may show a punched ring decoration around the top rivet hole.
  18. Hofheim *Context*: not recorded *Inventory No.*: 16063 *Reference*: RITTERLING 1913: Taf. XI, 2 *Dimensions (from scale photo)*: L: 51mm, W: 16mm *Notes*: Somewhat damaged and corroded tie-hook. It appears to retain both rivets.
  19. Kaiseraugst *Context*: Region 17, C *Inventory No.*: 1980.22521; FK B04486 *Reference*: DESCHLER-ERB 1999: Taf.15, 261 *Dimensions*: L: 36mm, W: 7mm, Th: 2mm *Notes*: Damaged tie-hook, lacking both rivets. Weight 1.92g.
  20. Magdalensberg *Context*: fire layer above the pavement *Inventory No.*: OR/23 *Reference*: DEIMAL 1986: 291 & Taf.76/18 *Dimensions*: L: 65mm, W: 9mm *Notes*: Cuirass tie-hook, with two rivet holes. No rivets survive.
  21. Oberstimm *Context*: not recorded *Inventory No.*: 1975.162 *Reference*: SCHÖNBERGER 1978: 170 & Taf.21, B115. *Dimensions*: L: 45mm, W: 10-14mm. *Notes*: Tie-hook with a single rivet. Rivet holes have the punched concentric ring decoration.
  22. Oberstimm *Context*: not recorded *Inventory No.*: 1975.191 *Reference*: SCHÖNBERGER 1978: 170 & Taf.21, B116 *Dimensions*: L: 37mm, W: 13-15mm. *Notes*:

- Plate of a tie-hook. Two rivet holes, but the rivets are missing.
23. Oberwinterthur *Context*: Field 121/14-26, 122/14-61, House 12B,D, Layer 360/1000, AD 90/100-200 *Inventory No.*: FK 4877 *Reference*: DESCHLER-ERB 1996: 289, Taf.22, 316 *Dimensions*: L: 28mm, W: 17mm, Th: 2mm, weight: 1 g. *Notes*: Plate portion of a tie-hook. The two rivets are present, although not placed symmetrically on the plate. The rivets are flat-headed.
  24. Oberwinterthur *Context*: Field 107/33, House 24B, Layer 0 *Inventory No.*: FK 3557 *Reference*: DESCHLER-ERB 1996: 289, Taf.22, 317 *Dimensions*: L: 23mm, W: 14mm, Th: 2mm, weight: 2 g. *Notes*: The plate portion of a tie-hook. One rivet remains, only.
  25. Oberwinterthur *Context*: Field 114/34-56, House 16D, 18B,C, Layer 300, sub-level 6, AD 70/130-50 *Inventory No.*: FK 4615 *Reference*: DESCHLER-ERB 1996: 289, Taf.22, 318 *Dimensions*: L: 26mm, W: 15mm, Th: 1mm, weight: 1g. *Notes*: Plate portion of a tie-hook. No rivets remain and the object is much damaged and corroded.
  26. Oberwinterthur *Context*: Field 101/14-36, Layer 1000, AD 130/150-200/230 *Inventory No.*: FK 2862 *Reference*: DESCHLER-ERB 1996: 289, Taf.22, 319 *Dimensions*: L: 13mm, W: 12mm, Th: 3mm, weight: 1 g. *Notes*: Damaged tie-hook. There are no rivets and no decorative features.
  27. Rheingönheim *Context*: not recorded *Inventory No.*: not recorded *Reference*: ULBERT 1969: Taf.52, 8 *Dimensions (from scale drawing)*: L: 41mm, W: 10mm *Notes*: Somewhat damaged tie-hook. There are no remaining rivets.
  28. Silchester *Context*: Insula XXIII, Pit 10, dated late 1st CAD. *Inventory No.*: – *Reference*: BOON 1969: 44 & 45, Fig.5,2 *Dimensions (from scale drawing)*: L: 53mm *Notes*: Cuirass tie-hook that appears to be in an unfinished condition, as there are no visible rivet holes.
  29. Straubing *Context*: not recorded *Inventory No.*: 3261 *Reference*: WALKE 1956: 149 & Taf.99, No.6 *Dimensions (from scaled photo)*: L: 43mm, W: 15mm *Notes*: Broken tie-hook with two intact rivets. The end of the plate appears to have been cut in a double scallop.
  30. Windisch *Context*: unstratified *Inventory No.*: None *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 680 *Dimensions (from scale drawing)*: L: 45mm, W: 13mm *Notes*: Corroded tie-hook with circular decoration to the rivet holes.
  31. Windisch *Context*: trench of 1898, opposite corner of the *Principia*, Tribune's house? *Inventory No.*: 263b *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 683 *Dimensions (from scale drawing)*: L: 60mm, W: 11mm *Notes*: Damaged tie-hook. Sides are parallel and the holes decorated with punched concentric rings. This hook is very long and narrow.
  32. Windisch *Context*: unstratified *Inventory No.*: None *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 695 *Dimensions (from scale drawing)*: L: 54mm, W: 7mm *Notes*: Very elongated hook, with only a single rivet in place and only one hole in the plate. The hook is also small.
  33. Windisch *Context*: trench at 'New Pavilions' site *Inventory No.*: 422 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 697 *Dimensions (from scale drawing)*: L: 28mm, W: 11mm *Notes*: Broken hook. The sides are tapered, but no rivets remain in place.
  34. Windisch *Context*: trench of 1936, central area of courtyard of *Praesidium* building.] *Inventory No.*: 36:1759 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 710 *Dimensions (from scale drawing)*: L: 43mm, W: 8mm *Notes*: Corroded hook, which nevertheless retains both dome-headed rivets.
  35. Windisch *Context*: rubbish dump *Inventory No.*: 5028 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 711 *Dimensions (from scale drawing)*: L: 38mm, W: 11mm *Notes*: Damaged hook, torn through second rivet hole. No rivets remain.
  36. Windisch *Context*: rubbish dump *Inventory No.*: 503 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 713 *Dimensions (from scale drawing)*: L: 88mm, W: 15mm *Notes*: Two rivets remain in this tie-hook. The loop itself appears to have been straightened out.
- ### Hvi
1. Buciumi *Context*: not recorded *Inventory No.*: not recorded *Reference*: CHIRILA *et al.*, 1972: Pl. CXV, 2 *Dimensions*: L: 30mm *Notes*: Broken fragment of a tie-hook, which retains a single rivet.
  2. Caerleon *Context*: Period 2a *Inventory No.*: not recorded *Reference*: MURRAY-THREIPLAND 1969: 111 & 110, Fig.9, 12 *Dimensions (from scale drawing)*: L: 15mm, W: 6.5mm *Notes*: A small portion of a tie-hook, broken off at the loop.
  3. Caerleon *Context*: Phases IIIa *Inventory No.*: 160 *Reference*: ZIENKIEWICZ 1986a: 111, 110 Fig.39, 18 *Dimensions*: L: 27mm *Notes*: Incomplete tie-hook, retaining one of the two square-headed rivets. Construction is from a flat metal strip, one end of which was rolled into a tube then bent into a loop.
  4. Caerleon *Context*: unstratified, 1969 excavations *Inventory No.*: not recorded *Reference*: ZIENKIEWICZ 1986b: 188-9 & Fig.64, 190 *Dimensions (from scale drawing)*: L: 17mm, W: 6mm *Notes*: Part of a girdle plate tie-hook loop.
  5. Caerleon *Context*: Block B, Phase III *Inventory No.*: 1777 (1807) *Reference*: EVANS & METCALF 1992: 115-6,

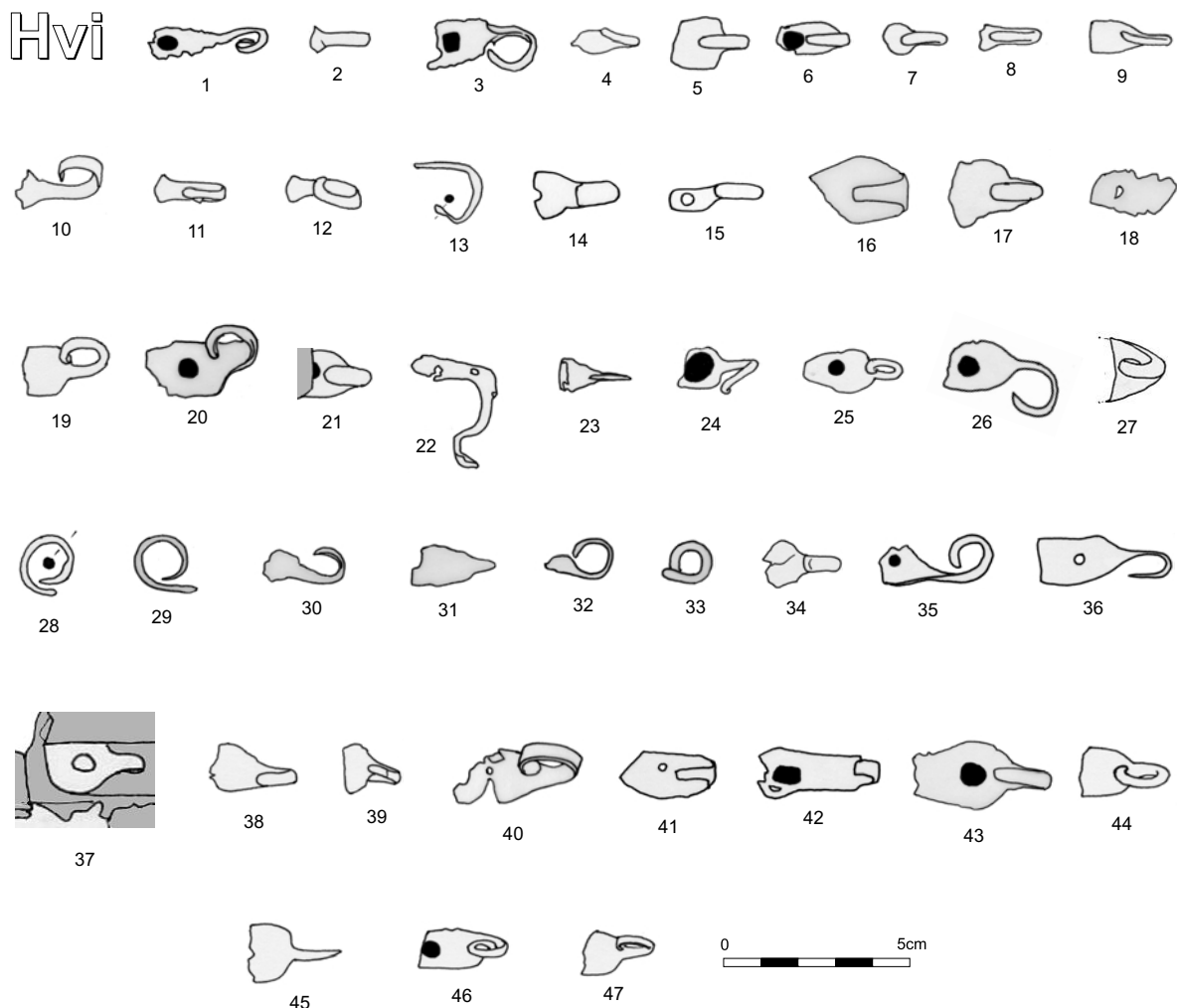




**Fig. 65:** Category H (tie loops) of Type v. Scale 1:2

- No.34 *Dimensions (from scale drawing):* L: 20mm, W: 13mm *Notes:* Fragment of loop portion of the fitment.
6. Caerleon *Context:* Block A, Phase I/II *Inventory No.:* 2616 (1735) *Reference:* EVANS & METCALF 1992: 115-6, 35 *Dimensions (from scale drawing):* L: 20mm, W: 14mm *Notes:* Stated that the rivet is bronze.
7. Caerleon *Context:* Block A, Phase I/II *Inventory No.:* 1572 (1742) *Reference:* EVANS & METCALF 1992: 115-6, No.36 *Dimensions (from scale drawing):* L: 17mm, W: 9mm *Notes:* Fragment of hook.
8. Caerleon *Context:* Block A, Phase IV *Inventory No.:* 1963 (1661) *Reference:* EVANS & METCALF 1992: 115-6, No.37 *Dimensions (from scale drawing):* L: 16mm, W: 7mm *Notes:* Fragment of tie hook.
9. Caerleon *Context:* Rampart area, Phase IV *Inventory No.:* 700 (854) *Reference:* EVANS & METCALF 1992: 115-6, No.38 *Dimensions (from scale drawing):* L: 21mm, W: 7mm *Notes:* Viewed from the rear it shows that the hook/loop portion was formed from a piece of sheet metal tapered to a narrow strand at one end and then rolled backwards to form the hook.
10. Caerleon *Context:* Block A, Phase IV *Inventory No.:* 1514 (1203) *Reference:* EVANS & METCALF 1992: 115-6, No.39 *Dimensions (from scale drawing):* L: 22mm, W: 8mm *Notes:* Fragment with a slightly different pattern. The hook is longer than the previous examples. Rolling a flat sheet, not by hammering from the sides before rolling has formed the loop.

11. Caerleon *Context*: Block A, Phase IV *Inventory No.*: 1361 (1482) *Reference*: EVANS & METCALF 1992: 116, No.40 *Dimensions (from scale drawing)*: L: 18mm, W: 7mm *Notes*: Similar fragment to the above.
12. Caerleon *Context*: Unstratified *Inventory No.*: 271 (323) *Reference*: EVANS & METCALF 1992: 116, No.41 *Dimensions (from scale drawing)*: L: 20mm, W: 7mm *Notes*: Similar to the above.
13. Caerleon *Context*: Block A, Phase IV *Inventory No.*: 1921 (1441) *Reference*: EVANS & METCALF 1992: 116, No.42 *Dimensions (from scale drawing)*: L: 18mm *Notes*: Small fragment of hook.
14. Caernarfon *Context*: Period 6A *Inventory No.*: 2172, SF1100 *Reference*: CASEY, DAVIES & EVANS 1993: 200 & Fig.10.18, No. 415(k) *Dimensions*: L: 23mm, W (max): 12mm *Notes*: Copper alloy girdle plate tie hook, broken through the top rivet hole.
15. Site Caernarfon: *Context*: Period 6A *Inventory No.*: 2172, SF1100 *Reference*: CASEY, DAVIES & EVANS 1993: 200 & Fig.10.18, No. 415(ab) *Dimensions*: L: 21mm, W (max): 3.5mm. *Notes*: Part of the hook of a girdle plate tie-hook.
16. Carlisle *Context*: - *Inventory No.*: - *Reference*: McCARTHY 1990: 120, Fig.109, 54 *Dimensions (from scale drawing)*: L: 26mm, W: 17mm *Notes*: Possible portion of a tie-hook.
17. Castleford *Context*: not recorded *Inventory No.*: 172 T14; CN32; SF239; 1c *Reference*: COOL & PHILO 1998: Fig.21, 224 *Dimensions*: L: 26mm, W: 21mm, Ht: 15mm, D (int): 8mm *Notes*: Broken loop portion of a tie-hook.
18. Castleford *Context*: not recorded *Inventory No.*: 073 T15II; CN34; SF108(C); 1c *Reference*: COOL & PHILO 1998: Fig.21, 225 *Dimensions*: L: 26mm, W: 15mm *Notes*: Broken loop portion of a tie-hook.
19. Chichester *Context*: 786 *Inventory No.*: A 121 *Reference*: DOWN 1989: Fig.27.5, 83 *Dimensions (from scale drawing)*: L: 22mm, W: 13mm *Notes*: Broken loop portion of a tie hook. The break has occurred through the top rivet hole, which has the surrounding ring decoration.
20. Colchester (Sheepen) *Context*: unstratified, from ploughsoil *Inventory No.*: not recorded *Reference*: NIBLETT 1985: 43 & 127, Fig.71, No.95 *Dimensions (from scale drawing)*: L (fitment only): 29mm, W: 14mm *Notes*: Copper alloy girdle tie-hook, broken through the second rivet hole and with a portion of armour plate still adhering. There is one rivet.
21. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.55 *Dimensions (from scale drawing)*: L (visible portion only): 16mm, W: 12mm *Notes*: Hook from Cuirass ii, a lower right-hand assembly from a Type-A cuirass, rear side. The overlying armour covers much of this hook.
22. Dangstetten *Context*: find group 183 *Inventory No.*: 183.1 *Reference*: FINGERLIN 1986: 72 & 288 *Dimensions*: cannot be determined due to condition. *Notes*: Bronze fitment, with two rivet holes. Much damaged.
23. Dangstetten *Context*: find group 504 *Inventory No.*: 504, 2 *Reference*: FINGERLIN 1986: 184 & 416 *Dimensions*: L (approx.): 18mm *Notes*: Small fragment of a tie-hook.
24. Exeter *Context*: trough *Inventory No.*: TS 984 *Reference*: HOLBROOK & BIDWELL 1991: 244 & 243 Fig.108, 4 *Dimensions*: L: 21mm, W: 10.5mm. D (rivet head): 7mm *Notes*: Incomplete tie-hook still attached to a fragment of girdle plate by a rivet with a very large disc head.
25. Hod Hill *Context*: not recorded *Inventory No.*: not recorded *Reference*: RICHMOND 1968: Pl.42 *Dimensions (from scaled photo, approx.)*: L: 26mm, W: 11mm *Notes*: Loop portion of a tie-hook. One rivet remains, but much of the plate is missing.
26. Hofheim *Context*: not recorded *Inventory No.*: 18304 *Reference*: RITTERLING 1913: Taf. XI, 5 *Dimensions (from scale photo)*: L (plate): 17mm, W (plate): 13mm *Notes*: Top portion of a tie-hook. The plate has broken between the two rivet holes.
27. Lincoln *Context*: Period 5/6, rampart heightening *Inventory No.*: P70 Ae8 *Reference*: JONES 1999: 150 & Fig.63, 24 *Dimensions*: L: 16mm, W: 16mm *Notes*: Top loop of a tie-hook, the bottom part of which has broken away and been lost.
28. Loughor *Context*: Phase 12, post abandonment ditch fills. (Context Group No.385) *Inventory No.*: 114.69\020 (077) *Reference*: MARVELL & OWEN-JOHN 1977: 262 & 261 Fig.98.114 *Dimensions*: D: 13.6 by 16.3mm *Notes*: Loop section of a girdle plate tie-hook.
29. Oberstimm *Context*: not recorded *Inventory No.*: 1975.35 *Reference*: SCHÖNBERGER 1978: 170 & Taf.21, B118 *Dimensions*: D: 14mm. *Notes*: Hook portion of a tie-hook.
30. Oberstimm *Context*: not recorded *Inventory No.*: 1975.178 *Reference*: SCHÖNBERGER 1978: 170 & Taf.21, B119 *Dimensions*: L: 21mm, W (max): 8mm. *Notes*: Broken tie-hook.
31. Oberstimm *Context*: not recorded *Inventory No.*: 1975.306 *Reference*: SCHÖNBERGER 1978: 170 & Taf.21, B120 *Dimensions*: L: 22mm, W: 11mm. *Notes*: Badly corroded loop portion of a tie-hook.



**Fig. 66:** Category H (tie loops) of Type vi. Scale 1:2

32. Oberstimm *Context:* not recorded *Inventory No.:* 1975.159 *Reference:* SCHÖNBERGER 1978: 170 & Taf.21, B121 *Dimensions:* D: 11mm *Notes:* The broken loop of a tie-hook.
33. Oberstimm *Context:* not recorded *Inventory No.:* 1975.121 *Reference:* SCHÖNBERGER 1978: 170 & Taf.21, B122 *Dimensions:* D: 11mm *Notes:* The broken loop of a tie-hook.
34. Oberwinterthur *Context:* Field 42/41-66, Layer 1000, sub-level 6, AD 80-130/50 *Inventory No.:* FK 949 *Reference:* DESCHLER-ERB 1996: 289, Taf.22, 315 *Dimensions:* L: 20mm, W: 14mm, Th: 2mm, weight: 1g. *Notes:* Top loop portion of a tie-hook.
35. Porolissum *Context:* not recorded *Inventory No.:* MIAZ Inv.CC 193/58 *Reference:* GUDEA 1989: Pl. CCLX, 18 *Dimensions (from scale drawing):* L: 29mm *Notes:* Top (loop) portion of a tie-hook. There may be a small rivet remaining.
36. Risstissen *Context:* not recorded *Inventory No.:* 3070 *Reference:* ULBERT 1959: 106 & Taf.61, 3 *Dimensions (from scale drawing):* L: 35mm, W: 12mm *Notes:* Damaged tie-hook, having broken through the second rivet hole.
37. Risstissen *Context:* Fortress 1/2, immediately beneath the soil level (158). *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 25, 61 & Taf.5, 90 *Dimensions:* L: 17mm, W: 13mm. *Notes:* As above, although this hook is broken.
38. South Shields *Context:* Topsoil find *Inventory No.:* not recorded *Reference:* ALLASON-JONES & MIKET 1983: Fig.68, 10 *Dimensions:* L: 37mm, W: 14mm. *Notes:* Labeled as an 'escutcheon' in the reference, but has all the form of a tie-hook.
39. South Shields *Context:* topsoil find *Inventory No.:* not recorded *Reference:* ALLASON-JONES & MIKET 1983: Fig.68, 11 *Dimensions:* L: 14mm, W: 12mm *Notes:* Similar to the above.

40. Wimborne *Context*: Lake Farm, not recorded otherwise *Inventory No.*: not recorded *Reference*: FIELD 1992: 21, Fig.2.2, (b) *Dimensions (approx., from photo)*: L: 34mm, W: 14mm *Notes*: Badly damaged girdle plate tie hook. No rivets remain and bending the plate, rather than hammering flat from the sides has formed the hook.
41. Windisch *Context*: Königsfelden, (barrack block, near to modern church *Inventory No.*: 61:639 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 674 *Dimensions (from scale drawing)*: L: 25mm, W: 13mm *Notes*: Broken (?) tie-hook, with only a single rivet hole.
42. Windisch *Context*: trench of 1935, part of *Principia* building, location No.10 *Inventory No.*: 35:698 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 682 *Dimensions (from scale drawing)*: L: 32mm, W: 13mm *Notes*: One rivet survives. It appears that the plate of this fitment has broken about half way down its length.
43. Windisch *Context*: rubbish dump *Inventory No.*: 4309 *Reference*: UNZ & DESCHLER-ERB 1997: Taf.32, 707 *Dimensions (from scale drawing)*: L: 36mm, W: 18mm *Notes*: Broken tie-hook. The sides appear to taper. One dome-headed rivet remains. The hook portion is very thick compared to the plate.
44. Woodcock Hall *Context*: small plateau between two streams, south of the river. *Inventory No.*: 218 *Reference*: BROWN 1978: 49 & Fig.30, 218 *Dimensions (from scale drawing)*: L: 23mm, W: 13mm *Notes*: The top loop portion of a tie-hook. There are no decorative features evident.
45. Woodcock Hall *Context*: small plateau between two streams, south of the river. *Inventory No.*: 219 *Reference*: BROWN 1978: 49 & Fig.30, 219 *Dimensions (from scale drawing)*: L: 24mm, W: 15mm *Notes*: Top portion of a tie-hook, the plate having broken through the top rivet hole. The loop has a circular cross section and has also broken off short.
46. Woodcock Hall *Context*: small plateau between two streams, south of the river. *Inventory No.*: 220 *Reference*: BROWN 1978: 49 & Fig.30, 220 *Dimensions (from scale drawing)*: L: 23mm, W: 10mm *Notes*: Top portion of a tie-hook, which retains one of the two rivets. The loop appears to have been formed by curling the plate, rather than by folding over from the sides.
47. Site Woodcock Hall: *Context*: small plateau between two streams, south of the river. *Inventory No.*: 221 *Reference*: BROWN 1978: 49 & Fig.30, 221 *Dimensions (from scale drawing)*: L: 18mm, W: 12mm *Notes*: Top portion of a tie-hook, formed by curling the plate (the loop has a flat cross section). There are no decorative features.

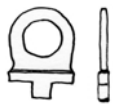
# Category 'I': Tie-Rings

## Contents

*Tie-rings from the following sites are recorded here:* Aldborough (GBR), Bad Deutsch-Altenberg (AUT), Caerleon (GBR), Caerwent (GBR), Carlisle (GBR), Chester (GBR), Chichester (GBR), Dalton Parlours (GBR), Gloucestershire (GBR), Komarno (SVK), Lorch-bei-Enns (AUT), Manchester (GBR), South Shields (GBR)

## Ii

1. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf. XVIII, 30 *Dimensions (from scale drawing):* L: 19mm, W: 15mm, Th: 3mm, Int. D: 8mm *Notes:* Very regularly shaped casting, with rectangular shank and pronounced shoulder.
2. Bad Deutsch-Altenberg *Context:* Armoury? *Inventory No.:* not recorded *Reference:* *ibid:* Taf. XVIII, 31 *Dimensions (from scale drawing):* L: 24mm, W: 17mm, Th: 3mm, Int. D: 10mm *Notes:* Symmetrical casting, with rectangular shank. The loop portion is formed with a slight waist.
3. Caerleon *Context:* Building 13, Phase 1, floor of room 13.1. Late 3rd/early 4th century. Riding School field site, N end of Mill Street. *Inventory No.:* 7.30 947/SG130 (853) *Reference:* EVANS *et al.*, 2000: 371 & Fig.90, No.130 *Dimensions:* L: 24.7mm, W: 14.4mm *Notes:* Unfinished cuirass fastening loop, with tang not yet trimmed to size.
4. Caerleon *Context:* unstratified, Cambria House site. *Inventory No.:* [7.53] 2002/ (2047) *Reference:* EVANS *et al.*, 2000: 373 & Fig.90, No.134 *Dimensions:* L: 25.7mm, W: 17.1mm *Notes:* Well-made loop, with very thin side to the loop portion.
5. Caerleon *Context:* Block A, Phase IV, ca. AD 160 *Inventory No.:* 1149 (1105) *Reference:* EVANS & METCALF 1992: 117-8, Fig.45 *Dimensions:* Int. D: 8mm, Ext. D: 14mm (taken parallel with the basal rib, the internal diameter vertically and horizontally). *Notes:* Basal rim clearly moulded on both sides of the fitting. The shank is short and flat.
6. Caerleon *Context:* Block A, Phase IV, ca. AD 160 *Inventory No.:* 501 (603) *Reference:* EVANS & METCALF 1992: 117-8, Fig.46 *Dimensions:* Int. D: between 8 and 9mm, Ext. D: 14mm *Notes:* Basal rim clearly moulded on both sides of the fitting. The shank is short and flat.
7. Caerleon *Context:* Block A, Phase IV, ca. AD 160 *Inventory No.:* 1963 (1676), *Reference:* EVANS & METCALF 1992: 117-8, Fig.47 *Dimensions:* Int. D: 8mm, Ext. D: 15mm. *Notes:* Basal rim clearly moulded on both sides of the fitting. The shank is short and flat.
8. Caerleon *Context:* Block A, Phase V, ca. AD 275-300 *Inventory No.:* 1959 (1603) *Reference:* EVANS & METCALF 1992: 118-9, Fig.48 *Dimensions:* Int. D: 10mm, Ext. D: 17mm *Notes:* Basal rib clearly moulded on one side, but more sketchily on the other. There is a short flat shank.
9. Caerleon *Context:* Block A, Phase V, ca. AD 275-300 *Inventory No.:* 1432 (1119) *Reference:* EVANS & METCALF 1992: 117-8, Fig.49 *Dimensions:* Int. D: 9mm, Ext. D: 16mm. *Notes:* Somewhat crudely formed with the short, flat shank eccentrically aligned with the hole in the ring.
10. Caerleon *Context:* Block B, Phase V, ca. AD 275-300 *Inventory No.:* 1361 (1446) *Reference:* EVANS & METCALF 1992: 117-8, Fig.50 *Dimensions:* Int. D: 8mm, Ext. D: 14mm. *Notes:* Badly corroded. Short, flat and heavy shank.
11. Caerleon *Context:* Unstratified *Inventory No.:* 126 (434) *Reference:* EVANS & METCALF 1992: 117-8, Fig.51 *Dimensions:* Int. D: 5mm. *Notes:* Very small tie-ring.
12. Caerleon *Context:* Block B, Phase III, ca. AD 100 *Inventory No.:* 2517 (1714) *Reference:* EVANS & METCALF 1992: 118, Fig.64 *Dimensions:* Int. D: 11mm, Ext. D: 18mm. Shaft: 8mm *Notes:* Clearly modelled basal rib with a shaft, which consists of an upper, slightly flared and faceted portion of polygonal cross section, with a narrower shaft of circular section below.
13. Caerleon *Context:* as above *Inventory No.:* 11/12 *Reference:* ZIENKIEWICZ 1986: p.175-6, Fig.57,31 *Dimensions:*



i Circular with a basal transverse rib extending beyond the line of the junction and with a short, flat shank of rectangular cross section



ii As for (i), but with a shank of circular, or near circular, section



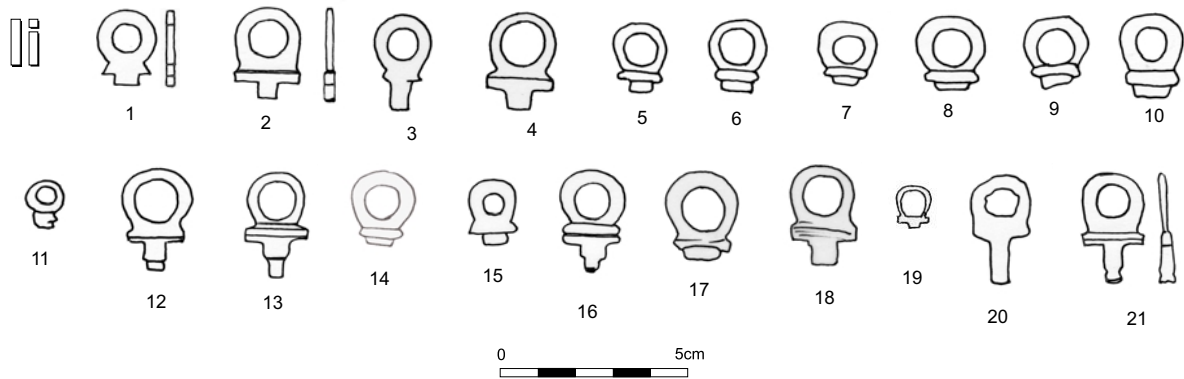
iii 'D' shaped, with shanks of rectangular cross section



iv As for (iii), but more elongated to give a 'U' shape, with shanks of rectangular cross section



v Others, not covered by the above criteria



**Fig. 67:** Category I (tie rings) of Type i. Scale 1:2

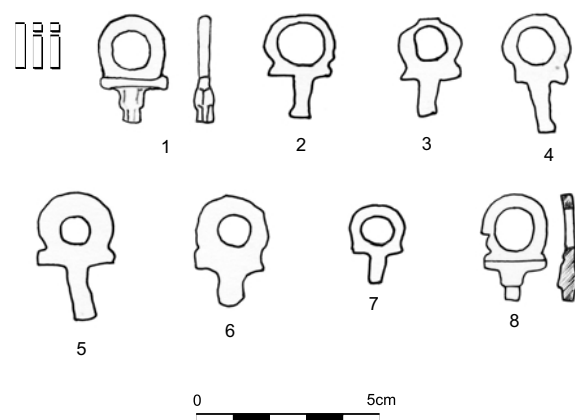
L: 28mm *Notes:* It does not appear to have been used as the shank has not been burred over.

14. Caerleon *Context:* Vicinity of the fortress baths, then known as the 'castle villa'. *Inventory No.:* not recorded *Reference:* LEE 1862: 67 & Pl. XXXIV, 13 *Dimensions (from scale drawing):* L (overall): 20mm, W: 15mm *Notes:* recorded in the catalogue of the 'Museum of Antiquities' at Caerleon and originally misinterpreted as being a handle for some object.
15. Chester *Context:* undated deposit *Inventory No.:* not recorded *Reference:* NEWSTEAD 1928: Pl.IX, 11 *Dimensions (from scale drawing):* H: 17mm, W (max): 12mm *Notes:* Rectangular cross section to the shank. The loop portion has a pronounced 'waist'.
16. Chester *Context:* undated deposit *Inventory No.:* not recorded *Reference:* NEWSTEAD 1928: Pl.IX, 12 *Dimensions (from scale drawing):* H: 27mm, W (max): 16mm *Notes:* A complex shank design is evident on this specimen.
17. Chester *Context:* not recorded *Inventory No.:* 215.R.1977 *Reference:* DROOP & NEWSTEAD 1931: Pl. XLVIII, 105 *Dimensions:* L: 19mm *Notes:* Rectangular section to the shank, with a pronounced basal ridge.
18. Gloucestershire, *Context:* Birdlip Quarry, unstratified *Inventory No.:* sf 1536, ctx 1210 *Reference:* MUDD *et al* 1999: 388-9, Fig.7.23, 541 *Dimensions:* L: 26mm *Notes:* Cast tie-ring. There is no burring of the tang, which would indicate that the loop has not been used.
19. Komarno *Context:* not recorded *Inventory No.:* c.II-4646 *Reference:* DORA & PRISKA n.d.: 14 & 25, Taf.7, 34 *Dimensions:* Int. D: 7.7mm. *Notes:* A very small tie-ring.
20. Manchester *Context:* Phase 3c, vicus, 819 *Inventory No.:* 3150 *Reference:* BRYANT *et al.* 1986: Fig.5.5 *Dimensions:* L: 33mm, W: 18mm *Notes:* Long shank to this specimen. Square section, though tending towards 'roundness'.
21. South Shields *Context:* not recorded *Inventory No.:* SS.1900.23(5) TWCMS B9822 *Reference:*

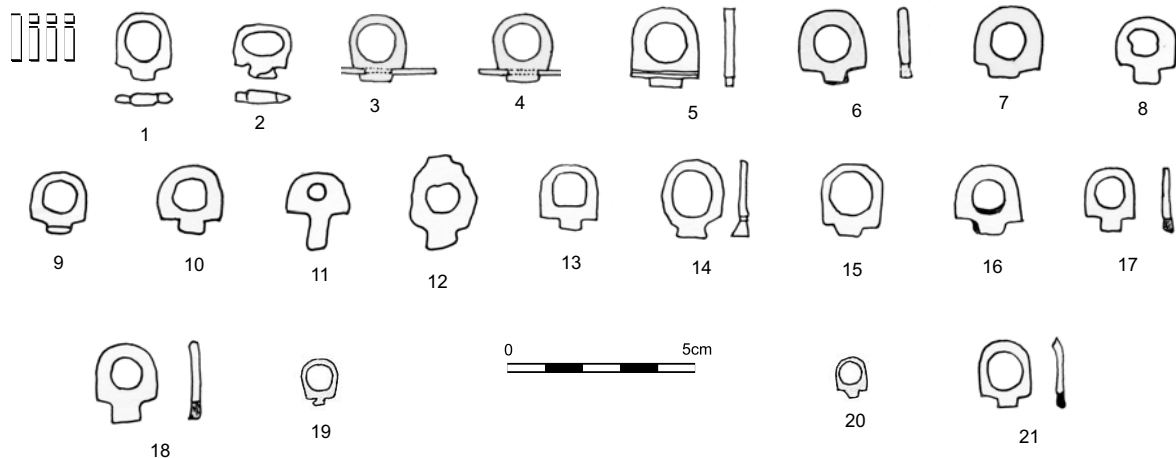
ALLASON-JONES & MIKET 1984: 208 & Fig.3,689 *Dimensions:* H: 29mm, W: 15mm, Th: 2mm *Notes:* Bronze ring, flat with a rectangular grooved bar and a square cross-section projection. There is a pronounced basal ridge.

### iii

1. Aldborough *Context:* Not recorded *Inventory No.:* 81418318 *Reference:* BISHOP (1996): 67-69 Fig.37, 417 *Dimensions:* H: 29.5mm, W: 19mm, Int. D: 10mm, Shank 5.5mm *Notes:* Copper alloy cast loop with a hexagonal, trending to circular, shank.
2. Caerleon *Context:* Block A, robbing *Inventory No.:* 206 (440) *Reference:* EVANS & METCALF 1992: 117-8, Fig.52 *Dimensions:* Int. D: 12mm, Ext. D: 18mm. Shaft 12mm *Notes:* Stout shaft of circular cross-section. The line of the shaft is at an angle to the fitting.
3. Caerleon *Context:* Block A, Phase V, ca. AD 275-300 *Inventory No.:* 1904 (1424), *Reference:* EVANS & METCALF 1992: 117-8, Fig.53 *Dimensions:* Int. D: 10mm, Ext. D: 17mm *Notes:* The line of the shaft is at an angle to the fitting.
4. Caerleon *Context:* Block C, Phase V, ca. AD 275-300 *Inventory No.:* 395 (631) *Reference:* EVANS & METCALF 1992: 117-8, Fig.54 *Dimensions:* Int. D: 10mm, Ext. D:

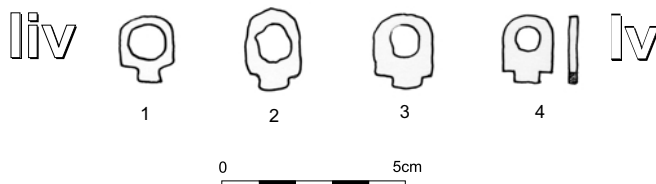


**Fig. 68:** Category I (tie rings) of Type ii. Scale 1:2



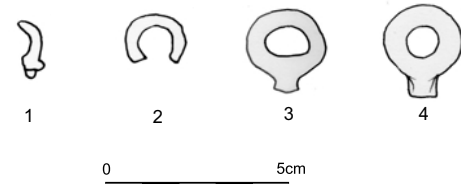
**Fig. 69:** Category I (tie rings) of Type iii. Scale 1:2

- 18mm, Shaft 14mm *Notes:* Stout shaft with a circular cross section. The line of the shaft is to one side.
5. Caerleon *Context:* Block B, Phase IV, ca. AD 160 *Inventory No.:* 1012 (964) *Reference:* EVANS & METCALF 1992: 117-8, Fig.55 *Dimensions:* Int. D: 8mm, Ext. D: 19mm., Shaft 15mm *Notes:* Stout, circular section shaft. Line of the shaft describes a slight curve.
  6. Caerleon *Context:* Block B, Phase IV, ca. AD 160 *Inventory No.:* 1440 (1234) *Reference:* EVANS & METCALF 1992: 117-8, Fig.56 *Dimensions:* Int. D: 9mm, Ext. D: 18mm. Shaft 10mm *Notes:* Badly corroded. This example has a stout shaft, of roughly circular section.
  7. Caerleon *Context:* Block A, Phase VI, post AD 350 *Inventory No.:* 254 (244) *Reference:* EVANS & METCALF 1992: Fig.65, 118 *Dimensions:* Int. D: of 8mm, Ext. D: 14mm. Shank 8mm *Notes:* Polygonal section to the shaft, which is at a very slight angle to the fitting.
  8. Carlisle *Context:* Blackfriars Street excavation, Building 2, Period 10, late 4th or 5th century. *Inventory No.:* BLA B267 Ae 118 *Reference:* McCARTHY 1990: 120 & 122, Fig.109,48 *Dimensions:* L (min): 28mm *Notes:* The shank has a noticeable taper and is of circular cross section. Made of a leaded copper alloy.
- iii**
1. Aldborough *Context:* Not recorded *Inventory No.:* 81418432 *Reference:* BISHOP 1996: 67-69 Fig.37, 418 *Dimensions:* L: 14mm, W: 14.5mm, Th: 2mm, Int. D: 10mm *Notes:* Squat example of a copper alloy cast loop, rectangular in section. There may be traces of tinning on the object.
  2. Aldborough *Context:* Not recorded *Inventory No.:* 81418432 *Reference:* BISHOP 1996: 67-69, Fig.37, 419 *Dimensions:* L: 18mm, W: 15.5mm, Th: 3mm, Int. D: 9mm. *Notes:* Rectangular section copper alloy loop with integral rectangular lug. Little or no wear on the object indicating little use.
  3. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: 2, 15-84, Taf. XVIII, 27 *Dimensions (from scale drawing):* L: 16mm, W: 17mm, Th: 3mm, Int. D: 10mm *Notes:* Tie-ring still *in situ* on the armour plate.
  4. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf. XVIII, 28 *Dimensions (from scale drawing):* L: 16mm, W: 17mm, Th: 3mm, Int. D: 10mm *Notes:* Tie ring still attached to a section of armour plate.
  5. Bad Deutsch-Altenberg *Context:* Armoury *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf. XVIII, 29 *Dimensions (from scale drawing):* L: 21mm, W: 17mm, Th: 3mm, Int. D: 11mm *Notes:* Very regularly formed casting, with short rectangular shank.
  6. Bad Deutsch-Altenberg *Context:* unstratified *Invoice No.* 432/69 *Reference:* GRÜNEWALD 1981: 23, Taf. 18, 20 *Dimensions (from scale drawing):* L: 18mm, W: 18mm, Int. D: 10mm. *Notes:* Copper alloy tie-ring, with short tang at the base.
  7. Caerleon *Context:* Buildings 21 & 22, abandonment, 4th century. Cambria House site, S end of Mill Street. *Inventory No.:* 7.63 2459/SG168 (2591) *Reference:* EVANS *et al*, 2000: 373 & Fig.90, No.133 *Dimensions:* L: 18.5mm, W: 17mm *Notes:* Very short shank to the loop, possibly broken off.
  8. Caerleon *Context:* Block A, Phase IV, ca. AD 160 *Inventory No.:* 1509 (1237) *Reference:* EVANS & METCALF 1992: 117-8, Fig.57 *Dimensions:* Int. D: 7mm, Ext. D (across the base line) 16mm *Notes:* Poorly formed tie-ring, definitely D-shaped rather than circular, however.
  9. Caerleon *Context:* Block B, Phase IVA, ca. AD 160 *Inventory No.:* 1389 (1408) *Reference:* EVANS & METCALF 1992: 117-8, Fig.58 *Dimensions:* Int. D: 8.5mm, Ext. D



**Fig. 70:** Category I (tie rings) of Type iv. Scale 1:2

- (across the base line) 14mm *Notes:* A very symmetrical loop, very thin.
10. Caerleon *Context:* Block B, Phase III, ca. AD 100 *Inventory No.:* 1777 (1803) *Reference:* EVANS & METCALF 1992: 117-8, Fig.59 *Dimensions:* Int. D: 8.5mm, Ext. D (across the base line): 16mm *Notes:* Flat shank of rectangular section.
  11. Caerleon *Context:* Block B, Phase IV, ca. AD 160 *Inventory No.:* 1063 (1046) *Reference:* EVANS & METCALF 1992: 117-8, Fig.60 *Dimensions:* Int. D: 5mm, Ext. D (across the base line): 16mm. Shank approx. 10mm long. *Notes:* Shaft cross section is polygonal. Flat shank at an angle to the fitting as a whole.
  12. Caerleon *Context:* Block B, Phase III, ca. AD 100 *Inventory No.:* 1731 (1377) *Reference:* EVANS & METCALF 1992: Fig.66, 118-9 *Dimensions:* Int. D: 8mm, Ext. D. (across the base): 14mm *Notes:* There are signs of hammering.
  13. Caerleon *Context:* Drain Group 4, upper sediments and dated c. AD 160-230, but including material from the end of the 3rd century. *Inventory No.:* 11 *Reference:* ZIENKIEWICZ 1986: 175-6, & Fig.57,29 *Dimensions:* L: 18mm *Notes:* somewhat crudely made, with very short shank.
  14. Caerleon *Context:* as above *Inventory No.:* 4 *Reference:* ZIENKIEWICZ 1986: 175-6, Fig.57, 30 *Dimensions:* L: 21mm *Notes:* Very short shank to this example.
  15. Caerleon *Context:* Unstratified *Inventory No.:* not recorded *Reference:* MURRAY-THREIPLAND 1966: 48 & Fig.5, 9 *Dimensions (from scale drawing):* L: 19mm, W: 15.5mm, Int. D: 11mm. *Notes:* Described as 'bronze eyelet'. Very short tang and a somewhat angular outer profile to the loop.
  16. Caerleon *Context:* Barrack VI, Room 7, on clay floor, 3rd century. *Inventory No.:* not recorded *Reference:* FOX 1939: 136 & Fig.8, 36 *Dimensions (from scale drawing):* L: 18mm, W: 18mm, Int. D: 10mm *Notes:* Described as 'bronze eyelet'. Three other examples were found in a 3rd century context, Period III (not illustrated).
  17. Chichester *Context:* Area 5 *Inventory No.:* P.114 *Reference:* DOWN 1978: 299 & Fig.10.35, 81 *Dimensions (from scale drawing):* H: 16.5mm, W: 13mm, Th: 3mm (max), Int. D: 8mm *Notes:* Very short tang on this specimen.



**Fig. 71:** Category I (tie rings) of Type v. Scale 1:2

18. Dalton Parlours *Context:* Structure 'M' (layer 1422), largest building on the site, SE of the main residential block. *Inventory No.:* SF 873 *Reference:* WRATHMELL & NICHOLSON 1990: 81, 86 & 87, Fig.70,28 *Dimensions:* L: 28mm, W: 16mm, shank section 7 x 3mm *Notes:* Simple, rectangular shank, slightly burred to one side at the end.
19. Komarno *Context:* not recorded *Inventory No.:* c.II-4789 *Reference:* DORA & PRISKA n.d.: 14 & 25, Taf.7, 39 *Dimensions:* Int. D: 9mm. *Notes:* A very small tie-ring.
20. Komarno *Context:* not recorded *Inventory No.:* c.II-1488 *Reference:* DORA & PRISKA n.d.: 14 & 25, Taf.7, 44 *Dimensions:* Int. D: 6.7mm. *Notes:* A very small tie-ring.
21. South Shields *Context:* not recorded *Inventory No.:* MA 1929.119(89); (1956.128.69.A) *Reference:* ALLASON-JONES & MIKET 1984: 208 & Fig.3,691 *Dimensions:* H: 17mm, W: 14mm, Th: 3mm *Notes:* Bronze, semi-oval flat ring with a rectangular section played projection from the base.

#### liv

1. Caerleon *Context:* Unstratified *Inventory No.:* 271 (302) *Reference:* EVANS & METCALF 1992: 117-8, Fig.61 *Dimensions:* Int. D: 9mm, Ext. D (across the base line): 14mm *Notes:* Short, flat shank of rectangular cross section, showing signs of having been hammered.
2. Caerleon *Context:* Block C, robbing *Inventory No.:* 409 (617) *Reference:* EVANS & METCALF 1992: 117-8 & Fig.62, *Dimensions:* Int. D: 9mm, Ext. D. (across the base line): 14mm *Notes:* Short, flat shank of rectangular cross section, showing signs of having been hammered.
3. Caerleon *Context:* Block B, Phase III/IV, ca. AD 100-160 *Inventory No.:* 2351 (1582) *Reference:* EVANS & METCALF 1992: 118, Fig.63, *Dimensions:* Int. D: 9mm, Ext. D. (across the base line): 15mm *Notes:* Short, flat shank of rectangular cross section, showing signs of having been hammered.
4. Lorch-bei-Enns *Context:* not recorded *Inventory No.:* not recorded *Reference:* von GROLLER 1910, 40 & Fig.14,9 *Dimensions (from scale drawing):* H: 18mm, W: 13mm, Th: 2.5mm, Int. D: 8mm. *Notes:* Short tang, appears very symmetrical.

#### Iv

1. Caerleon *Context:* Block B, Phase VI, post AD 350 *Inventory No.:* 452 (400) *Reference:* EVANS & METCALF



- 1992: Fig.67, p.118-9 *Dimensions*: L: 15mm, W: 6.5mm  
*Notes*: Fragment of a tie ring.
2. Caerleon *Context*: Unstratified *Inventory No.*: 183 (388)  
*Reference*: EVANS & METCALF 1992: Fig.68, p.118-9  
*Dimensions*: Int. D: 9mm, Ext. D: 15mm *Notes*: Fragment.
3. Caerwent *Context*: House No.8, room 14 (VIII.N), find No.146, pit. *Inventory No.*: 85.112.2 *Reference*: THOMAS
- (forthcoming) *Dimensions*: L (overall): 23mm, W: 22mm, Th (max): 6mm *Notes*: This is a very crudely cast fitment, with the inner part much thinner than the edges, as though it has shrunk in the mould.
4. Caerwent *Context*: not recorded *Inventory No.*: 85.115.7  
*Reference*: THOMAS (forthcoming) *Dimensions*: L (overall): 24mm, D: 21mm, Th: 4-2mm *Notes*: A perfectly flat tie-ring, with a slightly thicker tongue portion.

# Category 'J': Decorative Washers

## Contents

*Decorative armour washers from the following sites are included here:* Bad Deutsch-Altenberg (AUT), Caernarfon (GBR), Chester (GBR), Chichester (GBR), Colchester (GBR), Corbridge (GBR), Kaiseraugst (CHE), Longthorpe (GBR), Nijmegen (NLD), Richborough (GBR), Rissstissen (DEU), Silchester (GBR), Windisch (CHE)

## Ji

1. Bad Deutsch-Altenberg *Context:* Armoury building *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf. 19, Fig.65 *Dimensions (from scale drawing):* W (max): 15mm *Notes:* Central portion of a decorative washer, still attached to some armour plate.
2. Bad Deutsch-Altenberg *Context:* Armoury building *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf. 19, Fig.66 *Dimensions (from scale drawing):* D (max): 25mm *Notes:* decorative washer, with a small amount of armour plate still adhering behind.
3. Caernarfon *Context:* From a pit (2172), at the end of Period 6A, sealed beneath a Period 7 floor. Room X of the courtyard building SS2. Hadrianic-?early Antonine. *Inventory No.:* 415 *Reference:* CASEY, DAVIS & EVANS 1993: 200 & Fig.10.18, 415j *Dimensions:* D (of washer): 12mm, H (total): 5mm *Notes:* Fragment of an iron cuirass plate with an embossed disc washer with a 'pelleted' border around a dome-headed rivet. From the upper shoulder guard.
4. Caernarfon *Context:* as above *Inventory No.:* 415 *Reference:* CASEY, DAVIS & EVANS 1993: 200 & Fig.10.18h *Dimensions:* D (of washer): 26mm, D (of boss): 7mm *Notes:* Large copper alloy embossed washer decorated with a repoussé design of small pellets around the edge and longer pellets around the dome-headed rivet. From the upper shoulder guard.
5. Chichester *Context:* Pit B62 *Inventory No.:* 1314 *Reference:* DOWN 1989: 202 & Fig.27.6, 89 *Dimensions (from scale drawing):* D: 19mm *Notes:* Enamelled stud/washer
6. Chichester *Context:* Area 2, Pit L.101 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, i *Dimensions (from scale drawing):* D: 24mm *Notes:* Decorative washer attached to armour plate, above which is a lobate hinge.
7. Chichester *Context:* Pit X 133 *Inventory No.:* 366 *Reference:* DOWN 1981: 166 & Fig.8.30, 5 *Dimensions (from scale drawing):* D: 31mm *Notes:* Part of a decorative washer, the diameter is estimated only.
8. Colchester (Sheepen) *Context:* Period Ivb *Inventory No.:* not recorded *Reference:* NIBLETT 1985: 113 & 134, Fig.78, 17 *Dimensions:* D (washer boss only): 20mm *Notes:* Damaged copper alloy decorative washer, still attached to a portion of the armour plate.
9. Corbridge *Context:* As above *Inventory No.:* 71 *Reference:* ALLASON-JONES & BISHOP 1988: 32, Fig.32 *Dimensions:* D: 28mm, D (raised relief): 22mm, D (rivet head): 7mm *Notes:* From Cuirass 2, upper shoulder guard, end plate. This washer shows a series of repoussé decorations arranged in a circle around the central boss.
10. Corbridge *Context:* As above *Inventory No.:* 71 *Reference:* ALLASON-JONES & BISHOP 1988: 32, Fig.32 *Dimensions:* D (max): 27mm, D (rivet head): 8mm *Notes:* From Cuirass 2, upper shoulder guard, the central plate. There is a series of repoussé panels arranged around the central boss, which is borderless.
11. Corbridge *Context:* As above *Inventory No.:* 72 *Reference:* ALLASON-JONES & BISHOP 1988: 35, Fig.36 *Dimensions:* D: 32mm *Notes:* From Cuirass 3, upper shoulder guard, end plate. The original design was evidently of a ring of elongated shapes around a central boss.
12. Corbridge *Context:* As above *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 4 *Dimensions:* D (approx.): 30mm, D (rivet): 9mm *Notes:* From Cuirass 5, upper shoulder guard, end plate. A series of small panels surrounds the central boss.
13. Kaiseraugst *Context:* Region 16, A, unstratified *Inventory No.:* 1963.8043; FK X02928 *Reference:* DESCHLER-ERB 1999: Taf.15, 265 *Dimensions:* D: 21mm, Th: 1mm *Notes:* Decorative washer, almost complete, still attached to a small section of armour plate. Weight 0.52g.



i Petal design, arranged concentrically around central rivet



ii 'Segmented' design, arranged concentrically around central rivet



iii Indeterminate, too corroded or indistinct to classify

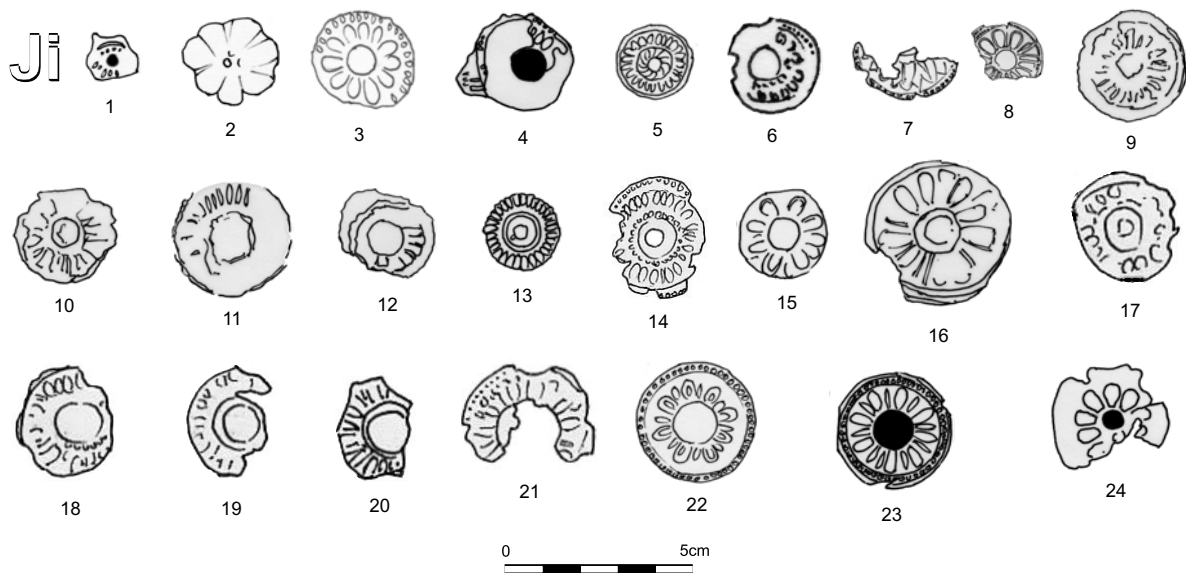
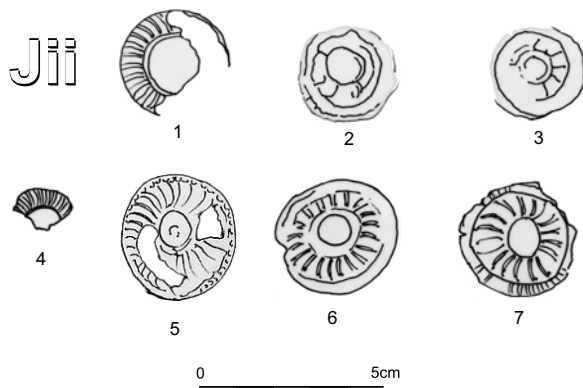


Fig.72: Category J (decorative washers) of Type i. Scale 1:2

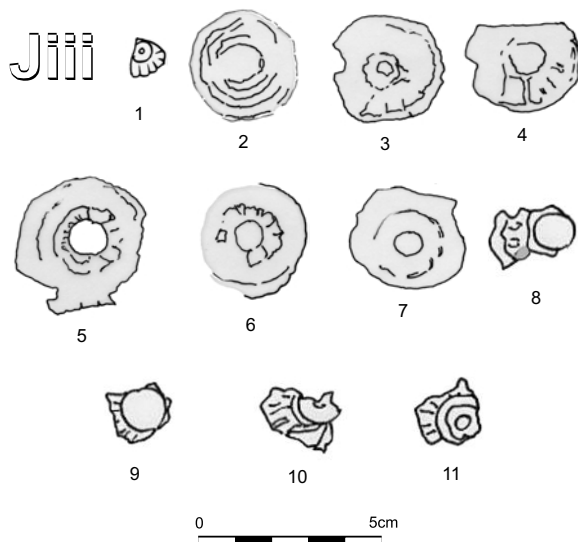
14. Longthorpe *Context*: upper filling of ditch and Pit 1 and N corner of Yard 1 (Claudio-Neronian assemblage) *Inventory No.*: 71.53.4 SF 58 *Reference*: DANNELL & WILD 1987: 89 & 86, Fig.22, 22 *Dimensions (from scale drawing)*: D: 32mm *Notes*: Damaged decorative washer, with the centre portion missing.
15. Nijmegen *Context*: not recorded *Inventory No.*: CA.1973.95.md *Reference*: BOGAERS & HALLEBOS 1977: 186 & 187, Fig.23, 3 *Dimensions (from scale drawing)*: D (washer only): 23mm *Notes*: A bronze decorative washer, still attached to some armour plate.
16. Richborough *Context*: as above *Inventory No.*: not recorded *Reference*: BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(b) *Dimensions (from scale photo)*: D (approx.): 37mm *Notes*: an almost complete washer, with iron armour plate still attached.
17. Risstissen *Context*: Fortress 1/2, level 158, immediately below the soil level. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 26, 61 & Taf.5, 93 *Dimensions*: D: 31mm, Th: 4mm *Notes*: Washer decorated with repoussé work, bronze. A small piece of armour remains attached.
18. Risstissen *Context*: Fortress 1/2, level 158, immediately below the soil level. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 94 *Dimensions*: D: 30mm *Notes*: Decorative bronze armour washer, damaged.
19. Risstissen *Context*: Fortress 1/2, level 158, immediately below the soil level. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 95 *Dimensions*: D: 30mm *Notes*: Decorative washer with some damage. There is a small amount of armour adhering still.
20. Risstissen *Context*: Fortress 1/2, level 158, immediately below the soil level. *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 96 *Dimensions*: D: 32mm *Notes*: Part of a decorative washer, somewhat damaged.
21. Risstissen *Context*: At a depth of 60-90cm, in the western corner of the level (12). *Inventory No.*: R 66/39 *Reference*: ULBERT 1970: 33, 52 & Taf.12, 208 *Dimensions*: D: 36mm *Notes*: Bronze decorative washer, much damaged.
22. Silchester *Context*: Insula XXIII, Pit 10, dated late 1st CAD *Inventory No.*: not recorded *Reference*: BOON 1969: 44 & 45, Fig.5, 1 *Dimensions (from scale drawing)*: D: 30mm *Notes*: Complete decorative washer.
23. Windisch *Context*: 1923 excavation, rubbish dump, Site No.41 *Inventory No.*: 23:? *Reference*: UNZ & DESCHLER-ERB 1997: 29 & Taf.31, 636 *Dimensions (from scale drawing)*: D: 26mm *Notes*: Decorative washer, with a small portion of armour plate still attached by the central rivet.
24. Windisch *Context*: 1928 excavation, Find site 23 *Inventory No.*: 28.2633 or 31? *Reference*: UNZ & DESCHLER-ERB 1997: 66 & Taf.31, 638 *Dimensions (from scale drawing)*: D: 28mm (fitment only, excluding armour plate). *Notes*: Decorative washer, with a small portion of armour plate still attached by the central rivet.

**Jii**

1. Chester *Context*: Site LXXXVI, King's Buildings *Inventory No.*: not recorded *Reference*: NEWSTEAD 1928: 91 & Pl. IX, 5 *Dimensions (from scale drawing)*: D: 28mm *Notes*: Large decorative washer, of which only a portion



**Fig. 73:** Category J (decorative washers) of Type ii. Scale 1:2



**Fig. 74:** Category J (decorative washers) of Type iii. Scale 1:2

- survives attached to the armour plate, which also bears a leathering washer.
2. Corbridge *Context:* SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 28, Fig.28 *Dimensions:* D: 25mm, including 19mm of embossed detail and a rivet head of D 10mm. *Notes:* From Cuirass 1, upper shoulder guard, central plate. Much corroded washer with central boss and at least three concentric rings.
  3. Corbridge *Context:* As above *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 41, Fig.43 *Dimensions:* D: 24mm *Notes:* From Cuirass 5, collar plate assembly, upper back plate. Very similar design to the above.
  4. Kaiseraugst *Context:* Region 17, B, unstratified *Inventory No.:* 1990.1.C06492.1 *Reference:* DESCHLER-ERB 1999: Taf.15, 266 *Dimensions:* L: 16mm, W: 13mm, Th: 1mm *Notes:* Section of a decorative washer with some armour plate still adhering to the rear. Weight 0.12g.
  5. Longthorpe *Context:* *Praetentura*, Pit 8, between barracks. *Inventory No.:* 73 II 8 *Reference:* FRERE & ST. JOSEPH 1974: 46 & 47, Fig.25, 16 *Dimensions (from scale drawing):* L: 33mm, W: 30mm. *Notes:* Large decorative washer, still attached to armour plate although somewhat damaged. Thought to be from the left chest guard plate.
  6. Richborough *Context:* Area VIII, in a deposit of heavily burnt material overlying a clay floor about 12-ins thick. It lay N of the main E/W road, immediately to the W of the defences of the 3rd century earth fort. Dated AD 55-75 *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39 *Dimensions (from scale photo):* D (approx.): 30mm *Notes:* Decorative washer, still with a considerable portion of armour plate attached.
  7. Richborough *Context:* as above *Inventory No.:* not recorded *Reference:* BUSHE-FOX 1932: 15, 82 & Pl. XII, Fig.2, 39(b) *Dimensions (from scale photo):* D (approx.): 29mm *Notes:* an almost complete washer, with iron armour plate still attached.
- Jiii**
1. Bad Deutsch-Altenberg *Context:* Armoury building *Inventory No.:* not recorded *Reference:* von GROLLER 1901a: Taf. 19, Fig.67 *Dimensions (from scale drawing):* W (max): 10mm *Notes:* Central portion of a decorative washer, together with the armour backing.
  2. Corbridge *Context:* As above *Inventory No.:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 28, Fig.28 *Dimensions:* D: 27mm, including 17mm of embossed detail and a rivet head D 10mm. *Notes:* from Cuirass 1, upper shoulder guard, end plate. Badly corroded, but showing a series of concentric rings.
  3. Corbridge *Context:* As above *Inventory No.:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 38, Fig.40 *Dimensions:* D: 29mm, rivet D: 4mm *Notes:* From Cuirass 4, upper shoulder guard, end plate. Little remains of the original design.
  4. Corbridge *Context:* As above *Inventory No.:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 38, Fig.40 *Dimensions:* D: 30mm, rivet D: 9mm *Notes:* From Cuirass 4, upper shoulder guard, central plate. The decoration comprised a number of small panels around the central boss.
  5. Corbridge *Context:* As above *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 42, Fig.44 *Dimensions:* D (approx.): 30mm, D (rivet): 9mm *Notes:* From Cuirass 5, upper shoulder guard, end plate. The centre of this decorative washer appears to have corroded away, together with much of the design.
  6. Corbridge *Context:* As above *Inventory No.:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 42, Fig.44 *Dimensions:* D (approx.): 35mm, D (rivet): 10mm *Notes:*

- From Cuirass 5, upper shoulder guard, central plate.  
Little remains of this washer.
7. Corbridge *Context:* As above *Inventory No.:* 75 *Reference:* ALLASON-JONES & BISHOP 1988:47, Fig.49 *Dimensions:* D (overall): 25mm, decorated portion: 18mm, D (rivet): 7mm *Notes:* From Cuirass 6, collar plate, upper rear back plate. Little remains of the original design here.
8. Ristissen *Context:* Fortress 1/2, level 158, immediately below the soil level. *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 27, 61 & Taf.5, 97 *Dimensions:* D: 32mm *Notes:* Small portion of a decorative washer.
9. Ristissen *Context:* Fortress 1/2, level 158, immediately below the soil level. *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 27, 61 & Taf.5, 98 *Dimensions:* 11mm *Notes:* Remains of a decorative washer. There remains a small amount of armour beneath the washer.
10. Ristissen *Context:* Fortress 1/2, level 158, immediately below the soil level. *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 27, 61 & Taf.5, 99 *Dimensions:* L (max): 15mm *Notes:* Remains of a decorative washer, with a small amount of armour plate beneath.
11. Ristissen *Context:* Fortress 1/2, level 158, immediately below the soil level. *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 27, 61 & Taf.5, 100 *Dimensions:* L (max): 15mm *Notes:* Remains of a decorative washer.

# Category 'K': Leathering Washers/Roves

## Contents

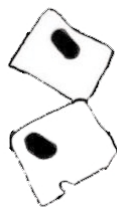
*Leathering washers/roves from the following sites are included here:*  
Bad Deutsch-Altenburg (DEU), Caerleon (GBR), Caernarfon (GBR), Corbridge (GBR), Risstissen (DEU)

## Ki

1. Bad Deutsch-Altenberg *Context:* Armoury, Building VI *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf XIX, Fig.65 *Dimensions (from scale drawing):* L: 13mm, W: 11mm *Notes:* An approx. square rove, lying behind an armour plate from the shoulder protection. In front there is the remains of a decorated rivet.
2. Bad Deutsch-Altenberg *Context:* Armoury, Building VI *Inventory No.:* not recorded *Reference:* von GROLLER 1901: Taf XIX, Fig.68 *Dimensions (from scale drawing):* L: 15mm, W: 12mm, rivet D: 5mm *Notes:* An approx. square rove, lying behind a section of armour plate.
3. Caerleon *Context:* earlier that ca. AD 100/110 *Inventory No.:* 1180:B *Reference:* ZIENKIEWICZ 1986: 173 & 174, Fig.56, 3 *Dimensions:* L: 12mm *Notes:* The rivet has a washer/rove under the burred end to prevent it tearing through the leather strap.
4. Caerleon *Context:* earlier that ca. AD 100/110 *Inventory No.:* 1180:B *Reference:* ZIENKIEWICZ 1986: 173 & 174, Fig.56, 4 *Dimensions:* L: 12mm *Notes:* Similar to the above.
5. Corbridge *Context:* SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 26, Fig.26 *Dimensions (from scale drawing):* (rove only) L: 22mm, W: 20mm *Notes:* From the lower back plate of Cuirass 1. The rove is approximately rectangular in shape.
6. Corbridge *Context:* As above. *Inventory No:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 26, Fig.26 *Dimensions (from scale drawing):* (rove only) L: 19mm, W (max visible): 15mm *Notes:* From the middle back plate of Cuirass 1. This washer appears to have been broken at the corner although the shape is approximately rectangular.
7. Corbridge *Context:* As above. *Inventory No:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 28, Fig.28 *Dimensions (from scale drawing):* (rove only) L: 15mm, W: 14mm *Notes:* A virtually rectangular and almost intact rove, with some mineralised leather strap remaining beneath. Upper shoulder guard, Cuirass 1.
8. Corbridge *Context:* As above. *Inventory No:* 72 *Reference:* ALLASON-JONES & BISHOP 1988: 33, Fig.34 *Dimensions (from scale drawing):* (rove) L: 17mm, W: 15mm *Notes:* An almost intact leathering washer/rove with a part of a leather strap still beneath. Cuirass 3, upper back plate.
9. Corbridge *Context:* As above. *Inventory No:* 75 *Reference:* ALLASON-JONES & BISHOP 1988: 47, Fig.49 *Dimensions (from scale drawing):* (max. rove only) L: 20mm, W: 16mm *Notes:* An intact, almost rectangular, rove, with some leather strap remaining beneath. From the upper back plate of Cuirass 6.
10. Corbridge *Context:* As above. *Inventory No:* 75 *Reference:* ALLASON-JONES & BISHOP 1988: 47, Fig.49 *Dimensions (from scale drawing):* (rove) L (max): 21mm, W (max): 15mm *Notes:* A rectangular rove from the lower back plate of Cuirass 6. A small piece of leather strap remains in position beneath the rove.
11. Corbridge *Context:* As above. *Inventory No:* 75 *Reference:* ALLASON-JONES & BISHOP 1988: 47, Fig.49 *Dimensions (from scale drawing):* L (max): 22mm, W (max): 32mm *Notes:* From the central back plate of Cuirass 6. The leather strap here has two intact rivets, but only



i Rectangular, single rivet



ii Rectangular, two rivets



iii Pear or 'teardrop' shaped



iv Other shapes or indeterminate due to damage

one of which retains this large rove of approx. rectangular form.

12. Corbridge *Context*: As above. *Inventory No.*: 75 *Reference*: ALLASON-JONES & BISHOP 1988: 47, Fig.49 *Dimensions (from scale drawing)*: L (max): 26mm, W (max): 22mm *Notes*: From the lower back plate of Cuirass 6; this rove is damaged although a small piece of mineralised leather remains beneath it.

**Kii**

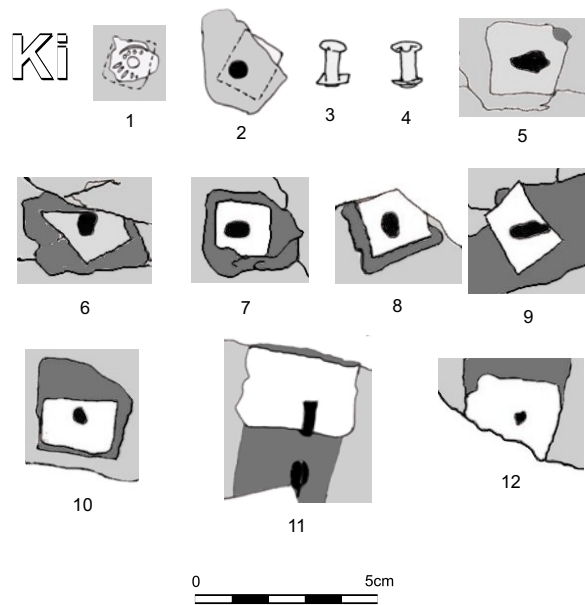
1. Caernarfon *Context*: From a pit (2172), at the end of Period 6A, sealed beneath a Period 7 floor. Room X of the courtyard building SS2. Hadrianic-?early Antonine. *Inventory No.*: 415 *Reference*: CASEY, DAVIS & EVANS 1993: 200 & Fig.10.18, 415(aj) *Dimensions (from scale drawing)*: (rove only) L: 27mm, W: 15mm *Notes*: Rectangular armour strip with two rivets and rove, from girth hoop.
2. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: - *Reference*: ALLASON-JONES & BISHOP 1988: 47, Fig.49 *Dimensions (from scale drawing)*: (roves only) (top) L: 22mm, W: 18mm, (bottom) L: 25mm, W: 20mm *Notes*: A strip of leather with two washers/roves in place. Both are approximately rectangular. From the centre back plate of Cuirass 6.

**Kiii**

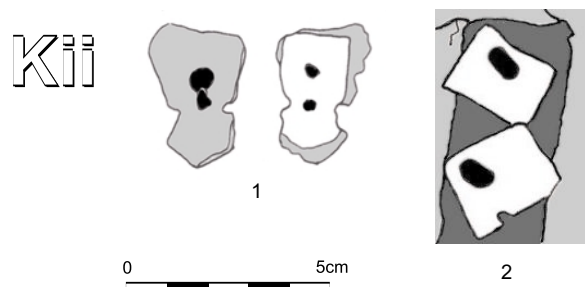
1. Caernarfon *Context*: From a pit (2172), at the end of Period 6A, sealed beneath a Period 7 floor. Room X of the courtyard building SS2. Hadrianic-?early Antonine. *Inventory No.*: 415 *Reference*: CASEY, DAVIS & EVANS 1993: 200 & Fig.10.18, 415j *Dimensions*: L (washer): 11mm, W: 7mm *Notes*: Iron cuirass plate fragment with a pear-shaped copper alloy sheet washer, secured with a copper alloy rivet.
2. Caernarfon *Context*: as above *Inventory No.*: 415 *Reference*: CASEY, DAVIS & EVANS 1993: 200 & Fig.10.18, 415n *Dimensions*: L (washer): 11mm, W: 8mm *Notes*: Rectangular armour plate, to which is fixed a pear-shaped bronze washer, secured with a copper alloy rivet.

**Kiv**

1. Chichester *Context*: Area 2, Kiln G.1 *Inventory No.*: 85B *Reference*: DOWN 1978: 299 & Fig.10, 36 iii *Dimensions (from scale drawing)*: L: 30mm, W: 27mm *Notes*: Fragment of iron plate with a copper alloy decorative rivet head in place. Behind the iron plate is an irregularly shaped fragment of bronze sheet serving as a rove.
2. Chichester *Context*: Area 2, Slot E.4 *Inventory No.*: 85B *Reference*: DOWN 1978: 299 & Fig.10, 36 iv *Dimensions (from scale drawing)*: L: 21mm, W: 17mm *Notes*: Fragment of iron plate with an ornamental rivet, backed by a roughly octagonal sheet of bronze as a rove.



**Fig. 75:** Category K (leathering washers/roves) of Type i. Scale 1:2

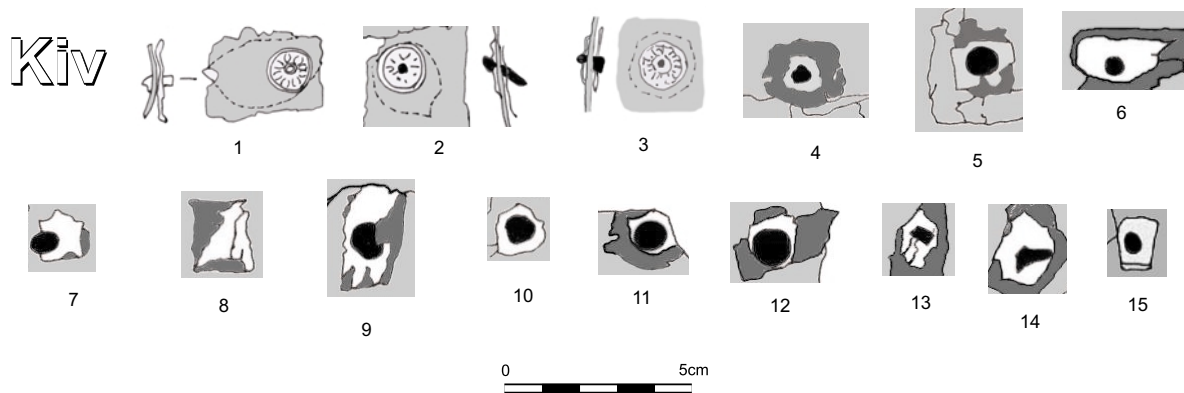


**Fig. 76:** Category K (leathering washers/roves) of Type ii. Scale 1:2



**Fig. 77:** Category K (leathering washers/roves) of Type iii. Scale 1:2

3. Chichester *Context*: Area 2, Slot E.4 *Inventory No.*: 85B *Reference*: DOWN 1978: 299 & Fig.10, 36 iv *Dimensions (from scale drawing)*: L: 16mm, W: 16mm *Notes*: Part of an iron plate with one of four decorative rivet heads. This one is backed by a rove, which is a roughly octagonal sheet of bronze.
4. Corbridge *Context*: SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 26, Fig.26 *Dimensions (from scale drawing)*: (rove only) L: 11mm, W: 10mm *Notes*: From the lower back plate of Cuirass 1. Much damaged, it is impossible to tell what the original shape of the rove was.
5. Corbridge *Context*: As above. *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 26, Fig.26 *Dimensions (from scale drawing)*: (rove only) L: 16mm, W:



**Fig. 78:** Category K (leathering washers/roves) of Type iv. Scale 1:2

- 12mm *Notes:* From the middle back plate of Cuirass 1. This washer appears to have been broken at the corner although the shape is approximately rectangular.
6. Corbridge *Context:* As above. *Inventory No:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 26, Fig.26 *Dimensions (from scale drawing):* (rove only) L: 26mm, W: 12mm *Notes:* From the upper shoulder guard of Cuirass 1.
7. Corbridge *Context:* As above. *Inventory No:* 72 *Reference:* ALLASON-JONES & BISHOP 1988: 36, Fig.37 *Dimensions (from scale drawing):* (rove) L: 13mm, W: 11mm, rivet D: 7mm *Notes:* From the lower shoulder guard of Cuirass 3.
8. Corbridge *Context:* As above. *Inventory No:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 38, Fig.40 *Dimensions (from scale drawing):* impossible to determine because of damage. *Notes:* From the upper shoulder guard of Cuirass 4.
9. Corbridge *Context:* As above. *Inventory No:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 38, Fig.40 *Dimensions (from scale drawing):* L (max): 27mm, W: 12mm, rivet D: 9mm *Notes:* From the central plate of the upper shoulder guard of Cuirass 4, backing a decorative rivet.
10. Corbridge *Context:* As above. *Inventory No:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 40, Fig.41 *Dimensions (from scale drawing):* L (max): 14mm, W (max): 12mm *Notes:* From the lower shoulder guard of Cuirass 4. Only a small, roughly circular, portion of the rove remains but there is no surviving leather strap here.
11. Corbridge *Context:* As above. *Inventory No:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 40, Fig.41 *Dimensions (from scale drawing):* (rove only) L (max): 15mm, W (max): 11mm *Notes:* From the lesser shoulder guard of Cuirass 4. Some leather strap remains beneath the rove.
12. Corbridge *Context:* As above. *Inventory No:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 44, Fig.46 *Dimensions (from scale drawing):* (rove) L (max): 14mm, W (max): 13mm *Notes:* From one of the long plates of the lesser shoulder guards of Cuirass 5. Most of the rove has broken away but there remains some of the leather strap beneath.
13. Corbridge *Context:* As above. *Inventory No:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 42, Fig.44 *Dimensions (from scale drawing):* (rove) L: 17mm, W: 11mm *Notes:* From the end plate of the upper shoulder guard of Cuirass 5. Much damaged, the original shape is impossible to determine.
14. Corbridge *Context:* As above. *Inventory No:* 74 *Reference:* ALLASON-JONES & BISHOP 1988: 42, Fig.44 *Dimensions (from scale drawing):* (max, rove only) L: 20mm, W: 14mm *Notes:* From the end plate of the upper shoulder guard of Cuirass 5. This rove is much damaged so that its original form cannot be seen.
15. Risstissen *Context:* Fortress 1/2, level 161, a large trench in the NW of the excavation. *Inventory No.:* R 68/28 *Reference:* ULBERT 1970: 28, 61 & Taf.7, 127 *Dimensions (from scale drawing):* D (rivet): 6mm, (rove) L: 14mm, W: 10mm *Notes:* A bronze leathering rivet (viewed from the rear side of the plate), which still retains a small piece of bronze, used as a washer/rove, to prevent the leather tearing through.

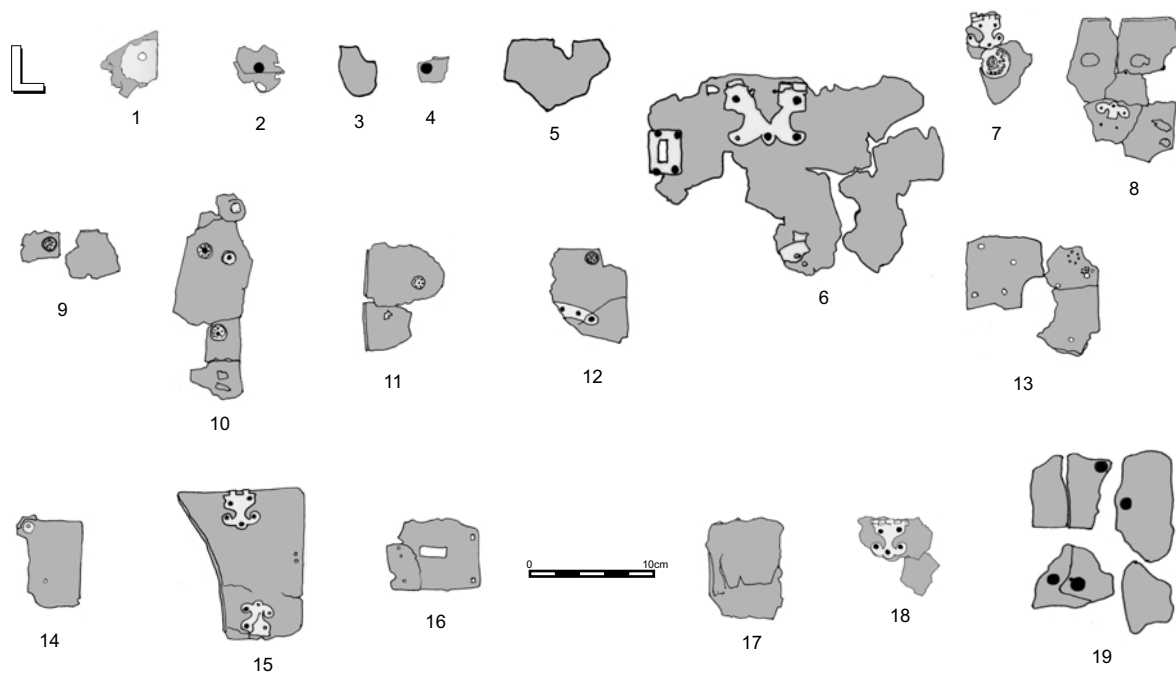


## Category 'L': Armour Fragments

### Contents

*Armour fragments from the following sites are included here. Note: ALL drawings in this section are one-third actual size:* Caerleon (GBR), Caernarfon (GBR), Carlisle (GBR), Chichester (GBR), Colchester (GBR), Corbridge (GBR), Dangstetten (DEU), Eining (DEU), Iža (SVK), Kalkriese (DEU), London (GBR), Longthorpe (GBR), Neuss (DEU), Newstead (GBR), Riststissen (DEU), Windisch (CHE), Zugmantel (DEU)

1. Caerleon *Context:* At the S end of Mill Street, post destruction use of the site of Buildings 3 & 5. Mid or late 2nd CAD to mid 3rd CAD. *Inventory No.:* [7.56] 2038/SG206 (2110) *Reference:* EVANS *et al* 2000: 371 & 372, Fig.90, 128 *Dimensions:* L (overall): 56mm, W: 44.3mm, (Copper alloy plate) L: 29.5mm, W: 26.3mm *Notes:* A square plate with a central hole, rivetted at the corners to a damaged iron sheet. This comes from a Newstead cuirass and is a part of one of the chest plates. The hole took a hook fixed to the upper girdle plate.
2. Caernarfon *Context:* From a pit (2172), at the end of Period 6A, sealed beneath a Period 7 floor. Room X of the courtyard building SS2. Hadrianic-?early Antonine. *Inventory No.:* 415 *Reference:* CASEY, DAVIES & EVANS 1993: 200, Fig.10.18, 415(l) *Dimensions:* D (of rivet head): 8mm *Notes:* Two pieces of armour plate, with a shaped edge, fastened together by a dome-headed copper alloy rivet. The hole of a second rivet is visible at one broken edge. Back plate.
3. Caernarfon *Context:* as above *Inventory No.:* 415 *Reference:* CASEY, DAVIES & EVANS 1993: 200 & Fig.10.18, (p) *Dimensions:* L: 38mm *Notes:* Fragment of iron cuirass plate with part of a raised rolled edge surviving.
4. Caernarfon *Context:* as above *Inventory No.:* 415 *Reference:* CASEY, DAVIES & EVANS 1993: 200 & Fig.10.18, (o) *Dimensions:* D (of rivet head): 9mm *Notes:* Iron cuirass fragment with a thickened edge. A single copper alloy rivet is in place.
5. Caernarfon *Context:* as above *Inventory No.:* 415 *Reference:* CASEY, DAVIES & EVANS 1993: 201 & Fig.10.18, (af) *Dimensions:* L: 83mm *Notes:* Large fragment of an iron cuirass plate with a thickened, rather than a rolled, edge.
6. Carlisle *Context:* 2nd stone fort (AD 183-320/30), from a soil deposit in the *intervallum* area, 4th and final phase *Inventory No.:* not recorded *Reference:* CARUANA 1993: 15-17 *Dimensions:* L: 50mm, W: 64mm. *Notes:* It appears to be a back plate from a 'Newstead' armour set. There is a large 'Carnuntum' style lobate-form shoulder hinge at the top (see Section 'J' for a more detailed view of this fitment). A rectangular slot on the left side is protected/decorated with a copper alloy plate, with four small rivets. On the centre-right at the bottom is another slot, partially surrounded with the remains of a copper alloy plate.
7. Chichester *Context:* Area 2, Pit L.101 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, I *Dimensions (from scale drawing):* L: 72mm, W: 52mm *Notes:* Fragment of a shoulder plate from the armour, with a bronze lobate hinge still attached. This hinge is folded back. Beneath the hinge is a decorative copper alloy stud for securing the leather strap (see Category 'K').
8. Chichester *Context:* area 2, G.59 *Inventory No.:* 85B *Reference:* DOWN 1978: 299, & Fig.10.36, ii *Dimensions (from scale drawing):* L: 114mm, W: 86mm *Notes:* Five fragments of armour plate, with part of a bronze lobate-form shoulder hinge (see Category 'F'). These may possibly come from the front shoulder plate or a Corbridge Type-B/C cuirass. There appears to be considerable concretion/corrosion product on the surface in places.
9. Chichester *Context:* Area 2, Kiln G.1 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, iii *Dimensions (from scale drawing):* Piece 1 - L: 30mm, W: 24mm, Piece 2 - L: 42mm, W: 38mm *Notes:* Two small fragments of iron sheet. One (the smaller) has a decorative rivet attached (see Section 'K').
10. Chichester *Context:* area 2, Slot E.4 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, iv *Dimensions (from scale drawing):* L: 161mm, W: 52mm *Notes:* Five pieces of armour plate, with four decorative rivets in place, two of which have octagonal washers behind them. This represents one of the lesser shoulder-guards. The number and positioning of the decorative rivets is unusual.
11. Chichester *Context:* Area 2, E.144 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, v *Dimensions (from scale drawing):* L: 84mm, W: 60mm *Notes:* Fragment, elements of two plates, one with a turned edge. One of the fragments has a decorative washer in place (see Section 'K').
12. Chichester *Context:* Area 2, Pit H.9 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.210.36, vi *Dimensions (from scale drawing):* L: 74mm, W: 60mm *Notes:* A fragment of iron plate, possibly split, with the remains of a bronze rivetted strap and a decorative washer/rivet head.



**Fig. 79:** Category L (armour fragments). Scale 1:6

13. Chichester *Context:* Area 2 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, vii *Dimensions (from scale drawing):* L: 102mm, W: 94mm *Notes:* Three fragments of iron plate, possibly armour. There are seven holes punched through and traces of two bronze rivet heads. A large jagged hole has been punched through the plate.
14. Chichester *Context:* Area 2, G.169 *Inventory No.:* 85B *Reference:* DOWN 1978: 299 & Fig.10.36, viii *Dimensions (from scale drawing):* L: 72mm, W: 50mm *Notes:* A curved fragment of iron plate, with one decorative rivet head in place.
15. Chichester *Context:* X 184 *Inventory No.:* 536 *Reference:* DOWN 1981: 163 & Fig.28, 2 *Dimensions (from scale drawing):* L: 120mm, W: 100mm *Notes:* Complete armour plate from the upper neck area. As this has two lobate hinges in place, it represents the joining plate between the chest/back plates. To protect the neck, the inside edge has been turned back and hammered down. All five rivets remain on the one hinge-plate, but only two on the other plate. Two small holes in the outer edge would have carried rivets for the underlying leather strap.
16. Chichester *Context:* X 155 *Inventory No.:* 435 *Reference:* DOWN 1981: 163 & Fig.28, 3 *Dimensions (from scale drawing):* L: 72mm, W: 56mm *Notes:* An iron plate, pierced with a rectangular slot. There are three small holes at one end and two rectangular holes at the other. Possibly the end of a 'Newstead' style girdle plate.
17. Chichester *Context:* Pit X 90 *Inventory No.:* 110 *Reference:* DOWN 1981: 163 & Fig.28, 4 *Dimensions (from scale drawing):* L: 78mm, W: 60mm, Th: 3.5mm *Notes:* A fragment of iron plate, which has been folded over. The folded over fragment (W: 60mm) has been cut away. It is of the right size and shape to be from the left shoulder piece of the armour.
18. Chichester *Context:* A 124 *Inventory No.:* 590 *Reference:* DOWN 1989: 202 & Fig.27.6, 85 *Dimensions (from scale drawing):* L: 62mm, W: 63mm *Notes:* Two fragments of iron plate, of which one retains a lobate form hinge (with all five rivets intact, and with concentric punched ring decoration to the rivet holes). From the shoulder plate of the armour.
19. Colchester *Context:* W. entrance area of Region 3 *Inventory No.:* not recorded *Reference:* HAWKES & HULL (1947): 338 & Fig.63, 3-6 *Dimensions (from scale drawing):* (largest piece): L: 86mm, W: 46mm *Notes:* Six small pieces of iron armour plate. At least four of them have bronze leathering rivets still in place.
20. Corbridge *Context:* SW corner of one of the rooms of a building of Phase 1, hospital or workshop. Deposited during Phase 2, dated AD 122-38. *Inventory No.:* 70 *Reference:* ALLASON-JONES & BISHOP 1988: 23 & 26, Fig.26 *Dimensions:* (overall) L: 384mm, W (max, lower back plate): 130mm, (breastplate) L (neck to bottom edge): 95mm, W: 90mm. The hinge of the lateral fastening buckle is 30mm from the (wearer's) left hand edge. Hinge of the vertical fastening strap is 65mm from the bottom edge of the plate. Distance from the hinge at the top of the breastplate to the bottom edge is c. 155mm. *Notes:* Cuirass 1 (Type-A), upper right-hand collar plate assembly, comprising chest plate, mid-collar plate, upper, middle and lower back plates. The

breastplate overlaps the mid collar plate, whereas it should lie under it. The disc headed rivet on the outer edge of the centre of the mid-collar plate retains a fragment of the central leather strap. There is one complete lobate-form hinge on the breastplate and a 1/2-hinge on the back plate (see Category 'F'). The buckle and strap fittings required for the breast- and back-plates are also present (see Categories 'A' and 'B', respectively). Surviving internal leather (for attaching the shoulder guards) on the rear face is c. 20mm wide. There is a fragment of the internal leathering on the rear face of the top back plate, which is 30mm wide.

21. Corbridge *Context*: As above *Inventory No.*: 70 *Reference*: ALLASON-JONES & BISHOP 1988: 23, 26 & 28, Fig.31 *Dimensions*: (overall) L: 460mm, W: 126mm. Lesser SG (largest plate) L: 410mm, W: 45-50mm. Lesser SG (shortest) L: 175mm, W: 45-50mm. The distance across the internal leathering rivets on the USG is c. 260mm, while for the LSG, total distance between the outer leathering rivets is c. 220mm on the largest plate and c. 160mm on the smallest. *Notes*: Cuirass 1 (Type A), shoulder guard assembly, comprising the three plates of the upper shoulder guard and four plates of the lesser shoulder guard.

The central plate of the upper SG has a pointed plate and is bent across its width. The pointed centre of the plate is directed away from the neck.

As with the upper SG, the lesser SG plates are bent at the front end. The traces of internal leather straps show widths of from 25 to 35mm.

22. Corbridge *Context*: As above *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 31, Fig.31 *Dimensions*: (breast-plate) L (from neck to bottom edge): 90mm, W: 80mm. Hinge of the lateral buckle, 30mm from left-hand edge. Hinge of vertical fastening strap is 70mm from the bottom edge of the plate. Distance of hinge at the top of the plate from the bottom is 175mm. *Notes*: Cuirass 2 upper right-hand collar plate assembly (Type-A), comprising four out of the five elements, i.e. a chest plate, mid-collar plate, upper back plate and a part of the central back plate.

The vertical fastening strap (see Category 'B') on the chest plate overlaps the lateral fastening and they share an end rivet. In the angle between the two is a decorated boss (see Category 'J'). The leathering on the rear face (W: 30mm) stretches from behind this boss to the rivet nearest to the hinge of the lateral hinged strap.

The front lobate hinge (see Category 'F') of the mid-collar plate is set close to the rolled collar. Fragments of leathering strap (c. 30mm wide) survive on the rear face.

The top back plate is attached directly to the mid collar plate and has a hinged strap. Leathering strap on the rear face is some 20mm wide.

23. Corbridge *Context*: As above *Inventory No.*: 71 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 32, Fig.32 *Dimensions*: (upper SG, centre plate) W: 70mm, (lesser SG, larger plate) L: 280mm, W: 60mm, (lesser SG,

smaller plate) L: 250mm, W: c. 60mm. Leathering rivets are 260mm across on the larger plate and 225mm on the smaller. *Notes*: Cuirass 2, shoulder guard assembly, comprising three plates of the upper SG and four of the lesser SG (the latter not illustrated).

The upper SG is a narrow, parallel-sided guard. The central plate has a borderless, decorated boss at the centre. A fragment of the end plate also has a decorated boss (see Category 'J'). The other end-plate has no such boss, just a domed rivet head. There is also a small piece of textile adhering to the surface of this plate.

The lobate hinges on the shoulder guard are both intact, with all ten rivets present on the lower one and nine on the upper (see Category 'F').

24. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29 & 33, Fig.34 *Dimensions*: (breast-plate) L (neck to bottom edge): 95mm, W: 95mm. Hinge of lateral fastening buckle c. 45mm from RH edge. Vertical fastening strap 65mm from bottom edge of the plate. L (top hinge to bottom hinge): c. 170mm. *Notes*: Cuirass 3 (Type-A), collar plate assembly, comprising three out of the five plates.

The lower lobate hinge is unusual (see Section 'F'), and appears to be a repair. Four large dome-headed rivets have been used and the two holes on the hinge's shoulders have not been used. One of the rivets has been hammered through the triangular cutout in the 1/2-hinge plate.

The hinge attaching the top back plate to the mid-collar plate is unusually large. There is a hinged buckle (see Category 'A') on this plate, with an internal leather strap (W: 15mm).

The chest plate, in addition to the lobate 1/2-hinge also retains a hinged buckle and the remains of a vertical strap fitting. Unusually, these two do not appear to have any rivets in common.

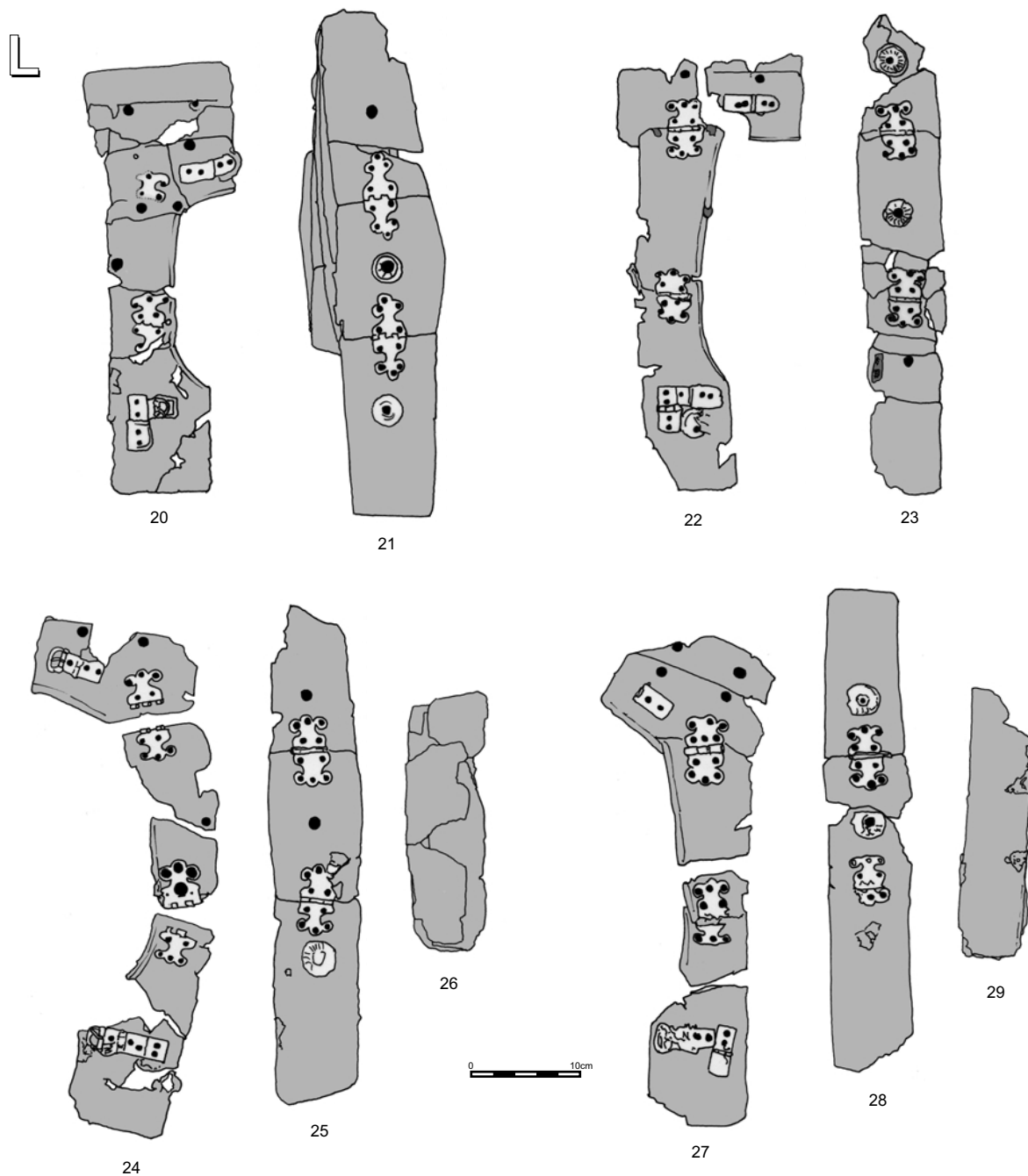
25. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 29, 34 & 35, Fig.36 *Dimensions*: Total distance across rivets for the internal leathering is c. 230mm. *Notes*: Cuirass 3, upper shoulder guards. This is a narrow USG. There is no decorated boss on the central plate, just a large dome-headed rivet (D: 10mm). A fragmentary leather strap, (W: 20mm), is adhering to the back of this.

One of the end plates also lacks a decorated boss, again employing a domed rivet (D: 9mm). There is an internal leather strap (W: 25mm).

The other end of the guard has a decorated boss (see Category 'J').

26. Corbridge *Context*: As above *Inventory No.*: 72 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 36, Fig.37 *Dimensions*: (Smallest plate) L: 180mm, W: 50mm. *Notes*: Cuirass 3, lesser shoulder guard assembly comprising four of the small plates.

Some fragments of string and textile adhere to the inside of the smallest plate.



**Fig. 80:** Category L (armour fragments). Scale 1:6

27. Corbridge *Context:* As above *Inventory No.:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 34 & 37, Fig.38 *Dimensions:* (breastplate) L (neck to bottom of plate): c. 90mm, W: 85mm. Hinge of lateral fastening buckle: 35mm from RH edge. Vertical fastening strap: 60mm from bottom *Notes:* Cuirass 4, (Type A), collar plate assembly comprising four out of five plates.

The vertical fastening strap is mounted at an angle and is slightly flexed. It has one large disc-headed rivet in the free element, suggesting a repair.

The mid-collar plate has disc-headed rivets (D:

8mm) on the underside and on the outer edge.

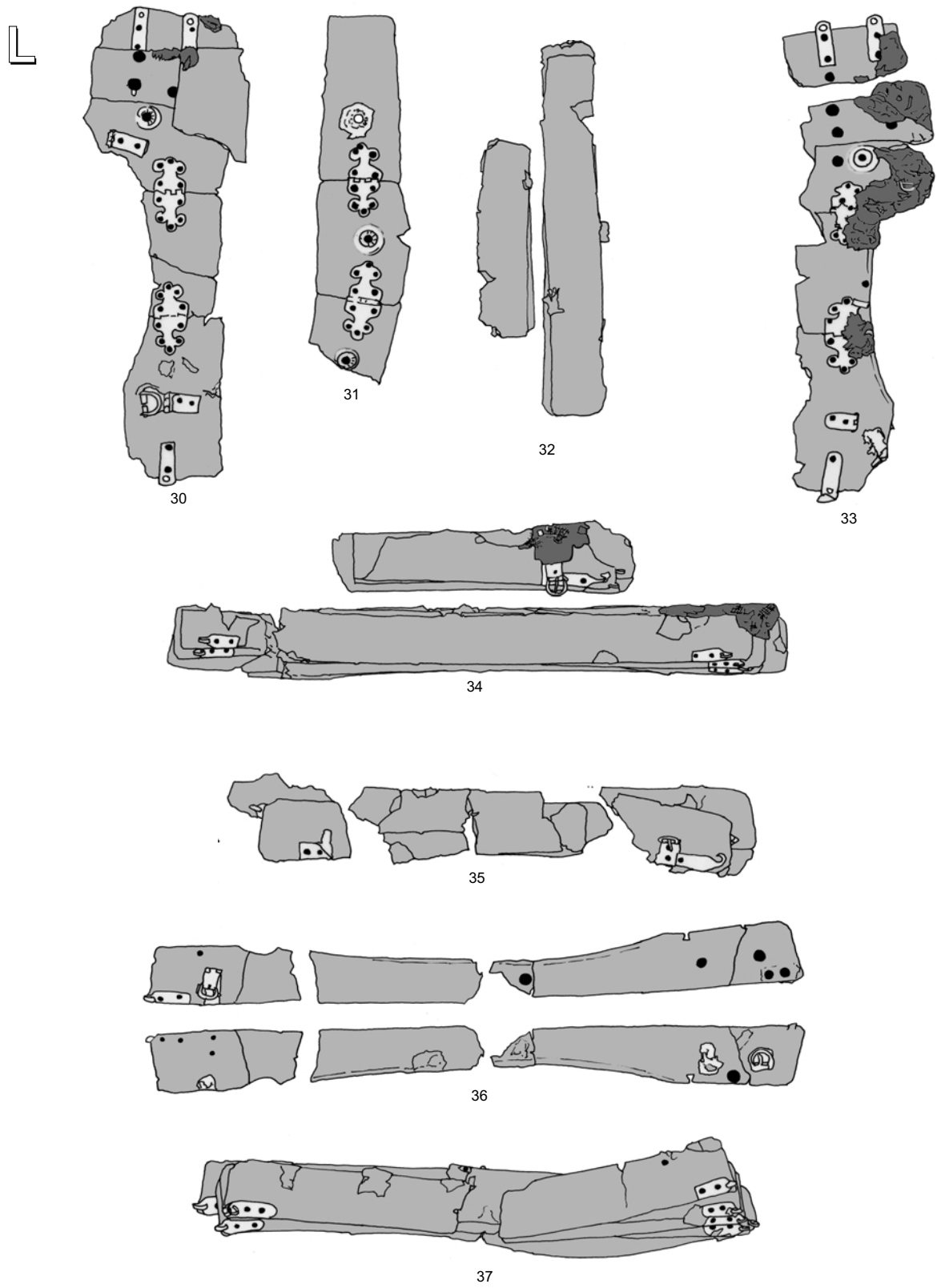
The top back plate has lost the free element from the hinged fitting, but it still retains the spindle of the hinge.

28. Corbridge *Context:* As above *Inventory No.:* 73 *Reference:* ALLASON-JONES & BISHOP 1988: 34 & 38, Fig.40 *Dimensions (from scale drawing):* Total distance across rivets for the internal leathers: c.235mm *Notes:* Cuirass 4, upper shoulder guard. The central plate overlaps one of the end plates by a considerable margin, because

they were riveted together, using the two holes in the shoulders of the lobate  $\frac{1}{2}$ -hinge. Only the top portion of the other half of this hinge can therefore be seen.

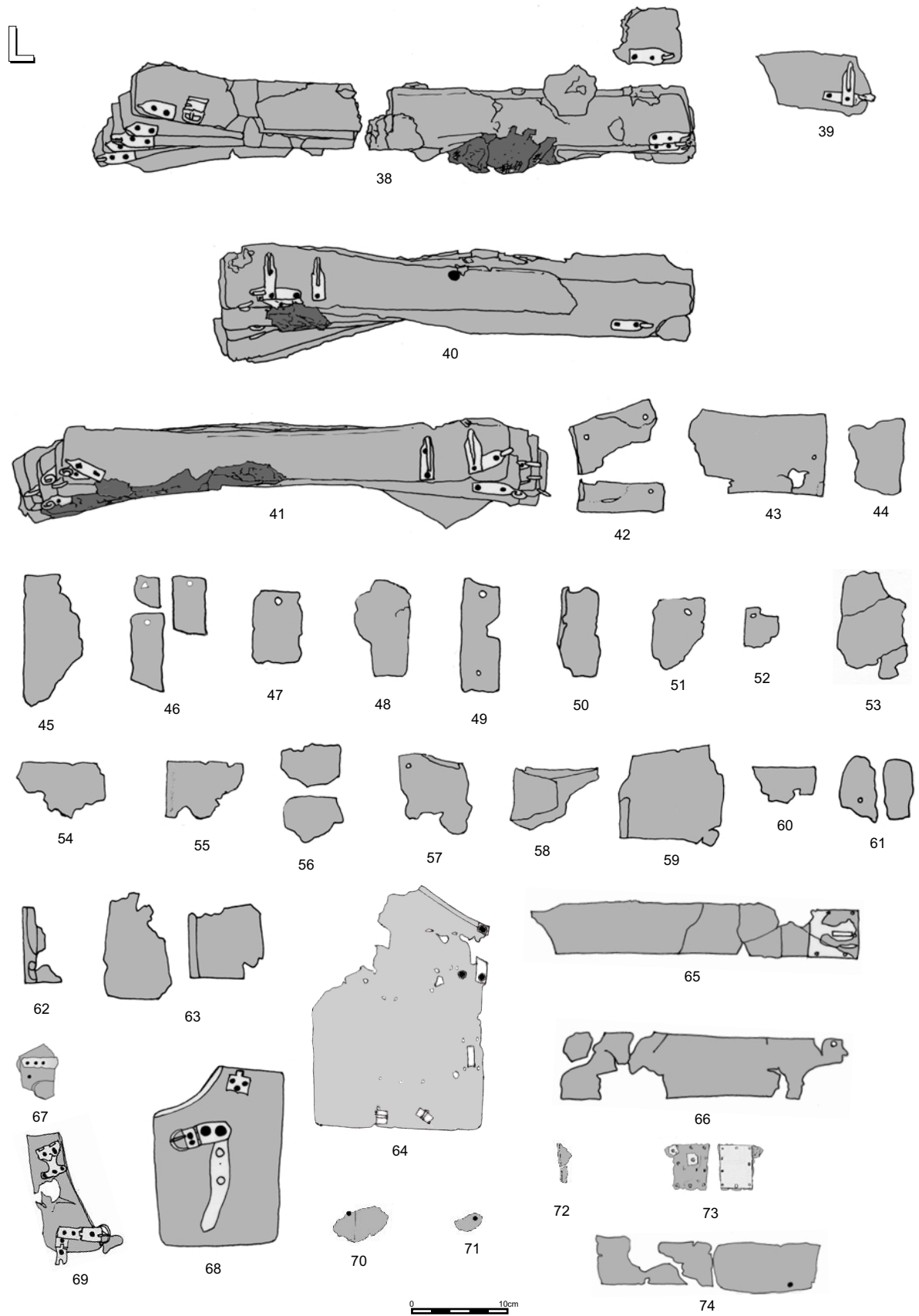
The other end plate has the remains of a boss, only.

29. Corbridge *Context*: As above *Inventory No.*: 73 *Reference*: ALLASON-JONES & BISHOP 1988: 34 & 40, Fig.41 *Dimensions*: (Largest) L: 285mm, W: 50mm, (smallest) L: 225mm, W: 50mm *Notes*: Cuirass 4, lesser shoulder guards. There remain only three plates in this assembly.
30. Corbridge *Context*: As above *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 41, Fig.43 *Dimensions*: (breastplate) L (neck to bottom): 100mm, W: 95mm. Lateral fastening buckle hinge is 45mm from the (wearer's) LH edge. Centre of the vertical fastening loop is 40mm from the (wearer's) RH edge of the plate. Distance from the hinge at the top of the breastplate to the bottom edge, c. 155mm. *Notes*: Cuirass 5 (Type-B), upper LH assembly. The top edge of the breastplate is some 10mm wider than the bottom edge of the mid-collar plate; both plates are somewhat bent here. There are possibly traces of rolled edges on the inside and outside edges of the mid-collar plate.  
The hinged buckle on the top back plate is slightly flexed. There is a decorated boss near the lower edge of this plate, which is partially obscured by the middle back plate.  
The middle back plate has four domed rivets (D: 12mm), which secure the internal leathers.  
The bottom back plate has two copper alloy vertical fastening loops and there is a similar fitment at the bottom of the breastplate (see Category 'G'). Each of these is secured by two rivets, which also retain the internal leathering straps.  
All three back plates preserve their original leathering. There is also a large piece of textile adhering to the rear of these plates (shown here where visible on the front face as very dark grey shading).
31. Corbridge *Context*: As above *Inventory No.*: 74 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 42, Fig.44 *Dimensions*: (central plate) W: 95mm. The total distance across the internal leathering rivets is c. 225mm. *Notes*: Cuirass 5, upper shoulder guard. The central plate is pointed, although damaged here. When found, this plate was directed point *inwards*, i.e. towards the neck.  
There is a decorated boss on each of the plates. The bottom plate has broken just below the decorated rivet boss. Both lobate hinges are intact, together with all the rivets (see Category 'F').
32. Corbridge *Context*: As above *Inventory No.*: 57 & 58 *Reference*: ALLASON-JONES & BISHOP 1988: 39 & 42, Fig.46 *Dimensions*: (largest plate) L: 380mm, W: 50mm, (shortest plate) L: 200mm, W: 40mm. The total distance across the leathering rivets is 200mm on the largest and 165mm on the smallest plates. *Notes*: Cuirass 5, lesser shoulder guards. There has been doubt expressed that these four plates do actually belong to
- Cuirass 5, although they are generally similar to those found with Cuirass 1.  
There are internal leather straps surviving on the widest plate (W: 25mm on central rivet, W: 30mm at either end) and also on the smallest plate (W: 25-30mm).
33. Corbridge *Context*: As above *Inventory No.*: 75 *Reference*: ALLASON-JONES & BISHOP 1988: 43 & 47, Fig.49 *Dimensions*: (breastplate) L (neck to bottom): 90mm, W: 95mm. The hinge of the lateral fastening buckle is 40mm from the LH edge. Centre of the iron vertical fastening loop is 50mm from the LH edge of the plate. Distance of the hinge at the top of the breastplate to the bottom edge is c. 150mm. *Notes*: Cuirass 6, (Type-C) upper RH shoulder guard assembly, comprising a breastplate, mid-collar plate and three back plates. There is a considerable amount of textile material adhering to both faces of this assembly (shown here as the darkest grey shade) and which partially obscures the lobate shoulder hinges.  
The buckle loop of the lateral hinge fastening at the top back-plate is flexed.  
The middle back plate has four domed rivets (D: 12mm), while the bottom plate has two more of these, as well as two *iron* vertical fastening loops (see Category 'G'), which project below the bottom edge of this plate (cf Cuirass 5, where these loops are of copper alloy).  
Internal leathering straps are each c. 20mm wide on the rear face of the back plates.  
There is a lateral buckle at the rear of the cuirass, but the type of front fastening is unknown.
34. Corbridge *Context*: As above *Inventory No.*: 76 *Reference*: ALLASON-JONES & BISHOP 1988: 43 & Fig.52 *Dimensions*: (Top plate) W (max): 55mm, W (min): 45mm, (Bottom plate) W: 55mm. Distance between tie-hooks on the top girth plate: 500mm *Notes*: Cuirass i, Type-A, girdle plates in two groups of three and five plates. Lower RH assembly.  
The uppermost (partial) hoop has a rolled top edge in the central area.  
At the front of the top plate is a copper alloy hinged buckle, which is flexed downward (see Category 'A'). The loop of the adjacent top tie-hook at straightened and bent upward (see Category 'H'). Some textile material partially covers the buckle fitment.  
There are two iron buckles at the rear of the top hoop; each secured with a single rivet. The one nearest the outer edge is fully flexed, while the other is fully depressed, (see Category 'D').  
There is a single rivet in the centre of the top plate, near the top edge, which retains a leather strap on the rear (W: 30mm).  
There are five other complete plates, some with attached tie hooks, at the front and rear. The lowest two plates have no tie-hooks. The bottom plate has a rolled lower edge. There are leathering straps on the rear of the plates (W: 20-30mm).
35. Corbridge *Context*: As above *Inventory No.*: 77 *Reference*: ALLASON-JONES & BISHOP 1988: 48 & Fig.55 *Di-*



**Fig. 81:** Category L (armour fragments). Scale 1:6

- mensions: (Top plate) W (max): 55mm, W (min): 40mm  
*Notes:* Type-A Cuirass ii, lower RH girdle plates. Fragments of at least three plates are present.
- The uppermost hoop has a rolled top edge in the central area.
- The hinged buckle at the front is flexed (see Category 'A'). The loop of the top tie-hook is twisted upwards and is slightly straightened out (see Category 'H').
- There is a single iron buckle at the rear, fixed with a single rivet, nearest the outer edge of the plate (see Category 'D').
36. Corbridge *Context:* As above *Inventory No.:* 78 *Reference:* ALLASON-JONES & BISHOP 1988: 48 & Fig.59 *Dimensions:* (Top hoop) W (max): 60mm, W (min): 40mm *Notes:* Cuirass iii (Type-A) lower LH assembly. There are fragments of six girdle plates, of which this is the top one.
- The hoop has a rolled top edge in the central area, which is noticeably narrower than at the ends.
- The hinged buckle at the front is flexed. At the rear is a pair of iron buckles, each fixed with a single rivet (see Category 'D'). That nearest the edge of the plate is fully flexed, whereas only the tongue of the adjacent buckle is flexed.
37. Corbridge *Context:* As above *Inventory No.:* 78 *Reference:* ALLASON-JONES & BISHOP 1988: 48 & Fig.59 *Dimensions:* Cannot be determined because of the distortion due to compression. *Notes:* Cuirass iii, girdle plates.
- So far as the remaining five girdle plates of this assembly are concerned, these hoops are twisted as well as curved, probably the result of being forced together too tightly.
- There are tie-hooks (see Category 'H') at both ends of all of these plates.
- Traces of leathering straps together with the attendant rivets can be seen on the rear faces of the plates.
- 38-9. Corbridge *Context:* As above *Inventory No.:* 79 *Reference:* ALLASON-JONES & BISHOP 1988: 48 & Fig.63 *Dimensions:* (Top hoop) W (max): 55mm, (Bottom hoop) W: 50mm *Notes:* Cuirass iv, lower RH girdle plate assembly, Type A. Elements of eight girth hoops are present.
- The uppermost hoop has a rolled top edge in the central area. The plates overlap at the rear and splay out in front due to compression.
- At the front is a flexed hinged buckle, the bottom of which is flush with the bottom of the top plate. At the rear are two iron buckles, each fixed with a single rivet.
- Two rivets for each plate, except the top one, secure the internal leather straps. Here, the two rivets are below the outermost buckle. There are internal leather straps (W: 35mm).
- The original textile wrapping material can be seen in the centre of the girdle plates, shaded here a dark grey colour.
40. Corbridge *Context:* As above *Inventory No.:* 80 *Reference:* ALLASON-JONES & BISHOP 1988: 51 & Fig.66 *Dimensions:* (Top plate) L: 474mm, (Bottom plate) L: 450mm. W (from the top): 55mm, 55mm, 55mm, 60mm, 50mm, 55mm, and 55mm. Distance over tie-hooks (top plate): c. 430mm *Notes:* Lower RH girdle plates from Cuirass v (Type-B/C). Elements of seven girth hoops are present. Traces of textile wrapping are evident on the bottom plate, shaded dark grey.
- The top edge of the top plate is rolled.
- The front vertical fastener on the small fragment of the top plate (see Category 'G') shares a rivet with the outermost one of the top tie-hook (see Category 'H'). This is repeated for the outermost rear hook. The two rear fasteners are 45mm apart.
- The central rivet head (D: 13mm) and leathering survives on the rear face of the plate, held by this rivet and two more at the rear. The strap widths vary (W: 25-35mm).
- Because of compression, the plates have fanned out at the front.
- The tie-hooks are reported to be much sturdier than those of the four Type-A cuirasses' girdle plate groups. The top tie hook at the rear may have traces of a leather tie still in place.
41. Corbridge *Context:* As above *Inventory No.:* 81 *Reference:* ALLASON-JONES & BISHOP 1988: 51 & Fig.70 *Dimensions:* (Top plate) L: 440mm, W: 60mm. Distance over tie hooks: 455mm. (Bottom plate) L: 415mm, W: 55mm. (Note: dimensions distorted because the hoops are flattened out). *Notes:* Cuirass vi; lower LH assembly from a Type B/C cuirass, which comprises the elements of seven girth hoops.
- The top edge of the top plate is rolled, whilst the bottom edge has some coarse textile adhering to it, shaded dark grey.
- The front vertical fastener is twisted to an almost horizontal position and shares a rivet with the corresponding tie hook. This is repeated at the other end of the hoop.
- The internal leather strap is visible on the rear face (W: 30mm).
- The bottom plate has a rolled lower edge and retains all three leathers (W: 25-35mm) on the rear face, retained by rivets (D: 7-9mm).
- The hoops are collapsed, overlapping at the front and splayed out at the rear.
42. Dangstetten *Context:* find group 268 *Inventory No.:* 268.17 *Reference:* FINGERLIN 1986: 97, 312 & 470, Taf.2, 17 *Dimensions:* L: 85mm, W (top fragment): 50mm, W (bottom fragment): 29mm *Notes:* Two fragments of iron plate, folded over several times. According to their shape, these probably belonged to the shoulder piece. The pieces are trimmed at one edge with a U-shaped bent bronze metal strip. The larger piece has a further iron strip folded over, (L: 28mm). On one side is a flat, bronze rivet. The second sheet is constructed in the same way, only the folded over section lies on the underside.



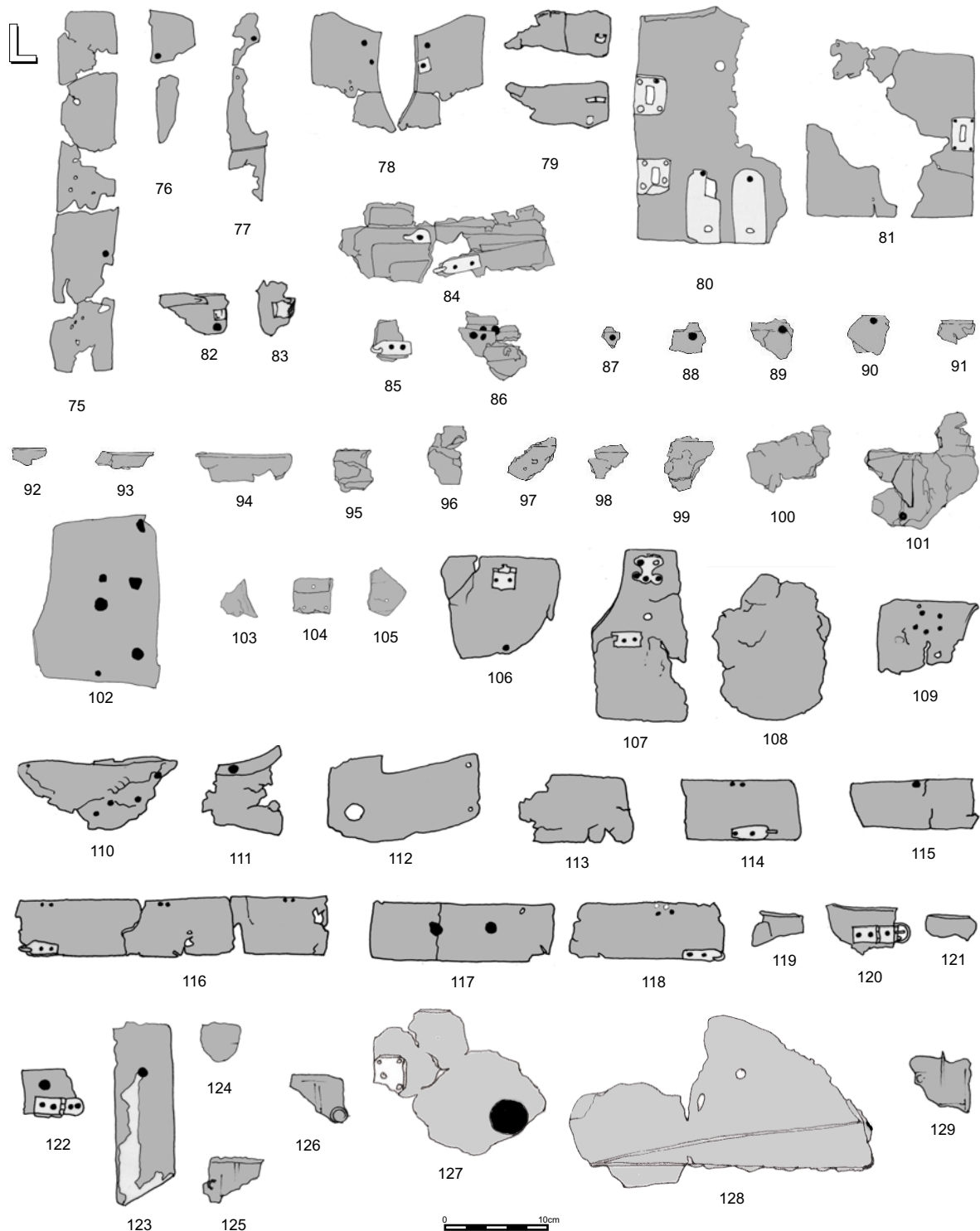
**Fig. 82:** Category L (armour fragments). Scale 1:6



43. Dangstetten *Context*: find group 371 *Inventory No.*: 371, 10 *Reference*: FINGERLIN 1986: 136, 357 & 470, Taf. 2, 10 *Dimensions*: L: 138mm, W: 81mm *Notes*: Large, rectangular sheet of armour plate. One short edge is virtually intact; the opposite edge is broken.
44. Dangstetten *Context*: find group 552 *Inventory No.*: 552.12 *Reference*: FINGERLIN 1986: Taf.2, 12 *Dimensions*: L: 80mm *Notes*: Large fragment of iron plate armour, roughly rectangular in shape, with one long edge largely intact.
45. Dangstetten *Context*: find group 595 *Inventory No.*: 595.10 *Reference*: FINGERLIN 1986: 230 & 466 *Dimensions*: L (max): 135mm *Notes*: Large section of armour plate, roughly rectangular, with only one corner remaining.
46. Dangstetten *Context*: find group 595 *Inventory No.*: 595.11 *Reference*: FINGERLIN 1986: 230 & 466 *Dimensions*: L (varies between): 33-35mm *Notes*: Three roughly rectangular fragments of armour plate. In the centre of the short edge of each is a large rivet hole.
47. Dangstetten *Context*: find group 604 *Inventory No.*: 604, 6 *Reference*: FINGERLIN 1998: 13 & 197 *Dimensions*: W: 50mm *Notes*: Rectangular piece of armour plate, with a single rivet hole in the short edge.
48. Dangstetten *Context*: find group 605 *Inventory No.*: 605, 24 *Reference*: FINGERLIN 1998: 14 & 198 *Dimensions (from scale drawing)*: L: 99mm, W: 54mm *Notes*: Large piece of plate armour, part of which shows a right-angled edge.
49. Dangstetten *Context*: find group 608 *Inventory No.*: 608, 17 *Reference*: FINGERLIN 1998: 16 & 200 *Dimensions (from scale drawing)*: L: 137mm, W: 39mm *Notes*: Long narrow strip of armour plate, with two rivet holes.
50. Dangstetten *Context*: find group 609 *Inventory No.*: 609, 14 *Reference*: FINGERLIN 1998: 16 & 201 *Dimensions*: L: 90mm *Notes*: Piece of armour plate, one long edge of which is folded over into a U-shape.
51. Dangstetten *Context*: find group 700 *Inventory No.*: 700, 13 *Reference*: FINGERLIN 1998: 36 & 223 *Dimensions (from scale drawing)*: L: 75mm, W: 54mm *Notes*: Piece of iron plate, with a rivet hole in the top corner.
52. Dangstetten *Context*: find group 700 *Inventory No.*: 700, 13 *Reference*: FINGERLIN 1998: 36 & 223 *Dimensions (from scale drawing)*: L: 42mm, W: 33mm *Notes*: Small piece of armour, with a rivet hole in the top left hand corner.
53. Dangstetten *Context*: find group 713 *Inventory No.*: 713, 2 *Reference*: FINGERLIN 1998: 41 & 227 *Dimensions (from scale drawing)*: L: 111mm, W: 72mm *Notes*: A large fragment of iron plate, probably from *lorica segmentata* armour. There are no rivet holes.
54. Dangstetten *Context*: find group 797 *Inventory No.*: 797, 3 *Reference*: FINGERLIN 1998: 58 & 246 *Dimensions (from scale drawing)*: L: 87mm, W: 60mm *Notes*: Piece of armour plate; one edge is straight, the others broken.
55. Dangstetten *Context*: find group 819 *Inventory No.*: 819, 4 *Reference*: FINGERLIN 1998: 64 & 251 *Dimensions (from scale drawing)*: L: 78mm, W: 57mm *Notes*: Piece of iron armour, with one edge thickened. All other edges are damaged.
- 56-7. Dangstetten *Context*: find group 875 *Inventory No.*: 875, 4 *Reference*: FINGERLIN 1998: 79 & 268 *Dimensions (from scale drawings)*: (top) L: 57mm, W: 45mm; (bottom) L: 60mm, W: 48mm *Notes*: Two fragments of iron plate armour, roughly rectangular in shape.
58. Dangstetten *Context*: find group 940 *Inventory No.*: 940, 2 *Reference*: FINGERLIN 1998: 100 & 296 *Dimensions (from scale drawing)*: (top) L: 72mm, W: 81mm; (bottom) L: 87mm, W: 66mm *Notes*: Two pieces of armour plate. One portion has a rivet hole with the edge partially folded over. The other fragment is folded over on two sides and is of a trapezoidal shape. The long edge appears curved, suggesting it to be a part of the shoulder plate.
59. Dangstetten *Context*: find group 977 *Inventory No.*: 977, 5 *Reference*: FINGERLIN 1998: 110 & 307 *Dimensions*: L (max): 105mm *Notes*: A large, trapezoidal form fragment of armour plate, part of the short edge of which is folded over.
60. Dangstetten *Context*: find group 1014 *Inventory No.*: 1014, 5 *Reference*: FINGERLIN 1998: 118 & 316 *Dimensions (from scale drawing)*: L (max): 42mm, W: 24mm *Notes*: Small piece of plate armour with what may have been a rivet hole in one edge.
61. Dangstetten *Context*: find group 1036 *Inventory No.*: 1036, 3 *Reference*: FINGERLIN 1998: 124 & 324 *Dimensions (from scale drawing)*: L (max): 46mm, W: 24mm *Notes*: Two pieces of plate armour. One has a rivet hole in it.
62. Dangstetten *Context*: find group 1151 *Inventory No.*: 1151, 5 *Reference*: FINGERLIN 1998: 152 & 357 *Dimensions (from scale drawing)*: L (max): 52mm, W (max): 26mm *Notes*: Small piece of armour plate, folded at the edge several times.
63. Dangstetten *Context*: find group 1220 *Inventory No.*: 1220, 11 *Reference*: FINGERLIN 1998: 164 & 370 *Dimensions (from scale drawing)*: (Left) L (max): 74mm, W: 46mm, (Right) L: 50mm, W: 50mm *Notes*: Two fragments of iron plate. The right hand piece has one edged folded back and hammered down.
64. Eining *Context*: Temple with a *t.p.q.* AD 229 *Inventory No.*: not recorded *Reference*: REINECKE 1927: 161 *Dimensions*: L: 245mm, W: 170mm *Notes*: Backplate of a

- 'Newstead' type armour set. The plate has been turned back and hammered flat around the neck opening.
- There are two slots in the right hand side, which are protected by brass plates. Traces of this plate together with three of the four rivets surround the top one. For the bottom slot there remain no traces of the plate, but all four small rivet holes can be seen.
- At the bottom edge of the plate are two small brass fittings used to attach the girdle plates and these are probably temporary repairs.
66. *Iza* Context: not recorded Inventory No.: not recorded Reference: REINECKE 1927: 90 & 91, Abb.7, 1 Dimensions (from scale drawing): L: 293mm, W: 67.5mm Notes: Strip of girdle plate armour. At one end, there is a small hole. This plate consists of at least three major fragments.
67. *Iza* Context: not recorded Inventory No.: not recorded Reference: REINECKE 1927: 90 & 91, Abb.7, 1 Dimensions (from scale drawing): L: 57mm, W: 43.5mm Notes: A small piece of armour with a copper alloy fitting attached, unusually, by means of three rivets. Probably a girdle plate.
68. Kalkriese Context: not recorded Inventory no.: not recorded Reference: FRANZIUS 1995: 76 & 71, Abb.2 Dimensions: L: 188mm, W: 135mm, Th: 1-3mm Notes: Complete upper breastplate from the armour. A bronze U-shaped channel covers the edge of the plate where it meets the neck of the wearer. At the top is the remains of a sub-lobate hinge, which connected with the mid collar plate, one leaf only now remaining. There are also the remains of a hinged buckle, attached to the iron plate with two disc-headed rivets. The remnants of a leather strap, now mineralised, are below and at right angles to this.
69. London Context: found at the site of the Bank of England excavation in 1936. Inventory No.: 14,283 Reference: WEBSTER 1959: 86 & 87, Fig.6, 159 Dimensions (from scale drawing): L (max): 115mm, W (max): 87.5mm Notes: An incomplete upper-chest front protector from the armour, bearing all the copper alloy fittings, a lobate  $\frac{1}{2}$ -hinge, hinged buckle and hinged strap fastener. Although damaged (approx. the lower half of the plate is missing), it can be seen that the edge of the plate has been folded over where it fits around the neck. The hole beneath the lobate hinge may be the result of battle damage.
70. Longthorpe Context: *praetentura*, Pit 8, between barracks Inventory No.: 73 II 8 Reference: FRERE & STJOSEPH 1974: 46 & 47, Fig.25, 16 Dimensions (from scale drawing): L (max, diagonal): 58mm, W (max, diagonal): 30mm Notes: Two small pieces of armour, which are linked by a copper rivet. These are stated to come from the uppermost back plate on the right side and the plate immediately below this.
71. Longthorpe Context: *praetentura*, Pit 8, between barracks Inventory No.: 73 II 8 Reference: FRERE & STJOSEPH 1974: 46 & 47, Fig.25, 16 Dimensions (from scale drawing): L: 29mm, W: 19mm Notes: Small piece of armour, which is thought to come from the upper back plate on the right hand side. Like the fragment above, this one also has a copper rivet in place.
72. Longthorpe Context: *praetentura*, Pit 8, between barracks Inventory No.: 73 II 8 Reference: FRERE & STJOSEPH 1974: 46 & 47, Fig.25, 16 Dimensions (from scale drawing): L: 41mm, W: 14mm Notes: Two small pieces of iron plate from the upper back plate on the right hand side. One edge of this plate is rolled back in order to protect the neck. The smaller piece is shown as coming from the upper left corner of the plate.
73. Neuss Context: not recorded Inventory No.: 13100 Reference: SIMPSON 2000: 76 & 151, Pl.24, 9 Dimensions (from scale drawing): L (max): 47mm, W (max): 46mm, L (plate): 44mm, W: plate): 32mm Notes: A fragment of sheet bronze backed by a section of armour plate, with nine rivets (which are smooth at the front and rough at the back). Two little patches were added later. Found with a corroded front lacing hook, so definitely from *lorica segmentata*.
74. Newstead Context: Pit 1, *Principia*, chamber No.5 at a depth of 25 ft. Inventory No.: FRA117 or FRA121 Reference: CURLE 1911: 157-8 & Fig.11 and BISHOP 1999: 31 & Fig.5 Dimensions: L: 340mm, W: 65mm Notes: Three fragments that, together, form a (long) lesser shoulder-guard. They are identified as such by reason of the leathering washers and rivets.
75. Newstead Context: Pit 1, *Principia*, chamber No.5 at a depth of 25 ft. Inventory No.: FRA117 or FRA121 Reference: CURLE 1911: 157-8 & Fig.11 and BISHOP 1999: 31 & 32, Fig.5 Dimensions: L: 440mm, W: 75mm Notes: These fragments have been assembled to form one of the (longer) lesser shoulder-guards. They are identified as such because of the presence of leathering rivets (with their associated square washers) near the inner edge. The thickness of the plates varies (Th: 1mm-1.2mm.).
76. Newstead Context: Pit 1, *Principia*, chamber No.5 at a depth of 25 ft. Inventory No.: FRA117 or FRA121 Reference: CURLE 1911: 157-8 & Fig.11 and BISHOP 1999: 31 & 32, Fig.5 Dimensions: W: 55mm Notes: Two fragments that may form one of the smaller of the lesser shoulder-guards. There is a leathering rivet and washer on one of the pieces.
77. Newstead Context: Pit 1, *Principia*, chamber No.5 at a depth of 25 ft. Inventory No.: FRA117 or FRA121 Reference: CURLE 1911: 157-8 & Fig.11 and BISHOP 1999: 31 & 32, Fig.5 Dimensions: W: 50mm Notes: Three pieces of iron sheet that may constitute the last of the lesser shoulder-guards. One of the fragments has a leathering rivet and washer.

78. Newstead *Context*: Pit 1, *Principia*, chamber No.5 at a depth of 25 ft. *Inventory No.*: FRA117 or FRA121 *Reference*: CURLE 1911: 157-8 & Fig.11, 1 & 11 and BISHOP 1999: 31 & Fig.4 *Dimensions*: L: 130mm, W: 76mm, Th: 1.7mm *Notes*: One edge of the plate has been turned back and shows a slight curve. As such, it forms a part of the mid-collar plate. There are two rivets and one retains a leathering washer, near the top edge.
79. Newstead *Context*: Pit 1, *Principia*, chamber No.5 *Inventory No.*: FRA117 *Reference*: CURLE 1911: 157-8 & Fig.11, 4 and BISHOP 1999: 31 & 33, Fig.6 *Dimensions (from scale drawing)*: (Plate) L: 100mm, W: 45mm, Th: 1mm. (Fitment) W: 13mm, H: 7mm, Depth: 7mm *Notes*: Through this plate there is an iron tubular fitting, the ends of which have been turned back and flattened. This is a part of a girdle plate.
80. Newstead *Context*: Pit 1, *Principia*, chamber No.5 *Inventory No.*: FRA 117 *Reference*: CURLE 1911: 156 & Pl. XXII and BISHOP 1999: 28 & Fig.3 *Dimensions*: L: 225mm, W: 140mm, Th: 1.6mm *Notes*: This is a back-plate from the armour. At the neck opening (the upper edge), the plate is turned outwards and hammered flat. The inner vertical edge is not well finished and is not straight. On the left side are two rectangular apertures, protected/decorated with copper alloy plates each secured with four small rivets. At the bottom of the plate are two oval slots, partially covered by copper alloy plates (both L: 65mm, and W: 29 and 31mm). Each is attached by a rivet at the top and is then folded over beneath the bottom edge of the iron plate. These slots accepted the vertical fasteners that were affixed to and supported the top girdle plate.
81. Newstead *Context*: *Principia*, chamber No.5 *Inventory No.*: FRA117 *Reference*: CURLE 1911: 156 & Pl. XXII and BISHOP 1999: 27-8 & Fig.2 *Dimensions*: L: 20cm, W: 18cm, Th: 1.5mm *Notes*: A breastplate, composed of a number of fragments. On one side is a rectangular slot (6mm x 16mm), through which a metal loop would be passed. This slot is protected/decorated by a small rectangular copper alloy plate (27mm x 35mm), secured with four small rivets. The upper edge of the breastplate has been turned out and thinned to 1.1mm. The position of the fragment at the upper left corner is conjectural.
82. Newstead *Context*: *Principia*, chamber No.5 *Inventory No.*: FRA121 *Reference*: CURLE 1911: 157-8 & Fig.11, 8 and BISHOP 1999: 31 & 33, Fig.6 *Dimensions*: (Plate) L: 43mm, W: 80mm. (Fitment) L: 14mm, W: 10mm, Th: 2.4mm *Notes*: This has a cast loop fitting which passes through the iron plate. The plate carries a rivet and has a portion folded over at the top edge.
83. Newstead *Context*: Pit 1, *Principia*, chamber No.5 *Inventory No.*: FRA117 *Reference*: CURLE 1911: 157-8 & Fig.11, 10 and BISHOP 1999: 31 & 32, Fig.5 *Dimensions*: (Plate) L: 45mm, W: 30mm, Th: 1.2mm. (Fitment) L: 20mm, W: 12mm *Notes*: Part of a plate with a breast fastening. The copper alloy fitment appears to have been flattened in antiquity.
84. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 26, 61 & Taf.5, 90 *Dimensions*: L (max): 195mm. W (of a complete plate from the rear): 53mm, Th: 2mm *Notes*: Iron plates, (five in number) and girdle tie-hooks (see Section 'H') from the front/back of a *lorica segmentata* cuirass. It includes one complete plate from the right underside (Th: 2mm). One tie-hook is fixed to the top plate, the second to the third plate - neither is attached right at the end of the plates.
85. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 26, 61 & Taf.5, 92 *Dimensions*: W (plate only): 38mm *Notes*: Bronze hook and girdle plates. The hook (see Section 'H') shows traces of punched concentric decoration around the rivet holes.
86. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 108 *Dimensions*: W (max): 58mm, Th (plates): 2mm, D (rivets): 8mm *Notes*: A 'stack' of iron girdle plates with bronze rivets. There are seven layers of armour in this pile. The rivets fixed the internal leather straps to the iron plates.
87. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 111 *Dimensions (from scale drawing)*: L: 18mm, W: 18mm, D (rivet head): 4.5mm *Notes*: A small portion of armour plate with a bronze rivet still attached, the latter used to attach internal leather straps.
88. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 112 *Dimensions (from scale drawing)*: L: 33mm, W: 28.5mm *Notes*: A small pile of iron plate fragments, the top one of which has a bronze rivet remaining.
89. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 113 *Dimensions (from scale drawing)*: L: 41mm, W: 39mm *Notes*: A pile of two plate fragments, and the vestige of a third. Between the two plate fragments there is the remains of a leather strap. A misshapen rivet (flat headed) is attached to the topmost fragment.
90. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 114 *Dimensions (from scale drawing)*: L: 36mm, W: 39mm *Notes*: Two iron plate fragments, fixed together by a bronze rivet. Between the two plates there are the remains of a leather strap.



**Fig. 83:** Category L (armor fragments). Scale 1:6

91. Risstissen *Context:* Forts 1/2, 158, immediately beneath the soil *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 27, 61 & Taf.6, 115 *Dimensions:* L: 35mm *Notes:* The edge of a sheet of armor plate; the edge of the plate is turned back and hammered flat.

92. Risstissen *Context:* Forts 1/2, 158, immediately beneath the soil *Inventory No.:* R 68/22 *Reference:* ULBERT 1970: 27, 61 & Taf.6, 116 *Dimensions:* L: 30mm *Notes:* The edge of an armor plate, similar to the above. This plate is slightly curved.

93. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 117 *Dimensions*: L: 35mm, Th (plate edge): 3mm *Notes*: A curved iron plate, whose edge is reinforced by a bronze strip.
94. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 119 *Dimensions*: L: 90mm, W: 28mm *Notes*: The edge of this iron plate is turned back and hammered down.
95. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 120 *Dimensions (from scale drawing)*: L: 39mm, W: 41mm *Notes*: Two superimposed iron plate fragments.
96. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 121 *Dimensions*: W: 56mm *Notes*: A single, though much damaged, girdle plate fragment.
97. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.5, 122 *Dimensions (from scale drawing)*: L (approx.): 46mm, W (approx.): 42mm *Notes*: A small stack of five girdle plate fragments.
98. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 123 *Dimensions (from scale drawing)*: L (approx.): 33mm, W (approx.): 37mm *Notes*: Two girdle plate fragments, cemented together.
99. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 124 *Dimensions (from scale drawing)*: L (max, approx.): 51mm, W (max, approx.): 45mm *Notes*: A stack of three curved plates with traces of leather straps between the plates.
100. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 27, 61 & Taf.6, 125 *Dimensions*: L (approx.): 60mm, W (approx.): 45mm *Notes*: Two curved iron plates, fixed together along one side. Between the plates are the remains of leather straps.
101. Risstissen *Context*: Forts 1/2, 158, immediately beneath the soil *Inventory No.*: R 68/22 *Reference*: ULBERT 1970: 28, 61 & Taf.6, 126 *Dimensions*: L (approx.): 105mm, W (approx.): 110mm, D (rivet head): 8mm *Notes*: A large, irregular, grouping of five curved iron plates. One appears to have a circular bronze (?) rivet or washer. (No.126).
102. Risstissen *Context*: Forts 1/2, 161, a large ditch in the NW of the excavation site. *Inventory No.*: R 68/28 *Reference*: ULBERT 1970: 27, 61 & Taf.7, 127 *Dimensions*: L (top): 142mm, L (bottom): 165mm, W: (left): 115mm, W (right), 100mm, D (rivets): 10mm *Notes*: A trapezoidal iron plate, which has a number of bronze leathering rivets attached. The left upper edge shows thickening. The iron plate (re-assembled here from many fragments) is torn and distorted on the left rear-side 3cm from the bottom. Otherwise, edges are exactly cut-off. On the inside, they show hammer marks. This plate formed the upper chest protection, below the neck.
103. Usk *Context*: Fortress pit, pre-Flavian *Inventory No.*: 1976B RFC *Reference*: MANNING *et al* 1993: 6-7 & Fig.2, 4b *Dimensions*: L: 30mm *Notes*: A small piece of iron with a curved rolled edge, which suggests that it may have formed the neck edge of a front breast plate.
104. Usk *Context*: Fortress pit, pre-Flavian *Inventory No.*: 1976B RFC *Reference*: MANNING *et al* 1993: 6-7 & Fig.2, 4d *Dimensions*: L: 35mm *Notes*: A flat fragment of iron with three rivet holes.
105. Usk *Context*: Fortress pit, pre-Flavian *Inventory No.*: HFN (2), Manning 1989, 20 *Reference*: MANNING *et al* 1993: 112 & Fig.4, 20 *Dimensions*: L: 80mm *Notes*: The two straight sides and the curved edge are original, as is the larger angled edge, but the shortest edge is broken. Because of the shape, it was thought that the identification as a piece of armour was speculative.
106. Site Windisch *Context*: rubbish dump, 1923 excavation *Inventory No.*: 23:4125 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf.30, 615 *Dimensions (from scale drawing)*: L: 111mm, W: 96mm *Notes*: Fragment of a shoulder piece from the armour, which retains a portion of a hinged, sub-lobate, fitment (see section 'F'). There is also a rivet at the bottom centre. This is a plate from a 'Kalkriese' armour set.
107. Site Windisch *Context*: unstratified *Inventory No.*: not recorded *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 616 *Dimensions (from scale drawing)*: L: 165mm, W: 90mm *Notes*: Virtually complete breast plate. It retains one half a lobate-form shoulder hinge (with four of the five rivets intact, Section 'F') and one leaf of a hinged fitment (probably a hinged buckle from the position, see Section 'C'). Where the plate fits around the neck, the edge is shaped and 'knocked back'.
108. Site Windisch *Context*: rubbish dump, 1908 excavation *Inventory No.*: 3327 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 617 *Dimensions (from scale drawing)*: L: 138mm, W: 111mm *Notes*: Possibly part of one of the shoulder plates of the armour.
109. Site Windisch *Context*: rubbish dump, 1931 excavation *Inventory No.*: 31:1055 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 618 *Dimensions (from scale drawing)*: L: 72mm, W: 90mm *Notes*: Part of a breastplate that retains five rivets for attaching the lobate-form shoulder hinge. Where the edge of the

- plate would have met the neck, the plate has been 'knocked back' and bent over.
110. *Site Windisch Context*: probably the excavation of 1926 *Inventory No.*: 26:2?? *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 619 *Dimensions (from scale drawing)*: L: 66mm, W: 153mm *Notes*: Part of a shoulder plate. On the underside there are a number of large bronze rivets.
111. *Site Windisch Context*: rubbish dump, 1923 excavation *Inventory No.*: 23:450 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 620 *Dimensions (from scale drawing)*: L: 84mm, W: 72mm *Notes*: A plate with a cut-out for the neck? An additional strip of metal has reinforced one edge.
112. *Site Windisch Context*: rubbish dump, 1910 excavation *Inventory No.*: 3204 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 621 *Dimensions (from scale drawing)*: L: mm, W: mm *Notes*: A large plate, possibly a breast-plate. Described as coming from a 'Newstead' type cuirass, with a large hole for a 'fixture'?
113. *Site Windisch Context*: rubbish dump. 1923 excavation *Inventory No.*: 23:?? *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 622 *Dimensions (from scale drawing)*: L: 64.5mm, W: 102mm *Notes*: Portion of a girdle plate.
114. *Site Windisch Context*: western rubbish dump, 1923 excavation *Inventory No.*: 23:681 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 623 *Dimensions (from scale drawing)*: L: 55.5mm, W: 120mm *Notes*: Portion of a girdle plate. It retains a tie-hook (see Section 'H') and there are two further rivets at the top edge, for securing the internal leather strips. The plate has a noticeable slope on the outer side edge and the bottom corner is rounded off.
115. *Site Windisch Context*: rubbish dump, 1923 excavation *Inventory No.*: 23:962 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 624 *Dimensions (from scale drawing)*: L: 16mm, W: 123mm *Notes*: Part of a girdle plate, which retains one of the leathering washers on the top edge.
116. *Site Windisch Context*: western rubbish dump, 1923 excavation *Inventory No.*: 23:660 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 625 *Dimensions (from scale drawing)*: L: 51mm, W: 297mm *Notes*: An almost complete girdle plate, though in a number of fragments. One fragment retains a tie-hook (with both rivets, Section 'H'). There are three pairs of leathering washers arranged along the top edge of the plate.
117. *Site Windisch Context*: rubbish dump, find site No.41 *Inventory No.*: 4197 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 30, 626 *Dimensions (from scale drawing)*: L: 54mm, W: 174mm *Notes*: Portion of a girdle plate, retaining two large leathering washers.
118. *Site Windisch Context*: rubbish dump, 1923 excavation *Inventory No.*: 23:475 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 31, 627 *Dimensions (from scale drawing)*: L: 54mm, W: 147mm *Notes*: A girdle plate, retaining one of the tie-hooks (attached by two rivets, see Section 'H'). There are also two leathering washers on the top edge.
119. *Site Windisch Context*: Spillman excavation of 1928, find site No.24 *Inventory No.*: 28:3112 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 31, 628 *Dimensions (from scale drawing)*: L: 36mm, W: 50mm *Notes*: A fragment of the breast or back plate of the armour. The edge around the neck opening has been thickened slightly and bent outwards.
120. *Site Windisch Context*: Spillman excavation of 1928, find site No.24 *Inventory No.*: 28:2631 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf. 31, 629 *Dimensions (from scale drawing)*: L: 46mm, W: 80mm *Notes*: Part of the breast or back plate of the armour. It retains one of the hinged buckles used to close it with the plate on the other side (see Section 'A'). The edge where the plate would fit around the neck has been 'knocked back' and then bent outwards.
121. *Windisch Context*: Spillman excavation of 1928 *Inventory No.*: 28:3115 *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf.31, 630 *Dimensions (from scale drawing)*: L: 20mm, W: 46mm *Notes*: a fragment of the breastplate of a cuirass. The edge has been folded back where it would be against the neck of the wearer.
122. *Windisch Context*: unstratified *Inventory No.*: not recorded *Reference*: UNZ & DECHLER-ERB 1997: 28 & Taf.31, 631 *Dimensions (from scale drawing)*: L: 46mm, W: 56mm *Notes*: A fragment of the breast or back plate of a cuirass. It retains a hinged strap fitment (with all four rivets intact, see Section 'B') as well as a large leathering washer.
123. *Xanten Context*: Mil 84 *Inventory No.*: RMX 88,15.004 *Reference*: SCHALLES & SCHREITER 1993: 41 & 227, Taf.47, 2 *Dimensions*: L: 163mm, W: 52mm, D (rivet head): 7mm *Notes*: Large fragment of iron plate, one edge intact, all the others broken. The iron is corroded and in part rusted away. At the upper left rim is a broken sheet, of which the corner of the torn edge has, in part, become separated. This is a wide fragment of iron plate, torn beneath; the upper half is slightly bent backwards and the upper third, in the middle, as a bronze strip. On the left side are a smaller strip and an impression (W: 20mm) of a former overlapping piece. There are similar traces on the broken edge and on the back is a right-angled strip, (L: 15mm). This plate forms a part of the shoulder protection of the armour - the upper shoulder guard. Weight, 103g.
124. *Zugmantel Context*: 3rd century AD date, possibly AD 259-60, when the fortress was abandoned. Excavated from a burned deposit near to the *praetorium*. *Inventory*

- No.*: not recorded *Reference*: JACOBI 1909: 99 & Taf.14, 50a *Dimensions (from scaled photo)*: L: 70mm, W: 70mm *Notes*: The smallest piece of the armour. The plate here shows an edge apparently covered with a thin sheet of bronze, possibly as a protection for the hip (from the hard iron edge of the girdle plate).
125. Zugmantel *Context*: 3rd century AD date *Inventory No.*: not recorded *Reference*: JACOBI 1909: 99 & Taf.14, 50b *Dimensions (from scaled photo)*: L: 55mm, W: 45mm *Notes*: The upper edge is curved over. On the right is attached a ring in an eyelet. In addition, there is a flat vertical strip of hammered out bronze sheet. This was regarded as being a part of the shoulder protection.
126. Zugmantel *Context*: 3rd century AD date *Inventory No.*: not recorded *Reference*: JACOBI 1909: 99 & Taf.14, 50c *Dimensions (from scaled photo)*: L: 50mm, W: 45mm *Notes*: Very similar to the above, but with the ring/eyelet on the opposite side.
127. Zugmantel *Context*: dated to 3rd century AD. *Inventory No.*: not recorded *Reference*: JACOBI 1909: 99 & Taf.14, 50d *Dimensions (from scaled photo)*: L: 165mm, W: 125mm, D (rivet head): 35mm *Notes*: This fragment represents the remains of a breast plate. There is a rolled edge to the plate at the top right (the neck opening), a brass plate surrounding a male lateral fastener (roughly octagonal in shape, i.e. square with the corners cut away) on the left and a large copper alloy leathering rivet on the right.
128. Zugmantel *Context*: 3rd century AD date *Inventory No.*: not recorded *Reference*: JACOBI 1909: 99 & Taf.14, 50f *Dimensions*: L: 270mm, W: 150mm *Notes*: The largest piece of armour from this site consists of a pile of girdle plate sections that have been over-compressed downwards. There appear to be five plates in all with the upper plate being about twice the depth of the others.
129. Zugmantel *Context*: 3rd century AD date *Inventory No.*: not recorded *Reference*: JACOBI 1909: 99 & Taf.14, 50g *Dimensions (from scaled photo)*: L: 38mm, W: 40mm *Notes*: This plate also has a thin sheet bronze edging.

## Bibliography

- ALCOCK 1909: Alcock, L., 'The hoard from Santon', *Proc. Cambridge Antiq. Soc.*, **13(2)**, 146–63
- ALCOCK 1967: Alcock, L., 'A reconnaissance excavation at South Cadbury Castle, Somerset, 1966', *Antiquaries Journal*, **47**, 70–6
- ALICU *et al.* 1994: Alicu, D., C. Sorin, Constantin, I & Soroceanu, A. *Small Finds from Ulpia Traiana Sarmizegetusa*, Cluj-Napoca, The National History Museum of Transylvania
- ALLASON-JONES & MIKET 1983: Allason-Jones, L. & Miket, R., *The Roman Fort at South Shields, Excavation of the Defences, 1977-81*, Newcastle
- ALLASON-JONES & MIKET 1984: Allason-Jones, L. & Miket, R., *The Catalogue of Small Finds from The South Shields Roman Fort*, Society of Antiquaries of Newcastle-upon-Tyne, Monograph series, **2**
- ALLASON-JONES & BISHOP 1988: Allason-Jones, L. & Bishop, M.C., *Excavations at Roman Corbridge: the Hoard*, HBMC Archaeological Report No.7 London
- ALLASON-JONES 1994: Allason-Jones, L., 'Roman military and domestic artifacts from Great Chester', *Archaeologia Aeliana*, Ser.5, **24**, 187–214
- BECHERT 1974: Bechert, T., *Asciburgium – Ausgrabungen in einem römischen Kastell am Niederrhein*, Duisburger Forschungen **20**, Duisburg
- BECHERT 1979: Bechert, T., 'Ausgrabungen in *Asciburgium*. Vorbericht über die Grabungen 1975–1977', *Bonner Jahrbücher* **179**, 475–98
- BEHRENS 1912: Behrens, G., 'Neue Funde aus dem Kastell Mainz', *Mainzer Zeitschrift* **7**, 82–109
- BEHRENS 1913–14: Behrens, G., 'Dritte Bericht über Funde aus dem Kastell Mainz', *Mainzer Zeitschrift* 8–9, 65–93
- BEHRENS & BRENNER 1911: Behrens and Brenner, E., 'Ausgrabungen im Legionskastell zu Mainz während des Jahres 1910', *Mainzer Zeitschrift* **6**, 53–120
- BELIËN 1996: Beliën, P., *Het Romeinse Leger in Nederland. Catalogus en Inleiding*, Delft
- BERGHE 1996: Berghe, L.V., 'Some Roman military equipment of the first three centuries AD in Belgian museums', *Journal of Roman Military Equipment Studies*, **7**, 59–93
- BERNARD 1981: Bernhard, H., 'Untersuchungen im frühromischen Rheinzabern', *Archäologische Korrespondenzblatt* **11**, 127–37
- BISHOP 1989: Bishop, M.C., 'The composition of some copper alloy artefacts from Longthorpe', *Arma*, **1(2)**, 20–3
- BISHOP 1995: Bishop, M.C., 'Some pre-Flavian Military Equipment from Kent', *Arma*, **7**, 17–19
- BISHOP 1996: Bishop, M.C., *Finds from Roman Aldborough*, Oxbow Monograph **65**, Oxford
- BISHOP 1999: Bishop, M.C., 'The Newstead *lorica segmentata*', *Journal of Roman Military Equipment Studies*, **10**, 27–43
- BISHOP & DORE 1989: Bishop, M.C. & Dore, J.N., 'Corbridge – Excavations of the Roman Fort and Town, 1947–80', HBMC Archaeological Report No.8, London
- BOGAERS & HAALBOS 1975: Bogaers, J.E. and Haalebos, J.K., 'Problemen rond het Kops Plateau', *Oudheidkundige Mededelingen* **56**, 127–78
- BOGAERS & HAALBOS 1976: Bogaers, J.E. and Haalebos, J.K., 'Opgravingen in de romeinse legioenvestigingen te Nijmegen, I', *Oudheidkundige Mededelingen* **57**, 149–96



- BOGAERS & HAALEBOS 1977: Bogaers, J.E. and Haalebos, J.K., 'Opgravingen in den Romeinse Legioensvestingen te Nijmegen, II', *Oudheidkundige Mededelingen* **58**, 73–157
- BOON 1969: Boon, G.C., 'Belgic and Roman Silchester: Excavations of 1954–8', *Archaeologia*, **CII**, 1–81
- BOUBE-PICCOT 1994: Boubé-Piccot, C.: *Les bronzes antiques du Maroc. IV. L'équipement militaire et l'armement*, Paris
- BRAILSFORD 1962: Brailsford, J.W., *Hod Hill, Volume 1, Antiquities from Hod Hill in the Durden Collection*, London
- BROWN 1986: Brown, 'The Iron Age and Romano-British Settlement at Woodcock Hall, Norfolk', *Britannia*, **17**, 42–9
- BRYANT, *et al.* 1986: Bryant, S., Morris, M., & Walker, J.S.F. 'Roman Manchester. A Frontier Settlement', *The Archaeology of Greater Manchester* **3**, Manchester
- BUSHE-FOX 1915: Bushe-Fox, J.P., *Second Report on the Excavations on the Site of the Roman Town at Wroxeter, Shropshire, 1913*, Reports of the Research Committee of the Society of Antiquaries of London **2**, Oxford
- BUSHE-FOX 1916: Bushe-Fox, J.P., *Second Report on the Excavations on the Site of the Roman Town at Wroxeter, Shropshire, 1914*, Reports of the Research Committee of the Society of Antiquaries of London **4**, Oxford
- BUSHE-FOX 1932: Bushe-Fox, J.P., *Third Report on the Excavations of the Roman Fort at Richborough, Kent*, Oxford
- CARUANA 1993: Caruana, I., 'A third century *lorica segmentata* back-plate from Carlisle', *Arma* **5**, 15–17
- CASEY *et al.* 1993: Casey, P.J., Davies, J.L. & Evans, J., *Excavations at Segontium (Caernarfon) Roman Fort, 1975–1979*, CBA Research Report **90**, London
- CASEY & HOFFMAN 1995: Casey, P.J. and Hoffmann, B., 'Excavations at Alstone Cottage, Caerleon, 1970', *Britannia* **26**, 63–106
- CHIRILA *et al.* 1982: Chirila, E., Gudea, N., Lucacel, V. & Pop, C., *Castrul roman de la Buciumi*, Cluj
- COOL & PHILO 1998: Cool, H.E.M. & Philo, C., *Roman Castleford Excavations 1974–85. Volume I: The Small Finds*, Yorkshire Archaeology **4**, Wakefield
- COOL, LLOYD-MORGAN & HOOLEY 1995: Cool, H.E.M., Lloyd-Morgan, G. & Hooley, A.D., *Finds from the Fortress, The Archaeology of York, The Small Finds 17/10*, York
- CRACKNELL & MAHANEY 1994: Cracknell, S. & Mahaney, C., *Roman Alcester, Southern extra-Mural Area. 1964–66 Excavations, Part II: Finds and Discussion*, Roman Alcester Series, Vol.1, CBA Research Report **97**, London
- CRUMMY 1977: Crummy, P., 'Colchester, the Roman fortress and colonia', *Britannia* **8**, 65–105
- CRUMMY 1983: Crummy, N., *Colchester Archaeological Report 2*, Colchester
- CRUMMY 1992: Crummy, N., *Colchester Archaeological Report 6: Excavations at Culver Street, the Gilbert School and other sites in Colchester, 1971–85*, Colchester
- CUNLIFFE 1968: Cunliffe, B.W. (ed.), *Excavations at the Roman Fort of Richborough, Kent, No.5*, Reports of the Research Committee of the Society of Antiquaries of London **23**, Oxford
- CUNLIFFE 1971: Cunliffe, B.W., *Excavations at Fishbourne, 1961–9. Volume II: the Finds*, Reports of the Research Committee of the Society of Antiquaries of London **27**, Oxford
- CURLE 1911: Curle, J., *A Roman Frontier Post and its People. The Fort at Newstead*, Glasgow

- DANELL & WILD 1987: Dannel, G.B. and Wild, J.P., *Longthorpe II. The Military Works Depot: an Episode in Landscape History*, Britannia Monograph **8**, London
- DEIMEL 1986: Deimel, M., *Die bronzekleinfunde vom Magdalensberg*, Klagenfurt
- DESCHLER-ERB 1996: Deschler-Erb, E. (ed.): *Beiträge zum römische Oberwintherthur – Vitudurum 7. Ausgrabungen im Unteren Bühl*, Monographien der Kantonsarchäologie Zürich **27**, Zürich
- DESCHLER-ERB 1998: Deschler-Erb, E.: ‘Vindonissa (Windisch AG – Switzerland): a gladius with a relief decorated sheath and belt pieces from the legionary camp’, *Arma*, **10: 1 & 2**, 2–5
- DESCHLER-ERB 1999: Deschler-Erb, E., ‘*Ad Arma! Römische Militär des 1. Jahrhunderts n. Chr. in Augusta Raurica*’, *Forschungen in Augst*, Bd.**28**, Augst
- DORA & PRISKA (undated): Dora, G. & Priska, R., *Katalog, Oblastine Podunajske Museum, Komarno, Komarno*
- DOWN 1974: Down, A., *Chichester Excavations*, 2, Chichester
- DOWN 1978: Down, A., *Chichester Excavations*, 3, Chichester
- DOWN 1981: Down, A., *Chichester Excavations* 5, Chichester
- DOWN 1989: Down, A., *Chichester Excavations* 6, Chichester
- van DRIEL-MURRAY 1989: van Driel-Murray, C., *Roman Military Equipment: the Sources of Evidence. Proceedings of the 5th Roman Military Equipment Conference*, BAR International Series **476**
- DROOP & NEWSTEAD 1931: Droop, J.P. & Newstead, R., ‘Excavations in the Deanery Fields, Chester 1928. Part 2: the finds’, *Liverpool University Annals of Anthropology and Archaeology* **18**, 113–56
- DUNNETT 1971: Dunnett, B.R.K., ‘Excavations in Colchester 1964–8’, *Transactions of the Essex Archaeological Society* ser.3, **3**, 1–106
- ELLIS 2000: Ellis, P. (ed.), *The Roman Baths and Macellum at Wroxeter. Excavations by Graham Webster 1955–85*, English Heritage Archaeological Report No.**9**, London
- ELLIS 2001: Ellis, P. (ed.), ‘*Roman Wiltshire and After, Papers in Honour of Ken Annable*’, Devizes
- EVANS & METCALF 1992: Evans, D.R. & Metcalf, V.M., *Roman Gates, Caerleon, Oxbow Monograph* **15**, Oxford
- EVANS 2000: Evans, E. (ed.), *The Caerleon (GB) Canabae*, Britannia Monograph Series, No.**16**, London
- FERNANDEZ 1992: Fernandez Ibañez, C., ‘El conocimiento de la antigua “Pisoraca” a través de los metales romanos’, *Papeles Herrerenses* **I**, 96–104
- FEUGERE 1993: Feugère, M., ‘*Les Armes Romaines*’, Paris, reprinted 2002 as ‘*Weapons of the Romans*’, Stroud
- FEUGERE 1997: Feugère, M., ‘Militaria de Gaule méridionale, 4; Vaison-la-Romaine (Vaulcluse)’, *Arma*, **9(1)**, 3–6
- FEUGERE & PELLECUER 198: Feugère, M & Pellecuer, C., ‘Militaria de Gaule méridionale, 7, Mèze (Hérault) et environs’, *Arma*, **10(1 & 2)**, 5–7
- FIELD 1992: Field, N.H., *Dorset and the Second Legion*, Tiverton
- FILLOY NIEVA & GIL ZUBILLAGA 1998?: Filloy Nieva, I. & Gil Zubillaga, E., *La romanización en Álava. Catálogo de la exp, osición permanente sobre Alava en época romana del Museo de Arqueología de Álava, Álava*
- FINGERLIN 1970: Fingerlin, G., ‘Dangstetten ein augusteisches Legionslager am Hochrhein. Vorbericht über Grabungen 1967–9’, *Berichte Römische-Germanische Kommission*, **51–2**, 197–232
- FINGERLIN 1986: Fingerlin, G., *Dangstetten I, Katalog der Funde*, Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg, **22**, Stuttgart

- FINGERLIN 1998: Fingerlin, G., *Dangstetten II*, Stuttgart
- FISCHER 1973: Fischer, U., *Grabungen im römischen Steinkastell von Heddernheim 1957–1959*, Schriften des Frankfurter Museums für Vor- und Frühgeschichte **2**, Frankfurt
- FORRER 1927: Forrer, R., *Das römische Straßburg, Argentorate*, Strasbourg
- FOX 1939: Fox, A., 'Legionary Fortress Caerleon (GB), Monmouthshire, Excavations at Myrtle Cottage', *Archaeologia Cambrensis*, **45(2)**, 101–52
- FOX 1941: Fox, A., *The Roman Legionary Fortress at Caerleon, Monmouthshire, Report on the Excavations Carried Out in Myrtle Cottage Orchard in 1939*, Cardiff
- FRANCE & GOBEL 1985: France, N.E. and Gobel, B.M., *The Romano-British Temple at Harlow*, Gloucester
- FRANZIUS 1992: Franzius, G., 'Archäologische Zeugnisse zur Varusschlacht?', *Germania*, **70(2)**, 349–83
- FRANZIUS 1995: Franzius, G., 'Die Römische Funde aus Kalkriese 1987–95', *Journal of Roman Military Equipment Studies*, **6**, 69–88
- FRERE 1984: Frere, S.S., *Verulamium Excavations, Vol. III*, Oxford Monograph No. **1**, Oxford
- FRERE & ST JOSEPH 1974: Frere, S.S. & St Joseph, J.K., 'The Roman Fortress at Longthorpe', *Britannia*, **5**, 1–129
- FRERE & WILKES 1989: Frere, S.S. & Wilkes, J.J., *Strageath, Excavations within the Roman Fort, 1973–86*, Britannia Monograph Series No. **9**, London
- FULFORD & TIMBY 2000: Fulford, M. & Timby, J., *Late Iron Age and Roman Silchester. Excavations on the site of the Forum-Basilica 1977, 1980–86*, Britannia Monograph Series No. **15**, London
- GARCIA DIEZ 1999: García Díez, F., 'Algunas piezas metálicas romanas de Herrera de Pisuerga', *Papeles Herrerenses* **II**, 13–31
- GENTSCHEVA 1999: Gentscheva, E., 'Neue Angaben bezüglich des Militärlagers von Novae im Unterdonaubecken aus der früheren Kaiserzeit', *Archaeologia Bulgarica*, **III**, 21–33
- GOULD 1966: Gould, J., 'Excavations at Wall, Staffs, 1964–6, on the site of the Roman Forts', *Transactions of the South Staffordshire Archaeological and Historical Society*, **VIII**, 1–40
- von GROLLER 1901a: von Groller, M., 'Das Lager von Carnuntum', *Der Römische Limes in Österreich* **2**, 15–84
- von GROLLER 1901b: von Groller, M., 'Römische Waffen', *Römische Limes in Österreich* **2**, 85–132
- von GROLLER 1910: von Groller, M., *Der Römische Limes in Österreich* **11**, Wien & Leipzig
- GRÜNEWALD 1981: Grünewald, M., *Die Kleinfunde des Legionslagers von Carnuntum – mit Ausnahme der Gefäßkeramik (Grabungen 1968–74)*, *Der Römische Limes in Österreich* **31**, Wien
- GRÜNEWALD 1983: Grünewald, M., *Die Funde aus dem Schutthügel des Legionslagers von Carnuntum. Die Baugrube Pingitzer*, *Der Römische Limes in Österreich* **32**, Wien
- GUDEA 1989: Gudea, N., *Porolissum. Un complex arheologic daco-roman la marginea de nord a Imperiului-Roman*, Zalău
- HAWKES & HULL 1947: Hawkes, C.F.C. & Hull, M.R., *Camulodunum, 1st Report on the Excavations at Colchester, 1930–39*, Oxford
- HEILIGMANN, 1990: *Der 'Alb-Limes'*, Stuttgart
- HOBLEY 1972: Hobley, B., 'Excavations at the Lunt Roman military site, Baginton. Second interim report', *Transactions of the Birmingham and Warwickshire Archaeological Society* **85**, 7–92
- HOFFILER 1912: Hoffiler, V.: 'Oprema rimskoga vojnika u prvo doba carstva II', *Vjestnik Hrvatskoga Arheoloskoga Društva (Zagreb)* n.s. **12**, 16–123

- HOLBROOK & BIDWELL 1991: Holbrook, L. & Bidwell, P.T., *Roman Finds from Exeter*, Exeter Archaeological Reports **4**, Exeter
- HOLBROOK 1998: Holbrook, N. (ed.), *Cirencester, The Roman Town Defences, Public Buildings and Shops*, Cirencester
- HÜBENER 1973: Hübener, W., *Die römischen Metallfunde von Augsburg-Oberhausen, ein Katalog*, Kallmünz
- HURST 1972: Hurst, H.R., 'Excavations at Gloucester, 1968–71, 1st interim report', *The Antiquaries Journal*, **LII**, Part 1
- HURST 1985: Hurst, H.R., *Kingsholm. Excavations at Kingsholm Close and Other Sites with a Discussion of the Archaeology of the Area*, Cambridge
- HURST 1986: Hurst, H.R., *Gloucester Report, 2*, Gloucester
- JACKSON 1990: Jackson, R., *Camerton – Late Iron Age and Early Roman Metalwork*, London
- JONES 1999: Jones, M.J., *Archaeology of Lincoln, Defences of the Lower City*, CBA Research Reports **114**, London
- KABAKCIEVA 1996: Kabakcieva, G., 'Frühromische Militärlager in Oescus (Nordbulgarien)', *Germania* **74(1)**, 95–117
- KALEE 1989: Kalee, C.A., 'Roman helmets and other militaria from Vechten', in van DRIEL-MURRAY 1989, 193–226
- KREKOVIC 1994: Krekovic, E., 'Military Equipment on the Territory of Slovakia', *Journal of Roman Military Equipment Studies* **5**, 211–25
- LEE 1862: Lee, J.E., *Isca Silurum, 1st Museum Catalogue, Museum of Antiquities, Caerleon*, London
- MANN 1981: Mann, J., 'Small finds: an ornamental dagger-sheath', *Lincoln Archaeological Trust, 9th Annual Report 1980–81*, Lincoln, 25–6
- MANNING *et al.* 1995: Manning W.H., Price, J., & Webster, J., *Report on the Excavations at Usk, 1965–76*, Cardiff
- MARVELL & OWEN-JOHN 1997: Marvell, A.G. & Owen-John, H.S., *Leucarum, Excavations at the Roman Auxiliary Fort at Loughor, West Glamorgan, 1982–84 & 1987–88*, Britannia Monograph Series No. **12**, London
- MCCARTHY 1990: McCarthy, M., *A Roman, Anglian and Medieval Site at Blackfriars Street, Carlisle, Cumberland and Westmorland Antiquarian and Archaeological Society Research Series 4*, Kendal
- MUDD *et al.* 1999: Mudd, A., Williams, R.J. & Lupton, A., 'Excavations Alongside Roman Ermine Street, Gloucestershire & Wiltshire. The Archaeology of the A419/A417 Swindon to Gloucester Road Scheme. Vol.2, Finds and Environmental Evidence', Oxford
- MURRAY-THREIPLAND 1965: Murray-Threipland, L., 'Caerleon: Museum Street Site, 1965', *Archaeologia Cambrensis* **115**, 130–45
- MURRAY-THREIPLAND 1966: Murray-Threipland, L., 'Excavations at Caerleon, 1966', *Archaeologia Cambrensis* **116**, 23–56
- MURRAY-THREIPLAND 1969: Murray-Threipland, L., 'The Hall, Caerleon, 1964. Excavations on the site of the Legionary Hospital', *Archaeologia Cambrensis* **118**, 86–123
- NEWSTEAD 1928: Newstead, R. 'Records of archaeological finds at Chester', *Journal of the Chester Archaeological Society* **27**, 59–162
- NEWSTEAD 1928a: Newstead, R., 'Report on the excavations on the site of the Roman fortress at the Deanery Field, Chester (no.2)', *Liverpool University Annals of Anthropology and Archaeology* **15**, 3–32

- NIBLETT 1985: Niblett, R., *'Sheepen, An Early Industrial Roman Site At Camulodunum'*, CBA Research Reports **57**, London
- NISSEN *et al* 1902: Nissen, H., Koenen, C., Lehner, H., Strack, M.L. & Hagen, J., 'Novaesium. Das im Auftrag des rheinischen Provinzialverbandes vom Bonner Provinzialmuseum 1887–1900 ausgegrabene Legionslager', *Bonner Jahrbücher* **111/12**, 1-462
- PARTRIDGE 1981: Partridge, C., *Skeleton Green. A late Iron Age and Romano-British Site*, Britannia Monograph Series No.2, London
- PLANK 1975: Planck, D., *Arae Flaviae I. Neue Untersuchungen zur Geschichte des römischen Rottweil*, Stuttgart
- POTTER & TROW 2000: Potter, T.W. & Trow, S.D., 'Puckeridge-Braughing, Herts: The Ermine Street Excavations, 1971–1972', *Hertfordshire Archaeology*, **10**
- RAJTAR 1992: Rajtar, J., 'Das Holz-Erde-Lager aus der Zeit der Markomannenkriege in Iža', in *Probleme der relativen und absoluten Chronologie ab Latenezeit bis zum Frühmittelalter*, Krakow, 149–70
- RAJTAR 1994: Rajtar, J.: 'Waffen und Ausrüstungsteile aus dem Holz-Erde-Lager von Iža', *Journal of Roman Military Equipment Studies* **5**, 83–95
- REINECKE 1927: Reinecke, P., 'Römische und frühmittelalterliche Denkmäler vom Weinberg bei Eining a. d. Donau', in *Festschrift zur Feier fünfundsichzigjährigen Bestehens des Römische-Germanischen Central-Museums zu Mainz*, Mainz, 157–70
- RICHMOND 1968: Richmond, I., *Hod Hill, Volume 2: Excavations Carried Out Between 1951 and 1958*, London
- REVELLIO 1937: Revellio, P., 'Das Kastell Hüfingen', *Obergermanische Rätische Limes*, **62a**, Berlin & Leipzig
- RITTERLING 1904: Ritterling, E., 'Das frührömische Lager bei Hofheim i.T. Ausgrabungs- und Fundbericht', *Annalen des Vereins für nassauische Altertumskunde* **34**, 1–110, 397–423
- RITTERLING 1909: Ritterling, E., 'Das Kastell Wiesbaden', *Obergermanische Rätische Limes*, **B31**
- RITTERLING 1913: Ritterling, E., 'Das frührömische Lager bei Hofheim im Taunus', *Annalen des Vereins für nassauische Altertumskunde* **40**, 1–416
- ROGERSON 1977: Rogerson, A., 'Excavation at Scole 1973', *East Anglian Archaeology Reports* **5**, 97–224
- ROUND 1969: Round, A.A., 'Excavations at Wall, Staffordshire, 1966–7 on the site of the Roman forts', *Transactions of the South Staffordsdhire Archaeological and Historical Society* **XI**, 7–31
- SAUER 2000: Sauer, F., 'Alchester a Claudian "vexillation fortress" near the western boundary of the Catuvellauni: new light on the Roman invasion of Britain', *Archaeological Journal* **157**, 1–78
- SCHLÜTER 1992: Schlüter, W., 'Archäologische Zeugnisse zur Varusschlacht? Die Untersuchungen in der Kalkrieser-Niewedder Senke bei Osnabrück', *Germania* **70**, 307–83
- SCHALLES & SCHREITER 1993: Schalles, H.-J. and Schreiter, C., *Geschichte aus dem Kies. Neue Funde aus dem Alten Rhein bei Xanten*, Xantener Berichte **3**, Köln
- SCHALLES 1994: Schalles, H.-J., 'Frühkaiserzeitliche Militaria aus einem Altrheinarm bei Xanten-Wardt', *Journal of Roman Military Equipment Studies* **5**, 155–65
- SCHÖNBERGER 1978: Schönberger, H., *Die Geschichte des Kastells Oberstimm*, Limesforschungen **18**, Berlin
- SIMPSON 2000: Simpson, G., *Roman Weapons, Tools, Bronze Equipment and Brooches from Neuss – Novaesium Excavations 1955–72*, BAR International Series **862**, Oxford

- SPRATLING 1975: Spratling, M., 'Fragments of *lorica segmentata* in the hoard from Santon, Norfolk.' *Britannia* **6**, 206–7
- THOMAS forthcoming a: Thomas, M.D., 'An unusually fine lobate hinge from *lorica segmentata* armour', *Arma*
- THOMAS forthcoming b: Thomas M.D., '*Lorica segmentata* armour fittings in Newport (Monmouthshire) Museum', *Arma*
- TODD 1981: Todd, M., 'A legionary cuirass hinge from the Great Casterton fort', *Britannia* **12**, 297–8
- ULBERT 1959: Ulbert, G., 'Die Römischen Donaukastelle Aislingen und Burghöfe', *Limesforschungen* **1**, Berlin
- ULBERT 1969: Ulbert, G., *Das frühromische Kastell Rheingönheim*, *Limesforschungen* **9**, Berlin
- ULBERT 1970: Ulbert, G., '*Das römische Donau-Kastell Risttissen, Teil 1: die Funde aus Metall, Horn und Knochen*', Stuttgart
- UNZ 1972: Unz, C., 'Zu den Schwertscheidenmedaillons aus Vindonissa', *Gesellschaft Pro Vindonissa, Jahresbericht*, 43–8
- UNZ 1973: Unz, C., 'Römische Funde aus Windisch im ehemaligen Kantonalen Antiquarium Aarau', *Gesellschaft Pro Vindonissa, Jahresbericht*, 11–42
- UNZ 1974: Unz, C., 'Römische Militärfunde aus Baden, ein Nachtrag', *Gesellschaft Pro Vindonissa, Jahresbericht*, 85–91
- UNZ & DESCHLER-ERB 1997: Unz, C., & Deschler-Erb, E., *Katalog der Militaria aus Windisch*, Brugg
- WACHER & McWHIRR 1982: Wacher J. & McWhirr, A, *Early Roman Occupation at Cirencester, Cirencester Excavations I*, Cirencester
- WEBSTER 1949: Webster, G., 'The Legionary Fortress at Lincoln', *Journal of Roman Studies* **39**, 57–78
- WEBSTER 1958: Webster, G., 'The Military Advance under Ostorius Scapula', *Archaeological Journal* **115**, 49–98
- WEBSTER 1960a: Webster, G., 'A note on the Roman cuirass (*lorica segmentata*)', *Journal of the Arms and Armour Society* **3**, 194–7
- WEBSTER 1960b: Webster, G., 'The discovery of a Roman fort at Waddon Hill, Stoke Abbot, 1956', *Proceedings of the Dorset Natural History and Archaeological Society* **82**, 88–108
- WEBSTER 1963: Webster, G., 'Further investigations on the Roman fort at Waddon Hill, Stoke Abbott, 1960–62', *Proceedings of the Dorset Natural History and Archaeological Society* **86**, 135–49
- WEBSTER 1979: Webster, G., 'Final report on the excavations of the Roman fort at Waddon Hill, Stoke Abbott, 1963–69', *Proceedings of the Dorset Natural History and Archaeology Society* **101**, 51–90
- WEBSTER 1980a: Webster, G., *The Roman Invasion of Britain*, London
- WEBSTER 1980b: Webster, G., *Rome Against Caractacus*, London
- WEBSTER 1985: Webster, G., *The Roman Imperial Army*, 3rd edition, London
- WRATHMELL & NICHOLSON 1990: Wrathmell, S. & Nicholson, A. (eds.), *Dalton Parlours: Iron Age Settlement and Roman Villa*, *Yorkshire Archaeology*, **3**, Wakefield
- ZIENKIEWICZ 1986a: Zienkiewicz, J.D., *Excavations in the Scamnum Tribunorum at Caerleon: The Legionary Museum Site 1983–5*, Cardiff
- ZIENKIEWICZ 1986b: Zienkiewicz, J.D., *The Legionary Fortress Baths at Caerleon (GB), II, The Finds*, Cardiff

# Index

This index should also serve to guide the reader to the geographic locations of the various sites mentioned in the text. The nationality of these has been indicated using the standard three-letter international abbreviations (following ISO 3166) for the countries concerned which are as follows:

AUT	Austria	CZE	Czech Republic	GBR	Great Britain	MAR	Morocco
BEL	Belgium	DEU	Germany	HRV	Croatia	NLD	Netherlands
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This volume is the natural companion to *JRMES* Monograph 1 (M.C. Bishop: *Lorica Segmentata, Volume I: A Handbook of Roman Plate Armour*) and presents a detailed catalogue of published examples of *lorica segmentata* fittings from the entire Roman empire. Eleven categories of fittings and surviving examples of the iron plates are included and individually illustrated.

It is the first time that all such fittings have been gathered under one cover, enabling direct comparison between items within the various categories. This volume will prove invaluable to re-enactors and experimental archaeologists, as well as anybody working in the field of Roman small finds study.

Contents include an introduction, detailed component catalogues (illustrated with specially-prepared scale drawings), and a full bibliography.

