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Fragmenting the Chieftain : a practice-based study of Early Iron Age Hallstatt C elite burials in the Low Countries

Vaart, S.A. van der

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FRAGMENTING THE CHIEFTAIN

Late Bronze and Early Iron Age elite burials in the Low Countries

Catalogue



Sidestone Press

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Catalogue

Sasja van der Vaart-Verschoof

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Contents

C1 Introduction **15**

C2 Terminology and typology **25**

C2.1 Pottery 25

C2.2 Bronze vessels 26

C2.2.1 Basic terminology and typology 26

C2.2.1.1 The type Kurd bucket 26

C2.2.2 The Dutch and Belgian bronze vessels 27

C2.3 Weaponry 27

C2.3.1 Swords and chapes 27

C2.3.1.1 Terminology 27

C2.3.1.2 Research history and typology 27

C2.3.1.3 Type Gündlingen swords 28

C2.3.1.4 Iron Mindelheim swords 29

C2.3.1.5 Other (unique) iron swords 31

C2.3.1.6 A rider's blade? 32

C2.3.2 Other weaponry 32

C2.4 Horse-gear and wagons 33

C2.4.1 Terminology 33

C2.4.2 Horse-gear and wagon components from the Low Countries 34

C2.4.2.1 Yoke and wagon components from Dutch and Belgian burials 34

C2.4.3 Horse-gear with British connections? 35

C2.4.4 The problem of the loose ring 36

C2.4.5 Horse-gear or scabbard element 36

C2.5 Tools 37

C2.5.1 Knives 37

C2.5.2 Axes 37

C2.5.3 (Whet)stones 37

C2.5.4 Spindle whorls 37

C2.6 Personal appearance: grooming tools and ornaments 37

C2.6.1 Atlantic razors? 37

C2.6.2 Toiletries 37

C2.6.3 Ornaments 38

C2.7 Textiles 38

C2.7.1 Defining cloth, clothing and costume 38

C2.7.2 Technical aspect of textile (analysis) 38

C2.7.3 Textiles in Oss-Vorstengraf 40

C2.7.4 Textiles in Uden-Slabroek 40

C3 Revealing restorations **41**
C3.1 Restoring the Chieftain's grave of Oss 42
C3.1.1 Restoration 1933–'34 42
C3.1.2 Restoration 1963 43
C3.1.3 Restoration 1992–'93 43
C3.1.4 Conclusion: the Chieftain's grave of Oss 44
C3.2 Restoring the Wijchen blades 45
C3.3 Court-St-Etienne La Ferme Rouge T.3 restored or degraded? 46
C3.4 Conclusion 46

C4 Baarlo **47**
C4.1 Find circumstances 47
C4.2 The material remains 48
C4.3 Dating 48
C4.4 Actions taken and reconstructing the (burial) ritual 49

C5 Basse-Wavre **50**
C5.1 Find circumstances 50
C5.2 Tombelle 5 50
C5.2.1 The material remains 50
C5.2.2 Dating 53
C5.2.3 Actions taken and reconstructing the (burial) ritual 53

C6 Court-St-Etienne **54**
C6.1 Research history 54
C6.2 Court-St-Etienne La Ferme Rouge 55
C6.2.1 Find circumstances 56
C6.2.2 Tombelle 1 57
C6.2.2.1 The material remains 57
C6.2.2.2 Dating 58
C6.2.2.3 Actions taken and reconstructing the (burial) ritual 58
C6.2.3 Tombelle 2 58
C6.2.3.1 The material remains 58
C6.2.3.2 Dating 59
C6.2.3.3 Actions taken and reconstructing the (burial) ritual 59
C6.2.4 Tombelle 3 59
C6.2.4.1 The material remains 61
C6.2.4.2 Dating 65
C6.2.4.3 Actions taken and reconstructing the (burial) ritual 66
C6.2.5 Tombelle 4 66
C6.2.5.1 The material remains 66
C6.2.5.2 Dating 68
C6.2.5.3 Actions taken and reconstructing the (burial) ritual 68
C6.2.6 Tombelle 5 68
C6.2.6.1 The material remains 68
C6.2.6.2 Dating 70
C6.2.6.3 Actions taken and reconstructing the (burial) ritual 70
C6.2.7 Objects found at La Ferme Rouge which cannot be ascribed to a specific barrow 70

C6.3 Court-St-Etienne La Quenique 71
C6.3.1 Find circumstances 71
C6.3.2 Tombelle A 71
C6.3.2.1 The material remains 71
C6.3.2.2 Also from Tombelle A? 74
C6.3.2.3 Dating 74
C6.3.2.4 Actions taken and reconstructing the (burial) ritual 74
C6.3.3 Tombelle B 75
C6.3.3.1 The material remains 75
C6.3.3.2 Dating 75
C6.3.3.3 Actions taken and reconstructing the (burial) ritual 76
C6.3.4 Tombelle K 76
C6.3.4.1 The material remains 76
C6.3.4.2 Dating 77
C6.3.4.3 Actions taken and reconstructing the (burial) ritual 77
C6.3.5 Tombelle L 77
C6.3.5.1 The material remains 77
C6.3.5.2 Dating 78
C6.3.5.3 Actions taken and reconstructing the (burial) ritual 78
C6.3.6 Tombelle M 78
C6.3.6.1 The material remains 78
C6.3.6.2 Dating 78
C6.3.6.3 Actions taken and reconstructing the (burial) ritual 78
C6.3.7 Tombelle X 78
C6.3.8 Tombelle Y 80
C6.3.8.1 The material remains 80
C6.3.8.2 Dating 80
C6.3.8.3 Actions taken and reconstructing the (burial) ritual 80
C6.3.9 Tombelle Z 80
C6.3.9.1 The material remains 81
C6.3.9.2 Dating 81
C6.3.9.3 Actions taken and reconstructing the (burial) ritual 81
C6.3.10 Objects found at La Quenique, but not attributable to a specific barrow 81
C6.3.10.1 Excavation 1861 82
C6.3.10.2 Burial opened in 1870 82
C6.3.10.3 Vandalization of barrows in 1877–'78 82
C6.3.10.4 Objects probably from vandalization of 1877–'78 87
C6.3.10.5 Objects of uncertain provenance 90
C6.3.11 Flat graves at La Quenique 90
C6.3.11.1 A chape probably found in a flat grave at La Quenique 92

C7 Darp-Bisschopsberg 93
C7.1 Find circumstances 93
C7.2 The material remains 94
C7.3 Dating 96
C7.4 Actions taken and reconstructing the (burial) ritual 96

C8 Ede-Bennekom **97**
C8.1 Find circumstances 97
C8.2 The material remains 97
C8.3 Dating 98
C8.4 Actions taken and reconstructing the (burial) ritual 98

C9 Flobecq-Pottelberg Tombelle 78 **99**
C9.1 The material remains 99
C9.2 Dating 99
C9.3 Actions taken and reconstructing the (burial) ritual 99

C10 Gedinne-Chevaudos **100**
C10.1 Find circumstances 100
C10.2 Tombelle 1 101
C10.2.1 The material remains 101
C10.2.2 Dating 101
C10.2.3 Actions taken and reconstructing the (burial) ritual 101
C10.3 Tombelle 2 102
C10.3.1 The material remains 102
C10.3.2 Dating 102
C10.3.3 Actions taken and reconstructing the (burial) ritual 102
C10.4 Tombelle 13 102
C10.4.1 The material remains 102
C10.4.2 Dating 102
C10.4.3 Actions taken and reconstructing the (burial) ritual 103
C10.5 Tombelle 14 103
C10.5.1 The material remains 103
C10.5.2 Dating 104
C10.5.3 Actions taken and reconstructing the (burial) ritual 104
C10.6 Tombelle 16 104
C10.6.1 The material remains 104
C10.6.2 Dating 106
C10.6.3 Actions taken and reconstructing the (burial) ritual 106
C10.7 Tombelle A 106
C10.7.1 The material remains 106
C10.7.2 Dating 106
C10.7.3 Actions taken and reconstructing the (burial) ritual 106
C10.8 Tombelle P/Q 107
C10.8.1 The material remains 107
C10.8.2 Dating 107
C10.8.3 Actions taken and reconstructing the (burial) ritual 107

C11 Haps grave 190 **108**
C11.1 Find circumstances 109
C11.2 The material remains 109
C11.3 Dating 110
C11.4 Actions taken and reconstructing the (burial) ritual 110

C12 Harchies-Maison Cauchies **111**
C12.1 Find circumstances 112
C12.2 Tombe 1 113
C12.2.1 The material remains 113
C12.2.2 Dating 113
C12.2.3 Actions taken and reconstructing the (burial) ritual 114
C12.3 Tombe 2 114
C12.3.1 The material remains 114
C12.3.2 Dating 116
C12.3.3 Actions taken and reconstructing the (burial) ritual 116
C12.4 Tombe 3 116
C12.4.1 The material remains 116
C12.4.2 Dating 117
C12.4.3 Actions taken and reconstructing the (burial) ritual 117
C12.5 Tombe 4 117
C12.5.1 The material remains 117
C12.5.2 Dating 117
C12.5.3 Actions taken and reconstructing the (burial) ritual 118
C12.6 Finds of unknown context 118

C13 Havré **121**
C13.1 Find circumstances 121
C13.2 Tombelle A, B and D 122
C13.3 Tombelle E 122
C13.3.1 The material remains 122
C13.3.2 Dating 122
C13.3.3 Actions taken and reconstructing the (burial) ritual 123
C13.4 Tombelles 1–17 124
C13.4.1 Tombelle 2 124
C13.4.2 Tombelle 4 126
C13.4.2 Tombelle 9 126
C13.4.3 Tombelle 10 127
C13.4.4 Tombelle 16 129

C14 Heythuizen-Bisschop **130**
C14.1 Find circumstances 130
C14.2 The material remains 130
C14.3 Dating 131
C14.4 Actions taken and reconstructing the (burial) ritual 131

C15 Hofstade-Kasteelstraat *spoor* 16 **132**
C15.1 Find circumstances 133
C15.2 The material remains 134
C15.3 Dating 134
C15.4 Actions taken and reconstructing the (burial) ritual 134

C16 Horst-Hegelsom **135**
C16.1 Find circumstances 135
C16.2 Restoration history 137
C16.3 The material remains 137
C16.4 Dating 138
C16.5 Actions taken and reconstructing the (burial) ritual 139

C17 La Plantée des Dames **140**
C17.1 Find circumstances 140
C17.2 Tombelle 3 141
C17.2.1 The material remains 142
C17.2.2 Dating 142
C17.3 Tombelle 4 142
C17.3.1 The material remains 142
C17.3.2 Dating 142

C18 Leesten-Meijerink grave 1 **143**
C18.1 Find circumstances 143
C18.2 The material remains 143
C18.3 Dating 145
C18.4 Actions taken and reconstructing the (burial) ritual 145

C19 Limal-Morimoine **148**
C19.1 Find circumstances 148
C19.2 Tombelle 1 148
C19.2.1 The material remains 148
C19.2.2 Dating 150
C19.2.3 Actions taken and reconstructing the (burial) ritual 150
C19.3 Tombelle 2 151
C19.3.1 The material remains 151
C19.3.2 Dating 152
C19.3.3 Actions taken and reconstructing the (burial) ritual 152
C19.4 An iron sword of unknown find context 153

C20 Lommel-Kattenbos Tombelle 20 **154**
C20.1 Find circumstances 154
C20.2 The material remains 154
C20.3 Dating 155
C20.4 Actions taken and reconstructing the (burial) ritual 155

C21 Louette-St-Pierre Fosse-Aux-Morts **156**
C21.1 Find circumstances 156
C21.1 Tombelle I 156
C21.1.1 The material remains 157
C21.1.2 Dating 157
C21.1.3 Actions taken and reconstructing the (burial) ritual 157
C21.2 Tombelle III 157
C21.2.1 The material remains 157
C21.2.2 Dating 158
C21.2.3 Actions taken and reconstructing the (burial) ritual 158
C21.3 Stray finds of unknown context within Louette-St-Pierre Fosse-Aux-Morts 158

C22 Maastricht-Heer **160**
C22.1 Find circumstances 160
C22.2 The material remains 161
C22.3 Dating 162

C23 Meerlo **163**
C23.1 Find circumstances 163
C23.2 Restoration history 163
C23.3 The material remains 164
C23.4 Dating 165
C23.4 Actions taken and reconstructing the (burial) ritual 165

C24 Meppen **167**
C24.1 Find circumstances 167
C24.2 The material remains 168
C24.3 Dating 168
C24.4 Actions taken and reconstructing the (burial) ritual 169

C25 Neerharen-Rekem tombe 72 **170**
C25.1 Find circumstances 170
C25.2 The material remains 170
C25.3 Dating 173
C25.4 Actions taken and reconstructing the (burial) ritual 175

C26 Oss-Vorstengraf **176**
C26.1 Find circumstances 176
C26.2 The material remains 180
C26.3 Dating 194
C26.4 Actions taken and reconstructing the (burial) ritual 196
C26.4.1 Artifacts that belong together 196
C26.4.2 The burial ritual of Oss 196

C27 Oss-Zevenbergen **199**
C27.1 Mound 3 199
C27.1.1 Find circumstances 199
C27.1.2 The material remains 199
C27.1.3 Dating 201
C27.1.4 Actions taken and reconstructing the (burial) ritual 201
C27.2 Mound 7 203
C27.2.1 Find circumstances 203
C27.2.2 The material remains 203
C27.2.3 Dating 205
C27.2.4 Actions taken and reconstructing the (burial) ritual 206

C28 Rhenen-Koerheuvel **207**
C28.1 Find circumstances 207
C28.2 The material remains 209
C28.3 Dating 215
C28.4 Actions taken and reconstructing the (burial) ritual 215

C29 Someren-Kraayenstark **216**
C29.1 Find circumstances 216
C29.2 The material remains 217
C29.3 Dating 217
C29.4 Actions taken and reconstructing the (burial) ritual 217

C30 Someren-Philipscamping **218**
C30.1 Find circumstances 218
C30.2 The material remains 219
C30.3 Dating 219
C30.4 Actions taken and reconstructing the (burial) ritual 219
C30.5 Two pots that may belong with the sword 219

C31 Stoquoy Tombelle 5 **220**
C31.1 The material remains 220
C31.2 Dating 220
C31.3 Actions taken and reconstructing the (burial) ritual 220

C32 Uden-Slabroek **221**
C32.1 Find circumstances 221
C32.2 The material remains 223
C32.3 Dating 224
C32.4 Actions taken and reconstructing the (burial) ritual 228

C33 Venlo **229**
C33.1 Find circumstances 229
C33.2 The material remains 229
C33.3 Dating 230

C34 Weert-Boshoverheide **231**
C34.1 Find circumstances 231
C34.2 Weert-Boshoverheide t.1 231
C34.3 Weert-Boshoverheide t.2 231
C34.4 Weert-Boshoverheide t.3 232
C34.5 Weert-Boshoverheide t.4 234
C34.6 Tumulus O 234
C34.6.1 The material remains grave A 234
C34.6.2 The material remains grave B 234
C34.6.3 The material remains grave C 234
C34.6.4 Other material remains 235
C34.6.5 Dating 235
C34.6.6 Actions taken and reconstructing the (burial) ritual 236

C35 Wijchen **237**
C35.1 Find circumstances 237
C35.2 The material remains 240
C35.3 Dating 250
C35.4 Actions taken and reconstructing the (burial) ritual 250
C35.4.1 A wagon (and other objects) on fire? 250
C35.4.2 The burial ritual 252

Bibliography **255**

App. CA1 Hallstatt period textile finds from the Netherlands **263**
CA1.1 Textiles from Oss-Vorstengraf 264
Textile on Mindelheim sword (*OV.06*) 264
Textile on iron knife (*OV.24*) 266
Textile on iron rings (*OV.16*) 267
Textile on iron ring (*OV.18*) 267
Loose textile (*OV.39–42*) 268

CA1.2 Textiles from Uden-Slabroek 270
Textile on bracelet (*US.07*) 270
Textile on bracelet set (*US.08*) 271
Textile on anklet (*US.09*) 272

App. CA2 Chieftain's grave of Oss through three restorations 273
CA2.1 Explanation of the categories 273

C1 Introduction

This Catalogue presents the terminology and typology used to discuss the objects found in the elite burials of the modern-day Low Countries and provides a detailed overview of each grave. It is intended as a companion to the dissertation *Fragmenting the Chieftain. A practice-based study of Early Iron Age Hallstatt C elite burials in the Low Countries*, but also can be used as a source of information on terminology and typology for certain kinds of bronze vessels, weaponry, horse-gear and wagons, tools and items related to personal appearance or for more detailed information on individual burials. For many of these graves this is the first (detailed) overview published in English. The information presented regarding the burials has been gathered from literature and derived from personal examination of artifacts (see Section 1.2.1.2) and forms the dataset for the research presented in the dissertation proper. This Catalogue explains and gives supporting arguments in nuanced detail for the interpretations of the burials and sites as used in the analyses in the main body of this dissertation. Note that the letter 'C' precedes all appendices, chapters, figures, sections and tables in this Catalogue, while any references consisting only of numbers refer to the dissertation proper. For example, Section C2.2 is in this Catalogue and presents the terminology used to describe bronze vessels, while Section 2.2 in the dissertation proper considers burial ritual and practice.

The Catalogue is structured as follows. Table C1.1 summarizes the sites and burials discussed and Figure C1.1 visualizes the grave goods and how they were treated following the format described in Section 4.1.1. Chapter C2 then presents the terminology and typology used in this research. Following this the importance of examining the post-excavation history of objects is discussed in Chapter C3. In the remainder of the Catalogue each site and burial is described in the following format. For each burial the research conducted by myself into that specific grave is summarized, followed by discussion of the find circumstances as these can provide insights into the reliability of the data. An overview figure is given of all human remains and grave goods found in the burial. These figures are intended to give a clear visual overview of the grave's content. They are compiled of photographs and drawings where these are available, and icons (as given in Fig. C1.1) are used for material for which only written record survives. These figures show each object from only one angle, and wherever possible objects are depicted on the same scale so that the reader takes away a clear mental image of the complete contents of the burial (see also Section 4.1.1).

Then the material remains are discussed in detail with additional figures as needed, including human remains and grave goods (though in some cases it is not completely certain that the objects in question in fact are from a grave, see Section 4.1) which are discussed per find category. These are: human remains, pottery, bronze vessel, weaponry, horse-gear, yoke and wagon components, tools, personal appearance and other. This division is intended to assist analysis. It should be noted that the prehistoric mourners may not have seen the objects as dividing into such categories. Each burial is summarized in a table, which lists the method and year of discovery of that grave, the current location of the artifacts and the period to which the burial dates. The method of discovery lists whether the burial was excavated or whether it was a chance find. The 'quality' of the excavation or chance find is labelled poor, medium, good or excellent. This is used to summarily show the quality of the data available. A find is graded poor when it is unclear whether objects are from the same grave, while a medium grave will have at least some information regarding its original context or method of recovery. Graves with a lot of data available regarding their recovery and the original context are qualified as good. Only burials with exceptionally detailed information available regarding recovery and original

context are considered excellent. For some sites it is known that certain objects were recovered, but it is unclear exactly where within the site they come from. Such finds are listed under 'site name-unknown context'. A grave's content is listed in this table per object category as described above. The table shows both the unique numbering system used in this dissertation, and others used by museums, depots or other publications. The unique numbering system is made up of the site abbreviation (see App. A1), followed by the barrow or grave number, followed by a sequential number for that object. If an object is lost, or was not analyzed by myself an asterisk follows the number. For example, *CSE-FR.T3.05* is an urn from Court-St-Etienne La Ferme Rouge T.3, while *CSE-FR.T3.04** is the lost accessory vessel. The other numbering systems are listed so that future researchers can relate objects between publications and so that it will be easier to locate artifacts within the institutions where they are housed.

The manners in which the grave can be dated, and its date, are then discussed. Note that when this dating has been carried out as part of other researches, it is discussed only summarily in this Catalogue. ^{14}C- or typological dating conducted (or changed/refined) as part of this research are discussed in more detail (see also Chapter 3). Lastly, where possible and relevant, the actions taken and (burial) ritual as can be reconstructed from the available data is described. In cases where multiple Late Bronze–Early Iron Age graves or barrows were present and/or excavated at a single site, these are described in the same chapter based on the site name.

Tab. C1.1 (following pages) Summary of the elite burials listed in this Catalogue.

The first two columns list the **site***, zone, burial number as well as* **year and method of discovery** *and the quality of the find circumstances. When a site or zone yielded multiple burials that are included in the dataset the first row summarizes the site as whole and the following rows list the individual graves. The* **date** *of a grave (as determined in Chapter 3) is given as well.* **Burial type** *lists whether the grave is from a (long) barrow, flat grave or ring ditch. The + and- signs in brackets show how certain a specific determination is (none/no: --; probably no: -; possibly: -+; probably yes: +; yes: ++; indeterminate/not applicable: ind).* **Size burial marker** *gives the diameter (D), height (H) or measurements of the burial marker.* **Context** *lists the immediate context of the burial, such as whether it was situated in a barrow line or group, urnfield or group of flat graves.* **Urnfield nearby**, **only one elite burial, high location** *and* **close by river** *are self-explanatory (see also Chapter 5).* **Fire** *lists whether it played role in the burial ritual and* **burial by pyre** *shows whether the grave included the pyre.* **Intentional deposition wood** *shows whether wood was deposited with the burial.* **Deposition human remains** *(partial/complete) lists whether human remains where recovered and whether it appears to be a complete or partial deposition of the remains.* **Manipulation/fragmentation grave goods** *lists whether the grave goods were intentionally bent or broken.* **Partial deposition grave goods** *gives whether only parts of objects were deposited, not whether for example a pars pro toto deposition of a wagon was included among the grave goods. If cloth was recovered this is listed under* **textile***. The final column lists the* **material categories** *of human remains and grave goods found in the burial. When this column is shaded this means that the burial complex may be incomplete. This category is visualized in Figure C1.1.*

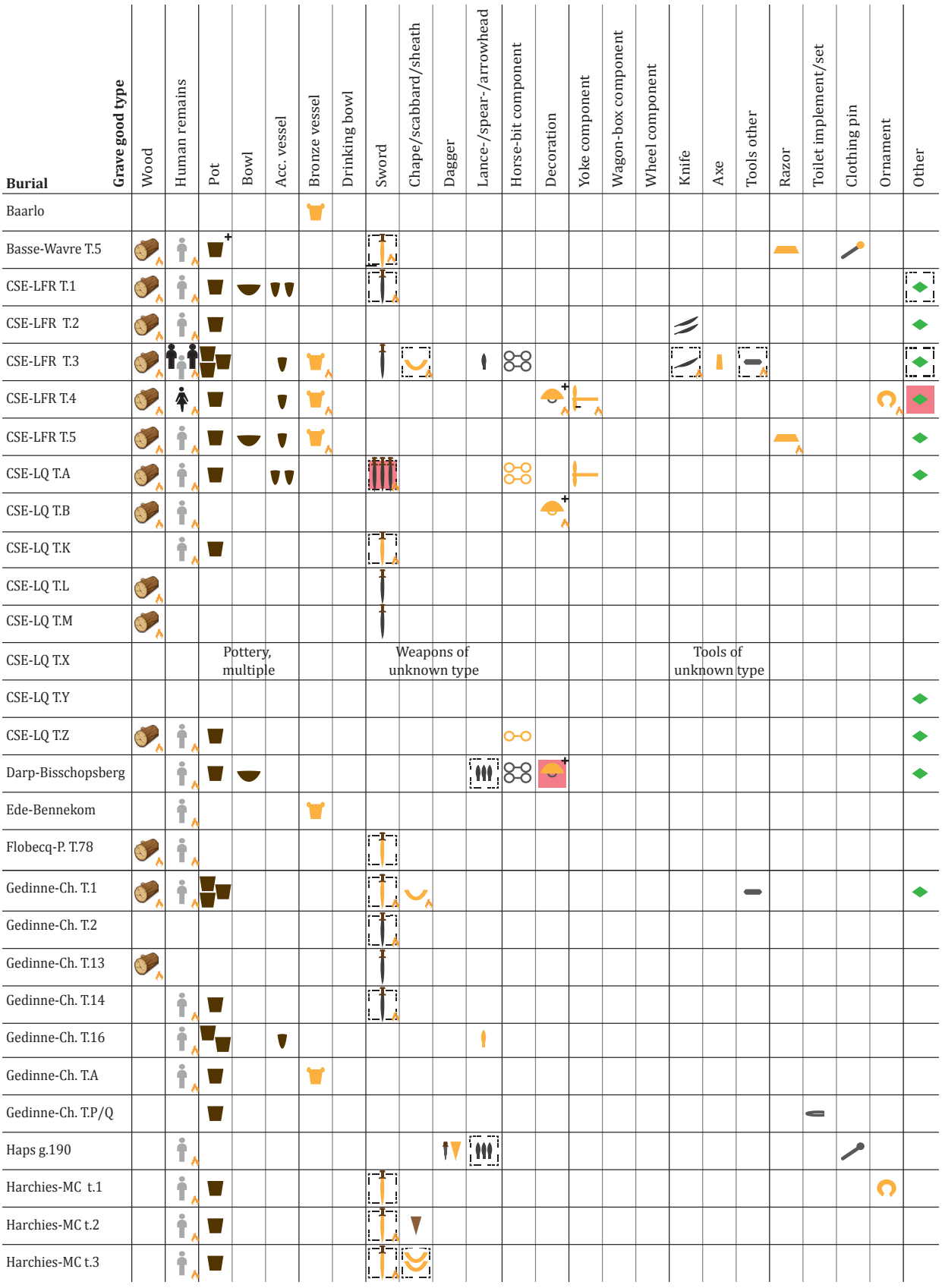
Burial	Context					Location				Burial ritual				Grave goods			
Site, zone, burial	Year and method of discovery	Date (range)	Burial type	Size burial marker	Context	Urnfield nearby	Only one elite burial	High location	Close by river	Fire	Burial by pyre	Intentional deposition wood	Deposition human remains (partial/complete)	Manipulation/fragmentation	Partial deposition	Textile	Material categories
Baarlo	1934; chance find (medium)	Ha C1–2	Barrow (+)	Ind	Ind	++	++	Ind	Ind	–	Ind	-	-	-	-	-	Bronze vessel
Basse-Wavre	1882–'83; excavation (poor)	Ha B3–C2			Barrow group (line) (barrows D: ca. 30 m)	++	–	++	++	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Human remains/pottery/ weaponry/tools/other
Unknown	1882–'83; excavation (poor)	Ha C1–2	Barrow (++)	D: ca. 30 m	Barrow group (line)	++	–	++	++	++	-+	+	-+ (ind)	++	-	--	Weaponry
T.5	1882–'83; excavation (poor)	Ha B3–C1	Barrow (++)	D: >30 m	Barrow group (line)	++	–	++	++	++	++	++	++ (ind)	++	+	--	Human remains/pottery/ weaponry/personal appearance
UC	1882–'83; excavation (poor)	Ha C1–2	Barrows (++)	Ind	Barrow group (line)	++	–	++	++	++	Ind	Ind	++ (ind)	++	Ind	-	Human remains/pottery/ weaponry/tools/other
Court-St-Etienne	18th–early 20th century; excavation (medium/poor)	Ha C1–D3			Barrows and flat graves	++	–	++	++	++	++	++	++ (ind)	++	-+	++	Human remains/pottery/bronze vessel/ weaponry/horse-gear/yoke and wagon components/tools/ personal appearance/other
La Ferme Rouge	1905; excavation (medium)	Ha C1–D3			Barrow group	++	–	++	++	++	++	++	++ (ind)	++	-	--	Human remains/pottery/bronze vessel/ weaponry/horse-gear/yoke and wagon components/tools/ personal appearance/ other
T.1	1905; excavation (medium)	Ha C1–2	Barrow (++)	D: ca. 25 m	Barrow group	++	–	++	++	++	++	++	++ (ind)	++	-	--	Human remains/pottery/ weaponry/other
T.2	1905; excavation (medium)	Ha C1–D3	Barrow (++)	D: 18 20 m	Barrow group	++	–	++	++	++	++	++	++ (ind)	--	-	--	Human remains/pottery/tools/ other
T.3	1905; excavation (medium)	Ha C1–2	Barrow (++)	D: ca. 25 m	Barrow group	++	–	++	++	++	++	++	++ (ind)	++	-	--	Human remains/pottery/bronze vessel/ weaponry/horse-gear/ tools/other
T.4	1905; excavation (medium)	Ha C1–2	Barrow (++)	D: ca. 22 m	Barrow group	++	–	++	++	++	++	++	++ (ind)	--	-	++	Human remains/pottery/bronze vessel/horse-gear/yoke and wagon components/personal appearance/ other
T.5	1905; excavation (medium)	Ha C1	Barrow (++)	D: ca. 20 m	Barrow group	++	–	++	++	++	++	++	++ (ind)	--	-	--	Human remains/pottery/bronze vessel/personal appearance/other

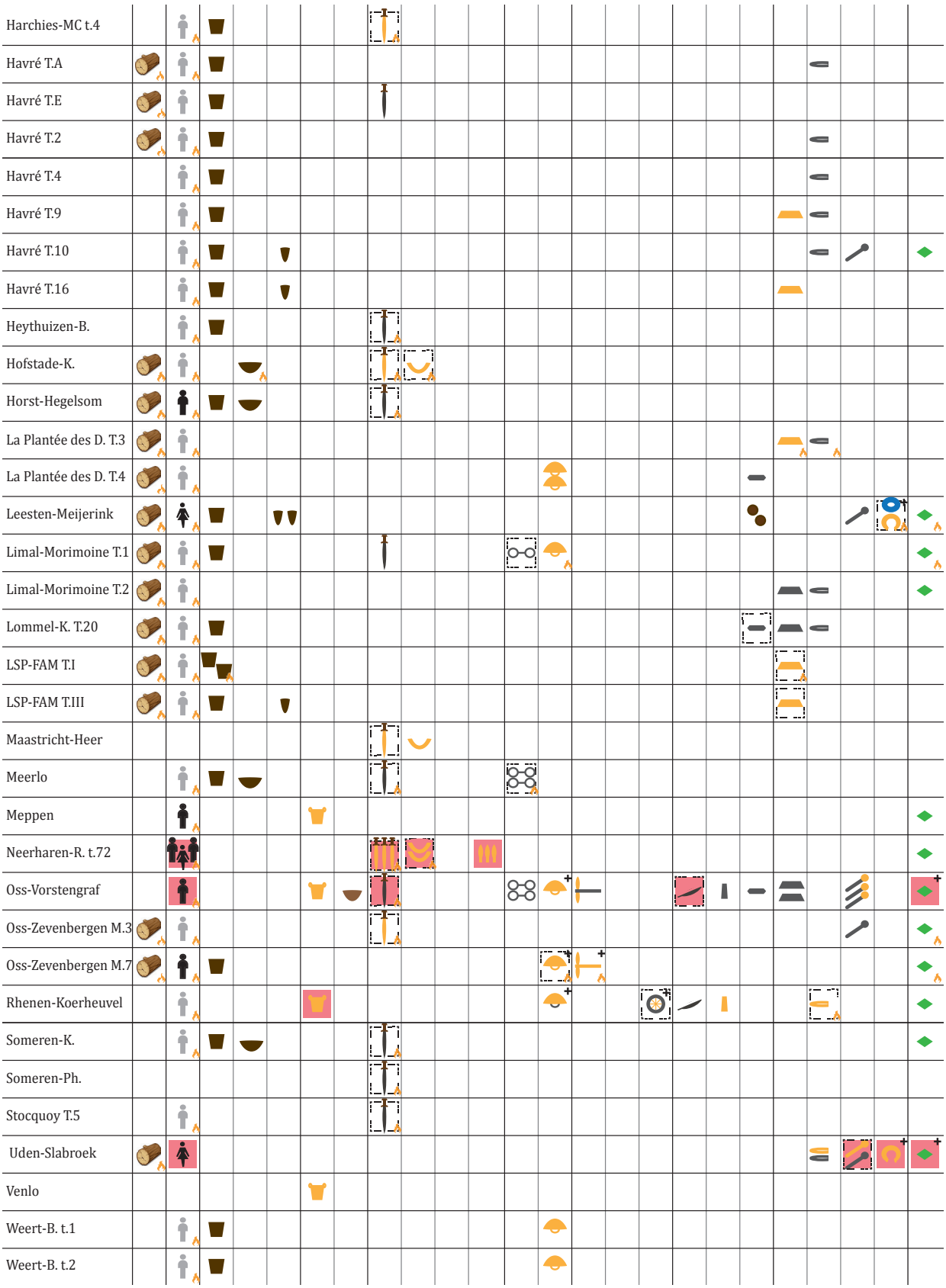
UC	1905; excavation (poor)	Ha C1–2	Barrow (+)	Ind		++	--	++	++	++	Ind	Ind	--	+	-	--	Horse-gear/personal appearance
La Quenique	19th–early 20th century; excavation (poor)	Ha B3–D3			Barrows (ca. 20) and flat graves	++	--	++	++	++	++	++	++	++	-+	++	Human remains/pottery/ weaponry/horse-gear/yoke and wagon components/tools/ personal appearance/other
T.A	1861; excavation (poor)	Ha C1	Barrow (++)	Ind	Barrow group	++	--	++	++	++	++	++	++ (ind)	++	-+	++	Human remains/pottery/ weaponry/horse-gear/yoke and wagon components/other
T.B	1861; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	++	--	++	++	++	++	++	++ (ind)	--	-	--	Human remains/horse-gear
T.K	1877–'78?; excavation (poor)	Ha B3–C1	Barrow (++)	Ind	Barrow group	++	--	++	++	++	--	++	++ (ind)	++	-	--	Human remains/pottery/weaponry
T.L	1877–'78; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	++	--	++	++	++	++	++	--	--	-	--	Weaponry
T.M	1877–'78; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	++	--	++	++	++	++	++	--	--	-	--	Weaponry
T.X	1784–'85; excavation (poor)	Ha C1–D3?	Barrow (++)	Ind	Barrow group	++	--	++	++	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Pottery/weaponry/tools
T.Y	18th/19th century; excavation (poor)	Ha C1–D3?	Barrow (++)	D: ca. 25 m; H: > 2m	Barrow group	++	--	++	++	--	--	--	--	--		--	Other
T.Z	1891; excavation (poor)	Ha C1–2	Barrow (++)	D: ca. 15-16; H: 1 m	Barrow group	++	--	++	++	++	++	++	++ (partial?)	--	-+	--	Human remains/pottery/ horse-gear/other
UC	1861–1920; excavation (poor)	Ha B3–C1	Ind	Ind	Barrow group; urnfield	++	--	++	++	++	Ind	Ind	++ (ind)	++	-+	--	Human remains/pottery/ weaponry/horse-gear/tools/ personal appearance/other
Darp-Bisschopsberg	1907; chance find (medium)	Ha C2–D1	Ind	Ind	In/near urnfield	++	++	+	+	++	Ind	--	++ (ind)	++	-	++	Human remains/pottery/ weaponry/horse-gear/other
Ede-Bennekom	Prior to 1863; excavation (poor)	Ha C1–2	Ind	Ind	Ind	Ind	++	Ind	Ind	++	Ind	--	++ (ind)	--	-	--	Human remains/bronze vessel
Flobecq-Pottelberg T.78	1837; excavation (poor)	Ha B3–C2	Barrow (++)	Ind	Barrow group	-+	++	++	Ind	++	++	++	++ (ind)	++	-	--	Human remains/weaponry
Gedinne-Chevaudos	1863; 1881; excavation (poor)	Ha C1–D3			Barrow group	--	--	-	-	++	++	++	++	++	-	--	Human remains/pottery/ weaponry/tools/ personal appearance/other
T.1	1863; excavation (poor)	Ha B3–C1	Barrow (++)	Ind	Barrow group	--	--	-	-	++	++	++	++ (ind)	++	-	--	Human remains/pottery/ weaponry/tools/ other
T.2	1863; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	--	--	-	-	++	--	--	-	++	-	--	Weaponry
T.13	1863; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	--	--	-	-	++	++	++	-	+-	-	--	Weaponry
T.14	1863; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	--	--	-	-	++	--	--	++ (ind)	++	-	--	Human remains/pottery/weaponry

T.16	1863; excavation (poor)	Ha C1–2	Barrow (++)	Ind	Barrow group	--	--	-	-	++	--	--	++ (ind)	--	-	--	Human remains/pottery/weaponry
T.A	1881; excavation (poor)	Ha C1–D3	Barrow (++)	Ind	Barrow group	--	--	-	-	++	--	--	++ (ind)	--	-	--	Human remains/pottery/bronze vessel
T.P/Q	1881; excavation (poor)	Ha C1–D3	Barrow (++)	D: 2–3 m	Barrow group	--	--	-	-	--	--	--	-	--	-	--	Pottery/personal appearance
Haps g.190	1960s; excavation (good)	Ha C1–D3	Ring ditch (++)	D: 7.5 m	In/near urnfield	++	++	--	--	++	--	--	++ (ind)	+	-	--	Human remains/weaponry/ personal appearance
Harchies-Maison Cauchies	1913–2006; excavation (medium)/chance find (poor)	Ha C1–D3			Flat graves (+)	--	--	-	-	++	--	--	++	++	-+	--	Human remains/pottery/ weaponry/ personal appearance/ other
t.1	1913; chance find (poor)	Ha B3–C1	Flat grave (+)	Ind	Group of (flat ?) graves	+	--	-	-	++	--	--	++ (ind)	++	-+	--	Human remains/pottery/ weaponry/ personal appearance
t.2	1914; excavation (medium)	Ha B3–C1	Flat grave (+)	Ind	Group of (flat ?) graves	+	--	-	-	++	--	--	++ (ind)	++	-+	--	Human remains/pottery/weaponry
t.3	1926; chance find (poor)	Ha B3–C1	Flat grave (+)	Ind	Group of (flat ?) graves	+	--	-	-	++	--	--	++ (ind)	++	-	--	Human remains/weaponry
t.4	1955; excavation (medium)	Ha B3–C1	Flat grave (+)	Ind	Group of (flat ?) graves	+	--	-	-	++	--	--	++ (ind)	++	-+	--	Human remains/pottery/weaponry
UC	1913; 1959; chance find (poor/medium)	Ha B3–D3?	Flat grave(s) (+)	Ind	Group of (flat ?) graves	+	--	-	-	++	Ind	Ind	++ (ind)	++	-	-	Human remains/pottery/ weaponry; other
Havré	1930–'31; excavation (medium)/chance find (medium)	Ha C1–D3			Barrow group	-		+	+	++		++	++	--	--	--	Human remains/pottery/ weaponry/ personal appearance/ other
T.A	1930; chance find (medium)	Ha C1–D3?	Barrow (++)	Ind	Barrow group	-	++	+	+	++	++	++	++ (ind)	--	--	--	Human remains/pottery/personal appearance
T.E	1930; chance find (medium)	Ha C1–2	Barrow (++)	Ind	Barrow group	-	++	+	+	++	++	++	++ (ind)	--	--	--	Human remains/pottery/weaponry
T.2	1931; excavation (medium)	Ha C1–D3	Barrow (++)	Ind	Barrow group	-	++	+	+	++	+	++	++ (ind)	--	--	--	Human remains/pottery/personal appearance
T.4	1931; excavation (medium)	Ha C1–D3	Barrow (++)	Ind	Barrow group	-	++	+	+	++	--	--	++ (ind)	--	--	--	Human remains/pottery/personal appearance
T.9	1931; excavation (medium)	Ha C1–D3	Barrow (++)	Ind	Barrow group	-	++	+	+	++	--	--	++ (ind)	--	--	--	Human remains/pottery/personal appearance
T.10	1931; excavation (medium)	Ha C1–D3	Barrow (++)	Ind	Barrow group	-	++	+	+	++	--	--	++ (ind)	--	--	--	Human remains/pottery/personal appearance/other
T.16	1931; excavation (medium)	Ha C1	Barrow (++)	Ind	Barrow group	-	++	+	+	++	--	--	++ (ind)	--	--	--	Human remains/pottery/personal appearance
Heythuizen-Bisschop	1934 or earlier; unknown	Ha C1–2	Barrow (++)	Ind	Barrow group and urnfield	++	++	Ind	Ind	++	Ind	-	++ (ind)	++	-	--	Human remains/pottery/weaponry
Hofstade-Kasteelstraat sp. 16	2014; excavation (excellent)	Ha B3–C1	Flat grave (++)	Ind	In/near urnfield	++	++	-	-	++	--	++	++ (ind)	++	++	--	Human remains/pottery/weaponry

Horst Hegelsom	1979; excavation (good)	Ha C1–2	Barrow (++); ring ditch (++)	D: 19 m	In/near urnfield	++	++	--	--	++	--	-	++ (partial?)	++	-	--	Human remains/pottery/weaponry
La Plantée des Dames	1902; excavation (medium)	Ha B3–D3			Barrow group (barrows D: 9–25 m)	--	Ind	+	++	++		++					Human remains/pottery/horse-gear/personal appearance
T.3	1902; excavation (medium)	Ha B3–D3	Barrow (++)	Ind	Barrow group	--	Ind	+	++	++	++	++	++ (ind)	-+	-	-	Human remains/personal appearance
T.4	1902; excavation (medium)	Ha C1	Barrow (++)	Ind	Barrow group	--	Ind	+	++	++	++	++	++ (ind)	--	-	--	Human remains/horse-gear
Leesten-Meijerink g.1	2010; excavation (excellent)	Ha C1–2	Double ring ditch (++)	D: 5.2 m; D: 6.8 m	In/near urnfield	++	++	--	--	++	--	++	++	++	-	--	Human remains/pottery/tools/personal appearance/other
Limal-Morimoine	1902; excavation (medium)	Ha C1–2			Barrows	--	++	++	+	++	++	++	++	+	+	-	Human remains/pottery/weaponry/horse-gear/personal appearance/other
T.1	1902; excavation (medium)	Ha C1–2	Barrow (++)	D: 14 m	Barrow group	--	++	++	++	++	++	++	++ (ind)	+	+	-	Human remains/pottery/weaponry/horse-gear/other
T.2	1902; excavation (medium)	Ha C1	Long barrow (++)	20 x 13.3 m	Barrow group	--	++	+	+	++	++	++	++ (ind)	-+	--	-	Human remains/personal appearance/ other
Lommel-Kattenbos T.20	1939; excavation (medium)	Ha C1	Barrow (++)	D: 8 m; H: 50 cm	Barrow group	++	Ind	-	-	++	-	++	++ (ind)	++	-	-	Human remains/pottery/personal appearance/tools
Louette-St-Pierre Fosse-Aux-Morts	1863; excavation (poor)	Ha C1–2	Barrow (++)		Barrow group	--	Ind	-+	-+	++	++	++	++	++	+	-	Human remains/pottery/personal appearance/other
T.I	1863; excavation (poor)	Ha C1	Barrow (++)	Ind	Barrow group	--	Ind	-+	-+	++	++	++	++ (ind)	++	--	-	Human remains/pottery/personal appearance
T.III	1863; excavation (poor)	Ha C1	Barrow (++)	Ind	Barrow group	--	Ind	-+	-+	++	++	++	++ (ind)	++	+	-	Human remains/pottery/personal appearance
UC	1863; excavation (poor)	Ha C1–2	Barrows (++)	Ind	Barrow group	--	Ind	-+	-+	++	Ind	Ind	++ (ind)	+	Ind	-	Personal appearance
Maastricht-Heer	2000; chance find (medium)	Ha B3–C1	Ind	Ind	Ind	++	++	Ind	Ind	-+	Ind	--	--	++	--	--	Weaponry
Meerlo	1967; chance find (medium)	Ha C1–2	Barrow (+)	Ind	In/near urnfield	++	++	-+	-+	++	Ind	--	++ (ind)	++	--	--	Human remains/pottery/weaponry/horse-gear
Meppen	1936; chance find (medium)	Ha D1–3	Ring ditch	Ind	In/near urnfield	++	++	Ind	Ind	--	Ind	--	--	--	--	--	Human remains/bronze vessel/other
Neerharen-Rekem t.72	1978; excavation (good)	Ha B3	Flat grave (++)	Ind	In/near urnfield	++	++	+	+	++		--	++ (ind)	++	--	--	Human remains/weaponry/other
Oss-Vorstengraf	1933; chance find and excavation (good)	Ha C1–2	Barrow (++); ring ditch (++)	D: 53 m	Barrow group/urnfield	++	++	++	++	++	--	--	++ (complete)	++	--	++	Human remains/bronze vessel/weaponry/horse-gear/yoke and wagon components/tools/personal appearance/other

Oss-Zevenbergen	1964–2007; excavation (good and excellent)	Neolithic–LTA			Barrow group/ urnfield	++	–	++	++	++	++	++	++	++	++	--	Human remains/pottery/ weaponry/yoke and wagon components/tools/personal appearance/other
M.3	2004; excavation (excellent)	Ha C2–LTA	Barrow (++)	D: 30 m	Barrow group/ urnfield	++	–	++	++	++	--	++	++ (partial)	++	++	--	Human remains/weaponry/ personal appearance/other
M.7	2007; excavation (excellent)	Ha C1–2	Barrow (++)	D: 36 m	Barrow group/ urnfield	++	–	++	++	++	++	++	++ (ind)	++	++	--	Human remains/pottery/ horse-gear/yoke and wagon components/other
Rhenen-Koerheuvel	1935; 1993; chance find (poor); excavation (medium)	Ha C1–2	Flat grave (-+)	Ind	In/near urnfield	++	++	++	++	++	--	--	++ (ind)	++	-+	++	Human remains/bronze vessel/ horse-gear/yoke and wagon components/tools/ personal appearance/other
Someren-Kraayenstark	1939; chance find (medium)	Ha C1–2	Ind	Ind	In/near urnfield	++	-	Ind	Ind	++	Ind	--	++ (ind)	++	-	--	Human remains/pottery/ weaponry/other
Someren-Philips-camping	Unknown; chance find? (poor)	Ha C1–2	Ind	Ind	Ind	+	-	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Weaponry
Stocquoy T.5	1863; 1880; excavation (poor)	Ha C1–2	Barrow (++)	D: 12 m; H: 60 cm	Barrow group	No	++	-+	-+	++	Ind	--	++ (ind)	++	--	--	Human remains/weaponry
Uden-Slabroek	2010; excavation (excellent)	Ha C1–2	Flat grave (++)	Ind	In/near urnfield	++	++	++	-	++	Ind	++	++ (complete)	++	--	++	Human remains/personal appearance/ other
Venlo	Unknown; chance find (poor)	Ha C1–D3	Ind	Ind	Ind	Ind	Ind	Ind	Ind	–	Ind	Ind	Ind	--	--	--	Bronze vessel
Weert-Boshoverheide	1823; 1889–'90; chance find/ excavation (poor)	Ha B3–C1			In/near urnfield	++	–	-+	-+				++				Human remains/pottery/ weaponry/personal appearance/ other
t.1	1889–'90; excavation (poor)	Ha C1–2	Flat grave (+)	Ind	In/near urnfield	++	–	-+	-+	++	Ind	--	++ (ind)	--	--	--	Human remains/pottery/ horse-gear
t.2	1889–'90; excavation (poor)	Ha C1	Flat grave (+)	Ind	In/near urnfield	++	–	-+	-+	++	Ind	--	++ (ind)	--	--	--	Human remains/pottery/weaponry or horse-gear
t.3	1889–'90; excavation (poor)	Ha B3–C2	Flat grave (+)	Ind	In/near urnfield	++	–	-+	-+	++	Ind	--	++ (ind)	--	--	--	Human remains/pottery/personal appearance
t.4	1889–'90; excavation (poor)	Ha B3	Flat grave (+)	Ind	In/near urnfield	++	–	-+	-+	++	Ind	--	++ (ind)	--	--	--	Human remains/pottery/weaponry
T.O	1889–'90; excava'tion (poor)	Ha B3–C1	Long barrow (++)	Ind	In/near urnfield	++	–	-+	-+	++	Ind	--	++ (ind)	++	+	--	Human remains/pottery/weaponry
Wijchen	1897; chance find (poor)	Ha C1–D1	Ind	Ind	Ind	++	++	++	+	++	Ind	--	++ (ind)	++	--	--	Human remains/pottery/bronze vessel/horse-gear/yoke and wagon components/tools/ personal appearance/other


Burial
Grave good type
Wood
Human remains
Pot
Bowl
Acc. vessel
Bronze vessel
Drinking bowl
Sword
Chape/scabbard/sheath
Dagger
Lance-/spear-/arrowhead
Horse-bit component
Decoration
Yoke component
Wagon-box component
Wheel component
Knife
Axe
Tools other
Razor
Toilet implement/set
Clothing pin
Ornament
Other
Baarlo
Basse-Wavre T.5
CSE-LFR T.1
CSE-LFR T.2
CSE-LFR T.3
CSE-LFR T.4
CSE-LFR T.5
CSE-LQ T.A
CSE-LQ T.B
CSE-LQ T.K
CSE-LQ T.L
CSE-LQ T.M
CSE-LQ T.X
Pottery, multiple
Weapons of unknown type
Tools of unknown type
CSE-LQ T.Y
CSE-LQ T.Z
Darp-Bisschopsberg
Ede-Bennekom
Flobecq-P. T.78
Gedinne-Ch. T.1
Gedinne-Ch. T.2
Gedinne-Ch. T.13
Gedinne-Ch. T.14
Gedinne-Ch. T.16
Gedinne-Ch. T.A
Gedinne-Ch. T.P/Q
Haps g.190
Harchies-MC t.1
Harchies-MC t.2
Harchies-MC t.3


Harchies-MC t.4
Havré T.A
Havré T.E
Havré T.2
Havré T.4
Havré T.9
Havré T.10
Havré T.16
Heythuizen-B.
Hofstade-K.
Horst-Hegelsom
La Plantée des D. T.3
La Plantée des D. T.4
Leesten-Meijerink
Limal-Morimoine T.1
Limal-Morimoine T.2
Lommel-K. T.20
LSP-FAM T.I
LSP-FAM T.III
Maastricht-Heer
Meerlo
Meppen
Neerharen-R. t.72
Oss-Vorstengraf
Oss-Zevenbergen M.3
Oss-Zevenbergen M.7
Rhenen-Koerheuvel
Someren-K.
Someren-Ph.
Stocquoy T.5
Uden-Slabroek
Venlo
Weert-B. t.1
Weert-B. t.2

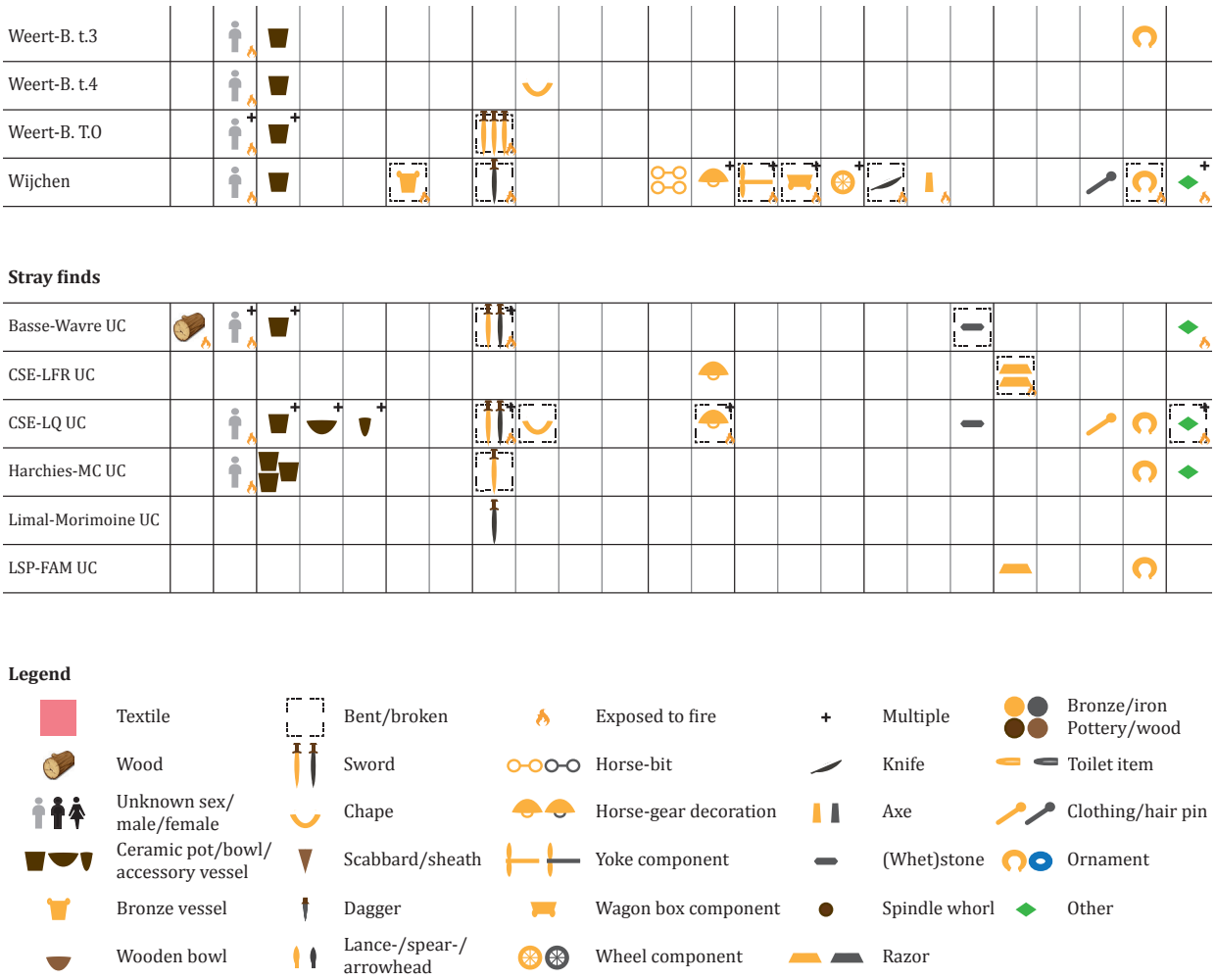


Fig. C1.1 Visual overview of the grave goods and stray finds in the Catalogue and how they were treated (see also Section 4.1 for more information).

C2 Terminology and typology

This chapter gives an overview of the categories of objects found in the elite burials and the terminology and typology used to discuss them in order to clarify what is meant when certain terms are used. In some cases research history is discussed as this influences how certain terminologies and typologies are or have been used. Per category a summary overview also is given of the items found in Dutch and Belgian elite burials that fall in that category to enable the reader to look up objects per kind and type (Fig. C2.1; see also App. A2). How these objects were made, may have been used and how they are interpreted is discussed in Chapter 6.

C2.1 Pottery

Over 120 items of pottery are listed in the Catalogue and summarized in Table A2.1 (ceramic spindle whorls are discussed in Section C2.5.4 under 'tools'). They come in a range of shapes and sizes (Fig. A2.1), and generally are labeled as 'pots', 'urns', 'bowls', 'small pots' and 'accessory vessels'. This is intended to give the reader a general idea of the pottery found. It should be noted that these categorizations are subjective and sometimes the result of the item's excavation and research history. The labeling of a pot as 'large' for example can be my individual evaluation, but it also can be that the pot is lost and the label is based on a description of said pot. A 'small pot' for example could have been an accessory vessel, but find circumstances may not have recorded it as such. There is a frequently recurring combination of a larger pot, usually used as an urn, with a

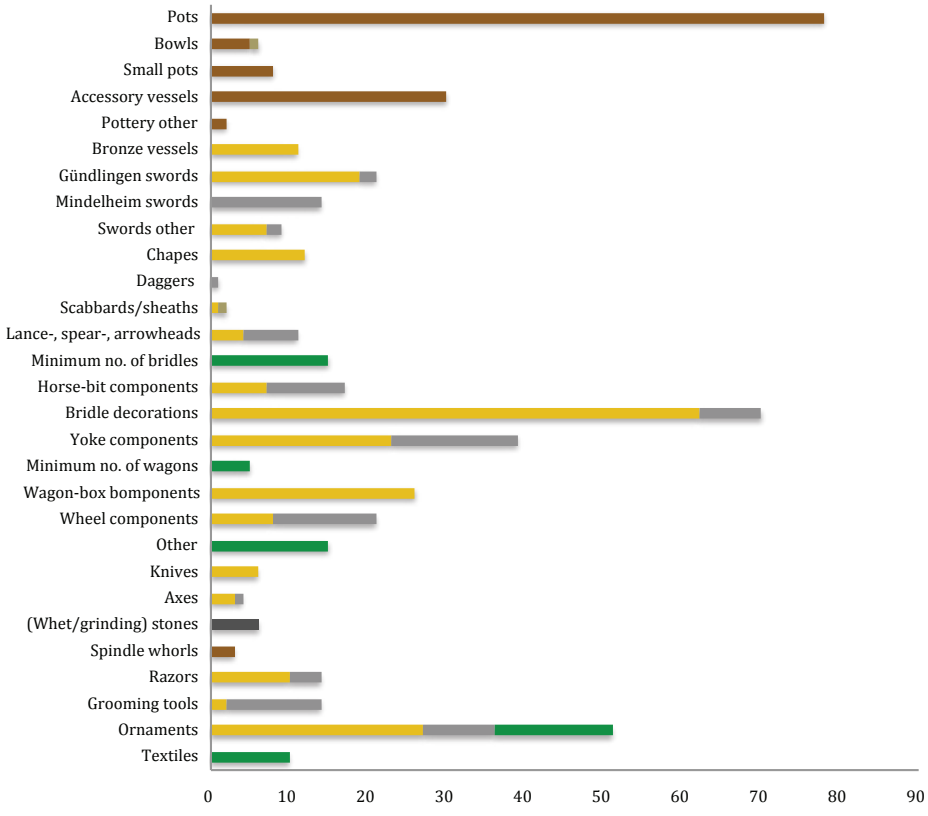


Fig. C2.1 Graph showing number of objects listed under different categories in the Catalogue. It should be taken into account that these numbers are not directly comparable in terms of absolute amount. For example, several individual items of horse-gear may have made up a single bridle, or several yoke and wagon components may have belonged to a single wagon. Note also that the more than a thousand bronze studs found in Oss-Zevenbergen M.7 and the 72 glass beads found in Leesten-Meijerink have been reduced to '10' to keep the graph readable. See also Figure 5.2 for the number of burials with various types of grave goods.

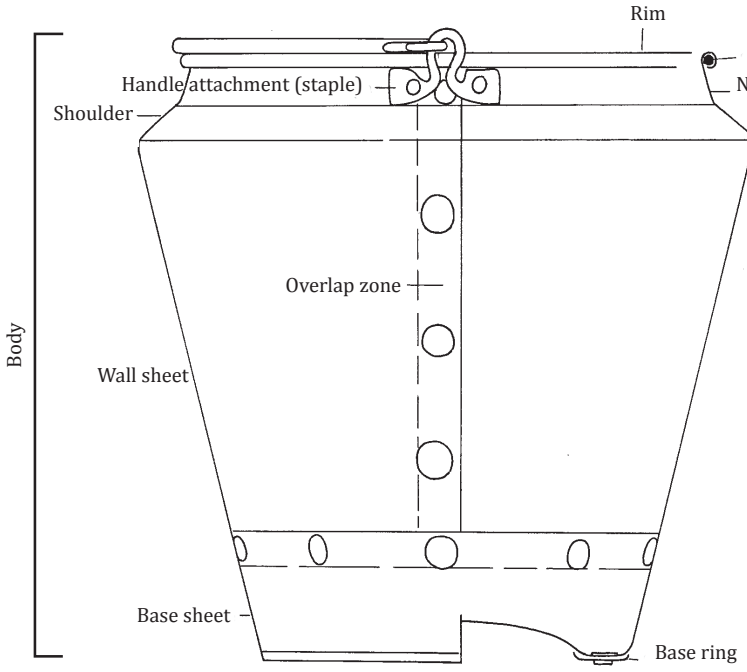


Fig. C2.2 Bucket terminology (adapted from Gerloff 2010, 41–3; Prüssing 1991, abb. 1). "The bottom sheet of the vessel is formed into a tub shape. The base of the tub is formed into a flat foot ring surrounding a hollow omphalos. The foot ring and its angle with the side of the vessel are protected by a variety of strengthening devices, the base- or angle plates. If these are in the form of a ring-shaped single casting, this is referred to as base ring" (Gerloff 2010, 41–3).

smaller accessory vessel. These accessory vessels may have held food or drink offerings (Louwen in prep.).

C2.2 Bronze vessels

In the following sections the terminology used when discussing bronze vessels is described so that it is clear what is meant by certain terms. The problematic 'type Kurd' is discussed to clarify how this term is used in the current research. Following this an overview of the eleven Early Iron Age bronze vessels known from the Low Countries is given, some of which were not recognized as such prior to this research (Fig. A2.2; Tab. A2.2). They all originate from either graves or probable burial contexts (Braat 1935; De Wit 1998; Holwerda 1934; Mariën 1958; Pare 1992; Pleyte 1877; Roymans 1991, 37; Van Heeringen 1998; Warmenbol 1978).

C2.2.1 Basic terminology and typology

The bronze vessels found in the Low Countries generally are referred to as *situlae*. However, a *situla*, as defined by Von Merhart (1952) must have a cross-handle *(Bügelhenkel*). In his terminology, vessels with one or more individual handles are referred to as *buckets*. Following Von Merhart (1952) and Gerloff (2010, 395) the 'situlae' of Baarlo, Oss and Rhenen are actually buckets and in this research therefore are referred to as such, even thought they generally are known as 'the situla of'. In order to be able to discuss the different components of the bronze vessels some basic terminology is presented in Figure C2.2. It is adapted from Gerloff's (2010, 41–3) and Prüssing's (1991, abb. 1) terminology for buckets, and is used when describing features of the bronze vessels in the dataset.

C2.2.1.1 The type Kurd bucket

The buckets from Rhenen, Oss and Baarlo usually are referred to as type Kurd buckets (Fokkens/Jansen 2004, 57; Van Heeringen 1998, 81). However, the usage of this term is somewhat problematic and this type therefore is discussed here to clarify how it is applied in the present research. According to Von Merhart (1969), Kurd buckets have an inverse conical body hammered out of one or two parts. The base is made from a single plate with a raised edge. The body and base plates are riveted together, with the rivet heads hammered flat. The walls merge clearly but smoothly into the short shoulder which has two or three semicircular ribs hammered outwards. The 'handles' are opposing bands of thin bronze sheet on which angular, cast rings generally hang. The places where the thin bronze sheets attach to the body usually are widened on both sides in a semicircle and bear a hammered decoration. However, Von Merhart (1969) also argues that apart from the 'Hajdu Böszörmény' type (with threadlike handles on the shoulder), which is partly contemporaneous, no other 'situla forms' are found in the early Hallstatt period. Operating under this assumption, Von Merhart has classified some very different forms as 'Kurd type', thereby devaluating "the type into a collection of 'situla-shaped' bronze buckets" (Van Heeringen 1998, 82). As Von Merhart's usage of this type has become so vague, this research follows Gerloff's (2010, 237) somewhat simpler description: Kurd buckets (also

referred to as Danubian-style) are characterized by strap-shaped handle attachments or ring carriers (*Bandhenkel*). The handle-attachments are riveted to the body and form a loop between the rim and shoulder. The ring handles fall outside the body of the bucket when at rest. Only when a vessel meets this description is it referred to as type Kurd.

C2.2.2 The Dutch and Belgian bronze vessels

Six (mostly) complete bronze vessels and the remains of at least another five have been found in the Low Countries (see Fig. A2.2; Tab. A2.2). The (mostly) complete vessels were found at Baarlo, Ede-Bennekom, Meppen, Oss-Vorstengraf, Rhenen-Koerheuvel and Venlo. While incomplete, the type of bronze vessel found at Wijchen can be identified from the fragmented remains. Fragments of bronze vessels also were found at Court-Saint-Etienne La Ferme Rouge T.3, T.4 and T.5 and Gedinne-Chevaudos T.A (though not all were recognized prior to this research (see Chapter C6) and the types of vessels represented by the fragments could not be determined). These bronze vessels date from Hallstatt C or the beginning of Hallstatt D (see Chapter 3 and remainder of the Catalogue).

The buckets and situlae found in the Low Countries are made from sheets of bronze plate riveted together in various configurations. The design and production method can differ per vessel, but at present there is no evidence that the people living in the Low Countries had mastered these forging techniques. The vessels therefore are believed to have been produced elsewhere, as also indicated by typological parallels. While the origin of the more fragmentary objects cannot be determined, the (mostly) complete and intact bronze vessels are most likely imports from Italy (Meppen (or France): *cf.* Nortmann 1998; Wijchen: Roymans 1991, 43), the East(?)-Alpine region (Baarlo, Ede and Oss: Roymans 1991, 43; Rhenen-Koerheuvel) or the adjoining region to the south (Venlo; Egg 1985, 376*ff.*; Von Merhart 1969, 287*ff.*). (Most of) these vessels likely found their way north along the Rhine from the Hallstatt Culture in southern Germany (Roymans 1991, 43). Signs of wear were observed on the vessels from Oss-Vorstengraf, Rhenen-Koerheuvel Venlo and Wijchen, and possibly on Ede-Bennekom as well that indicate they were suspended from their rings or handles for extended periods of time, suggesting some kind of use (*e.g.* Fig. C28.2). This is discussed further in Section 6.1.

C2.3 Weaponry

In the following Sections the sword terminology used is presented to clarify certain terms. Following this the typologies in use for the swords and accompanying chapes, as well as the genesis of certain types are discussed. An overview of the 37 swords and nine chapes found in Dutch and Belgian elite burials is given in Table A2.3. The remaining weaponry is considered in Section C2.4.2, indicating also how this research differentiates between arrow-, spear- and lanceheads. How the weaponry may have been used is discussed in Section 6.2.2.

C2.3.1 Swords and chapes

In this section a short introduction to sword terminology is given to allow for discussion of the various components of the swords found. A very brief research history of these swords and sword typologies then is given as these are relevant to the current research. There is also a general discussion of the types of swords found in the dataset.

C2.3.1.1 Terminology

Figure C2.3 gives an overview of the various terms used to refer to the parts of a sword. Note that when a sword is described the hilt is up and the tip is down. For example, the grip is situated lower than the pommel. The blade segment that runs underneath the hilt is referred to as the *tang*. The *pommel* or *pommel hat* serves as a counterweight at the top the handle to balance the sword. It also can assist in drawing the blade (from a scabbard or victim *etc*.). The upper part of the tang on which the pommel is fixed is called the *pommel-piece*. The ricasso is a beveled edge between the shoulders and the blade that serves to protect the user's hand (either by catching or slowing down an opponents blade from sliding up or to stop a user's hand sliding onto the blade) or allows for a different grip. Where the blade runs into the tang is known as the *shoulders*.

C2.3.1.2 Research history and typology

Views on typology, chronology, and the origin of the bronze and iron swords of the early Hallstatt period have changed and evolved in the last 100 years, and as a result the typologies in use are strongly linked and intertwined with the research history of these objects. Similar to problems with chronology (see Section 3.2), when Author A classifies a sword as Type A, this may not mean the same thing as when Author B does. Understanding how these swords were considered in the past helps one to understand how the various typo(chrono)logies in use came to be and how this relates to our understanding of these blades. The research history of these swords therefore is summarized here (see Milcent (2004; 2012) and Trachsel (2004) for more detailed overviews of how typology, dating and our understanding of these swords have developed).

In the early 20th century P. Reinecke (1965 [1911]) – soon followed by J. Déchelette (1927 [1913]) – distinguished two types of bronze swords based on their associated chapes and length (Milcent 2004, 73). Mariën (1958, 253–5; 1975) then determined that the bronze swords of Court-St-Etienne fall into two types: type

Villement and type Miers. Both terms are still used in the latest French typology (Milcent 2012, fig. 9.A).

The groundwork for the current sword typology was laid by J.D. Cowen (1967). He was the first to divide 'Hallstatt period swords' into Gündlingen en Mindelheim types, the terms still used by many today. At the time it was believed that these two types of swords occurred contemporaneously. His types were argued to have not only chronological value, but also geographic and cultural connotations (Cowen 1967, 401–3). A problem with his classifications, however, was that they were based primarily on the variability in pommel attachment, rather than on the blade as a whole (*cf.* Milcent 2004, 76).

P. Schauer (1971) in turn incorporated German finds and developed a typology that not only considered the manner of attachment of the pommel, but also the general morphology. This scheme added a number of types and was used by H. Gerdsen (1986) in his well-known publication. At the start of the 1990s, C.F.E. Pare (1991; 1992) demonstrated that Gündlingen swords represent an earlier type and in fact (partially) predate the Mindelheim swords. His work not only considered the swords, but also the associated finds and in particular the associated chapes. As discussed in Section 3.2.1, his work introduced the so-called Gündlingen phase (also known as the Wehringen phase).

Typology in the 21st century

In the last 15 years both P.-Y. Milcent (2004; 2012) and M. Trachsel (2004) published major works on the typo(chrono)logy of Early Iron Age swords. Trachsel (2004; Fig. C2.4) created his scheme by defining several different typochronological 'Etappen' (steps) within the Gündlingen (five steps) and Mindelheim types (six steps). He distinguishes two series of Mindelheim swords based on their cross-section. Trachsel (2004, 107–44) agrees with Pare that the Gündlingen type precedes the Mindelheim type, though argues that there is some overlap chronologically. He also argues that the Mindelheim Serie I developed from the Gündlingen Etappe 3 (Trachsel 2004, 124). Milcent (2004, Ch. 2) in contrast does not use the term Gündlingen type, and instead incorporates a number of French and German types into his scheme (which are equivalent to Trachsel's type Gündlingen Etappe 1–5): types Holme Pierrepoint, Villement, Wehringen, Weichering and Miers. Milcent does use the Mindelheim type, and divides them into six groups (Milcent 2004, 91–5). He pairs them all with their respective chapes (Fig. C2.5).

In recent years publications of Dutch finds have primarily identified such swords as Gündlingen type (*e.g.* Fontijn 2002, 171–2; Roymans 1991), while in the Belgian research tradition both type Gündlingen and types Holme Pierrepoint, Villement, Wehringen and Weichering are employed (*e.g.* De Mulder 2011, 285; Warmenbol 1988). In this research the overarching types Gündlingen and Mindelheim are used, and where possible it is noted which of Trachsel's (2004) Etappen or Milcent's (2004; 2012) French types a sword falls into as this can provide insights into which swords and burials might be ealier and which later (Section 3.4.1.1; Tab. A2.3). The two main Late Bronze–Early Iron Age sword types – Gündlingen and Mindelheim – are discussed in more detail below. With regard to the former an overview is given of how views on the genesis of it have evolved, as this is relevant to understanding how the elite burial practice evolved in the Low Countries (see below).

C2.3.1.3 Type Gündlingen swords

Gündlingen swords usually are made from bronze, though a few iron ones are known. Early iron examples resemble the bronze ones (Fontijn 2002, 171; O'Connor 1980, 246; see also Section 6.2.1.1). They are quite short, usually between 70 and 75 cm long, though some

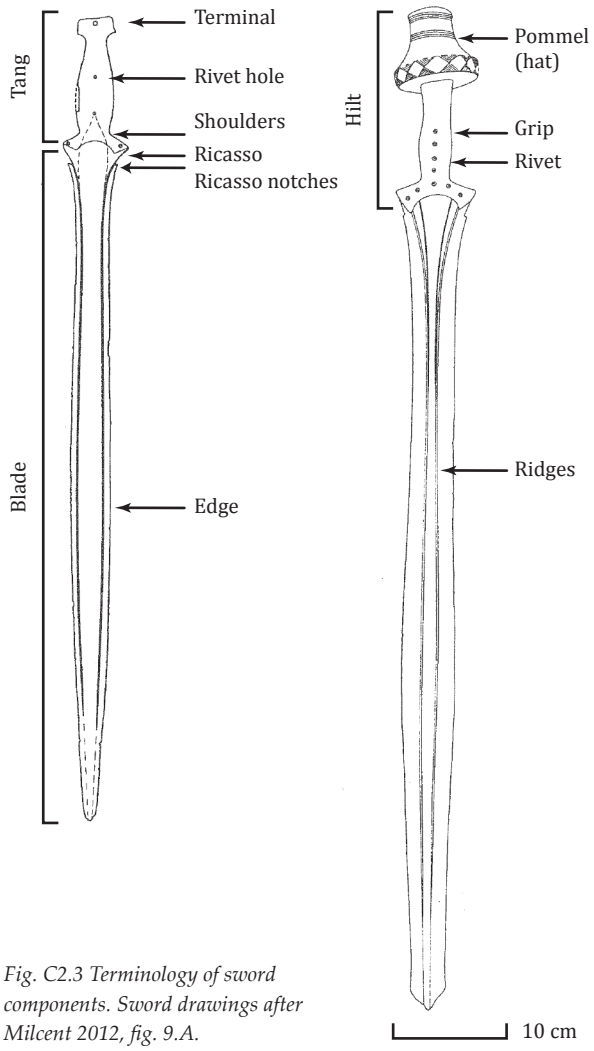


Fig. C2.3 Terminology of sword components. Sword drawings after Milcent 2012, fig. 9.A.

longer and shorter ones exist. The original length of most of the Dutch and Belgian swords in the Catalogue unfortunately cannot be determined as they have not survived complete. The Gündlingen swords generally are considered to be primarily slashing swords (Cowen 1967, 391; see also Section 6.2), and often are found with bronze chapes. From bottom to top, these swords generally have 'blunt' tips with a rounded or V-shape form (Burgess/Colquhoun 1988, 114). They have long, narrow and slightly leaf-shaped blades, the edges of which are demarcated by a ridge, which transitions into the ricassos near the bottom of the tang (Cowen 1967, 393–4). Broad and angular shoulders blend the tang and blade. While to my knowledge no bronze swords with pommels have been found, the Gündlingen swords appear designed for securely attaching a pommel piece (*cf.* Burgess/Colquhoun 1988, 114). It therefore is assumed that these swords would have had hat-shaped pommels, similar to those found on Mindelheim swords, only slightly smaller (Burgess/Colquhoun 1988, 114; Cowen 1967, 393). The two iron Gündlingen swords with bronze hilts found at Battel, however, appear to have flat handles (Fig. C2.6; Warmenbol 2015, fig. 4.15). These are discussed further in Section 6.2.1.1. The pommel and grip were fastened with rivets (two, four or six of them).

Bronze Gündlingen swords are found from Bohemia/Bavaria in the east, to the North- and West-Alpine region, to the Mediterranean, as well as in central and soutern France, the Low Countries, and even parts of Britain and Ireland, with concentrations in the Thames Valley, the Low Countries, the Jura and southwest France (*e.g.* Gerloff 2004, fig. 17.8). It was noted already by Cowen (1967, 396) that this general distribution of Gündlingen swords represents swords from burials, while such blades from watery contexts seem to be found primarily in western Europe.

The genesis of the Gündlingen sword: Atlantic or North-Alpine development?

The origin of the earliest bronze Gündlingen swords and accompanying chapes has long been contested (*e.g.* Burgess/Colquhoun 1988; Cowen 1967; Fontijn 2002; Gerdsen 1986; Meyer 1984; Milcent 2004; 2012; Schauer 1971; 1972; Trachsel 2004; Warmenbol 1988). In the last 40 years scholars have gone back and forth in their ideas regarding the genesis of these swords, with some arguing for a North-Alpine origin (Burgess/Colquhoun 1988; Cowen 1967) and placing their development in the French/British sphere (sometimes referred to as the Atlantic tradition; Fontijn 2002, 171; Meyer 1984; Milcent 2012; O'Connor 1980, 246; Warmenbol 1988). It also has been argued that both Continental and Atlantic versions exist (Roymans 1991, 35; Schauer 1971). Establishing the origin of the Gündlingen swords is important as the bronze swords and the graves they are found in are believed to be (partially) earlier than the burials with clear Hallstatt Culture imports. If the bronze blades turn out to be Atlantically produced then they reflect a contact network in the Late Bronze Age that differs from the Early Iron Age one (see Section 5.7). In this manner determining where and how this sword type evolved could be key to understanding how the elite burial practice evolved in the Low Countries (Chapter 5). While originally considered a North-Alpine development (Cowen 1967), it has recently become more and more accepted that the Gündlingen swords first developed in the the Atlantic tradition with the British Ewart Park/Thames type swords recognized as their immediate predecessors (Fig. C2.5; Gerloff 2004, 141–5; Milcent 2004; 2009; 2012; Warmenbol 1988). Understanding of the origin of the early bronze swords has developed in concordance with the varying research focuses over the years, and ideas regarding whether the Hallstatt burials in the Low Countries are those of invaders naturally have played a significant role. In general though, Warmenbol's (1988) argument that in the Low Countries Atlantic proto-Hallstatt (Ewart-Park/Challans and Thames type) swords were replaced by Atlantic Hallstatt (Gündlingen/Villement type) swords, and that most (if not all) Gündlingen blades and accompanying chapes found in Dutch and Belgian burials and depositions were of Atlantic manufacture (with the inevitable exceptions) still stands (Milcent 2012, fig. 9.A).

Typology Dutch and Belgian Gündlingen swords and (accompanying) chapes

There are 19 bronze swords (or fragments thereof) in the Catalogue that can be identified as type Gündlingen. Of these 13 can be assigned to a specific Etappe within Trachsel's (2004) scheme or a type within Milcent's (2004; 2012) scheme (Fig. A2.3; Tab. A2.3). There are also two iron short swords which appear to be Gündlingen/Holme Pierrepoint type swords (*CSE-LQ.UC.16** and *CSE-LQ.UC.26*; Fig. A2.3). In Section 6.2.1.1 it is argued that these may be local productions, and if so it is striking that they most strongly resemble *early* Gündlingen swords. There are also a dozen bronze chapes, of which a little more than half were found together with Gündlingen swords and one with an iron sword (in Court-St-Etienne La Ferme Rouge T.3; see Tab. A2.3).

C2.3.1.4 Iron Mindelheim swords

Mindelheim swords generally are seen as the successors to the Gündlingen swords (*e.g.* Fontijn 2002, 172), though recent research indicates that they overlapped chronologically (see Sections 3.4 and C2.4.1.2). While mostly made of iron, some bronze swords are known in Central Europe (for example the sword from Mindelheim itself; Gerdsen 1986, 127). The Mindelheim swords are

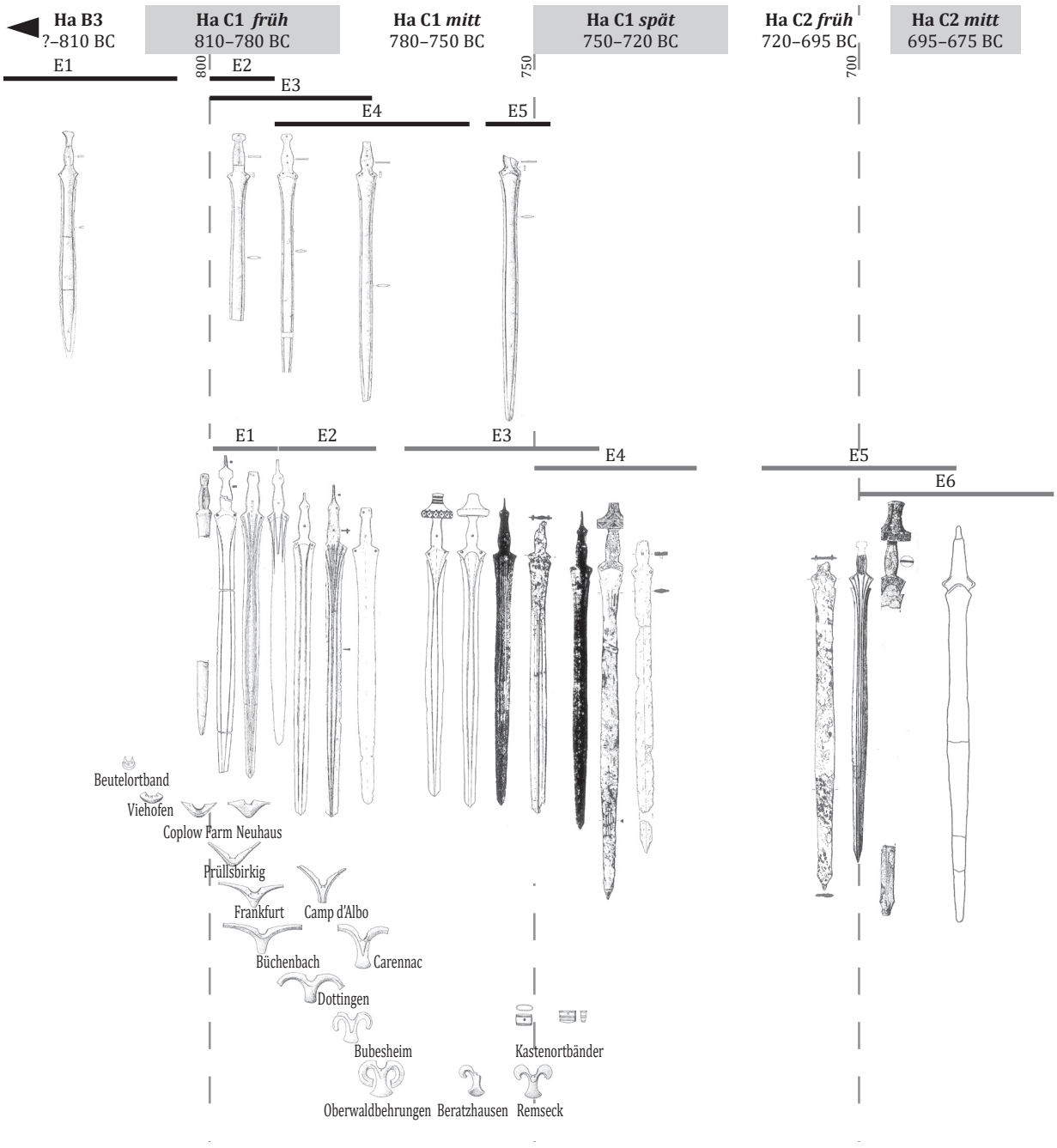


Fig. C2.4 Sword and chape typochronology according to Trachsel (2004), displayed chronologically (and simplified). Figure adapted from Trachsel 2004, 109–30; figs. 58, 63 and 65–7.

larger than the Gündlingen swords and have hat-shaped pommels and usually have short ricassos beneath the hilt. They have heavy, leaf-shaped blades with broad necks and their widest point down quite low. The whole design of this type of sword suggests they were used to deliver slashing blows (see also Section 6.2.2.4). As discussed above in Section C2.3.1.2, both Trachsel (2004) and Milcent (2004; 2012) recently published typologies of Mindelheim swords. Trachsel distinguishes three series of five to six Etappen (Fig. C2.4). Milcent (2004, 87–95), in contrast, divides them into six groups of 'Hallstatt swords' based on a number of characteristics (Fig. C2.5). The typology of iron swords, however, is complicated by the fact that they tend to be poorly preserved. The iron swords of the Early Iron Age in the Low Countries generally are labeled as Mindelheim type, though for many their

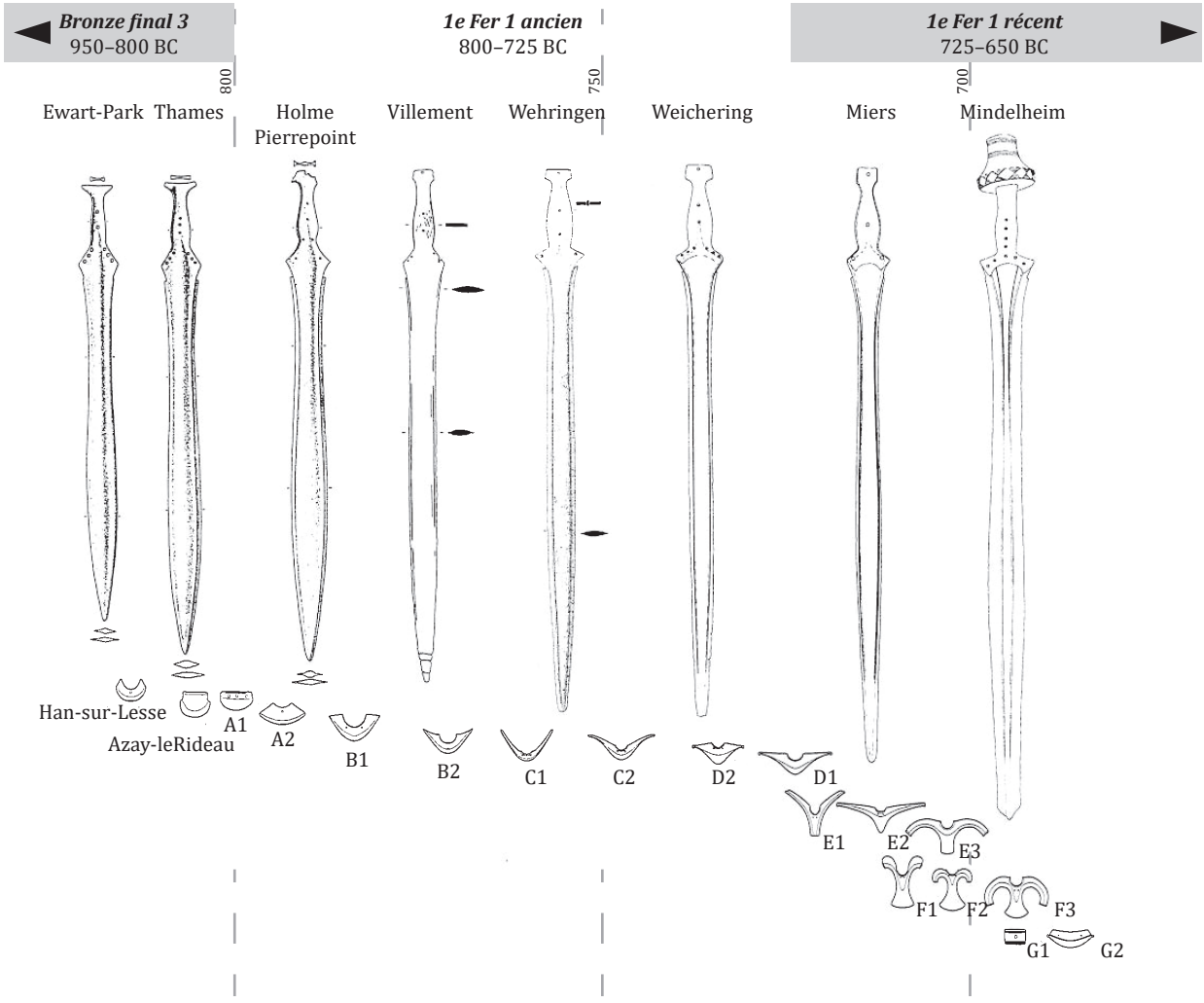


Fig. C2.5 Sword and chape typochronology according to Milcent (2012). Figure adapted from Milcent 2012, fig. 9.A.

poor preservation in my opinion makes it problematic to label them as such. In this research twelve swords in the Catalogue are identified as type Mindelheim, and another two as maybe being of this type (Fig. A2.3). These swords are classic Mindelheim type swords, and have been included in a number of overviews (Fokkens/Jansen 2004, 80; Roymans 1991, 38). The Mindelheim swords in the Low Countries generally are identified as imports from the Hallstatt Culture of Central Europe (though Roymans (1991, 35) for example did state that local production cannot be excluded; Section C2.3.1.3). The Mindelheim sword of the Chieftain of Oss with its elaborate gold-decorated handle is discussed further in Section 6.2.1.2, where it is posited that it may have been produced in a workshop in southern Germany or Upper Austria specialized in such blades. How the famous 'lightning' decorations (Fig. 6.3) should be interpreted is discussed there as well.

C2.3.1.5 Other (unique) iron swords

There are also two swords in the dataset that are very different from the others in the Catalogue. These are the sword from Court-St-Etienne La Ferme Rouge T.3 and Wijchen. The sword from Court-St-Etienne La Ferme Rouge is unique in the Low Countries, and stands out both because of its antenna-style hilt and its comparatively short length. While 'antenna' weaponry generally are considered *Leitfunden* for the Hallstatt D phase, it should be noted that some such weaponry, like the sword from Court-St-Etienne La Ferme Rouge T.3, is also dated Hallstatt C (*cf.* Sievers 1982). The sword from Wijchen, in contrast, is one of the longest known in the Low Countries, with only the sword from Oss being at all comparable. It also appears to be unique in design in Northwest Europe and is discussed in detail in Section 6.2.1.3.

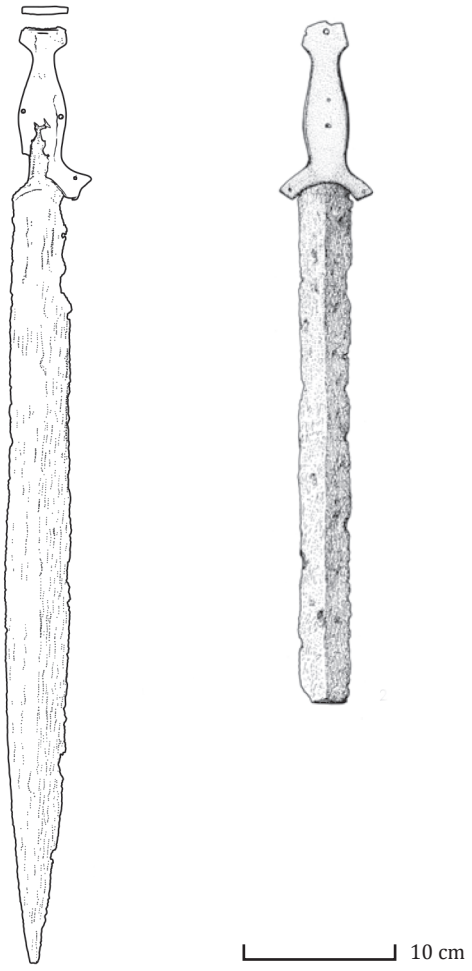


Fig. C2.6 Two iron swords from Battel with bronze handles. Figure after Warmenbol 2015, fig. 4.15.

C2.3.1.6 A rider's blade?

The Gündlingen and Mindelheim swords frequently are described as cavalry swords or as swords meant to be used by mounted warriors (*e.g.* Fontijn 2002, 171–2). This idea can be traced back to Cowen (1967, 418–20) who argued that the Gündlingen and Mindelheim swords, as well as the accompanying chapes (as defined by him) must have been made for and used by mounted warriors. His argument is based on a number of factors. He firstly links the development of rigid horse-bits with cheek-pieces to the development of a 'cavalry sword' as these happened at roughly the same time, and the fact that a harsher bit (than was previously used) is needed in battle to control your horse (see also Sections 6.3.5.2 and 6.3.6.4). He also considers that the wagon burials of the Hallstatt Culture in Central Europe often contain three sets of horse-bits. These are interpreted as for a pair of horses to pull the wagon, and a third for the 'warrior's charger'. Cowen's (1967) article, however, most commonly is linked to the idea that the 'Hallstatt chape' was designed to be able to draw the sword with one hand (as the other supposedly would be holding a shield) while mounted on a horse by hooking the chape behind the thigh or foot (though Cowen actually refers to Brewis (1924) and J.L. Meyers for this idea; Mariën (1952, 295) published a similar suggestion). The longer length of the associated swords was thought to support the idea that these weapons belonged to equestrians.

While it is certainly possible that mounted warriors used these swords and chaped scabbards, there is actually little evidence to indicate this, particularly so for the Gündlingen swords. Firstly, a mounted warrior does not need to brace a scabbard with his/her foot in order to draw a blade as a scabbard can be worn in such as way that the sword can be drawn without holding the scabbard. Secondly, there does not appear to be a strong association between the Gündlingen swords and their chapes with horse-gear. In the Low Countries there are no bronze swords (with or without chapes) associated with horse-gear (see also Fig. C1.1). Indeed, the only *possible* association of a chape with horse-gear is in Court-St-Etienne La Ferme Rouge T.3, and in that case the horse-gear likely refers to a wagon, rather than a rider (see also Section 6.3.5.4). Moreover, in the Low Countries the Gündlingen swords (partially) date earlier than the burials with Hallstatt Culture horse-gear (see Chapter 3). Alternative explanations for how these swords were used are discussed in Section 6.2.

C2.3.2 Other weaponry

The remaining items of weaponry in the dataset include iron and bronze lance-, spear- and arrowheads, a dagger and some decorated organic fragments that may from a scabbard (Tab. A2.3). The latter is discussed in detail elsewhere (Section C12.3.1). An iron dagger with decorated bronze sheath from Haps is unique within the dataset, though a rather similar one was found deposited in the Schelde near Oudernaarde (Chapter C11; De Mulder 2011, 426–7; fig. 11.12).

The typology of the lance-, spear- and arrowheads does not tell us much, but the difference between the three kinds warrants brief discussion as they indicate different kinds of use. Functionally, a spear is a weapon that is thrown, while a lance is thrust (and an arrow is shot with a bow). However, when only the 'head' is found, it is not always apparent how the weapon was used. While arrowheads are generally small and lanceheads large, it is a gradual spectrum in which there is quite some overlap. The identification of an archeological find as a lance-, spear- or arrowhead therefore is generally more a size than a functional determination and should be taken as such in this research.

C2.4 Horse-gear and wagons

In the following sections the terminology used when discussing wagons and horse-gear is introduced so that it is clear what is meant by certain terms. A summary overview of 41 wagon components, 11 yoke components and over a hundred bridle components found in the Low Countries is also given (Fig. A2.4; Tab. A2.4). I also discuss the problematic issue of how loose rings frequently are interpreted as horse-gear even when there is no basis for this and how the current research deals with this problem. How the elaborate wagons (*Prunkwagen* in German), associated yokes and horse-gear appeared, were made and used, as well as how they may have been perceived is discussed in Section 6.3.

C2.4.1 Terminology

Figure C2.7 gives an overview of the terminology used when discussing horse-gear and wagons, upon which this section shortly elaborates (see Section 6.3 for more details). The Hallstatt Culture wagons consisted of a rectangular wagon-box with low sides, a draft pole attached to the undercarriage and spoked wheels which often were equipped with iron tires. The wagon-boxes and wheels in particular frequently were fitted with metal decorations (Pare 1992; Section 6.3.2). The wagons were pulled by two horses hitched to the wagon with a wooden yoke that often also was decorated with metal fittings (Section 6.3). In addition to being strapped into the yoke, the horses would have worn bridles, which are the leather headpieces worn by the horses, which often (but not always) incorporate a horse-bit and various decorations. Figures

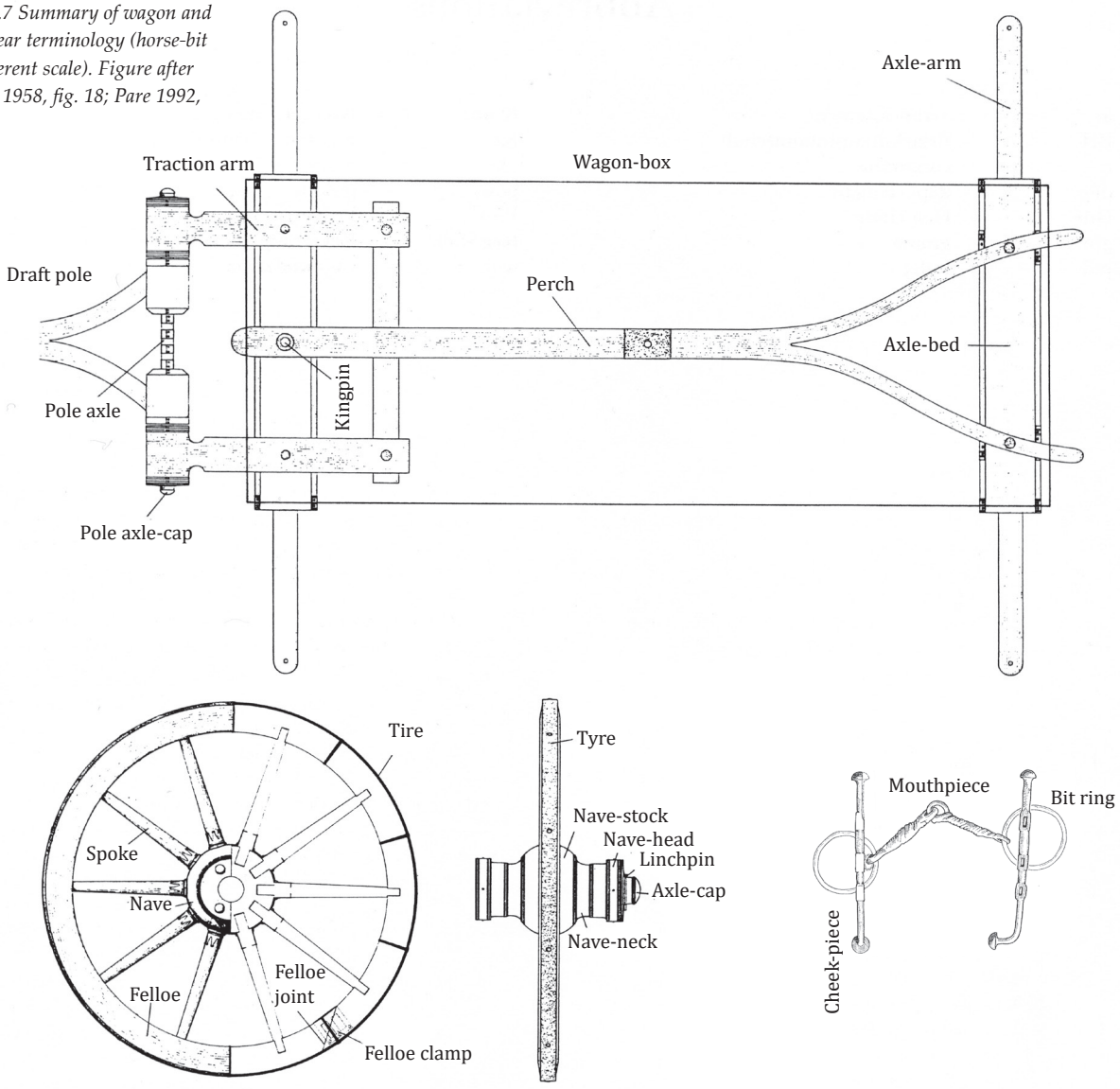


Fig. C2.7 Summary of wagon and horse-gear terminology (horse-bit is a different scale). Figure after Mariën 1958, fig. 18; Pare 1992, fig. 1.

4.11, 4.14, 7.1 and C2.8 give possible reconstructions of Hallstatt Culture bridles, but it should be noted that many different configurations of leather straps are possible. The reins are the leather straps used by a rider or driver to direct the horse. These usually are attached to bit rings on the horse-bit, but also can be attached to the leather of the bridle (though this is rare and not attested for any Early Iron Age find).

C2.4.2 Horse-gear and wagon components from the Low Countries

This section discusses the horse-gear as well as the yoke and wagon components found in the Catalogue. These are (parts of) 14 horse-bits and ca. 100(–1000) horse-gear decorations (depending on whether one counts the roughly 1000 bronze studs found in Oss-Zevenbergen M.7 as a single find or individually), eleven yoke components, 27 wagon decorations and 14 items relating to the wheels (some of which are reconstructed in Fig. C2.8). Note that these numbers are intended to give a general overview but that they change depending on how you count individual objects and fragments. As also discussed in Sections 6.3.5.4 and 7.2.3.4, when only a single item of horse-gear or a single wagon decoration is found, it could be an extreme *pars pro toto* deposition of horse-gear or a wagon, but it also could be that the component was reused as something else, like an ornament. The practice of secondary use (and interment) of horse-gear as ornaments has long since been suspected and discussed (Koch 2012; Metzner-Nebelsick/ Nebelsick 1999).

C2.4.2.1 Yoke and wagon components from Dutch and Belgian burials

The types of yoke and wagon components found in the Low Countries are depicted in Figure A2.4 and include the following. Bronze sheet bands (*WIJ.10*) found at Wijchen would have decorated the yoke. Bronze yoke rosettes were found in the burials of Court-St-Etienne La Ferme Rouge T.A (*CSE-FR.T4.7–8*) and Oss-Vorstengraf (*OV.21*). These would have been attached to the top of the yoke (see Figs. 4.14 and 7.1). Wooden knobs covered in bronze studs (*OZ.M7.21*) discovered at Oss-Zevenbergen M.7 would have served the same function (Fontijn/ Van der Vaart 2013, fig. 7.42). Such bronze studs also decorated other yoke straps and the yoke itself. A single bronze *Jochschnalle* (*CSE-LQ.TA.6*) would have decorated the yoke straps (Fig. C2.8). Two iron toggles (*OV.22–23*) would have attached the belly strap of the yoke. An elaborate chest-piece made up of iron rings and pendants (*CSE-FR.T4.5**) is unique within the dataset and most likely would have decorated the chest-strap of a yoke. The Wijchen burial also yielded a number of wagon-box

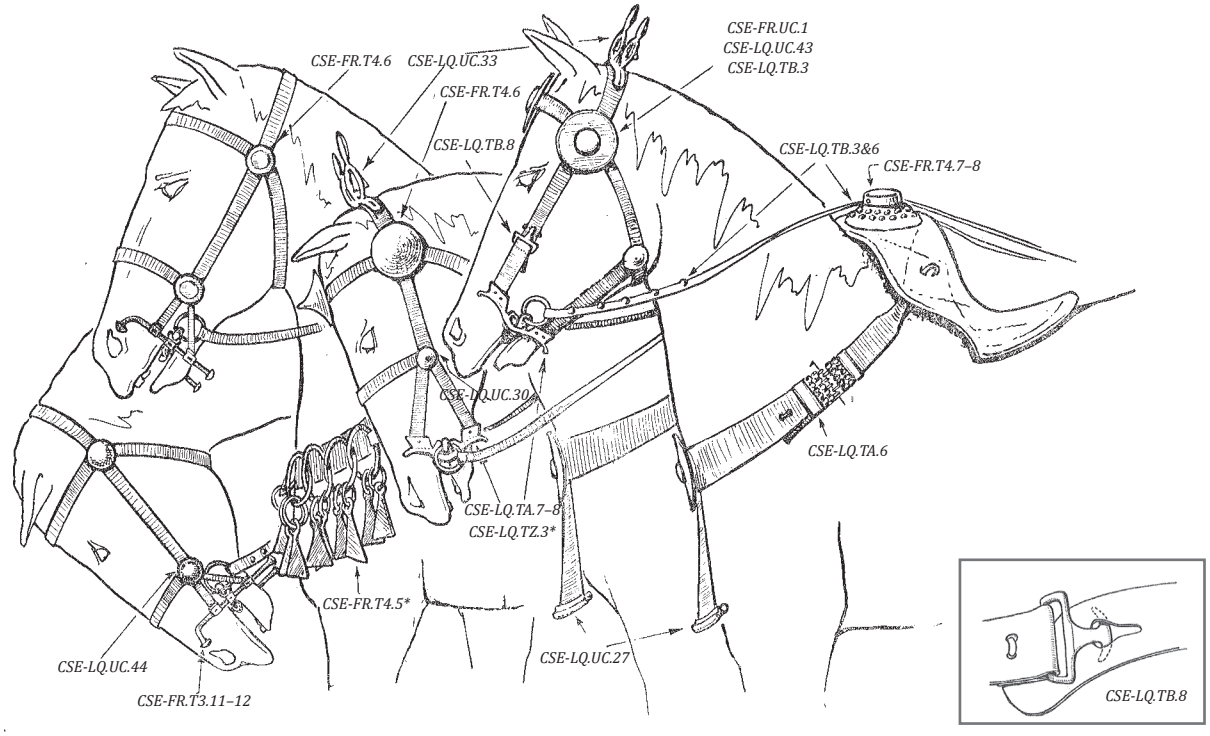


Fig. C2.8 Reconstruction of (some of the) horse-gear and yoke components from Court-St-Etienne. The inventory numbers are given in the figure. Note that in my opinion the horse-bits CSE-FR.T3.11–12 are reconstructed the wrong way round (see Section 6.3.4). Figure 7.1 gives the correct reconstruction. Figure adapted from Mariën 1958, figs. 46 and 4.8.

decorations (*WIJ.11ab–17*), a possible reconstruction of which is given in Figure 4.11. Two types of linchpins have been found in the Low Countries. These are the bronze trident-shaped linchpins of Wijchen (*WIJ.18a–d*) with Etruscan-style protomes and the iron Bohemian linchpins of Rhenen-Koerheuvel (*RK.05c–d* and *RK.06b*). The Wijchen linchpins are considered the finest of their kind (Pare 1992, 91). Both kinds had multiple dangling metal rings that would have jingled when the wagon moved (see also Section 6.3.5). The Wijchen linchpins attached through axle-caps (*WIJ.19a–d*), the only such objects to be found in the Low Countries, and they all show extensive use-wear (Fig. C35.8). While the Rhenen burial did not yield axle-caps, it did yield the fragmentary remains of a type Breitenbonn nave (*RK.06c*, *RK.08* and *RK.09*), again the only such objects to be found in the Low Countries.

C2.4.2.2 Bridle components from Dutch and Belgian burials

The types of bridle components found in the Low Countries are depicted in Figure A2.4 and include the following. A pair of horse-bits was found in five burials and with one exception all horse-bits are made of iron (the Wijchen examples are bronze). The horse-bits from Court-St-Etienne La Ferme Rouge T.3 and Oss-Vorstengraf are type Platenitz bits with curved cheek-pieces, with the Oss bits showing use-wear from the horses' mouths. Half of such a bit was found also in Limal-Morimoine T.1. The horse-bits from Meerlo are also classic early Hallstatt C bits (in Kossack's scheme; Fig. 3.1), but they have fanned cheek-pieces. While these appear to be typical Hallstatt Culture horse-bits, they are so large that they are unusable (see Sections 6.3.6.4 and C23.3). The bits from Wijchen are simple snaffle bits with bit rings and show extensive use-wear (Fig. C35.5; Sections 6.3.6.4 and C35.2). Three bronzes (*CSE-LQ.TA.7–8* and *CSE-LQ.TZ.3**) were interpreted as cheek-pieces from a horse-bit by Mariën (1958, 25–33; 85–7) and they are discussed further in Section C2.4.3 below.

The majority of bridle components found in the Dutch and Belgian elite burials take the form of bronze decorations (Fig. A2.4). While it should be noted that some of these bronzes could have been used as decorations of the yoke (compare for example the studs from Oss-Zevenbergen M.7 with those from Court-St-Etienne La Quenique T.B) or as ornaments on the body (Koch 2012), they are here identified as bridle decorations because of observed use-wear or associated artifacts. The bronze studs or hemispherical sheet-knobs are a common type of decoration and occur in a range of sizes. They are made of sheet-bronze, have a hemispherical domed head and two legs. The studs and sheet-knobs would have decorated the bridle straps or reins (or yoke panels, see above). Bronze hemispherical ring-footed rein-knobs were found in two burials, and would have helped guide the straps of the bridle (*RK.03* and *WIJ.08*). Bronze *phalerae* (discs with hooks) were found primarily as stray finds, but also in several burials and generally are a common kind of bridle decoration. Bronze *Tutuli*, a specific kind of *phalera*, likewise would have guided or decorated the bridle straps (*CSE-LQ.UC.28–29* and *OV.13*). There are also numerous bronze and iron rings in the dataset, both with round and square cross-sections and ranging in size from ca. 10 to 120 mm in diameter. As discussed below in Section C2.4.4, only those metal rings found together with horse-gear, yoke and wagon components are interpreted as such. In short, it was not only the wagons that were elaborately decorated, so were the horses. And these are only the metal components, there may have been elaborate organic decorations as well that do not survive (for example dyed leather).

C2.4.3 Horse-gear with British connections?

The vast majority of the horse-gear found in the Dutch and Belgian graves can be identified as Hallstatt Culture imports, or at least as inspired by Hallstatt Culture horse-gear. There is one exception where a connection with the British Isles seems evident: the cheek-pieces from Court-St-Etienne La Quenique T.A and T.Z (Fig. A2.4). These cheek-pieces are an unusual design, and to my knowledge the only ones known of this exact type (also confirmed by Koch 2014, *pers. comm.*). The only known parallels for them come from the Llyn Fawr hoard (Fig. C2.9; Alcock 1961). Here one complete and a fragment of a second similar bronze were found. The finishing on these indicates they were made to be seen from only one side as one side is nicely finished while the other was left rough. This rough side has been rubbed smooth from use. Use-wear on the Llyn Fawr examples indicates that a solid object like a metal rod would have run diagonally through the central openings, which is consistent with use as cheek-pieces for a horse-bit (Alcock 1961, 149).

Meyer (1980, 74) also noted the similarity between the bronzes from Court-St-Etienne and Llyn Fawr (as did Warmenbol 1993, 98), though Meyer argues that the Llyn Fawr ones "differ in important details, which make a direct import unlikely". Instead he aligns with O'Connor (1980, 13) who argued for a local production of the Llyn Fawr pieces under the influence of Continental forms. One wonders though how strong such influence could have been as they are so extremely rare. While the cheek-pieces from Court-St-Etienne and Llyn Fawr may vary in design detail, they are certainly similar and imply the same functionality in bridle design. In any case, these items of horse-gear from Court-St-Etienne La Quenique T.A and T.Z certainly appear indicative of contacts of a local, Atlantic nature rather than with Central Europe (see also Section 5.7).

C2.4.4 The problem of the loose ring

Bronze and iron rings are found regularly in Early Iron Age burials. The graves from Oss, Rhenen and Wijchen, for example, each contain an assortment of rings. Both bronze and iron rings with a round cross-section come in many different sizes and are found on a variety of different types of objects. The same is true for (bronze) rings with a square cross-section. Both kinds of rings are found as components of horse tack (Trachsel 2004, 530). Rings, however, served a variety of different functions. When rings occur singly it therefore usually is only possible to determine their function by the find context (*cf.* Mörtz 2012, 161; Trachsel 2004, 530). It is sometimes believed that the square cross-section of some rings may have helped 'block' the reins when pulled on (Willms 2002). However, almost any type of object that incorporates rings has been found with rings with both a round cross-section and a square cross-section. The cross-section of a loose ring therefore cannot provide much information about its original function. The following gives some examples of the possible uses of rings.

A common type of ring found in Hallstatt burials is the bit ring. The bridle and reins attach to bit rings on the sides of the mouthpiece (see Section C2.4.1). These rings can have both a round and a square cross-section, and usually have a diameter of 36 to 51 mm and are ca. 4–6 mm thick (Trachsel 2004, 53–5; 484). In some cases they show (extreme) signs of wear, such as the bit rings from Wijchen (Fig. C35.5). Rings also feature in the construction and fastening of the yoke. The attachments of the belly and chest straps can incorporate rings (*e.g.* Fig. 4.14). In some cases the leather decoration panels, either from the yoke itself or from the straps, are preserved and still bear rings. A leather panel from Ins (Switzerland) even bears a ring with a square cross-section (Koch 2006, 163). Rings also can serve to guide the reins in a variety of ways (Fig. 6.7). So-called chain-dividers can incorporate a variety of different rings, with both round and square cross-sections (Trachsel 2004, 146; 536). Rings can dangle from a variety of different linchpin types, such as Bohemian type (as found in Rhenen, see Section C28.2) and trident-shaped ones (as found in Wijchen, see Section C35.2). The dangling rings usually have a round cross-section, though some Bohemian linchpins also have (iron) rings with a square cross-section. For slightly earlier finds it also has been argued that rings can be from a scabbard or sword belt construction (Mörtz 2012). Toiletries found in Early Iron Age burials often have several tools (ear spoon, nail cutter and tweezers) suspended from a single ring, which either can have a round or a square cross-section (Kossack 1959, 14; Willms 2002, 49). Bronze buckets often have rings dangling from their strap-shaped handles. The vessels from Baarlo and Rhenen, for example, both have rings with a square cross-section. The rings from Rhenen show wear from the bucket being suspended by the rings. Though the vessels more commonly have rings with a square cross-section, they also occur with rings with a round cross-section (Gerloff 2010).

In summary, there are many different kinds of objects that incorporate rings in their construction. Therefore, even though wagon and horse-gear components are their most common use, one must be cautious when interpreting the original function of loose rings. In this research, therefore, only rings found in association with wagon, yoke or horse-gear components are identified as such.

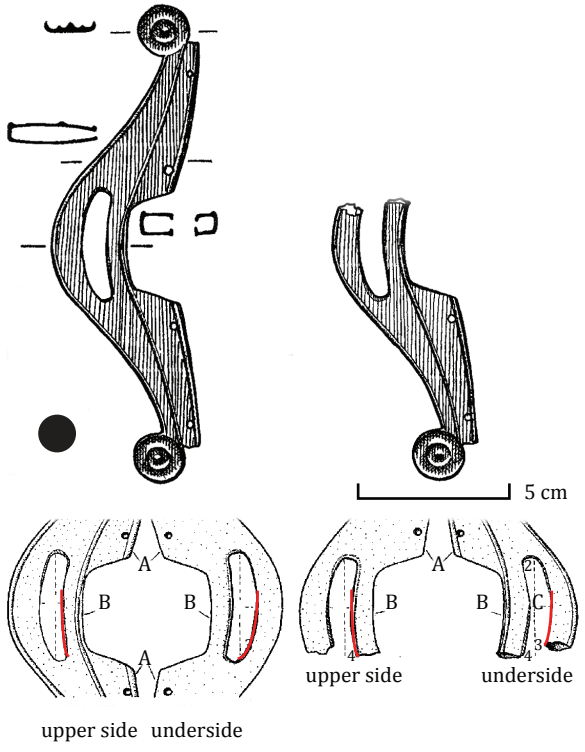


Fig. C2.9 The bronzes from the Llyn Fawr hoard with use-wear marked in red. Figure after Alcock 1961, figs. 1 and 2).

C2.4.5 Horse-gear or scabbard element

Similar to the problem of recognizing a loose ring as horse-gear, some bronzes that look like horse-gear may be part of a scabbard or sword belt. In a few well-documented cases bronzes that at first glance may appear to be horse-gear actually were found in relation to swords. For example the bronze disc found at Frankfurt-Stadwald (Fischer 1979, 73; T.11) or the *Knopf* from Gemeinlebarn T.1 (Kromer 1958, A111a; Metzner-Nebelsick 2002, 331) which both were found in association with Mindelheim swords and are interpreted as part of the sword suspension (belt) which was wrapped around the blade prior to placement in the grave. While there is no evidence for this in the

Dutch and Belgian burials, it is something to be aware of when interpreting isolated bronzes (see also Section C34.3).

C2.5 Tools

The following sections discuss the five knives, four axes, six (grinding/whet)stones and three spindle whorls listed as tools in the Catalogue (Fig. A2.5; Tab. A2.5).

C2.5.1 Knives

Knives are not an uncommon find in all kinds of burials from this period, although the knives found in the elite burials can be extravagant both in size (*e.g.* the possible oversized knife found in Court-St-Etienne La Ferme Rouge T.3) and decoration (*e.g.* the gold inlays in the knife from Frankfurt-Stadtwald; Willms 2002, 90–1). They are found in both the richest burials (see Section 6.4.2) and in one other in the dataset (Tab. A2.5). The knives themselves appear to be unremarkable, and most could be locally made or imports from the Hallstatt Culture. One possible exception is the mentioned knife from Court-St-Etienne La Ferme Rouge T.3, which may have been unusually large, but this cannot be confirmed due to its (unfortunate) research history (Section C6.2.1).

C2.5.2 Axes

There are only four axes in the Catalogue, and to my knowledge these are the only axes from this period found in a funerary context in the Low Countries (see also Sections 6.4.1 and 7.2.3.3). They are all socketed axes, with those from Court-St-Etienne La Ferme Rouge T.3, Rhenen-Koerheuvel and Wijchen being bronze, while the one from Oss-Vorstengraf is iron. The bronze socketed axe from Court-St-Etienne La Ferme Rouge T.3 is decorated and appears to be a type Wesseling axe (Butler/Steegstra 2003/4; De Mulder 2011; Mariën 1958, 118). The iron socketed axe from the Chieftain's grave of Oss (*OV.25*) is the only iron axe found in a burial from this period in the Low Countries, though a rough parallel from Didam-Kerkwijk suggests it could have been made locally (Van der Veken *et al.* 2011). It does not appear to resemble any of the iron axes found in the Central European Hallstatt Culture. The axe from Rhenen is a plain Wesseling type axe and likely was made in the eastern part of the Netherlands or adjacent parts of western Germany (Butler in Van Heeringen 1998, 93–4). Determining the type and source of the Wijchen axe is more difficult due to its melted appearance. However, it is most likely a Niedermaas (or perhaps a Helmeroth) axe which is a regional type (Butler/Steegstra 2003/4; Fontijn 2015, pers. comm.).

In any case, they do *not* appear to be imports from the Hallstatt Culture, and in Section 7.2.3.3 it is argued that the decision to include them in these burials most likely was motivated by the involvement of individuals with knowledge of Hallstatt Culture elite burial customs in the burial rituals of these four individuals.

C2.5.3 (Whet)stones

A number of stone artifacts found in these graves traditionally have been interpreted as whetstones (*e.g.* Jansen/Fokkens 2007, 81). Preliminary analysis, however, indicates that they may have been used for a different, as yet unknown, purpose (see Section 6.4.3). Which is not to say that none of the stone objects found in graves were not used to sharpen blades, but the new results indicate we should not assume that something that looks like a whetstone was used as one.

C2.5.4 Spindle whorls

Three spindle whorls are also among the finds listed in the Catalogue. One was found in a flat grave at Court-St-Etienne, while the other two were found in the 'Princess' burial of Leesten-Meijerink (see Sections C6.3.11 and C18.2).

C2.6 Personal appearance: grooming tools and ornaments

In this section the origin of razors is considered and the razors, toiletries and ornaments found in the Dutch and Belgian elite burials are presented briefly (Fig. A2.6; Tab. A2.6). The razors, tweezers and other toilet items in particular would have been used to alter a person's body and/or face, and in Section 6.5.1 it is considered how and why this was done.

C2.6.1 Atlantic razors?

Razors are a common occurrence in the elite burials (as they are in urnfield graves; *e.g.* Louwen in prep.). Warmenbol (1988, 252–5) argues that the bronze razors found in Dutch and Belgian burials during the Early Iron Age are likewise of Atlantic origin. He stresses (*cf.* Meyer 1984) that the bronze razors included in the Catalogue (those from Basse-Wavre T.5, Court-St-Etienne La Ferme Rouge UC, Havré T.16, Louette-St-Pierre Fosse-Aux-Morts T.I and T.III) have Atlantic connections. Taken together with a number of other razors found in Belgium and Britain, Warmenbol (1988, 252–5) argues that the razors demonstrate that close connections must have existed between northwestern France, southeastern England and the Low Countries.

C2.6.2 Toiletries

Razors, however, were not the only objects used to change the appearance of the face (and possibly the body). There are a number of toiletry items found in the elite Early Iron Age burials. These include tweezers which presumably

were used for depilatory purposes. Items with a V-shaped notch are interpreted as nail cutters, and small spooned items are believed to be either makeup implements (Harding 2008, 192) or for cleaning ears.

C2.6.3 Ornaments

A range of ornaments was found in the burials under discussion. These include bronze bracelets and anklets, bronze and iron pins and fibulae, bronze and glass beads and buttons, bronze hair- or earrings as well as a few others (Figs. 4.27 and A2.6; Tab. A2.6). A number of these appear to be rather common types of ornaments and are found in other graves as well, while some appear specific to the elite burials. This is discussed further in Section 6.5.

C2.7 Textiles

Direct evidence of textiles survives in the elite burials Oss-Vorstengraf and Uden-Slabroek, and in several others the imprint of textiles has been preserved in the corrosion of metal objects. The textiles appear to have had different functions in the burials in which they are preserved. While some appears to be the clothing of the deceased, some is also a functional part of the burial ritual used to wrap up grave goods. In the case of the Oss burial the extreme high quality of some of the textile, as well as the manner of deposition, suggest that cloth was deposited as a precious grave good in its own right. For this reason textile is discussed here, rather than as items related to personal appearance. The following sections discuss the terminology and technical aspects of textiles as used in the analysis of archeological textiles (see also App. CA1 and Grömer 2015). The range of functions that textiles can hold, from clothing to scabbard linings to house furnishings, is discussed further in Section 6.5.3. The manner in which textiles can convey meaning and messages is considered there as well.

C2.7.1 Defining cloth, clothing and costume

To allow for proper discussion one has to differentiate between cloth, clothing and costume. *Cloth* refers to the textile itself, while *clothing* is something that can be worn made from cloth. *Costume* in turn refers to the outfit created with clothing, ornaments and dress fittings (Grömer *et al.* 2013, 221; Sørensen 1997; 2010). One also can make a distinction between items that are removable (like pins or belts) and items that are attached or sewn onto cloth (like studs or beads). There are of course also ornaments that are pretty much permanently attached to the body itself (such as some kinds or torques or arm rings; Sørensen 1997, 95–102). Another term that is sometimes used is *cloth-type materials*, which refers to "flexible, thin sheets that can be wrapped, shaped and folded and are used to clothe, cover and contain" (Harris 2012, 62).

As we are dealing only with fragments of clothing and cloth in the Low Countries' elite burials, it is worthwhile to consider the concept of 'cloth culture', in which the focus is on cloth rather than on clothing culture (Harris 2008; 2012; Harris *et al.* 2010). The use of cloth-type materials is universal to all societies, and each culture uses specific materials. The cloth itself, not only the clothing it can be turned into, therefore can contribute to the construction and expression of identity (Grömer *et al.* 2013, 222; Harris 2012). For the Bronze Age, Harris (2012) for example distinguishes cloth cultures of the Aegean, Pharaonic Egypt, Scandinavia and Central Europe.

C2.7.2 Technical aspect of textile (analysis)

As organic materials, textiles rarely survive as they easily disintegrate, particularly in the ground. By far most archeological textiles are minute fragments that survive (often only as mineralized pseudomorphs) preserved on metal artifacts. Even when only present in this state, it is often still possible to extract information on the textile, such as whether they were made of plant fiber (such as linen) or animal fiber (such as wool). Yarn or textile quality sometimes can be established by considering weave type, thread count, yarn thickness, use of plied or single yarn, twist direction (s or z, see below) weaving errors and seams (Grömer 2013, 56; 2015; App. CA1). These all relate to the process through which textiles are made.

The first steps when making textiles are the harvesting, preparing and spinning of fibers (Grömer 2013, 56). The spinner influences the eventual textile produced, for (s)he produces yarn with specific characteristics as determined by his/her background, craftsmanship, skill and choices. Hallstatt period fibers, for example, were worked more extensively than in the Bronze Age (Grömer 2013, 56). Characteristics that result from the spinning process are yarn twist, twist direction, twist angle and thread diameter (Grömer 2013; Hammarlund 2005, 106). When spinning yarn the threads can be spun in either direction, producing so-called s- or z-twist yarns (Fig. C2.10). This can relate to craft traditions, but also can be used to create a certain effect in the eventual textile product (Bank-Burgess 1999, 34*ff.*; Grömer 2013, 58). The Iron Age saw an upsurge in high quality textiles making use of finely spun yarn (very fine: 0.2 mm; fine: 0.4 mm; medium fine: 0.5–0.7 mm; coarse: 1 mm; very coarse: >1.5 mm; Grömer 2005, 28–30). The Iron Age textiles from Hallstatt, for example, are made from relatively fine yarn, with most threads being 0.4–0.6 mm in diameter, but also a high proportion of high-quality, fine threads that are 0.3–04 mm or 0.1–0.2 mm in diameter (Grömer 2013, 56–7).

After the yarn is spun it can be woven into cloth in a range of ways, creating various weave-types. The skill

and technical ability of the weaver as well as the available weaving devices influence the choice of weave-type (Grömer 2013, 59). When weaving the 'vertical' warp threads are held in tension on a loom, and the 'horizontal' weft threads are 'thrown' across. By alternating how many threads are passed over and under different weave types can be created (Fig. C2.10; see also Grömer 2013, fig. 19). A *tabby,* for example, is a basic weave which is strong and hard-wearing. The warp and weft form a crisscross pattern (Fig. C2.10). With a tabby or balanced plain weave the warp and weft threads are the same in thickness and number. A variation on this is a *basket* weave in which two or more threads are combined and then woven as one. In *twill* weaves the weft thread is passed over one or more warp threads and then under two or more warp threads with a 'step' between rows, giving the fabric a pattern of diagonal ribs. Twills generally drape well, are elastic and are better at retaining heat than tabbies (Grömer 2013, 62). The number of threads passed over and under can be described as a fraction in which the numerator indicates the number of threads that the weft passes under, with the denominator indicating the number of threads that the weft passes over (see Fig. C2.10 for examples). The number of threads per 10 mm^2, *i.e.* the *thread count*, determines how 'fine' a textile is (very fine: > 15 thr./10 mm^2; fine: 11–15 thr./10 mm^2; medium

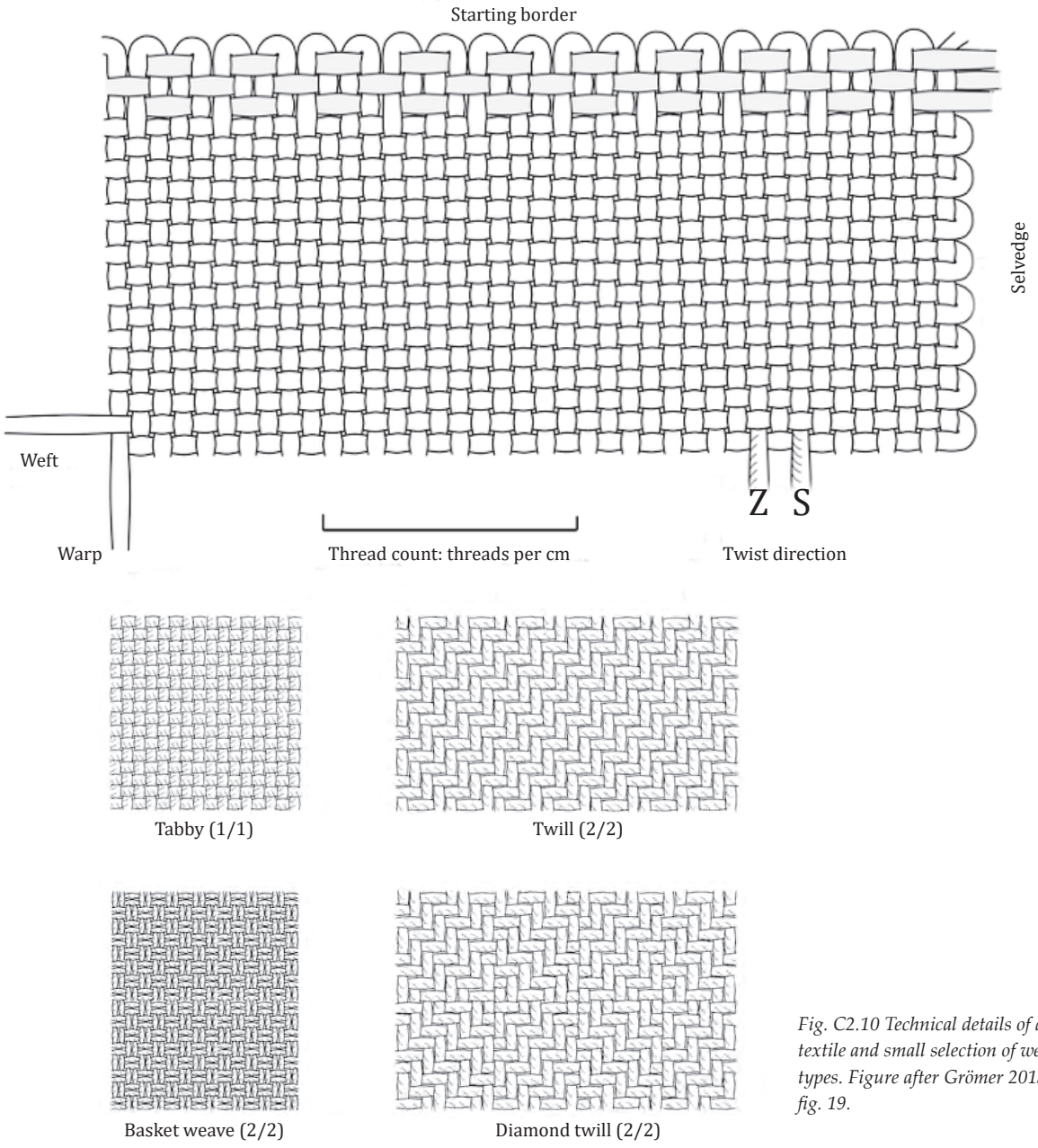


Fig. C2.10 Technical details of a textile and small selection of weave types. Figure after Grömer 2013, fig. 19.

fine: 6–10 thr./10 mm$^{2;}$ coarse: 1–5 threads per 10 mm^2; Grömer 2005, 28–30) and is one of the technical features of textiles used to determine quality.

An important part of textile analysis, as with many of the analyses of the elite graves, is consideration of the microstratigraphy – *i.e.* the stratigraphic position of textile remains (*cf.* Grömer 2015). For example, is the textile located directly on an artifact, are there several layers of textile, are there different weaves on top of each other *etc.* (*e.g.* Fig. CA1.1).

C2.7.3 Textiles in Oss-Vorstengraf

The following is a summary of the technical analysis of the Oss textiles by K. Grömer (2015; see also App. CA1) and technical analyses by I. Joosten and M. Bommel. The Oss textiles survive in a mineralized state with some parts still organically preserved. Textiles are present on the sword (*OV.06*), several iron rings (*OV.16*; *OV.18*) and the knife (*OV.24*), and also survive as 'loose' finds (*OV.39–42*). In total eight different weaves were identified (Textiles A–H; see Tab. A2.7).

Four different kinds of textile were identified on the sword. A coarser tabby (Textile A) on the side of the handle is likely from the wrapped iron rings (or may have been a textile covering the whole burial deposit). Three different textiles were identified on the sword blade, on both the inside and outer side. On the outside there is a coarser tabby (Textile B), several layers of a fine diamond twill (Textile C) and finer tabby (Textile D). The textile on the inner side of the blade survived poorly, but may be identified as deriving from the fine diamond twill (Textile C). Textiles A–D also were found among the 'loose' textile fragments from the situla (*OV.39–42*). The microstratigraphy of the various weaves on the sword and the loose fragments indicate that the coarser tabby (Textile B) was used to wrap the blade of the sword and that something made of the diamond twill (Textile C) was folded around something made of the finer diamond twill (Textile D) and was placed in the situla as grave goods in their own right and lay against the sword. Two different kinds of textiles were found on the outer side of iron rings (*OV.16*). A coarser tabby (Textile A) was identified on a smaller ring, and four layers of diamond twill (textile E) were found on the side of another ring. Textile also was found on one side of another iron ring (*OV.18*) but was too degraded to identify. Taken together this is interpreted as meaning that all rings were packed close together. Another weave (Textile F) was found only on the iron knife (*OV.24*). It is preserved in two places on one side of the blade and folds over the edge of the back of the knife. One part is covered by leather, of which the type of animal or tanning could not be identified. The microstratigraphy and the archeological context of the textile and leather indicate that either the leather is a knife sheath with the textile between leather and knife being the lining of the sheath, or the leather belongs to the horse-gear which was found together with the knife in the situla. If the latter is the case, then the textile may indicate that the knife was wrapped separately as the textile cannot be from the tabbies that cover the sword and iron rings (they differ in thread diameter and thread count). The interpretation of the textile as a wrapping certainly fits with the reconstruction of the burial ritual (Fig. 4.9; Section C26.4). Textile G is a coarse twill, and Textile H is a plied yarn, wrap, band weave.

C2.7.4 Textiles in Uden-Slabroek

The following is a summary of the technical analysis of the Uden-Slabroek textiles by K. Grömer (2015; App. CA1) and technical analyses by M. Bommel and I. Joosten. Textiles are present on both anklets (*US.06*; *US.09*) and the three bracelets (*US.07–08*), as well as preserved under the bronze pin (*US.14*). Two different weaves were identified (Textiles A and B; see Tab. A2.7). Textile A is a coarse twill (2/2) and was identified directly on the bronze anklets and bracelets, in some cases in multiple layers. Exceptionally, both the pattern and colors of this textile could be identified. It was likely a regular checkered pattern of bright red and blue blocks (dyestuff analysis is underway to confirm this). It probably can be interpreted as a long-sleeved garment that reached to the ankles, likely a dress. A second weave, Textile B, is a finer twill (2/2) and was found on top of the Textile A fragments on the bracelets. This textile is interpreted as a shroud.

C3 Revealing restorations

This chapter is dedicated to Jo Kempkens (09.02.1949 – 07.10.2016), who helped me see that conservation starts in the field and analysis starts during conservation.

Most of the burials in the dataset, in particular the more elaborate Chieftains' burials, were discovered at least several decades ago, sometimes even several centuries ago. Since then most have been published several times, and more often than not the artifacts also have been (heavily) restored. In this section I stress the importance of not only studying the objects as they appear today, but also considering any and all information available regarding their post-excavation appearance in the past. Rare cases where restoration history was documented can provide interesting insights, such as with the Chieftain's burial of Oss, while in other cases, new restoration work and the collaboration of restorer and researcher can reveal new information, such as happened with the sword from Wijchen (see below). Many of the objects that form the focus of this research have changed significantly in appearance since their excavation. The reasons for these changes are diverse and range from various forms of human intervention to natural degradation. A common factor is developing archeological insights which are reflected in the restoration work conducted. Another important factor is the developing skills of restorers. New techniques, knowledge and experience have made new approaches possible. The now common use of X-rays for example is a significant improvement. The changing ethics that dictate restoration work likewise have played a role. In the past, for example, it was common practice to fill in missing pieces and make fragmented objects look like new (as may be the case with a number of finds from Court-St-Etienne La Ferme Rouge T.3, see below). Whole pots were recreated from a few sherds, or a few corroded metal fragments were shaped into a complete sword. The eventual shape and appearance of these heavily restored objects were dictated by the understanding and ideas of the time. Nowadays it is common for restorers to remove old additions and make any new restoration work visible and reversible. These objects may appear less attractive than the wholly reconstructed objects of the past, but they often allow for a better understanding of the actual artifact.

In short, it is important that when examining and analyzing objects one bears in mind that the object one is looking at could be nothing like the artifact it was when excavated or even when it was deposited. This makes it harder to understand the object as it was used in life or the object deposited. Trying to recognize restoration work is key, and if available, one should always study restoration reports. Older discoveries also may have degraded since their excavation, which is yet another reason to always consider old notes, depictions and descriptions wherever possible. In other cases new restoration work as well as the expertise of the restorer can offer valuable insights. The value of this approach is illustrated with three case studies below. They were selected as they are the best examples in the Catalogue of how restoration (history) can change and influence the appearance and understanding of archeological objects and complexes. Where the restoration history of the Chieftain's grave of Oss allowed for a detailed reconstruction of part of the burial ritual, restoration work on the sword of Wijchen conducted for the present research revealed unknown details. While Court-St-Etienne La Ferme Rouge T.3 shows the value of considering old depictions.

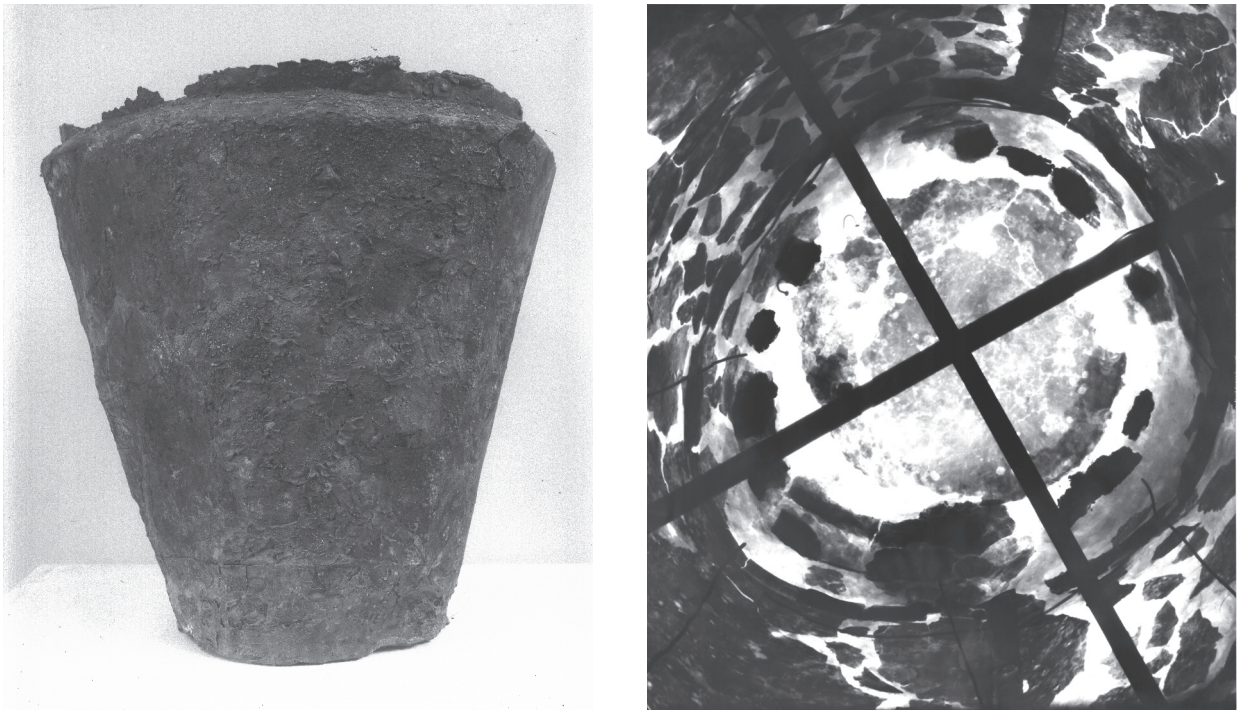


Fig. C3.1 The bronze vessel of Oss mounted on a metal and plaster frame as it appeared after restoration in the 1930s (left) and an X-ray of the vessel taken from above showing the frame upon which the bronze fragments were mounted. Photographs ©RMO.

C3.1 Restoring the Chieftain's grave of Oss

The Chieftain's grave of Oss is not only one of the most iconic archeological finds from Dutch prehistory, it is also one of the most valuable sources of information for the present research. Its extensive research history and in particular how it was treated by past restorers and researchers allow for a detailed reconstruction of the burial ritual (see Section C26.4). Yet at the same time its research history makes it one of the most complex datasets examined in this work. There are numerous publications, and the very artifacts, as well as our understanding of this burial have changed substantially in the 80 years since its excavation (discussed below). This complexity made the normally straightforward task of creating an inventory of the grave goods quite a challenge (see Section C26.1). The Chieftain of Oss' bronze bucket and its contents have been restored *three* times and researched and re-published even more (*e.g.* Fokkens *et al.* 2012; Fokkens/Jansen 2004; Holwerda 1934; Jansen/Fokkens 2007; Modderman 1964). The first restoration in 1933–'34 resulted in 21 inventory numbers listed as encompassing the Chieftain's burial of Oss. In the 1960s, and again in the 1990s, more restoration work took place on the material from Oss, not only changing the appearance of objects but also revealing new ones. Heavily corroded artifacts were cleaned, and fragments were restored into single or completely different objects. A 'lump of rust' yielded unknown objects both times.

In a way, each restoration resulted in a new Chieftain's burial of Oss. During the various restorations artifacts have been altered, combined and occasionally given new or re-cycled inventory numbers. It is only by studying the (unpublished) restoration report (Kempkens/Lupak 1993a) and the actual artifacts as well as the works by Holwerda (1934) and Modderman (1964) that an inventory could be created (see also App. CA2). This section highlights how not only the physical finds from the Chieftain's grave of Oss, but also the interpretation of the artifacts and the whole complex have changed in the last 80 years, and how these changes are in part the result of choices made during restorations. First, the three major restorations are described, and an overview given of the objects that were known at the time and how they were viewed.

C3.1.1 Restoration 1933–'34

Following its discovery the situla and its content were block-lifted and brought back to the National Museum of Antiquities (RMO) in Leiden (see Section C26.1 for more details). Once there the museum restorer, D. Versloot, uncovered and removed the objects and cremation remains from the situla. He managed to reconstruct the fragmented situla by mounting the pieces on a metal and plaster model (Holwerda 1934, 39). Figure C3.1 shows how this manner of restoration strongly influenced the appearance of the bucket, compared to how it was restored

in the 1990s (see below). With regard to the contents of the bucket, Holwerda mentions, almost in passing, the burned bone material and two large fragments of daggers or small swords, two oval bronzes, a bronze cross-shaped piece, three small solid bronze rings, a whetstone and fragments of cloth, probably deriving from a piece of clothing. Holwerda (1934, 39–40) seems to consider these finds to be of comparatively little importance. The main focus is clearly the sword, which was uncovered in six pieces.

C3.1.2 Restoration 1963

In the 1960s the finds from the Chieftain's grave of Oss came under the attention of P.J.R. Modderman because of a study he was conducting into a similar find from Wijchen (see Chapter C35). While studying the artifacts from this special grave, Modderman (1964, 57) came to realize that Holwerda's description of this find had become outdated and that a new one was needed.

From a picture he concluded that the situla was found askew, which explained the oval mouth of the situla (Modderman 1964, 57; see also Fig. 4.8). The weight of the earth above it had distorted its shape. When he re-examined the finds from Oss, the rusty lump known by the inventory number *k 1933/7.10* spiked his curiosity. Though Modderman was not sure what everything was, he could tell the lump consisted of all kinds of iron rings and things. These objects were taken to the laboratory of the State Service for Archaeological Investigations in Amersfoort. The chief of the laboratory, J. Ypey, first reconstructed the broken lump and then partially cleaned it (Modderman 1964, 57). As a result of this process several new artifacts were excavated some 30 years after they had come out of the ground.

These 'new' artifacts included an iron socketed axe and two 'knives' (which today are interpreted as razors). Two objects made of two separate bronze cones joined by an iron pin also were found. Modderman thought these might be dress-pins, but could not give a definite interpretation. He took the tang-end of an iron knife to be an entirely new knife, but during the next restoration this piece would turn out to belong to the knife tip already 'found' in the 1930s (see below). Modderman (1964) could give no explanation as to the function of an iron rod with a rounded cross-section, or to an iron rod with a knob and an eye (these would be restored into what are today known as two matching toggles). The uncovering of two iron bits with cheek-snaffles was one of the more important discoveries made during this restoration. Though in many pieces, of which some were not recognized as belonging to the bits, this discovery added an entirely new category of finds to the Chieftain's assemblage: horse-gear. The eight iron rings unearthed from the rusty lump probably also belonged to the horse tack.



Fig. C3.2 The Chieftain's burial of Oss as it appeared following the 1960s restoration. Note the now identifiable, but not yet complete horse-bits. Photograph ©RMO.

C3.1.3 Restoration 1992–'93

In 1992 the RMO decided to once again have the finds from the Chieftain of Oss restored. They were still a crowd puller, and the find complex was to be preserved and restored for the opening of the renewed exhibit at the Museum (Fokkens/Jansen 2004, 54). The artifacts were in quite poor condition, and J. Kempkens spent a year and a half on the Chieftains' grave goods (Kempkens/Lupak 1993a). This was an extremely complex process. Certain finds had to be stabilized and almost all required extensive cleaning. During the restoration process it was discovered that several artifacts were in multiple pieces, with fragments sometimes rusted onto other artifacts. Several objects that Modderman had interpreted as separate artifacts turned out to belong to single pieces. So not only did the finds require a lot of restoration work to make them more presentable to the public, it was also quite a puzzle. During this restoration process the 'rusty lump' that had so interested Modderman yielded yet more finds, such as another, and this time intact, dress-pin. Several iron rings were reconstructed from loose pieces. A mass of iron rings, though already described by Modderman, looks quite different now that the broken pieces have been supplemented (Fig. C3.3). The cleaning process also revealed the presence of an iron rod with a flattened end

and two bronze hemispherical sheet-knobs. An object described by Modderman as an iron rod turned out to be a toggle, matching the broken piece already described by Modderman. It is striking though how different the object described by Modderman looks from the now restored toggle. This demonstrates how influential restoration work can be. Another example of this is the reconstruction of the two horse-bits from the cheek-snaffles and several loose pieces that according to Modderman (1964, 60) could not be part of the same object.

Certain finds also 'disappeared' during this restoration. The iron knife with a sharp edge and a blunt back on the straight side and Modderman's tanged end of a knife were restored into a single curved knife. However, the best-known example of this is the object that was interpreted as another knife or second sword for 60 years, but which turned out to be a part of the Mindelheim sword. By recognizing that the fragment interpreted by Modderman as the tip of the sword was in fact a 'middle' piece, and refitting the real tip, 26 cm was added to the sword (Fig. C26.4). It also put an end to the idea that the Chieftain of Oss might have had two swords (though reference to multiple weapons is still made in some later articles, such as Lanting/Van der Plicht 2001/2, 173).

Understanding the history of the finds of the Chieftain's grave of Oss, post-excavation, is complicated by the 're-use' of inventory numbers after the restoration by Kempkens. When separate pieces were restored into a single object, 'old' numbers were re-used for 'new' objects. For example, Modderman's artifact known as *k 1933/7.10c* turned out to be part of a knife known as *k 1933/7.9*. A newly discovered pin then was given the number *k 1933/7.10c*. And to make things even more complicated, several mistakes were made during the numbering process at the RMO when the museum restorer wrote the inventory numbers on the physical artifacts. For example, the pin that should have had the number *k 1933/7.10c,* is *k 1933/7.10a.* For more details on these numbering problems, see Appendix CA2.

C3.1.4 Conclusion: the Chieftain's grave of Oss

In summary, during the 80 years since it was excavated the Chieftain's grave of Oss has changed in appearance and composition on several occasions. The first restoration in 1933 turned a plaster block filled with rust into a chieftain's burial, complete with exotic import goods. The second one in 1963 added horse-gear to the grave goods of our Dutch Chieftain; again changing the way the burial was seen and interpreted. The most radical physical change, however, took place in 1993. From an impressive but unattractive burial, the Chieftain's grave was transformed into the magnificent and shiny affair it is today. A few years ago the inventory of the grave was changed again with the 'discovery' of another iron ring fragment and bronze sheet-knob.

During the past 80 years the tally of artifacts in the Chieftain's grave has been raised from some 30 finds known in 1933, to over 50 finds today. As stated above, this section is the result of a research initially started with the relatively simple goal of compiling a complete inventory of the Chieftain's burial from Oss. It, however, soon became clear that making such an inventory was easier said than done. Some inconsistencies in numbering were noted while comparing Modderman's findings with Kempkens' restoration report, which led to a more extensive examination of all available documentation. Simply trying to understand 'which object was which' required detailed study of the transformations of certain finds during the various restorations. This brought to the fore how restoration work can color perception of an archeological find.

Most who study the Chieftain's grave of Oss know that the burial assemblage we see today is for a large part the result of extensive restoration work. The majority of the finds are reconstructed at least partially, from the bronze bucket to the simple iron rings. For example, if one looks at the before and after pictures of the conglomeration of iron rings or *Tutulus*, the difference is striking (Fig. C3.3). I stress this because researchers can ascribe value to a feature of an object, which can (strongly) influence the overall interpretation of the object. For example, when a number of Hallstatt culture scholars gathered in Leiden for a workshop in 2010, the *Tutulus* from Oss was discussed. It was postulated that the raised direction of the rings on it indicated that it probably was made locally, as the Hallstatt Culture *Tutuli* found in Central Europe have horizontal rings. However, the restoration history of this object shows that these rings are fills, and their direction may not be completely accurate (Fig. 3.3).

A different aspect of the same problem are the ´unattractive´ finds. There are several of these in the inventory of the Chieftain's burial that are so poorly known that if one does not go through the actual drawers in the depot, one might not even know they exist because they had never been published. A striking example of this is a ring fragment and bronze stud found in the depot in 2011 which was published in 2012 (Fokkens *et al.* 2012). In conclusion, I would like to emphasize that when one works with (old) discoveries like the Chieftain's grave of Oss, the finds you see can be influenced strongly by the way they have been restored. This burial is also an excellent example of how not only individual artifacts, but also a burial complex as a whole and even more so our understanding of it can change radically after it has been excavated.



Fig. C3.3 The bronze Tutulus (OV.13) and mass of iron rings (OV.16) from Oss pre- and post-restoration. Photographs after Kempkens/ Lupak 1993, 3 and 18; by P.J. Bomhof ©RMO.

C3.2 Restoring the Wijchen blades

I first examined the objects from the wagon-grave of Wijchen (see Chapter C35) in 2011 as part of an earlier research. While the bronzes had survived well, the iron artifacts were in extremely poor condition. An iron sword (which was published also by Pare 1992, 220) was highly fragmented and corroded, which made it very hard to discern diagnostic features. Little more could be said about it beyond that it was a bent iron sword with a central rib. As this sword is from one of the most elaborate and otherwise informative elite burials of the Low Countries it was frustrating and problematic that so little could be said about the sword, an integral part of the burial assemblage. Among the rust fragments I also found what seemed to be two knife fragments which had not been identified previously. These fragments were covered in such a thick layer of corrosion it could not even be determined with certainty whether they represented two knives or belonged to the same blade. At the time I cautiously interpreted them as two knives. As part of the current research I conferred with curator L. Swinkels and the in-house metal restorer R. Meijers of Museum het Valkhof, where this burial currently resides, regarding the poor state of these sword and the knife fragments and what might be possible with regards to restoration work. They agreed that it was a shame that major features of the Wijchen burial were not only in too poor a state to do a proper scientific analysis, but also that they were unrecognizable as being a sword and knife fragments to the average museum visitor. It was agreed that an attempt would be made to restore this sword and knife fragments. We agreed that we did not want to take the sword to a highly polished finish (like the Oss sword) and instead chose to focus on revealing diagnostic features (shape of the hilt and tip, length and curve of the blade and so forth). Restoration of the knife fragments was aimed at exposing the surfaces of the break in order to establish whether they were from a single blade.

Halfway through the restoration process I returned to the Museum to review what had been discovered and discuss what further work would be required to achieve our goal of a better scientific understanding, coupled with the desire to make the sword and knife fragments more displayable for the Museum and its visitors. Upon completion of the restoration work I returned for a re-analysis of the sword and (as it turned out single) knife, as well as to take photographs of it and of the complete inventory from this grave. The results were astounding. This sword went from barely recognizable to a highly diagnostic artifact that in fact appears to be unique in



Fig. C3.4 The grave goods from Court-St-Etienne La Ferme Rouge T.3 as they appeared in the 1950s. Figure after Mariën 1952, 281.

Europe (Figs. C35.2 and C35.4; Section 6.2.1.3). I have included this case study as an example of the need and added value of working with a restorer, both from a museum as well as a research perspective. The restoration expertise of Meijers combined with my own resulted not only in a 'new' sword, but also in a far better understanding of this grave, arguably one of the most important Early Iron Age burials of the Low Countries. It was only by restorer and academic working together that this could be achieved.

C3.3 Court-St-Etienne La Ferme Rouge T.3 restored or degraded?

Several iron artifacts form Court-St-Etienne La Ferme Rouge T.3 serve as a last example. Figure C3.4 was taken at some point during the 1950s and published by M.-E. Mariën (1952, 281). As becomes apparent when one compares this image with pictures taken during the current research (*e.g.* Figs. 4.6 and C6.5), the iron artefacts appear to have been in much better condition when they were photographed in the 1950s. The iron horse-bits are intact and they have their bit rings, while today the latter are missing (see Section C6.2.4.1). The lancehead also appears to be in perfect condition in Figure C3.4, while today it is relatively poorly preserved (see also Fig. C6.9; Section C6.2.4.1).

Interpreting the difference in appearance of the objects is complicated by the fact that there are no records of the restoration work done on these items. It is therefore unknown whether the objects truly were in such excellent condition in the 1950s but have degraded drastically since then (which is in theory possible if not stored under appropriate conditions), or whether the objects were restored quite heavily in the 1950s and that the restoration fills since have been removed (which is also a not uncommon practice). While we can only speculate in this case, it does show the importance of also considering older publications and images when re-examining artifacts.

C3.4 Conclusion

I hope it is clear from these three case studies how important it is to understand the post-excavation and restoration history of objects whenever possible. One has to be aware that when dealing with older finds one may be looking at an objects that is largely modern, which may even be 'wrong'. They also may have once been in better condition and older descriptions and images can be of tremendous help when studying old discoveries and poorly preserved finds. It is also possible that old descriptions or depictions (still) show objects *in situ* or corroded together, which can help one to reconstruct how objects may have been interred (as was the case with the Chieftain's burial of Oss; Section C26.4). These are all things to bear in mind, and I stress that going back to the original data and finds is often crucial.

C4 Baarlo

The bronze vessel from Baarlo strongly resembles the famous bucket found in the Chieftain's grave of Oss, and often is included in discussions of the chieftains' graves in the Netherlands (Fig. C4.1; *e.g.* Fokkens/Jansen 2004, 54; Roymans 1991, 37–43). This vessel is a Hallstatt Culture import and is believed to have been found underneath a barrow. It therefore is included in this Catalogue as a likely grave find. The bucket was made available for study by the National Museum of Antiquities in Leiden (RMO) and it was studied and photographed by myself. At my request P.J. Bomhof of the RMO kindly also photographed this vessel, producing excellent photographs.

C4.1 Find circumstances

W.C. Braat (from the RMO) was doing a small excavation in Maasbree in 1934 when one of the workers informed him that he knew someone who had found a bronze bucket underneath a mound some time previously (since the bronze vessel was discovered in an earthen mound, it is assumed to be from a grave). Suspecting that it might concern a find similar to the Hallstatt culture bucket from the recently discovered Chieftain's grave of Oss (see Chapter C26), Braat requested that the man take him to see the friend. This friend told him he indeed had found a bronze bucket about a year ago. The finder had wanted to use it as a flowerpot, but while 'sanding and cleaning' the bottom had fallen out and there were holes in the pot, so he threw it in a ditch. A collector by the name of L.D. Keus from Venlo had heard a rumor about the find and had come and collected the bucket from the ditch. Braat (1935) went to see the gentleman, who was willing to sell the bucket to the Museum. While the exact find location of the situla is unknown, Roymans (1991, 57–8) was able to establish that it lay some hundred meters east of an urnfield at De Bong.



Fig. C4.1 The finds from Baarlo. Number has the prefix Ba. Photograph by P.J. Bomhof ©RMO.

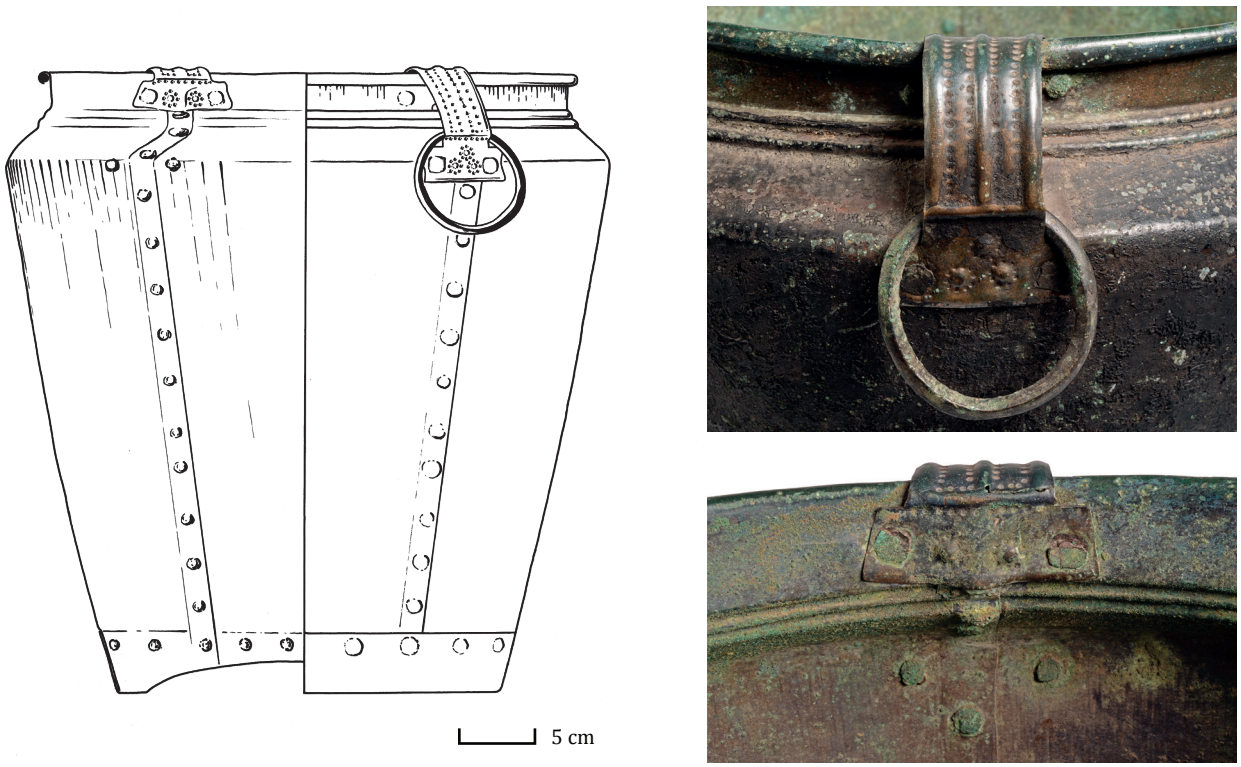


Fig. C4.2 Schematic drawing of the Baarlo bucket (left) and a handle on the same vessel from Baarlo, exterior (top) and interior (bottom) view (different scales). Drawing by unknown artist; photographs by P.J. Bomhof ©RMO.

Baarlo **Limburg, the Netherlands**					**Data quality:** medium,
Method of recovery: chance find (medium) **Year of discovery:** 1934 **Date:** Ha C1–2 **Current location:** National Museum of Antiquities, Leiden		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** RMO inv. no.
Bronze vessel					
Ba.1	Bronze bucket	--/-	--/--	--	I 1934/8.3
References: Braat 1935; Roymans 1991, 37–9.					

Tab. C4.1 Inventory and numbering information Baarlo.

C4.2 The material remains

Bronze vessel This bronze bucket is in relatively good condition (Fig. C4.1), with the exception of a reconstructed base and some holes in the walls of the bucket. It is 41.1 cm high. The walls are made from two trapezoidal bronze sheets riveted over each other (Fig. C4.2, left). The shoulder, neck and raised edge were hammered from the same pieces as the walls. The shoulder of the bucket has two ribs. The rim probably was hammered outwards around a core of some kind, though the core is no longer visible. Both handles are present, with embossed and raised decoration, also on the inside (Fig. C4.2, right). One of the handles is partially loose, and one of the two bottom rivets is missing. A difference in patination suggests that the rivet was there when the bucket was interred. The other handle is still complete, including its ring (with a roughly square cross-section). The rivets on the outside appear slightly square. The bottom is a separate piece, which originally was riveted onto the walls. Today it is (at least partially) attached with plaster. There are no signs of burning, intentional distortion, wear or ancient repairs on this bucket.

C4.3 Dating

According to Prüssing (1991, 49–52) similar type Kurd buckets (see Section C2.2.1.1) primarily date to the Hallstatt C1 period, but can also date Hallstatt C2. This is

consistent with the dates ascribed to Oss-Vorstengraf and Rhenen-Koerheuvel, both of which yielded practically identical buckets. The Baarlo vessel (and the burial it is believed to be from) therefore is dated Hallstatt C1–2 (see also Fig. 3.5; Section 3.4.1.5).

C4.4 Actions taken and reconstructing the (burial) ritual

This vessel was found by chance, though the finder reported that he recovered it from a low mound, which makes it probable that this is an incompletely recovered grave find. Unfortunately this means that all that can be reconstructed of the ritual conducted here is that a bronze bucket, in apparently perfect condition, was deposited in or on the ground and that a mound may have been erected.

C5 Basse-Wavre

A number of barrows were excavated at Basse-Wavre, yielding both swords and razors. Unfortunately, only some of the finds from a single barrow could be located. These were made available for study by the Royal Museums of Art and History (MRAH) in Brussels, Belgium.

C5.1 Find circumstances

In 1882 the Marquis of Wavrin, assisted by L. de Pauw, the curator of the paleontological collection of the University of Brussels, found a dozen barrows near the town of Wavre. These now are known as the barrows of Basse-Wavre or La Bruyère-Saint-Job. In particular Tombelle 5 of this group often is referred to as La Bruyère-Saint-Job. These barrows are reported to have been rather low but sizable, about 30 m in diameter. They were arranged one after the other, creating a line (De Loë 1920, 164–6; Mariën 1958, 207). Prior to the activities of the Marquis and De Pauw several barrows reportedly were destroyed at this same location (Mariën 1958, 203). Baron De Loë (1920) gives a summary of De Pauw's data regarding the general characteristics of the barrows (Mariën 1958, 207–8). He describes that the urns containing the cremated bones and other objects were located at the level of the old surface. Pyre ashes covered the areas where these deposits were positioned and the barrows were erected over them. Similar findings are reported at nearby Court-St-Etienne (Chapter C6). In several of the barrows at Basse-Wavre they discovered objects of bronze, iron and ceramics. Cloquet (1888, 186–7) and De Loë (1920) report that a large iron sword, fairly well preserved, was found here, and that it is (or was) in the possession of the Marquis of Wavrin (Mariën 1958, 208). It is thought that this iron sword is comparable to those in the dataset (but as it is of unknown type, it is not included in Figure 3.5 as the given date is so speculative). There also may have been more of these weapons. Moreover, while De Pauw describes this sword as broken, it is plausible that it was merely bent or that the break was post-depositional (Mariën 1958, 208). Tombelle 3 contained five coarse pots and small iron objects, or fragments of indeterminate bronze or iron were found in four or five barrows. Globules of molten bronze, a broken polishing stone and one or more bronze swords were also recovered (as summarized by Mariën 1958, 208–9). It is unclear where these finds currently reside. Another barrow, Tombelle 5, was excavated at this location in 1883 by Stassin and is discussed in more detail below.

C5.2 Tombelle 5

The fifth burial mound is the best-known barrow of this group. It was one of the smaller mounds and contained multiple pots, bronze and iron fibula fragments, a bronze razor and a fragment of a bronze sword (Mariën 1958, 210–3). Of these, only the sword fragment and bronze razor have been identified in the collection of the MRAH, where they were kindly made available for study (Fig. C5.1). They were examined by myself and photographed by J. van Donkersgoed.

C5.2.1 The material remains

Human remains While there is no information regarding the human remains of this barrow specifically, in De Loë's (1920) summary of De Pauw's data regarding the general characteristics of the barrows the urns are described as containing cremated bones

Basse-Wavre Unknown context **Walloon Brabant, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1883 **Date:** Ha C1–2 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Human remains				
*BW.UC.1**	Cremated remains, multiple deposits	Indet	Indet	++	-
	Pottery				
*BW.UC.2**	Ceramic pots, multiple	Indet	Indet	Indet	-
	Weaponry				
*BW.UC.3**	Bronze sword, one or more	Indet	Indet	Indet	-
*BW.UC.4**	Iron sword, possibly multiple ones	Indet	-+/++	+	-
	Tools				
*BW.UC.5**	Polishing stone	Indet	--/+	Indet	-
	Other				
*BW.UC.6**	Fragments of indeterminate bronze or iron	Indet	Indet	Indet	-
*BW.UC.7**	Globules of molten bronze	Indet	Indet	++	-
References: Cloquet 1888, 186–7; De Loë 1920; Mariën 1958, 207–8.					

Tab. C5.1 Inventory and numbering information Basse-Wavre Unknown context.

(Mariën 1958, 207–8). For this reason it is assumed that at least one of the pots recovered from this barrow originally contained cremation remains.

Pottery Multiple pots were found in the barrow, but they have not been identified. No information is therefore available regarding these pots, except that they are similar to some found at Court-St-Etienne and some are curiously shaped (Cloquet 1888; Mariën 1958, 211).

Weaponry One fragment of a bronze Gündlingen sword survives from this burial, and reportedly this is all that was found of it. This could be due to the poor excavation methods, but it also could be that only this piece was deposited. The fragment is broken halfway the tang and a few centimeters below the shoulders. The break at the tang end is slightly bent and shows some cracking of the bronze, indicating it was broken by bending or wrenching the tang or hilt in half (Fig. C5.2, bottom left). The break below the shoulders is sharp, and may be a hot-short fracture (Fig. C5.2, bottom middle). The sword fragment still has five rivets, one on the tang, and two on each shoulder. Those that survive to their original height show a point-circle decoration. The ends of both shoulders are broken (Fig. C5.2, bottom right). It has an unusual cross-section, with sharp edges, raised ribs and grooves. This sword fragment has a ricasso and a rather large recent damage of unknown origin (Fig. C5.2, top).

Personal appearance A bronze razor shaped like two little figures or a 'smiley face' was found in this barrow. All the edges around the heads and the 'smile' appear



Fig. C5.1 The finds from Basse-Wavre T.5 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix BW.T5. Photographs by J. van Donkersgoed.



Fig. C5.2 The broken tang (BW.T5.3) with recent damage (top) with details of the top (bottom left) and bottom break (bottom middle) and the broken shoulders and point-circle decoration on the rivets (bottom right). Photographs by J. van Donkersgoed.

Basse-Wavre Tombelle 5 **Walloon Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (poor) **Year of discovery:** 1883 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*BW.T5.1**	Cremated remains	Indet	Indet	++	-	-	-
	Pottery						
*BW.T5.2**	Ceramic pots, multiple	Indet	Indet	Indet	a	-	-
	Weaponry						
BW.T5.3	Bronze sword, fragment (type Gündlingen Etappe 4/ Weichering)	--/--	++/++	+	c	B 789	-
	Personal appearance						
BW.T5.4	Bronze razor (type Gruppe C/Feldkirch/Bernissart)	+/+	--/--	--	d	B 790	-
*BW.T5.5**	Bronze, and bronze and iron fibula fragments	Indet	Indet	Indet	b	-	-
References: Cloquet 1888; De Loë 1920; Mariën 1958, 210–3.							

Tab. C5.2 Inventory and numbering information Basse-Wavre T.5.

rough, as though the final grinding was only quickly done rather than completed to a smooth finish, though the flat surfaces are smooth. The razor edge shows grinding traces with a clear facet (Fig. C5.1). The actual edge has degraded somewhat, but this razor may have been sharpened close to the time of deposition. Mariën (1958, 211) questions the association of the razor with the sword described above because he claims it is the only such barrow to contain both a sword and a razor. However, they date to the same period (see below), and there is no evidence that they are not from a single grave. Reportedly, a number of fibula fragments were also found in this barrow, made of both iron and bronze. These, unfortunately, cannot be identified. It therefore is unclear whether there were in fact fibula fragments, or whether they may have been misidentified as such.

C5.2.2 Dating

The bronze sword (*BW.T5.3*) from this burial appears to be a late type Gündlingen (Etappe 4/Weichering) sword based on the shape of the shoulders, tang and cross-section of the blade (Milcent 2012, 48; Trachsel 2004, 123), which indicates that this burial likely dates to the end of the date range determined for Gündlingen swords in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5), which is consistent with the date indicated by the razor (*cf.* Trachsel 2004, 144).

C5.2.3 Actions taken and reconstructing the (burial) ritual

The objects from Tombelle 5 were recovered from a barrow. Whether they were dug into an existing mound or were the reason for erecting the mound is unknown. The barrows of this group are described as containing urns with cremated bone, with other objects deposited on the level of the old surface which were covered with pyre ashes. The barrows were then erected over these deposits (De Loë 1920; Mariën 1958, 207–8).

The state of the bronze sword also indicates that fire was likely part of the (burial) ritual through which it and the other objects were deposited. The break on the blade is sharp and defined and most likely the result of a hot-short, whereby the blade was heated in some kind of fire and this energy released by a sharp tap resulting in the characteristic sharp break. The broken off tang, however, shows a different breaking technique. The bent angle of the break and the small cracks indicate that bending or wrenching the tang or hilt in half caused this break. This probably required at least some heating of the bronze. In all likelihood the bronze tang still was encased in an organic hilt, as five of the bronze rivets that would have held on the organic hilt are still present. This could have affected the fragmenting process, requiring bending and breaking, rather than fracturing with a hot short. The razor was deposited intact, but the freshness of the grinding traces on the blade facet suggests it may have been sharpened prior to deposition. Nothing is known regarding the state of the bronze and iron clothing pin at its time of deposition, only that it ended up in this deposit. As mentioned above, a barrow was erected over these objects.

C6 Court-St-Etienne

As a prehistoric burial site Court-St-Etienne is simultaneously well-known and poorly understood. The top finds are relatively broadly known but actual details about the site far less so. While most sites considered in this study have only one or at most a few really rich burials, Court-St-Etienne has yielded an extraordinary number of elite objects from numerous barrows and burials. Unfortunately, it is not always known where artifacts originated exactly. This is understandable considering the research history of this site. Many early researches and excavations took place here from the 18th until the early 20th century. The most recent, and in actuality only, overview of finds from the site as a whole was created in the 1950s by M.-E. Mariën (1958). He concluded that several dozen barrows have been destroyed at Court-St-Etienne, and that only a few of these were properly documented. To further complicate matters, the site Court-St-Etienne actually is made up of three zones known as La Ferme Rouge, La Quenique and Bettremont, in which both barrows and flat graves occur. Exactly how many there were of either type unfortunately is unknown (Mariën 1958, 187–90). The barrows were located on the southern edge of a plateau that slopes down suddenly towards the Orne creek, and is surrounded by the river Dyle and several other creeks (Mariën 1958, 13–6; Figs. 5.12 and C6.1).

At La Ferme Rouge a group of five barrows was excavated in 1905. These mounds are the best documented burials of Court-St-Etienne (Mariën 1958, 96–147). There are also several in the area of La Quenique, but only a few of these yielded useable archeological data (Mariën 1958, 198). For seven barrows Mariën succeeded in establishing (roughly) which objects they originally contained, and of six he located some or all artifacts in the Royal Museums of Art and History (MRAH) in Brussels where most known finds reside. However, there are also many artifacts for which he could not retrace the specific find location and/or find context. This makes it extremely hard to reconstruct the exact funerary events that took place on this plateau. Detailed study of the various literary sources and the objects themselves did allow for a more generalized overview of Early Iron Age events here, with more or fewer details available for the different burials and barrows.

Since Court-St-Etienne is such a large and complicated site, both with regard to its research history and archeology, it is discussed here according to a different structure than other sites. First a general research history of Court-St-Etienne is described, followed by discussion of the burials and grave goods. These will be discussed first per zone of Court-St-Etienne, followed by discussion of artifacts of which the find location could not be reconstructed. The artifacts from Court-St-Etienne predominantly reside in the collection of the MRAH. Those finds that could be located were made available by N. Cauwe and were studied by myself and photographed by J. van Donkersgoed.

C6.1 Research history

Court-St-Etienne started attracting research interest at the end of the 18th century. The first barrow was excavated due to the interest of Baron F.-Ch. De Beeckman. No information or finds survive from this campaign (Goblet d'Alviella 1908, 27). The second excavation to take place was ordered by Baron de Remerscal, who had become the owner of the area in 1785 (De Mulder 2011, 37; Tarlier/Wauters 1864, 128).

Barrows regularly were examined by local (amateur) archeologists from the mid-19th century onwards. J. Tarlier (1864) was active at La Quenique in 1861 (De Mulder 2011, 41). During harvesting of the forest in the following years, new finds

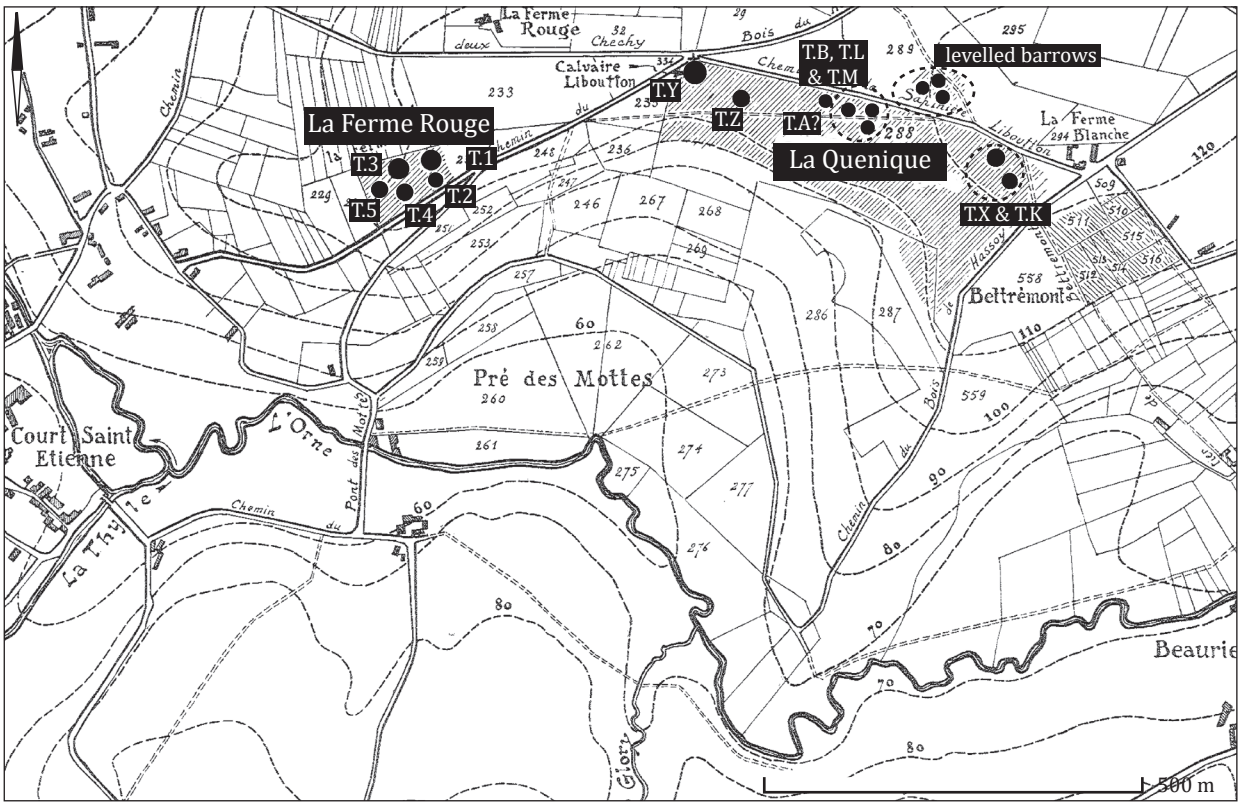


Fig. C6.1 Map showing the (known locations of) burials of Court-St-Etienne. The zone La Ferme Rouge is shown on the left, the zone La Quenique is on the right. Drawing adapted from Marien 1958, fig. 2.

were done. N. Cloquet (1882), who was an active member of *the Société archéologique de l'arrondissement de Nivelles*, collected and recorded these finds. They attracted the interest of Baron A. de Loë, who was the first to scientifically excavate a barrow on this site (De Loë 1891). Count Goblet d'Alviella was the next to excavate at Court-St-Etienne. From the early 20th century until the start of WWII, he excavated several barrows (Goblet d'Alviella 1908; Mariën 1958). The Count was active both in politics and science. His documentation of his archeological research, however, does not measure up to the scientific work conducted by A. de Loë (De Mulder 2011, 41; De Munck 1925, 229–30). C. Dens, member of the *Société d'Archéologie de Bruxelles,* conducted research both in Court-St-Etienne and in the surrounding area. He documented his excavations relatively well with field drawings and cross-sections (Dens 1903). In the 1950s Mariën, as head of the Old Belgium (Dutch: *Oud-België*) department of the MRAH in Brussels, studied and published the older Early Iron Age assemblages that were in the Museum's collection, including finds from Court-St-Etienne and surrounding areas (Mariën 1958), Saint Vincent (Mariën 1964) and Havré (Mariën 1999).

In the following the sub-sites of Court-St-Etienne are discussed separately. Since Bettremont yielded only flat graves and finds that are not immediately relevant to this research due to the nature of the finds or their date they are not discussed in further detail (see Mariën 1958). Court-St-Etienne La Ferme Rouge is discussed first, followed by a discussion of Court-St-Etienne La Quenique. It should be noted that the extensive restoration work done on the ceramics from this site unfortunately did not allow for new analyses at present. Mariën (1958), however, offers descriptions of the ceramics and the reader therefore is referred to this publication for more information regarding the pottery.

C6.2 Court-St-Etienne La Ferme Rouge

The most westerly zone of the Court-St-Etienne sites is known as *La Ferme Rouge* (French for 'red farm'). This area was covered with heather until it was forested in 1830 (Goblet d'Alviella 1908). Despite foresting activities, five barrows survived on a trapezoidal plot between the fields of La Ferme Rouge to the north, and the old road to La Quenique to the southeast. A plan published by Goblet d'Alviella (1908, fig. 3) shows the area to be between 53 and 83 m in width, and 113 m long (Fig. C6.2). This land is identified as the western part of the cadastral parcel Sect. A, 231. The objects from these five barrows currently are

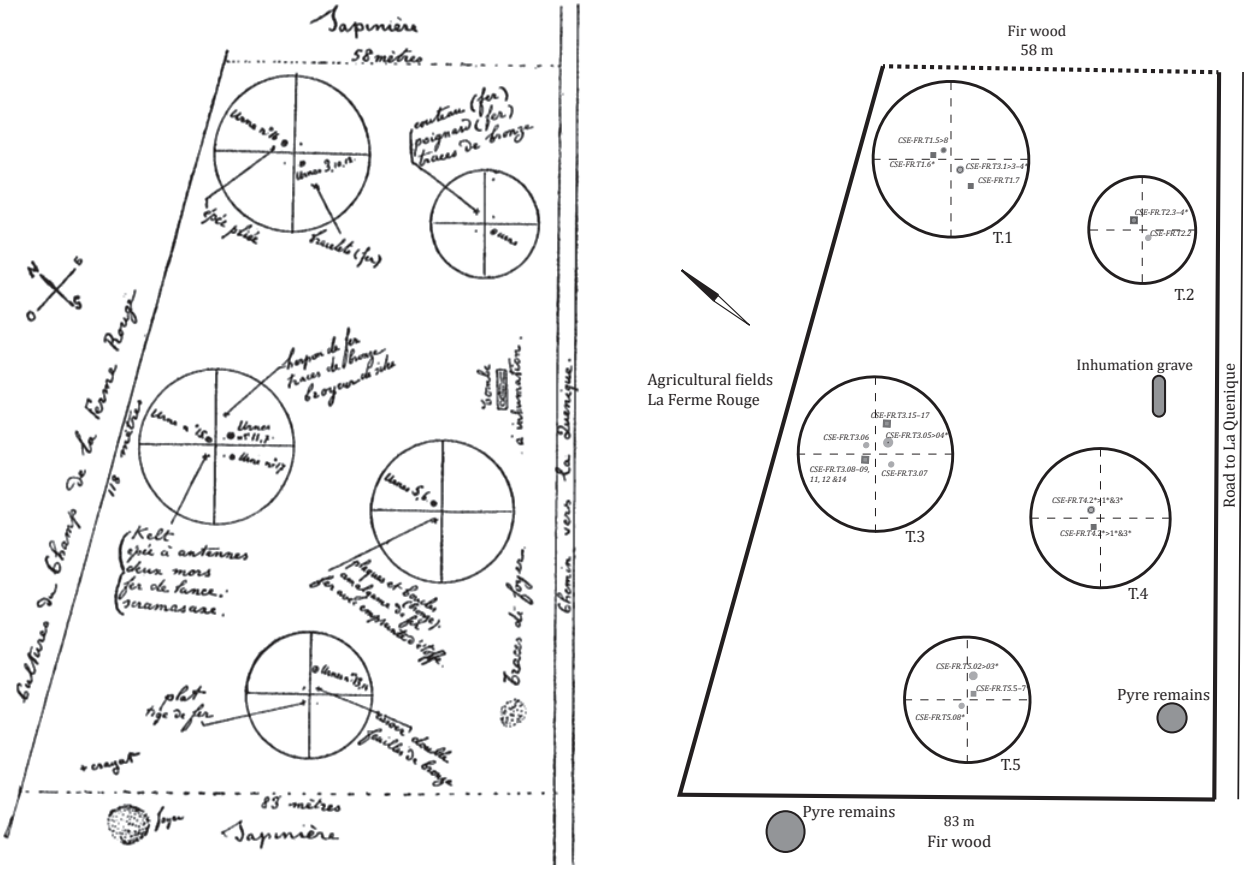


Fig. C6.2 The zone of La Ferme Rouge as published by Goblet d'Alviella (1908, fig. 3; left) and reinterpreted with the object numbers used in this research (right).

stored in the MRAH, where those available were studied by myself and photographed by J. van Donkersgoed. Due to their early date of excavation and the sometimes-undetailed description of the objects by Goblet d'Alviella, it is unfortunately not always clear exactly which object comes from which barrow. However, with the help of the various publications and the helpful staff at the museum it was possible to reconstruct the following.

C6.2.1 Find circumstances

Count Goblet d'Alviella excavated the five surviving barrows in the winter of 1905 (Fig. C6.2). He excavated by means of two trenches, extending them in the center, going down to the virgin soil, and then turning over the soil until 60 cm deep. It should be noted that he did not level the barrows and specifically focused on extracting grave goods. Any burials or structures located outside of the trenches would have been missed. It is possible that this technique precluded determining whether the objects found in a barrow originated from a single grave or from multiple ones. There are no drawings of individual graves, nor any section drawings. Goblet d'Alviella does report that he found areas of 3 by 4 m with charcoal and burned bone in the barrows, indicating that the La Ferme Rouge mounds covered burned-out pyres (or remains) and cremation graves. In addition to these five barrows, Goblet d'Alviella's plan shows they found an inhumation grave, though unfortunately no other information survives. The rough plan published by Goblet d'Alviella mentioned above was drawn on a 1:1200 scale (Fig. C6.2). It gives the approximate find location of each object found in the barrows. This sketch was the basis for the individual plans of the barrows published by Mariën (1958, figs. 15–7; 20; 24). Mariën's drawings therefore are interpretations of a field drawing that likely was not very exact in the first place given the time of excavation and the scale at which it was drawn. So especially with regard to scale and the distribution of the artifacts found in the barrows, care should be taken when interpreting Mariën's plans. In some cases Mariën's individual barrow plans indicate that objects, which he himself interprets as coming from the same grave, were found more than 10 m apart (*e.g.* Section C6.2.4). The barrow features and grave goods found at this site are described per barrow.

C6.2.2 Tombelle 1

This barrow was located at the northeastern end of the field. It was a very large mound, ca. 25 m in diameter. The association of the objects in this barrow is only summarily known from the sketches. Two accessory vessels were found in the urn alongside cremation remains. A complete iron sword was uncovered slightly to the north of the urn. A bowl was found near this urn. The most southern find in this barrow consists of two iron rings. With the exception of one of the accessory vessels and the iron sword, all artifacts were made available for study by the MRAH (Fig. C6.3). These objects were analyzed by myself and photographed by J. van Donkersgoed.

C6.2.2.1 The material remains

Human remains Cremation remains were found deposited in an urn. They have never been analyzed, and it is unclear where they currently are.

Pottery A large decorated pot (Fig. A2.1) was used as an urn and two small pots were deposited as accessory vessels. Mariën (1958, 103) argued that a bowl found in this mound is a later La Tène intrusion into the barrow.

Weaponry A complete iron sword (Fig. A2.1) was found slightly to the north of the urn. This sword was curled up and may also show signs of battle damage, but at present it cannot be located within the MRAH, so this cannot be confirmed. Mariën (1958, 102–3) reports that this sword was restored poorly and that this has obscured some of the diagnostic features. A published drawing (Mariën 1958, fig. 15) reveals this to be a Mindelheim type sword.

Other Two iron rings are described by Mariën (1958, 105) as broken, and he argues that they are from a type Platenitz horse-bit (such as for example the bits from Court-St-Etienne La Ferme Rouge T.3, see Section C6.2.4). While it is possible that they are from a horse-bit, it is almost impossible to ascribe function to loose rings (as discussed in Section C2.4.4) and they therefore are listed under this category. These rings are rather heavily conserved. One is complete (in contrast to Mariën's statement) and appears to have had a round cross-section. The other has an opening. One end, the narrow one, appears broken (Fig. C6.3). The other end is square in cross-section, and appears to be the original ending rather than a break. Though it also may have been a closed ring originally that was broken open, and that the break subsequently was restored in such a manner that the break became unrecognizable. At the MRAH five thin iron fragments were found in the supposed La Tène bowl. They are small pieces of thin iron, with some original beveled edges showing, but also a lot of broken edges. It is tempting to see these as fragments from the iron sword found near the bowl. As of yet, however, this sword has not been localized or examined, so this remains a very preliminary conclusion. One of these pieces could be corroded iron, but is also reminiscent of carved wood.



Fig. C6.3 The finds from Court-St-Etienne La Ferme Rouge T.1 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-FR.T1. Drawings after Mariën 1958, fig. 15; photographs by J. van Donkersgoed.

Court-St-Etienne La Ferme Rouge Tombelle 1 **Walloon-Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1905 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-FR.T1.1**	Cremation remains, found in urn *CSE-FR.T1.2*	Indet	Indet	++	-	-	-
	Pottery						
CSE-FR.T1.2	Urn, contained cremation *CSE-FR.T1.1**	--/--	--/-	--	3/c	-	1471
CSE-FR.T1.3	Accessory vessel	--/--	--/--	--	10/d	B 1683	1514
*CSE-FR.T1.4**	Accessory vessel	--/--	--/--	--	12/e	B 1683	
CSE-FR.T1.5	Bowl, contained iron fragments *CSE-FR.T1.8*	--/--	--/--	--	5?/c	B 1683,37/ f1683h	1525
	Weaponry						
*CSE-FR.T1.6**	Iron sword, curled up (type Mindelheim Etappe 2, *ohne Serienzugehörigkeit*)	+/--	++/--	+	210/a	B 1683, 12	-
	Other						
CSE-FR.T1.7	Iron ring, 2x	--/--	-/+	--	213/f	-	2420
CSE-FR.T1.8	Iron fragments, found in bowl *CSE-FR.T1.5*	--/--	--/+-	--	5?/c	B 1683, 37 f1683h	1525
References: Goblet d'Alviella 1908; Mariën 1958, 100–5.							

Tab. C6.1 Inventory and numbering information Court-St-Etienne La Ferme Rouge T.1

C6.2.2.2 Dating

The iron sword from this burial appears to be an early type Mindelheim (Etappe 2, ohne Serienzugehörigkeit) sword (Milcent 2012, 48; Trachsel 2004, 124–31), which suggests that this burial likely dates to the early part of the date range determined for Mindelheim swords in Section 3.4.1.2 (ca. 800–650 BC; Fig. 3.5). Note, however, that this is based only on Mariën's (1958, fig. 15) depiction of this sword as it was not available for study.

C6.2.2.3 Actions taken and reconstructing the (burial) ritual

An individual of unknown sex or age was cremated. His or her remains were collected and deposited in an urn, along with two accessory vessels. An iron sword was curled up and deposited with the deceased. Two iron rings may be the remains of a horse-bit, or perhaps were deposited as rings intended to represent a horse-bit. It cannot be determined whether the objects deposited had accompanied the deceased on the funeral pyre. In any case, a very large barrow, ca. 25 m in diameter, covered pyre remains and burial deposit. The sketch published by Mariën (1958, fig. 15) of the relative find locations shows that the objects were spread out within the mound. If accurate, the sword was recovered 10 m to the north of the two iron rings. The sword then would have been located closer to the supposed La Tène bowl. However, as argued in Section C6.2.1, these sketches need to be taken with a grain of salt.

C6.2.3 Tombelle 2

This barrow was the smallest in this group, between 18 and 20 m in diameter and located at the eastern edge of the group. In this barrow an urn (unidentified) and two iron knives were found together with unidentified 'traces of bronze' from multiple objects. The knives were made available for study by the MRAH (Fig. C6.4). These were examined by myself and photographed by J. van Donkersgoed.

C6.2.3.1 The material remains

Human remains It is unknown how the cremation remains found in this barrow were deposited, nor is their current location known.

Pottery An urn was found in this barrow, but it cannot be identified.

Tools One of the knives (*CSE-FR.T2.3*) is small, with a very narrow blade, triangular in cross-section with a flat back opposite the cutting edge. The thin narrow blade has an unusual shape and silvery color. The cutting edge is for the most part preserved, as is the tang. The other knife (*CSE-FR.T2.4*) is larger, with a wider blade. This knife has been restored heavily, maybe also with an addition. A fair bit of the tip is missing, but this appears to be degradation rather than an intentional break. At the tang end there is a lot of iron or extra corrosion. It is very thick and there may be leather hidden in the iron corrosion

Court-St-Etienne La Ferme Rouge Tombelle 2 **Walloon-Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1905 **Date:** Ha C1–D3 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-FR.T2.1**	Cremation remains	Indet	Indet	++	-	-	-
	Pottery						
*CSE-FR.T2.2**	Urn	Indet	Indet	--	-	-	-
	Tools						
CSE-FR.T2.3	Iron knife	--/--	--/--	--	214/a	B 1683, 16	2417
CSE-FR.T2.4	Iron knife	--/--	--/--	--	215/b	B 1683, 15	2428
	Other						
*CSE-FR.T2.5**	Traces of bronze	Indet	Indet	Indet	-	-	-
References: Goblet d'Alviella 1908; Mariën 1958, 105–8.							

Tab. C6.2 Inventory and numbering information Court-St-Etienne La Ferme Rouge T.2.



Fig. C6.4 The finds from Court-St-Etienne La Ferme Rouge T.2 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-FR.T2. Photographs by J. van Donkersgoed.

Other 'Traces of bronze' reportedly were found in this barrow, but these cannot be identified.

C6.2.3.2 Dating

Mariën (1958, 108) dates the assemblage found in Court-St-Etienne La Ferme Rouge T.2 to the Hallstatt D period based on the knives interred here. However, the knives are a very basic and common shape, and resemble knives found in Hallstatt C context (like knife *OV.24* in the Chieftain's grave of Oss). They and the burial they were found in therefore could be as early as early 8th century BC, but could also date to the Hallstatt D period.

C6.2.3.3 Actions taken and reconstructing the (burial) ritual

Little is known regarding the burial ritual conducted here. The cremated remains of someone were deposited with an urn, two iron knives and 'traces of bronze' (unidentifiable) in or under a barrow that was 18 to 20 m in diameter.

C6.2.4 Tombelle 3

This barrow was very large, ca. 25 m in diameter, and located to the southeast of Tombelle 1. It contained the richest deposit of grave goods found in Court-St-Etienne, spread out over multiple burials. This barrow contained at least two urns, probably three, and two deposits of artifacts. In the northern quadrant an urn (*CSE-FR.T3.06*) was found near the center of the barrow. Urn *CSE-FR.T3.07* was located just south of the center of the barrow. East of the barrow center was a third pot (*CSE-FR.T3.05*), accompanied by an accessory vessel (probably *CSE-FR.T3.04*). All three urns contained cremated remains (Fig. C6.5; Mariën 1958, 112–4). Close to the center in the western quadrant a large irregular block of sand with iron oxide was found on the remains of a pyre.



Fig. C6.5 The finds from Court-St-Etienne La Ferme Rouge T.3 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-FR.T3. Drawing after Mariën 1958, fig. 19; photographs by J. van Donkersgoed.

This block was heavy and taken to the MRAH and treated there. It turned out to be two iron horse-bits, an iron lancehead, an iron antenna sword and a bronze axe. An iron knife found in the block of artifacts was misidentified as a medieval scramasax (Goblet d'Alviella 1908). Below I argue that there was in fact an Iron Age knife (*cf.* Mariën 1958, 125).

C6.2.4.1 The material remains

Human remains There were three separate cremation deposits in this barrow. The cremation remains *CSE-FR.T3.02* found in urn *CSE-FR.T3.06* in the northern quadrant near the center of the barrow were of an adult, likely a male (though note that this and other determinations of cremation remains from this site may not be reliable, see Section 2.2.3.3). Urn *CSE-FR.T3.07*, found just south of the center of the barrow reportedly contained the cremated remains of an adult ca. 30 years old and probably male. East of the barrow center a third pot (*CSE-FR.T3.05*) also contained cremation, but according to Mariën (1958, 112–4), this since has been lost. However, a bag of cremation remains found at the MRAH contained a note that identified it as coming from urn *CSE-FR.T3.05* of Court-St-Etienne. It is hoped that these remains will be analyzed in the near future.

Pottery Three pots, of which at least two definitely were used as urns, were found in this barrow, one of which was decorated (see Mariën 1958, 112–26 for more details). Urn *CSE-FR.T3.05* contained an accessory vessel *CSE-FR.T3.04** that cannot be identified. All three contained cremation remains.

Bronze vessel Some 'traces of bronze' (*CSE-FR.T3.17**) that were found in this barrow could not be identified by Mariën (1958, 117), though he suggested some of the fragments listed under his numbers 149–152 and 154 may be from this barrow. These bronze sheet fragments are the only such fragments of which the exact find location within La Ferme Rouge is uncertain. I argue that some of these bronze sheet fragments are indeed from this barrow, while some are from T.5. I base this on the following.

Firstly, the bronze sheet fragments 149–152 and 154 include two razor fragments and a possible *phalera* fragment. Goblet d'Alviella (1908, 41) notes that nearly a kilogram of bronze sheet fragments was found in three barrows: in T.4, T.5 and an unidentified one. In Section C6.2.5.1 I argue that the fragments of a bronze cup listed by Mariën as 143 are likely from T.4. This means that the fragments 149–152 and 154 are either from T.5 or the unidentified barrow. As Mariën (1958) indicates, this third barrow is probably T.3., I therefore argue that some of the bronze sheet fragments are likely from T.3, and some from T.5. Based on differences in patination and corrosion, as well as differences in the degree to which fragments are melted, I argue that the fragments listed by Mariën as 149, 150 and 154 are probably not from the same context, making it probable that the fragments 149 and 154 are from one barrow, while fragments he lists as 150 are from another. While it cannot be determined with certainty which fragments belong to which barrow, the razor from T.5 is quite melted as are the fragments listed as 150. For this reason I list these fragments as coming from T.5, while listing the fragments of 149 and 150 as coming from this barrow (Fig. C6.6). I stress that this is an educated guess. In any case it appears highly likely that both T.3 and T.5 yielded melted and fragmentary remains of bronze vessels, in particular identifiable by the rivets and square reinforcement plates still visible underneath these rivets (compare for example the bucket from Rhenen-Koerheuvel; Figs. C28.1 and C28.2).

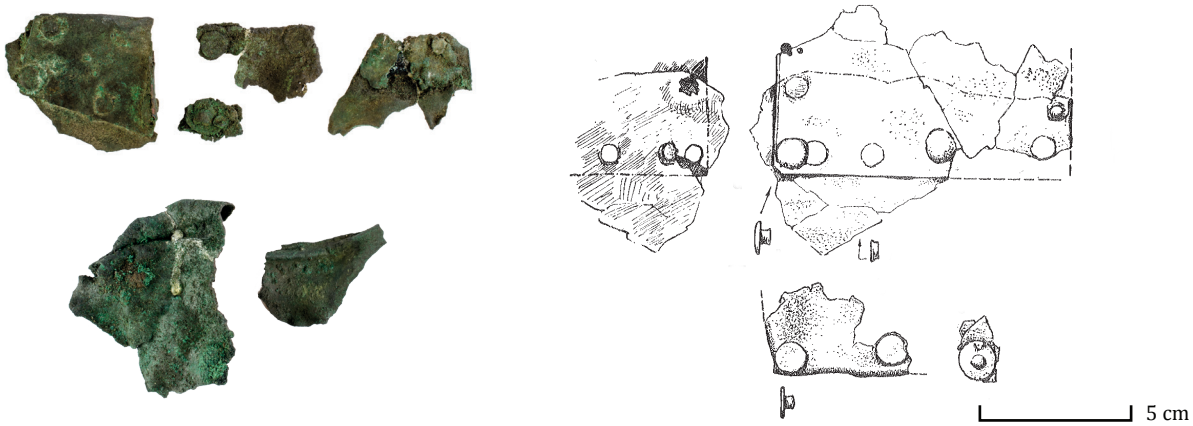


Fig. C6.6 The bronze vessel fragments (CSE-FR.T3.18–21) as they appear today (left) and a number of fragments as reconstructed by Mariën (right). Drawings after Marien 1958, fig. 25; photographs by J. van Donkersgoed.

Weaponry Several items of weaponry were found in this barrow. These are an iron sword, a bronze chape and an iron lancehead. The sword has an antenna-style hilt with four prongs, each capped with a small sphere made up of two sections. It is reminiscent of later Hallstatt D antenna daggers, though the larger antenna swords are argued to be earlier (Sievers 1982, 18). It has been restored heavily, including modern additions. This hindered analysis of this object, but the following could be established. The blade is iron, but it appears that the tang, antenna prongs and small spheres are bronze (Fig. C6.7, middle). The tang shows a bronze color, and one of the spheres shows clear green (copper oxide) corrosion. This is not surprising as the shape of the tang would be easier to achieve in bronze, especially the small spheres. On one side of the blade, just below the tang, there is a streaky looking area that could be organic material preserved in the restoration. The blade had a pronounced central rib, and may have had grooves running on either side of this rib (see Mariën 1958, fig. 19). There are several nicks along the blade edges that could be battle damage, but are more likely preservation flukes. The same is true for some striations on the blade. These could be grinding traces, but could be the result of the restoration work (Fig. C6.7, bottom).

A bronze chape was found in this barrow (Goblet d'Alviella 1908, 41). Mariën suggests that this chape could be *CSE-FR.T3.10* (Fig. C6.8), and in my opinion this is highly likely as it is the only chape from La Ferme Rouge without a specific find context. It is possible that a bronze fragment listed by Mariën as 154 or 155 could be from the same chape (Fig. C6.8). Together they would then have made up a chape with curved blades (Mariën 1958, 147). Both fragments show signs of heavy burning and may be intentionally broken.

The iron lancehead is in poor condition and shows restoration work. The socket is relatively intact, complete with a hole for the pin for attaching it to a wooden staff, but almost none of the blade edges survive. Originally it would have had a raised rib, giving it a flattened diamond cross-section. The lancehead appears very different from the drawing and picture depicted by Mariën (1952, fig. 281; 1958, fig. 18). In these the lancehead is in perfect shape (figs. C3.4 and C6.9). The difference could be the result of rapid deterioration of the iron (which is entirely possible within the time-span if the conditions under which it was stored changed; Kempkens 2015, *pers. comm.*). It is also possible that in the 1950s the lancehead was restored, and that the restoration additions since have been removed (see Section C3.3).

Horse-gear The iron horse-bits are identified by Mariën (1958, 121–3) as being of the Platenitz type. The bits have rod-shaped cheek pieces with three holes each, bent at one end and with small spheres at both ends. The mouthpieces



Fig. C6.7 Details of the antenna sword (CSE-FR.T3.08) showing the tang, prongs and spheres of the handle and the possible grinding traces on the point of the sword (different scales). Photographs by J. van Donkersgoed.

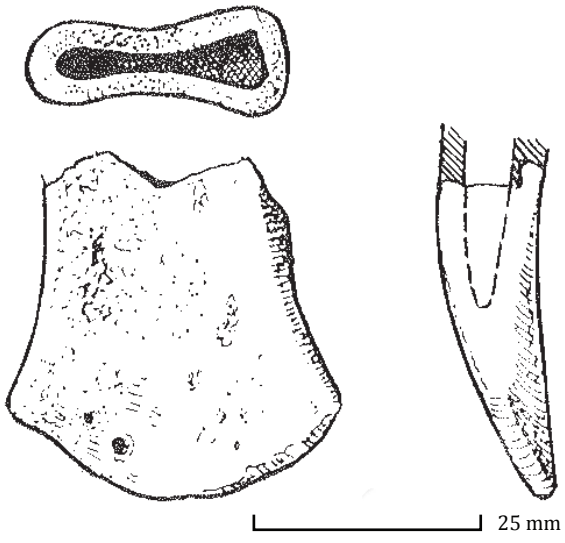


Fig. C6.8 Possible chape fragment (CSE-FR.T3.10). Drawing after Mariën 1958, fig. 10.

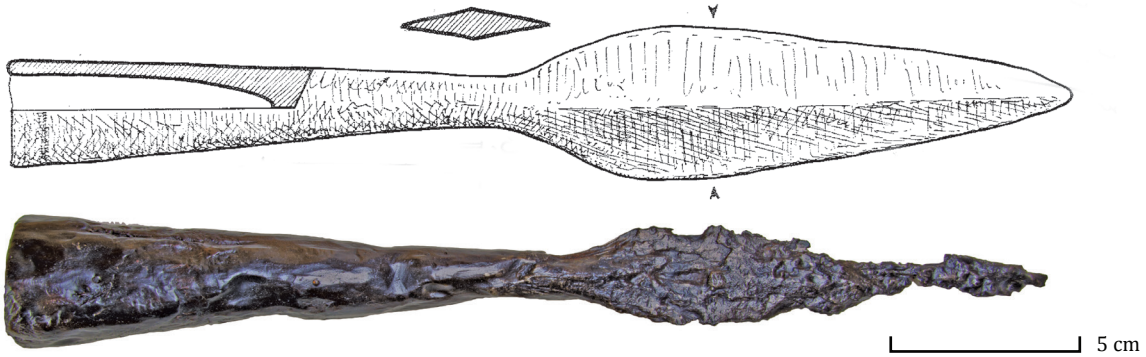


Fig. C6.9 The lancehead (CSE-FR.T3.09). Drawing after Mariën 1958, fig. 18; photograph by J. van Donkersgoed.

are made of iron loops twisted into bars. The resulting mouthpiece has grooved bars and is hinged in the center. The bits are badly degraded and have modern additions. There may be traces of wear visible on the mouthpieces, though this could also be the result of differential degradation and subsequent restoration work (Fig. C6.10). The bits today, however, appear very different than the bits depicted by Mariën (1952, fig. 281; 1958, fig. 18; Figs C3.4 and C6.5; Section C3.3). At present the bits consist of only cheek-pieces and the trens. The trens is tied onto the cheek-pieces with modern pieces of leather. In Mariën's (1952, fig. 281; Fig C3.4) picture, however, the bits have their rein rings still attached, and the mouthpieces are attached to the cheek-pieces with what appears to be metal (or modern restoration material). It is possible that the differences are modern additions that have since been removed. If they are modern additions, it is odd that one of the tips of a cheek-piece was not restored prior to the picture being taken, but has since been added. In any case, whether original or modern repairs, it is highly likely that the bits originally did appear as they do in Figure C3.4. The mouth-piece likely ran through small rings attached to the cheek-pieces, similar to the bits of Oss-Vorstengraf (Section C26.2). On one of the Court-St-Etienne bits part of one of these small rings is still visible.

Tools The bronze socketed axe has decoration along the 'corners' with a small ear (Fig. C6.11). It is in very good condition. The blade edge is very sharp, though grinding traces were not discernible. According to De Mulder (2011) this axe is a type Wesseling axe (Butler/Steegstra 2003/4; Mariën 1958, 118). Goblet d'Alviella 's drawing lists a "scramasax" as found on the same spot as the two horse-bits, sword, lancehead and axe (Fig. C6.2). Mariën (1958, 125) identifies and depicts a large one-sided knife as from this burial (Fig. C6.5). He argues that this blade is in fact an Iron Age blade, but that its resemblance to a Medieval scramasax makes Goblet d'Alviella's miss-



Fig. C6.10 Possible wear on mouthpiece (CSE-FR.T3.12). Photograph by J. van Donkersgoed.

identification understandable. Its find location, corroded onto the other Iron Age objects, as well as the fact that it was broken ritually into three pieces (Mariën 1958, 125) indicate that this is indeed an Iron Age knife. Moreover, while unusually large, one-sided knives do occur in Iron Age burials (for example Oss-Vorstengraf, Wijchen or La Ferme Rouge T.2), and Mariën (1958, 126) lists some examples of similarly large Hallstatt knives. This knife, unfortunately, was not available for examination. The flint pounding stone is roughly cube shaped and its surface appears pecked, with one facet broken off showing a fresh surface.

Other An iron 'trident' was found separate from the horse-gear and arms, probably in association with the flint pounding stone and 'traces of bronze' (*CSE-FR.T3.16**; these could not be identified by Mariën 1958, 117) in the eastern quadrant. At present only two of the three prongs survive, and the pronged end is bent (Fig. C6.12). At the opposite end the trident has a socket. For most of its length the trident has a decoration created by twisting the iron rod in opposite directions. The iron trident is an unusual and special object, even within the context of Court-St-



Fig. C6.11 The axe (CSE-FR.T3.14) as depicted by Mariën and as it appears today. Drawings after Mariën 1958, fig. 19; photograph by J. van Donkersgoed.

Etienne. This object usually is thought to be some kind of meat hook, and therefore associated with food and feasting (De Mulder 2011, 292; Mariën 1958, 115–7). However, there are also other theories as to its function. For example, it may be a stimulus used to encourage horses from the wagon bed (Mariën 1952, 302).

In my opinion it is unlikely that this object was used to suspend meat from. Its thick, sizable socket indicates it was meant to be attached to a pole or staff in a similar manner as a lancehead (which is not consistent with contemporary meat hooks). It is possible that the trident originally was straight, and that its current bent shape is the result of intentional bending during the funerary ritual. With regard to it perhaps being a stimulus for driving, this is a possibility, though it also seems unlikely to me. While we know that stimuli were used in the Early Iron Age, as shown by situla art and the stimulus found at Hochdorf (Koch 2006, 87–8; Lucke/Frey 1962), this iron fork does not seem the most likely shape for such an object. Though clearly intended to be mounted on a pole of some kind, it would have been very heavy and difficult to control. A simple stick, or even one decorated like the



Fig. C6.12 The pronged end of the iron trident (CSE-FR.T3.16). Photograph by J. van Donkersgoed.

Hochdorf example, would have been far easier to use. In any case, though a possibility, as of yet I have not been able to find a likely parallel for this object, nor any further information regarding its function.

Court-St-Etienne La Ferme Rouge Tombelle 3 **Walloon-Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1905 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:**		
					Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
CSE-FR.T3.01	Cremation remains, found in *CSE-FR.T3.05*	Indet	Indet	++	11/b	N 00562	1757
CSE-FR.T3.02	Cremation remains, found in *CSE-FR.T3.06* (380 gr)	Indet	Indet	++	15/a	N 00563	1758
*CSE-FR.T3.03**	Cremation remains, found in *CSE-FR.T3.07*	Indet	Indet	++	17/m	-	-
	Pottery						
*CSE-FR.T3.04**	Accessory vessel	Indet	Indet	Indet	7/c	-	-
CSE-FR.T3.05	Urn, contained cremation *CSE-FR.T3.01*	--/--	--/--	--/--	11/b	B 1683, 39	1526
CSE-FR.T3.06	Urn, contained cremation *CSE-FR.T3.02*	--/--	--/--	--/--	15/a	B 1683, 46	1509
CSE-FR.T3.07	Urn, contained cremation *CSE-FR.T3.03**	--/--	--/--	--/--	17/m	B 1683, 45	1686
	Bronze vessel						
*CSE-FR.T3.17**	Bronze traces, believed to be *CSE-FR.T3.18–21*	Indet	Indet	Indet	-/e	-	-
CSE-FR.T3.18	Bronze sheet fragment, rectangular with rivets, interpreted as situla fragments with repair plates	--/--	+-/+-	++	149a	B 1683	2406
CSE-FR.T3.19	Bronze sheet fragment, edge with two rivets with large flat heads, interpreted as situla fragments	--/--	+-/+-	++	149b	B 1683	2406
CSE-FR.T3.20	Rivet fragment, interpreted as a situla fragment	--/--	+-/+-	++	149c	B 1683	2406
CSE-FR.T3.21	Bronze sheet fragment, 2x	--/--	+-/+-	++	154	N00888	2405
	Weaponry						
CSE-FR.T3.08	Iron and bronze antenna sword	+-/--	--/--	--	207/h	B 1683, 13	-
CSE-FR.T3.09	Iron lancehead	--/--	--/--	--	209/k	B 1983, 18	-
CSE-FR.T3.10	Bronze chape	--/--	+/+	++	-/n 110?	-	2403
	Horse-gear						
CSE-FR.T3.11	Iron horse-bit	+/--	-/-	--	211/i	B 1683, 19	-
CSE-FR.T3.12	Iron horse-bit	+/--	-/-	--	212/j	B 1683, 20	-
	Tools						
*CSE-FR.T3.13**	Iron knife	--/--	--/++	+	208/l	B 1683, 14	-
CSE-FR.T3.14	Bronze axe	--/--	--/--	--	111/g	B 1683,1	1493
CSE-FR.T3.15	Flint pounding (?) stone	++/--	--/+	+	302-f	B 1683	2402
	Other						
CSE-FR.T3.16	Iron trident	--/--	++/--	+/-	216/d	B 1683, 23	-
References: Goblet d'Alviella 1908; Mariën 1958, 108–28.							

Tab. C6.3 Inventory and numbering information Court-St-Etienne La Ferme Rouge T.3.

C6.2.4.2 Dating

Warmenbol (1993, 102) argues that the ceramics from Court-St-Etienne La Ferme Rouge T.3 confirm a date late in the Early Iron Age, and therefore accepts Mariën's (1958) date of around 550 BC for this burial. However, as discussed above, it is debatable whether those ceramics are from the same burial as the metalwork, which actually was found in two distinct concentrations. As argued above, in my opinion it is far from certain that all the finds from this barrow are from the same burial event given their dispersion within the barrow. The two iron horse-bits, iron lancehead, iron antenna sword and bronze axe are however from the same event as these were found corroded together. This block of corroded metalwork probably also contained a knife (see above). The trident and flint stone were found on the opposite side of the barrow to this block of artifacts. It is possible these object concentrations each relate to one of the three urn burials but this remains uncertain. The characteristic early Hallstatt C1 horse-bits (*cf.* Kossack 1954; Pare 1992, Ch. 10), the same type as found in Limal-Morimoine T.1 and the Chieftain's burial of Oss, indicate that the burial associated with the metalwork most likely dates to the 8th century BC

(Section 3.4.1.3; Trachsel 2004, 53). This is consistent with the (early) Hallstatt C date ascribed to the antenna sword (Sievers 1982, 18; Trachsel 2004, 137), and the axe type. This burial is therefore dated to the 8th century BC (note that this is also the burial that generally is referred to as Court-St-Etienne La Ferme Rouge T.3 in this research).

C6.2.4.3 Actions taken and reconstructing the (burial) ritual

Three urns with cremation deposits were found in this barrow, and they appear to represent three different individuals. The available documentation does not reveal whether these are all primary burials or whether they are later burial depositions dug into an existing barrow. The pyre remains found in the western quadrant indicate that this deposit, at least, was likely primary. These pyre remains contained the two horse-bits, lancehead, antenna sword, iron knife and bronze axe rusted together. The urn located the closest to this deposit (roughly a meter) is the urn found in the northern quadrant (*CSE-FR.T3.02*), and it is posited that these form the primary deposit, or at least one of the primary deposits (see Fig. C6.2). If the assertion that urn *CSE-FR.T3.02* is indeed connected with the pyre remains and finds done there is correct, several actions of this burial ritual can be reconstructed. An adult, probably a man (though see Section 2.2.3.3), was cremated at this spot. His remains were collected and deposited in an urn. The fact that the two horse-bits, lancehead, antenna sword, chape, iron knife and bronze axe rusted together indicates they were deposited together. No signs of burning are visible on these objects, but as argued in Section 2.2.3.4 this does not mean they were not exposed to fire. They could have been lying on the edge of the pyre as the deceased was cremated, or they could have been placed on the burned-out pyre later. The knife, at least, was broken intentionally into three pieces prior to its final deposition.

Another person, probably a man (though see Section 2.2.3.3), also was cremated. His remains were deposited in an urn (*CSE-FR.T3.03**) in this barrow. Unfortunately it is impossible to determine whether this man was cremated at the same time as the man buried in urn *CSE-FR.T3.02*. Another person, whose remains have not yet been analyzed, was cremated and deposited in a third pot (*CSE-FR.T3.01*). An accessory vessel was placed in this urn as well. Though a direct association cannot be proven, this urn was found closest to the iron trident, some 'traces of bronze' and the flint pounding stone.

A bronze chape was found in this barrow also, though exactly where is unclear (Fig. C6.5). Due to its fragmented and incomplete nature it is difficult to determine its type, though a shape with curved blades (type Beratzhausen or Remseck; see Figs. C2.4 and C2.5) seems the most likely. However, these usually are found with long iron Mindelheim swords and date to the middle or late Hallstatt C period (Trachsel 2004, 112–6). An association with the antenna sword, believed to date slightly earlier and partially contemporaneous (Sievers 1982, 18; Trachsel 2004, 137) therefore seems possible. Whatever grave this chape belonged to, it shows signs of heavy burning and may have been broken intentionally.

C6.2.5 Tombelle 4

Tombelle 4 was located to the southeast of Tombelle 3 and was ca. 22 m in diameter. According to Mariën (1958, 128) several bronze *phalerae* and yoke decorations, a concretion of iron, an iron fragment with textile imprint on it and fragments of a small bronze cup or bowl were found together in the southern quadrant of this barrow, though the sketch shows them coming from the western quadrant (Fig. C6.13). It seems likely that these objects were associated with the urn and accessory vessel. Those objects that could be located were made available for study by the MRAH. They were examined by myself and photographed by J. van Donkersgoed.

C6.2.5.1 The material remains

Human remains If urn *CSE-FR.T4.2** is indeed the urn from this barrow, then the cremation remains belonging to this burial were identified as those of a female (Mariën 1958, 142). However, as the anthropological analysis was performed prior to the 1990s it should be considered suspect (Section 2.2.3.3).

Pottery An urn and accessory vessel were found in this barrow. The accessory vessel was located in the urn.

Bronze vessel Several fragments of a bronze vessel or bowl were found in this barrow. Mariën (1958) describes these as the remains of a cup, but in my opinion the fragments are more likely pieces of a bowl of some kind. One fragment is rather large, three are medium sized and the remaining fragments appear to form some kind of rim with a hammered, finished edge. They were exposed to fire, though it is unclear whether their fragmented state is intentional or post-depositional. The largest fragment has a round imprint in the center, which appears to be from one of the *phalera* pressing into the bronze sheet post-depositionally (Fig. C6.14).

Horse-gear There are also two bronze *phalerae* that take the shape of small circles with bent edges and a loop on the back. One of these is in decent shape, while the other has been exposed to fire.

Yoke and wagon components The concretion of iron proved to be a complex chest ornament for a horse, made up of at least six iron rings with dangling, triangular

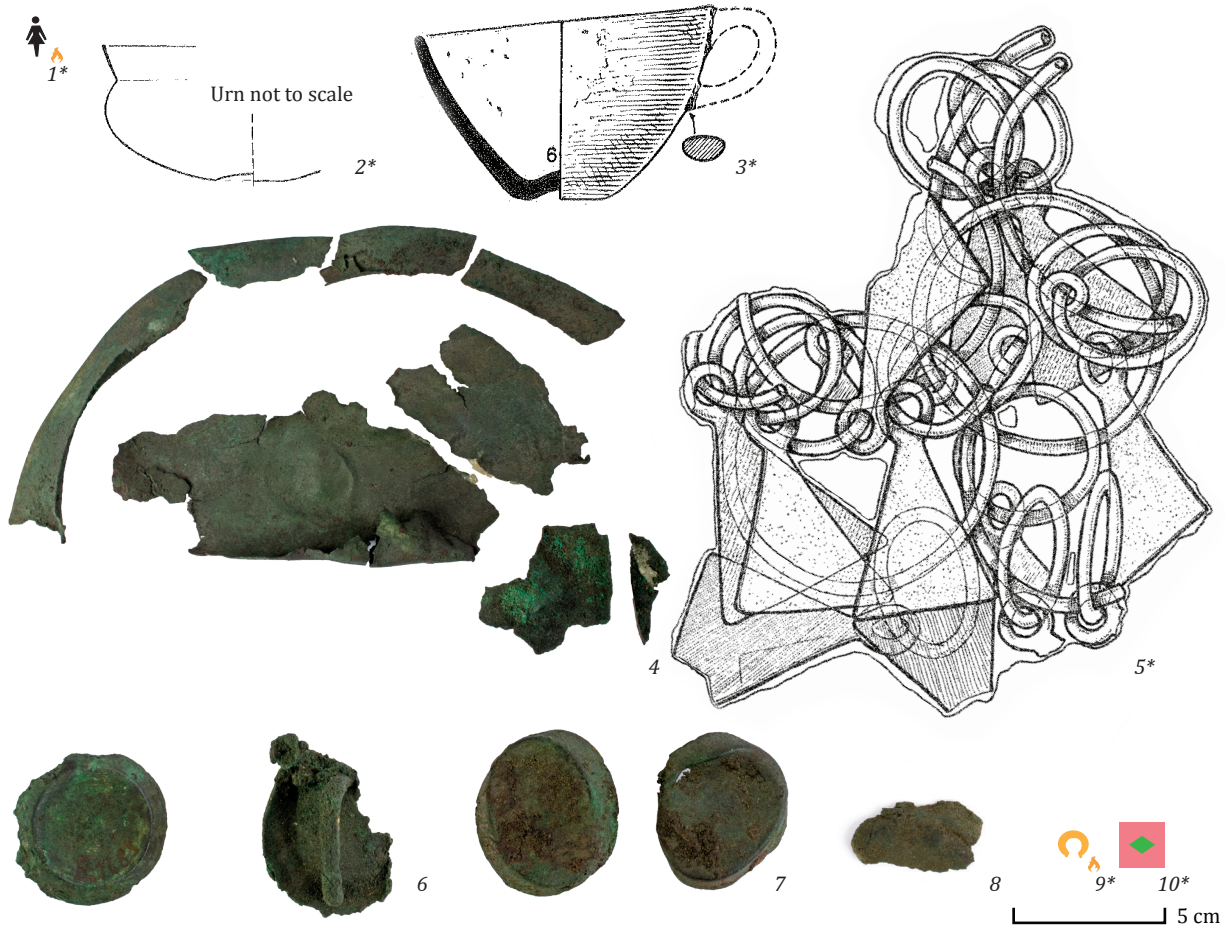


Fig. C6.13 The finds from Court-St-Etienne La Ferme Rouge T.4 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-FR.T4. Drawings after Mariën 1958, fig. 20; photographs by J. van Donkersgoed.

pendants attached (Mariën 1958, 132–4, fig. 23; due to its complicated mounting in the museum exhibition, I could not examined this object closely). It would likely have decorated the chest-strap to attach the yoke (Fig. 4.14). Two bronze ovals (*CSE-FR.T4.7*) are interpreted as yoke rosettes. At present one is bent and clearly affected by fire, though the bending in this case is not necessarily intentional. On the hollow side of the unbent oval there is the start of a rod at one side and a hole on the edge opposite. The rod would have spanned from one edge to the other. The bent oval originally had a similar small bar running across its hollow back. A fragment of a third object of this shape is even more melted and distorted.

Personal appearance According to Mariën (1958, 142) the (supposed) female buried in urn *CSE-FR.T4.2** was cremated with a bronze bracelet, though no other information regarding the size or shape of this ornament is known.



Fig. C6.14 Bronze vessel fragment with imprint (CSE-FR.T4.4; bottom) and the phalera (CSE-FR.T4.6; top) that likely caused it. Photograph by J. van Donkersgoed.

Court-St-Etienne La Ferme Rouge Tombelle 4 **Walloon-Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1905 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-FR.T4.1**	Cremation remains, found in *CSE-FR.T4.2**	Indet	Indet	++	16/a	-	-
	Pottery						
*CSE-FR.T4.2**	Urn, contained cremation *CSE-FR.T4.1**	--/--	--/--	--/--	16/a	-	-
*CSE-FR.T4.3**	Accessory vessel	--/--	--/--	--/--	6/b	-	-
	Bronze vessel						
CSE-FR.T4.4	Bronze cup/bowl fragments, 8x	--/--	+-/+-	++	153/g	N 01360 B1683(17)?	5475
	Horse-gear						
CSE-FR.T4.6	Bronze *phalera*, 2x	--/--	+-/+-	++	132/e	B 1683	2404
	Yoke and wagon components						
*CSE-FR.T4.5**	Iron horse chest ornaments, rings and pendants	--/--	+-/-	Indet	217/c	B 1683, 27	-
CSE-FR.T4.7	Bronze yoke rosette, 2x	--/--	+-/-	++	131/d	B 1683	2407
CSE-FR.T4.8	Bronze yoke rosette fragment	--/--	+-/+-	++	132/e	-	2383
	Personal appearance						
*CSE-FR.T4.9**	Bronze bracelet	Indet	Indet	++	-	-	-
	Other						
*CSE-FR.T4.10**	Fragment of iron with cloth imprint	Indet	Indet	Indet	-/f	-	-
References: Goblet d'Alviella 1908; Mariën 1958, 128–37.							

Tab. C6.4 Inventory and numbering information Court-St-Etienne La Ferme Rouge T.4.

Other An iron fragment with textile imprint was found in this barrow, though neither it nor any depictions can be located.

C6.2.5.2 Dating

The characteristic early yoke rosettes (*CSE-FR.T4.7–8*) as well as the horse chest ornament (*CSE-FR.T4.5**) found in this barrow indicate that this burial most likely dates to the Hallstatt C1 phase (Kossack 1954; Mariën 1958, 136; Trachsel 2004, 369).

C6.2.5.3 Actions taken and reconstructing the (burial) ritual

The urn contained the remains of someone, perhaps a woman, who was cremated with a bronze bracelet (Mariën 1958, 143) and interred with horse-gear, including wagon components (the yoke rosettes), the latter of which is unusual. The iron fragment with textile imprint on it, unfortunately, has been lost. This means that we can neither identify the textile itself, nor what kind of object it was corroded onto. However, it does add an interesting dimension to this burial complex: the likely wrapping of objects, as any garments worn by the deceased would not have survived cremation.

C6.2.6 Tombelle 5

Tombelle 5 is located at the most southeast corner. It was roughly 20 m in diameter. An urn containing an accessory vessel was found in the eastern quadrant, close to the center of the barrow. A bronze bifid razor and a number of bronze sheet fragments (probably *CSE-FR.T5.6*) were found either with or in this urn (Fig. C6.15). The bifid razor is heavily affected by fire, and shows traces indicating it was in contact with iron. In the eastern quadrant a flat bowl and an iron 'rod' were found. Some of the finds from this grave were made available by the MRAH. They were studied by myself and photographed by J. van Donkersgoed.

C6.2.6.1 The material remains

Human remains Mariën (1958) does not mention any cremation remains found in this barrow, but a find bag of cremation remains was found in urn *CSE-FR.T5.2* at the MRAH. It is hoped these will be examined in the future.

Pottery An urn was found here which contained an accessory vessel, and a bowl.

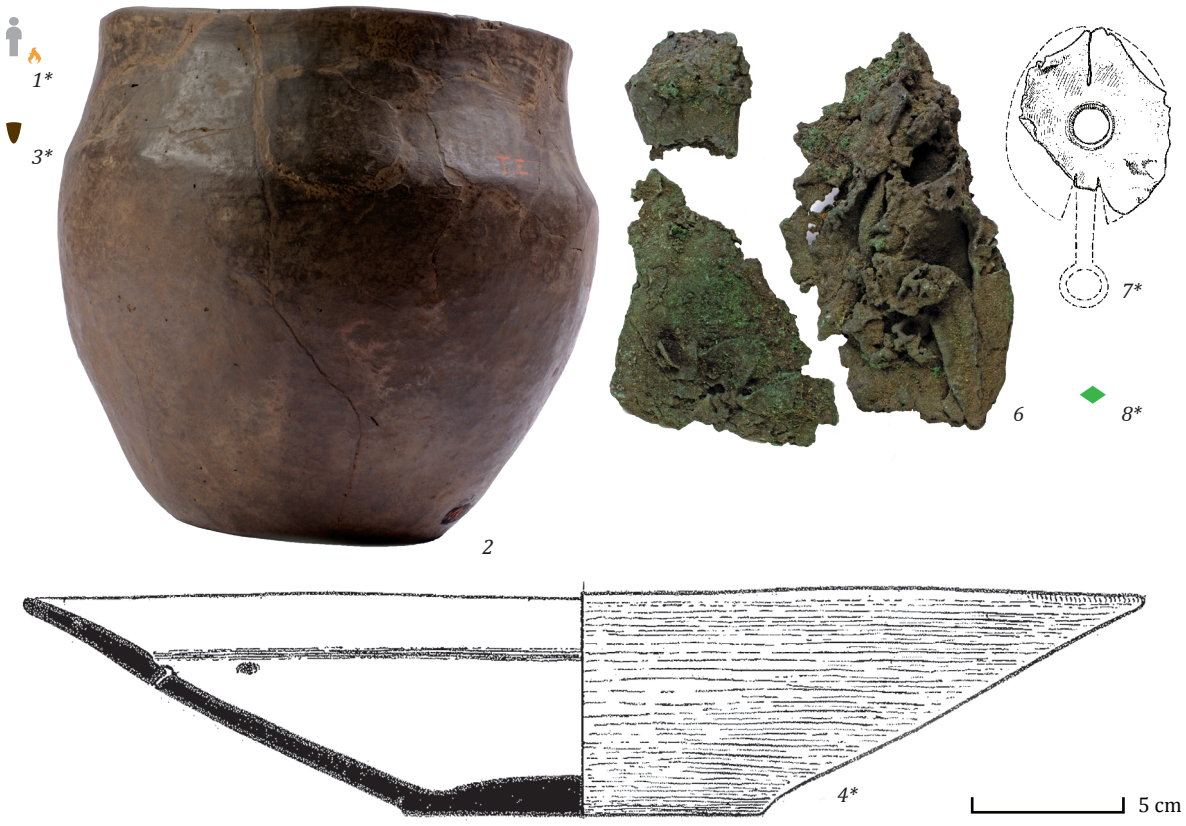


Fig. C6.15 The finds from Court-St-Etienne La Ferme Rouge T.5 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-FR.T5. Drawings after Mariën 1958, fig. 24; photographs by J. van Donkersgoed.

Court-St-Etienne La Ferme Rouge Tombelle 5 **Walloon-Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1905 **Date:** Ha C1 **Current location:** Royal Museums of Art and History, Brussels/lost		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
CSE-FR.T5.1	Cremation (0.620 gr), found in pot *CSE.T5.2*	Indet	Indet	++	13/a	B 1683, 43/B1683g	1523
	Pottery						
CSE-FR.T5.2	Pot, contained cremation *CSE-FR.T5.1*	Indet	Indet	--	13/a	B 1683, 43/B1683g	1523
*CSE-FR.T5.3**	Accessory vessel	Indet	Indet	--	14/b	-	-
*CSE-FR.T5.4**	Bowl	Indet	Indet	--	65/e	B 1683, 36	1498
	Bronze vessel						
*CSE-FR.T5.5**	Bronze sheet, is probably (from) the same object as *CSE-FR.T5.6.*	--/--	+-/+-	++	-/d	B 1683	-
CSE-FR.T5.6	Series of bronze sheet fragments, interpreted as situla fragments	--/--	+-/+-	++	150	B 1683	1755
	Personal appearance						
*CSE-FR.T5.7**	Bronze bifid razor (type Gruppe B)	--/--	--/+-	++	133/c	B 1683	-
	Other						
*CSE-FR.T5.8**	Iron rod	Indet	Indet	Indet	-/f	-	-
References: Goblet d'Alviella 1908; Mariën 1958, 137–41.							

Tab. C6.5 Inventory and numbering information Court-St-Etienne La Ferme Rouge T.5.

Bronze vessel In Section C6.2.4.1 I argue that the bronze sheet fragments listed by Mariën (1958, fig. 25) as 150 are from this barrow. These fragments are the melted remains of a bronze vessel of some kind, identifiable in particular by the rivets and square reinforcement plates.

Personal appearance A bronze bifid razor appears to be heavily affected by fire. It also shows traces that indicate it was in contact with iron (Mariën 1958).

Other An iron rod of some kind is listed as being found here but could not be identified and it is unclear what this refers to.

C6.2.6.2 Dating

The razor (*CSE-FR.T5.7**) from this burial is an early Hallstatt C1 type (type Gruppe B) and this burial therefore most likely dates early in the 8th century BC (Fig. 3.5; Trachsel 2004, 142–3).

C6.2.6.3 Actions taken and reconstructing the (burial) ritual

A person of unknown sex was cremated, and was probably accompanied on the pyre by a bronze razor and situla. His or her remains were collected in an urn and buried. The remains of the razor, situla and iron rod (the razor has iron corrosion on it indicating the iron rod was deposited with the bronzes) were placed either in or alongside the urn. A barrow was erected over the pyre remains and burial deposit.

C6.2.7 Objects found at La Ferme Rouge which cannot be ascribed to a specific barrow

In his seminal work, Mariën (1958, 141–7) describes several objects that were found at La Ferme Rouge but could not be ascribed to a specific barrow. For several of these I believe it is possible to reconstruct to which barrow they likely belong, which I have done above. Here those objects that I could not assign to a specific barrow are discussed (Fig. C6.16). These include two pieces of bronze with a rolled edge, as well as ring fragments (*CSE-FR.*

Court-St-Etienne La Ferme Rouge Unknown context **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (medium) **Year of discovery:** 1905 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels/lost		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Horse-gear						
CSE-FR.UC.1	Bronze *phalera* fragment	--/--	--/+-	--	152	N00891	2410
	Personal appearance						
CSE-FR.UC.2	Bronze razor fragment	--/--	--/+	++	142	B 1683	2408
*CSE-FR.UC.3**	Bronze bifid razor, fragment	--/--	--/+-	+	151	-	-
References: Goblet d'Alviella 1908; Mariën 1958, 141–7.							

Tab. C6.6 Inventory and numbering information Court-St-Etienne La Ferme Rouge Unknown context.



Fig. C6.16 The finds from unknown contexts within La Ferme Rouge. The individual numbers all have the prefix CSE-FR.UC. Drawing after Mariën 1958, fig. 24; photographs by J. van Donkersgoed.

UC.1). They are identified as *phalera* fragments by Mariën (1958, 146–7), though they are not of a type known to me. Two fragments of a bronze bifid razor (*CSE-FR. UC.2*) were also found. The ring and the stem survive, but none of the blade. The pieces do not connect, but the decoration indicates that they are from the same object. It is an attractive, delicate piece, affected by fire and possibly intentionally broken though it cannot be determined in what order. They might be from the same razor as *CSE-FR.T5.11**, of which only the blade survives. Mariën discounts this possibility, even though Goblet d'Alviella (1908, pl. VI) depicts them together. A second bronze razor fragment, this time part of the blade, is also among the finds of uncertain origin. It is affected by fire.

C6.3 Court-St-Etienne La Quenique

This zone of Court-St-Etienne has a very complicated excavation history. Various scholars and researchers excavated here from the late 19th century onwards. Various methods have been used to uncover finds here, but unfortunately not all were recorded or published. As a result it is unclear how many barrows were located in this area originally and how many have been excavated or otherwise examined. What is known about this zone is discussed here.

C6.3.1 Find circumstances

According to Tarlier and Wauters (1864) there was a fir wood belonging to mayor M. Libouitton in 1773 and a communal heath near Hasoit. Excavations were conducted here in 1861. There were about 20 mounds, all relatively low. Only two reached a height of more than 1 m: one by the entrance to the fir wood with a little chapel, the other by La Ferme Blanche (see below). These two mounds attracted the most attention (Mariën 1958, 20). One barrow, Tombelle Y, was excavated at least twice. The first time was towards the end of the 18th century, so Goblet d'Alviella (1908, 20) tells us, by Baron F.-CH. Beeckman. Goblet d'Alviella (1908) writes that the excavated artifacts were deposited in the castle by his maternal grandfather, but he never saw them himself. When Tarlier visited La Quenique in 1860, he noted Tombelle Y as well and remarked that there was a chapel erected by one of the barrows. It was located near the entrance of the fir wood. In 1958 the barrow was still there and about 25 m in diameter, and over 2 m high (Mariën 1958, 21). Two bronzes 'scepter ends' were very likely found in this barrow (Mariën 1958, 184–5; see also Section C6.3.8). In 1784–'85 Baron Remersval excavated Tombelle X at La Quenique. The finds consisted of pottery, probably several vases, as well as weapons and tools, all either partially or entirely made of iron (Juste 1860; Mariën 1958, 21). These objects had disappeared by 1860, and probably much earlier. In 1864 the barrow was more than a meter high, and located near La Ferme Blanche. In June and October of 1861 further excavations took place at La Quenique. More than ten barrows were opened in different places, yielding urns, pottery debris, and iron and bronze objects. According to Tarlier (1864; Mariën 1958, 23), the mounds were barely a meter high. One or two yielded no traces of a burial, but in all others they found a bed of charcoal and cremated bone, and according to Cloquet (1887; Mariën 1958, 24) many of the bronze and iron objects were located on these charcoal beds. Tombelles A and B are discussed in more detail below. Prior to 1864 another two or three barrows were leveled by plowing. They were located north of the path of *Sapiniere Liboutton*. The remains of several barrows along the A 289 might be from these leveled barrows (Fig. C6.1; Mariën 1958, 21). Several isolated objects were found at La Quenique during the winter of 1877–'78, such as a number of sword fragments, horse-gear components and some objects of unknown function. There are also several isolated objects that are probably from the destruction of barrows during 1877–'78 (Mariën 1958, 71–6). These also include sword fragments, pottery and some objects of unknown function. A number of objects listed by Mariën (1958, 78; my translation) as "of uncertain provenance" likely all relate to horse-gear. These objects are all discussed below.

C6.3.2 Tombelle A

The only information regarding the location of Tombelle A is that it was located close to Tombelles Y and Z. It was excavated in 1861, though it is unclear whether this was in June or October of that year (Mariën 1958, 23–4). According to Tarlier (1864; Mariën 1958, 24), the mound was barely a meter high. According to Cloquet (1888, 182) it contained a bed of charcoal and cremated bone, and it is possible some of the metal objects were located on this charcoal bed. This barrow yielded the following artifacts: a large urn, cremation remains, a small accessory vessel with an ear, a second small vessel, an iron sword, some horse-gear and yoke component (Fig. C6.17). The cremation remains and eared accessory vessel were found in the urn. It is unclear whether the remaining finds were also interred in the urn. The objects were made available by the MRAH. They were studied by myself and photographed by J. van Donkersgoed.

C6.3.2.1 The material remains

Human remains The urn contained cremation remains (Goblet d'Alviella 1908, 21), unfortunately these appear to be lost.

Pottery This barrow contained a large urn and two accessory vessels. The large urn is decorated with plastic



Fig. C6.17 The finds from Court-St-Etienne La Quenique T.A (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.TA. Photographs by J. van Donkersgoed.

Court-St-Etienne La Quenique Tombelle A **Walloon-Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (poor) **Year of discovery:** 1861 **Date:** Ha C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-LQ.TA.1**	Cremation remains, found in *CSE-LQ.TA.2*	Indet	Indet	++	18	-	-
	Pottery						
CSE-LQ.TA.2	Pot with protuberances	--/--	--/-	--	18	B 463	1527
CSE-LQ.TA.3	Small accessory vessel with an ear	--/--	--/-	--	19	B 463	1515
CSE-LQ.TA.4	Small cup	--/--	--/-	--	23	2989	1474
	Weaponry						
CSE-LQ.TA.5	Iron sword, in 2 or 3 fragments (type Mindelheim?)	--/--	++/+	++	201ab	B 463	2429 & 2382
	Horse-gear						
CSE-LQ.TA.7	Bronze cheek-piece from a horse-bit	--/--	--/+-	--	112	B 463/FF 32/2989	-
CSE-LQ.TA.8	Bronze cheek-piece from a horse-bit	--/--	--/+-	--	113	B 463/FF 32/2989	2387
	Yoke and wagon components						
CSE-LQ.TA.6	Bronze *Jochschnalle*	--/--	--/-	--	115	B 463/FF 33, 2989	-
References: Cloquet 1882; Goblet d'Alviella 1908; Mariën 1958, 26–36.							

Tab. C6.7 Inventory and numbering information Court-St-Etienne La Quenique T.A.

elements, and both accessory vessels originally had an ear. The urn contained cremation remains (which have since been lost), as well as the eared accessory vessel when found.

Weaponry A long iron sword was found to be in very poor condition. It is in two pieces, and the iron has split into several layers. The original edge is almost completely gone. It may be a Mindelheim type sword, but this is difficult to determine without the tang. The sword may have been wrapped in textile, as suggested by a woven pattern in certain patches of corrosion. This sword likely was exposed to fire, bent, and probably broken as well. Another piece of an iron sword, a probable tang fragment with a beveled edge, was found with piece *CSE-LQ.TA.5* that Mariën (1958) does not depict. It could be part of the same sword.

Horse-gear Two bronze cheek-pieces are the horse-gear found in this barrow. They show no clear signs of exposure to fire, but are both broken in a similar fashion, perhaps intentionally (the similar breaks led Cloquet (1882, pl. IV) to erroneously depict them as being a single object broken into two). *CSE-LQ.TA.7* is broken at one end. It is unclear whether this is an old break. The end that survives is preserved completely, and has two little holes through which the organic material would have been attached. There is some kind of bronze in one of the holes, probably the remains of a bronze rivet used to attach the organic material. Some of this material might have survived between the bronze plates of the side that survives. There may be some signs of wear on this piece, though they also could be brush strokes from some kind of conservation treatment. Bronze cheek-piece *CSE-LQ.TA.8* is heavily restored with modern additions. It has an attractive green patina, with the original bronze color showing in places. The little winged protrusion on the surviving side is far more 'flicked up' than on *CSE-LQ.TA.7*. It is striking that there are only two sidepieces. This means that either there are two sidepieces from one bridle, or one sidepiece from two bridles (see Figs. C2.8 and 4.14).

Yoke and wagon components The *Jochschnalle* would have decorated a strap attached to a yoke (see Fig. C2.8). This yoke decoration therefore indicates the presence of draft animals and a wagon, but this is not obviously reflected in the bridle components. The bronze yoke decoration shows possible signs of use, and shows signs of having been exposed to fire. According to Mariën (1958, 29) the little 'cups' of the *Jochschnalle* would have been inlaid with something organic, probably bone. The little cones that survive in some of the cups would have served as a base to affix the organic material (Fig. C6.18). This *Jochschnalle* on occasion has been misidentified as a strange fibula (Cloquet 1882).

Court-St-Etienne La Quenique Tombelle A? **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1861 **Date:** Ha C1–2? **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën no.	MRAH inv. no.	Fiche no.
	Weaponry						
CSE-LQ.TA?.1	Iron sword, large, fragment	--/--	--/--	--	202	2989=B 463	2430
*CSE-LQ.TA?.2**	Iron sword, large	Indet	Indet	Indet	-	2989	-
	Other						
CSE-LQ.TA?.3	Iron socket	--/--	--/+	+	-	-	-
*CSE-LQ.TA?.4**	Bronze rod fragments?	Indet	Indet	Indet	-	-	-
References: Mariën 1958, 26–36.							

Tab. C6.8 Inventory and numbering information Court-St-Etienne La Quenique T.A?.



Fig. C6.18 Back view of the Jochschnalle showing the hollow 'cups'. Photograph by J. van Donkersgoed.

C6.3.2.2 Also from Tombelle A?

Mariën (1958, 36–41) distinguishes another group of artifacts that may be from Tombelle A, even though Cloquet does not mention them. These include two iron swords, one of which may in fact be a mislabeled sword examined at the MRAH (see Section C19.4). Mariën (1958, 47) also refers to a note by Th. Juste in which a lance socket is listed as among the grave goods from this barrow. I argue that this could be the broken socket shown in Figure C6.19, as it resembles a lance socket, and it is the only such object among the finds of unknown context within La Quenique. Mariën (1958, 36–41) also lists a number of horse-gear components as possibly coming from this barrow. However, below in Section C6.3.3 I argue that those objects are in fact more likely from Tombelle B.

C6.3.2.3 Dating

The *Jochschnalle* (type GRZ 01; Trachsel 2004) from this burial falls into Kossack's rich early Hallstatt C1 horse-gear (*cf.* Kossack 1954; Pare 1992, Ch. 10), which would indicate a date in the 8th century BC for this burial (*cf.* Trachsel 2004, 53; 369). This fits with the date range for Mindelheim swords as determined in Section 3.4.1.2 (ca. 800–650 BC).

C6.3.2.4 Actions taken and reconstructing the (burial) ritual

As the cremation remains are lost, it cannot be established who was cremated here. Whoever they were, their cremation remains were laid to rest in a large urn with unusual protuberances. A small accessory vessel, which originally had an ear, accompanied the remains in the urn. A number of other objects were also deposited either in the urn or alongside it, including a long iron sword that was bent double and two pieces of horse-gear as well as a yoke component. The two unusual cheek-pieces probably were used as part of a bridle before being selected for this burial. Though they show no clear signs of exposure to fire, they both are broken in a similar fashion, perhaps intentionally. The *Jochschnalle* would have decorated a strap attached to a yoke. This yoke decoration therefore seems to indicate draft animals and a wagon, though this is not obviously reflected in the bridle components. There are only two sidepieces, which seems to indicate a single bridle (though this type of horse-gear is extremely rare and how exactly it was incorporated into the bridle remains somewhat speculative; see also Section C2.4.3). The bronze yoke decoration also seems to have been used before deposition, and unlike the bridle elements it does show signs of having been exposed to fire. The cremated remains and at least one of the small vessels were placed in the urn. The remaining grave goods accompanied the deceased, either in or by the urn.



Fig C6.19 The finds that are probably from Court-St-Etienne La Quenique T.A (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.TA?. Photograph by J. van Donkersgoed.

C6.3.3 Tombelle B

This barrow was excavated in 1861 and contained an unknown object, perhaps a fragment of a belt, a very remarkable clip, loop, fragments of buttons and various small objects. Unfortunately none of these objects could be identified with certainty by Mariën (1958, 47). However, the objects depicted in Figure C6.20 are all known to be from the excavation campaign in which this barrow and T.A were excavated, and must therefore belong to one of them. I argue that these objects are from the former. Firstly, the bronze *phalera* (*CSE-LQ.TB.3*) and a bronze buckle/strap attachment (*CSE-LQ.TB.5*) must be from the same context as they have the same tiny bronze studs corroded onto their surface. The bronze attachment/hook



Fig. C6.20 The finds that are probably from Court-St-Etienne La Quenique T.B (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.TB. Photograph by J. van Donkersgoed.

(*CSE-LQ.TB.2*), the bronze buckles (*CSE-LQ.TB.4–5*) as well as five larger bronze studs (*CSE-LQ.TB.6*) would fit well with the *phalera* and attachment/hook in terms of function and date. Especially the combination of smaller and larger studs is a common occurrence. They all relate to horse-gear (or a yoke). Secondly, visually they fit the given description of a remarkable clip, loop, fragments of buttons and various small objects. I therefore list these objects as coming from Tombelle B. While no cremation remains are ascribed to this barrow specifically, Mariën (1958, 24) does state that most of the barrows excavated at this time covered a bed of charcoal and cremated bone, with only one or two yielding no trace of a burial. As this barrow did yield bronze objects, it seems likely that this barrow also covered a bed of charcoal and cremation remains.

C6.3.3.1 The material remains

Horse-gear The bronzes that I argue are from this barrow all either relate to horse-gear, or are most likely from horse-gear. They include a bronze attachment known as a toggle, a *phalera* fragment and a buckle fragment of some kind. The last two both have small bronze studs corroded onto them. In addition to these numerous small studs there are five loose studs that are slightly larger.

C6.3.3.2 Dating

The bronze horse-gear decorations from this burial all date to the Hallstatt C1 phase, with some possibly even occurring earlier (Trachsel 2004, 52). As with burials

Court-St-Etienne La Quenique Tombelle B **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1861 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën no.	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-LQ.TB.1**	Cremation remains	Indet	Indet	++	-	-	-
	Horse-gear						
CSE-LQ.TB.2	Bronze attachment	--/--	--/-	-	116	B 463	2395
CSE-LQ.TB.3	Bronze phalera fragment	--/--	--/+-	-	117	2989 = B 463	2399
	Bronze studs	--/--	--/+-	-	117b	-	-
CSE-LQ.TB.4	Bronze buckle	--/--	--/+-	-	118	2989 = B 463	2396
	Bronze buckle fragment	--/--	--/+-	-	118b	-	2396
CSE-LQ.TB.5	Bronze buckle/strap end?	--/--	--/+-	-	119	2989 = B 463	2394
	Bronze studs, small	--/--	--/--	-	119b	-	2394
CSE-LQ.TB.6	Bronze hemispheres, studs, 5x	--/--	--/--	++	120	2989 = B 463	2393
References: Mariën 1958, 26–36; 47.							

Tab. C6.9 Inventory and numbering information Court-St-Etienne La Quenique T.B.

Court-St-Etienne La Quenique Tombelle K **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1877–'78? **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels/lost		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-LQ.TK.1**	Cremation remains, lost	Indet	Indet	++	-	-	-
	Pottery						
*CSE-LQ.TK.2**	Large urn, could not be identified	Indet	Indet	Indet	-	-	-
	Weaponry						
CSE-LQ.TK.3	Bronze sword, fragments (type Gündlingen Etappe 4/Weichering (?))	--/--	++/++	++	101	B1683	2384
References: Mariën 1958, 57.							

Tab. C6.10 Inventory and numbering information Court-St-Etienne La Quenique T.K.

with Kossack's (1954; Pare 1992, Ch.2) characteristic early horse-gear, this indicates that this burial dates to the (early) 8th century BC (see also Section 3.4.1.3).

C6.3.3.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated here, and their remains were (at least partially) left lying among the burned-out pyre. A number of horse-tack components accompanied this person, and may have accompanied the deceased on the pyre. A barrow was erected over the deposit.

C6.3.4 Tombelle K

This barrow was vandalized during the winter of 1877–'78 and its content only partially survives. It contained, at least, a large urn (which cannot be identified), and a bronze sword (Fig. C6.21). As of yet only one fragment from this sword has been made available by the MRAH. It was studied by myself and photographed by J. van Donkersgoed.

C6.3.4.1 The material remains

Human remains This grave reportedly contained cremation remains, but these currently are lost.

Pottery A large urn found in this barrow cannot be identified.

Weaponry The bronze sword has been broken intentionally into several pieces and bent. It has a beautiful green patina



Fig. C6.21 The finds from Court-St-Etienne La Quenique T.K (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.TK. Drawing after Mariën 1958, fig. 6; photograph by J. van Donkersgoed.

and its edges are mostly intact, with a ridge running parallel to each cutting edge on either side. Only one blade fragment, however, was available for study, though it is hoped that the remaining fragments will be located during the MRAH's ongoing inventorying project. The available fragment has been exposed to fire and has been distorted intentionally. Note that both the tang and tip were not present at the time Mariën studied it and may have never been interred.

C6.3.4.2 Dating

The bronze sword from this burial appears to be a late type Gündlingen (Etappe 4/Weichering(?)) sword based on the shape of the shoulders, tang and cross-section of the blade (Milcent 2012, 48; Trachsel 2004, 118–24), and therefore indicates that this burial likely dates to the end of the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).

C6.3.4.3 Actions taken and reconstructing the (burial) ritual

All that can be reconstructed of this burial ritual is that someone was cremated and had their remains placed in an urn. A bronze sword was heated, bent and broken. The broken fragments were deposited either in or under a barrow, apparently in a stone coffin of some kind (Mariën 1958, 53).

C6.3.5 Tombelle L

This barrow was excavated by F. Gérard in 1877–'78, and probably was located on parcel A 288. It contained a bed of charcoal and an iron sword stuck obliquely into the ground (Fig. C6.22; Mariën 1958, 79–80). The sword was made available by the MRAH. It was examined by myself and photographed by J. van Donkersgoed.

C6.3.5.1 The material remains

Weaponry The sword from Tombelle L is in a reasonably good state, though it has been restored and is incomplete. On one side by the point a metal rod has been attached, presumably in order to stabilize a break, and partially covered up with some kind of addition. The point is rounded, and does not appear to have a sharp edge. The blade edges on one side appear very blunted. If original, these areas were never sharpened for battle use. The other side does appear to show sharpened areas, though some stretches appear blunt as well. There may be battle damage not quite halfway down the blade on the side that is sharpened. The broken off tang looks like a post-depositional break rather than a deliberate one. This appears to be a Mindelheim sword, which at present is just shy of 62 cm long. It is at its widest about a third of the way down the blade and starts to narrow at the break. It shows no signs of fire or intentional distortion.

Court-St-Etienne La Quenique Tombelle L **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1877–'78 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Weaponry						
CSE-LQ.TL.1	Iron sword (type Mindelheim)	+-/--	--/--	--	205	B 1588	10133
References: Mariën 1958, 79–81.							

Tab. C6.11 Inventory and numbering information Court-St-Etienne La Quenique T.L.

Court-St-Etienne La Quenique Tombelle M **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1877–'78 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Weaponry						
*CSE-LQ.TM.1**	Iron sword (type Mindelheim)	--/--	--/+-	--	206	B 1683, 11	-
References: Mariën 1958, 79–81.							

Tab. C6.12 Inventory and numbering information Court-St-Etienne La Quenique T.M.

C6.3.5.2 Dating

The iron sword from this burial appears to be a type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), though this is hard to state conclusively as it is only a blade fragment. Assuming it is, then this burial most likely dates to ca. 800–650 BC (see Fig. 3.5; Section 3.4.1.2).

C6.3.5.3 Actions taken and reconstructing the (burial) ritual

All we know of the ritual conducted at Tombelle L is that it involved fire, as evidenced by the charcoal beds found in the barrow and the deposition of an iron sword. Whether the charcoal beds relate to a cremation burial, or even to the same ritual in which the sword was deposited cannot be determined from the available evidence.

C6.3.6 Tombelle M

This barrow was excavated by F. Gérard in 1877–'78, and was probably located on parcel A 288. It contained a bed a bed of charcoal, and an iron sword stuck obliquely into the ground prior to the erection of the barrow, but no pottery (Fig. C6.23; Mariën 1958, 79–80).

C6.3.6.1 The material remains

Weaponry This sword was not available for examination. Little can be said regarding it except that it appears to be a Mindelheim sword, broken both at the tang and the blade. It is possible that these are intentional breaks, but this cannot be confirmed from a drawing.

C6.3.6.2 Dating

The iron sword from this burial appears to be a type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), which indicates that this burial dates ca. 800–650 BC (see Fig. 3.5; Section 3.4.1.2).

C6.3.6.3 Actions taken and reconstructing the (burial) ritual

All we know of the ritual conducted at Tombelle M is that it involved fire, as evidenced by the charcoal beds found in the barrows and the deposition of the iron sword. Whether the charcoal beds relate to a cremation burial, or even to the same ritual in which the sword was deposited cannot be determined from the available evidence.

C6.3.7 Tombelle X

Tombelle X was excavated in 1784–'85 by Baron Remersval. He reportedly found pottery, probably several vases, as well as weapons and tools, all either partially or entirely made of iron (Juste 1860; Mariën 1958, 21). The objects have been lost. In 1864 the barrow was more than a meter high, and located near La Ferme Blanche (Mariën 1958, 22). The location of this barrow, surrounded by barrows that date to the Early Iron Age, as well as the fact that weapons and tools made of iron were found in it



Fig. C6.22 The find from Court-St-Etienne La Quenique T.L. The number has the prefix CSE-LQ.TL. Drawing after Mariën 1958, fig. 11; photograph by J. van Donkersgoed.

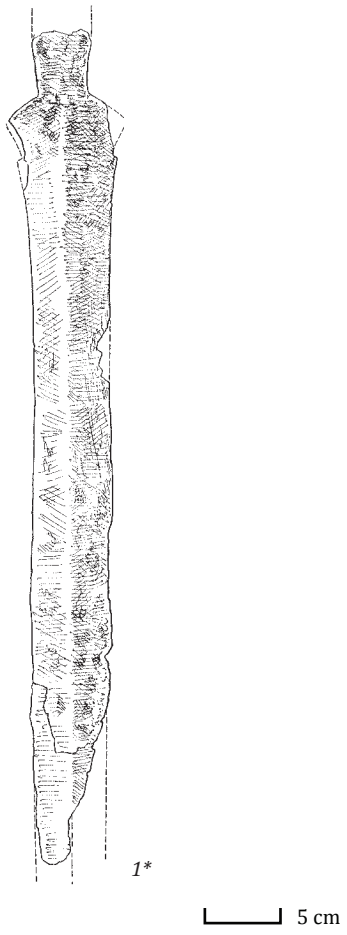


Fig. C6.23 The find from Court-St-Etienne La Quenique T.M. The number has the prefix CSE-LQ.TM. Drawing after Mariën 1958, fig. 11.

make it probable that this barrow also dates to that period. For this reason it is included here and in the various tables and graphs in this research. As it is unknown what types of objects, this barrow is not included in Figure 3.5 as the given date is so speculative.

C6.3.8 Tombelle Y

This barrow was excavated in the 18th century, and then again in the 19th century. Goblet d'Alviella (1908, 20) reports that the excavated artifacts were deposited in the castle by his maternal grandfather, but that he never saw them himself. Two bronze 'scepter ends' are very likely from this barrow (Fig. C6.24; Mariën 1958, 184–5), though it is unclear whether these are the excavated artifacts deposited in the castle referred to by Goblet d'Alviella, or are from the second excavation. The unusual bronzes were made available by the MRAH, studied by myself and photographed by J. van Donkersgoed.

C6.3.8.1 The material remains

Other The bronzes have sockets with bars running through them which would have served to attach the bronze to something like a wooden rod or staff. One has a rounded top, the other is similar in shape but lacks the rounded top. Mariën (1958, 21) interprets them as the top and bottom of a scepter. No signs of burning, distortion or wear were observed.

C6.3.8.2 Dating

The 'scepter' ends found in this burial do not allow for an accurate dating, though given its find location an Early Iron Age date seems plausible for this burial. However, it is not included in Figure 3.5 as the given date is so speculative.

C6.3.8.3 Actions taken and reconstructing the (burial) ritual

Two unusual bronzes likely were deposited in or under this barrow. Nothing else can be reconstructed.

C6.3.9 Tombelle Z

The last barrow excavated at La Quenique was Tombelle Z. It was excavated in 1891 by Baron A. de Loë. The mound was ca. 15–16 m in diameter, and 1 m high. It was excavated in front of members of *the Fédération des Cercles archéologiques et historiques de Belgique*. They dug a trench through the center of the barrow, going down to the virgin soil. There was a roughly circular patch of black soil with a bed of charcoal, about 10 cm thick. In this scatter of charcoal the objects were found. On the cross-section the black layer of earth and charcoal is located in a shallow depression. In this barrow they found a bronze cheek-piece from a horse-bit and a number of other objects which have not been identified (Fig. C6.25; Cloquet 1882, 39; 44; De Loë 1891, 517–22; Mariën 1958, 84–5). None of the objects from this barrow could be located in the MRAH and therefore have not yet been studied by myself. The information described below is derived from Mariën's (1958, 84–8) work.



Fig. C6.24 The finds from Court-St-Etienne La Quenique T.Y. The number has the prefix CSE-LQ.TY. Photograph by J. van Donkersgoed.

Court-St-Etienne La Quenique Tombelle Y **Walloon-Brabant, Belgium**				**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 18th or 19th century **Date:** Ha C1–D3? **Current location:** Royal Museums of Art and History, Brussels	**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Other					
CSE-LQ.TY.1	Bronze 'scepter' ends	--/--	--/--	--	135ab	-	-
References: Mariën 1958, 20–1.						

Tab. C6.13 Inventory and numbering information Court-St-Etienne La Quenique T.Y.

Court-St-Etienne La Quenique Tombelle Z **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavated (poor) **Year of discovery:** 1891 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën no.	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-LQ.TZ.1**	Fragment of human cremation? lost	Indet	Indet	++	-/f	-	-
	Pottery						
*CSE-LQ.TZ.2**	Pottery	Indet	Indet	Indet	-/g	-	-
	Horse-gear						
*CSE-LQ.TZ.3**	Bronze cheek-piece of a horse-bit	Indet	--/-	Indet	114/a	B 1683,8	-
	Other						
*CSE-LQ.TZ.4**	Rolled quartz block	Indet	Indet	Indet	-/b	-	-
*CSE-LQ.TZ.5**	Kind of bronze nail or rivet	Indet	Indet	Indet	-/c	-	-
*CSE-LQ.TZ.6**	Shard of phtanite	Indet	Indet	Indet	-/d	-	-
*CSE-LQ.TZ.7**	Small bronze fragment	Indet	Indet	Indet	-/e	-	-
References: Cloquet 1882; De Loë 1891; Mariën 1958, 84–8.							

Tab. C6.14 Inventory and numbering information Court-St-Etienne La Quenique T.Z.

C6.3.9.1 The material remains

Human remains A fragment of burned bone is identified as a likely fragment of human cremation.

Pottery While it is recorded that pottery was found in this barrow, it is unknown what kind.

Horse-gear A bronze cheek-piece from a horse-bit, the same type as those found in Tombelle A, was found in this barrow. The parts that attached to the organic material are broken, though it cannot be determined whether this was intentional or post-depositional based solely on the available drawing.

Other Several objects are described as coming from this barrow, which unfortunately cannot be identified. These are a rolled block of quartz, some kind of bronze nail or rivet, a shard of phtanite, another small bronze fragment and pottery.

C6.3.9.2 Dating

The bronze cheek-piece found in this burial is the same type as those found in Court-St-Etienne La Quenique T.A which can be dated by its *Jochschnalle* and sword to the 8th century BC (see Section C6.3.2.3). A date somewhere in the same date range therefore seems plausible for T.Z (*cf.* Trachsel 2004, 369), but this is somewhat speculative.

C6.3.9.3 Actions taken and reconstructing the (burial) ritual

The patch of black soil with a bed of charcoal and the human cremation remains found indicate someone was cremated here. He or she ended up buried with pottery, a bronze cheek-piece from horse-gear and a number of other objects which have not been identified, though how this exactly took place cannot be determined.

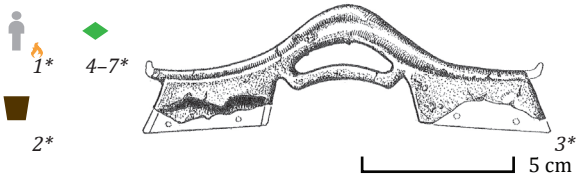


Fig. C6.25 The finds from Court-St-Etienne La Quenique T.Z (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.TZ. Drawings after Mariën 1958, 12.

C6.3.10 Objects found at La Quenique, but not attributable to a specific barrow

There are finds from several campaigns conducted at La Quenique that cannot be attributed to a specific barrow or flat grave. These are discussed here as even without context information they still offer some interesting insights into prehistoric events at La Quenique. First a selection of finds excavated in 1861 and then a number of isolated finds excavated in 1877–'78 are discussed. Lastly several isolated objects that are believed to have been excavated in 1877–'78 are considered. They are listed in Table C6.15. Though brought together in the table, they are first discussed per excavation campaign as finds done in the same campaign are more likely to have been found

in the same grave or mound, as I will argue for certain finds in the following.

C6.3.10.1 Excavation 1861

There is a selection of objects which were found during the excavations of 1861, but which cannot be attributed to Tombelle A (Fig. C6.26; Mariën 1958, 41–6). These include the following.

Pottery An urn (*CSE-LQ.UC.01*) once contained cremation remains of an adult of at least 50 years of age (though see Section 2.2.3.3), but these have since been lost. There were also two small vessels, a small, footed bowl (*CSE-LQ.UC.02**) and a small accessory vessel (*CSE-LQ.UC.04*).

Weapons A large iron Mindelheim sword (*CSE-LQ.UC.15*) is in two pieces. It is in very poor condition, but still includes its tang. The sides of the tang are beveled, but little if any of the rest of the original sides survives. It does not appear bent or folded, though it cannot be determined whether the break is antique. As this sword is a Mindelheim type blade (Milcent 2012, 48; Trachsel 2004, 124–31), it is dated to the date range determined for these swords in Section 3.4.1.2 (ca. 800–650 BC). A short iron sword (*CSE-LQ.UC.16**) also belongs to this selection of objects, though this has not yet been located at the MRAH. It is more difficult to date as this type of short iron sword may be locally made (as argued in Section 6.1.1.2), and in terms of typology is most comparable with early bronze type Gündlingen (Etappe 1/Holme Pierrepoint) swords (Milcent 2012, 48; Trachsel 2004, 118–22). It is unclear, however, whether they also date as early as the bronze versions. A fragment of a winged chape (*CSE-LQ.UC.17*; Fig. C6.27) is likely type Oberwaldbehrungen/F3 and therefore probably dates to the Hallstatt C1 phase (Milcent 2012, 48; Trachsel 2004, 112–6). It likely was broken and bent intentionally, and on one side it shows signs of possible fire exposure.

Horse-gear Mariën identifies a hollow bronze crescent (*CSE-LQ.UC.27*) as a horse harness decoration (Fig. C2.8). It would have served as a kind of chest ornament. It shows signs of burning and was probably intentionally broken.

Other A squarish piece of bronze sheet (*CSE-LQ.UC.36*) served an unknown purpose. Another fragment of bronze sheet (*CSE-LQ.UC.37*) was melted partially.

C6.3.10.2 Burial opened in 1870

In 1870 a burial (barrow?) was opened and an urn with cremation remains found (Goblet d'Alviella 1908).

C6.3.10.3 Vandalization of barrows in 1877–'78

In the winter of 1877–'78 several barrows were vandalized and leveled, thereby unearthing countless urns filled with cremation remains and often accompanied by metal objects (Fig. C6.28). These include the following.

Pottery Several pots and accessory vessels were found, some of which are currently housed in the Archeology Museum in Nivelles (Mariën 1958, 67–8).

Weaponry A number or sword fragments, both bronze and iron were found. A tang fragment of a bronze sword (*CSE-LQ.UC.18*) has been affected by fire, bent and broken intentionally. A rivet is still present, and on one side protrudes to its original height, indicating the thickness of the original organic hilt. Beneath the rivet the tang has a raised rib running down. As it is a tang fragment from a Gündlingen sword (unknown Etappe) it likely dates somewhere in the date range determined for such swords in Section 3.4.1.1 (ca. 850–750 BC).

The point end of a bronze sword (*CSE-LQ.UC.19*) is broken in two. The top break appears ancient, but the break between the two halves appears to be modern as it is rough and not patinated. The very tip of the point is missing, as are the edges on the bottom piece. On the other piece the edges are very well preserved, one side is almost entirely present. There is a triangular notch in it that could be battle damage (Fig. C6.29, B). The piece as a whole is bent into a curve. The top break is patinated and might be a deliberate break. As they are fragments from a Gündlingen sword (unknown Etappe) it likely dates somewhere in the date range determined for such swords in Section 3.4.1.1 (ca. 850–750 BC). Another fragment from a bronze sword (*CSE-LQ.UC.20*) appears to have been broken, and then exposed to fire. It is part of the blade, and the decoration along the edges consists of grooves. As it is a tang fragment from a Gündlingen sword (unknown Etappe) it likely dates somewhere in the date range determined for such swords in Section 3.4.1.1 (ca. 850–750 BC). *CSE-LQ.UC.25* share the same Mariën number (*106*) but are categorized differently by Mariën, see below. This would seem plausible since the sword fragments do not appear to all be from the same sword. As they are blade fragments from a Gündlingen sword (unknown Etappe) they likely date somewhere in the date range determined for such swords in Section 3.4.1.1 (ca. 850–750 BC). A bronze chape (*CSE-LQ.UC.21*) has one end broken off (Fig. C6.30). The end is bent as well, and the break appears intentional. The other end is complete, though there is a glued break, so it is impossible to tell whether this break was ancient. The two pins that attached the chape to the scabbard survive. This bronze chape is type Prüllsbirkig/C1, and likely dates somewhere in Hallstatt C1 (Milcent 2012, 48; Trachsel

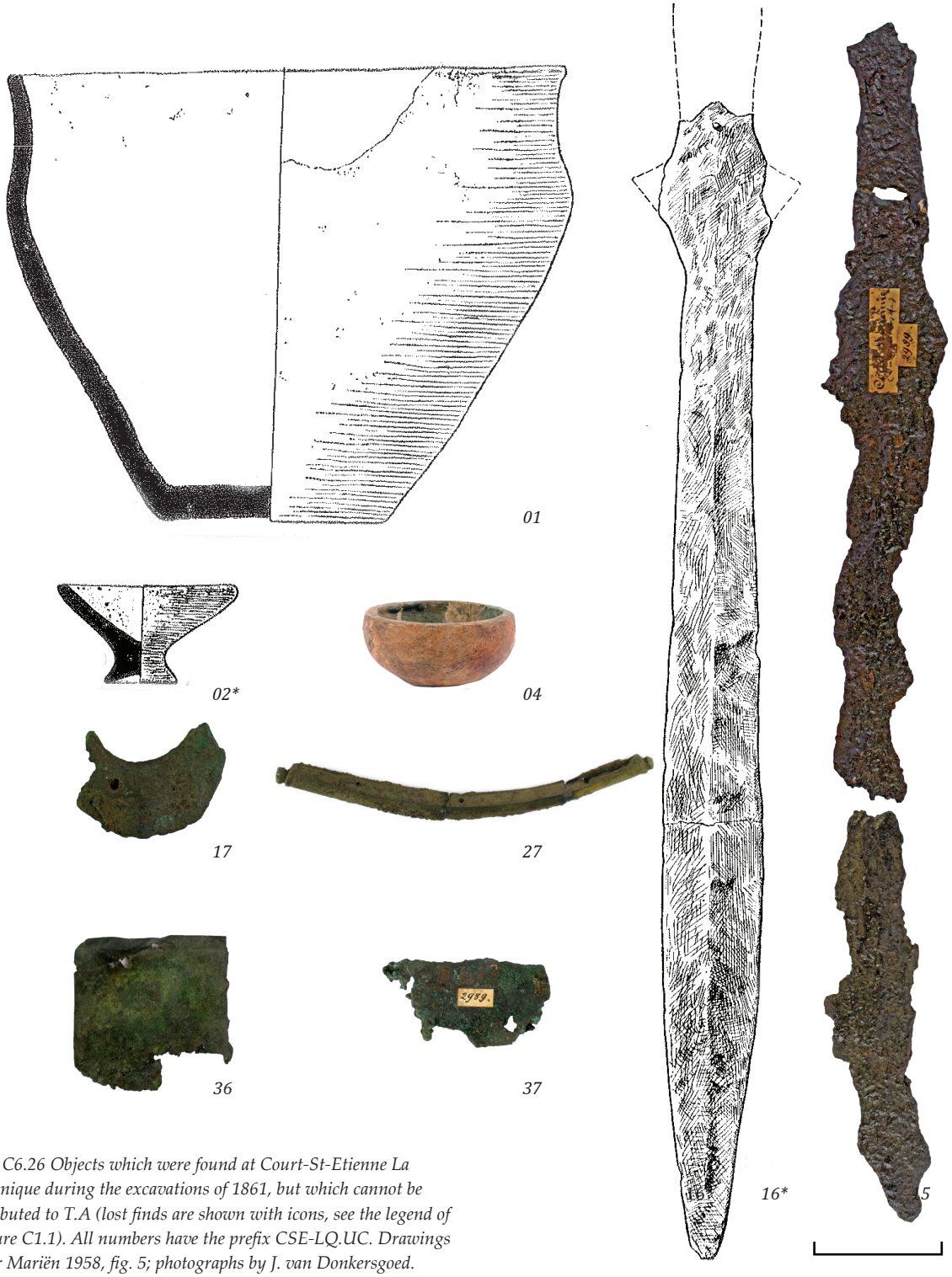


Fig. C6.26 Objects which were found at Court-St-Etienne La Quenique during the excavations of 1861, but which cannot be attributed to T.A (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.UC. Drawings after Mariën 1958, fig. 5; photographs by J. van Donkersgoed.

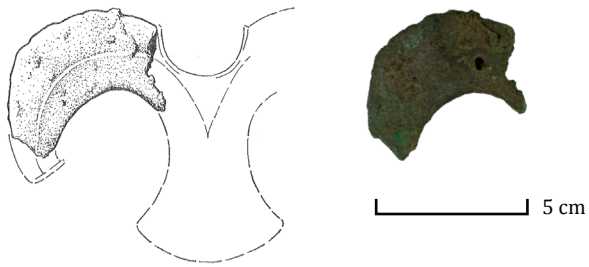


Fig. C6.27 The bronze winged chape reconstructed by Mariën and the fragment CSE-LQ.UC.17 as it appears today. Drawing after Mariën 1958, fig 4; photograph by J. van Donkersgoed.



Fig. C6.28 Objects which were found during the winter of 1877–'78 which cannot be attributed to a specific barrow (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.UC. Drawings after Mariën 1958, fig. 8; photographs by J. van Donkersgoed.

2004, 112–4) though the presence of a chape of the same type in the sharply ^{14}C-dated Neerharen-Rekem t.72 burial indicates that it could be as early as 9th century BC. The last fragment to fall into this category of finds is an iron sword fragment (*CSE-LQ.UC.22**), which is housed in Nivelles (Mariën 1958).

Horse-gear A number of bronze horse-gear decorations also belong to this group of finds, and based on their function and typochronological date it is very plausible that they (or at least a selection) are from the same (burial) context. These are the following. Two large bronze *Tutuli* (*CSE-LQ.UC.28–29*) at first glance do not seem to belong together. Yet they are the same kind of object and very likely a set. The larger one is broken and missing its cone. At the MRAH, however, it was possible to match another fragment (also *CSE-LQ.UC.29*) onto the broken *Tutulus*. This object has been affected by fire and bent. The patination on the broken off cone, however, is different than that on the rest of the *Tutulus*, suggesting it likely was not broken off intentionally. The other *Tutulus* (*CSE-LQ.UC.30*) at first glance appears smaller, but as there are no original edges and the heights of the cones on both *Tutuli* are the same, I argue that these formed a set. They are the largest *Tutuli* encountered in this research and would have been impressive mounted on horse-gear. The cone



Fig. C6.29 Sword fragments (CSE-LQ.UC.19) shown from all sides, with details of the top break (A), the possible battle damage (B) and the bottom break of the top piece (C). Drawing after Mariën 1958, fig. 6; photographs by J. van Donkersgoed.



Fig. C6.30 Bronze chape (CSE-LQ.UC.21) from both sides (top) with details (bottom; different scales). Drawing after Mariën 1958, fig 10; photographs by J. van Donkersgoed.



Fig. C6.31 Objects which probably were found during the winter of 1877–'78 which cannot be attributed to a specific barrow (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix CSE-LQ.UC. Note that CSE-LQ.UC.25 is depicted in Figure C6.28. Photographs by J. van Donkersgoed.

fragment refitted on the *Tutulus* was melted onto a piece of flat bronze with a small bronze hemisphere. A small round *phalera* (*CSE-LQ.UC.30*), with a protruding center with the tip broken off (modern?), and a small bar on the backside for attachment is a similar object as the *Tutuli*, but scaled down. It may come from the same context as the *Tutuli* and have decorated the same horse-gear. Some bronze studs (*CSE-LQ.UC.31*) listed by Mariën as no. 126 were incorrectly numbered at the MRAH as 117b. These bronze studs are hollow hemispheres with a bar across



Fig. C6.32 The three surviving fragments of a bronze sword (CSE-LQ.UC.23; the tang is on the left) with detail of the middle fragment (reverse side) showing cracks in the bronze (inset). Photographs by J. van Donkersgoed.

the hollow side, rather than legs. One is in good shape, and does not appear burned. The others are in varying conditions of preservation. Two show signs of burning. A small bronze loop (*CSE-LQ.UC.32*) is interpreted as a buckle fragment, though this is a tentative conclusion.

The last horse-gear piece in this group is a bronze bridle decoration (*CSE-LQ.UC.33*), which is broken into two pieces. A bronze stud is corroded onto one end, which possibly could have been exposed to fire. The other end where a circle top has been broken off appears bent, as though the top decoration has been wrenched or broken off intentionally. There is wear on the loop on the bottom where the pendant would have hung. Based on a parallel Mariën (1958, 63–5) reconstructs this bridle ornament with a trapezium shaped pendant dangling in the bronze ring. The presence of a bronze stud corroded onto the bridle decoration would suggest that it is from the same context as *CSE-LQ.UC.31*. Moreover, in terms of function, dating and appearance it seems likely that the two bronze *Tutuli* (*CSE-LQ.UC.28–29*), the *phalera* (*CSE-LQ.UC.30*), the bronze studs (*CSE-LQ.UC.31*) and hook/buckle (*CSE-LQ.UC.32*) might well be from the same grave/context. In short, *CSE-LQ.UC.28–33* likely come from the same grave and date to the 8th century BC as they are characteristic early Hallstatt C1 horse-gear (Kossack 1954; Pare 1992, Ch. 10).

Personal appearance Two pieces of jewelry were found. These are the discoid head of a pin (*CSE-LQ.UC.34*) and the fragment of a bronze bracelet (*CSE-LQ.UC.35**). The bronze pinhead is identical to a pin found in a flat grave which Mariën (1958, 58) identifies as a typical Hallstatt B/Urnfield type of pin. The bracelet fragment was unfortunately not available for study, but it is known it was found in a flat grave.

Other The last two objects from this group are a bronze rod with a flattened end (*CSE-LQ.UC.38*) of unknown function, and a fragment of a bronze ring or rod (*CSE-LQ.UC.39*).

C6.3.10.4 Objects probably from vandalization of 1877–'78

There are also a number of object that are *probably* from the same destruction of burials during 1877–'78 (Fig. C6.31). These include the following objects.

Pottery A large urn (*CSE-LQ.UC.05*) and an accessory vessel (*CSE-LQ.UC.03**).

Weaponry A bronze sword (*CSE-LQ.UC.23*), broken with three pieces surviving (Fig. C6.32). A piece of the handle, with a rivet showing on one of the sides is affected heavily by fire. On one side the original cutting edge appears preserved, with a ding possibly being battle damage. This fragment is bent. The next fragment likewise is bent and shows some cracking of the bronze, but otherwise appears in much better condition. The last piece is bent also, and appears more affected by fire than the first piece. There is a bowing of the edge which could be battle damage, but could also be the result of exposure to very hot fire. The striking thing about this sword is that the three pieces fit together. They connect, but the middle piece is far less affected by fire or corrosion, indicating that the sword was broken before going on the pyre. The sword is an early to middle type Gündlingen (Etappe 2–3/Villement) sword and therefore likely dates somewhere in the date range determined for such swords in Section 3.4.1.1 (Trachsel 2004, 123; Milcent 2012, 48). Another sword fragment is a piece of a tang (*CSE-LQ.UC.24*). On one broken edge the rivet hole is visible. On the other broken edge the body of the rivet is still in the hole. It appears deliberately

Court-St-Etienne La Quenique Unknown context **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1861, 1877–'78 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-LQ.UC.47**	Cremation found *CSE-LQ.UC.01*, of an adult, less than 50 years old, of medium build	Indet	Indet	++	-	-	-
	Pottery						
CSE-LQ.UC.01	Pot, contained cremation *CSE-LQ.UC.47**	--/--	--/--	--	21	2989 B00634	1492
*CSE-LQ.UC.02**	Small footed bowl	Indet	Indet	Indet	20	2989	-
*CSE-LQ.UC.03**	Small accessory vessel	Indet	Indet	Indet	-	-	-
CSE-LQ.UC.04	Accessory vessel	--/--	--/--	--	22	B00463	1475
CSE-LQ.UC.05	Large pot	--/--	--/--	--	64	B 4588,1	1500
*CSE-LQ.UC.06**	Small pot	Indet	Indet	Indet	9	B 1683	
*CSE-LQ.UC.07**	Small pot	Indet	Indet	Indet	66	-	-
*CSE-LQ.UC.08**	Small pot	Indet	Indet	Indet	67	-	-
*CSE-LQ.UC.09**	Small accessory vessel	Indet	Indet	Indet	68	-	-
*CSE-LQ.UC.10**	Decorated sherds?	Indet	Indet	Indet	69	-	-
*CSE-LQ.UC.11**	Small pot with a rounded bottom	Indet	Indet	Indet	-	-	-
*CSE-LQ.UC.12**	Base of a very small pot	Indet	Indet	Indet	-	-	-
*CSE-LQ.UC.13**	Three pots with rounded bellies?	Indet	Indet	Indet	-	-	-
*CSE-LQ.UC.12**	Pot with rounded bottom	Indet	Indet	Indet	-	-	-
	Weaponry						
CSE-LQ.UC.15	Iron sword, large fragment (type Mindelheim)	--/--	--/+-	-	203ab	2989	2431 2432
*CSE-LQ.UC.16**	Iron sword, short	--/--	--/--	--	204	2989	-
CSE-LQ.UC.17	Bronze chape, fragment (type Bubesheim/ Oberwaldbehrungen/F2/F3)	--/--	+/+	+	108	2989	2400
CSE-LQ.UC.18	Bronze sword, tang fragment (type Gündlingen)	--/--	--/++	++	102	B 1683	2385
CSE-LQ.UC.19	Bronze sword, fragments 2x (type Gündlingen)	+/--	++/--	--	104	B 1683	2424
CSE-LQ.UC.20	Bronze sword, fragment (type Gündlingen)		/++	++	106a	B 1683	2391
CSE-LQ.UC.21	Bronze chape (type Prüllsbirkig/C1)	--/--	+/+	--	107	B 1683, 4	
*CSE-LQ.UC.22**	Iron sword, fragment	Indet	Indet	Indet	218	-	-
CSE-LQ.UC.23	Bronze sword, fragments 3x (type Gündlingen Etappe 2-3/Villement)	+/--	++/++	++	103	-	2425
CSE-LQ.UC.24	Bronze sword, fragment (type Gündlingen)	--/--	--/++	--	105	-	2389
CSE-LQ.UC.25	Bronze sword, fragments 3x (type Gündlingen)	--/--	++/++	++	106b–d	-	2427
CSE-LQ.UC.26	Iron sword, short	+-/--	--/--	--	219	N 03744	10135
	Horse-gear						
CSE-LQ.UC.27	Bronze hollow ornament	--/--	-/+	+	121	-	2398
CSE-LQ.UC.28	Bronze Tutulus	--/--	+-/+	++	124	B 1683	2392
CSE-LQ.UC.29	Bronze Tutulus	--/--	+-/+	++	123	B 1683	2392
	Bronze *Tutulus,* fragment	--/--	-/-	++	123b	-	2390
CSE-LQ.UC.30	Bronze phalera	--/--	-/-	-	125	B 1683	2423
CSE-LQ.UC.31	Bronze studs	--/--	--/--	+	126	B 1683	2401?

Tab. C6.15 Inventory and numbering information Court-St-Etienne La Quenique Unknown context.

		Use/ repair	Bending/ breaking	Fire	Other numbering systems:		
					Mariën 1958	MRAH inv. no.	Fiche no.
CSE-LQ.UC.32	Bronze buckle, *phalera* attachment?	--/--	-/+-	+-	127	B 1683	2426
CSE-LQ.UC.33	Bronze bridle decoration	++/--	--/+	+-	128	B 1683, 6	-
	Bronze stud	--/--	--/--	+-	128b	B 1683	-
CSE-LQ.UC.43	Bronze *phalera*, fragment	--/--	--/+-	+-	146	-	2418
	Tools						
CSE-LQ.UC.41	Grinding stone	++/--	--/--	--	303	-	1496
	Personal appearance						
CSE-LQ.UC.34	Fragment of a bronze discoid pin head	--/--	--/+-	--	137	B 1683	2388
*CSE-LQ.UC.35**	Bracelet (fragment) with grooves	Indet	Indet	Indet	138	-	-
	Other						
CSE-LQ.UC.36	Bronze sheet fragment	--/--	+-/+-	--	122	2989	2397
CSE-LQ.UC.37	Bronze fragment, partially melted	--/--	+-/+-	++	150	2989	2386
CSE-LQ.UC.38	Bronze rod with flattened end	Indet.	Indet.	Indet.	129	B 1683	2421
CSE-LQ.UC.39	Bronze ring fragment or bronze rod	Indet.	Indet.	Indet.	130	B 1683	2422
*CSE-LQ.UC.42**	Bronze fragments	Indet.	Indet.	Indet.	-	-	-
CSE-LQ.UC.44	Bronze hemisphere	--/--	--/+-	+-	147	-	2416
CSE-LQ.UC.45	Bronze pendant?	--/--	--/+-	-	148	-	2419
CSE-LQ.UC.46	Bronze rivets, 2x	--/--	--/+-	+-	149	-	2414

References: Mariën 1958.

Tab. C6.15 continued.



Fig. C6.33 Objects which probably were found during the winter of 1877–'78 which cannot be attributed to a specific barrow within Court-St-Etienne La Quenique. All numbers have the prefix CSE-LQ.UC. Photographs by J. van Donkersgoed.

broken. Three sword fragments are listed under *CSE-LQ.UC.25,* though they may not all be from the same sword, as the edge decorations are not the same on all three (see also above). Figure C6.28 shows that fragment B is in the best shape. It is a little bent, possibly intentionally broken, but it still has its original surface and edges intact. One of the breaks is very straight and clean, and likely a hot-short. There are striations on the surface that could be brush strokes from conservation work, but might also be sharpening. Fragment C is heavily affected by fire. One surface is so degraded that the grooves that run parallel to the edge on the other side are not discernable. It has been intentionally heated and broken. Fragment D also has been affected by fire, but not as badly as C. It is a little bent lengthwise, but more bent along the edges. One long edge is curled over. It most likely was heated and broken intentionally. The grooves are different; from the edge inwards there is first a ridge, then a groove. This contrasts to the others where there is just a groove. An iron sword (*CSE-LQ.UC.26*) is in poor condition. It has been heavily restored and is covered in some kind of lacquer. The shoulders are present, but the sword is broken off above that. It lacks ricasso. There are some spots of bronze corrosion along the blade and in particular around the shoulders. At present it is roughly 47 cm long, which is quite short for such a sword. The point is almost bulbous due to heavy restoration work and additions. Some sections indicate a central rib. The blade edges seem relatively complete, and show bends, possibly from battle damage. This short iron sword is difficult to date. As argued in Section 6.2.1.1 this type of short iron sword appears locally made, and in terms of typology is most comparable with early bronze type Gündlingen (Etappe 1/Holme Pierrepoint bronze swords; Milcent 2012, 48; Trachsel 2004, 118–22). It is unclear, however, whether they also date as early as the bronze versions.

Other "Bronze fragments" (*CSE-LQ.UC.42**) supposedly were found as well, but these are not further identified (Mariën 1958, 75). The last object in this group is a grinding stone (*CSE-LQ.UC.41*) of some kind. It has a number of facets. One long edge appears shaped on both surfaces to form a sharpish edge. These facets are the smoothest. The small ends are roughish and have a somewhat pecked or battered appearance.

C6.3.10.5 Objects of uncertain provenance

The last objects from Court-St-Etienne La Quenique to be discussed are five bronzes of uncertain provenance (Fig. C6.33). They could all be horse-gear, and may be from the same grave. A bronze *phalera* fragment (*CSE-LQ.UC.43*) has a rectangular loop on the back. It looks like the top surface was round and attaches to the loop, and that there is another layer of sheet bronze attached to the round bronze. A bronze hemisphere (*CSE-LQ.UC.44*) has no original edges surviving and it is unclear what its function may have been, though some kind of *phalera* seems plausible. A small bronze pendant (*CSE-LQ.UC.45*) with two 'prongs' (one of which is broken off halfway, the other is missing its tip) and two bronze rivets (*CSE-LQ.UC.46*) are also part of this group. Though I postulate that they may be from horse-gear, I categorize them as 'other' because the categorization as horse-gear is too tentative.

C6.3.11 Flat graves at La Quenique

A number of flat graves also were excavated at La Quenique, in addition to the barrows discussed above. The objects found in these graves are for the most part of little interest to the current study and generally are not discussed elsewhere. However, as it is relevant to be able to discuss the site of La Quenique as a whole, the finds done in these flat graves are listed. The numbers used indicate

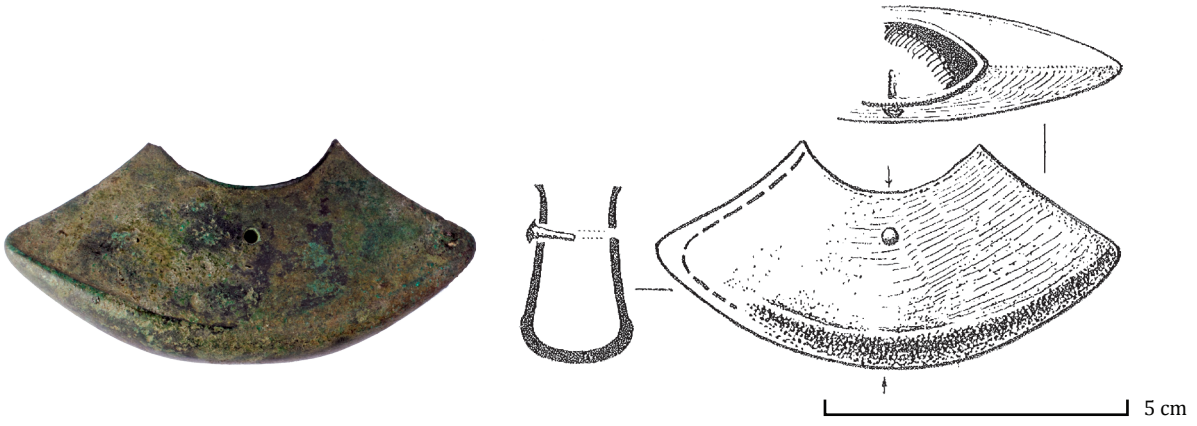


Fig. C6.34 A bronze chape (CSE-LQ.UC.48) probably from a flat grave at Court-St-Etienne La Quenique. Drawing after Marien 1958, fig. 10; photograph by J. van Donkersgoed.

Court-St-Etienne La Quenique Flat graves **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1908, 1913, 1914 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:**		
					Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*CSE-LQ.tpI.1**	Cremation remains of youth less than 15 years old at time of death (lost?), found in *CSE-LQ.tpI2**	Indet	Indet	Indet	-	-	-
*CSE-LQ.tpII.1**	Cremation remains, found in *CSE-LQ.tpII.2**	Indet	Indet	Indet	-	-	-
*CSE-LQ.tpIII.1**	Cremation remains, found in *CSE-LQ.tpIII.2*	Indet	Indet	Indet	-	-	-
CSE-LQ.tpV.1	Cremation remains, found in *CSE-LQ.tpV.2*	Indet	Indet	Indet	30	B01305	1497
CSE-LQ.tpXI.1	Cremation remains, found in *CSE-LQ.tpXI.2*	Indet	Indet	Indet	51	B01918D	1505
*CSE-LQ.tp.1**	Cremation remains, found in *CSE-LQ.tp.7**	Indet	Indet	Indet	48	-	-
*CSE-LQ.tp.2**	Cremation remains, found in *CSE-LQ.tp.11*	Indet	Indet	Indet	31	B01683l or B1683, 38	1508
CSE-LQ.tp.3	Cremation remains, found in *CSE-LQ.tp.12*. Cremation of 0.330 kg, substantial pieces	Indet	Indet	Indet	32	B01683n	1507
CSE-LQ.tp.4	Cremation remains found in *CSE-LQ.tp.13*. 0.035 kg cremation.	Indet	Indet	Indet	33	B01683o or B 1683, 41	1521
CSE-LQ.tp.5	Cremation remains, found in *CSE-LQ.tp.14*. Two bags of cremation, 0.500 kg and 0.335 kg	Indet	Indet	Indet	34	B01683f	1504
	Pottery						
*CSE-LQ.tpI.2**	Urn, contained cremation *CSE-LQ.tpI.1**	Indet	Indet	Indet	24	-	-
CSE-LQ.tpI.3	Accessory vessel	Indet	Indet	Indet	25	B1805A	1476
CSE-LQ.tpII.2	Pot, contained cremation *CSE-LQ.tpII.1**	Indet	Indet	Indet	26	B01805	1501
*CSE-LQ.tpII.3**	Accessory vessel	Indet	Indet	Indet	27	B 1805, 8	
CSE-LQ.tpIII.2	Pot, contained cremation *CSE-LQ.tpIII.1**	Indet	Indet	Indet	28	B 01805 C	1503
CSE-LQ.tpV.2	Pot, contained cremation *CSE-LQ.tpV.1*	Indet	Indet	Indet	30	B01305	1497
CSE-LQ.tp.XI.2	Pot, contained cremation *CSE-LQ.tpXI.1*	Indet	Indet	Indet	51	B01918D	1505
CSE-LQ.tp.6	Pot	Indet	Indet	Indet	47	B01918A	1524
*CSE-LQ.tp.7**	Pot, contained cremation *CSE-LQ.tp.1**	Indet	Indet	Indet	48	-	-
CSE-LQ.tp.8	Pot	Indet	Indet	Indet	49	N00520	1489
CSE-LQ.tp.9	Accessory vessel	Indet	Indet	Indet	49	B 01918, 4	1485
CSE-LQ.tp.10	Accessory vessel	Indet	Indet	Indet	50	B01918E or B1918, 5	1481
CSE-LQ.tp.11	Pot, contained cremation *CSE-LQ.tp.2**	Indet	Indet	Indet	31	B01683l/ B1683, 38	1508
CSE-LQ.tp.12	Pot, contained cremation *CSE-LQ.tp.3*	Indet	Indet	Indet	32	B01683n	1507
CSE-LQ.tp.13	Pot, contained cremation *CSE-LQ.tp.4*	Indet	Indet	Indet	33	B01683o B 1683, 41	1521
CSE-LQ.tp.14	Pot, contained cremation *CSE-LQ.tp.5*	Indet	Indet	Indet	34	B01683f	1504
CSE-LQ.tp.15	Accessory vessel, old card says B1683(35)	Indet	Indet	Indet	35	B1683i	1510
CSE-LQ.tp.16	Accessory vessel	Indet	Indet	Indet	36	B01683h	1511
CSE-LQ.tp.17	Pot	Indet	Indet	Indet	37	N00529	1518
CSE-LQ.tp.18	Accessory vessel	Indet	Indet	Indet	41	N00528	1517
CSE-LQ.tp.19	Accessory vessel	Indet	Indet	Indet	42	N00519	1488
CSE-LQ.tp.20	Pot	Indet	Indet	Indet	43	N00530	1519
CSE-LQ.tp.21	Pot with incised decoration on the shoulder, with white residue. Bone paste?	Indet	Indet	Indet	44	N00531	1520
CSE-LQ.tp.22	Pot	Indet	Indet	Indet	45	N00532	1522

Tab. C6.16 Inventory and numbering information Court-St-Etienne La Quenique flat graves.

		Use/ repair	Bending/ breaking	Fire	Other numbering systems:		
					Mariën 1958	MRAH inv. no.	Fiche no.
CSE-LQ.tp.23	Accessory vessel	Indet	Indet	Indet	46	B01683	1483
CSE-LQ.tp.24	Accessory vessel	Indet	Indet	Indet	46	N00517	1482
CSE-LQ.tp.25	Accessory vessel	Indet	Indet	Indet	57	N 00525	1512
CSE-LQ.tp.26	Accessory vessel	Indet	Indet	Indet	58	N00527	1516
CSE-LQ.tp.27	Accessory vessel	Indet	Indet	Indet	59	N00518	1487
CSE-LQ.tp.28	Accessory vessel	Indet	Indet	Indet	60	N00521	1490
CSE-LQ.tp.29	Accessory vessel	Indet	Indet	Indet	62	N00526	1513
CSE-LQ.tp.30	Accessory vessel	Indet	Indet	Indet	70	N00523	1495
	Tools						
*CSE-LQ.tpll.4**	Spindle whorl	Indet	Indet	Indet	98	B 1805, 9	-
	Personal appearance						
*CSE-LQ.tpl.4**	Bronze spiral tubes	Indet	Indet	Indet	139a–c	B1808, 11	-
*CSE-LQ.tpl.3**	Glass bead	Indet	Indet	Indet	301	B1805, 11	-
References: Mariën 1958.							

Tab. C6.16 continued.

Court-St-Etienne La Quenique Unknown context **Walloon-Brabant, Belgium**					**Data quality:** poor		
Method of recovery: excavation (poor) **Year of discovery:** 1920 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:**		
					Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
CSE-LQ.UC.48	Bronze chape (type Viehofen/A2)	--/--	--/--	--	109	-	-
References: Mariën 1958.							

Tab. C6.17 Inventory and numbering information Court-St-Etienne La Quenique chape from a flat grave.

which objects come from the same grave. Objects from the flat graves, but without a specific flat grave number also are listed in the table.

C6.3.11.1 A chape probably found in a flat grave at La Quenique

A bronze chape probably was found in a flat grave at La Quenique (Mariën 1958, 184–5). It is of interest to the current study to show the time depth of the burials at Court-St-Etienne. The chape *CSE-LQ.UC.48* appears to be a type Viehofen/A2 and therefore most likely dates to the second half of the 9th or the early 8th century BC (Fig. C6.34; Milcent 2012, 48; fig. 9.A; Trachsel 2004, 112–3).

C7 Darp-Bisschopsberg

An unusual grave, containing among other things the remains of two bridles and three iron spearheads, was found near Darp in the province of Drenthe (Fig. C7.1). The artifacts from this burial are currently in the collection of the National Museum of Antiquities (RMO), though unfortunately only a selection could be located. Curator L. Amkreutz made these available for study. They were examined by myself and photographed by J. van Donkersgoed. For the remaining finds the descriptions given by De Wit (1998) and Kooi (1983), in combination with surviving color drawings by B. Dekker and X-rays (housed in the RMO archive) were used to re-analyze this complex as a whole.

C7.1 Find circumstances

This Early Iron Age grave was discovered in 1907 on the Bisschopsberg (also known as the Havelterberg) near Darp, municipality of Havelte. The laborers who found the burial complex salvaged several objects (Kooi 1983). The finds were kept in the attic of a local draper for several years until a collector from Almelo (province of Overijssel) bought them in 1910. This collector, a M.G. ter Kuile asked curator J.H. Holwerda of the RMO to trade the finds for some that were from Overijssel. Following this exchange the Darp finds resided in the collection of the RMO until their significance was recognized. In his letters Ter Kuile indicates roughly the spot where the finds were found, but there remains some uncertainty as to the exact find location. Though the landscape has changed since the discovery of this grave, it appears that at the time of the find the countryside was a heathland with sand drifts (Kooi 1983, 197). Several other finds are reported from this

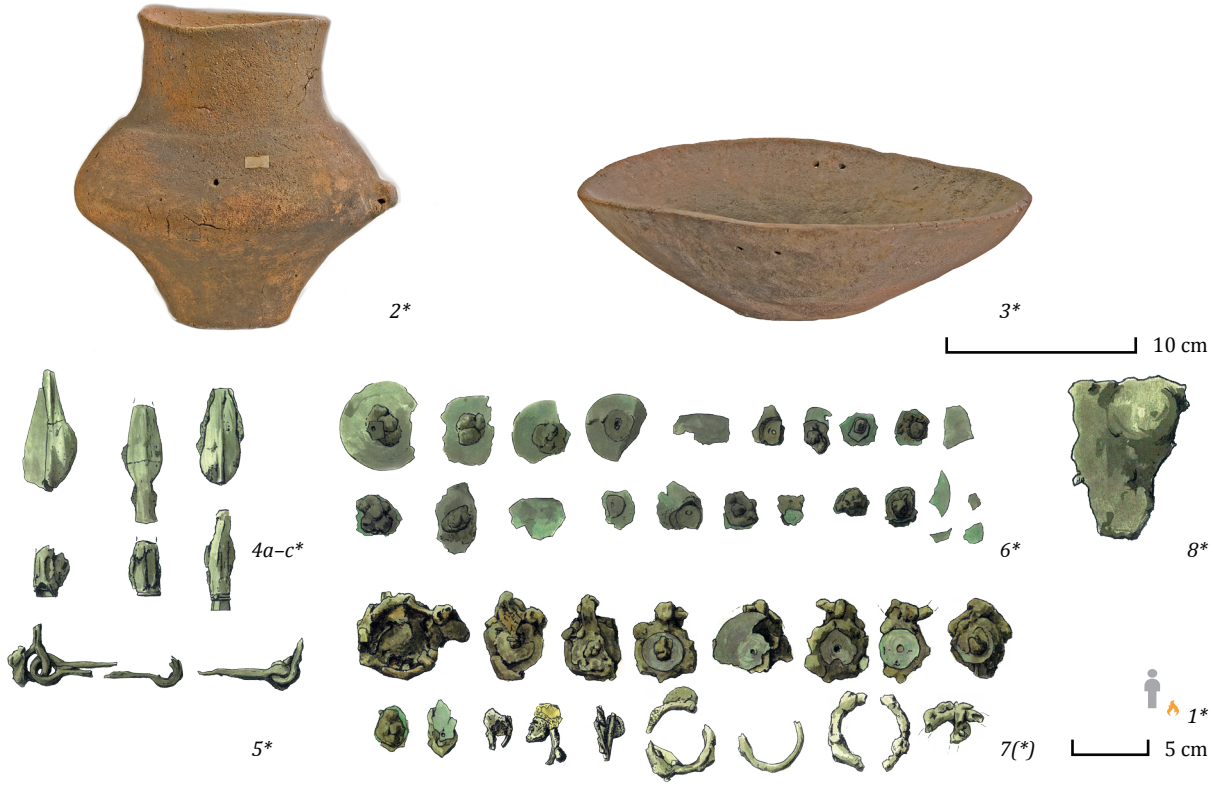


Fig. C7.1 The finds from Darp-Bisschopsberg (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix DB. Drawings by B. Dekker; photographs ©RMO.

area at roughly the same time. J. Tomp from Steenwijk donated half of a bronze mould to the Drents Museum (DM) in 1907. The mould half had been found in a stretch of moorland next to a road (the Ruiterweg) near Havelte. The DM also bought a bronze axe that had been found near the Havelterberg in 1920. In 1923 the DM acquired several other objects that had been found on the Bisschopsberg (Kooi 1983, 197). Kooi (1983, 198–9) uses various topological changes and local finds to argue that the 1923 finds likely come from the same burial field as a barrow excavated in 1924 by A.E. van Giffen. He also suggests that it is highly likely that the 1907 finds are also from this same burial field.

C7.2 The material remains

Human remains The finders reported that the urn was filled with cremation remains when discovered, but these have not survived.

Pottery The urn is a Ruinen-Wommels-1 type with a pierced lug on the belly (Kooi 1983, 199). The urn is a grey-beige color and misshapen. It is tempered with white *steengruis* (crushed stone), 20.5 cm high and 0.5 cm thick (De Wit 1998, 334). A flat, conical bowl (also grey-beige) with a pair of piercings under its rim was found lying shattered on the urn (Kooi 1983, 199). It is tempered with white *steengruis* and some quartz particles. The bowl is irregular in shape, though this may be a result of the extensive restoration. It is 9.5 cm high and 29.5 cm in diameter at its largest point (De Wit 1998, 334).

Weaponry Three iron spearheads were found in this grave (Fig. C7.2). They are all in very poor condition, and slightly different in shape. One spearhead has an unusual octagonal-shaped socket (*DB.4a**) with three sharp ridges toward its end. The pin for attaching a wooden shaft survives in the socket. The drawing shows that the octagonal pattern on the socket had been twisted in a way. The somewhat haphazardness of this twisting suggests this perhaps was not done as a way of decorating the spearhead, but rather may have been part of an intentional process in which this spearhead was bent, and perhaps broken during the burial ritual. The other two spearheads have round sockets, both also with their pins surviving. One of these (*DB.4b**) has a central rib running into the blade. The X-ray of this spearhead reveals that it also had three sharp ridges around its socket. These ridges, however, are not depicted in Dekker's drawing of this fragment, nor does Kooi depict them on his reconstruction. It is possible that they were not discernable on the corroded artifact, but they are discernable on the X-ray. The other spearhead has three ridges toward the end according to Kooi (1983, 199–200). However, on the drawing by Dekker the socket of this spearhead has only a single ridge. There is no X-ray available of this spearhead, so this cannot be verified. The spearheads are all broken in roughly the same places, making it possible that they were broken intentionally prior to deposition. In concert with the above observation that *DB.4a** appears to have been twisted intentionally prior to deposition, it seems likely that these weapons were intentionally bent and broken. Without access to the actual artifacts, this remains conjecture.

Horse-gear Several bronze and iron fragments of horse-gear were found in this burial. They include fragments of two iron horse-bits of which the joints of the snaffle survived. The bits appear to not be identical, and at least



Fig. C7.2 The three spearheads (DB.4a–c) as reconstructed by Kooi. Drawing after Kooi 1983, fig. 3.*

one seems to have been of a different shape than the other horse-bits studied for this research. The one that survives the most intact appears to have been made by linking two rings and then flattening the middle sections of the rings, leaving an eye at either end. In all other iron bits studied here the mouth-pieces were made of twisted rings or bear falls twisted decoration (see Fig. A2.4). Kooi (1983, 201) extrapolated that the horse-bits would have been 15 cm wide (see also Section 6.3.6.4). Kooi had several rusted together bronze discs and iron rings (*DB.6**) X-rayed which revealed that they were indeed horse-gear. One is a fragment of a ring with two attached eyes. Of these one eye has been forged into a flat, roughly triangular shape. Two discs have been riveted to this, one of bronze, the other of iron (Kooi 1983, 201). There is also a complete ring with eyes like those on the previous piece. Fragments of other rings have corroded onto it (Kooi 1983, 201). This combination of a ring and eyes with riveted on discs occurs eight times. There are an additional eight bronze discs with iron rivets. A woven pattern appears discernable on the X-rays of one of these objects, perhaps indicating the one-time presence of textile.

Kooi reconstructs these, together with the horse-bit fragments into two bridles. Though likely correct that the bronze and iron discs and rings made up the attachments for two bridles incorporating the iron snaffles, the bridles as reconstructed would not function (Kooi 1983, fig. 5). The bit would slide sideways in and out of the horse's mouth (see also Sections C2.4.1 and 6.3.6.4). It is more likely that the various fragments originally were incorporated into some kind of construction that would have held the bit in place. Unfortunately it is impossible to posit a more detailed reconstruction of the horse-gear without access to the actual artifacts.

There were also several *phalerae* in this grave. The most complete of these is a bronze disc (*DB.7*) with the remains of a hook in the center (Fig. C7.3). The disc is pierced in the center and around this perforation the remains of other pieces of sheet iron and bronze are riveted to the disc. This disc was situated in the urn, on top of the cremated remains (Kooi 1983, 199). According to De Wit (1998, 334) these likely were attached to the horse-bits and used to attach the reins. In Ter Kuile's letter regarding these objects he writes of five or six of these discs, while only four are present in the RMO collection. The most intact of the discs is 5.6 cm in diameter (De Wit 1998, 334). The other three bronze discs are preserved only partially and have traces of other objects corroded onto them. The color drawings of the objects that were recently recovered reveal several more (fragments) of similar objects (see Fig. C7.1). There were also several iron ring fragments in this grave. These could be from the disc/iron ring pieces (*DB.6**) or have been loose rings that were likely part of the horse-gear in some manner.

Darp-Bisschopsberg **Drenthe, the Netherlands**					**Data quality:** medium
Method of recovery: chance find (medium) **Year of discovery:** 1907 **Date:** Ha C2–D1 **Current location:** National Museum of Antiquities, Leiden (partially lost)		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** RMO inv. no.
	Human remains				
*DB.1**	Cremation remains	Indet	Indet	++	-
	Pottery				
*DB.2**	Pottery urn, contained cremation *DB.1*	--/--	--/--	--	c 1911/4.1
*DB.3**	Pottery bowl	--/--	--/--	--	c 1911/4.2
	Weaponry				
*DB.4a**	Iron spearhead	--/--	+-/+	--	c 1911/4.6
*DB.4b**	Iron spearhead	--/--	--/+	--	c 1911/4.6
*DB.4c**	Iron spearhead	--/--	--/+	--	c 1911/4.6
	Horse-gear				
*DB.5**	Iron horse-bit, 2x	--/--	--/-	--	c 1911/4.5
*DB.6**	Bronze discs and iron rings, partially lost.	--/--	--/--	--	c 1911/4.4
DB.7(*)	Bronze disc *phalera*, 4x and multiple fragments	--/--	--/--	--	c 1911/4.3
	Other				
DB.8	Iron (?) fragment	--/--	-/-	--	-
References: De Wit 1998; Kooi 1983.					

Tab. C7.1 Inventory and numbering information Darp-Bisschopsberg.

C7.3 Dating

According to Kooi (1983, 201) the Ruinen-Wommels-1 type urn dates this grave to ca. 650 BC (based on ^{14}C-dates, though he does not specify to which dates he is referring). This would appear consistent with the horse-bits, horse-gear decorations and the spearheads (Fig. 3.5; Trachsel 2004, 370).

C7.4 Actions taken and reconstructing the (burial) ritual

The finders of this unusual grave reported that the urn was filled with cremation remains when discovered, and that one of the bronze discs was located on top of these remains. The fragmented bowl, which was found shattered above the urn, contained more cremated remains and the rusted lumps of other objects (Kooi 1983, 200). Unfortunately this information does not allow for a particularly detailed reconstruction of the burial ritual. What we do know is that someone was cremated and buried in an urn, with some cremation remains ending up in a bowl. How this bowl was positioned originally is unknown. A likely option, based on other graves and the distribution of the cremation remains, is that the bowl was placed as a lid over the urn. What is clear, in any case, is that this individual, or individuals, was or were buried with unusual horse-gear and spearheads, and that textile was likely incorporated in one form or another. The presence of a pair of bridles suggests that the horse-gear was for draft animals (Section 6.3.5.4). The association with spearheads is unusual for an Early Iron Age grave, though more common for later burials. The presence of the nails in the spearhead shafts suggests they were buried mounted on wooden shafts. Since the spearheads (likely) were located in an urn, this would indicate that the spear shafts were broken off close below the spearheads.



Fig. C7.3 Some of the bridle decorations (DB.7) from Darp-Bisschopsberg. Photograph by J. van Donkersgoed.

C8 Ede-Bennekom

This little bronze vessel is often mentioned in discussions of the chieftains' graves as it is a clear Hallstatt import (Fig. 8.1). Yet it is a different type than the other Early Iron Age bronze vessels found in the Low Countries. It is also a confirmed grave find. The National Museum of Antiquites (RMO) kindly made this vessel available. It was studied and photographed by myself. The in-house photographer of the RMO, P.J. Bomhof was kind enough to also photograph it.

C8.1 Find circumstances

In 1863 A.G. Haasloop Werner wrote a letter to the RMO about several objects excavated recently in Ede-Bennekom and included some drawings. He describes how a bronze urn "filled to the rim with burned bones, of which several pieces of a skull could be recognized" upon discovery had been pierced on one side by a spade (Pleyte 1877, 52; my translation). It is interesting that no sign of this (or of restoration work repairing it) can be discerned on the situla at present. These objects, including the situla were collected by the museum after Haasloop Werner's death in 1864.

C8.2 The material remains

Human remains Pleyte (1877, 52) notes that burned bones filled the bronze vessel to the rim and that several skull fragments were recognizable. This indicates that there were cremation remains present at the time of discovery, but these have unfortunately been lost.



Fig. C8.1 The finds from Ede-Bennekom (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix EB. Photograph by P.J. Bomhof ©RMO.



Fig. C8.2 A handle on the rim (left), a repair on the lower rim (middle) and a repair on the bottom of the vessel from Ede-Bennekom (EB.2) placed during production (right). Figures are different scales. Photographs by P.J. Bomhof ©RMO.

Ede-Bennekom **Gelderland, the Netherlands**					**Data quality:** medium
Method of recovery: excavation (poor) **Year of discovery:** prior to 1863 **Date:** Ha C1–2 **Current location:** National Museum of Antiquities, Leiden		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** RMO inv. no.
	Human remains				
*EB.1**	Cremation remains, lost	Indet	Indet	++	-
	Bronze vessel				
EB.2	Bronze situla	+-/+	--/--	--	HW 24
References: Fokkens/Jansen 2004, 57; Pleyte 1877, 52; Roymans 1991, 37–9.					

Tab. C8.1 Inventory and numbering information Ede-Bennekom.

Bronze vessel This small bronze situla is unique in the Low Countries (Fig. C8.1). The walls are made from a single sheet of bronze bent into a tube and riveted together. Two ribs have been hammered out on the shoulder. The rim was hammered outwards around a metal core. The handles are bronze rods bent into shape and attached to the vessel with two rivets each and may be slightly worn (Fig. C8.2, left). One handle straddles the seam of the wall sheet; the other is directly opposite it. The bottom is a separate circular piece riveted on. The rivets attaching the bottom to the body are flattened on the outside and for the most part evenly spaced. On one spot where the bottom is attached to the wall, there are two rivets right next to each other, with another rivet fastening a square piece of bronze plate right above (Fig. C8.2, middle). The rivets of this repair match the other rivets attaching the base to the wall. This similarity indicates that this was likely done during or right after production. On the bottom, directly beneath this repair, there is another rectangular piece of bronze plate riveted onto the bottom, covering a split (Fig. C8.2, right). The piece on the bottom is attached with a different kind of rivet than those used on the body. Considering its location and the type of tear, I suggest that this tear occurred while the base ring was being hammered out. The proximity of these two repairs in particular indicates that it might be a production flaw and repair. There are no signs of burning or intentional distortion.

C8.3 Dating

The type of bucket found in Ede-Bennekom is described by Prüssing (1991, 60–71; Taf. 25) as a situla *mit Schulterippen* and *Omegaförmigen Attaschen*, and appears to date to the older Hallstatt C phase, but can also be from the whole Hallstatt C period (Fig. 3.5).

C8.4 Actions taken and reconstructing the (burial) ritual

Someone was cremated and the remains were buried in a bronze vessel. The mourners deliberately may have deposited skull fragments lastly, given Pleyte's (1877,52) comment regarding the visible skull fragments. Unfortunately, this is all that can be reconstructed of the burial ritual in which this bronze vessel was deposited.

C9 Flobecq-Pottelberg Tombelle 78

A group of barrows was excavated at Flobecq-Pottelberg in 1836. Tombelle 78 was excavated for the first time the next year. The barrow contained a chamber built of stone, and within this a zone of cremated bone and charcoal mixed together was found. Later, in 1843, a bronze sword was found at the level of the chamber floor. The hilt allegedly had plates made of wood (Delvaux 1888/89, 22*ff.*; 101*ff.*; Gerdsen 1986, 107). No other information regarding this sword survives, and it is unclear where the finds currently reside.

C9.1 The material remains

Human remains The cremated bone lay in the center of the barrow, mixed with charcoal (Delvaux 1888/89, 22*ff.*; 101*ff.*; Gerdsen 1986, 107; Mariën 1958, 235).

Weaponry A bronze sword was broken into three pieces. Mariën (1958, 235) describes this sword as a Hallstatt bronze sword, and according to Delvaux its hilt had plates made of wood (Delvaux 1888/89, 22ff.; Gerdsen 1986, 107).

C9.2 Dating

The description of this sword by Mariën (1958, 235) as a Hallstatt bronze sword, unfortunately, does not provide a typochronological date any narrower than the dating range of bronze Gündlingen and Mindelheim swords, which would date this sword, and therefore likely the burial somewhere in the 850–650 BC range (Sections 3.4.1.1 and 3.4.1.2).

C9.3 Actions taken and reconstructing the (burial) ritual

Though little can be reconstructed of the burial ritual that resulted in T.78, the supposed stone burial chamber is of interest. Unfortunately, the early date of the excavation and its poor description means it cannot be established what exactly was interpreted as a stone burial chamber, or whether modern excavation techniques would have yielded the same interpretation. In any case, someone was cremated and their remains ended up mixed with charcoal at the center of a some kind of stone chamber. A bronze sword was deliberately broken into three fragments and interred with the deceased.

Tab. C9.1 Inventory and numbering information Flobecq-Pottelberg T.78.

Flobecq-Pottelberg Tombelle 78 **Hainaut, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1837/1843 **Date:** Ha B3–C2 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Human remains				
*FP.T78.1**	Cremation remains, lost	Indet	Indet	++	-
	Weaponry				
*FP.T78.2**	Bronze sword	Indet	Indet/++	Indet	-
References: Delvaux 1888/89; Gerdsen 1986, 107; Mariën 1958, 235; Roymans 1991.					

C10 Gedinne-Chevaudos

The barrow cemetery of Gedinne-Chevaudos (located only a kilometer from Louette-St-Pierre, see Chapter C21) yielded several swords and an unusual spearhead. Warmenbol (1978; 1993) comprehensively studied the finds from this site in the 1970s. He was kind enough to make his dissertation and notes available to me. These were sufficient for the current research to analyze this barrow group.

C10.1 Find circumstances

Dujardin and Gravet (1865/66) excavated around 20 barrows in 1863 and De Radiguès (1881, 253) excavated roughly another 20 in 1881 (Warmenbol 1993, 87). The barrows covered burned areas, sometimes mixed with charcoal (with T.S being the exception, this barrow is not discussed further). The barrows were no more than 40 cm high and the edges of were difficult to discern. No peripheral structures are reported, except for a wall of quartz blocks built around T.O (1.30 m). In many of the barrows (definitely in T.1, T.3, T.6, T.A and T.N) the cremation remains were collected in urns. In one case the cremation remains were scattered around a small pot with a flared neck. Sometimes the urn was dug into the burned area. T.3, T.7 and T.12 all contained pots and nothing else.

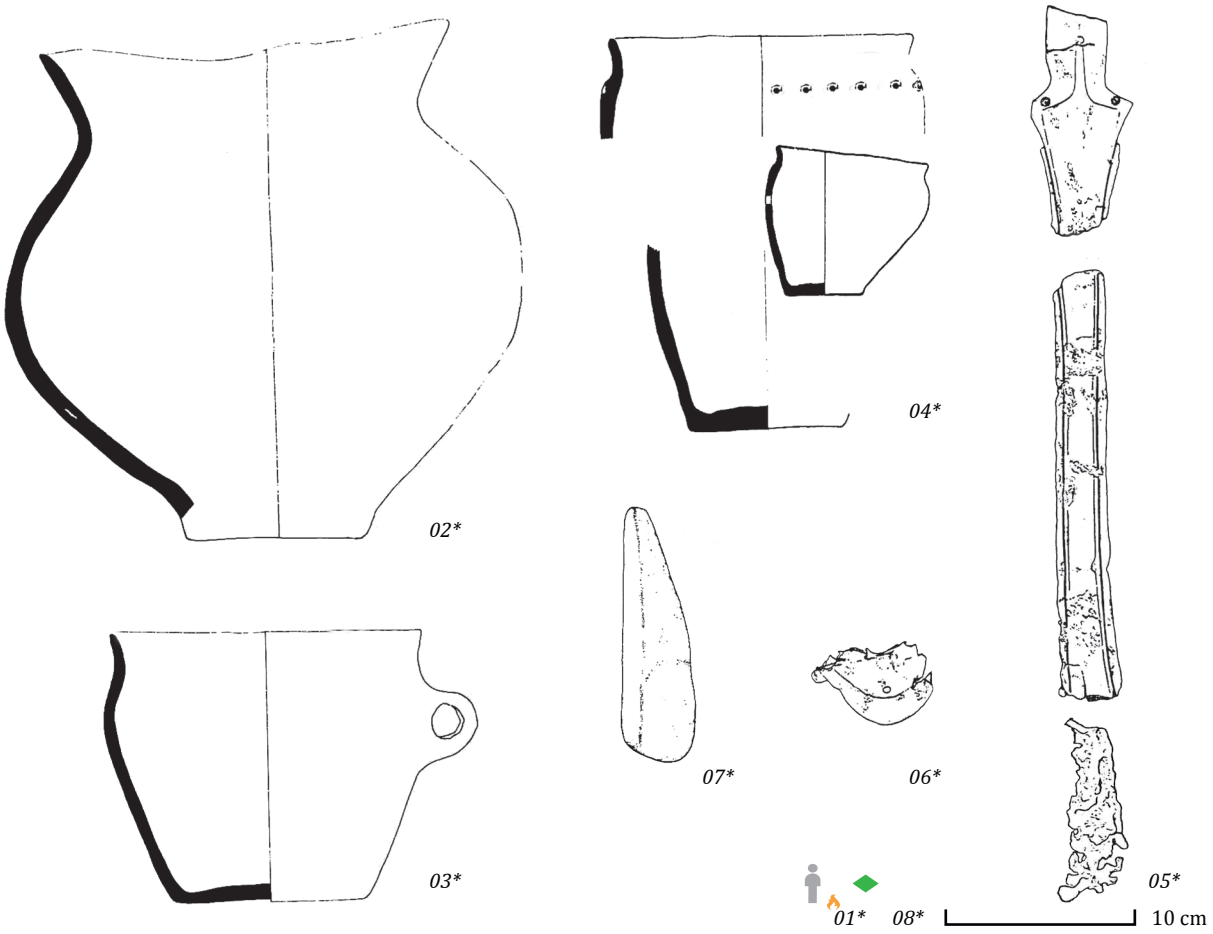


Fig. C10.1 The finds from Gedinne-Chevaudos T.1 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix GC.T1. Drawings after Warmenbol 1978, pl. VI and VII.

C10.2 Tombelle 1

This barrow was leveled completely (Dujardin/Gravet 1865/66; Warmenbol 1978, 36). It contained an area of burned earth. Charcoal and cremation remains were found deposited in an urn, as well as a bronze sword fragment, a bronze chape fragment, flint fragment and a pounding stone. Next to this urn lay the incomplete remains of two pots (Fig. C10.1; Warmenbol 1978, 36–53). This is the richest barrow of Gedinne-Chevaudos and Louette-St-Pierre.

C10.2.1 The material remains

Human remains Cremation remains were found in an urn.

Pottery Three pots were found in this barrow. One urn contained the cremated remains of the deceased. The other two lay scattered and were incomplete, which could mean that they were smashed prior to deposition (Warmenbol 1978, 45–52).

Weaponry A bronze Gündlingen sword was broken into at least four pieces, three of which were found in this barrow. The sword was twisted, broken and burned (Warmenbol 1993, 90). The handle and blade fragment show signs of fire exposure, and the third piece is very heavily melted. A bronze chape also was exposed to fire and is partially melted, with part of a rivet surviving (Warmenbol 1978, 39).

Tools A sandstone grinding stone was part of this assemblage (Warmenbol 1978, 52–3).

Other A small piece of flint could no longer be identified by (Warmenbol 1978, 52–3).

C10.2.2 Dating

The bronze sword from this burial appears to be a late type Gündlingen (Etappe 4/Weichering(?)) sword based on the shape of the shoulders, tang and cross-section of the blade (Milcent 2012, 48; Trachsel 2004, 118–24), which indicates that this burial likely dates to the end of the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).

C10.2.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated. Their remains were collected and deposited in an urn. A bronze sword was heated, twisted and broken into at least four pieces, and likely placed back in the pyre. A bronze chape was melted also, suggesting perhaps that the scabbard had been placed on the pyre as well. The remains of the sword and chape were placed in the urn with a fragment of flint and a grinding stone. The broken and incomplete remains of two pots lay by the urn. The burial deposited was covered with a barrow (Warmenbol 1978, 36–53).

Gedinne-Chevaudos Tombelle 1 **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha B3–C1 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Human remains				
*GC.T1.01**	Cremation remains, found in urn *GC.T1.02**	Indet	Indet	++	-
	Pottery				
*GC.T1.02**	Urn, contained cremation *GC.T1.01**	Indet	Indet	Indet	3
*GC.T1.03**	Pot, lay scattered and incomplete	Indet	Indet/+-	Indet	4
*GC.T1.04**	Pot, lay scattered and incomplete	Indet	Indet/+-	Indet	5
	Weaponry				
*GC.T1.05**	Bronze sword, 3 fragments (type Gündlingen Etappe 4/Weichering(?))	--/--	++/++	++	1
*GC.T1.06**	Bronze chape, partially melted	--/--	+-/+-	++	2
	Tools				
*GC.T1.07**	Grinding stone, sandstone	Indet	Indet	Indet	6
	Other				
*GC.T1.08**	Small piece of flint	Indet	Indet	Indet	7
References: Cowen 1967; De Loë 1891; Dujardin/Gravet 1865/66; Mariën 1952; 1953; 1975; Warmenbol 1978; 1993.					

Tab. C10.1 Inventory and numbering information Gedinne-Chevaudos T.1.

C10.3 Tombelle 2

There was no pottery in this barrow, nor are any cremation remains mentioned. This mound yielded only an iron sword (Fig. C10.2).

C10.3.1 The material remains

Weaponry The iron sword found in Tombelle 2 was bent so that the handle and tip were together, and located about a meter under the surface of the barrow. The sword from Tombelle 14 likewise was bent double, and Warmenbol could not determine which sword belonged to which barrow. Given that Dujardin and Gravet (1865/66, 48–9; Warmenbol 1978, 54) describe the handle and point of the sword from Tombelle 2 as coming together, I would suggest that Warmenbol's (1978) '*epée ployée 2*' is most likely the sword from this barrow. The other sword is folded in such a way that the handle and point are still quite a ways apart. For this reason Warmenbol's (1978) '*epée ployée 2'* is discussed here, and '*epée ployée 1*' is discussed under Tombelle 14. The sword discussed here is between 80 and 84 cm long.

C10.3.2 Dating

The iron sword from this burial appears to be type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), which indicates that this burial likely dates somewhere in the date range determined for this sword type in Section 3.4.1.2 (ca. 800–650 BC; Fig. 3.5).

C10.3.3 Actions taken and reconstructing the (burial) ritual

An iron sword was folded in half so that the handle and point ended up together. The sword was driven into the ground with the handle/tip pointing downward, and covered with a barrow. No mention is made of cremation remains, yet this is described as a burial with a sword, and this does seem likely given its presence in a barrow.

C10.4 Tombelle 13

Traces of a pyre were found at an 'ordinary depth' (Dujardin/Gravet 1865/66, 79). No mention is made of bones or pottery. Only an iron sword is listed as coming from this barrow (Fig. C10.3).

C10.4.1 The material remains

Weaponry This barrow contained the remains of an iron sword. It was stuck into the ground and appears to be an isolated find. It was very heavily rusted, poorly preserved and broken (Warmenbol 1993, 90). It is unclear whether these were recent breaks or ancient and intentional ones.

C10.4.2 Dating

The iron sword from this burial appears to be type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), which indicates that this burial likely dates somewhere in the date range determined for this sword type in Section 3.4.1.2 (ca. 800–650 BC; Fig. 3.5).

Gedinne-Chevaudos Tombelle 2 **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha C1–2 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Weaponry				
*GC.T2.01**	Iron sword (type Mindelheim)	--/--	++/--	+	2
References: Dujardin/Gravet 1865/66; Gerdsen 1986; Warmenbol 1978; 1993.					

Tab. C10.2 Inventory and numbering information Gedinne-Chevaudos T.2.

Gedinne-Chevaudos Tombelle 13 **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha C1–2 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Weaponry				
*GC.T13.01**	Iron sword, stuck into the ground	--/--	--/+-	--	1
References: Dujardin/Gravet 1865/66; Gerdsen 1986; Warmenbol 1978; 1993.					

Tab. C10.3 Inventory and numbering information Gedinne-Chevaudos T.13.

C10.4.3 Actions taken and reconstructing the (burial) ritual

The iron sword was stuck vertically into the ground, probably in the pyre remains (Dujardin/Gravet 1865/66, 50–1; Warmenbol 1978, 79). The supposed pyre remains and sword are the only indications of a grave here. No cremation remains were found.

C10.5 Tombelle 14

This barrow is noteworthy for the folded iron sword that was found in it (Fig. C10.4).

C10.5.1 The material remains

Human remains Small pieces of bone reportedly were found in this barrow (Dujardin/Gravet 1865/66, 51;

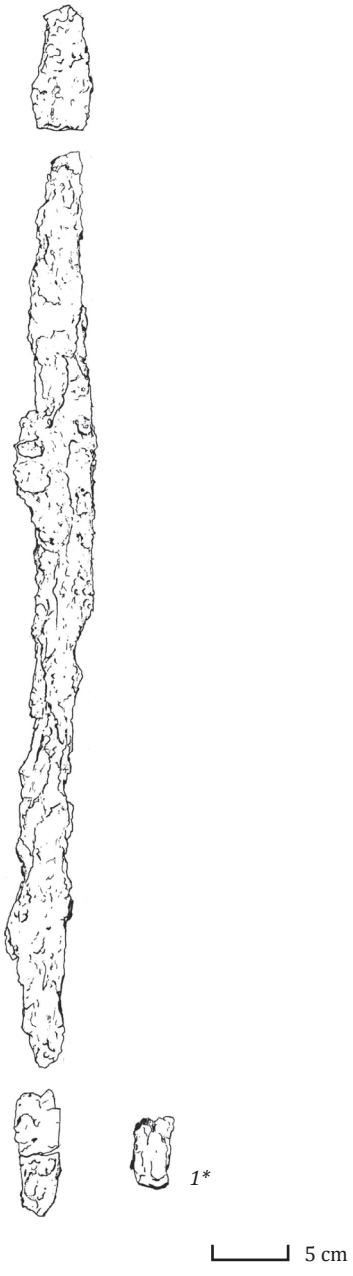


Fig. C10.2 The finds from Gedinne-Chevaudos T.2. The number has the prefix GC.T2. Drawings after Warmenbol 1978, pl. XII and XIII.

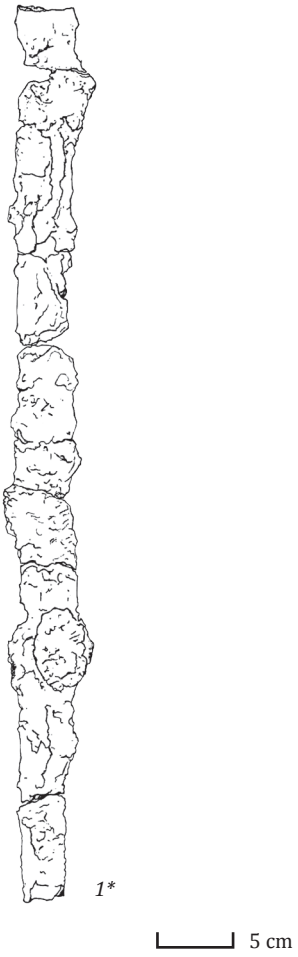


Fig. C10.3 The finds from Gedinne-Chevaudos T.13. The number has the prefix GC.T13. Drawings after Warmenbol 1978, pl. XII.

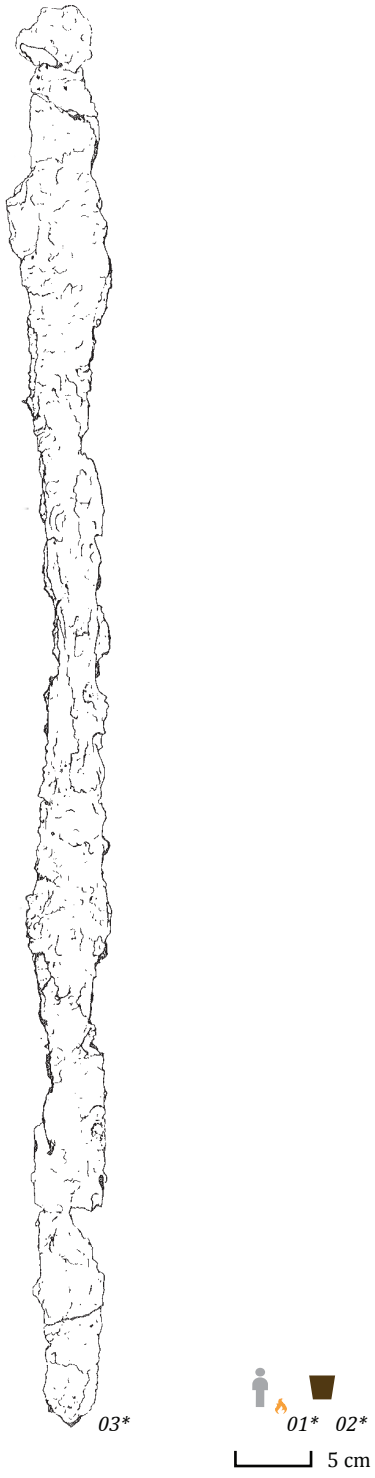


Fig. C10.4 The finds from Gedinne-Chevaudos T.14 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix GC.T14. Drawings after Warmenbol 1978, pl. XII and XIII.

Warmenbol 1978, 83), but nothing more is known about them. They are assumed to be human remains given their find location.

Pottery The pottery fragments that reportedly were found in this barrow could not be located (Warmenbol 1978, 83).

Weaponry As was described above with Tombelle 2 of this site, there is some uncertainty over which of two folded iron swords belongs to Tombelle 2 and which to Tombelle 14. I argued that it seems most likely that Warmenbol's '*epée ployée 1*' belongs to this barrow. This blade is one of the shorter ones in the dataset at 61 cm.

C10.5.2 Dating

The iron sword from this burial appears to be type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), which indicates that this burial likely dates somewhere in the date range determined for this sword type in Section 3.4.1.2 (ca. 800–650 BC; Fig. 3.5).

C10.5.3 Actions taken and reconstructing the (burial) ritual

An iron sword was folded roughly in half, and placed vertically into the ground in a burned area of earth with small pieces of bone. The urn likely was placed over it as fragments of the urn were recovered exactly above it (Dujardin/Gravet 1865/66, 51; Warmenbol 1978, 83).

C10.6 Tombelle 16

This barrow yielded a bronze lancehead and is therefore included in the current study (Fig. C10.5).

C10.6.1 The material remains

Human remains Cremation remains were found in a large pot, they do not appear to ever have been analyzed.

Pottery A large pot was used as an urn. A second pot was incomplete (described in detail by Warmenbol 1978, 88), though according to a later publication (Warmenbol 1993, 92) this grave reportedly contained two accessory vessels in addition to the large pot used as an urn.

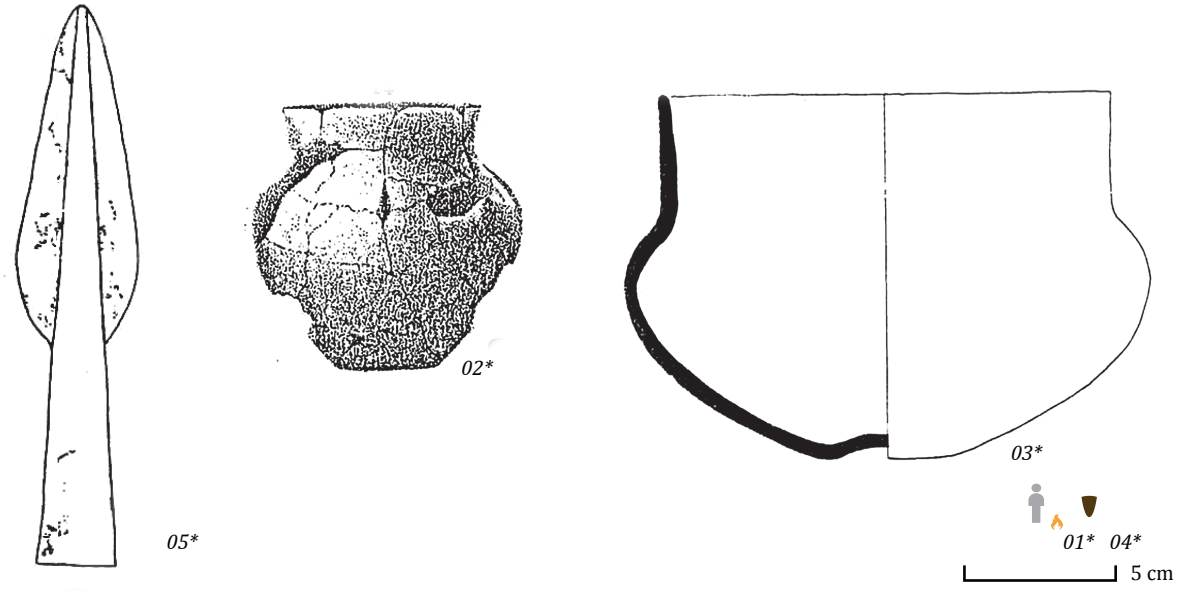
Fig. C10.5 (next page) The finds from Gedinne-Chevaudos T.16 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix GC.T16. Drawings after Warmenbol 1978, pl. XVI.

Gedinne-Chevaudos Tombelle 14 **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha C1–2 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Human remains				
*GC.T14.01**	Small bone fragments, assumed to be human	Indet	Indet	++	-
	Pottery				
*GC.T14.02**	Pot fragments	Indet	Indet	Indet	-
	Weaponry				
*GC.T14.03**	Iron sword, folded	--/--	++/--	+	1
References: Dujardin/Gravet 1865/66; Gerdsen 1986; Warmenbol 1978; 1993.					

Tab. C10.4 Inventory and numbering information Gedinne-Chevaudos T.14.

Gedinne-Chevaudos Tombelle 16 **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863? **Date:** Ha C1–2 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Human remains				
*GC.T16.01**	Cremation remains, found in large pot *GC.T16.02**	Indet	Indet	++	-
	Pottery				
*GC.T16.02**	Large pot, contained cremation *GC.T16.01**	Indet	Indet	Indet	2
*GC.T16.03**	Pot with cylindrical neck	Indet	Indet	Indet	3
*GC.T16.04**	Accessory vessel?	Indet	Indet	Indet	-
	Weaponry				
*GC.T16.05**	Bronze lancehead	--/--	--/--	--	1
References: Dujardin/Gravet 1865/66; Gerdsen 1986; Warmenbol 1978; 1993.					

Tab. C10.5 Inventory and numbering information Gedinne-Chevaudos T.16.



Weaponry A bronze lancehead is complete and measures 17.8 cm long. It has a circular socket with a relatively long shaft.

C10.6.2 Dating

This burial is dated Hallstatt C1–2 based on the pottery and spearhead (Warmenbol 1978, 90; Fig. 3.5).

C10.6.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated and their remains were deposited in an urn. A bronze lancehead, a second pot and possibly two accessory vessels accompanied the deceased. These either were buried in or covered by a barrow.

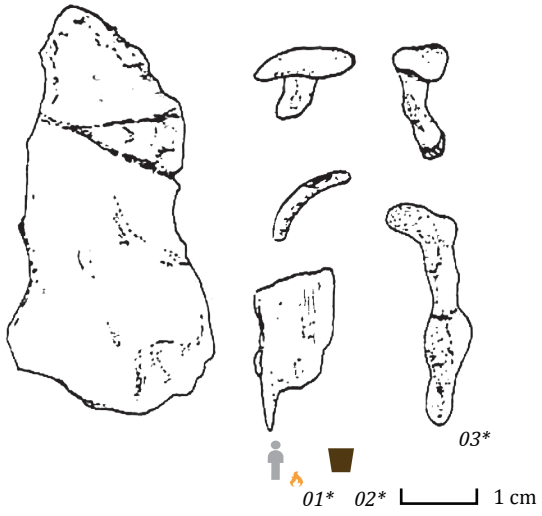


Fig. C10.6 The finds from Gedinne-Chevaudos T.A (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix GC.TA. Drawings after Warmenbol 1978, pl. XVI.

C10.7 Tombelle A

This barrow yielded some fragments from a bronze vessel and therefore is included in the current study (Fig. C10.6).

C10.7.1 The material remains

Human remains Burned bone was found in the urn, but nothing else is known (De Radiguès 1881, 253; Warmenbol 1978, 95).

Pottery The urn from this barrow could not be identified (Warmenbol 1978).

Bronze vessel Bronze sheet fragments were found in this burial, and De Laet (1974, 399) already proposed that it could be a situla as the bones reportedly were enveloped by the bronze. Warmenbol (1978, 95; pl. XVI) postulates that a small fragment of bronze sheet could be from this bronze vessel. Unfortunately, this fragment is not numbered on the plate, so it is not certain which fragment he refers to. The sheet in the middle seems the most plausible, and is bent at an angle that would be present on a situla.

C10.7.2 Dating

The fragmentary remains of a bronze vessel were found in this burial, and given the find context it is not unlikely that it dates to the Early Iron Age, though as this is a speculative dating it is not included in Figure 3.5.

C10.7.3 Actions taken and reconstructing the (burial) ritual

De Laet (1974, 399) proposed that the bronze sheet fragments could be the remains of a situla as the bronze reportedly enveloped the bones. As the burned bone was found in the urn, this indicates that the bronze vessel also was placed in the urn, though it is unclear whether it had to be bent, broken or burned in order to fit.

Gedinne-Chevaudos Tombelle A **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1881 **Date:** Ha C1–D3 **Current location:** -		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Human remains				
*GC.TA.01**	Cremation remains, found in urn	Indet	Indet	++	-
	Pottery				
*GC.TA.02**	Urn	Indet	Indet	Indet	1
	Bronze vessel				
*GC.TA.03**	Bronze sheet, possibly a situla/cup	Indet	Indet	Indet	2
References: De Laet 1974; De Radiguès 1881; Warmenbol 1978; 1993.					

Tab. C10.6 Inventory and numbering information Gedinne-Chevaudos T.A.

Gedinne-Chevaudos Tombelle P/Q **Namur, Belgium**					**Data quality:** poor
Method of recovery: 1881 **Year of discovery:** excavation (poor) **Date:** Ha C1–D3 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Pottery				
*GC.TP/Q.1**	Urn	Indet	Indet	Indet	1
	Personal appearance				
*GC.TP/Q.2**	Iron tweezers and iron rod	Indet	Indet	Indet	2; Z.4
References: De Radiguès 1881; Warmenbol 1978; 1993.					

Tab. C10.7 Inventory and numbering information Gedinne-Chevaudos T.P/Q.

C10.8 Tombelle P/Q

It is unclear whether the finds listed below are from Tombelle P or Q (Fig. C10.7). In either case, they are from a small barrow 2–3 m in diameter (Warmenbol 1978, 98).

C10.8.1 The material remains

Pottery A small pot that cannot be identified was found in this barrow.

Personal appearance The iron fragment that was found in this barrow is likely a set of tweezers. There are four fragments of these iron tweezers. There also appears to be an iron rod attached to the tweezers (Warmenbol 1978, 126). This might be another toiletry item, like a nail cutter.

C10.8.2 Dating

Tweezers similar to those found in this grave have been found in burials that date to the Hallstatt C1 period (*e.g.* Limal-Morimoine T.2 or Uden-Slabroek), but they also are found in later Early Iron Age contexts. This burial therefore likely dates early in the Early Iron Age, which appears consistent with the pottery.

C10.8.3 Actions taken and reconstructing the (burial) ritual

A small pot and a toilet set ended up buried in or under this barrow. Unfortunately no other information survives.

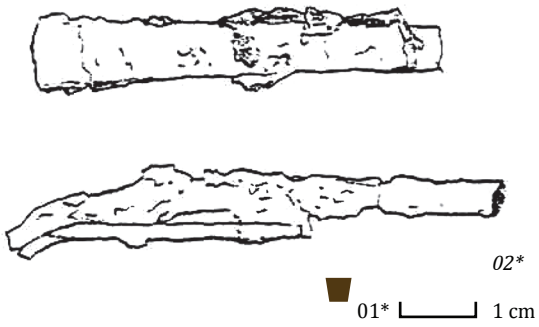


Fig. C10.7 The finds from Gedinne-Chevaudos T.P/Q (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix GC.TP/Q. Drawings after Warmenbol 1978, pl. XVI.

C11 Haps grave 190

Grave 190 from Haps is included in the present study because of the iron antenna dagger and arrowheads that were found in it (Fig. C11.1). While this burial has been dated to the Hallstatt D period in the past (Fokkens/Jansen 2004, 80; Roymans 1991, 38), new evidence indicates that it more likely dates to the late Hallstatt C period. It therefore is included in the current study. This burial was studied and published in detail by G.J. Verwers (1972), and his work forms the primary source of information. In order to answer a number of detailed questions, the entire burial assemblage was examined and photographed by myself at the Noordbrabants Museum, where the finds were kindly made available.



Fig. C11.1 The finds from Haps g.190 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix Hp.g190.

C11.1 Find circumstances

This burial was excavated in the 1960s as part of a larger excavation. It was located in the center of a closed ring ditch roughly 7.5 m in diameter. The cremated remains were not deposited in an urn, and the burial goods were found among the cremation remains. The objects were packed close together (Verwers 1972, 40–55).

C11.2 The material remains

Human remains Cremation remains were found with this burial. It is hoped that these can be located and analyzed in future.

Weaponry The iconic iron antenna dagger and sheath survive reasonably complete. The dagger cannot be taken out of the sheath anymore, though may have looked something like Figure C11.2. The sheath appears to have been made of a layer of leather and thin metal. Surprisingly, this metal sheath appears to (at least partially) be iron. On one side the sheath survives pretty much complete and bears a linear decoration (Fig. C11.2, bottom left). Verwers (1972, 55–8) writes that the other side of the sheath has loops on the back for attaching a belt of some kind. These loops could no longer be discerned.

This side of the dagger shows some interesting details. The metal facing of the sheath is missing on the top two thirds of the dagger, but the layer showing under this facing is not the blade itself (Fig. C11.2, bottom middle). It appears to be the leather inside of the sheath. Near the top the actual dagger is showing. There may also be a few traces of textile showing between the leather and the dagger blade. The bottom of the sheath terminates in a decorated ball (Fig. C11.2, bottom right). The blade

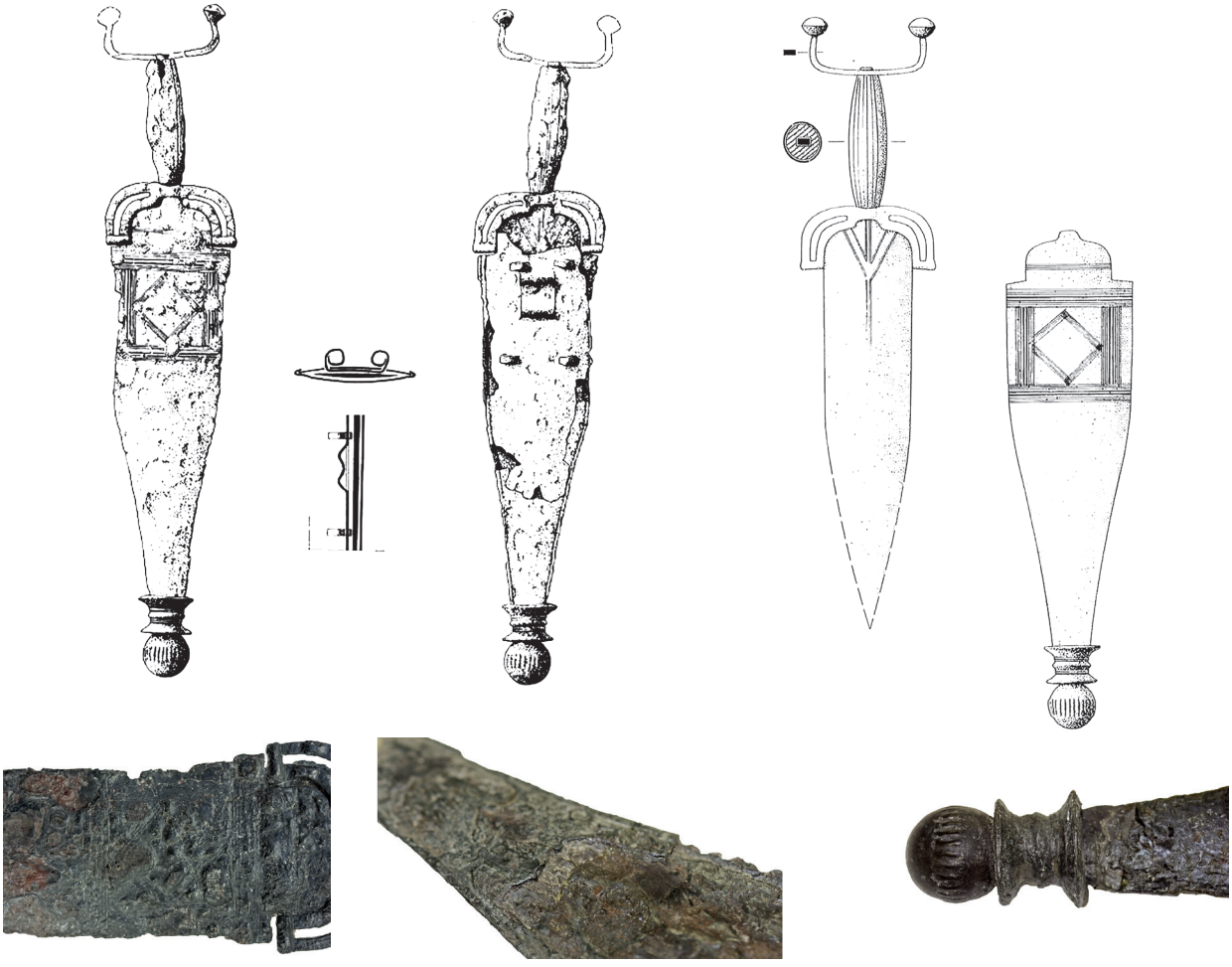


Fig. C11.2 The dagger (Hp.g190.2) as it appears today (top left) and in reconstruction (top right), with details of the decorated sheath (bottom left), the layers of sheath and leather(?) (bottom middle) and the decorated ball at the bottom of the dagger sheath (bottom right). Drawings after Verwers 1972, abb. 31–32.

Haps Grave 190 **Noord-Brabant, the Netherlands**					**Data quality:** good
Method of recovery: excavation (good) **Year of discovery:** 1960s **Date:** Ha C1–D3 **Current location:** Noordbrabants Museum, 's Hertogenbosch		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** NBM inv. no.
	Human remains				
*Hp.g190.1**	Cremation remains	Indet	Indet	++	-
	Weaponry				
Hp.g190.2	Iron dagger with decorated bronze sheath	-	-	-	-50304.1; 50304.2
Hp.g190.3–5	Iron arrowhead, 3x	-	--/+	-	50299; 50302; 50303
	Personal appearance				
Hp.g190.6	Iron pin	-	-	-	50301
References: Verwers 1972.					

Tab. C11.1 Inventory and numbering information Haps g.190.

is closed at the top by a curved crossguard. The tang survives, though the organic handle does not. There is a linear decoration on the grip and blade. The top of the tang has been hammered flat and terminates in the characteristic antennae, of which only one survives. The antennae were square in cross-section, and terminated in spheres made of two halves. Only one of these survives. The three iron arrowheads have a hollow socket and a rib running towards the tip. They are about 8 cm long, making them rather longer than the average arrowhead which is 4 cm (Verwers 1972, 58–60; see also Section C2.3.2). The wooden shafts seem to still be present in the sockets and they may have been broken off intentionally.

Personal appearance An iron pin, lacking its head and with a bend (Verwers 1972, 58), known as a *kropfnadel*, was found here.

C11.3 Dating

Pins and daggers similar to those found in this burial generally date to the late Hallstatt C1 or C2 phase (Trachsel 2004, 68–9; 136–7), though antenna daggers more generally are dated to the Hallstatt D phase (Sievers 1982). This would suggest that this burial dates to the Early Iron Age, with it more likely being early rather than later (Fig. 3.5).

C11.4 Actions taken and reconstructing the (burial) ritual

A man or woman was cremated, and his or her cremation remains ended up inside a ring ditch. The iron finds of this burial show no fire damage, nor is it likely they would have (see Section 2.2.3.4). The leather and bronze components of the dagger, however, probably would have been damaged had they been exposed to high temperatures for any length of time. This suggests that they did not accompany the deceased on the pyre.

The grave goods were found rusted together in a clump among the cremation remains. In order to corrode together in this manner the objects must have been packed very close together. It is likely that the arrow shafts were snapped off in order to deposit the arrowheads so closely with the dagger. The objects may even have been wrapped in textile into a bundle before being placed in the urn with the cremation remains.

C12 Harchies-Maison Cauchies

The site known as Harchies-Maison Cauchies yielded some spectacular finds and is an important cemetery relevant to this research. There have been a number of explorations and excavations at this site, yielding graves and fragments of at least four bronze swords. However, the site was never completely excavated, nor have the results of research at this site been extensively or comprehensively published (though see Leblois 2009; 2010). Because of this it is unknown how many burials were located here, or how many exactly were excavated. Information on the configuration of the graves, unfortunately, also is lacking. Most finds were done relatively deep in the ground (between 0.80 and 1 m; Leblois 2009, 22; 2010; Mariën 1975). The burials therefore could have been flat graves, though the types of objects found in them usually are found underneath barrows in this area (De Mulder 2011, 208). Moreover, it should be noted that at Gedinne, for example, the funeral deposit was placed in a hole dug through the layer of pyre debris, but covered by a barrow (Mariën 1975, 22–3). It therefore is also possible that there originally were barrows covering these graves, but that they were leveled before the excavations took place. Mariën (1975) also mentions this possibility, finding it likely considering that the graves were located in the modern village center. Leblois (2009, 22) in contrast argues that the proximity of the graves to each other indicates that these were flat graves as there would not have been space for barrows. In this Catalogue I list these graves as tombes rather than Tombelles to show this uncertainty. What is known is that the following finds were done and excavations conducted at this site (Fig. C12.1). The burials are discussed individually below.

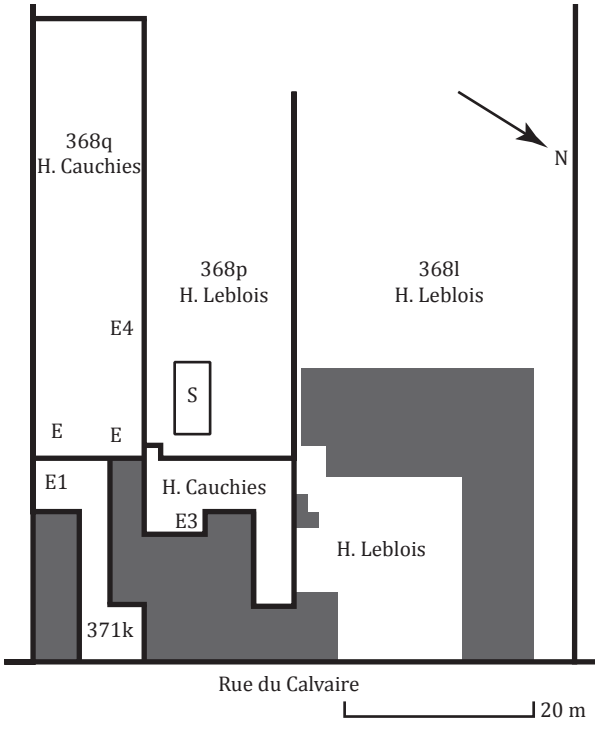


Fig. C12.1 Map of the excavations at Harchies-Maison Cauchies. Figure after Leblois 2010, fig. 2.

C12.1 Find circumstances

In 1913 H. Cauchies found the first remnants of the cemetery in his garden, including several fragments of an urn and "various objects from the Metal Ages"(Mariën 1975, 18–9), but also a grave (tombe 1) containing an urn, a 'band' (bracelet, or earring possibly?) and two fragments of a ritually broken bronze sword (Leblois 2010, 107). The presence of cremation remains is not mentioned explicitly, but the term "*tombe incineration*" makes it likely that this was a cremation grave (Mariën 1975, 18–9). Following this discovery, the *Service des Fouilles des Musées royeux d'Art et d'Histoire* (Brussels) authorized the first systematic excavation of the garden of the house Cauchies. This excavation was conducted in 1914 by E. Rahir. An urn containing cremation remains and five fragments of an intentionally broken bronze sword were found at a depth of 1 m (tombe 2; Leblois 2010, 107; Mariën 1975, 19). C. Leblois, intrigued by the finds, dug some holes in his parents' orchard in 1916. He was only 12 at the time. He continued from the area examined by H. Cauchies, and found two small bronze objects: a ring (believed to be *HMC.UC.7*), and some kind of pendant (*HMC.UC.08**; Leblois 2009, 12; 2010, 107). In 1926, during building work for the new house on the Rue du Calvaire, behind Café du Telephone, H. Cauchies found a new bronze sword (practically complete) and two bronze chapes together with cremated remains in tombe 3. The cremated remains and finds either were lying in piles or spread throughout the grave, possibly mixed with the ashes of the pyre (Leblois 2010, 108). In 1955, the MRAH undertook a new excavation campaign in Harchies. Mariën systematically excavated the garden of M. Cauchies behind the Café du Telephone. Here he found sherds from a pot and three fragments of a sword in very poor shape (tombe 4). The fragments lay 0.86 m below ground level, 0.05 m above the bottom of the urn, only half of which was present having been destroyed by soil disturbance at a depth of 0.70 m. To the east of the urn lay a dark spot with cremation remains (diam. 40 cm). In 1959, C. and Y. Leblois dug where the former had found the two small objects in 1916. They found a decorated "band", possibly an ear- or hair ring of some kind

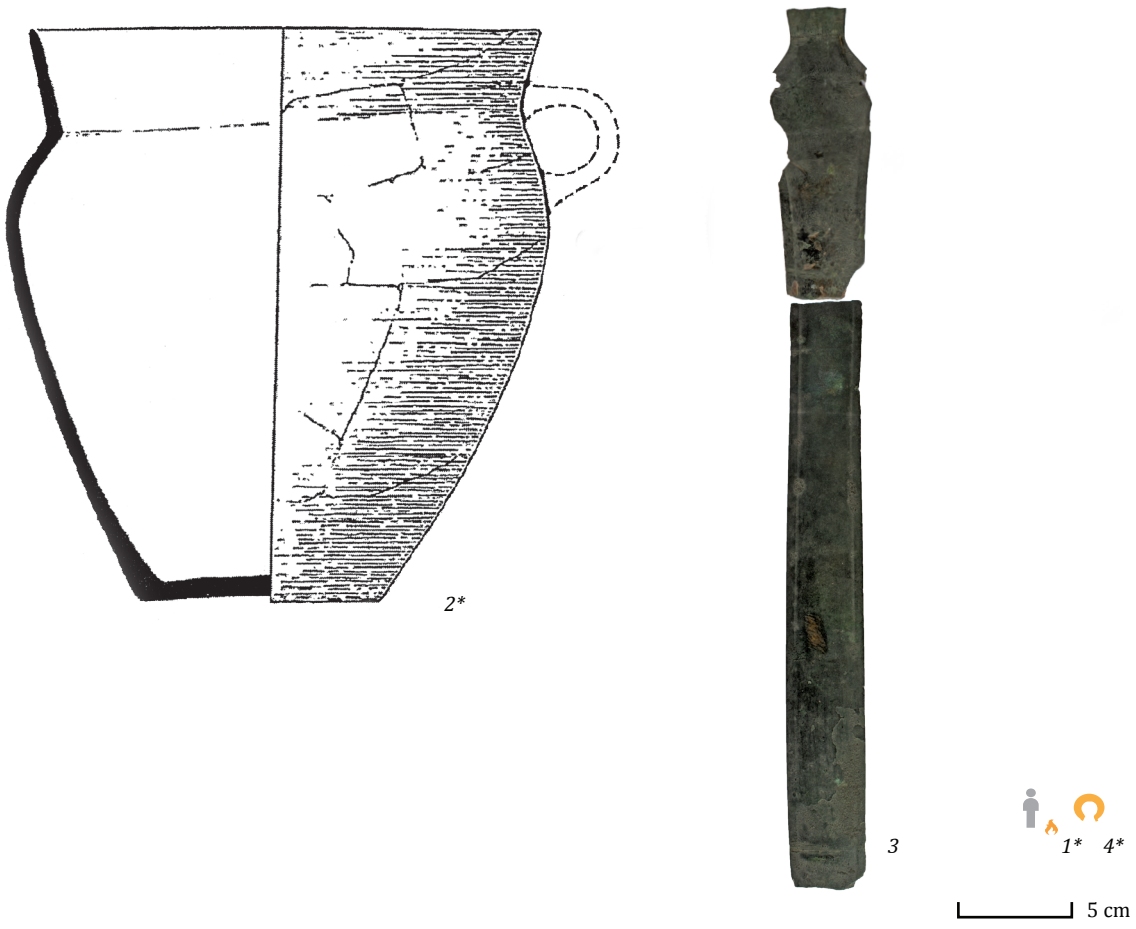


Fig. C12.2 The finds from Harchies-Maison Cauchies t.1 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HMC.t1. Drawing after Leblois 2009, fig. 8; photograph by J. van Donkersgoed.

(*HMC.UC.6**; Leblois 2010, 107). In 2006 S. Parent found a new fragment of a bronze sword, about 800 m to the east of the Maison Cauchies cemetery. The fragment is a piece of the tang, and resembles the tang of the sword from tombe 2 at Maison Cauchies (Leblois 2010, 110–1). The finds from tombe 1, 2 and 4 are in the collection of the MRAH and several objects were made available. They were examined by myself and photographed by J. van Donkersgoed. The finds from tombe 3 are in private hands (Mme Colette Warnier-André), though there is a replica in the MRAH.

C12.2 Tombe 1

As described above, H. Cauchies found a grave with a number of objects in his garden in 1913 (Fig. C12.2; Leblois 2010, 107). Of these the broken bronze sword was made available by the MRAH. The urn and bronze band could not be studied, though the urn at least has been documented at the museum recently. The sword was studied by myself and photographed by J. van Donkersgoed.

C12.2.1 The material remains

Human remains The use of the term "*tombe incineration*" makes it likely that this was a cremation grave (Mariën 1975, 18–9), though no cremation remains survive.

Pottery A pot, likely used as urn, was found in this grave.

Weaponry Two fragments of an intentionally broken bronze sword were recovered from this burial. This sword lacks ricasso and has two rivet holes on each shoulder. It is broken on the holes on both sides (Fig. C12.3, left), and there are pieces broken off the blade as well. There is a very slight curve to the blade piece. When present, the edges are mostly sharp, with no signs of blade damage. The edge decoration is very faint, and towards the bottom it almost disappears in spots. All the breaks are clean and appear intentional, probably hot-shorts (Fig. C12.3, left). There appears to be a lot of post-depositional damage to these sword fragments. There are deep scratches that are probably spade damage at several points, and parts appear to have been broken off as well (Fig. C12.4, middle and right) as indicated by the lack of or different patination of certain breaks. There is also damage from being mounted for display in the form of lines running across both fragments. These are the result of having been mounted with fish line. The tang fragment has very deep scratches both at its top and bottom break (Fig. C12.3), and it is unclear whether this is antique damage or whether this is also from some kind of display mounting. Both sword fragments have been repeatedly and thoroughly cleaned. Labels and stickers appear to have been added and removed several times. The side with the sticker is a lot shinier than the other. It would be strange for that to be from cleaning since the stickerless side is now a lot duller and dirty looking than the side with the sticker.

Personal appearance A 'band' found in this grave is interpreted as possibly being a bracelet or some kind of hair ring.

C12.2.2 Dating

The bronze sword from this burial appears to be an early type Gündlingen (Etappe 2/Villement) sword based on the shape of the shoulders and blade (Milcent 2012, 48; Trachsel 2004, 118–24), which indicates that this burial likely dates to the early part of the date range

Harchies-Maison Cauchies Tombe 1 **Henegouwen, Belgium**					**Data quality:** poor	
Method of recovery: chance find (poor) **Year of discovery:** 1913 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels/lost		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no.	De Mulder 2011
	Human remains					
*HMC.t1.1**	Cremation remains(?), likely found in *HMC.t1.2**	Indet	Indet	++	-	-
	Pottery					
*HMC.t1.2**	Pot, likely contained cremation *HMC.t1.1**	Indet	Indet	Indet	-	-
	Weaponry					
HMC.t1.3	Bronze sword, 2 fragments (type Gündlingen Etappe 2/Villement)	-/--	--/++	+-	B. 2119	MC.01.02
	Personal appearance					
*HMC.t1.4**	'band'?*	Indet	Indet	Indet	-	-
References: De Mulder 2011; Leblois 2009; 2010; Mariën 1975.						

Tab. C12.1 Inventory and numbering information Harchies-Maison Cauchies t.1.



Fig. C12.3 The broken shoulders (left), the bottom break of the tang fragment (middle) and damage to the tang fragment (right) of the sword (HMC.t1.3) from Harchies-Maison Cauchies t.1 (different scales). Photographs by J. van Donkersgoed.

for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).

C12.2.3 Actions taken and reconstructing the (burial) ritual

It is believed that someone was cremated and buried either in or with a pot. A bronze sword was broken into several pieces, of which at least two were deposited with the cremation remains. A band of some kind, perhaps a bracelet, was deposited as well. It is unknown whether this burial was marked above ground.

C12.3 Tombe 2

This grave was discovered during the systematic excavation of the garden of the house Cauchies by E. Rahir of the MRAH in 1914. The finds were found at a depth of 1 m (Fig. C12.4; Leblois 2010, 107; Mariën 1975, 19) and currenctly reside in the collection of the MRAH in Brussels, where they were kindly made available for study.

C12.3.1 The material remains

Human remains Cremation remains were found in the urn.

Pottery A complete urn was found in this burial and contained cremation remains at the time.

Weaponry Five fragments of an intentionally broken bronze sword were found. The very top and point are missing, but the breaks appear ancient and intentional. It is possible that that they originally were deposited and were overlooked when the sword was found. The breaks are sharp and appear deliberate. Though broken this sword is in very good condition. The tang has raised edges and is broken at the top on a rivet hole, with one rivet still showing in the center. The side with the sticker has been



Fig. C12.4 The finds from Harchies-Maison Cauchies t.2. All numbers have the prefix HMC.t2. Photographs by J. van Donkersgoed.



Fig. C12.5 Tang fragment (HMC.t2.3; top left) and recent damage (top right) on the sword as well as the scabbard(?) fragments (HMC.t2.4; bottom) from Harchies-Maison Cauchies t.2. Photographs by J. van Donkersgoed.

Harchies-Maison Cauchies Tombe 2 **Henegouwen, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1914 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels/lost		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no.	Fiche no.	De Mulder 2011
	Human remains						
HMC.t2.1	Cremation remains, found in urn *HMC.t2.2*	Indet	Indet	++	-	-	-
	Pottery						
HMC.t2.2	Urn, contained human cremation *HMC.t2.1*	--/--	--/--	--	B 02119D	F 367	-
	Weaponry						
HMC.t2.3	Bronze sword, broken into 5 pieces (type Gündlingen Etappe 1/Holme Pierrepoint)	+-/--	++/++	+	B 02119	7870	MC.02.02
HMC.t2.4	Wooden fragments, scabbard?	--/--	--/-	--	B02119	f370	-
References: De Mulder 2011; Leblois 2009; 2010; Mariën 1975.							

Tab. C12.2 Inventory and numbering information Harchies-Maison Cauchies t.2.

cleaned a little too vigorously and is scratched. The next fragment consists of the shoulders and has ricasso, which seems almost carved in rather than cast (Fig. C12.5, top left). On one side the four rivets are still protruding, on the other side two protrude, the others end in holes. They are spaced unevenly. One set of two is closer to the edge than the other. The blade has a beautiful edge decoration, with a slightly raised rib next to a slightly rounded out groove. The edges are still sharp. The ricasso appears cut straight into this raised rib and then follows it up. The next fragment shows a slight curve and a number of edge damages (Fig. C12.5, top right). The breaks have a slightly different color. The next piece is also slightly bent, but not in a clear curve the way the previous piece was, and the decoration along the side is less pronounced. There are odd lines crossing the blade at three points on one side of the sword. These unfortunately are damage from mounting the sword in exhibitions. A surprise find at the MRAH was a number of thin wooden fragments that had been mounted suggestively on a scabbard-shaped piece of plastic. These fragments are not mentioned in the publications on this site by Mariën and Leblois.

A note found with the fragments, however, identifies them as belonging to this grave. While it cannot be proven that these fragments are indeed from a scabbard, it is certainly plausible. A number of fragments have a rounded edge that would have created a narrow space, the expected shape of a wooden scabbard (Fig. C12.5; they appear quite delicate, though see Section 6.2.2.2). In any case, the fragments are clearly manufactured to be something, and even have decorative stripes incised across them (Fig. C12.5, bottom). Moreover, this grave was systematically excavated by professionals. While no record survives on why these wooden fragments were mounted so suggestively, their find context may have contributed to the interpretation of these as a scabbard (for example if they were found on or by the sword).

C12.3.2 Dating

The bronze sword from this burial appears to be an early type Gündlingen (Etappe 1/Holme Pierrepoint) sword based on the narrow, edged tang, the outward bending shoulders and the short, wide blade (Milcent 2012, 48; Trachsel 2004, 118–24), which indicates that this burial likely dates to the early part of the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).

C12.3.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated and buried in a pot. A bronze sword was broken into several pieces and deposited in the urn as well. A decorated wooden scabbard also may have been buried in the urn. It is unknown whether this burial was marked above ground.

C12.4 Tombe 3

H. Cauchies found another bronze sword and two chapes (Fig. C12.6) together with cremated remains in tombe 3 in 1926 during building work for the new house on the *Rue du Calvaire* (behind *Café du Telephone*). The finds from this grave are in private hands (Mme Colette Warnier-André), but there is a replica in the MRAH (Leblois 2009, 19). They could not be examined by myself and the following is based on available literature.

C12.4.1 The material remains

Human remains The cremated remains and finds were either lying in piles or spread throughout the grave, possibly mixed with the ashes of the pyre (Leblois 2010, 108).

Weaponry The bronze sword from this grave is practically complete (L.: ca. 64 cm, wght: 703.71 gr), though broken into eight fragments. The first, fifth and eighth fragments show the most pronounced signs of burning (Leblois 2010). It has been bent, though not round like some, and is more a semicircle shape. Two bronze chapes were also found in this grave. They are broken, though it is unclear whether this is intentional (Fig. A2.3).

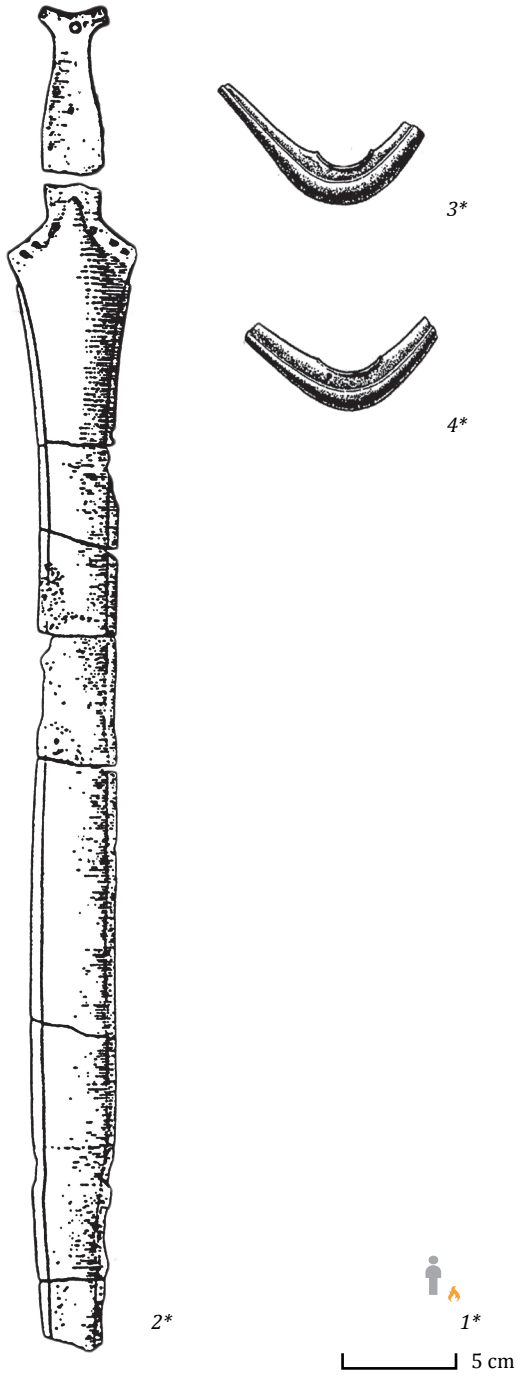


Fig. C12.6 The finds from Harchies-Maison Cauchies t.3 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HMC.t3. Figure after Leblois 2010, fig. 4.

Harchies-Maison Cauchies Tombe 3 **Henegouwen, Belgium**					**Data quality:** medium
Method of recovery: chance find (poor) **Year of discovery:** 1926 **Date:** Ha B3–C1 **Current location:** private collection Mme Colette Warnier-André		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** De Mulder 2011
	Human remains				
*HMC.t3.1**	Cremation remains	Indet	Indet	++	-
	Weaponry				
*HMC.t3.2**	Bronze sword, 8 fragments (type Gündlingen Etappe 3/ Villement)	--/--	++/++	++	MC.03.01
*HMC.t3.3**	Bronze chape (type Prüllsbirkig/C1)	--/--	--/++	Indet	MC.03.02
*HMC.t3.4**	Bronze chape chape (type Prüllsbirkig/C1)	--/--	--/++	Indet	MC.03.03
References: De Mulder 2011; Leblois 2009; 2010; Mariën 1975.					

Tab. C12.3 Inventory and numbering information Harchies-Maison Cauchies t.3.

C12.4.2 Dating

The bronze sword from this burial appears to be a later type Gündlingen (Etappe 3/Villement) sword based on the shape of the tang and relatively slim blade (Milcent 2012, 48; Trachsel 2004, 118–24), which indicates that this burial likely dates later in the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5), which is consistent with the dating of the type Prüllsbirkig/C1 chapes (Milcent 2012, 48; Trachsel 2004, 112–4).

C12.4.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated, and their remains may have been left lying among the pyre remains, either spread out, or collected in small heaps. A bronze sword was heated, bent and broken. As a number of fragments show more severe fire damage, the sword may have been bent and broken and then placed on the pyre. Two bronze chapes were also broken and placed in the burial. It is unknown whether this grave was marked above ground.

C12.5 Tombe 4

This grave was found in the garden of M. Cauchies behind the *Café du Telephone* during systematic excavations by Mariën in 1955. Fragments of a bronze sword lay 0.86 m below ground level, 0.05 m above the bottom of an urn, only half of which was present having been destroyed by soil disturbance at a depth of 0.70 m (Fig. C12.7). To the east of the urn lay a dark spot with cremation remains (40 cm in diam.). It is probably a flat grave, but we must take into account the fact that at Gedinne the funeral deposit was placed in a hole dug through the layer of pyre debris, but covered by a barrow (Mariën 1975, 22–3). The finds are currently in the MRAH where they were made available for study. They were examined by myself and photographed by J. van Donkersgoed.

C12.5.1 The material remains

Human remains Human cremation remains lay to the east of the pot in a dark spot. Several fragments are embedded in the melted sword fragments.

Pottery The broken remains of a sizable urn were found. About half the base survives, with most of the wall archeologically intact. It is burnished on the outside and has quite thick walls (ca. 5 mm). It may have been burned.

Weaponry Three fragments of a bronze sword are recognizable. The fragments are part of the tang (with at least one rivet still in place), the shoulders and part of the blade. They are very heavily affected by fire. Even so, it is clear that this sword is incomplete. Given that this grave was excavated by professionals it seems likely that everything deposited was in fact collected. This suggests that this sword intentionally was deposited partially. Also, the very top of the tang ended up melted on to the side of the shoulders (Fig. C12.8, bottom left). To end up in this position it probably would have had to be broken off prior to the event that cause the heavy melting.

C12.5.2 Dating

The bronze sword from this burial is affected very badly by fire, but it appears to have a narrow, edged tang, which indicates it could be a later type Gündlingen (Etappe 3/ Villement; Milcent 2012, 48; Trachsel 2004, 118–24). This suggests that this burial likely dates later in the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).



Fig. C12.7 The finds from Harchies-Maison Cauchies t.4 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HMC.t4. Photograph by J. van Donkersgoed.

Harchies-Maison Cauchies Tombe 4 **Henegouwen, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1955 **Date:** Ha B3–C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no.	Fiche no.	De Mulder 2011
	Human remains						
*HMC.t4.1**	Cremation remains	Indet	Indet	++	-	-	-
	Pottery						
HMC.t4.2	Urn, half	--/--	--/+-	+-	B 4428-4	7876	-
	Weaponry						
HMC.t4.3	Bronze sword, 3 fragments (type Gündlingen Etappe 3/Villement)	--/--	--/++	++	B 4428-6	7864	MC.04.02
References: De Mulder 2011; Leblois 2009; 2010; Mariën 1975.							

Tab. C12.4 Inventory and numbering information Harchies-Maison Cauchies t.4.

C12.5.3 Actions taken and reconstructing the (burial) ritual

The cremated remains were discovered in a dark spot to the east of the broken pot, though it is unclear whether this is how the pot and remains were deposited, or whether this distribution is the result of post-depositional disturbance. So we know someone was cremated and that their remains were deposited either in or by a pot. A bronze sword was fragmented and exposed to high temperatures long enough to actually melt the bronze. Part of the sword was buried with the deceased, while parts were intentionally kept out of the burial. It is unknown whether this grave was marked above ground.

C12.6 Finds of unknown context

In addition to those stray finds already described, a number of objects from Harchies were found at the MRAH (Fig. C12.8) that are not mentioned in the publications by Leblois (2009; 2010) and Mariën (1975). These are three pots (two large, one very small). Urn *HMC.UC.2* is large and has two imprinted dots underneath the rim.



The urn has cremation remains caked to the inside of the pot. A bronze ring examined in the MRAH is believed to be the ring found by C. Leblois in 1916. The pendant he found at the time was not encountered in the MRAH and it is unknown whether it is in their collection. A decorated band appears to be an ear- or hair ring of some kind. This object is also only known from a drawing (Fig. C12.8). In 2006 a single fragment of a bronze sword was found 800 m east of Maison Cauchies (Fig. C12.8). It is a tang fragment from a Gündlingen type sword (Leblois 2010), and is therefore dated ca. 850–750 BC (see Chapter 3).

Fig. C12.8 The finds from unknown contexts within Harchies-Maison Cauchies (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HMC.UC. Drawings after Leblois 2010, figs. 1 and 3; photographs by J. van Donkersgoed.

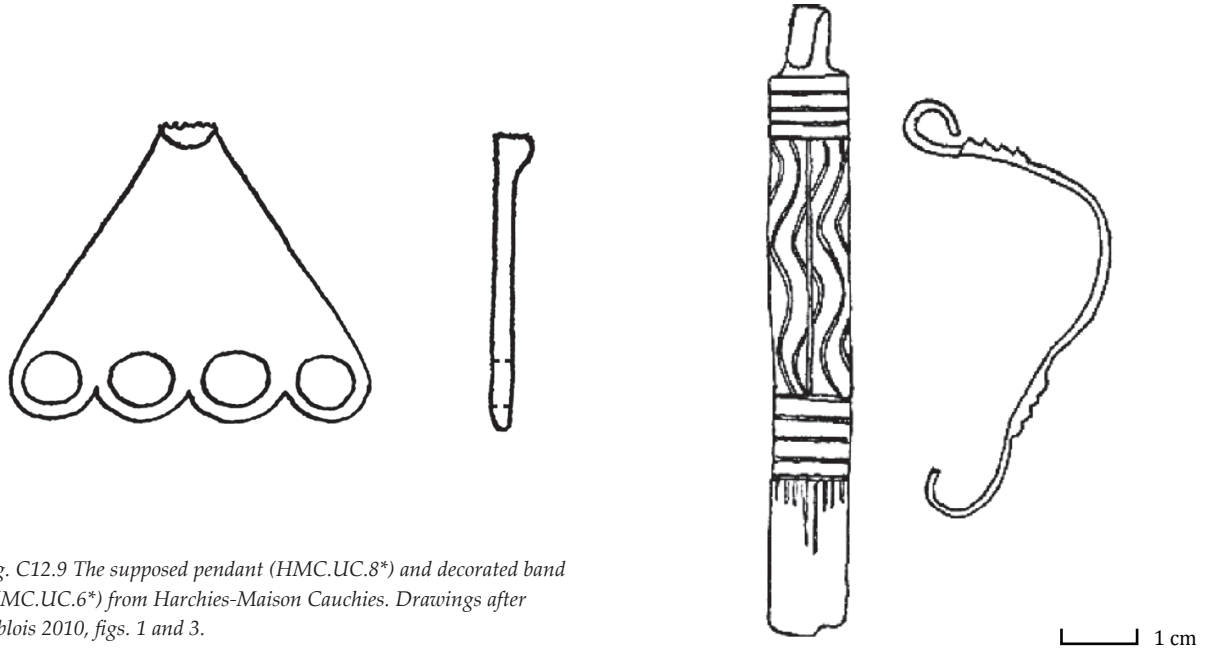


Fig. C12.9 The supposed pendant (HMC.UC.8) and decorated band (HMC.UC.6*) from Harchies-Maison Cauchies. Drawings after Leblois 2010, figs. 1 and 3.*

Harchies-Maison Cauchies Unknown context **Henegouwen, Belgium**					**Data quality:** poor	
Method of recovery: excavation (medium) **Year of discovery:** 1916; 1959; 2006 **Date:** Ha B3–D3? **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no.	Fiche no.
	Human remains					
HMC.UC.1	Human cremation, found in *HMC.UC.2*	Indet	Indet	++	-	-
	Pottery					
HMC.UC.2	Large urn, contained *HMC.UC.1*	--/--	--/--	--	B 04428-1	7862
HMC.UC.3	Pot with striped decoration	--/--	--/--	--	B 04428-2	7863
HMC.UC.4	Pot	--/--	--/--	--	B 04428-3	7865
	Weaponry					
*HMC.UC.5**	Tang fragment of a bronze sword	--/--	--/++	-	-	-
	Personal appearance					
*HMC.UC.6**	Decorated band, probably ear- or hair ring	--/--	+-/--	--	-	-
	Other					
HMC.UC.7	Bronze ring with an angle on the outside, but not quite square in cross-section	--/--	--/--	--	B02119A	f369
*HMC.UC.8**	Pendant?	Indet	Indet	Indet	-	-
References: De Mulder 2011; Leblois 2009; 2010.						

Tab. C12.5 Inventory and numbering information Harchies-Maison Cauchies Unknown context.

C13 Havré

A barrow group at Havré known as *Bois de la Taille des Vignes* was noted by Mariën (1958) when he remarked that an iron sword was found here (Fig. C13.1; Mariën 1958, 233–4). He later published this group in full (Mariën 1999). Gerdsen (1986, 106) and Roymans (1991, 78) also published short notes regarding this site. The sword from Tombelle E was examined by myself and photographed by J. van Donkersgoed at the Royal Museums of Art and History (MRAH) in Brussels. At the time it was not known that this sword was from this site, though this could be confirmed later (see Section C13.3).

C13.1 Find circumstances

A chance find was done here in 1930 during the expansion of a quarry. Tombelles A, B and D were uncovered, as was Tombelle E. In 1931 the excavation service of the MRAH conducted an excavation of 17 barrows. They encountered barrows consistent with the descriptions given of the barrows uncovered by chance (Mariën 1958, 228–9). The *Service National des Fouilles* has a report of the 1931 excavation in its archives. The barrows had diameters ranging from 5–10 m and were between 30 and 80 cm in height at the time of excavation (Mariën 1999, 229).

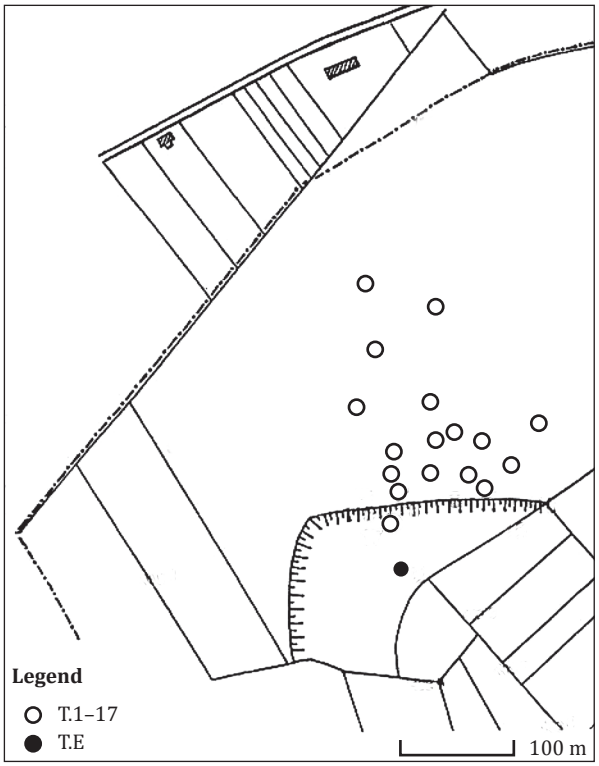


Fig. C13.1 Map of Havré. Figure after Mariën 1999, 227.

C13.2 Tombelle A, B and D

In Tombelle A an urn was found between 40 and 60 cm deep, with the remains of a pyre close by. A small iron instrument that was probably a set of tweezers was found in addition to the urn. Both objects are lost (Mariën 1999, 229). As it is unknown what type of tweezers was found in this barrow, it is dated tentatively to the whole Early Iron Age, but is not included in Figure 3.5 as the given date is so speculative. An urn was found close by a pyre in Tombelle B. Tombelle D yielded an urn that resembles the one found in Tombelle E, which is described in more detail below (Mariën 1999, 229). Note that only Tombelle A is included in Table C1.1, B and D are described to serve as context information.

C13.3 Tombelle E

This barrow is listed as Tombelle 1 in an older publication (Mariën 1958, 233–4), but based on the finds it seems that this is the same barrow later published as Tombelle E (Mariën 1999). It yielded a weaponry burial. An urn containing cremated remains was found at a depth of 50–60 cm. An iron sword was found nearby the pot, unbent, stuck into the ground tip first (Fig. C13.2). The pyre remains were located just south of the burial, at the same level as the pottery. It covered an area of 2 by 2 m (La Gazette Bruxelles, 17 and 18.8.1930, as cited by Mariën 1999, 229).



Fig. C13.2 The finds from Havré T.E (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix H.TE. Drawing after Mariën 1999, fig. 5; photograph by J. van Donkersgoed.

C13.3.1 The material remains

Human remains It is unclear what form the human remains from this grave were in.

Pottery A pot was found in this barrow. It was used as an urn and is chocolate brown in color (Mariën 1999, 231).

Weaponry Mariën (1999, 231) describes this sword as mostly complete, with one rivet on the shoulder surviving and a very pointed tip. He lists the inventory number B 5556 of the MRAH. When I visited the MRAH in 2014 I examined an iron sword that at the time was listed as found at Court-St-Etienne and inventoried as N 00530 (though a post-it note stated "Famars B273 Meerle"). I argue that this is the sword from this barrow. It matches the drawing in its shape, dimensions and the pattern of the break at the hilt and has one rivet surviving (Fig. C13.3). Given that the Havré site and this sword also were published summarily in Mariën's (1958, 233–4) earlier work on Court-St-Etienne it is not surprising that the sword was catalogued as coming from this site, which also is located close by Havré. The iron sword is in relatively good condition and survives almost complete. Only the very top of the tang is missing. The shape of this break is one of the characteristics present on Mariën's (1999, fig. 5) depiction that confirms this sword is from this barrow (Fig. C13.3). It is a Mindelheim type sword and one rivet survives on one of the shoulders. It has been treated by a restorer, but more to stabilize than to seriously alter. Even the blade edges are reasonably intact, with some small nicks that could be battle damage but also could be simple degradation of the iron. The tip is unusually sharply pointed.

C13.3.2 Dating

The iron sword from this burial appears to be a type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), which suggests that this burial dates somewhere in the date range for these swords as determined in Section 3.4.1.2 (ca. 800–650 BC; Fig. 3.5).



Fig. C13.3 The sword (H.TE.3) from several angles and with details (different scales) showing the central rib, the tang and point. Drawing after Mariën 1999, fig. 5; photographs by J. van Donkersgoed.

C13.3.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated and his or her remains were collected and deposited in an urn dug into the ground close by the burned-out pyre. An iron sword was stuck into the ground by the urn. This is one of the few burials in which a sword was deposited intact.

Havré Tombelle E **Hainaut, Belgium**					**Data quality:** medium		
Method of recovery: chance find (medium) **Year of discovery:** 1930 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels/unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1999	MRAH inv. no.	Fiche no.
	Human remains						
*H.TE.1**	Human remains, unclear what kind	Indet	Indet	Indet	-	-	-
	Pottery						
*H.TE.2**	Pot	Indet	Indet	Indet	B 5555	-	-
	Weaponry						
H.TE.3	Iron sword (type Mindelheim)	+-/--	--/--	--	B 5556	N1364	F5481
References: Gerdsen 1986, 106; Mariën 1958, 233–4; 1999; Roymans 1991, 78.							

Tab. C13.1 Inventory and numbering information Havré T.E.

C13.4 Tombelles 1–17

A number of these barrows yielded metal grave goods that are worth discussing in more detail (Fig. C13.1). They are considered individually below. The remaining barrows are presented here and serve to provide a context for the burials discussed in detail (note that these are not included in Table C1.1 as they are only included as background information for the barrows under consideration). At Tombelle 1 cremation remains were found in a heap on the ancient surface with bronze fragments and charcoal, covering a circular area roughly 2 m in diameter. No urn was found. A small pot was found at a depth of 60 cm under the old surface of Tombelle 3 together with cremated bone. Tombelle 5 yielded an urn filled with cremation remains, though there were no traces of a pyre. Tombelle 6 yielded both an urn with cremated remains and a small cup. They were found in a circular layer of charcoal with a diameter of 150 cm. In Tombelle 7 a large urn with cremation remains was found at the level of the old surface. Large chunks of charcoal were found around the urn. An urn was found at the level of the old surface under Tombelle 8, as well as cremation remains and charcoal. Tombelle 11 contained a patch of charcoal about 40 cm in diameter, cremated bone and an iron ring fragment with a square cross-section. Tombelle 12 covered an area of 2 by 1.5 m in which sherds and cremation remains were found. It also may have covered older pottery and flint. Under Tombelle 13 sherds and cremation remains lay scattered with charcoal. Tombelle 14 may have been a natural mound of earth and yielded some pottery fragments and cremation remains. In Tombelle 15 a small pot and two fragments of iron lay at the level of the old surface. Tombelle 17 yielded 'very old' pottery sherds and cremation remains (Mariën 1999, 231–8).

Barrow	**Height**
Tombelle 1	115 cm
Tombelle 3	-
Tombelle 5	60 cm
Tombelle 6	90 cm
Tombelle 7	80 cm
Tombelle 8	60 cm
Tombelle 11	-
Tombelle 12	-
Tombelle 13	40 cm
Tombelle 15	40 cm
Tombelle 17	20 cm

Tab. C13.2 The heights to which the barrows survived (Mariën 1999).

C13.4.1 Tombelle 2

Tombelle 2 yielded an urn filled with cremation remains, as well as an iron ring with what appears to be toiletry tools attached (Fig. C13.4). Some cremated bone and charcoal was found outside the urn as well (Mariën 1999, 231). Tweezers similar to those found in this grave have been found in burials that date to the Hallstatt C1 period (such as Limal-Morimoine T.2 or Uden-Slabroek), but they can also be found in later Early Iron Age contexts. This burial therefore most likely dates early in the Early Iron Age, which appears consistent with the pottery (Fig. 3.5).

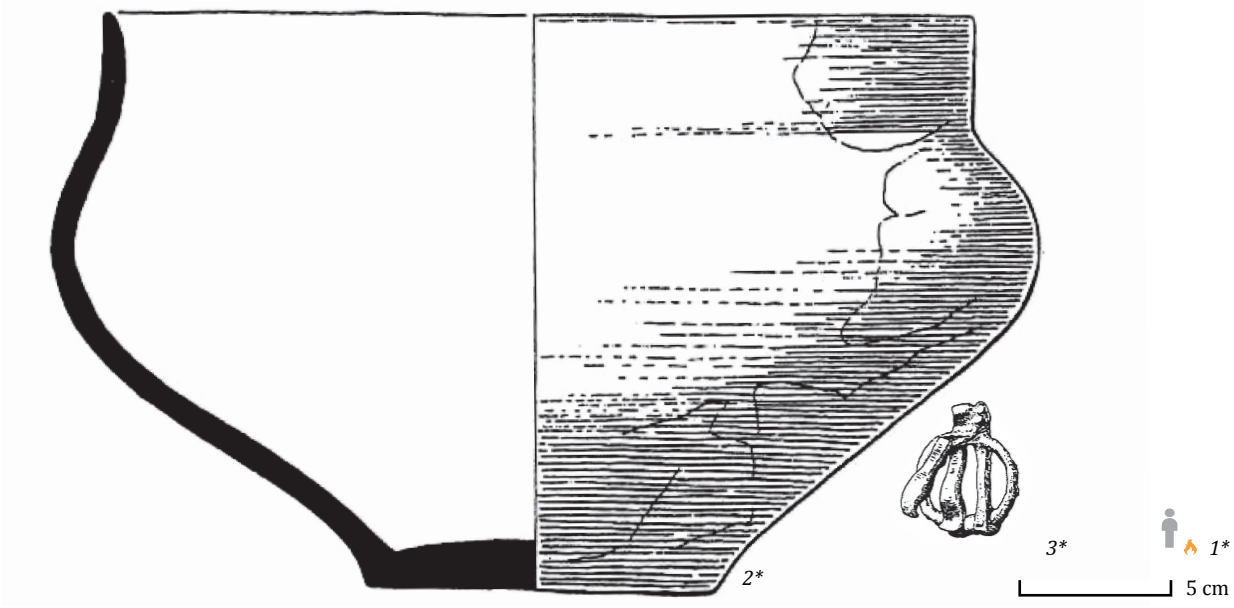


Fig. C13.4 The finds from Havré T.2 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix H.T2. Drawings after Mariën 1999, fig. 5.

Havré Tombelle 2 **Hainaut, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1931 **Date:** Ha C1–D3 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Human remains				
*H.T2.1**	Cremation remains	Indet	Indet	Indet	-
	Pottery				
*H.T2.2**	Pot	Indet	Indet	Indet	-
	Personal appearance				
*H.T2.3**	Iron ring and toiletries	--/--	--/-	--	-
References: Mariën 1999.					

Tab. C13.3 Inventory and numbering information Havré T.2.

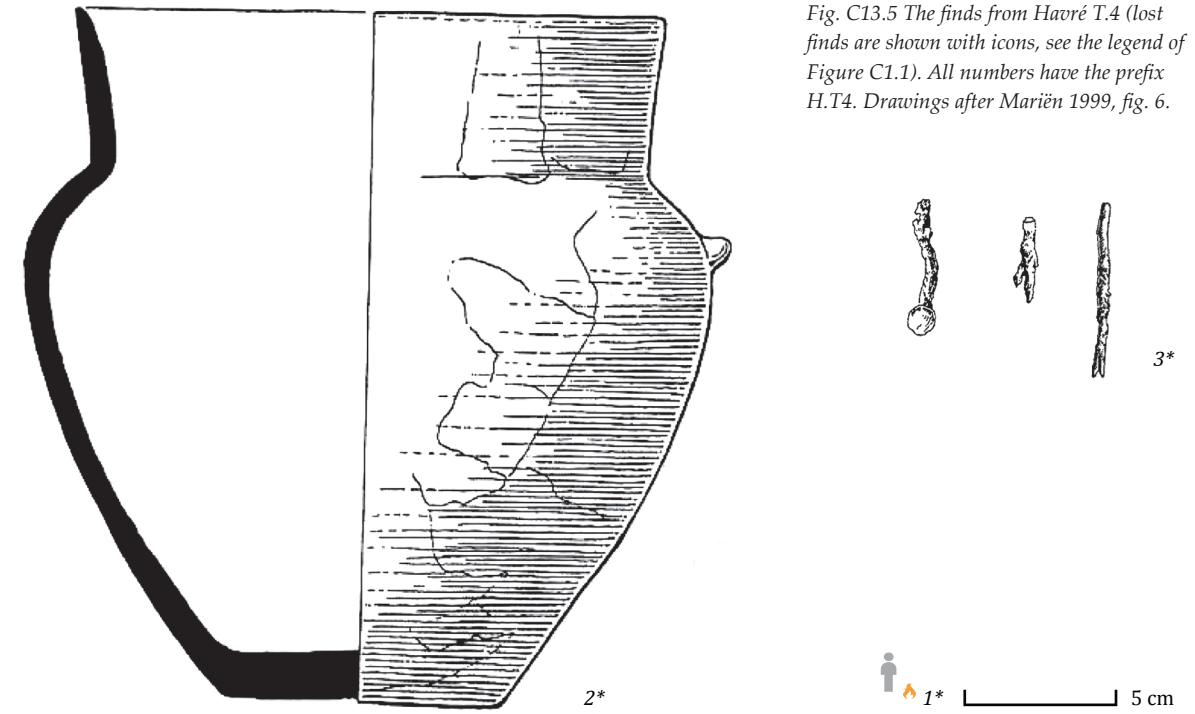


Fig. C13.5 The finds from Havré T.4 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix H.T4. Drawings after Mariën 1999, fig. 6.

Havré Tombelle 4 **Hainaut, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1931 **Date:** Ha C1–D3 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Human remains				
*H.T4.1**	Cremation remains	Indet	Indet	Indet	-
	Pottery				
*H.T4.2**	Pot	Indet	Indet	Indet	-
	Personal appearance				
*H.T4.3**	Iron fragments from a toilet set	--/--	--/-	--	-
References: Mariën 1999.					

Tab. C13.4 Inventory and numbering information Havré T.4.

C13.4.2 Tombelle 4

An urn filled with cremation remains and two iron fragments was found under Tombelle 4 (Fig. C13.5). The iron fragments appear to be from a toilet set similar to those found in Tombelles 2 and 9 (Mariën 1999, 231–3). These kind of toilet sets are found in Hallstatt C1 contexts such as Limal-Morimoine T.2 or Uden-Slabroek, but they can also be found in later Early Iron Age contexts. This burial therefore most likely dates early in the Early Iron Age (Fig. 3.5), which appears consistent with the pottery, but note that this is somewhat speculative.

C13.4.2 Tombelle 9

Tombelle 9 was a meter high and yielded an urn, a bronze razor and iron toiletry items. The bronze razor and toiletry items lay atop the cremation remains in the urn. Unfortunately no drawings of these objects were published, though Mariën describes the razor as a bifid one with a ring-shaped terminal. The toiletry set appears to have included a little spoon, a nail cutter and tweezers (Mariën 1999, 235). Such finds generally date to the Hallstatt C1 period, though note that this is somewhat speculative (Fig. 3.5; Trachsel 2004, 142–3).

Havré Tombelle 9 **Hainaut, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1931 **Date:** Ha C1–D3 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no. (Mariën 1999)
	Human remains				
H.T9.1*	Cremation remains	Indet	Indet	++	-
	Pottery				
H.T9.2*	Urn	Indet	Indet	Indet	B 5558
	Personal appearance				
H.T9.3*	Bronze razor	Indet	Indet	Indet	B 5559
H.T9.4*	Iron toilet set with tweezers	Indet	Indet	Indet	-
References: Mariën 1999.					

Tab. C13.5 Inventory and numbering information Havré T.9.

Havré Tombelle 10 **Hainaut, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1931 **Date:** Ha C1–D3 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no. (Mariën 1999)
	Human remains				
*H.T10.1**	Cremation remains	Indet	Indet	++	-
	Pottery				
*H.T10.2**	Urn	Indet	Indet	Indet	B 5560
*H.T10.3**	Accessory vessel	Indet	Indet	Indet	B 5561
	Personal appearance				
*H.T10.4**	Toilet set with tweezers	Indet	Indet	Indet	-
*H.T10.5**	Iron pin	Indet	--/+-	Indet	-
	Other				
*H.T10.6**	Iron ring	Indet	Indet	Indet	-
References: Mariën 1999.					

Tab. C13.6 Inventory and numbering information Havré T.10.

C13.4.3 Tombelle 10

Tombelle 10 was 110 cm high. A large urn filled with cremation remains was found here at the level of the old surface (Fig. C13.6). Atop the cremation remains lay a small accessory vessel in which lay iron tweezers, an iron pin and a large iron ring (60 mm in diam.), which Mariën (1999) states is the right size for a bracelet. For this reason this ring is listed under personal appearance, despite the difficulty of assigning functions to loose rings (Section C2.2.4). Tweezers similar to those found in this grave have been found in burials that date to the Hallstatt C1 period (such as Limal-Morimoine T.2 or Uden-Slabroek), but they can also be found in later Early Iron Age contexts. This burial therefore is dated to the Early Iron Age, which appears consistent with the pottery (Fig. 3.5).

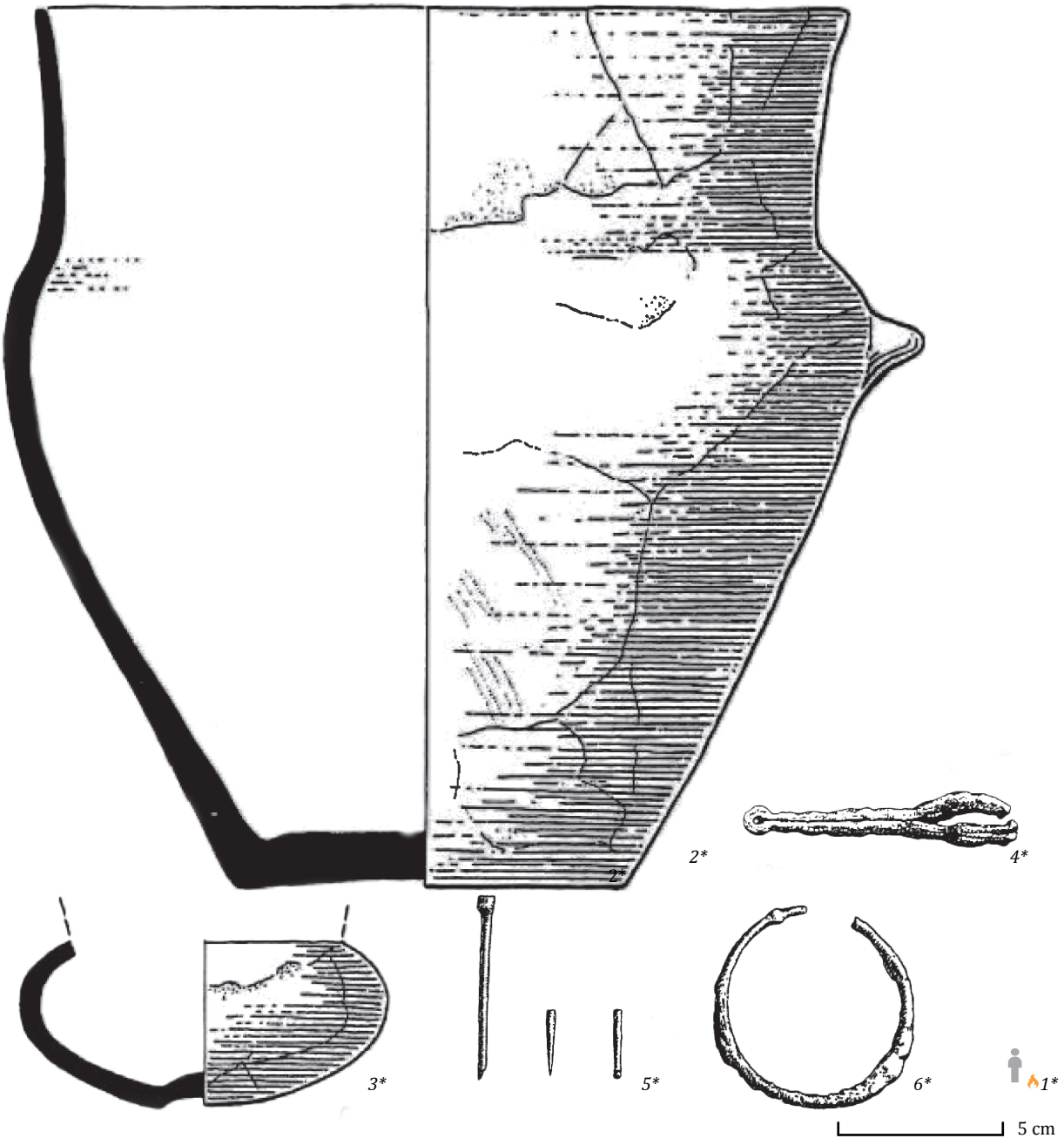


Fig. C13.6 The finds from Havré T.10 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix H.T10. Drawings after Mariën 1999, fig. 7.

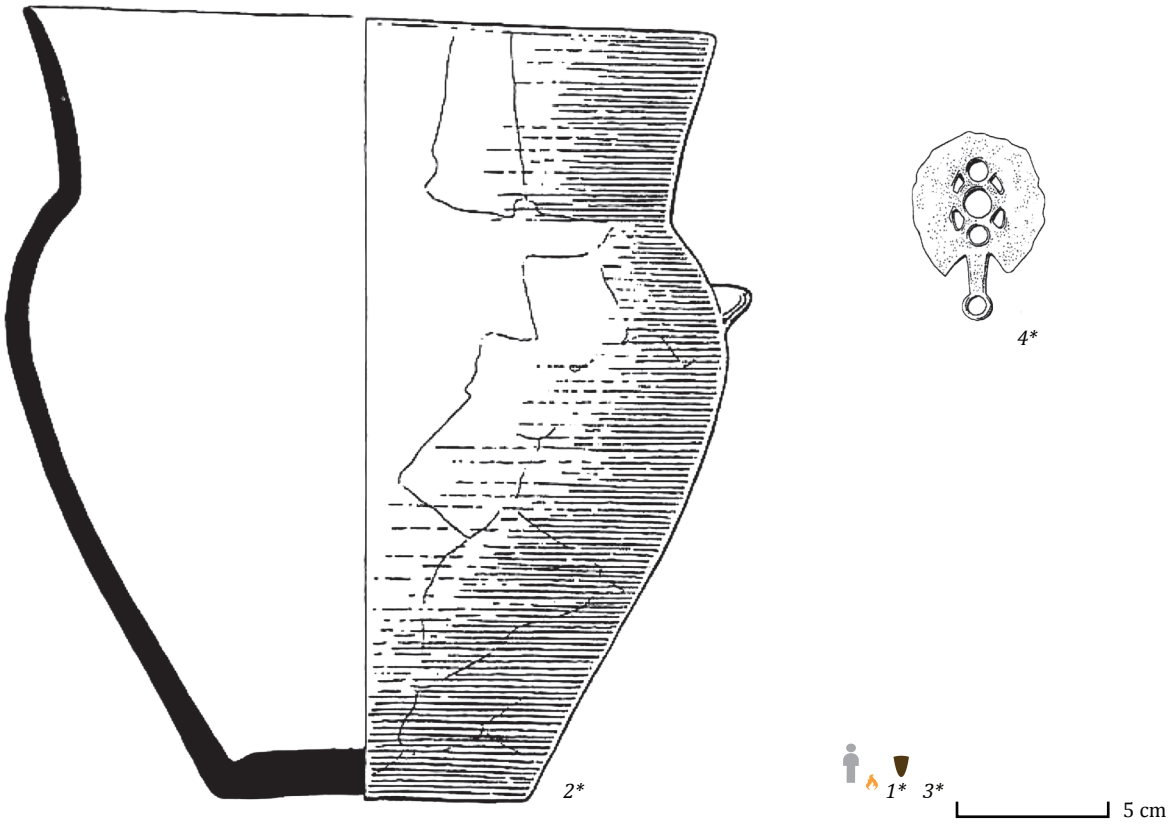


Fig. C13.7 The finds from Havré T.16 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix H.T16. Drawings after Mariën 1999, fig. 7.

Havré Tombelle 16 **Hainaut, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1931 **Date:** Ha C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** MRAH inv. no. (Mariën 1999)
	Human remains				
*H.T16.1**	Cremation remains	Indet	Indet	++	-
	Pottery				
*H.T16.2**	Urn	Indet	Indet	Indet	B 5562
*H.T16.3**	Small cup	Indet	Indet	Indet	-
	Personal appearance				
*H.T16.4**	Bronze razor	Indet	Indet	Indet	B 5563
References: Mariën 1999.					

Tab. C13.7 Inventory and numbering information Havré T.16.

C13.4.4 Tombelle 16

Tombelle 16 was 80 cm high and yielded an urn, cremation remains, a small dish and a bronze razor (Fig. C13.7). The razor from this burial is an early Hallstatt C1 type (type Gruppe B; Trachsel 2004, 142–3) and this burial therefore likely dates early in the 8th century BC (Fig. 3.5). This is consistent with the pottery.

C14 Heythuizen-Bisschop

Very little is known about this find. Roymans (1991, 78) lists a sword from this site in his overview of Early Hallstatt swords, but it is otherwise unpublished. After much searching, sword and urn fragments (Fig. C14.1) from this site were located in the depot of the National Museum of Antiquities (RMO) in Leiden and made available by curator L. Amkreutz. They were studied by myself and photographed by J. van Donkersgoed. Work is underway by I. Joosen and V. Fontani to analyze the crystalline structure of the sword.

C14.1 Find circumstances

Little is known about the find circumstances of this find, beyond a note on a pottery fragment that tells that it was found in a barrow to the southeast of the café Theunissen-Vogels and that the curled-up sword was discovered in the urn. The state of the urn fragments, as well as the very fragmentary and incomplete nature of the sword (see below) suggest that this find was damaged by plowing before being discovered. The RMO archive indicates a Mr. Keus from Venlo donated the finds to the museum. C.C.W.J. Hijszeler (1952) describes some work that took place at an Iron Age *kringgrepurnen* (ring ditch, urn in Dutch) cemetery at Heythuizen where multiple barrows were examined. In total 53 burials were examined, with cremation either buried loose or in urns. In one of these a curled up iron sword was found, and it seems highly likely that this is the sword currently in the collection of the RMO.

C14.2 The material remains

Human remains No human remains survive, beyond a few fragments of cremated bone preserved in the iron corrosion of a sword fragment.

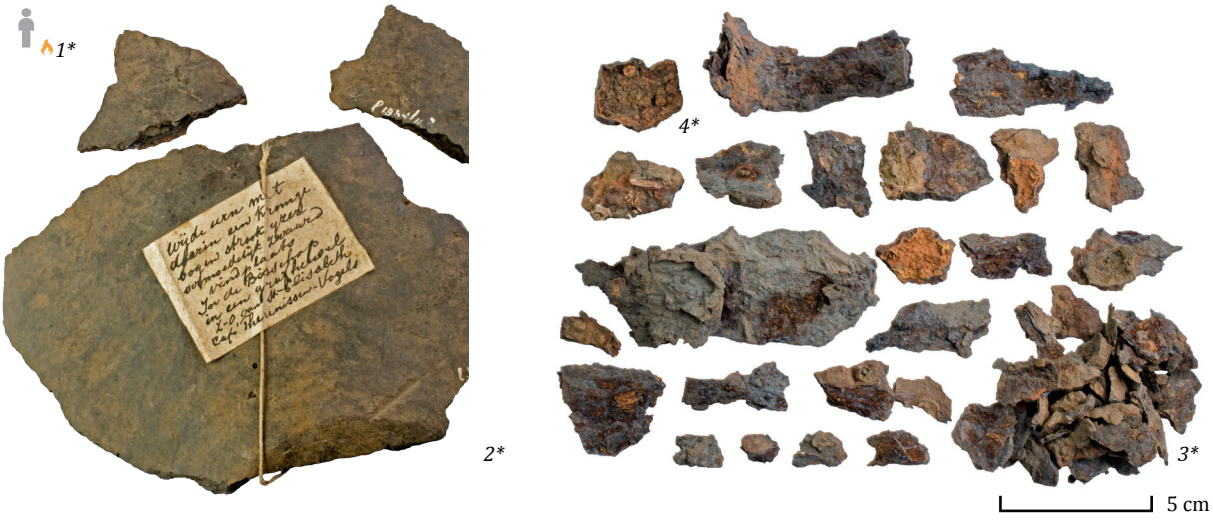


Fig. C14.1 The finds from Heythuizen-Bisschop (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HB. Photograph by J. van Donkersgoed.

Heythuizen-Bisschop **Limburg, the Netherlands**					**Data quality:** poor, grave incomplete
Method of recovery: unknown **Year of discovery:** 1934 or earlier **Date:** Ha C1–2 **Current location:** National Museum of Antiquities, Leiden		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** RMO inv. no.
	Human remains				
HB.1	Cremation remains, survived in the corrosion of *HB.3*	Indet	--/--	++	I 1934/11.2
	Pottery				
HB.2	Pottery urn, fragments	--/--	--/-+	--	I 1934/11.2
	Weaponry				
HB.3	Iron sword, fragments (bent)	--/--	++/+-	+	I 1934/11.2
	Other				
HB.4	Rectangular fragment of unknown source	--/--	--/--	--	I 1934/11.2
References: Hijszeler 1952; Roymans 1991, 78.					

Tab. C14.1 Inventory and numbering information Heythuizen-Bisschop.

Pottery A few fragments of a wide urn survive. A large base and a few wall fragments have scratches consistent with plow damage.

Weaponry Several fragments of an iron sword survive, though they are in very poor condition. There are two larger fragments and innumerable small ones. Not only is the sword badly corroded and degraded, it is more incomplete than one would expect from simple degradation, making it probable that the sword was deposited or recovered incompletely. Given the plow damage on the sherds it seems plausible the sword likewise was damaged. The larger pieces show that the sword was bent prior to deposition.

Other A rectangular fragment made from very thin material was among the fragments. It is unclear what this is (from). It could be a corrosion product.

C14.3 Dating

The sword itself is in such bad condition that there are few to no diagnostic characteristics recognizable, and while it could be a Mindelheim type sword, this cannot be confirmed. The associated pottery, however, is consistent with a date (early) in Hallstatt C (*cf.* the date given by Roymans 1991, 78; Fig. 3.5).

C14.4 Actions taken and reconstructing the (burial) ritual

Very little can be reconstructed of the burial ritual through which this iron sword was deposited. The few cremation fragments in the iron corrosion on the sword fragment reveal that someone was cremated. An iron sword of unrecognizable type was bent at least double, and probably curled up entirely. The bent blade was deposited in an urn with the cremation remains.

C15 Hofstade-Kasteelstraat *spoor* 16

This burial was uncoverd at one of the more recently excavated sites (Fig. C15.1). It was found in the province of Oost-Vlaanderen by the town of Hofstade. As an urn burial with a bronze sword as grave gift it is of interest to the current research. The finds were unfortunately not available for examination, but more detailed analysis is planned in future (De Mulder 2015, pers. comm.). The following is based on the publication by Laloo *et al.* (2014) en personal communication with G. De Mulder.



Fig. C15.1 The finds from Hofstade-Kasteelstraat sp.16 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HK. Figure after Laloo et al. 2014, figs. 22–4.

Fig. C15.2 (next page) The burial Hofstade-Kasteelstraat in context from above and in section. Figure after Laloo et al. 2014, figs. 20 and 21.





C15.1 Find circumstances

This burial was found in April 2014 during a trial trench excavation just north of Hofstade, near Aalst in Belgium. Previous research already had uncovered cremation graves from the Late Bronze Age–Early Iron Age nearby and during the excavation 24 Late Bronze–Early Iron Age burials were uncovered (Laloo *et al.* 2014, 23). One of these warrants inclusion in this Catalogue. In *spoor* (sp.; Dutch for feature) 16 an urn burial was found containing an intentionally fragmented bronze sword and chape

Hofstade-Kasteelstraat spoor 16 **Vlaams Brabant, Belgium**					**Data quality:** excellent
Method of recovery: excavation (excellent) **Year of discovery:** 2014 **Date:** Ha B3–C1 **Current location:** Provinciaal Erfgoedcentrum Oost-Vlaanderen, Ename		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Human remains				
*HK.1**	Human cremation remains	Indet	--/--	++	-
	Pottery				
*HK.2**	Bowl	--/--	--/-	++	-
	Weaponry				
*HK.3**	Bronze sword, broken (type Gündlingen Etappe 1/ Holme-Pierrepoint)	Indet	++/++	+	-
*HK.4**	Bronze chape (type Viehofen/A2)	Indet	+-/++	+	-
References: Laloo *et al.* 2014.					

Tab. C15.1 Inventory and numbering information Hofstade-Kasteelstraat sp. 16.

fragment. Laloo *et al.* (2014, 27) also noted that there was a dark feature (sp. 17) directly next to the feature that held the sword burial, and may relate to it. The excavation quality of the sword-grave is classified as excellent, even though the top of the urn burial was discovered right under the plow layer (and may have even protruded into the plow layer) and was hit during the excavation process. It was decided to lift the burial that same day, as it had been uncovered in the presence of bystanders. The burial pit was sectioned, and the content was collected in layers of 5 cm. The pit was preserved to a depth of 15–20 cm. After documenting the find the urn was lifted in its entirety, and the remaining grave cut content was collected in layers of 5 cm. The burial pit fill was dark gray to black charred material and included bits of burned bone and burned pottery fragments (Fig. C15.2; Laloo *et al.* 2014, 25).

C15.2 The material remains

Human remains The cremated remains found in this burial have not (yet) been analyzed.

Pottery The urn itself has not been described in detail, though the general shape is depicted in Figure C15.1. It is a bowl-shaped urn similar to pottery found in Late Bronze–Early Iron Age settlement contexts at Sint-Gillis-Waas (Oost-Vlaanderen), Ormegnies en Blicquy (Henegouwen; Bourgeois/Cherretté 2005; Henton/ Demarez 2005). In addition to sherds from the urn, there also may have been secondarily burned pottery sherds deposited in the burial pit along with the cremated remains (Laloo *et al.* 2014, 27).

Weaponry Laloo *et al.* (2014, 25) identify the sword as type Villement or Wehringen (Milcent 2004, 82–5), though I find its shape more consistent in shape with a type Gündlingen Etappe 1/Holme-Pierrepoint (Milcent 2012, 48; Trachsel 2004, 118–22). This sword has been manipulated and broken intentionally, and four fragments of the bronze sword, as well as a single fragment of a chape were deposited in the urn (Laloo *et al.* 2014, 25). This chape fragment found is identified as a type Viehofen/ A2 (Milcent 2012, 48; Trachsel 2004, 115).

C15.3 Dating

The bronze sword from this burial appears to be an early type Gündlingen (Etappe 1/Holme-Pierrepoint) sword based on the shape of the shoulders, tang and cross-section of the blade, and the chape fragment can be identified as a type Viehofen/A2 (Milcent 2012, 48; Trachsel 2004, 115–24). Together they indicate that this burial likely dates to the early part of the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).

C15.4 Actions taken and reconstructing the (burial) ritual

It is not (yet) possible to reconstruct the actions taken during the burial ritual in great detail. What we do know is that someone was cremated, and that their remains were collected and placed in a bowl. A bronze sword was bent and broken into at least five fragments, four of which were placed in the bowl used as urn. A chape was broken as well and part of it was put in the urn. The manner of excavation means that it is certain that at least one sword fragment and part of the chape deliberately were kept out of the burial. In addition to the bronze finds it is possible that sherds from a burned vessel were placed in the burial as well. This urn with its content was buried in an urnfield.

C16 Horst-Hegelsom

A grave often included in discussion of the chieftains' graves in the Low Countries is a burial from Horst-Hegelsom, even though it usually is not referred to as a chieftain's grave in its own right (see Section 2.2.1.1). The grave goods from this find currently reside in the Limburgs Museum in Venlo. M. van Meer kindly made the pottery and sword available for study (Fig. C16.1). They were examined and photographed by myself.

C16.1 Find circumstances

Following B. Alards' discovery of a grave with a sword on his land, the State Service for Archaeological Investigations (ROB) conducted a small-scale excavation in Hegelsom, municipality Horst, in 1979 (Fig. C16.2). Alards had discovered a *Schräghals*-urn, with a bowl used as a lid (Fig. C16.2). The urn was filled with cremated bone and a rolled-up iron sword which rested atop the remains. The broken tang was located at an angle among the rolled-up blade. Most of the cremated remains originally present have gone missing, and there are some pottery fragments missing as well. There therefore may have originally been more grave goods that were not recovered (Willems/Groenman-van Waateringe 1988, 13–24). The trial trench (only the northwest quadrant; Fig. C16.2) revealed that the Early Iron Age grave had been at the center of a large barrow that had been partially leveled by plowing. The mound was located in or near a small urnfield. The barrow containing the sword was not threatened, so only a small-scale excavation was conducted. This revealed that the grave had been created in a pit. A wooden post was discovered by the burial, along with some large chunks of charcoal. These are taken to be remains of some kind of funerary structure. The post was not removed and it is believed that the structure was burned intentionally prior to the construction of the barrow. The black color and high charcoal content of the old surface indicate that the vegetation had been burned off prior to the construction of the barrow (Willems/Groenman-van Waateringe 1988, 13–25). A very wide but shallow ring ditch surrounded the barrow. The earth from the ring ditch likely was used in the construction of the barrow. The barrow was rather large, with a diameter of 19 m. Even if this barrow were only a meter



Fig. C16.1 The finds from Horst-Hegelsom (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix HH. Photographs by Restauratieatelier Restaura, Haelen.

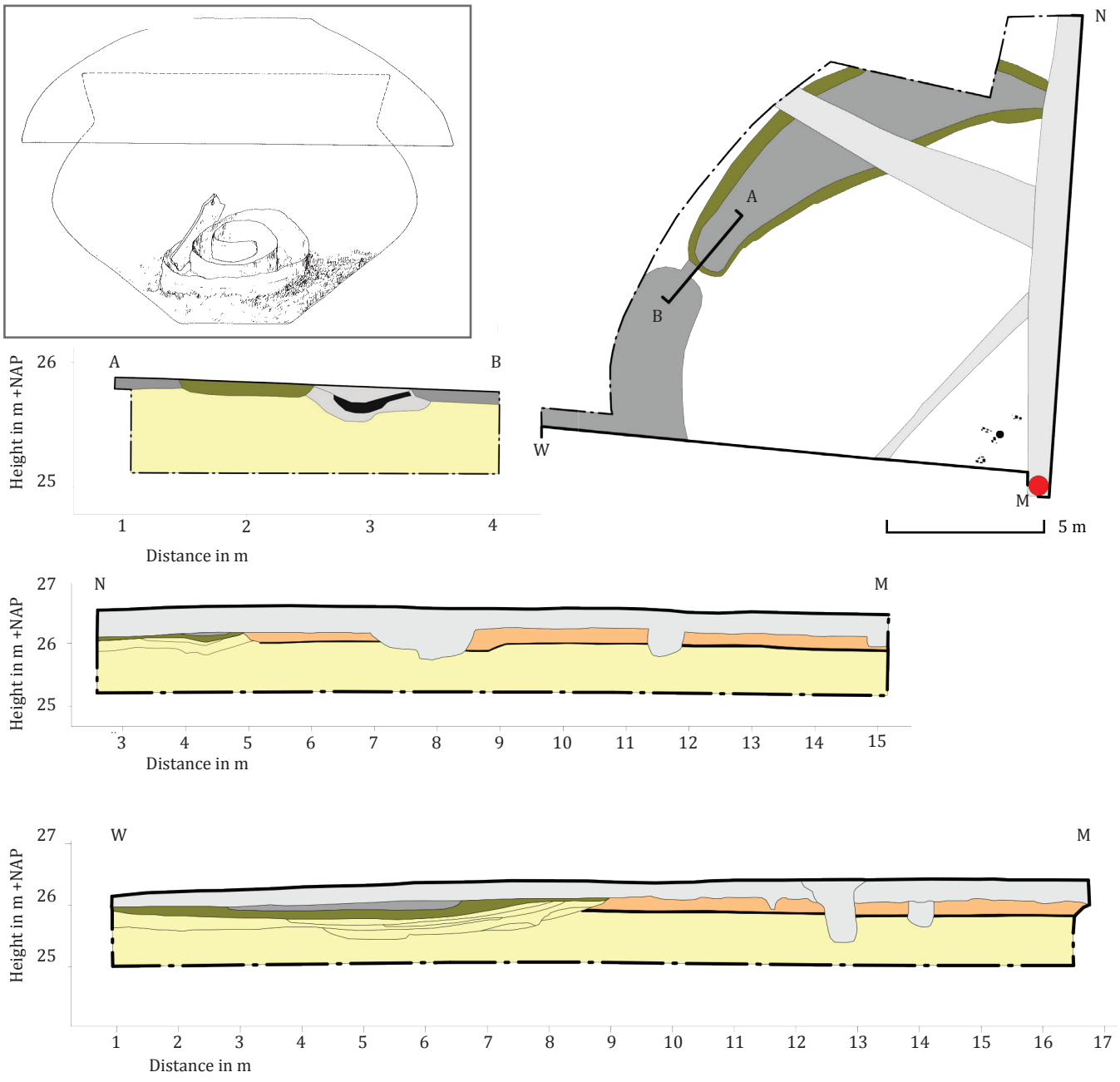


Fig. C16.2 Excavation plans of Horst-Hegelsom and reconstruction of the deposition (inset). Figure after Willems/Groenman-van Waateringen 1988, figs. 3 and 5; by W.B. Verschoof-van der Vaart.

high, it would have required 300 m^3 of sods and earth to construct. The earth from the ring ditch would not have been enough. People therefore must have imported sods from elsewhere. An opening initially was left in the ring ditch in the west-northwest side. In this opening a fire had burned in a funnel-shaped pit (Fig. C16.2; Willems/Groenman-van Waateringe 1988, 13–25).

C16.2 Restoration history

Restauratieatelier Restaura treated the sword and pottery from this burial from 2010 to 2013. The sword and pottery had been restored previously. The former was covered in several layers of artificial resin and fills had been made where fragments were missing (Fig. C16.3). As a result of the severe corrosion process the iron blade had expanded in certain areas, making the sword appear thicker than it was. The previous treatments were removed and the sword was stabilized, repaired and missing parts were filled. To further stabilize it the sword was impregnated with epoxy under light heat (Kempkens/Lupak 2013). The urn and bowl were both reconstructed with a lot of additions. The glued sherds of the bowl and urn had become unstable. They were stabilized and the whole surface was retouched (Fig. C16.1).

C16.3 The material remains

Human remains The surviving 200 grams of cremated bone were all rather large pieces and were analyzed by E. Smits. The analysis revealed that the cremated bones were the remains of a man between 25 and 60 years old at the time of death. It was determined that a temperature between 650 and 800 °C was reached on the pyre (Willems/Groenman-van Waateringe 1988, 13–5).

Pottery The *Schräghals*-urn and bowl are both tempered with organic material. The urn has a polished surface and the characteristic outward angled rim. No signs of burning, intentional distortion or wear are discernable. Note, however, that both the urn and bowl were recovered incomplete and were heavily restored when I examined them (see above).

Weaponry The iron Mindelheim sword is roughly 90 cm long (6.3 cm wide at the shoulders, tang to start of pommel is 10 cm). It has a flat tang with a trapezoid top. There are two holes on the shoulders. Rivets running through these would have fastened a grip made from organic material to the tang. The tang is thicker at the shoulders and has been hammered out towards the pommel and the blade (Fig. C16.3). The tip is relatively blunt. The ricasso also appears

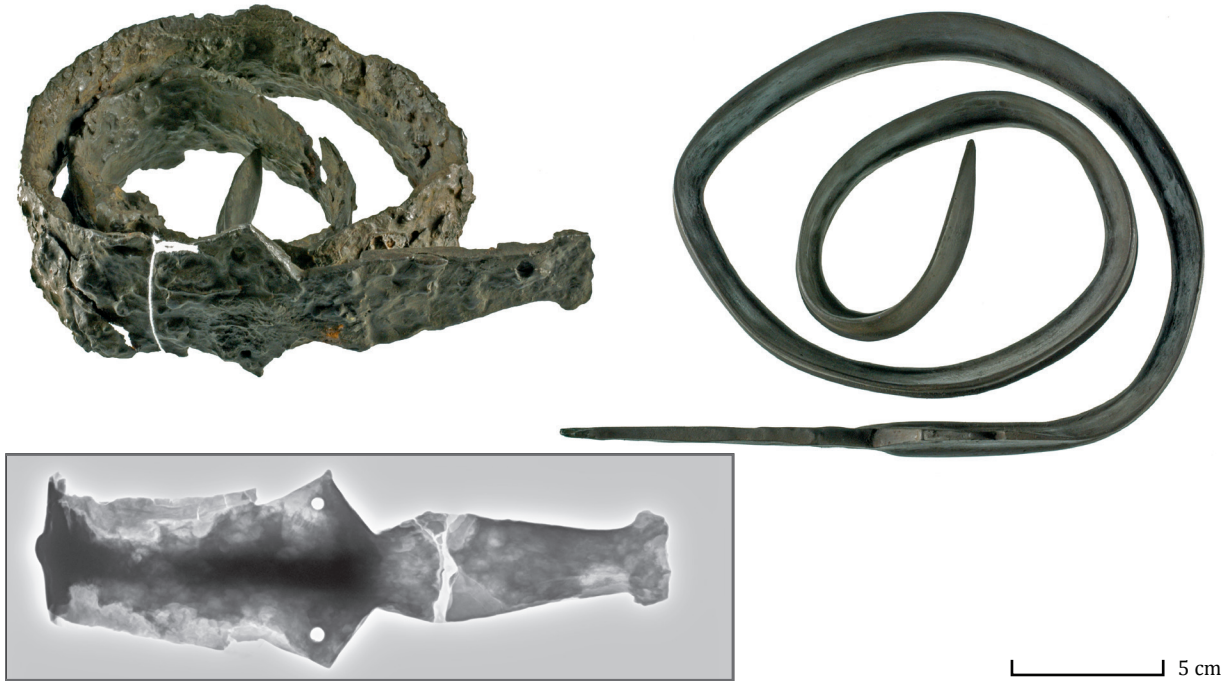


Fig. C16.3 The sword (HH.4) prior to the Restaura restoration work (top left) and side view of sword post-restoration (top right) and X-ray of tang fragment (inset). Photographs and X-ray by Restauratieatelier Restaura, Haelen).

Horst-Hegelsom **Limburg, the Netherlands**					**Data quality:** good
Method of recovery: excavation (good) **Year of discovery:** 1979 **Date:** Ha C1–2 **Current location:** Limburgs Museum, Venlo		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** LM inv. no.
	Human remains				
*HH.1**	Cremation remains	Indet	Indet	++	-
	Pottery				
HH.2	Pottery urn	--/--	-/-	--	L27171.2
HH.3	Pottery bowl	--/--	-/-	--	L27171.3
	Weaponry				
HH.4	Iron sword, curled up (type Mindelheim)	--/--	++/+-	+	L27171.1
References: Willems/Groenman-van Waateringe 1988.					

Tab. C16.1 Inventory and numbering information Horst-Hegelsom.

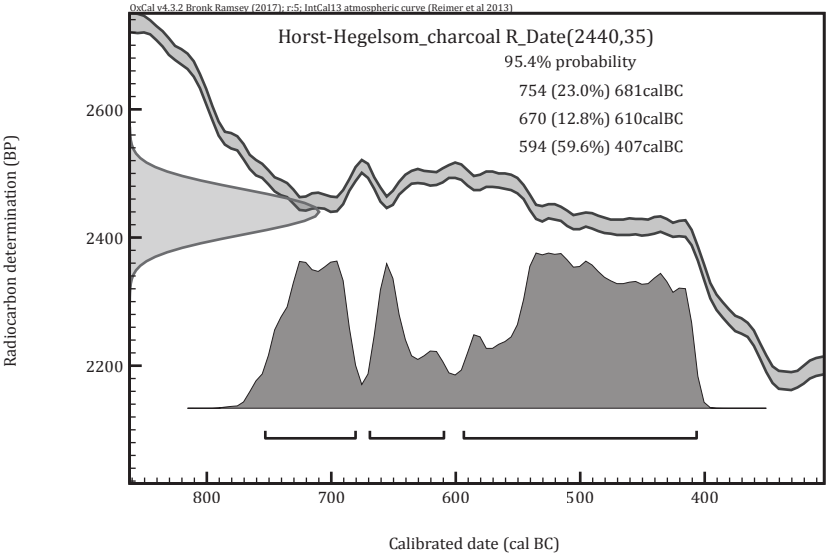


Fig. C16.4 The calibrated ^{14}C-date (with OxCal v4.3.2 at the 2σ range) of charcoal sample from Horst-Hegelsom.

rather blunt and unrefined. It is unclear whether this is original or restoration work. There is a (hemispherical) central rib running the length of the blade, flattening out towards the tip.

The combination of the sharp shoulders and ricasso with the single, central raised rib running down the blade makes it difficult to relate this sword to any of Trachsel's (2004) Etappes. The sword has been intentionally and carefully curled up (Fig. C16.3). Roughly at the center of the blade there is a sharp bend, while the rest curves gradually. This indicates that the sword likely was heated and bent in the middle, and then gradually curled up the rest of the way.

C16.4 Dating

Lanting and Van der Plicht (2001/2, 174) date this burial Hallstatt C (800–625 BC) based on the *Schräghals-urn*. However, they also ^{14}C-dated charcoal from the pit located in the gap or entrance of the ring ditch. Lanting and Van der Plicht (2001/2, 174) dispute the relationship between this pit and the burial. They claim this pit to be only a dip in the soil profile. However, in the original publication of this grave this pit is described as a distinct feature filled with large chunks of charcoal (probably from a fire burning in it; Willems/Groenman-van Waateringe 1988, 17). It therefore seems highly doubtful that this was only a dip in the soil profile (especially since Lanting and Van der Plicht appear to base their statement only on Willems/ Groenman-van Waateringe 1988; see also Fig. C16.2). I

therefore argue that this feature and ^{14}C-date most likely do relate to the burial event.

The ^{14}C-date of 2440±35 BP (GrN-10761) calibrates to ca. 755–405 BC at the 2σ range (Fig. C16.4). As discussed in Section 3.4.1.2, type Mindelheim swords are dated 800–650 BC in this research, suggesting that this burial likely dates somewhere around the Hallstatt C1–2 transition (Fig. 3.5), which is consistent with the urn which is of the same type as those found for example in Lommel-Katten-bos T.20 and Oss-Zevenbergen M.7.

C16.5 Actions taken and reconstructing the (burial) ritual

A man between 25 and 60 years of age was cremated. At least some of his cremation remains were collected and deposited in a *Schräghals*-urn. An iron sword was heated and bent in half, and then curled up the rest of the way. It was placed in the urn alongside the cremation remains. Its handle may have been broken off deliberately and placed among the rolled-up blade. A ceramic bowl was used as a lid to close off the urn. The urn was placed in a pit that was marked by some kind of wooden funerary structure. This construction may have been burned as part of the burial ritual.

A large barrow (19 m in diameter) was constructed over the burned remains and the pit. The barrow may have been constructed using earth from a very wide ditch that was dug around the mound, with more sods being brought in from elsewhere. At first an opening was left in the ring ditch in the west-northwest side, where a fire burned.

C17 La Plantée des Dames

In 1902 C. Dens excavated a dozen barrows, known as (Court-St-Etienne) La Plantée des Dames or as Le Bois de Noirhat (Fig. C17.1). The barrows were situated on the border between Court-St-Etienne and the neighboring municipality Bousval, in the woods of Basse Laloux and Bois-Goffaux. The mounds are located on the western edge of a plateau between the rivers Dyle and Thyle (Dens 1903). Information regarding these barrows is limited, but a few interesting details survive. A single bronze button was available at the MRAH. It was studied by myself and photographed by J. van Donkersgoed.

C17.1 Find circumstances

A total of twelve barrows were excavated at La Plantée des Dames. Of these, eleven contained charcoal in some form or another, five yielded human remains and seven objects. One of the barrows to yield grave goods, Tombelle 8, contained a secondary

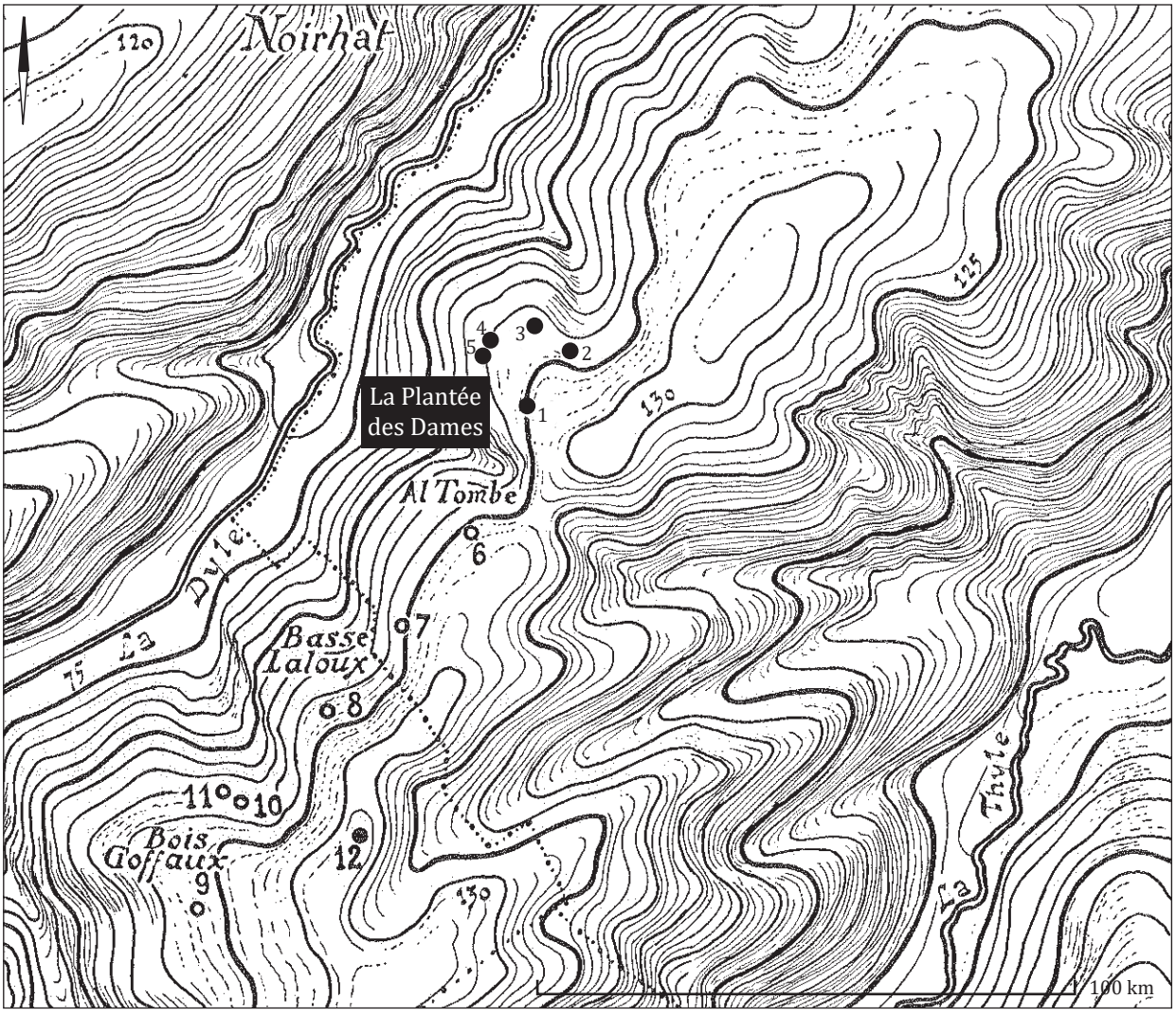


Fig. C17.1 The find location of La Plantée des Dames. Figure after Mariën 1958, fig. 44.

Frankish burial with a belt. This grave is not discussed further. Tombelles 3 and 4 are discussed individually below while the remainder is discussed here. Note that these serve as context information and are not included in Figure C1.1 and Table C1.1. The barrows ranged in size from 9 to 25 m in diameter, with the highest surviving height being 1.50 m. With the exception of Tombelle 1 all barrows yielded charcoal. In some cases the charcoal presence was substantial enough to be interpreted as pyre remains by the excavators (T.2–5 and T.12), in other cases there was just a scattering of charcoal (T.7–11). In five barrows prehistoric (traces of) bones were found (T.2, T.4, T.6, T.11 and T.12). Four yielded artifacts (T.1, T.3–5) and another two contained traces of objects (T.2 and T.11; Dens 1903, 153–61; Mariën 1958, 226–32).

In Tombelle 1 Dens (1903) found a layer of charcoal on the old surface that extended in a very uneven manner and at one point even exceeded the foot of the barrow. Among these coals a heat-fractured grinding stone was found. Tombelle 2 contained a northeast oriented pyre of 3 by 2 m. It also yielded cremated bone, charcoal and melted bronze drops scattered in all directions. Tombelle 5 covered two small pyre areas. Dens interpreted these as two child burials. In the center of each was a small pot. Tombelle 6, unfortunately, had been ransacked to a depth of 3.5 m prior to excavation. A small area was strewn with bones. Tombelles 7, 9 and 10 yielded only trace amounts of charcoal scattered throughout the mounds (Dens 1903, 153–8). Tombelle 8 was slightly different than the rest. It was elliptical in shape and roughly 25 m in length. At its center a secondary burial from the last Frankish era had been dug into the barrow. The pit was oriented northeast and about 1.2 m deep. The bones had degraded completely and a plate buckle belt with silver elements was all that survived (Dens 1903, 157–8). Tombelle 11 yielded trace amounts of charcoal spread throughout the mound. At its center a small pit 60 cm deep was found to contain cremated bones with traces of copper oxide. Tombelle 12 had no surviving mound body. A burial was brought to light when charcoal was plowed up. It turned out to be from a pyre 2 m long and 75 cm wide. It lay on a bed of white sand and was oriented southeast. The cranial bones and dimensions of the long bones indicate that the body was positioned with the face looking south (Dens 1903, 158). According to Dens (1903) the disappearance of the funeral deposits in Tombelles 7–10 can be attributed to bioturbation, such as the rabbit burrows observed in the mounds. Also the ground was disturbed to a depth of 60 cm for the planting of the forest. In Tombelle 11, for example, the burial deposit survived by chance, the planting trench was only 2 cm away from it.

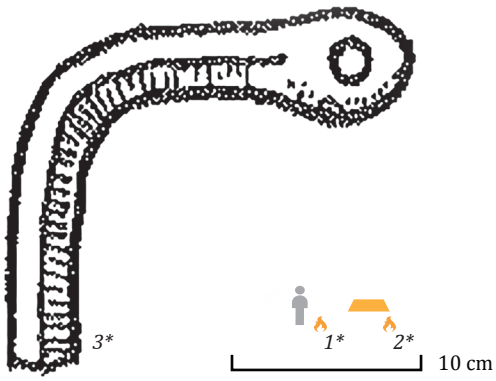


Fig. C17.2 The finds from La Plantée des Dames T.3 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix PdD.T3. Drawing after Mariën 1958, fig. 44.

C17.2 Tombelle 3

Tombelle 3 contained a circular area with pyre remains. Several objects from this barrow were affected heavily by fire. Dens thought he recognized a bronze crescent-shaped razor. He also collected an iron object that might be part of a toilet set (Fig. C17.2; Dens 1903, 153–4; Mariën 1958, 227–9).

La Plantée des Dames Tombelle 3 **Walloon Brabant, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1902 **Date:** Ha B3–D3 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958
	Human remains				
*PdD.T3.1**	Bone material	Indet	Indet	Indet	-
	Personal appearance				
*PdD.T3.2**	Bronze crescent-shaped razor	--/--	--/--	++	1
*PdD.T3.3**	Iron object, from a toilet set?	--/--	+-/+-	+	2
References: Dens 1903, 153–61; Mariën 1958, 226–32.					

Tab. C17.1 Inventory and numbering information La Plantée des Dames T.3.

C17.2.1 The material remains

Human remains Bone material was recovered that probably was cremated as it was mixed in with the charcoal.

Personal appearance Metal objects distorted by fire were found here, including a bronze crescent-shaped razor and iron object (perhaps a toilet set; Fig. C17.2).

C17.2.2 Dating

This burial is difficult to date as there is no depiction of the razor, and the iron object is not diagnostic. A bronze crescent shaped razor can date from Hallstatt B3 to D3 and this burial is therefore not included in Figure 3.5 (Trachsel 2004, 142–4).

C17.3 Tombelle 4

Tombelle 4 is the most noteworthy of the group in terms of grave goods (Fig. C17.3). It covered a rectangular pyre of 2 by 0.75 m, oriented southeast. In the center lay scattered bones. On the side, in the middle of an area cleared of debris, was a hole in the ground, made with care and about 20 cm wide, shaped like a truncated cone, simulating the shape of a pot. Here the main fragments of bone and two bronze buttons were deposited (Dens 1903, 154; Mariën 1958, 229–30).

C17.3.1 The material remains

Human remains Cremated remains were found in this barrow.

Horse-gear Two bronze buttons were found in this barrow, but only one was available for study at the MRAH. This button (*PdD.T4.1*) is made of rather thick bronze and is quite heavy and sturdy. There is a bar running across the hollow side of the semi-sphere. It is listed here under horse-gear as it appears to be a *phalera*, though it also could be a bronze decoration for a non-horse-gear item. It is stored under the same number as one of the footed bowls from T.5 as though it is from the same burial as the bowl. According to Mariën however, they are from two different barrows (Mariën 1958, 227–30).

C17.3.2 Dating

Bronze buttons like the one found in this burial predominantly date to the Hallstatt C1 phase, suggesting that this burial dates to this same phase (*cf.* Trachsel 2004, 53; Fig. 3.5).

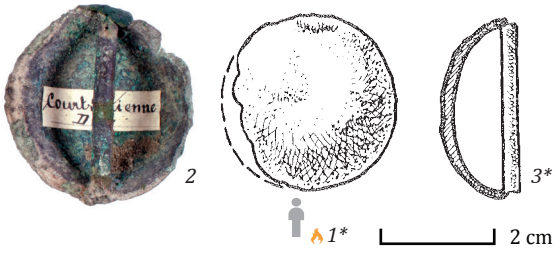


Fig. C17.3 The finds from La Plantée des Dames T.4 (lost finds are shown with icons, see the legend of Figure C1.1). All num- bers have the prefix PdD.T4. Drawing after Mariën 1958, fig. 44; photograph by J. van Donkersgoed.

La Plantée des Dames Tombelle 4 **Walloon Brabant, Belgium**					**Data quality:** medium		
Method of recovery: excavation (medium) **Year of discovery:** 1902 **Date:** Ha C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.	Fiche no.
	Human remains						
*PdD.T4.1**	Cremation remains	Indet	Indet	++	-	-	-
	Horse-gear						
PdD.T4.2	Bronze button	--/--	--/--	--	1–2	D 00042	3029
*PdD.T4.3**	Bronze button	Indet	Indet	Indet	1–2	-	-
References: Dens 1903, 153–61; Mariën 1958, 226–32.							

Tab. C17.2 Inventory and numbering information La Plantée des Dames T.4.

C18 Leesten-Meijerink grave 1

This unusual burial (grave 1) from Leesten-Meijerink with a rich ornament set was discovered only a few years ago (Fig. C18.1). It was termed a 'Princess grave' by its excavators and has played a role in the ongoing discussion regarding the use of terms such as 'chieftain's grave' (Van Straaten/Fermin 2012, 12). B. Fermin of the municipality of Zutphen kindly made the finds available for study and supplied both drawings and photographs of them.

C18.1 Find circumstances

This grave was found in an urnfield and was noticed as special right away due to its double peripheral ditch and pottery finds located next to the urn (Fig. C18.2). The truly special finds, however, were not done until the contents of the pot were removed. The urn was located in a grave pit by the remains of the pyre, within two concentric ditches, which given their concentric nature and lack of other burials likely both relate to the 'Princess grave' as it is now known. The ditches were not recovered intact, so it is unclear whether they had openings. The inner ditch had a diameter of 5.2 m and the outer had a diameter of 6.8 m. Double ring ditches are known from other urnfields, but are still a relatively rare occurrence. The urnfield had been leveled, so it is impossible reconstruct the appearance of the monument (Van Straaten/Fermin 2012, 38; 92).

C18.2 The material remains

Human remains The cremated remains (1686 gr) found in the urn proved to be those of a woman who was between 25 and 34 years old when she died (Van Straaten/Fermin 2012, 86–93).

Pottery The urn was interpreted as a *cilinderhalsterrine* with a polished surface and a sand temper (Van Straaten/Fermin 2012, 49). In this urn a small accessory bowl (*LeM.g1.04*) was found. A second small accessory vessel (*LeM.g1.03*) was found next to the urn.

Tools Spindle whorls were found both in the urn (*LeM.g1.05*) and next to it (*LeM.g1.06*).

Personal appearance The urn also contained several dozen bronze ornaments and 76 glass beads (or fragments thereof). The bronze ornaments included a clothing or hairpin (burned, and possibly intentionally broken), ear- or hair rings (burned and possibly intentionally broken), a 'button', spiral beads and over 50 tiny studs. The glass beads come in two types. Four of the beads are (cobalt) blue *Ringaugenperlen* (burned) which originally would have had white or yellow circular rings (Fig. C18.3). These are of high quality, though they have lost their ring-shaped white or yellow decoration. Three were definitely burned, of the fourth (no. 3) it is not as clear. These are the only *Ringaugenperlen* found in the Netherlands. The other 72 glass beads are simple blue rings, and may have been locally made (Van Straaten/Fermin 2012). The bronze pin is broken into several fragments. The fragments do not connect, which suggests that not all the pieces were collected from the pyre. The pin fragments currently make up 5 cm, though it originally was likely twice as long. It has a dish (*i.e.* a hemispherically) shaped head which is perforated with two small round holes, as well as a third irregularly shaped hole. The pinhead is 29 mm in diameter. It is unclear whether this pin originally had a



Fig. C18.1 The finds from Leesten-Meijerink g.1 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix LeM.G1. Pottery is not to scale (the largest pot is ca. 22 cm high). Figures supplied by B. Fermin.

round head, which would have made it a *Bombenkopf* pin. XRF-analysis showed that the head is lead bronze, while the pin is a mix of copper, antimony, arsenic and silver (Van Straaten/Fermin 2012). The bronze pin showed a very high tin content, which is interpreted as evidence that the objects were intentionally tinned to give them a shiny surface (Van Straaten/Fermin 2012, 63). The pin fragments show signs of burning, and may have been broken intentionally. There are five fragments made up of melted together bronze threads. Two fragments are bent round. Van Straaten and Fermin (2012) argue that this is original and that this indicates they were likely hair- or earrings. There are also several beads made of tightly curled up bronze thread. All the beads are broken, so it is unclear how long they originally were. These also have a high tin content, indicating they had a shiny surface (Van Straaten/Fermin 2012). There are also some fragments which appear to be from one of these beads that has

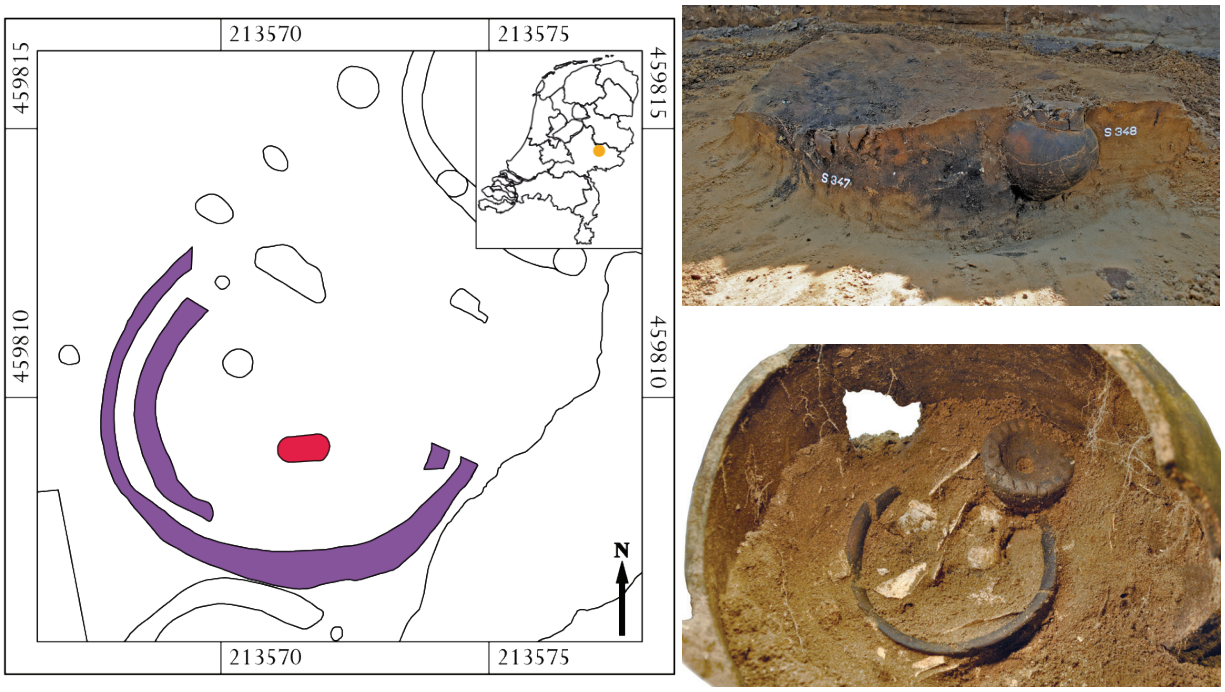


Fig. C18.2 Excavation plan (left) as well as g.1 in situ (top right) and the urn in excavation (bottom right). Figures supplied by B. Fermin.



Fig. C18.3 A glass Ringaugenperle (LeM.g1.08). Figure supplied by B. Fermin.

been 'pulled out'. A single bronze button is made up of a flattened hollow hemisphere and is 12 mm in diameter. There are more than 50 tiny hollow bronze conical studs with a little bar running along the hollow side. On average they are 6 mm across and 4 mm high, not counting the bar. XRF-results indicate they may have been intentionally tinned to give them a shiny surface (Van Straaten/Fermin 2012, 93). These studs probably would have been sewn onto clothing.

Other Two possible fragments of burned animal bone were found among the cremation remains (Van Straaten/Fermin 2012, 86).

C18.3 Dating

The cremation remains were ^{14}C- dated 2570 ± 35 BP (Fig. C18.4), which at the 2σ range calibrates to 811–744 cal BC (67.3%), 686–665 cal BC (7.0%) and 644–551 cal BC (21.1%). When combined with the type of urn and the *Ringaugenperlen*, a date in the 8th century BC appears the most likely for this burial (Van Straaten/Fermin 2012, 93; Fig. 3.5).

C18.4 Actions taken and reconstructing the (burial) ritual

This grave is likely the earliest and the richest burial of the excavated part of the cemetery, though it should be noted that only a part of the cemetery was excavated. It is possible there are older or richer burials in other parts, yet to be discovered. The burial is located on one of the highest points in this area (Van Straaten/Fermin 2012, 93). A woman between 25 and 34 years old died and was cremated. She likely wore a number of different ornaments when she was burned on the pyre. She wore a bronze clothing or hair pin and bronze ear- or hair rings as these both show signs of exposure to heat. The bronze pin is broken into several fragments. The fragments do not

Leesten-Meijerink Grave 1 **Gelderland, the Netherlands**					**Data quality:** excellent
Method of recovery: excavation (excellent) **Year of discovery:** 2010 **Date:** Ha C1–2 **Current location:** Gemeentelijk Depot voor Bodemvondsten, Zutphen		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Find no.
	Human remains				
LeM.g1.01	Cremation remains, found in pot *LeM.g1.02*	Indet	Indet	++	-
	Pottery				
LeM.g1.02	Pottery urn, contained *LeM.g1.02*	--/--	--/--	--	V 118
LeM.g1.03	Pottery accessory bowl, found next to *LeM.g1.02*	--/--	--/--	--	V 116-3
LeM.g1.04	Pottery accessory bowl, found in *LeM.g1.02*	--/--	--/--	--	V 118-3
	Tools				
LeM.g1.05	Ceramic spindle whorl, found in *LeM.g1.02*	--/--	--/--	--	V 118-2
LeM.g1.06	Ceramic spindle whorl, found next to *LeM.g1.02*	--/--	--/--	--	V 116-1
	Personal appearance				
LeM.g1.07	Glass bead, 72x	--/--	-	++	V 118
LeM.g1.08	Glass *Ringaugenperlen*, 4x	--/--	--/-	++	V 118
LeM.g1.09	Bronze clothing or hair pin, in fragments	--/--	--/+-	++	V 118
LeM.g1.10	Bronze ear- or hair ring fragments	--/--	++/++	++	V 118
LeM.g1.11	Bronze spiral beads	--/--	++/++	+-	V 118
LeM.g1.12	Bronze 'button'	--/--	--/--	+-	V 118
LeM.g1.13	Bronze studs, > 50	--/--	-/-	+-	V 118
	Other				
LeM.g1.14	2 possible fragments animal bone	Indet	--/--	++	V 118
References: Van Straaten/Fermin 2012.					

Tab. C18.1 Inventory and numbering information Leesten-Meijerink g.1.

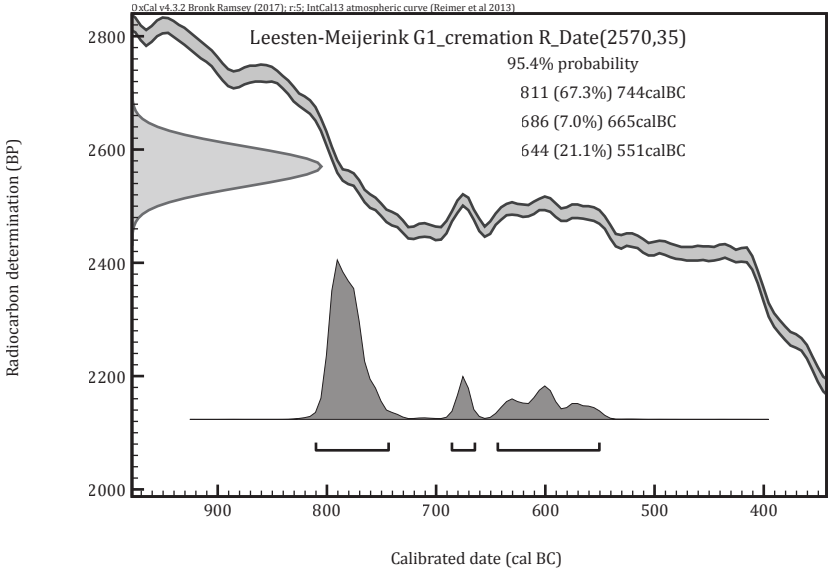


Fig. C18.4 The calibrated ^{14}C-date (with OxCal v4.3.2 at the 2σ range) of a sample of cremation remains from the burial of Leesten-Meijerink.

connect, suggesting that not all the pieces were collected from the pyre. The pin fragments show signs of burning, and may have been broken intentionally. A bronze button, some bronze spiral beads and more than 50 tiny bronze studs also may have adorned her person, or could have been added to the remains later on. The bronze studs likely were sewn onto her clothing. The bronze spiral beads may have been intentionally fragmented. They are all broken, and some even appear to have been 'pulled out'. This woman, however, was adorned with more than just bronzes on her pyre. Three out of four (cobalt) blue *Ringaugenperlen* also were burned, and possibly the fourth as well. They are not all complete. Another 72 glass beads (or fragments thereof) are simple blue rings, and may have been made locally. The cremated remains and ornaments were collected from the pyre and placed in an urn along with a small accessory bowl and spindle whorl. The absence of a number of pin fragments suggests this searching through of the pyre remains was not thorough or that some ornament fragments deliberately were kept out of the urn. The urn was buried in a pit by the burned-out pyre, either in the center of a double ring ditch, or it was buried and a double ring ditch was then dug. Another accessory bowl and spindle whorl were placed next to the urn.

C19 Limal-Morimoine

The four barrows of Limal-Morimoine were located on a plateau with a magnificent view of the valley of the river Dyle (Fig. C19.1). The artifacts from this site currently are housed in the MRAH. Unfortunately only a selection of grave goods could be located and made available for study. These were studied by myself and photographed by J. van Donkersgoed at the MRAH.

C19.1 Find circumstances

C. Dens (1903) excavated the mounds of Limal-Morimoine in 1902. In the same campaign he excavated barrows at Stoquoy and La Plantée des Dames (see Chapters C17 and C31). Two of the Limal-Morimoine barrows yielded finds interesting to the current study, including an iron sword, horse-gear and razor. Beyond their dimensions, little is known about the other two barrows at this location. Tombelle 3 was 8 m in diameter and 50 cm high. Tombelle 4 was a very large and high mound, 19 m in diameter and 1.7 m high (Dens 1903, 124–53; Mariën 1958, 214–26).

C19.2 Tombelle 1

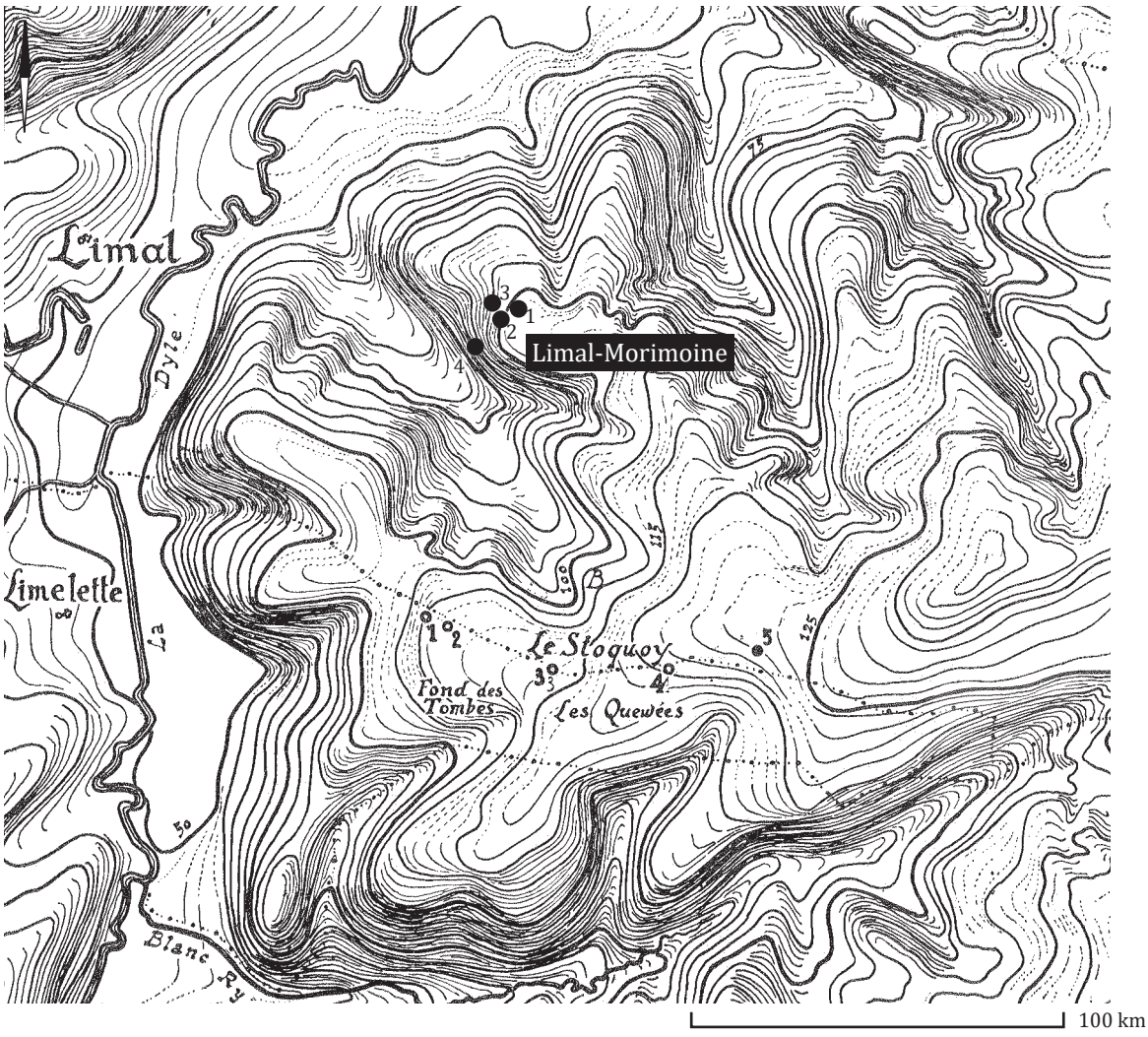
Tombelle 1 (ca. 14 m in diam.) yielded very interesting finds, despite having been almost completely leveled in 1899 to raise the road that ran alongside the mound (Figs. C19.1 and C19.2). Metal objects were found deposited alongside an urn and cremation remains (Dens 1903). Despite its early excavation date, there is a fair amount of information available regarding the find contexts of these objects. Dens and his companions were able to examine the old surface and concluded that a pyre had been built over a pit 25 cm deep. This pit was equipped with two flues. They identified the remains of a pyre which was roughly trapezoidal in shape. It was about 5 m long and roughly 4 m wide at the base and 1.75 m wide at the top. The ground around this zone was dotted with charcoal fragments. Their distribution, however, was restricted to the eastern side. The excavator interpreted this as the result of a strong wind blowing from the opposite direction at the time of cremation. The cremated remains were spread out in a zone of 2 by 0.80 m together with the small bronze ornaments. Among these was the urn containing ashes. The iron horse-bit fragment was found in the center, and an iron sword lay in the northern corner (see Fig. C19.1). The large size and strange shape of the pyre remains, combined with the presence of two flues lead Dens (1903, 145) to hypothesize that a horse may have been cremated here alongside its master, and its bones rejected as being unworthy to rest in the grave (a similar event is described by Tacitus in Germania, C. XXVII; Dens 1903, 142–9). All finds from this barrow are housed in the MRAH, but at present only the urn, bronze studs and melted drops of bronze were available for examination. These were studied by myself and photographed by J. van Donkersgoed.

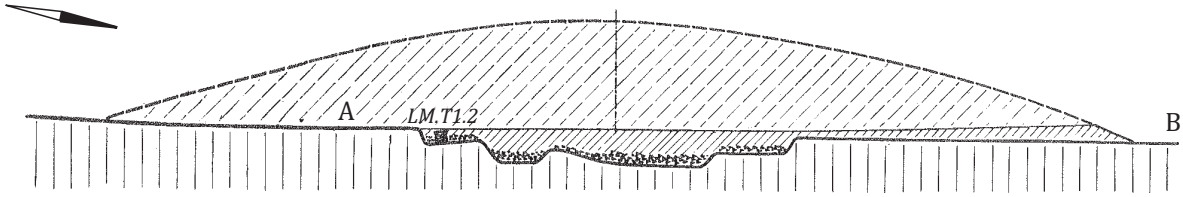
C19.2.1 The material remains

Human remains The cremated remains were found spread out in a zone with the bronzes as well as in the decorated urn.

Pottery A decorated urn was found in this barrow.

Weaponry A straight iron Mindelheim sword was deposited in this grave. It appears complete.





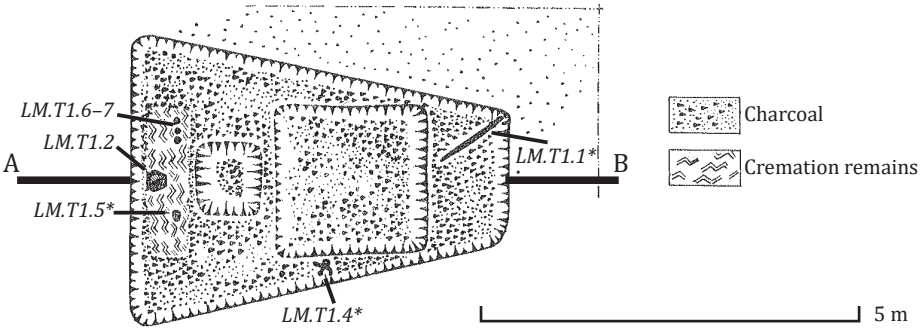


Fig. C19.1 Map of Limal-Morimoine (top) and excavation plan of Tombelle 1. Figure after Mariën 1958, figs. 39 and 40.

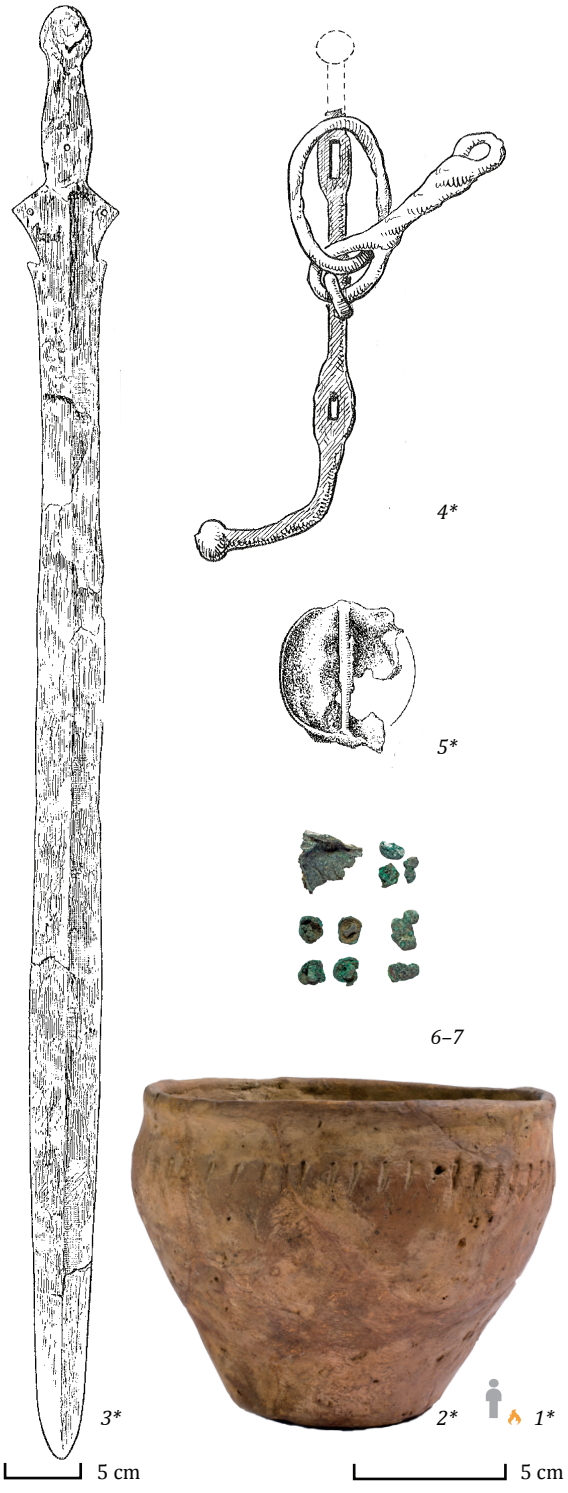


Fig. C19.2 The finds from Limal-Morimoine T.1 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix LM.T1. Drawings after Mariën 1958, fig. 40; photographs by J. van Donkersgoed.

Horse-gear The recovered horse-gear consists of half an iron horse-bit, a bronze *phalera* as well as four bronze studs. Dens describes the horse-bit as originally having had a mouthpiece 15 cm wide. This is rather on the large side for this type. The bit is of similar construction to the bits from Oss and T.3 of Court-St-Etienne La Ferme Rouge. Dens (1903, 149) interprets the Limal bit as having been for a very large horse, which was difficult to master. He argues that the bit was equipped with double reins and that there are edges evident on the bridle (though see Section 6.3.4 for current thinking on the functioning of such bits). The five bronzes most likely would have decorated the accompanying horse-gear.

Other Dens reports five 'melted drops of metal' among the objects. It is unknown what these are originally from, though they indicate bronze objects were placed on or by the pyre.

C19.2.2 Dating

The characteristic early Hallstatt C1 horse-bit (*cf.* Kossack 1954; Pare 1992, Ch. 10; Fig. 3.1), the same type as found in Court-St-Etienne La Ferme Rouge T.3 and the Chieftain's burial of Oss, indicates that this burial likely dates to the 8th century BC (Fig. 3.5; Section 3.4.1.3; Trachsel 2004, 53). This is consistent with the date ascribed to the Mindelheim sword.

C19.2.3 Actions taken and reconstructing the (burial) ritual

By the time Dens (1903) examined this burial the mound body had been removed, but what remained is highly interesting (it should be noted that originally there may have been more objects). In this barrow lay a massive zone of charcoal, 5 m long and between 4 and 1.75 m wide (Fig. C19.1). At the wide end of this zone lay a scatter of cremated bone, with an urn containing ashes in the center of this. To either side of this urn lay bronze horse-gear ornaments. The deposit is located at various depths. As mentioned above, Dens (1903, 124–53) interpreted this as evidence that the mourners had dug a pit about 25 cm deep, with two flues, and constructed a pyre over this. I offer a different interpretation. The distribution of charcoal, cremation and objects appears very deliberate, and not consistent with Dens' interpretation of it simply being a massive pyre. The distribution of the cremation remains serves as an example. The cremation remains were located in a rectangular area roughly 1.80 m by 0.8 m. Their distribution appears very localized and deliberate. Especially since the urn, likewise containing ashes, was placed in the middle of this cremation zone, with bronze horse-gear decorations to either side (Fig. C19.1). This

Limal-Morimoine Tombelle 1 **Walloon Brabant, Belgium**					**Data quality:** medium	
Method of recovery: excavation (medium) **Year of discovery:** 1902 **Date:** Ha C1–2 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.
	Human remains					
*LM.T1.1**	Cremation remains, found in *LM.T1.2*	Indet	Indet	++	-	-
	Pottery					
LM.T1.2	Pot, contained cremation *LM.T1.*	--/--	--/--	--	2	-
	Weaponry					
*LM.T1.3**	Iron sword (type Mindelheim)	--/--	--/--	--	1	D. 042 or F365
	Horse-gear					
*LM.T1.4**	Iron horse-bit, about half	---/--	--/+	--	3	-
*LM.T1.5**	Bronze phalera	--/--	--/+-	++	4	-
LM.T1.6	Bronze studs, 4x	--/--	--/--	++	5–8	N 01173 or 3037
	Other					
LM.T1.7	Melted drops of bronze, 5x	Indet	Indet	++	9	N 01173 or 3037
References: Dens 1903, 124–53; Mariën 1958, 214–26.						

Tab. C19.1 Inventory and numbering information Limal-Morimoine T.1.

zone of cremation remains and objects appears laid out. The straightforward cremation of an individual would not result in this deposit. It could, however, be the result of the following scenario. Perhaps a pyre was built in the large central square and an individual was cremated on it. As it burned a strong wind blew from the west, resulting in charcoal speckles to the east. After it burned down, or perhaps was blown out by the strong westerly wind, the remaining charcoal was searched through and spread about (compare for example Oss-Zevenbergen Mound 7; Section C27.2). The cremation remains were collected and some were used to create a rectangular area of cremation, perhaps mimicking the shape and size of a body (an established practice). Some of the ashes were placed in an urn which in turn was placed in the center of the cremation remains zone. A handful of bronzes were placed to either side of the urn or perhaps they had started out on that side of the pyre. They show signs of exposure to heat and fire, as do of course the 'droplets of molten metal'. It is possible that there originally were more objects that simply did not survive or were not retrieved. The surviving horse-bit fragment and sword were found right on the edges of the large charcoal zone. Perhaps the objects lay around the pyre as it burned. In short, it seems not unlikely that this burial deposit is the result of a similar burial ritual as found at Mound 7 of Oss-Zevenbergen (Fontijn *et al.* 2013a; Section C27.2).

C19.3 Tombelle 2

Tombelle 2 was an oval elevation, some 20 m long and approximately 13.30 m wide. This long barrow yielded cremation remains, an iron razor, an iron toilet set, iron ring fragments and a bronze ring fragment (Fig. C19.3). Dens' (1903, pl. XXIII) transverse section appears to show a soil formation in the shape of a low mound, with a higher mound constructed over this. Whether the bottom elevation is an earlier mound phase or a natural elevation cannot be determined. Whatever it was, a pit (ca. 2 m by 1 m) was dug into the side of it.

One of the pit walls sloped gently while the other was straightly vertical. It contained only burned wood. On the top the mound, about 60 cm from the pyre pit, was a narrow pit 75 cm deep which contained a considerable amount of cremated bone. In the midst of this lay an amalgamation of objects that had corroded together. With the exception of the cremation remains all finds from this barrow were made available by the MRAH. They were studied by myself and photographed by J. van Donkersgoed.

C19.3.1 The material remains

Human remains Dens (1903, 150) argues that there was an unusual amount of cremation remains, and interprets this as indicating that it represents the remains of two individuals. Unfortunately, this cannot be confirmed.



Fig. C19.3 The finds from Limal-Morimoine T.2 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix LM.T2. Photographs by J. van Donkersgoed.

Limal-Morimoine Tombelle 2 **Walloon Brabant, Belgium**					**Data quality:** medium	
Method of recovery: excavation (medium) **Year of discovery:** 1902 **Date:** Hallstatt C1 **Current location:** Royal Museums of Art and History, Brussels		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Mariën 1958	MRAH inv. no.
	Human remains					
*LM.T2.1**	Cremation remains	Indet	Indet	++	-	-
	Personal appearance					
LM.T2.2	Iron razor (type Gruppe D)	--/--	--/--	-	1	D. 42 or 8511
LM.T2.3	Iron tweezers with iron instrument	--/--	--/--	--	2-3	D. 42 or 8511
	Other					
LM.T2.4	Iron plate, fragment	--/--	--/+-	--	4	D. 42 or 8511
LM.T2.5	Iron ring with round cross-section, and iron ring fragment with square cross-sections	--/--	--/+-	--	5–6	D. 42 or 8511
LM.T2.6	Bronze ring fragment	--/--	--/+-	--	-	D. 42 or 8511
References: Dens 1903, 124–53; Mariën 1958, 214–26.						

Tab. C19.2 Inventory and numbering information Limal-Morimoine T.2.

Personal appearance An iron razor, and a set of iron tweezers together with a third iron instrument likely all relate to the personal appearance of the deceased.

Other Several iron ring fragments with square cross-section were found. As discussed in Section C2.4.4, it is difficult to attribute a function to loose finds of rings. A square iron fragment with two holes of unknown function was also found.

C19.3.2 Dating

The iron razor from this burial appears to be a type Gruppe D and therefore indicates that this burial likely dates to the Hallstatt C1 phase (Trachsel 2004, 144). The other objects unfortunately do not provide a narrower date, though the toilet set from this burial is very similar to the one found in Slabroek, which would be consistent with a Hallstatt C1 date for this burial (Fig. 3.5).

C19.3.3 Actions taken and reconstructing the (burial) ritual

The cremation remains found in this burial have been lost. It therefore is unknown who was cremated and buried here, though Dens (1903, 150) argues that the unusual amount of cremated bone indicates the remains of two individuals. Mariën (1958, 226) argues that the razor, toilet set and hook belong to a man, while the rings belong to a woman. However, as discussed in Section C2.4.4, it is difficult to attribute a function to loose finds of rings, let alone a gender. Moreover, while Dens states that there was an unusual amount of cremation remains found, it is unknown what he considered 'usual'. The amount of cremation remains from a single individual can vary strongly, especially considering the varying practices with regard to how 'complete' a cremation was deposited by the mourners. An 'unusual' amount of cremated bone is therefore not enough to state that two people were cremated and buried here. What is clear, however, is that



Fig. C19.4 The iron sword of unknown context. Photograph by J. van Donkersgoed.

the appearance of this person was emphasized though his or her grave goods.

This individual was buried with several objects related to personal appearance: an iron razor and a toilet set. The latter consists of tweezers and an instrument that could be a nail cutter. An iron square with two holes is interpreted by Mariën (1958, 225) as part of a hook, and by Dens (1903, 150) as the handle of a dagger. Neither interpretation is backed up by parallels and it remains unclear what this is. Several iron ring fragments with square cross-section also were buried with this person. If the square cross-sectioned ring fragment was really all that was there, and we are not dealing with a partial retrieval, then a ring was broken intentionally and partially deposited. At the MRAH a single fragment of a bronze ring was found with the finds from this barrow.

C19.4 An iron sword of unknown find context

At the MRAH an iron sword was found that is listed in their inventory as being from Limal-Morimoine, though it has a somewhat questionable context. An old note with the sword lists it as "*Limal? Ou Court-St-Etienne*?" Another note with it says: "*M-E Mariën épée Hallstatt n° 131683 (11) traifement en cours Ne RIEN DÉPLACER*". In other words, its label of being a sword from Limal is not completely certain. In any case, the sword was in fragments, but it was possible to fit most back together. The result was two lengths of sword that could not be connected, but appear to be from the same sword (Fig. C19.4). The fragments that I could piece together measure about 90 cm, and include the start of the shoulders, with a possible ricasso. The sword seems to have broken in half lengthwise. This is a fairly massive sword, and does not resemble the Iron Age swords examined in this study, though the type of ricasso observed does conform with an Iron Age sword.

Its massive appearance in combination with its possible find context being Court-St-Etienne, rather than Limal, makes it possible that this is the large iron sword that Juste and Cloquet mention as being from La Quenique Tombelle A. Mariën (1959) could not identify the sword mentioned by Juste and Cloquet. Interesting with regard to the massive sword under discussion is that they describe the sword from Tombelle A as initially being misidentified as a Frankish sword. This is worth noting, since that was my first thought upon seeing the sword as well. I stress that I only tentatively suggest that this blade is the missing sword from Tombelle A, but it is a possibility.

C20 Lommel-Kattenbos Tombelle 20

This barrow is included in the present study because of a toiletry set and iron razor found in it (Fig. C20.1), which sometimes are given as paralells for objects found in the elite burials. Tombelle 20 is the only one to be discussed in detail below, though the site is noteworthy for several other finds as well, including bronze rings and some ornaments, iron hooks and a La Tène iron lancehead (see De Laet/Mariën 1950).

C20.1 Find circumstances

There were a number of disturbances in this area in the 1930s and in 1939 Frère Simplicus excavated, among others, Tombelle 20 (De Laet/Mariën 1950, 311). This barrow was found in the northeast quadrant of the excavation. It was 8 m in diameter and 50 cm high. In the center an urn was found, and to the south of the urn lay a lot of charcoal. A (presumed) grinding stone was found close to the urn. Among the charcoal iron objects, including a razor, tweezers and a toiletry item were found. There were no signs of burned earth and the fact that the iron objects show no signs of burning lead De Laet and Mariën (1950, 321) to postulate that the barrow was not erected over the pyre.

C20.2 The material remains

Human remains Cremation remains were found in the urn.

Pottery A *Schräghals*-pot served as urn.

Personal appearance There are several toiletry items. An iron razor is squarish in shape with one rounded edge. There are also a set of iron tweezers and a fragment of what appears to be an iron nail cutter. It is unclear whether the nail cutter was broken prior to deposition.

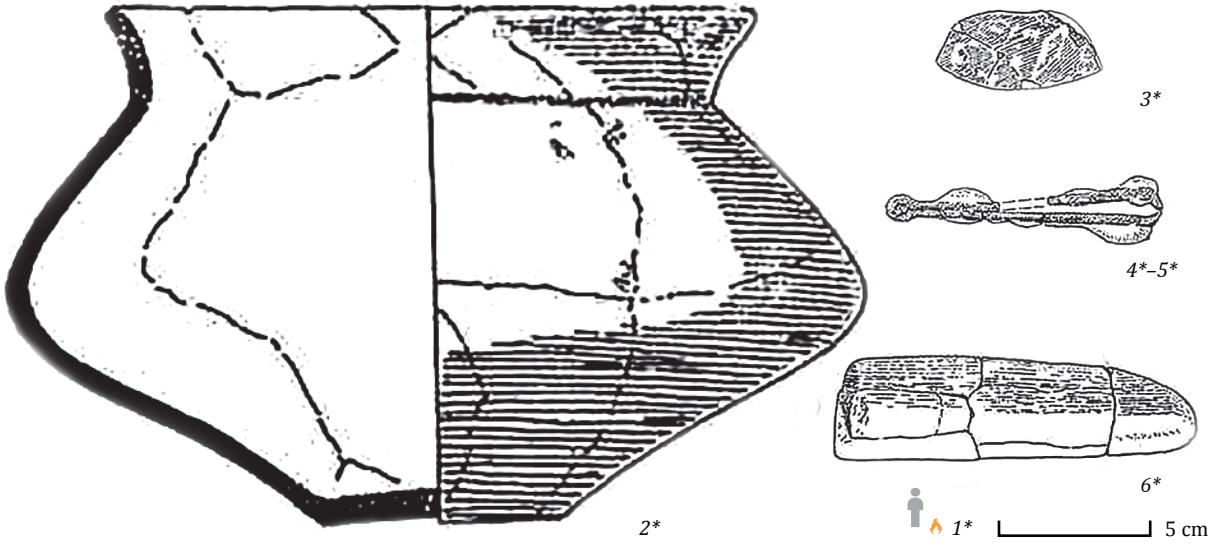


Fig. C20.1 The finds from Lommel-Kattenbos T.20 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix LK.T20. Figure after De Laet/Mariën 1950, fig. 6.

Lommel-Kattenbos Tombelle 20 **Limburg, Belgium**					**Data quality:** medium
Method of recovery: excavation (medium) **Year of discovery:** 1939 **Date:** Ha C1 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** De Laet/Mariën 1950
	Human remains				
*LK.T20.1**	Cremation remains, found in *LK.T20.2**	Indet	Indet	++	-
	Pottery				
*LK.T20.2**	Urn (Schräghals)	--/--	--/--	--/--	A
	Tools				
*LK.T20.6**	Grinding stone	--/--	--/++	--/--	B
	Personal appearance				
*LK.T20.3**	Iron razor	--/--	--/--	--/--	C
*LK.T20.4**	Iron tweezers	--/--	--/--	--/--	D
*LK.T20.5**	Iron nail cutter	--/--	--/--	--/--	E
References: De Laet/Mariën 1950; Mariën 1952.					

Tab. C20.1 Inventory and numbering information Lommel-Kattenbos T.20.

Other A grinding stone appears intentionally broken (De Laet/Mariën 1950, 321–2).

C20.3 Dating

De Laet and Mariën (1950, 322) date this grave to the Hallstatt C period based on the urn, razor and tweezers. This still seems the most likely date. The *Schräghals*-urn resembles the ones found in Horst-Hegelsom, Meerlo and Oss-Zevenbergen M.7. The tweezers resemble those found in Uden-Slabroek. All these parallels suggest a date in Hallstatt C1 for this burial (Fig. 3.5).

C20.4 Actions taken and reconstructing the (burial) ritual

Someone was cremated and his/her remains were collected and placed in an urn. This urn was placed by an area of charcoal. A grinding stone lay close to the urn, and iron toiletry items were among the charcoal.

C21 Louette-St-Pierre Fosse-Aux-Morts

Warmenbol (1978) comprehensively and thoroughly examined the finds from this site. His work forms the basis for the following.

C21.1 Find circumstances

The first excavation at Louette-St-Pierre Fosse-Aux-Morts took place in 1863 and the results were published in 1866 (Dujardin/Gravet 1865/66; Warmenbol 1993). In total 17 barrows were opened, but only four are described in any detail. They varied between 7 and 18 m in diameter and reached ca. 1 m in height. All covered, in so far as could be verified, areas of burned earth. A low wall of white quartz blocks defined the perimeter of one. No other peripheral structures were found, but this could be due to the excavation methods (Dujardin/Gravet 1865/66; Warmenbol 1978; 1993, 83–4). The grave goods were located on layers of burned earth and the cremated bones either were scattered about this area (T.I), or collected in an urn (T.II, T.III and T.IV) (Warmenbol 1993, 84). Tombelles I and III each contained pottery, a bronze razor and cremation remains (Warmenbol 1978; 1993) and are discussed below. With regard to Tombelle II it suffices to say that it contained two pots, one of which was filled with the cremation remains of a child who was 7 or 8 years old at the time of death. The urn also contained a fragment of non-human bone, which could be from a dog's ulna (Warmenbol 1978; 1993, 95). The barrow is no longer visible.

C21.1 Tombelle I

This barrow is noteworthy due to the bronze razor found in it (Fig. C21.1). Charcoal and cremation remains were recovered from an area of burned earth. The finds were found in this area. Information regarding its size, or the area of burned earth and charcoal

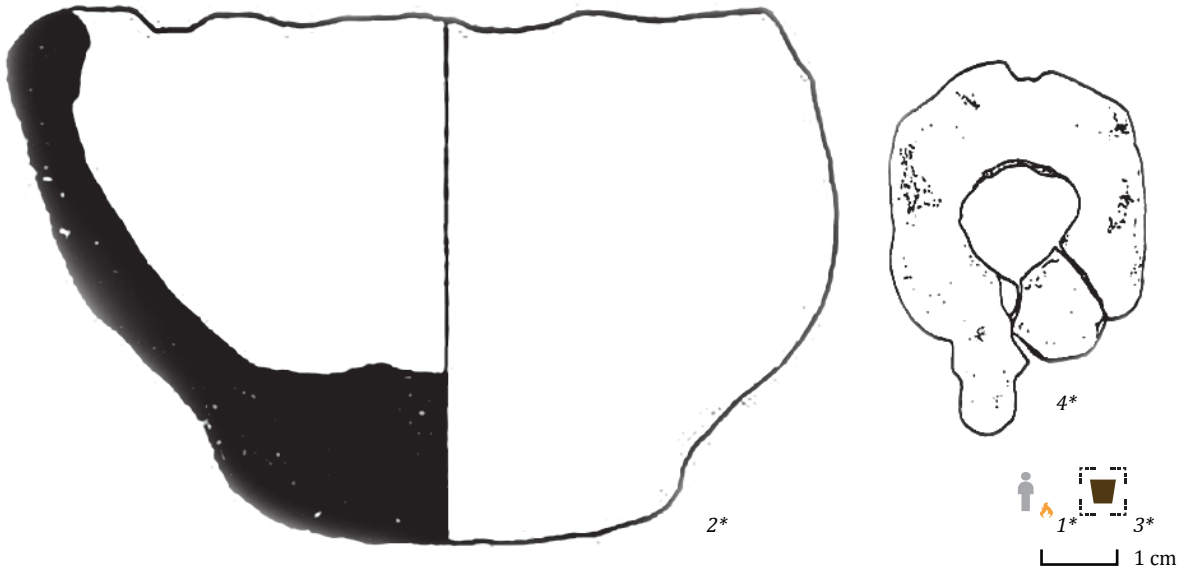


Fig. C21.1 The finds from Louette-St-Pierre Fosse-Aux-Morts T.I (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix LSP-FAM.TI. Figure after Warmenbol 1978, pl. I.

Louette-St-Pierre Fosse-Aux-Morts Tombelle I Namur, Belgium					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha C1 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Human remains				
*LSP-FAM.TI.01**	Cremation remains	Indet	Indet	++	-
	Pottery				
*LSP-FAM.TI.02**	Pot, broken and possibly burned	--/--	--/+-	+	2
*LSP-FAM.TI.03**	Fragments of a large pot.	Indet	Indet	Indet	3
	Personal appearance				
*LSP-FAM.TI.04**	Bronze razor, fragment (Gruppe B, type Gramat?)	+-/--	++/++	++	1
References: Dujardin/Gravet 1865/66, 40–1; Warmenbol 1978; 1993.					

Tab. C21.1 Inventory and numbering information Louette-St-Pierre Fosse-Aux-Mort T.I.

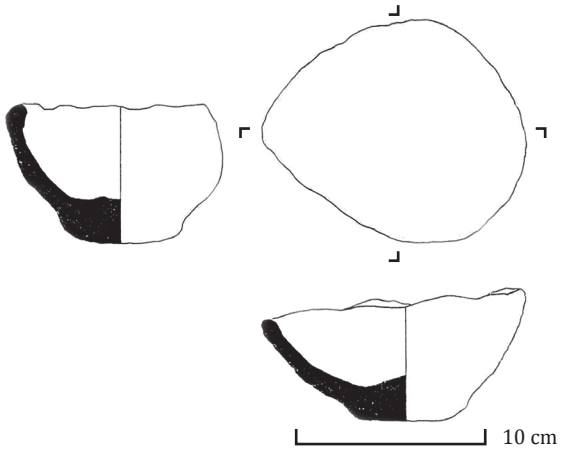


Fig. C21.2 The pot LSP-FAM.TI.02 shown from multiple angles. Figure after Warmenbol 1978, pl. I.

that Dujardin and Gravet (1865/66) describe is lacking (Warmenbol 1978, 13).

C21.1.1 The material remains

Human remains The cremated bones lay scattered on a layer of burned earth (Warmenbol 1993, 84). They do not survive.

Pottery A broken pot was among the finds (Fig. C21.2). It appeared deformed by fire. There were also a few fragments of a large pot, but these could not be located (Warmenbol 1978, 19; 84).

Personal appearance There was a bronze razor in this grave, similar to those found at Court-St-Etienne La Ferme Rouge T.5 and T.9 from Havré (Sections C6.2.6 and C13.3.2). It was affected by fire and had been twisted. The blade is broken and the handle is incomplete. It may show traces of use (Warmenbol 1978, 13–4; 1993, 84).

C21.1.2 Dating

The razor from this burial is in poor condition, but Warmenbol (1978, pl. I) depicts a razor that appears to be a type Gruppe B (possibly type Gramat), and this burial therefore is dated to the Hallstatt C1 period (Fig. 3.5; Trachsel 2004, 142–3).

C21.1.3 Actions taken and reconstructing the (burial) ritual

Someone was cremated and his or her remains were left throughout the burned-out pyre. One pot lay scattered as well and likely lay on the pyre as it burned. A few sherds of a large pot were found, but it is unknown whether it was exposed to fire. A bronze razor likely also lay on the pyre as it burned and was deliberately bent and broken. This assemblage then was covered with a barrow.

C21.2 Tombelle III

Like Tombelle I, this barrow contained a bronze razor (Fig. C21.3). The mound is described as very small. An urn containing cremation remains, charcoal and a bronze razor was found placed among the pyre remains (Dujardin/Gravet 1865/66, 42; Warmenbol 1978, 26).

C21.2.1 The material remains

Human remains The cremated bones were deposited in an urn (Warmenbol 1993, 84).

Pottery An urn and an accessory vessel were found in this barrow. The urn was already lost when Warmenbol studied the finds in 1978. Dujardin and Gravet (1865/66, 42; Warmenbol 1978, 28) describe it as very large. Warmenbol (1978, pl. III) depicts a bowl under

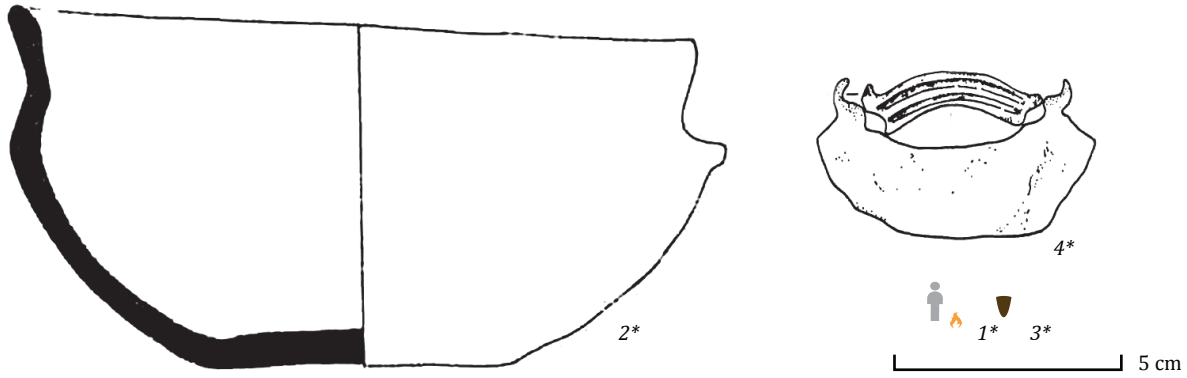


Fig. C21.3 The finds from Louette-St-Pierre Fosse-Aux-Morts T.III (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix LSP-FAM.TIII. Figure after Warmenbol 1978, pl. III.

Louette-St-Pierre Fosse-Aux-Morts Tombelle III **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha C1 **Current location:** Musée de Namur, Namur		Use/ repair	Bending/ breaking	Fire	**Other numbering systems:** Warmenbol 1978
	Human remains				
LSP-FAM.TIII.1*	Cremation remains, found in *LSP-FAM.TIII.2**	Indet	Indet	++	-
	Pottery				
LSP-FAM.TIII.2*	Urn, contained cremation *LSP-FAM.TIII.1** and *LSP-FAM.TIII.4**	Indet	Indet	Indet	2
LSP-FAM.TIII.3*	Accessory vessel	Indet	Indet	Indet	3
	Personal appearance				
LSP-FAM.TIII.4*	Bronze razor, found in *LSP-FAM.TIII.2**	--/--	--/+	--	1
References: Dujardin/Gravet 1865/66, 40–1; Warmenbol 1978; 1993.					

Tab. C21.2 Inventory and numbering information Louette-St-Pierre Fosse-Aux-Morts T.III.

the number of this urn, but given that he never saw this bowl this seems unlikely. Moreover, the dimensions of the drawing do match the small bowl described as an accessory vessel from this barrow. This small bowl was incomplete and heavily restored (Warmenbol 1978, 29).

Personal appearance A bronze razor was found in this barrow, the largest piece in the pottery urn. This razor distinguishes itself due to its high quality (Warmenbol 1978, 27).

C21.2.2 Dating

The razor from this burial is in poor condition, but Warmenbol (1978, pl. III) depicts a razor that appears to be a type Gruppe A (though it does not match exactly). If correct, then this razor and therefore the burial can be dated to the Hallstatt C1 period (Fig. 3.5; Trachsel 2004, 142–3).

C21.2.3 Actions taken and reconstructing the (burial) ritual

The razor was broken in two pieces prior to deposition since only one fragment was found in the urn. The larger fragment was placed in the urn along with cremation remains and charcoal. It is unclear how the urn and accessory vessel were deposited.

C21.3 Stray finds of unknown context within Louette-St-Pierre Fosse-Aux-Morts

A number of objects were recovered during the excavation of Dujardin and Gravet at Fosse-Aux-Morts from "several other" barrows (Fig. C21.4; Dujardin/Gravet 1865/66, 44; Warmenbol 1978, 115). These include a bronze bifid razor with a missing 'stem'. It shows some irregularities that are probably from use (Warmenbol 1978, 115–6). It appears to be a type Gruppe B razor



Fig. C21.4 Finds of unknown context within Louette-St-Pierre Fosse-Aux-Morts. All numbers have the prefix LSP-FAM.UC. Figure after Warmenbol 1978, pl. V.

Louette-St-Pierre Fosse-Aux-Morts Unknown context **Namur, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 **Date:** Ha C1–2 **Current location:** Musée de Namur, Namur		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Warmenbol 1978
	Personal appearance				
*LSP-FAM.UC.1**	Bronze bifid razor (type Gruppe B)	+/--	--/+-	--	Y 1
*LSP-FAM.UC.2**	Bronze bracelet fragment, decorated	--/--	--/-	--	Y 2
*LSP-FAM.UC.3**	Perforated tooth pendant with bronze ring	--/--	--/-	--	Y 3
References: De Loë 1891; Dujardin/Gravet 1865/66, 40–1; Warmenbol 1978; 1993.					

Tab. C21.3 Inventory and numbering information Louette-St-Pierre Fosse-Aux-Morts Unknown context.

and therefore likely dates early in the 8th century BC (Trachsel 2004, 142–3). A fragment of a bronze bracelet is another find. It is made of a bronze thread/rod and has a hatched (fishbone) decoration (Warmenbol 1978, 187), as frequently found on bracelets from this period (see also Sections C32.3 and C34.4). The last object known to be from these 'other barrows' is a pendant that was already lost when Warmenbol conducted his study (1978, 122). It seems to have been a tooth with a perforation through which a bronze ring was threaded (Warmenbol 1978, 122).

C22 Maastricht-Heer

A relatively poorly known bronze Gündlingen sword and chape were found near Maastricht (Fig. C22.1). The sword and chape kindly were made available for study by curator W. Dijkman of the Centre Ceramique in Maastricht, the Netherlands.

C22.1 Find circumstances

Metal detectorist P. Magielse discovered a bronze sword and chape in the south-east of Maartricht-Heer on March 12, 2000. He reported his discovery to the relevant authorities, who proceeded to record the exact find spot. The sword had been located about 50 cm below the present day surface. No signs of urn burial or human remains were found. The nature of the find (in particular the intentional bending, see below), and the presence of an urnfield only a few dozen meters away, lead Dijkman to interpret this as a grave find (Dijkman 2000, 17). Though it should be noted that while this sword is treated as from a burial in this research, there are more reports of finds done near urnfields the nature of which may warrant further consideration.



Fig. C22.1 The finds from Maastricht-Heer. All numbers have the prefix MH.

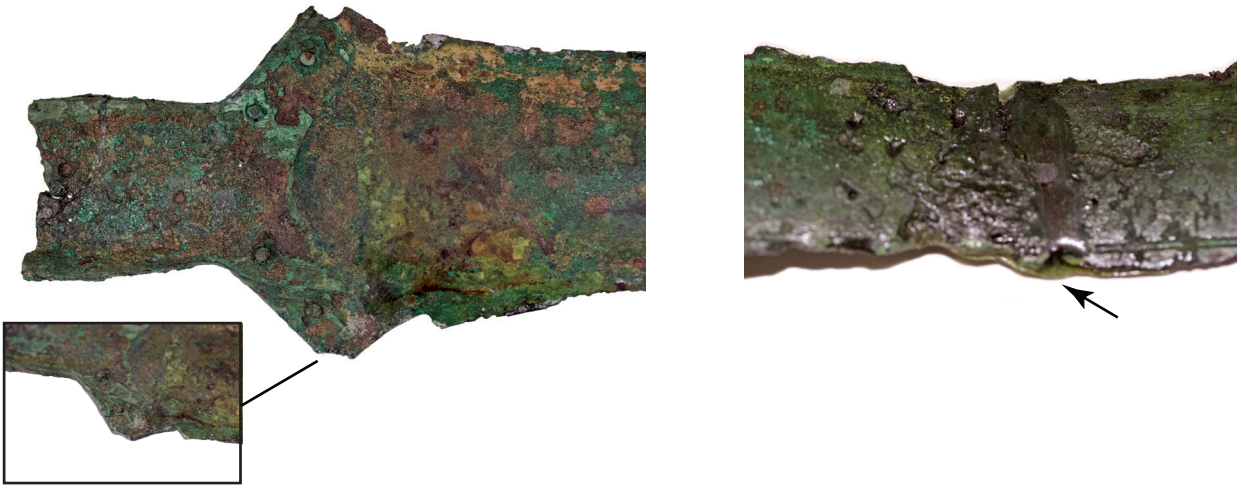


Fig. C22.2 The tang and shoulders (of MH.1) showing the imprint of the organic handle (left) with detail of a broken shoulder (inset) and detail of one of the restored bends. Note the thick layer of glue/epoxy covering the bend and the added cloth on the other side (indicated; right). Note also that figures are different scales.



Fig. C22.3 The chape (MH.2) with details of the broken wings (right; not to scale).

C22.2 The material remains

Weaponry The bronze sword is of the Gündlingen type, currently 61.5 cm long and has a rather bright green patina. The sword is in comparatively poor condition, and has been restored relatively heavily. Fills and other material have been applied in such a way that much of the original surface is obscured. Little of the original edges survive. The tang and shoulders still show the imprint of the organic handle (Fig. C22.2). The sword originally had the characteristic incised edge, and the tip is relatively pointy.

The top half of the tang is missing, so it was originally a few centimeters longer. There are little air pockets at both sides of the break and it is unclear whether they are casting bubbles or the effect of corrosion. In any case, the patina and corrosion indicate this break likely did not occur during recovery or anytime recently. The break is at the middle rivet which still partially survives, as do two rivets on each shoulder. Though the tips of both shoulders are broken, there appears to originally have been a third one.

When discovered the sword was bent at two points, though not completely broken. According to Dijkman (2015, *pers. comm.*) the nature of the bends indicated that the bending was recent damage from a mechanical digger. The location of the bends, however, suggests that this bending may be original. They are located roughly 16 cm from the current top and about 25 cm from the tip. Several of the swords in this Catalogue are bent or broken at about a third down from the handle and a third up from

Maastricht-Heer **Limburg, the Netherlands**					**Data quality:** medium
Method of recovery: chance find (medium) **Year of discovery:** 2000 **Date:** Ha B3–C1 **Current location:** Centre Ceramique, Maastricht		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** CC inv. no.
	Weaponry				
MH.01	Bronze sword, broken in three pieces (type Gündlingen Etappe 2/Villement)	--/--	++/+	+-	BC2961
MH.02	Bronze chape (type Coplow Farm/B2)	--/--	--/--	--	-
References: Dijkman 2000.					

Tab. C22.1 Inventory and numbering information Maastricht-Heer.

the point, similar to this sword from Maastricht-Heer. The manner of restoration – it appears as though some kind of cloth or plastic was added – complicates confirmation of either option (Fig. C22.2, right). However, considering the other side of the sword, in combination of the location and angle of the bends I argue that this sword was bent intentionally prior to deposition, rather than post-depositionally.

The chape is of a type Coplow Farm/B2 (Dijkman 2000; Milcent 2012, 48; Trachsel 2004, 112–3). It is 9.4 cm wide and no more than a centimeter thick and therefore is comparatively dainty. Both wings are broken, but this appears to be post-depositional (Fig. C22.3).

C22.3 Dating

The bronze sword from this burial appears to be an early type Gündlingen (Etappe 2/Villement) sword based on the shape of the shoulders, tang and cross-section of the blade and the chape fragment can be identified as a type Coplow Farm/B2 (Milcent 2012, 48; Trachsel 2004, 112–3; 118–24). Together they indicate that this burial likely dates to the early part of the date range for Gündlingen swords as determined in Section 3.4.1.1 (ca. 850–750 BC; Fig. 3.5).

C23 Meerlo

One of the few graves traditionally known as a chieftain's grave is a burial from Meerlo (Fig. C23.1). Curator W. Dijkman made the metal finds available and these were examined and photographed by myself at the Centre Ceramique in Maastricht.

C23.1 Find circumstances

In April of 1967 amateur archeologist J. Driessens found an urn filled with cremation remains in the middle of a faintly recognizable (burial?) mound in a field between the villages of Meerlo and Wanssum. Sherds and cremation remains lay scattered over the field. Later examination revealed that these sherds belonged to the rim of a ceramic urn and a bowl that had been used as a cover. A plough had hit and damaged the urn. The fragments remaining in the soil were excavated carefully at a later moment. During examination and restoration work by restorer J. Ypey, the urn was discovered to contain several corroded iron objects. These turned out to be the fragmented remains of two horse-bits and a rolled up sword (Verwers n.d., 1). In 1993 J. Kempkens (Kempkens/Lupak 1993b) restored the artifacts a second time.

C23.2 Restoration history

Kempkens and Lupak of *Restauratieatelier* Restaura restored the pottery and iron objects of this burial in 1993. The Centre Ceramique kindly made their restoration documentation available to me (Kempkens/Lupak 1993b). Where possible old additions on the pot and bowl were removed and replaced with (colored) plaster and retouched. The iron horse-bits were cracked, with fragments having separated and areas of corrosion. They had been treated with wax. Kempkens removed this wax and cleaned the bits with airbrassive. Broken fragments were attached with cyanoacrylate. The bits then were treated with heated epoxy. Cracks and dents were filled with polyester and impregnated with epoxy.

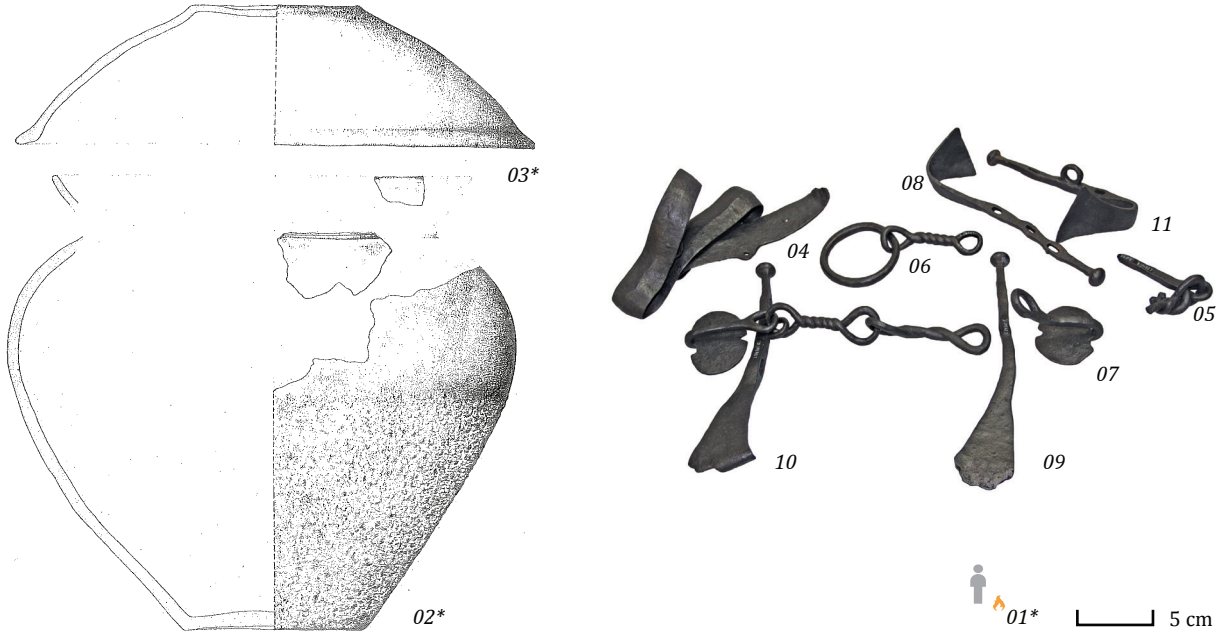


Fig. C23.1 The finds from Meerlo (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix M. Drawing after Verwers 1968, 4.

Of interest is that the restoration report shows that one of the bits was intact at the time of Kempkens' restoration (Kempkens/Lupak 1993b).

C23.3 The material remains

Human remains The cremation remains (that were still present in 1968) cannot be located and appear to have been lost somewhere between 1968 and 1998 (Dijkman 2011, *pers. comm.*). They were never examined and therefore nothing is known regarding age or sex of the deceased.

Pottery The pot used as an urn was hand-shaped and had a reddish brown color after firing. It has a flat base, a rounded shoulder and a rim that angles outwards (a *Schräghals*-pot). There is a horizontal groove right below the transition to the shoulder of the pot. The outside surface of the lower part of the pot (from the base to the widest point) was roughened. The area above this has been polished smooth. The bowl used as a lid was also hand-shaped. It has a slightly larger diameter than the pot and worked well as a cover. It has a reddish-brown color and both the inner and outer surface are polished. The rim angles slightly outwards and is somewhat flattened on the top (Verwers n.d., 1–2).

Weaponry The iron Mindelheim sword was found broken into three pieces. Kempkens was able to restore the sword, revealing its fantastically bent nature (Fig. C23.2). It was folded in multiple directions into a tiny package. The folded sword appears diminutive when compared to the horse-bits. The sword was originally ca. 80 cm long. It would have had a grip and pommel made from organic material riveted onto the tang. There is ricasso below the hilt (Verwers n.d., 3). There are two holes on the shoulders and a rivet in the middle of the tang that would have attached an organic hilt. There are no signs of use-wear discernable, though this could be the result of the extensive restoration work.

Horse-gear The urn contained the fragments of two iron horse-bits. According to Verwers (n.d.) one bit was found relatively intact, while the other was fragmented. Both were heavily corroded. At present one of the cheek-pieces (*M.11*) and one of the disc-shaped hooks (*M.07*) are not attached to the 'complete' bit (*M.10*), even though they appear to have been still attached following the 1993 restoration (Kempkens/Lupak 1993b). It is unclear why or when the pieces were disconnected. The mouthpiece of *M.10* is made from two iron rings that were twisted into bars. One of the rings is much less twisted and bar-like than the other. The cheek-pieces have a knob on one end and have been flattened into a fan-like shape at the other. The four cheek-pieces in this burial are not exactly the same. Two cheek-pieces (*M.08* and *M.09*) have three holes, the middle for attaching the reins and the other two for attaching the headpiece. The other two cheek-pieces (*M.10* and *M.11*) have a ring, instead of a middle hole, for attaching the reins. The ring is flanked by two holes for attaching the headpiece. The cheek-piece still attached to the mouthpiece is of this type, and in the restoration report the now unattached cheek-piece was the same. The other bit did not survive intact but all the components are present. There are two cheek-pieces (with three holes each), one twisted mouthpiece attached to a ring (*M.06*) and a fragment of the other mouthpiece attached to a fragment of a disc-shaped hook (*M.05*). This horse-bit



Fig. C23.2 The sword from Meerlo.

also displays some asymmetry. The ring attached to the mouthpiece would have served the same function as the disc-shaped hooks (attaching the reins).

These two bits at first glance appear to be what one would expect to find in such a grave. All the components for two bridles are present. However, closer examination reveals some odd inconsistencies, such as the ring for attaching one of the reins and the difference in twisting of the mouthpieces. The other striking issue is that the bits are much larger than usual. The intact mouthpiece is *19 cm wide*. Early Iron Age horse-bits are rarely wider than 12 cm, and 14 cm seems to be the maximum (see Section 6.3.6.4). The size of a bit has to be right otherwise the horse will not respond as desired (see Sections 6.3.4 and 6.3.6.4). Even modern bits designed specifically for enormous draft horses are not as wide as the Meerlo bits. While the Hallstatt Culture horses may have been quite large (see Section 6.3.6), they were not in the same league as modern day draft horses. In my opinion the bits from Meerlo therefore were never used to communicate with a horse. They are simply too big. Nor does the construction of the mouthpieces seem congruent with a functional horse-bit. This will be discussed further in Section 6.3.6.4, but it would seem that perhaps these bits should be viewed as some kind of symbol, perhaps even representing 'mythical' horses.

C23.4 Dating

The *Schräghals*-urn is dated to the Hallstatt C period by Lanting/Van der Plicht (2001/2, 174), and this is consistent with the dates ascribed to the burials from Horst-Hegelsom and Oss-Zevenbergen M.7 which yielded similar urns. The characteristic early Hallstatt C1 horse-bits (*cf.* Kossack 1954; Pare 1992, Ch. 10), even though they are over-sized, indicate that this burial most likely dates to the 8th century BC (Section 3.4.1.3; Trachsel 2004, 53), which is consistent with the date range ascribed to the Mindelheim sword as determined in Section 3.4.1.2 (Fig. 3.5).

C23.4 Actions taken and reconstructing the (burial) ritual

The loss of the cremation remains sometime between 1968 and 1998 has made it impossible to recover any information about the sex or age of the deceased or the pyre technology. The recorded presence of cremation remains, however, is evidence of an important step in the burial ritual, the cremation of the deceased. Following this the remains were collected for interment in the urn. There is no evidence indicating the iron grave goods were burned on the pyre, but it is likely that this would not have left any recognizable traces. It therefore cannot

Meerlo **Limburg, the Netherlands**					**Data quality:** good
Method of recovery: chance find (medium) **Year of discovery:** 1967 **Date:** Ha C1–2 **Current location:** Centre Ceramique, Maastricht		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** CC inv. no.
	Human remains				
*M.01**	Cremation remains, lost	Indet	Indet	++	-
	Pottery				
*M.02**	Pot (Schräghals)	--/--	--/--	--	2702
*M.03**	Bowl	--/--	--/--	--	2701
	Weaponry				
M.04	Iron sword (type Mindelheim)	--/--	++/	+	L24301A
	Horse-gear				
M.05	Part of an iron mouth-piece with disc-shaped hook fragment attached	--/--	-/+-	-	L24301B
M.06	Iron ring with part of a mouth-piece	--/--	--/--	--	L24301C
M.07	Iron disc-shaped hook	--/--	--/--		L24301D
M.08	Iron cheek-piece, bent	--/--	++/--	+	L24301E
M.09	Iron cheek-piece, straight	--/--	--/--	--	L24301F
M.10	Iron cheek-piece with mouth-piece and disc-shaped hook	--/--	--/--	--	L24301G
M.11	Iron cheek-piece, bent	--/--	++/--	+	L24301H
References: Verwers n.d.					

Tab. C23.1 Inventory and numbering information Meerlo.

be determined whether the grave goods are cremation artifacts. They were all manipulated in one form or another before being placed in the urn. For example, the sword was intentionally folded up before interment. Unlike the swords from Horst-Hegelsom and Oss, which were curled up, the sword from Meerlo was folded in a myriad of directions into a tiny package. It is almost as though the mourners folded it once or twice, decided it was not small enough, and folded it again. The 'horse-bits' are the oddest component of this burial. Overall they appear to be two recognizable Hallstatt Culture horse-bits. However, upon closer examination very little seems 'right' about them. The cheek-pieces are not all the same, the rein-attachments are different and the mouthpieces are oddly shaped. Moreover, they make up enormous horse-bits and are not useable on real horses. Perhaps they were made specifically to be buried or served some symbolic purpose (see also Section 7.2.1.1). There is, in any case, evidence that the bits were manipulated prior to interment. Two of the cheek-pieces, one of each type (*i.e.* with and without a central eye), were bent into almost 90° angles. The eye of one of the disc-shaped hooks also was bent out of shape. The collected cremation remains, folded sword and distorted 'horse-bits' were then placed in the urn and closed off with a bowl used as a lid. The urn was buried and a mound erected.

C24 Meppen

This bucket is the least well-known of the Dutch bronze vessels (C24.1). It was made available for study by J. Bruggink of the Museum of Drenthe (DM). It was studied and photographed by myself, and also recently republished (Van der Sanden 2016).

C24.1 Find circumstances

J. Eefting found this bucket in 1936 during groundwork for the construction of a house near the village of Meppen (*kadastrale aanduiding sectie* K, No. 2955; De Wit 1998, 345; Van der Sanden 2016, 115). Following the find of the bronze vessel the mayor of Meppen warned A.E. van Giffen from the *Biologisch-Archaeologisch Instituut* in Groningen, who came and excavated a small part of the urnfield where the bucket was found. His investigation revealed that the bucket had been lying in the middle of a ring ditch some 16 m in diameter, and that there were another three ring ditches in the immediate vicinity (De Wit 1998, 345; Van der Sanden 2016, 115–6). The ring ditch associated with the bronze vessel is the largest found in any urnfield of the northern Netherlands (*cf.* Kooi 1979, 132; Van der Sanden 2016, 120).

The bucket was relatively intact when uncovered. Unfortunately, the bucket was then put aside and heavily damaged by local youths (Van Giffen 1938, 101; Van der Sanden 2016, 115). Only the thicker rim and several pieces of the body and base survived (Fig. A2.2). The find was bought by the DM on March 31, 1936. Restorer J. Ypey refitted the fragments and reconstructed the missing parts of the Meppen bucket in the 1960s, following comments from W. Glasbergen (De Wit 1998, 345). Due to some ambiguity in the find documentation it is unclear whether human cremation remains found at the DM belong with the bronze vessel. Van der Sanden (2016, 116–20) re-examined both the finds and the original field documentation and argues in favor of a direct association between the cremation remains and the bronze bucket (Fig. C24.2). Though he also



Fig. C24.1 The finds from Meppen (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix Me.

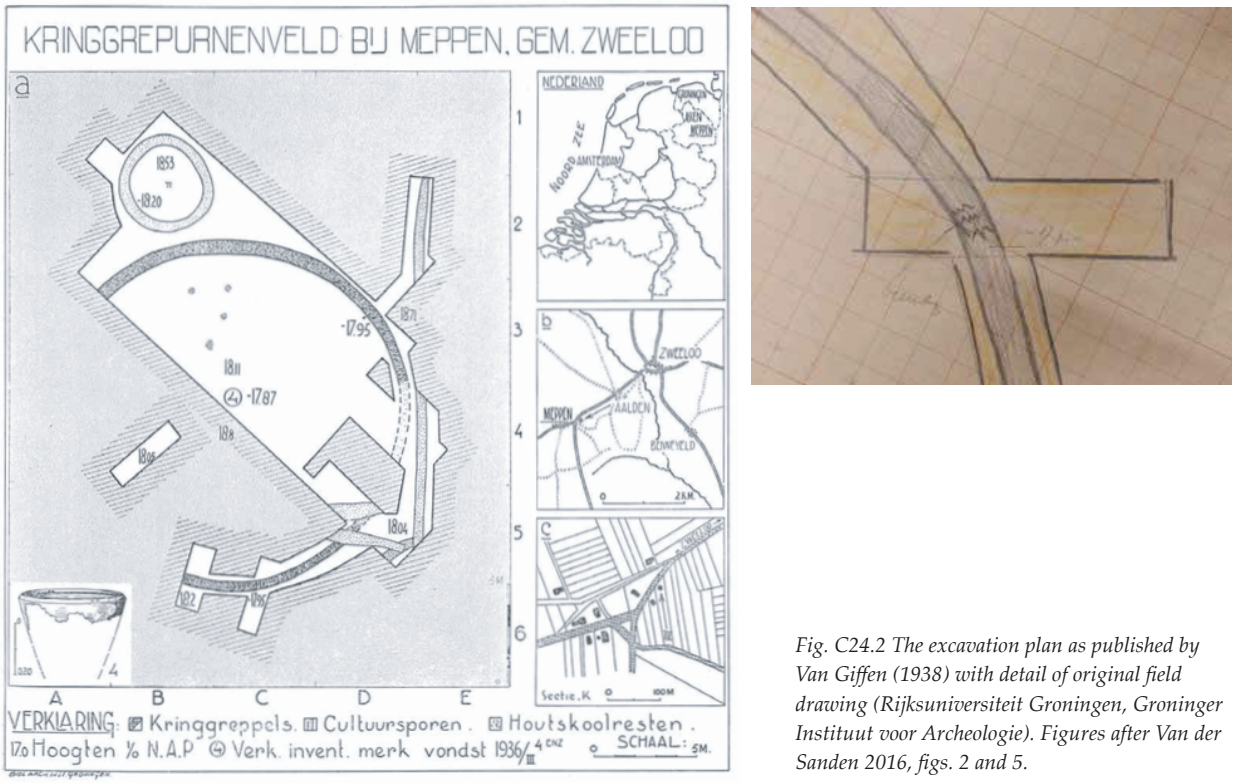


Fig. C24.2 The excavation plan as published by Van Giffen (1938) with detail of original field drawing (Rijksuniversiteit Groningen, Groninger Instituut voor Archeologie). Figures after Van der Sanden 2016, figs. 2 and 5.

notes the possibilities that the cremation remains come from the ring ditch that surrounded the bronze vessel or were once the central cremation of the smaller ring ditch (Van der Sanden 2016, 118). A number of small charcoal fragments were found among the cremation remains. There were (in descending order of amount) oak (*Quercus*), alder (*Alnus*) and juniper (*Juniperus*) fragments, of which the presence of juniper is unusual (as determined by S. Lange; Van der Sanden 2016, 119).

C24.2 The material remains

Human remains A total of 308 gr of cremation remains were examind by L. Smits, who determind that the bone material was well cremated (>800°C). They represent the remains of a single individual, most likely a man who was 40–50 years old at the time of death. Most fragments are > 1 cm and primarily represent the skull and limbs. Some pathologies observed on the neck and lower back vertebrae (marginal osteophytes and erosion) indicate degeneration of the intervertebral disks (Van der Sanden 2016).

Bronze vessel The walls of the bucket are made from a single piece of bronze. The rim of the bucket is thicker than the rest and slopes inwards. There are two fastening places for handles on opposing sides of the outer rim of the bucket, each fastened by two rivets. The flat bottom is made of a separate piece of bronze and shows signs of originally having had a broad concentric ring on the bottom. The raised edge of the separate bottom has not survived. No mention is made of this bucket having ancient repairs, though considering its fragmentary survival no definitive conclusions can be drawn. At present the reconstructed vessel is 44 cm high. This bucket is a rare type and has only a small number of parallels (De Wit 1998, 345; Nortmann 1998). Several authors have separated the Meppen bucket and those like it into a separate group (Boulimié 1977; Kimmig 1964) and the bucket from Meppen was found much further north than this type usually occurs. There is also some discussion as to where this bucket was made. Nortmann (1998) is in favor of central Italy as an area of origin. However, a French origin is also a possibility.

Other A cattle molar from the top jaw was found among the cremation remains (Van der Sanden 2016, 119).

C24.3 Dating

Although a relatively rare type of bucket, parallels indicate that it most likely dates to the Hallstatt D phase (Bouloumié 1977; De Wit 1998, 347; Kimmig 1964; Roymans 1991, 38; tab. 4; Fig. 3.5).

Meppen **Drenthe, the Netherlands**					**Data quality:** medium
Method of recovery: chance find **Year of discovery:** 1936 **Date:** Ha D1–3 **Current location:** Drents Museum, Assen		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** DM inv. no.
	Human remains				
*Me.2**	Cremation remains	Indet	Indet	++	-
	Bronze vessel				
Me.1	Bronze bucket	--/--	--/--	--	1936/III.4
	Other				
*Me.3**	Bovine molar	Indet	Indet	Indet	-
References: De Wit 1998; Van der Sanden 2016; Van Giffen 1938.					

Tab. C24.1 Inventory and numbering information Meppen.

C24.4 Actions taken and reconstructing the (burial) ritual

All that can be reconstructed is that someone was cremated and that a bronze bucket was buried in the middle of a ring ditch in an urnfield. Given the fact that these bronze buckets tend to be used as urns in the Netherlands and its find location in a ring ditch, it is not unlikely that this bucket was part of a burial and may originally have contained cremation remains and possibly other objects. Unfortunately no evidence of this survives (which is not surprising given how this vessel was discovered).

C25 Neerharen-Rekem tombe 72

The Neerharen-Rekem urnfield is located on the edge of the Meuse terrace of Maasmechelen, close to where it suddenly drops to the alluvial plain of the Meuse (Temmerman 2007, 12). This urnfield yielded an unusually high number of bronzes (over a quarter of all graves contained bronze (grave) goods), both burned and unburned (Temmerman 2007, 153; 197–8). Four burials yielded iron finds, and even gold was found (three bronze rings with gold leaf; Temmerman 2007, 153–4).

This research focuses on tombe 72 found at Neerharen-Rekem as this burial frequently is discussed in studies of Early Iron Age elite burials due to the Gündlingen swords that it yielded (Fig. C25.1). It is different from most of the burials studied in this research as three individuals were buried in a single grave. Moreover, they were laid to rest with several weapons that were broken, burned and bent and placed among their cremated remains. The objects from this grave unfortunately were not available for study as they are currently on display at the Limburgs Museum (LM) and difficult to access. Fortunately they have been studied and published thoroughly in the past. I therefore rely on published results for the interpretation presented with regard to this grave in the current research, in particular the work by B. Temmerman (2007).

C25.1 Find circumstances

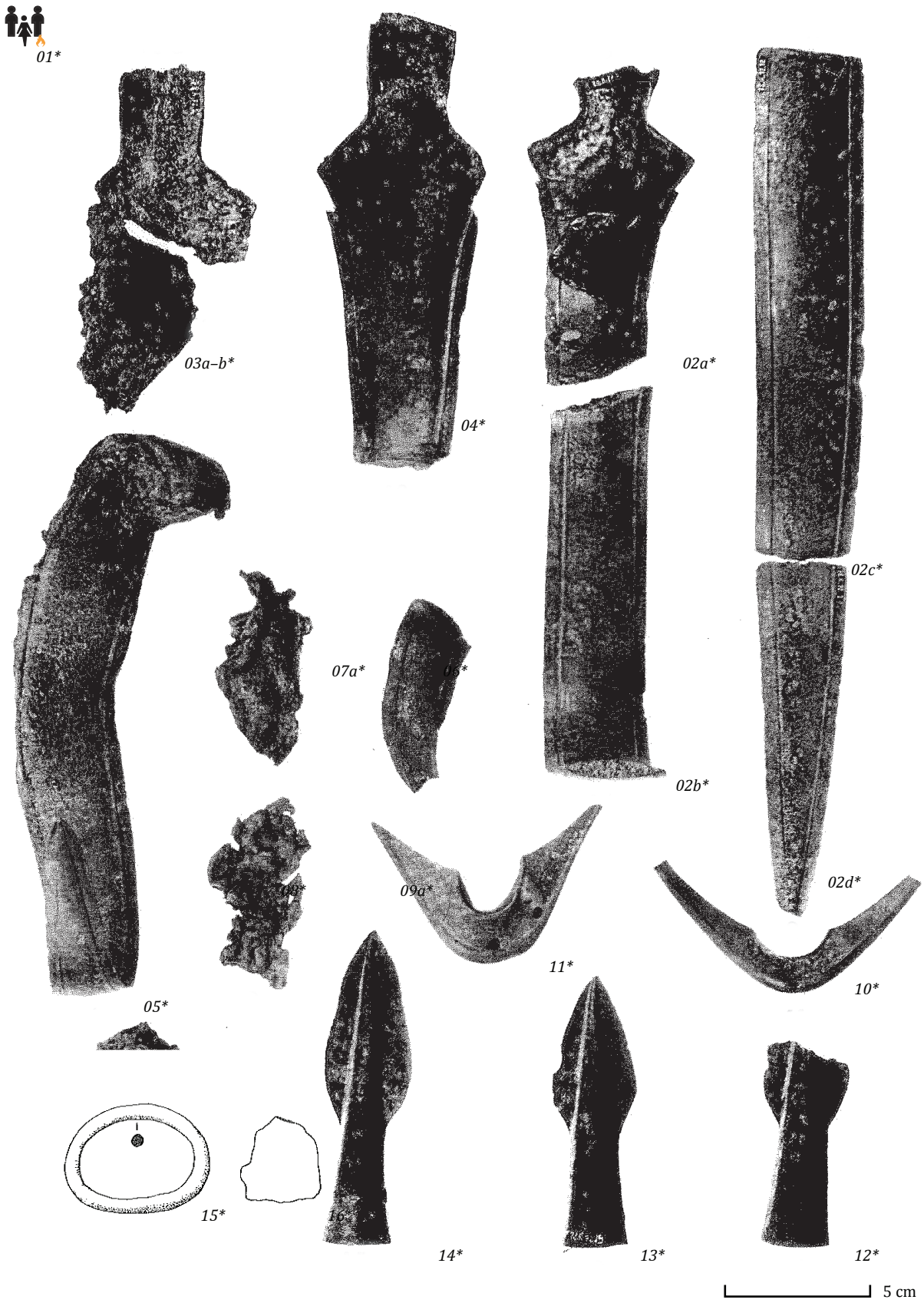
The weapon grave was one of the last to be found during the excavation campaign of 1978 (Fig. C25.2). It was located right by the northern edge of the trench and appeared as a small pit at a depth of 45–50 cm. At first it seemed to be a simple burial of cremated bone deposited in a pit with a few small pieces of bronze spread throughout the cremation remains. It was located partially in the trench, and when they extended it to expose the rest of the burial pit, the small bits of bronze proved to be part of 17 fragments of bronze weapons (Van Impe/Thyssen 1979, 63–6). Remains of textile found on the bronzes indicate that this burial likely was wrapped in a cloth (Temmerman 2007, 223).

C25.2 The material remains

Human remains An impressive amount (3490 gr) of cremation remains was found in this grave (Temmerman 2007, 224; Van Impe/Thyssen 1979, 66). P. Janssens (Antwerp) determined that the cremation remains were from three individuals. They were those of a man around 25 years of age and a woman around 20 years of age when they died. The third individual was probably a male as well who was 30 to 35 years of age at the time of his death (Van Impe/Thyssen 1979, 66). According to Temmerman (2007, 224), however, the remains are those of a man and a woman, and a possible third person. She determined the man to be between 30 and 40 years of age, and the woman 18 to 20 years of age.

Weaponry A bronze sword, complete except for its tip and part of the tang was bent and broken into at least six fragments, of which four fitting fragments were deposited in this grave (*NR.t72.02a–d**). On both wings there is single rivet. The handle has a short ricasso with a sharp incut. It has a slim, lens-shaped blade (7.5 mm at its thickest point; Temmerman 2007, 224–5). Temmerman (2007, 224–6) argues that this sword was heated and bent prior to being placed on the pyre. The whole thing shows some slight heat damage and a brown discoloration, which makes her suspect it lay against the 'iron plate' that was also found in this grave (see below). This is confirmed by Van

Fig. C25.1 The finds from Neerharen-Rekem t.72 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix NR.t72. Drawings after Van Impe 1980, pl. XII; photograph after Van Impe/Thyssen 1970, fig. 39.


01*
03a–b*
04*
02a*
02c*
07a*
08*
02b*
09a*
02d*
11*
10*
05*
15*
16*
14*
13*
12*
5 cm

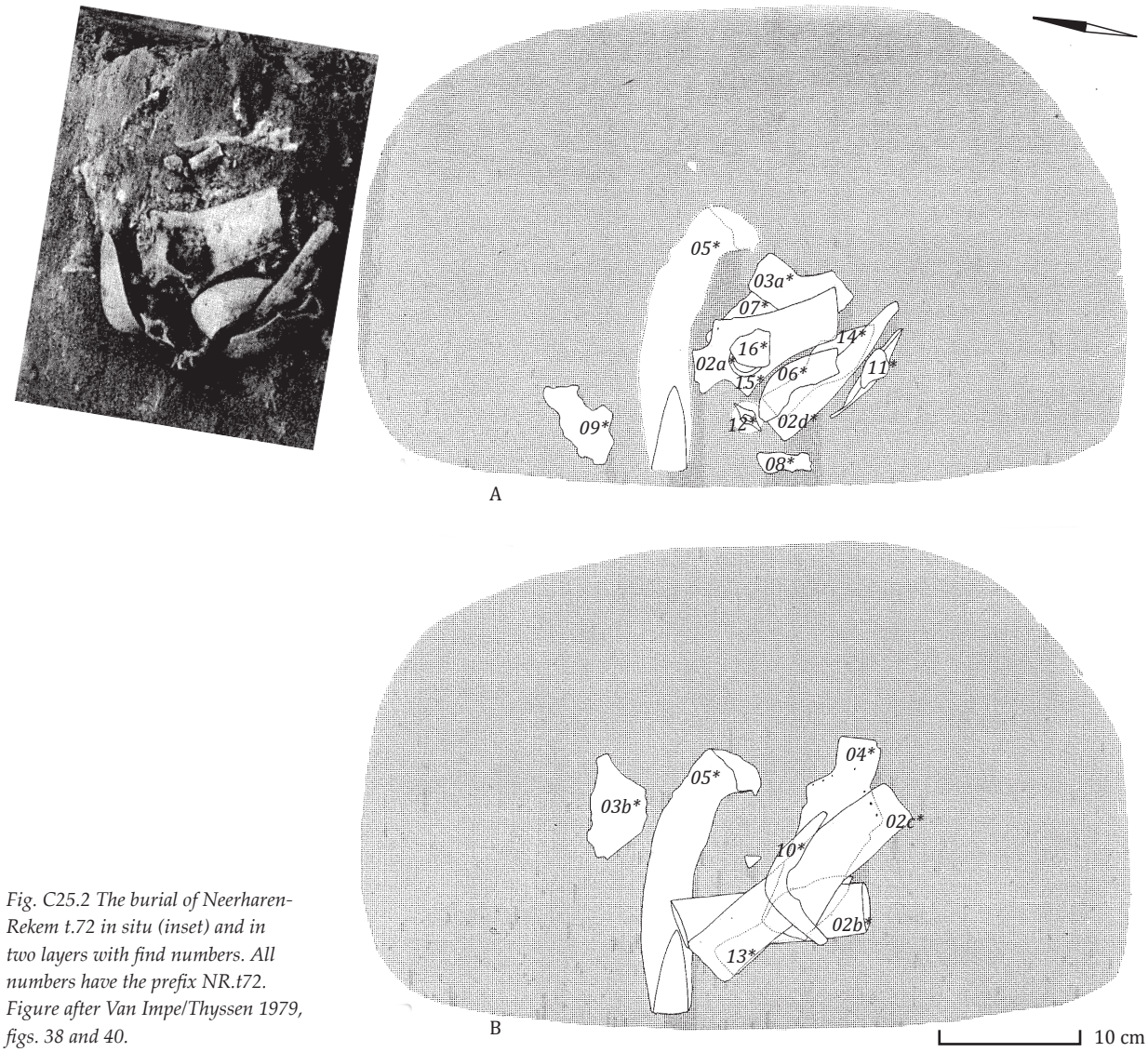


Fig. C25.2 The burial of Neerharen-Rekem t.72 in situ (inset) and in two layers with find numbers. All numbers have the prefix NR.t72. Figure after Van Impe/Thyssen 1979, figs. 38 and 40.

Impe and Thyssen (1979, 66) who report that the bronze D-shaped ring and an 'iron plate' were initially attached to the bronze handle fragment. The total length of the sword blade is 59 cm and it weighs 623 gr (Temmerman 2007, 224–6). A second sword handle is broken on the tang (at a rivet) and at the shoulders (*NR.t72.03a–b**). On the shoulder fragment three rivets survive on one side, and two on the other. The whole thing is 7 cm long and weighs 76 gr (Temmerman 2007, 226). The fact that on one side only two rivets survives suggests it originally fit onto a completely melted fragment (101 gr) that has the remains of a single rivet on one end (Van Impe 1980). A third sword handle (*NR.t72.04**) is made up of two melted fragments according to Temmerman (2007, 225), though no evidence of this is visible in any of the published pictures and drawings, nor do Van Impe and Thyssen (1979) note that this handle is made up of two pieces. The handle fragment is broken halfway the tang and a ways below the shoulders. The tang has two rivets, and on the shoulders there are three to six rivets. According to Temmerman (2007, 225) there are only three rivets on the shoulders, but Van Impe (1980) appears to depict six. In any case, it originally would have had six rivets on the shoulders. It has a ricasso with sharp incut. The whole fragment measures about 16 cm and weighs 246 gr. The blade is 7.5 mm at its thickest point. The fragment does not show a lot of damage from heat, and according to Temmerman (2007, 225) it may belong to the same sword as *NR.t72.05**. However, I suggest that *NR.t72.05** might well belong with the handle fragment *NR.t72.03a–b**. The sword blade fragment (*NR.t72.05**) still has its tip but is broken at the blade and is made up of four fragments according to Temmerman (2007, 226), though all other descriptions and depictions

suggest it is a single fragment (Van Impe 1980; Van Impe/Thyssen 1979). In any case, the top break is very heavily melted, and the whole thing has been bent (Fig. 25.1). The bottom part in particular has been bent into a semi-circle (Fig. CA2.3). The whole thing measures 33.7 cm and weighs 291 gr. Temmerman (2007, 226) suggests that since this top break is so heavily melted (it has partially liquefied), one of the other fragments might belong to this sword. A blade fragment (*NR.t72.06**) is broken at both ends, yet based on its dimensions it is possible to determine that this fragment is from very near the point of the sword. The whole thing is 8.3 cm long, 4–4.5 cm wide at its widest point and weighs 31 gr. Temmerman (2007, 226) asserts that since the fragments do not connect or fit, we must consider that this fragment originally may have fit with fragment *NR.t72.04** rather than (the four fragments of) *NR.t72.05**. However, since *NR.t72.06** is from the blade section close to the tip, a section present in *NR.t7205*,* it would seem impossible that *NR.t72.06** is from the same sword as *NR.t72.05**. A long melted blade fragment (*NR.t72.07**) weighs 82 gr and has a flattened surface on one side with traces of the same patina as fragment *NR.t72.03a**. The fragments therefore likely belong to the same sword (Temmerman 2007, 226). According to Temmerman (2007, 226) the last sword fragment is a completely melted fragment that possibly fits between fragment *NR.t72.03b** and *NR.t72.07**. Van Impe and Thyssen (1979, fig. 39) however, show another two melted sword fragments (*NR.t72.08** and *09**).

So in summary, it appears that there are (at least) three bronze swords represented in this grave, though they were not deposited completely. One sword (*NR.t72.02a–d**; type Gündlingen Etappe 2/Villement) was heated, bent and broken into at least six fragments, of which four fitting fragments were deposited in this grave. It is complete from halfway the tang to just above the point, which is missing. Two melted fragments of a handle (*NR.t72.03a–b**; type Gündlingen Etappe 1/Holme Pierrepoint) and a melted blade fragment (*NR.t72.07**) share the same patina and are believed to belong to the same sword. Handle fragment *NR.t72.04** (type Gündlingen Etappe 1/Holme Pierrepoint) does not show a lot of damage from heat, and according to Temmerman (2007, 225) it may belong to the same sword as the bottom fragment *NR.t72.05**. However, it is also possible that *NR.t72.06** belongs to this sword as they both show little signs of burning. The top of *NR.t72.05**, in contrast, shows substantial melting. This melting suggests that *NR.t72.03a–b**, *NR.t72.05** and *NR.t72.07** are from the same sword. *NR.t72.08** and *NR.t72.09** likewise are melted heavily and may belong to this same sword. It is, however, also possible that *NR.t72.08–09** fit between *NR.t72.04** and *NR.t72.06*,* and that only the middle section of the sword was melted. I find it more likely that *NR.t72.03a–b*, NR.t72.05** and *NR.t72.07–09** belong together. These fragments measure about 60 cm, a plausible length for this kind of sword. This would mean though that a large middle section is missing from the sword to which *NR.t72.04** and *NR.t72.06** belong. In any case, the combined lengths of all these fragments show that several sword fragments were not deposited, no matter where we reconstruct fragments *NR.t72.08–09** as belonging.

Two winged chapes were also found with the swords in this grave. Chape (*NR.t72.10**) is type Prüllsbirkig/C1 (Milcent 2012, 48; Trachsel 2004, 112–4; it has also been labeled Sion Reach type, whereof the wings are in a C-shape, or Prüllsbirkig II type; Warmenbol 1988, 249–50). The tips of the wings are broken off of this chape. It weighs 28 gr (Temmerman 2007, 226). Chape *NR.t72.11** is type Coplow Farm/B2 (Milcent 2012, 48; Trachsel 2004, 112–3). Its socket where the sword point fit in is distorted (Van Impe 1980, pl. XII). It weighs 30 gr (Temmerman 2007, 226).

Parts of three lanceheads (*NR.t72.12–14**) were found in this grave as well. Temmerman (2007, 228) determines that they were originally all of the same type, though of one only the bottom half (*NR.t72.12**) is present. The largest of the three (*NR.t72.14**) has a decoration running along the center. They all have short and broad sockets that run through into the point. Each socket has two holes for attaching them to wooden shafts. According to Temmerman (2007, 228) these lanceheads are squatter than most found in the Low Countries.

Other A bronze D-shaped ring was found attached to the bronze sword fragment *NR.t72.02a** with an iron plate fragment (Van Impe/Thyssen 1979, 66). Its location on the sword fragment, and its association with the bronze ring makes me wonder whether the iron plate might in fact be some kind of leather, perhaps part of a belt system for wearing the sword. This is based on the fact that prehistoric leather from such graves tends to be hard to recognize as such, and sometimes resembles iron, as well as the fact that iron is otherwise absent from this grave, while iron objects would have likely survived the pyre better than the bronze objects given its significantly higher melting point. Also, if iron, it would be one of the earliest iron finds in the Low Countries. This, however, must remain speculation, as I was not able to examine these finds personally.

C25.3 Dating

Lanting and Van der Plicht (2001/2, 174) give a ^{14}C-date for cremation remains from this grave of 2675 ± 40 BP (GrA-17787/19062). As discussed in Section 3.3.3, this gives a date of 906–796 cal BC (95.4%) according to the latest calibration (Fig. C25.3), which when combined

Neerharen-Rekem Tombe 72 **Belgisch Limburg, Belgium**					**Data quality:** good		
Method of recovery: excavation (good) **Year of discovery:** 1978 **Date:** Ha B3 **Current location:** Limburgs Museum, Venlo		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Van Impe/ Thyssen 1979	Van Impe 1980	Temmerman 2007
	Human remains						
*NR.t72.01**	Cremation remains, three individuals	Indet	Indet	++	-	-	-
	Weaponry						
*NR.t72.02a**	Bronze tang fragment (fits *NR.t72.02b*)	--/--	++/++	++	5	4	a
*NR.t72.02b**	Bronze sword fragment (fits *NR.t72.02a* and *c*)	--/--	++/++	++	14	4	a
*NR.t72.02c**	Bronze sword fragment (fits *NR.t72.02b* and *d*)	--/--	++/++	++	12	4	a
*NR.t72.02d**	Bronze sword fragment	--/--	++/++	++	2	4	a
*NR.t72.03a**	Bronze tang fragment	--/--	++/++	++	10a	3	d
*NR.t72.03b**	Bronze tang fragment with rivet	--/--	++/++	++	16	3	e
*NR.t72.04**	Bronze tang fragment	--/--	++/++	++	13	2	b
*NR.t72.05**	Large, bent and partially melted sword fragment	--/--	++/++	++	6	1	c
*NR.t72.06**	Bronze sword fragment	--/--	++/++	++	3	7	f
*NR.t72.07**	Melted bronze sword fragment	--/--	++/++	++	10	-	g
*NR.t72.08**	Melted bronze sword fragment	--/--	++/++	++	7	-	-
*NR.t72.09**	Melted bronze sword fragment	--/--	++/++	++	8	-	-
*NR.t72.10**	Bronze chape (type Prüllsbirkig/C1)	--/--	+-/--	-	11	9	-
*NR.t72.11**	Bronze chape (type Coplow Farm/B2)	--/--	--/+	-	1	8	-
*NR.t72.12**	Bronze lancehead, fragment	--/--	--/+-	-	4	5	-
*NR.t72.13**	Bronze lancehead	--/--	--/--	-	9	6	-
*NR.t72.14**	Bronze lancehead	--/--	--/--	-	15	7	-
	Other						
*NR.t72.15**	Bronze ring	--/--	--/--	--/--	-	-	-
*NR.t72.16**	'Iron plate'?	--/--	--/--	--/--	-	-	-
References: Temmerman 2007; Van Impe 1980; Van Impe/Thyssen 1979.							

Tab. C25.1 Inventory and numbering information Neerharen-Rekem t.72.

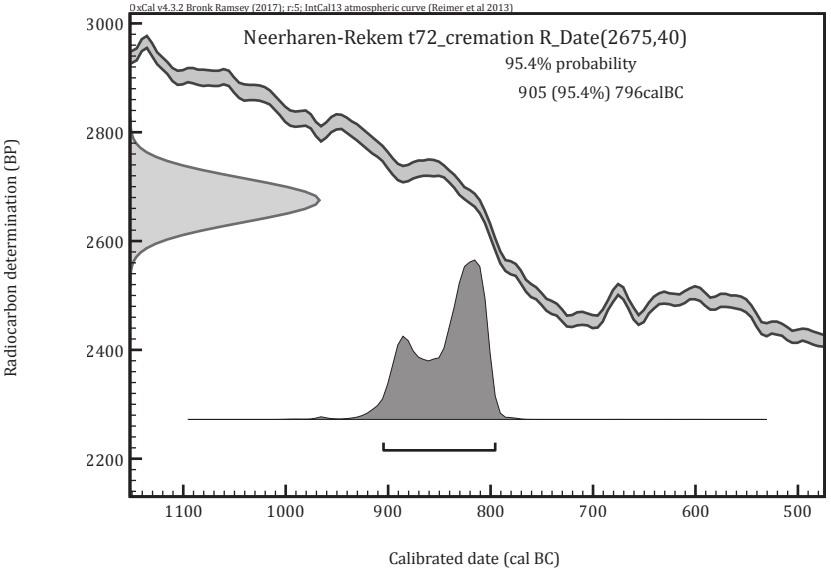


Fig. C25.3 The calibrated ^{14}C-date (with OxCal v4.3.2 at the 2σ range) of a sample of cremation remains from the burial of Neerharen-Rekem t.72.

with the latest typochronological dates of similar swords and chapes indicate this burial most likely dates to the (second half of the) 9th century BC (Fig. 3.5; Section 3.4.1.1).

C25.4 Actions taken and reconstructing the (burial) ritual

Three people were cremated, either together on the same pyre or separately, and their cremated remains brought together. They were those of two (probable) men and a woman. The cremated remains were deposited with a number of bronze weapons that had been burned, bent and broken. These include a bronze sword (*NR.t72.02a–d**) that was heated, bent and broken into at least six fragments, of which four fitting fragments were deposited in this grave. An 'iron plate' and D-shaped ring lay against this. As argued above, another sword (believed to be made up of *NR.t72.03a–b*, NR.t72.05** and *NR.t72.07–09**) was broken and melted (the fact that *NR.t72.03a** and *b** are connecting fragments with melted edges indicates it was broken first and then burned). A third sword was broken into at least four fragments, of which two were deposited in this grave. They show minimal signs of heat exposure, though the point fragment has been bent. The three swords are accompanied by two bronze chapes, one of which had its ends broken off. Half of a broken bronze lancehead, as well as two complete ones were also placed in this grave.

Textile on the bronzes indicates the entire weapon deposit was wrapped in textile (Temmerman 2007, 223; Van Impe/Thyssen 1979, 66), though without knowing where on the bronze this textile was found it remains conjecture whether the whole deposit was wrapped or whether individual objects were wrapped as well. Given the tightly concentrated nature of the whole deposit and the presence of textile on the bronzes the entire weapon deposit was wrapped in textile (Temmerman 2007, 223; Van Impe/Thyssen 1979, 66), though individual objects may also have been wrapped.

C26 Oss-Vorstengraf

Without a doubt, the Chieftain's burial of Oss is one of the most outstanding and fascinating finds from Dutch prehistory (Fig. C26.1). It has known a long research history since its discovery in 1933, and yet there is still more to discover. The grave goods currently are incorporated into the new permanent exhibit on the Archeology of the Netherlands at the National Museum of Antiquities in Leiden (RMO). Curator L. Amkreutz was kind enough to arrange to have all artifacts going on display photographed by the museum photographer P.J. Bomhof prior to this exhibit opening in January 2011. Working as an intern on this new exhibit, I had the opportunity to examine the artifacts before placing them on display. During this process the bucket, in particular, was thoroughly examined for any signs of repair (see Section 6.1.1). The less attractive and fragmented artifacts from the museum depot, as well as those deemed too fragile to display, were examined later. Bomhof also photographed these fragmented and less attractive finds. J. van Donkersgoed photographed a few fragments discovered later. Detailed photographs were taken of the Mindelheim sword and textile fragments by R.J. Looman during a temporary closing of the exhibit in 2015. For the first time, everything from the burial of Oss has now been examined and photographed, with a range of artifacts also analyzed by a range of specialists. Certain artifacts also were studied using XRF-analysis by J. van der Stok-Nienhuis (Cultural Heritage Agency; RCE) and her intern J. Steijger (intern InHolland at RCE), as well as D. Braekmans (Leiden University) to identify unrecognizable metals and residues. E. van Hees (Laboratory for Archaeobotanical Studies, Leiden University) and C. Vermeeren (BIAX Consult) examined wooden and charcoal artifacts and fragments, and S. Lemmers (formerly of the Laboratory for Human Osteology and Funerary Archaeology, Leiden University) analyzed cremation remains. A. van Gijn and A. Verbaas (both Laboratory for Artefact studies, Leiden University) performed use-wear analyses. A new technical analysis of all surviving textile, including those fragments still attached to the various objects was conducted by K. Grömer (Naturhistorisches Museum Wien) and myself. I. Joosten (RCE) and M. van Bommel conducted dyestuff analyses on the textiles from this burial (App. CA1). I. Joosten (RCE) together with D. de Loof also performed micro-CT analysis on textiles. Lastly, two ^{14}C-dates were performed and provide new insight into the dating of this burial complex

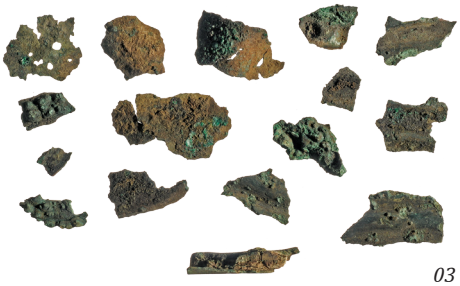
C26.1 Find circumstances

The Chieftain's burial of Oss was uncovered during reclamation work on the heath near Oss in 1933. A bronze vessel initially was laid bare while the barrow that covered it was being levelled. The badly degraded bucket and the finds it contained would almost certainly have fallen apart and been lost to us if inexpert hands had tried to lift it. It was only through the interest and quick thinking of two local men that the fragmented vessel was kept *in situ* (Fig. 4.8) until it could be properly lifted (Holwerda 1934, 39). When F.C. Bursch, assistant to the curator of prehistory at the RMO, arrived in Oss he was able to cover the entire find in plaster and lift it as a block. The plaster block, and the then unknown finds within, were transported to the museum in Leiden. In the 80 years since its discovery, the bronze bucket and its contents have been restored at least three times and researched and re-published even more (Fokkens/Jansen 2004; Fokkens *et al.* 2012; Holwerda 1934; Jansen/Fokkens 2007; Modderman 1964). The first restoration in 1933/'34 resulted in 21 inventory numbers listed as encompassing the Chieftain's burial of Oss (see App. CA2, in the original Dutch). In the 1960s, and again in the 1990s, more

Fig. C26.1 The finds from the Chieftain's burial of Oss (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix OV. Drawing by J.P. Boogerd; photographs by P.J. Bomhof; R.J. Looman ©RMO.



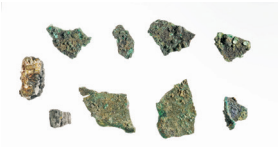
02
Not to scale



03



04



05

2 cm



06
Not to scale



07





08

01

1 cm



Fig. C26.1 (continued).





Fig. C26.1 (continued).

restoration work took place on the material from Oss. Not only were heavily corroded artifacts cleaned, but fragments were restored into single or completely different objects as well. A 'lump of rust' yielded objects both times. In a way, each restoration resulted in a new Chieftain's burial of Oss. The three restorations of the Chieftain of Oss are described briefly in Section C3.1, and a short summary is given of the objects known at the time. Appendix CA2 gives an overview of how each artifact was restored and (miss-) interpreted in the 1930s, 1960s and 1990s. It also gives an overview of several mix-ups that occurred with regard to the numbering of the objects. Unfortunately no documentation of the first two restorations survives. The publications by Holwerda (1934) and Modderman (1964), and Modderman's unpublished notes describing a discussion with the original restorer regarding his work are the only available sources.

Lastly, not only have the finds from this burial repeatedly attracted the attention of researchers, the site where they were found have been excavated numerous times as well, both in the 1930s and the last 30 years (Bursch 1937; Fokkens/Jansen 2004; Jansen/Fokkens 2007; see Fokkens *et al.* 2012 for a recent overview of the fieldwork done in the this area).

C26.2 The material remains

Human remains The central, and sometimes forgotten, component of the Chieftain's burial of Oss is the Chieftain himself (Fig. C26.2). Most of the cremation remains were collected from the pyre and deposited in the bronze bucket, with excellent preservation of the remains as a result (Smits *et al.* 1997, 97). They were examined in 1960 by physical anthropologist J. Huizinga, and again in 1993 by L. Smits (Fokkens/Jansen 2004, 63–7). Smits determined that the cremation was of good quality based on the weight, fragment size and presence of various skeletal elements. In total the cremation remains weigh roughly 1800 gr, of which approximately 1330 gr are fragments larger than 10 mm. These larger fragments are from the skull (ca. 200 gr), the axial skeleton (ca. 330 gr) and the extremities (ca. 800 gr; Smits *et al.* 1997, 96). Several different methods were used to determine age. The morphological study indicated that the cremation remains were from an older individual, between roughly 40 and 60 years old (Smits *et al.* 1997, 98). A qualitative histological study of the bone structure conducted by several independent researchers, however, led to a histological age determination of 20 to 34 years (Smits *et al.* 1997, 99). Smits *et al.* (1997, 98) determined that the Chieftain was a tall man, roughly 180 cm. The vertebral column showed degenerations and pathologies indicative of 'diffuse idiopathic skeletal hyperostosis' (DISH). This is a condition whereby the ligaments and ligament attachments ossify and therefore was thought to seriously restrict movement. According to Smits *et al.* (1997, 99–101) it is a condition more commonly associated with old age. This was one of the arguments used to determine that the Chieftain had been an older man when he died, rather than the young man indicated by the histological analysis. Since the cremation remains from the Chieftain are the only human remains that survive from a 'traditional' chieftain's grave in the Low Countries (see Section 2.2.1.1), they warrant extra attention and study. The results from previous studies, as conducted in the past, had discrepancies with regard to the age determination of the Chieftain. After discussing these results with physical anthropologist S. Lemmers of Leiden University, it was decided that it was time to take advantage of recently developed techniques and that new research should be conducted. The focus of Lemmers' re-analysis was to obtain an accurate age determination from osteological and histological assessments. Using techniques that were not available in the '90s, she was able to determine that the Chieftain had been between 30 and 40 years old when he died (Lemmers 2012, pers. comm.), far younger than previously thought. An unexpected result from her study was a better understanding of the effects of DISH on a person's daily life. Given the location of the Chieftain's spine ossification he likely would have suffered no symptoms beyond a slightly stiff back in the morning. It is remarkable though to find this condition in a person this young. Furthermore, given the robusticity of his skeleton with well-defined muscular attachments, the condition of the joints and an absence of severe enthesopathies, there is nothing to suggest that the Chieftain was in any way severely restricted in his movements (Lemmers *et al.* 2012).

Bronze vessel As mentioned above, the museum restorer Versloot reconstructed the bucket in the 1930s by mounting the fragments on a metal and plaster model (Fig. C3.1; Holwerda 1934, 39). In 1992 the vessel once again was taken into the care of restorers. Kempkens and Lupak removed the old plaster model. Loose fragments were refitted and missing pieces reconstructed. The entire surface of the bucket was cleaned and covered in a layer of polyester reinforced with fiberglass (Kempkens/Lupak 1993a, 1–1.20). Several bronze fragments from the bucket were not refastened to the vessel (*OV.03–05*). The walls of the bucket are made from two trapezoidal sheets of bronze slid over each other and fastened with rivets. These rivets are domed on the inside of the bucket and appear as flat circles on the outside, indicating that they were flattened from the outside. The raised edge, neck and shoulder were hammered from the same pieces as the walls. The shoulder of the bucket has two ribs. The rim was hammered outwards around a lead core (as confirmed



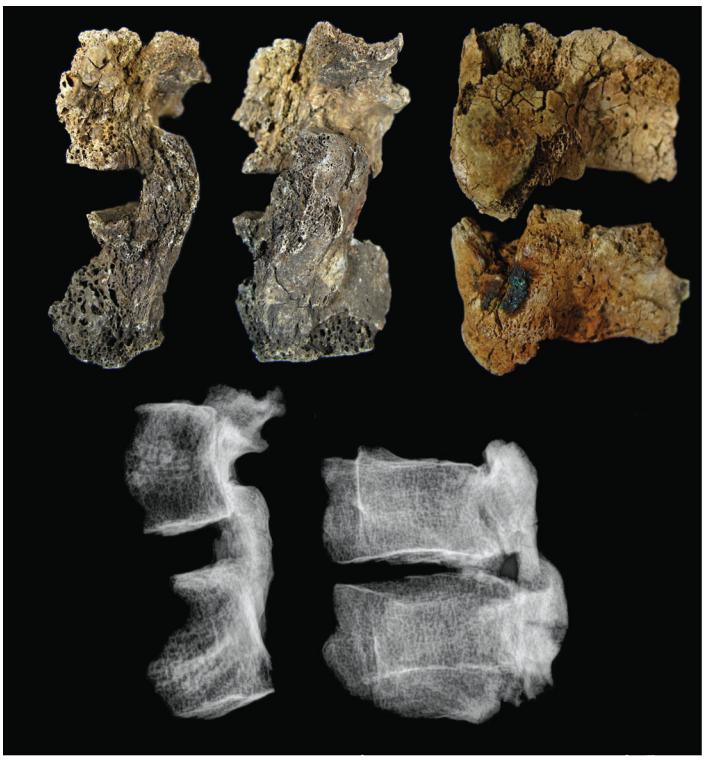


Fig. C26.2 The Chieftain's cremated remains (left, skull at top; OV.01) and "thoracic vertebrae, showing anterior longitudinal spinal liga- ment ossification. The intervertebral disk space is spared, with bony bridges clearly visible" (Lemmers et al. 2012; right). X-ray pictures taken under supervision of E. te Loo and T. Wiensma, Department of Radiology, Rijnstate Medical Centre Arnhem, figure kindly provided by S. Lemmers.

by XRF-analysis; Nienhuis/Steijger 2012). This type of bucket usually has two strap-shaped handles (see for example Baarlo; see Chapter C4). In the case of the Oss bucket these are both partially missing. On one side the handle-attachment on the inside of the bucket survives. This strip of bronze is decorated with several rows of raised dots (Fig. C26.3, top left). On the other side of the bucket the lower part of the handle survives on the outside of the bucket (Fig. C26.3, top right). This jutting piece of the handle is fastened with two rivets, with the flat side outside. The bottom is fastened over the trapezoidal sidepieces. It is not of equal height along the circumference of the bucket; it is much higher on one side. This bottom is fastened with rivets with the flat side on the outside. On the bottom there is a hammered-out base ring. An extra band of lead covered in bronze is fastened to the outside of this base ring with rivets. On the inside of the bucket there are small squares of bronze between the rivet and the bottom (Fig. C26.3, bottom). For the past two decades this bucket has been described as being in a decrepit state and having many repairs. It has even been said that it was fitted with a leather handle at one point, as some kind of amateuristic repair. Verhart and Spies (1993, 80–3) were the first to publish this idea, and this has evolved into a generally accepted notion in the Dutch archeological community. According to Fokkens and Jansen (2004, 56), for example, the 1992/'93 restoration of the bucket revealed that the handles of the bucket were



Fig. C26.3 Handle attachment with raised dot decoration on the interior surface (left), handle attachment on the exterior surface (right), domed rivets with square reinforcement plates underneath one of the rivets on the interior surface (middle left), repair plate added during manufacture on the base (bottom left) and section of the wall, base and lead base ring (bottom right) of the bucket (OV.02). Pictures and drawing different scales. Drawing after Kempkens/Lupak 1993a; photographs by L. Amkreutz; P.J. Bomhof ©RMO.

repaired several times. They describe how several pieces of bronze plate, one with punched-in decoration, were attached to the vessel (Fokkens/Jansen 2004, 56).

The bucket, however, is in much better shape than generally thought. Examination of the vessel revealed only a single, small bronze plate riveted to the bottom (Fig. C26.3, bottom left). This repair covers a tear in the bottom of the bucket which most likely occurred during the hammering out of the base ring. The subsequent repair took place during the production process as evidenced by the similarity in fastening method when compared to the rest of the bucket (Kempkens 2011, pers. comm.). This means that the *only* repair on this bucket was done during the initial fabrication process. This, however, does not mean that the bucket does not show signs of use. The vessel was dented in antiquity.

The often-mentioned bronze plates attached to the bucket as 'repairs' are in fact re-enforcements underneath rivets, meant to prevent tearing of the bronze plate (Fig. C26.3). The 'repair plate with punched-in decoration' is part of the original strap-handle (Fig. C26.3, top left). Kempkens (2011, pers. comm.) revealed that there was a stage during the restoration process in which the possibility of a leather handle was discussed. However, this notion was dismissed later on. What had been taken to be the possible remnant of such a handle turned out

to be something different. At the base of the bucket, below the jutting handle attachment, the bronze had torn and organic material was poking out. The subsequent use of bone glue and other composites during the 1933 restoration gave this the appearance of a leather handle. The organic material underneath the jutting handle attachment, thought at the time to possibly be leather as well, is likely contamination from material inside the bucket. Once the restoration was complete the idea of a leather handle had been rejected. Verhart and Spies' (1993) book, however, already had been printed. This publication spread the idea of the frequent repairs and leather handle into the Dutch archeological community, and has never been corrected. It should be noted that Fokkens and Jansen did not have direct access to either Kempkens and Lupak's restoration report or the bucket (Fokkens 2011, pers. comm.). Kempkens (2011, pers. comm.) did suggest that the lead base ring could be a later addition in terms of how it was constructed and attached. Such a base ring is not a very typical phenomenon, nor is the presence of lead during this period. However, considering the use of lead underneath the rim (confirmed by XRF-analysis Nienhuis/Steijger 2012), perhaps the bronze-covered lead base ring is original.

Weaponry The curled-up sword with the gold-inlaid handle is one of the most iconic prehistoric finds of the Netherlands. Typologically the Oss sword falls into the Mindelheim type, and probably was produced in southern Germany (Roymans 1991, 36; Section 6.2.1.2). However, the long and shiny sword as it is today is the result of the restoration in 1992/'93. For several decades after it was excavated the sword was in a very poor state (Fig. 4.8). It was also 26 cm shorter and for years there was a running debate about whether the Chieftain may have been interred with *two* swords. Holwerda (1934, 40)

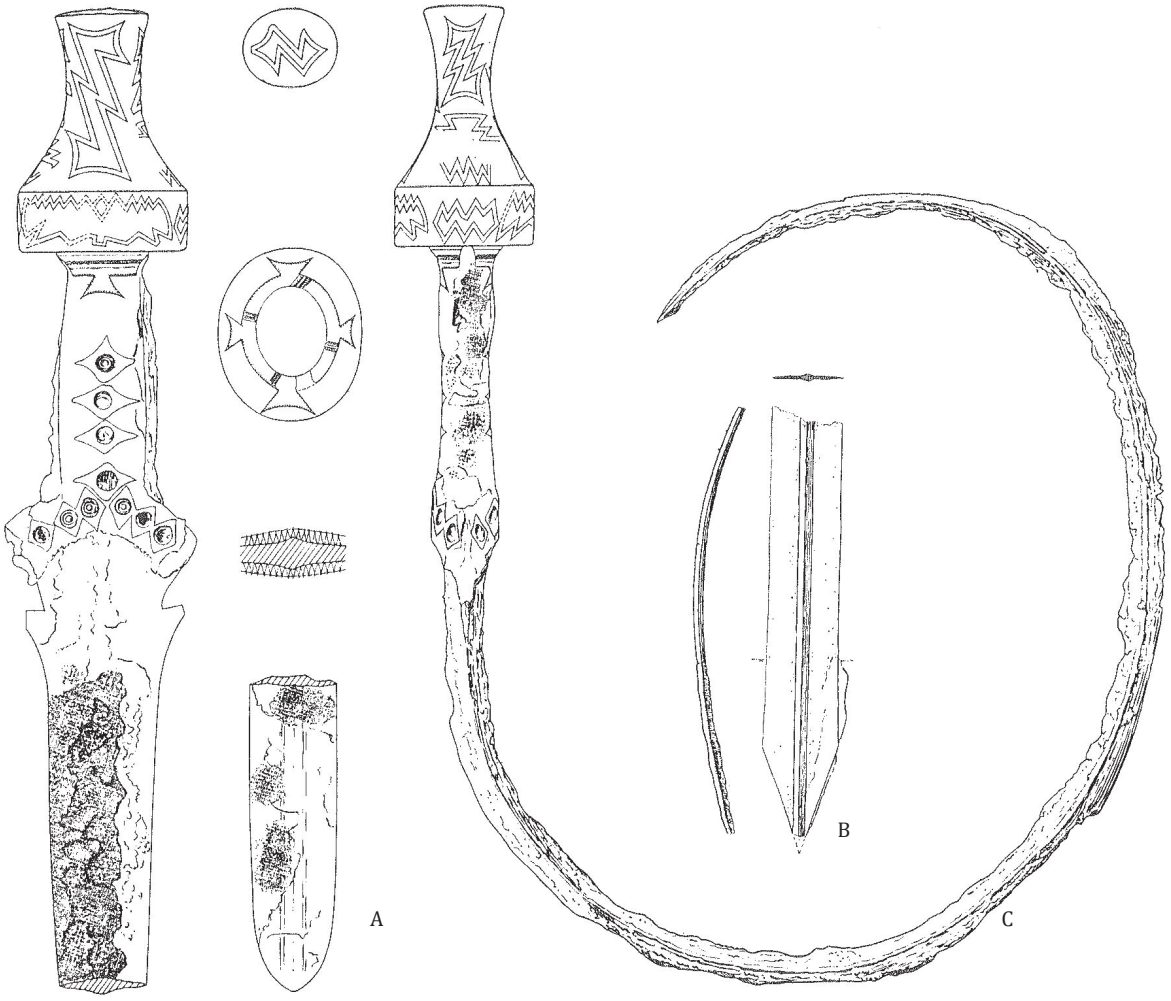


Fig. C26.4 Holwerda's point that turned out to be a 'middle piece' (A), Holwerda's antenna sword/Modderman's antenna dagger that turned out to be the point (B) and the Mindelheim sword (C). See also Fig. 6.5. Figure after Modderman 1964, fig. 2.

interpreted the piece in Figure C26.4, B as an (antenna) sword fragment; Modderman (1964, 59) viewed it as a dagger with cutting edges on both sides. Somewhere between then and the 1990s restoration, it was discovered that the piece Holwerda and Modderman had interpreted as the point of the Mindelheim sword (Fig. C26.4), was in fact a 'middle' piece and that the 'antenna sword/ dagger' was the tip of the Mindelheim sword. Pictures taken late in the 20th century show that the point had already been re-attached to the sword prior to the last restoration (Fig. C3.2), though it was Kempkens and Lupak who returned the sword to its former glory. Today the sword is ca. 117 cm long, of which is 96 cm is the iron blade; longer than most Mindelheim swords by about 20 cm (see also Fig. CA2.3; Sections 6.2.1.2 and C3.1). The blade required a lot of work during the 1992/'93 restoration to get it looking the way it does. It was covered almost completely in iron oxide, which was removed. Several fractures (incorrectly) repaired by Versloot were undone and repaired properly. It was supplemented with polyester in multiple places. The blade was revealed to have ricassos on both sides, with the cutting edges of the blade starting beneath. The cross-section of the blade resembles a flattened diamond shape. There are two narrow ridges echoing the central rib, starting at the grip. Two narrow grooves accentuate each of the narrow ridges. The central rib runs almost all the way down to the point of the sword.

The hilt was made up of a wooden grip and a hat-shaped pommel of a perishable material. The single-handed wooden grip survived quite well, though it still needed restoration work. Iron oxide had to be removed from the grip and the decorations repaired. Kempkens and Lupak (1993a) preserved the original wood and filled it out with cyanoacrylate. The bottom edge of the grip perpendicular to the blade is decorated with many tiny triangular gold sheet decorations (Fig. 6.3). Several more of these were discovered recently (*OV.07*). They still show the tiny folded edges used to insert them into the wood (Fig. C26.1, *OV.07*). The grip is decorated with diamond-shaped gold sheet decorations around bronze rivets (four on the vertical part of the grip, six on the curved part by the blade) on both sides. There is a circular decoration with four protrusions decorating the transition from the grip to the pommel. The circular part is on the bottom of the disc of the pommel, with the protrusions attached to the grip. The pommel did not survive, but parallels indicate it could have been made from wood, bone or ivory (Cowen 1967, 384; Section 6.2.1.2). Versloot reconstructed the hat-shaped pommel from gypsum by following the shapes of the gold sheet decoration. These decorations are a variety of lightning-like patterns (Fig. 6.3; Kempkens/Lupak 1993a). The accuracy of this reconstruction based on fragile gold sheet decorations can be questioned as the resulting pommel is a strange shape when compared to most pommels that have survived which are shorter than the reconstructed Oss one. There is however at least one exception of a pommel hat with an identical, elongated shape (see Section 6.2.1.2 for further discussion of this).

The current work has been able to link a number of previously unpublished fragments to the sword handle that were uncovered in the depot (*OV.08*). In the museum inventory book from 1933 they are listed as "small pieces of bone (?), upon which the golden decoration of no. 3 [sword] were located" (my translation). The fragments were cleaned during the 1992/'93 restoration and while some appear to be bone (see below), some do not. Kempkens and Lupak (1993a, 22) describe them as fragments of tin or lead. The fragments do not fit together, but some appear to have formed a circle (Fig. C26.1, *OV.08*). A small piece of gold is present on one of these fragments, lending credence to the idea that they were in some manner part of the sword hilt. Due in particular to their likely association with the sword handle, it was deemed worthwhile to have these analyzed using XRF-analysis. J. Nienhuis of the RCE and her intern, J. Steijger, performed the analysis, and were able to confirm that the ring fragments were indeed (primarily) lead (Nienhuis/Steijger 2012). This confirmation adds another dimension to our understanding of the unique Mindelheim sword from this grave. Its pommel hat would have incorporated a lead ring, and possibly other lead elements. Given its association with the gold decoration, it is likely that the lead was located on the surface, perhaps as decoration (as opposed to its presence as extra weight to balance the sword).

A number of these fragments, however, were not lead (Fig. C26.1, *OV.08* left). A. Verbaas of the Laboratory for Artefact Studies was kind enough to examine these and concluded that they were weathered bone (or possibly antler, though this was deemed less likely). The fragments are worked and shaped into little bars, almost like lines. They also show traces of contact with copper or bronze and gold (Fig. C26.5). This leads me to conclude that the handle of the Oss sword was decorated with inlays of bone, in addition to the gold, bronze and lead decorations.

Reproduction experiments (using modern techniques) revealed some interesting clues regarding the possible function of the sword. The gold leaf that decorates the grip was originally 0.1 to 0.2 mm thick. The edges of the decorations were bent and inserted into slits made in the wood, as the loose gold triangles also show (Fig. C26.1, *OV.07*). Van Nistelrooij (2010, 12) argues that the decoration would not have stood up to being handled and the sword therefore likely was never used 'as a sword', though it should be noted that modern techniques and materials were used in these experiments.

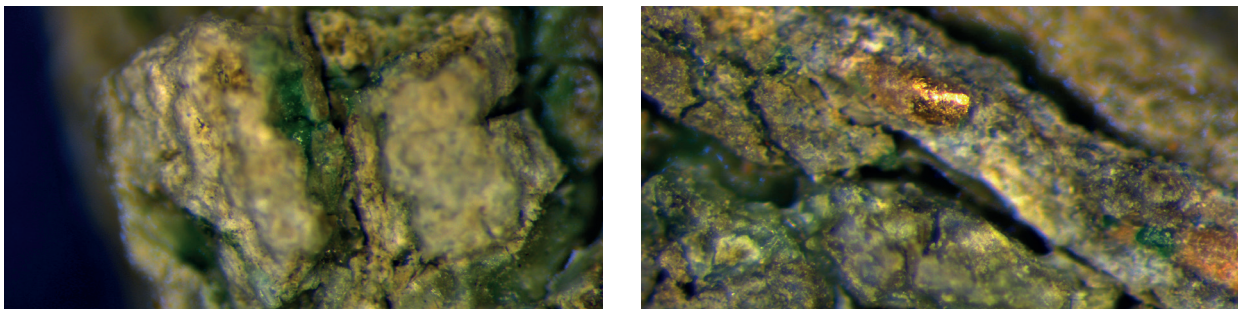


Fig. C26.5 Microscopic traces of copper or bronze (left) and gold (right) on the bone fragments from the sword hilt (different scales). Photographs by A. Verbaas.



Fig. C26.6 Wooden fragments adhered to the sword blade (OV.06). Photograph by R.J. Looman ©RMO.

New experiments are underway by J. van Zuiderwijk to recreate the Oss sword with a gold-inlaid handle using Iron Age techniques that should provide further insights, though I do concur with Van Nistelrooij (2010) that the delicate gold decorations likely would not have stood up to vigorous handling or use.

There are also wood and textile fragments preserved on the sword. The wooden fragments are of unknown origin or function (Fig. C26.6). Several authors have already noted the presence of textile remains on the sword (Fokkens/Jansen 2004, 62; Modderman 1964, 58). Textile has adhered to both the handle and the blade in several places on both sides. This suggests the sword was wrapped with a length of cloth before being deposited in the bucket, though analysis shows the hilt was likely left bare. The textile is discussed further below. There is, of course, another step in the burial ritual represented by this sword. It was intentionally, and quite beautifully, curled up. Unfortunately the metal blade of the sword is so degraded that it is impossible to determine whether the sword would have had to be reheated to bend it, or whether this could have been done 'cold'. The structure of the metal of the original sword is unrecognizable, so it will have to remain an educated guess how it was actually done. Research is currently underway by I. Joosten and V. Fontani to analyze the crystalline structure of iron Mindelheim swords and how they were worked.

Horse-gear In 1963 Ypey's work on the 'lump of rust' revealed the presence of horse-gear in the Chieftain's grave of Oss (see Fig. C3.2). Though he did not reconstruct the fragments into the horse-bits we see today, his discovery radically changed the way this grave was seen and interpreted. Ypey uncovered the two mouthpieces and several fragments of the cheek-pieces, but it was Kempkens and Lupak who reconstructed the seven

different fragments into two horse-bits. Even though in two cases (*Modderman k 1933.7.10j* and *7.10k*) Modderman (1964, 60) explicitly stated that they could not belong to the bits, showing again the importance of collaborating with restorers (Chapter C3).

Today several objects can be identified as horse-gear paraphernalia. The two iron horse-bits (*OV.09–10*) are the easiest to recognize. The mouthpieces are each made of two iron rings that were joined and twisted into bars with loops left at each end or were forged as such with false twisting decoration. The loops joined together in the middle form the joint of the mouthpiece. The loops at the opposite ends each attach to a ring on a rod-shaped cheek-piece and a loose iron ring. The leather reins would have attached to these rings, while the leather straps of the horse's headpiece would have attached to the other two holes in each cheek-piece (Fig. 7.1). On both horse-bits small bronze fragments were found. These are possibly 'legs' from so-called hemispherical sheet-knobs (Fig. C26.7). Both bits show wear on the twisted (decoration) part of the mouthpieces where the bit would have ground against the horses' teeth. There are twelve loose hemispherical sheet-knobs, of which six are in good condition (Fig. C26.1, *OV.11*). Two sheet-knobs are corroded onto a mass of iron rings (*OV.16*), and another is corroded onto a loose ring fragment (*OV.20*). In all cases where the legs of the sheet-knobs survive, they are bent indicating that they were fastened on leather (Fig. C26.7). Hemispherical sheet-knobs were used to decorate horse-gear and associated paraphernalia. They are often found on the leather decoration panels on yokes, though they were also used on bridles (Koch 2006; Willms 2002). As further discussed in Section C26.4.1, these sheet-knobs likely decorated the bridles. A single, small stud is depicted on the original drawings by J.P. Boogerd discovered in the archives of the Faculty of Archaeology (thanks to S. van As). The actual find (*OV.44**), however does not survive (Fig. C26.1; see also Section 7.2.1.8).

Several other bronze pieces also served as decorations on the horse tack. The bronze tubular cross-shaped object would have been part of the headgear of the horse (Fig. C26.8). Such pieces are usually reconstructed as part of the bridle construction with leather straps running through them (Fig. 7.1; Koch 2011, pers. comm.). Another is the bronze so-called *Tutulus* (*OV.13*). This slightly sombrero-shaped object with a loop on the back (Fig. C26.8) also featured in the headgear of a horse (Trachsel 2004, 547). An unusual feature of this *Tutulus* is that the little loops around the side are positioned vertically (they usually stick out horizontally). This could be taken as an indication that this object was made locally. However, this object has been post-depositionally distorted in shape and has been extensively restored, making the current vertical position of the loops slightly questionable (see also Section C3.1.4). Trachsel (2004, 547) dates similar objects very early in Hallstatt C. There is also a fragment of a bronze object (*OV.14*) that originally would have been circular with a raised center. This may be some kind of horse tack decoration, but cannot be identified further.

There are three solid bronze rings, and at least twelve iron rings in the Chieftain's burial. The three bronze rings (diameter ca. 36 mm; cross-section 9.4 mm) are believed to have been part of the bridles (see Section C26.4). Ten iron rings have been restored in their corroded configuration. There are two loose iron rings reconstructed from loose fragments. The larger ring was reconstructed from a fragment attached to the knife. The smaller ring was reconstructed from several loose fragments. The diameters could not be measured accurately at the present time. Based on pictures the *very* rough outside diameters were determined. The measurements seem to suggest 'groupings' of iron rings. There are three rings around 53 mm in diameter, three rings roughly 87 mm in diameter, and four rings roughly 106 mm in diameter, with one outlier with a diameter of around 135 mm. The thick ring in the mass of rings has a diameter of roughly 47.5 mm. Figure C3.3



Fig. C26.7 Hemispherical sheet-knobs (OV.11) shown from the back (left) and detail of a horse-bit (OV.09) with attached bronze fragment that is likely the 'leg' of a hemispherical sheet-knob (right). Photographs by P.J. Bomhof ©RMO.



Fig. C26.8 Tubular cross-shaped object (OV.12; left) and Tutulus (OV.13; right) shown from the back. Photographs by P.J. Bomhof ©RMO.



Fig. C26.9 Mass of iron rings (OV.16) fully restored with detail of gold and bone(?) from the sword hilt (left inset) and two hemispherical sheet-knobs (inset right) corroded onto iron rings. Photographs by P.J. Bomhof ©RMO.

shows the extensive restoration and reconstruction work that was performed to get the rings looking the way they do today. Textile fragments have been preserved on the outer two rings, and on the smaller of the two loose rings. The textile survives only on the outer edge of the group of rings, and only on the outside of the rings themselves. This, combined with the configuration in which the rings corroded together suggests that the rings were wrapped in textile as a package (discussed further below). There are (fragments of) other objects corroded onto the rings. In the middle of the group of rings there is an iron rod with a flattened end. It is unclear what this object might be. There are also two bronze hemispherical sheet-knobs affixed to one of the outer rings. On a fragment of one of the rings an impression of the sword hilt with gold inlay survives (Fig. C26.9). There are a number of loose ring fragments. It is unclear whether these were originally part of the reconstructed rings, or whether they represent even

more rings. For all these rings the traditional description has been 'associated with horse-gear'. Considering the presence of horse-gear and yoke components in the burial, this still seems to be an appropriate interpretation. The bronze rings could have featured as part of the bridles or reins. With regard to the iron rings, it is my opinion that they featured on the harness and yoke (and possibly the wagon) both to guide the reins and possibly to fasten the yoke in some manner. The groupings in size of the rings seems to supports this. Most functions on horse-gear, yokes and wagons that require rings occur symmetrically, or at least in multiples, requiring several rings (of the same size) for the same function. However, as discussed in Section C2.4.4, when dealing with loose rings it is almost impossible to positively identify their function.

Yoke and wagon components The bronze yoke rosettes and iron toggles would have been fastened to a wooden yoke 'in life'. The rosettes would have been nailed on the top of the yoke at either end, possibly attaching decorative leather panels to the wood. The iron toggles likely fastened the stomach straps of the horse harness that held on the yoke (Fig. 7.1). In 1963 the two iron toggles looked very different than they do today and they also were interpreted differently. One toggle (*OV.22*) was described by Modderman (1964, 60) as a "rod with knob and only one eye, which is bigger than the eyes in the other [cheek-piece]". In his article this object had RMO inventory number *k 1933/7.10l*, today this object has number *k 1933/7.10e*, which in this research is known as *OV.22*. The other toggle (*OV.23*) was depicted by Modderman (1964, fig. 3) as an iron rod rusted onto the axe.

Tools The tanged iron knife known today as *OV.24* was reconstructed in 1992/'93 by Kempkens and Lupak from the tip-end (*k 1933/7.9*) already listed by Holwerda, and the tang-end (*Modderman k 1933/7.10c*) uncovered by Ypey in 1963. It is a reasonably simple knife with a curved cutting edge and a flat back to the blade. The handle did not survive and likely was made from perishable material such as bone or wood. There is textile and leather corroded onto the tip of the knife (Fig. CA1.1). These could be the remains of a sheath or the knife could have been wrapped in textile and rested against a leather bridle (discussed further below). There is an argument to be made that the knives in rich Hallstatt Culture burials should be seen as ritual butchering knives, possibly used in sacrificial practices (Huth 2003; see Section 6.4.2).

An exceptionally fine iron socketed axe with a more-or-less round opening was also among the grave goods. The position of the axe within the bucket makes it probable that it was interred without a handle. Though axes occur in a select number of other rich burials as well, the one from Oss is the only iron example in the Low Countries found in such a context.

A flat stone with a pointed end is the only stone object in this burial. A break was repaired during the 1992/'93 restoration. The stone is grey, but there is an interesting orange-reddish discoloration to part of it. D. Braekmans examined this residue using XRF-analysis and confirmed that it was very likely ocher. This object has always been described as a whetstone, but this could not be confirmed through use-wear analysis. Instead A. van Gijn found traces that indicate the short edge had been used in a transverse motion, a scraping movement. It should be noted, however, that a lack of traces of use as a whetstone does not mean it was never used as such. It only shows that it was definitely not used as such long enough to produce observable traces. It is unclear how this object should be interpreted. Similar stones have been found in any number of burials from this period and will be examined in the future, which may offer insights into how the Oss stone was used (see also Section 6.4.3).

Personal appearance Two iron objects are interpreted as razors. Both were discovered during the restoration of 1963 in the lump of rust known as *k 1933/7.10*. They were interpreted as knives at the time. In 1963 the rectangular razor was in multiple pieces and the other was corroded onto the clump of iron rings. In 1993 Kempkens and Lupak restored the fragmented 'knife' into the complete rectangular razor and separated the other from the mass of rings and restored it. It was not until their latest restoration that they were interpreted as razors. In the case of the rectangular razor it is even today not certain that it in fact is a razor as it does not have a sharp edge, though this could be the result of the extreme deterioration and subsequent restoration process. The other object does appear to be a razor, though it also resembles a certain type of knife found in the Hallstatt Culture (Egg 2015, *pers. comm.*). The rectangular razor is one of several examples where something went wrong with the numbering of the finds (see App. CA2).

In 1963 Ypey uncovered two "objects of bronze plate" (*OV.29–30*), that were interpreted by Modderman as the heads of dress-pins (Modderman 1964, 58–9). These two pins are incomplete, but the discovery of a third and complete pin by Kempkens and Lupak confirms Modderman's interpretation. The pin was discovered corroded onto knife *OV.24*. The third pin received the RMO inv. no. *k 1933/7.10c*, which previously had been the tang-end of the knife (*OV.24*). And then later when the numbers were written on the objects, a mistake was made and this pin was given number *k 1933/7.10a.* The

Tab. C26.1 (next page) Summary technical data textile analysis by K. Grömer (see also Fig. C26.10).

Textile A: coarser tabby

Localisation: sword *OV.06*-1 (on the handle); rings *OV.16–17*; loose fragments *OV.39–42*
Microstratigraphy: -
Color and material: rust-red and blackish; wool with kemp
Thread system 1: 0.5 mm z-yarn; 5–6 threads per cm
Thread system 2: 0.4–0.5 mm s-yarn; ca. 6 threads per cm
Remarks: open weave, surface worn out, low cover factor
Interpretation: this coarse tabby was found on the sword handle and on some of the rings. It may have been used to wrap up the rings, and then was transferred to the sword handle as is lay against it. It may also have been used to wrap the burial as a whole.

Textile B: medium fine tabby

Localisation: sword *OV.06*-2; loose fragments *OV.39–42*
Microstratigraphy: on the sword blade, covered by the fine diamond twill Textile C
Color and material: rust-red and blackish; fibers too degraded for material identification
Thread system 1: 0.4 mm z-yarn; ca. 15 threads per cm
Thread system 2: 0.4 mm z-yarn; 14–15 threads per cm
Remarks: dense fabric
Interpretation: this medium fine tabby appears to have been used to wrap the sword.

Textile C: fine diamond twill

Localisation: sword *OV.06*-3; loose fragments *OV.39–42*
Microstratigraphy: on the sword blade, covered by the fine diamond twill Textile C: multiple layers (more than 6), covering the sword blade on different parts on the outer and inner side, going over one edge; textile on the inner side of the sword very destroyed, but might belong to this fabric. Between sword blade and diamond twill sometimes the tabby *OV.06*-2 can be seen and on the diamond twill there are fragments of another tabby *OV.06*-4. Among the loose fragments *OV.39–42* a huge amount of lumps of that textile, folded to several layers, sometimes one layer of Textile D folded in.
Color and material: rust-red, black to reddish-brown, wool
Thread system 1: 0.2 mm s-yarn; ca. 20–24 (20–22) threads per cm
Thread system 2: 0.2 mm z-yarn; ca. 20–24 (24–26) threads per cm
Remarks: diamond twill, with point repeat in one direction, displacement in the other
Seams: On *OV.39* stitches of overcast-stitch(?) detected. The sewing thread consists of 0.3 mm sZ-plied yarn and the stitches are very regular with a distance of about 3 mm.
Interpretation: this textile can be identified as a grave good in its own right. It was folded into multiple layers and folded around something made of Textile D. Whatever the Textile C was from, one fragment (*OV.39*) shows stitches.

Textile D: finer tabby

Localisation: sword *OV.06*-4; loose fragments *OV.39–42*
Microstratigraphy: this tabby is partly visible as top layer on the diamond twill Textile C, in box *OV.42* there are 2 lumps of multilayered Textile C with one layer Textile D folded in.
Color and material: rust-red to dark brownish, wool
Thread system 1: 0.3–0.4 mm s-yarn; 16 threads per cm
Thread system 2: 0.3–0.4 mm z-yarn; 16 threads per cm
Remarks: open weave
Interpretation: this textile was folded into the Textile C cloth, and therefore can be identified as a grave good in its own right.

Textile E: fine diamond twill

Localisation: rings *OV.16*-2; loose fragments *OV.39–42*
Microstratigraphy: -
Color and material: rust-red and blackish, bast fibre?
Thread system 1: 0.3 mm s-yarn; ca. 20 threads per cm
Thread system 2: 0.3–0.4 mm z-yarn; ca. 10 threads per cm
Remarks: folded textile? On the better preserved items surface very flat and regular, high quality object; diamond twill with point repeat
Interpretation: -

Textile F: coarse tabby

Localisation: iron knife *OV.24*
Microstratigraphy: the tabby *OV.24*-1 is attached directly to the knife blade, it is covered partly by leather
Color and material: rust-red, no fibre identification
Thread system 1: 0.6 mm s-yarn; 12 threads per cm
Thread system 2: 0.6 mm z-yarn; 12 threads per cm
Remarks: very dense, slightly ribbed appearance due to different thread count in warp and weft
Interpretation: lining of the leather knife sheath or a wrapping/covering of the knife blade

Textile G: coarse twill

Localisation: *OV.42*
Microstratigraphy: -
Color and material: rust-red and blackish, wool
Thread system 1: 0.4 mm z-yarn; 5–7 threads per cm
Thread system 2: 0.4–0.5 mm s-yarn; ca. 6 threads per cm
Remarks: threads low twist; on some fragments the surface is heavily worn; use-wear or caused by degradation process?
Interpretation: the interpretation remains unclear, the weave was found only in the box, without a specific microstratigraphy or other context with a metal find.

Textile H: repp

Localisation: *OV.42*
Microstratigraphy:-
Color and material: rust-red and blackish, wool?
Warp: 0.8 mm zS-plied yarn; threads per cm not countable
Weft: 0.3–0.4 mm z-yarn; threads per cm not countable
Remarks: no selvedge survived, maybe it was a repp band
Interpretation: this may be a belt of some kind that was used to wrap up the Textile C and D grave goods, but this is speculation.

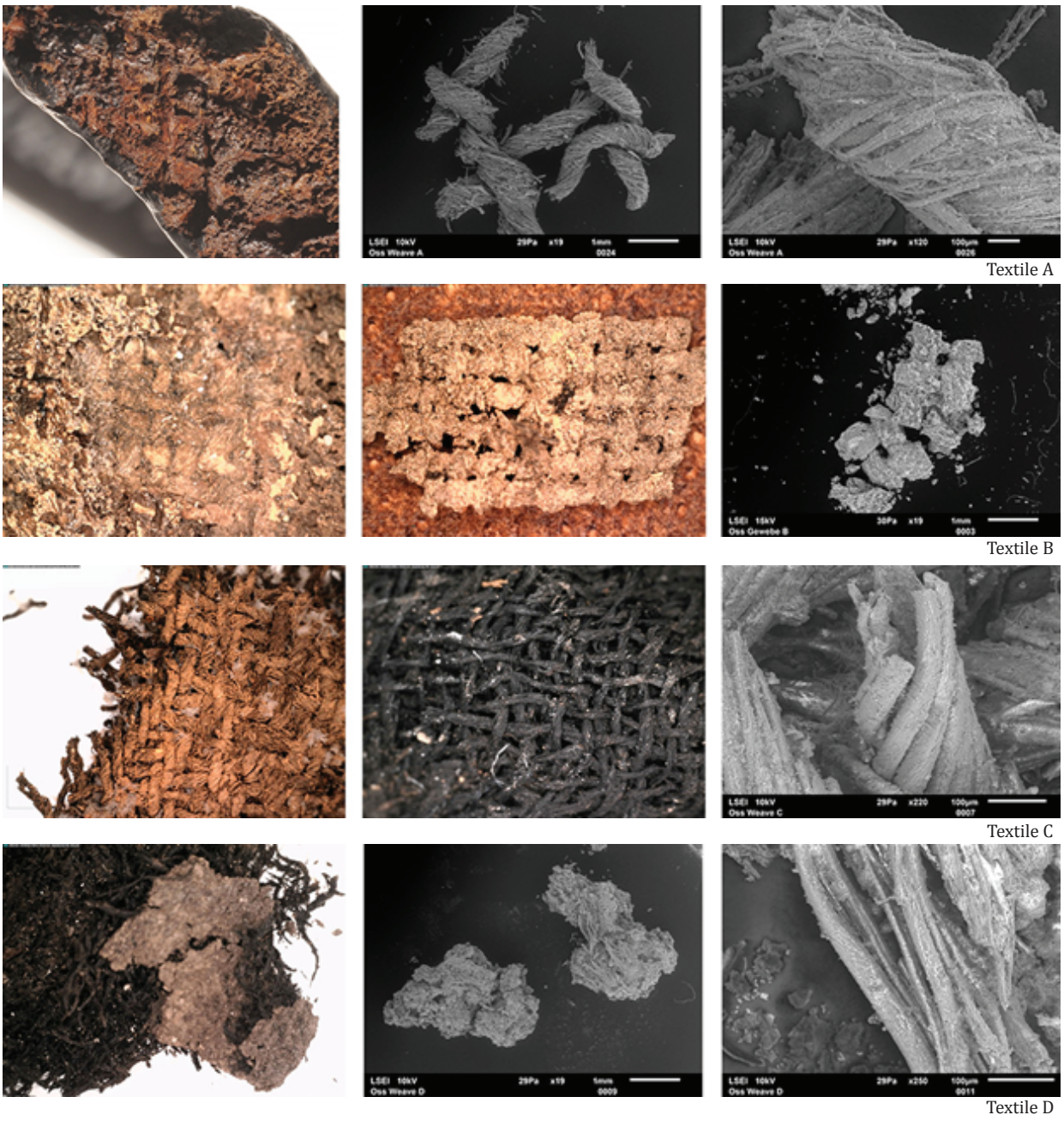
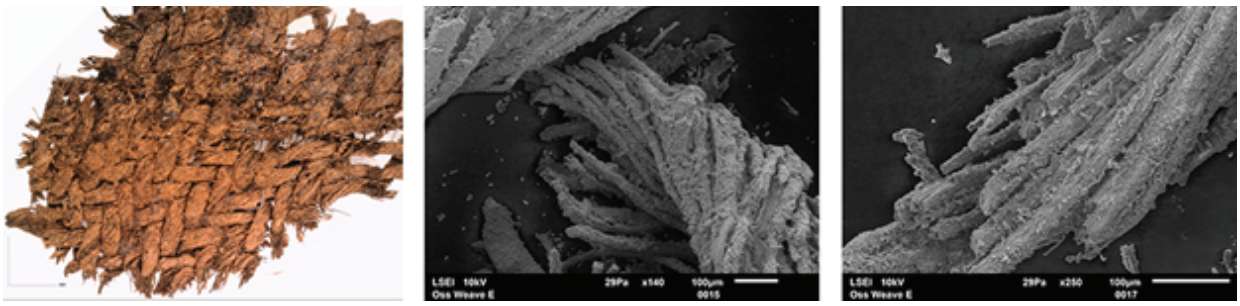


Fig. C26.10 The various weaves found in the Chieftain's burial (OV.38–42; different scales). Figure after Grömer 2015.

numbers on the two pinheads were mixed up at this point as well. *k 1933/7.10a* became *k 1933/7.10b,* and *k 1933/7.10b* became *k 1933/7.10c* (see App. CA2). These pins usually are referred to as *Bombenkopfnadeln*. However, considering their small size and their hollow heads, perhaps the lesser-known term *Hohlkugelkopfnadeln* describes them better. In discussions of the pins from Oss refererence usually is made to two similar pins from Saint-Vincent mentioned by Warmenbol (1993, 104), but note that such pins also occur in burials from the Hallstatt Culture. In life they likely functioned as fastenings for clothing. However, it is suggested that they may have been used to fasten the textile wrappings of some of the other artifacts (see below).

Other The burned remains of several animals were encountered in the bucket among the human cremation remains. These included a fragment of a horse femur, a fragment of roe deer antler and a fragment of an unknown middle-large mammal (Smits *et al.* 1997, 99–100). These



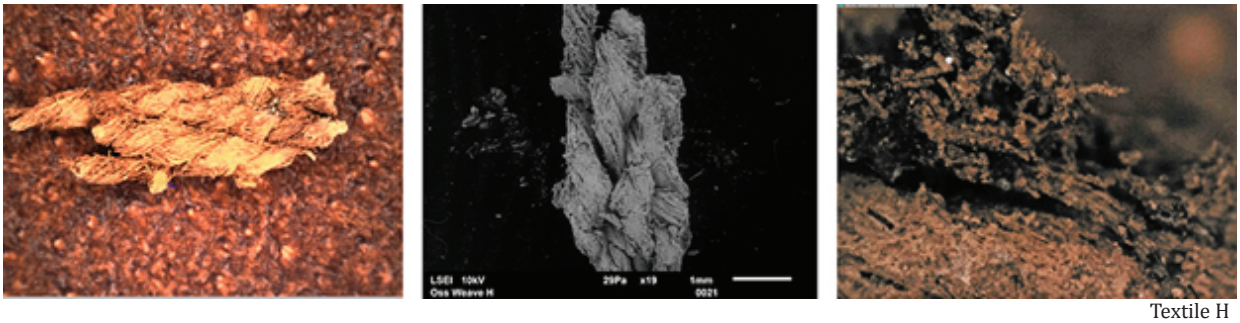
Textile E



Textile F



Textile G



Textile H

Fig. C26.10 (continued).

could be the remains of food offerings. Experiments have shown that during the cremation process the bones of people and (sacrificed) animals more or less retain their anatomical position (Williams 2004, 281; see also Section 2.2.3). Cremated animal bone also looks and feels different than cremated human bone (Lemmers 2011, pers. comm.). This indicates that the animal bones probably were selected deliberately from among the pyre debris, and not accidentally confused with the Chieftain's remains.

Several wooden fragments were found in the bucket from Oss. Though the physical appearance of these fragments has not changed during the restorations, the ideas about them have. Holwerda interpreted a large fragment (*OV.32*) as part of a wooden reinforcement on which the bronze bucket had been mounted. This type of bucket would, however, not have had a wooden reinforcement. It is at present not clear what the fragment is from. Better known are some wooden fragments with carved grooves (*OV.33*). Holwerda (1934, 40) interpreted

these as being from a scabbard since they adhered to the Mindelheim sword. Modderman (1964, 61) already pointed out that a wooden scabbard could not have been bent to follow the curve of the sword. The grooves were carved at a right angle to the grain of the wood, which is oak (Fokkens/Jansen 2004, 63). The ridges between the grooves are not equally wide, which together with the curved cross-section of certain fragments supports Modderman's (1964, 61) suggestion that they originally formed a bowl-shape. In my opinion these carved wooden fragments originally could have formed a wooden *Rippenschale*. These bowls usually are made from bronze, and often found in association with a larger bronze vessel. This combination of a large mixing vessel with accompanying drinking vessel is a recurring feature and highly significant (Willms 2002; see also Section 6.1).

There are three fragments of worked bone and antler in the Chieftain's burial, as well as some other indeterminate fragments. One antler fragment has been shaped into a point (*OV.34*), while the other two appear to be the 'top-ends' of objects (*OV.35–36*). These bone fragments are different from those described above. They are worked and do not appear to have been burned, and therefore should be seen as fragments of burial goods. Given their small size and incomplete state it is impossible to identify what they are from. For the antler point it has been suggested that it might be the remains of a *coup de grâce*, which have been found in several Hallstatt Culture burials (Huth 2011, pers. comm.).

Several pieces of leather survive, though originally there would have been several leather components interred. The fragments of one piece were discovered in the 1930s, though Kempkens and Lupak are responsible for glueing them together again (*OV.37*). This piece is very small (35 by 11 mm) and thin (ca. 1 mm). There is a tiny bronze droplet of some kind on its edge. K. Grömer (2015, pers. comm.) was able to determine that this delicate leather was extremely worn and that the species can no longer be determined. The other pieces of leather (*OV.38*) were recently discovered among the cremation remains. One piece is in three fragments that fit together, and is probably from the same component as the first piece as it appears to be of the same width and thickness. The leather fragments are extremely thin, which suggests a more 'delicate' function than horse tack.

A surprising amount of textile survived in the Chieftain's burial, especially considering the rarity of such material. As already mentioned, there is also textile corroded onto artifacts. L. Jørgensen examined the textiles in the 1980s, and I examined the textiles together with K. Grömer in 2015 as more textile had become available for study. Recently I. Joosten (RCE) and D. de Loof (student at Leiden University) also made micro-CT scans of textile samples which currently are being analyzed. Jørgensen already identified three different types of cloth in this burial. She determined that several of the loose and compressed textile fragments (*OV.39–41*) are z/s-spin diamond twills with combined point repeat/displacement (Figs. C2.10 and C26.10; see also Jørgensen 1983 for explanation of weave). The Oss textiles are some of the earliest pieces of this type (Jørgensen 1983, 1–3). The analysis done by Grömer of newly uncovered material

Oss-Vorstengraf **Noord-Brabant, the Netherlands**					**Data quality:** good
Method of recovery: chance find, followed by excavation (good) **Year of discovery:** 1933 **Date:** Ha C1–2 **Current location:** National Museum of Antiquities, Leiden		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** RMO inv. no.
	Human remains				
OV.01	Cremated remains	Indet	--	++	k 1933/7.21
	Bronze vessel				
OV.02	Bronze bucket	+/--	--/--	--	k 1933/7.1
OV.03	Bronze plate fragments from *OV.02*	Indet	Indet	Indet	k 1933/7.12a
OV.04	Bronze plate fragments from *OV.02*	Indet	Indet	Indet	k 1933/7.12b
OV.05	Bronze plate fragments from *OV.02*	Indet	Indet	Indet	k 1933/7.20b
	Weaponry				
OV.06	Iron Mindelheim sword	--/--	++/--	+	k 1933/7.3
OV.07	Gold fragments, from *OV.06*	Indet	Indet	--	k 1933/7.13
OV.08	Lead fragments, from *OV.06*	Indet	Indet	--	k 1933/7.14

Tab. C26.2 Inventory and numbering information Oss-Vorstengraf.

		Use/ repair	Bending/ breaking	Fire	Other numbering systems: RMO inv. no.
	Horse-gear				
OV.09	Iron horse-bit	+/--	--/--	--	k 1933/7.10h
OV.10	Iron horse-bit	+/--	--/--	--	k 1933/7.10i
OV.11	Bronze hemispherical sheet-knobs, 12x	--/--	--/--	--	k 1933/7.4a–l
OV.12	Bronze tubular cross-shaped object	--/--	--/--	--	k 1933/7.7
OV.13	Bronze Tutulus	--/--	-+/--	--	k 1933/7.18
OV.14	Bronze harness decoration (?)	--/--	--/--	--	k 1933/7.20c
OV.15	Bronze rings, 3x	--/--	--/--	--	k 1933/7.5
OV.16	Mass of 10 iron rings with assorted objects	--/--	--/--	--	k 1933/7.10j
OV.17	Iron ring	--/--	--/--	--	k 1933/7.10k
OV.18	Iron ring with textile remains	--/--	--/--	--	k 1933/7.10l
OV.19	Iron ring fragments, 2x	--/--	--/-+	--	k 1933/7.10m
OV.20	Iron ring fragments, bronze sheet knob fragment.	--/--	--/-+	--	k 1933/7.20a
*OV.44**	Bronze studs	Indet	Indet	Indet	-
	Yoke and wagon components				
OV.21	Bronze yoke rosettes, 2x	--/--	--/--	--	k 1933/7.6
OV.22	Iron toggle	--/--	--/--	--	k 1933/7.10e
OV.23	Iron toggle	--/--	--/--	--	k 1933/7.10f
	Tools				
OV.24	Iron knife with leather and textile remains adhered	--/--	+/--	--	k 1933/7.9
OV.25	Iron socketed axe	--/--	--/--	--	k 1933/7.10g
OV.26	Whetstone (?)	++/--	--/--	--	k 1933/7.11
	Personal appearance				
OV.27	Iron razor (?)	--/--	--/--	--	k 1933/7.8
OV.28	Iron razor	--/--	--/--	--	k 1933/7.10d
OV.29	Bronze & iron *Bombenkopf* pin	--/--	--/--	--	k 1933/7.10b
OV.30	Bronze & iron *Bombenkopf* pin	--/--	--/--	--	k 1933/7.10c
OV.31	Bronze & iron *Bombenkopf* pin	--/--	--/--	--	k 1933/7.10a
	Other				
OV.32	Wood fragment	--/--	--/-+	--	k 1933/7.2
OV.33	Wooden fragments with carved grooves, 10x	--/--	--/-+	--	k 1933/7.15
OV.34	Worked antler object, fragment	Indet	Indet	--	k 1933/7.17b
OV.35	Worked bone object, fragment	Indet	Indet	--	k 1933/7.17c
OV.36	Worked bone object, fragment	Indet	Indet	--	k 1933/7.17a
OV.37	Leather fragment	--/--	--/--	--	k 1933/7.16
OV.38	Leather fragments, multiple	--/--	--/--	--	-
OV.39	Textile fragments, 5x	--/--	--/--	--	k 1933/7.19a
OV.40	Textile fragments, 3x	--/--	--/--	--	k 1933/7.19b
OV.41	Textile fragments, 2x	--/--	--/--	--	k 1933/7.19c
OV.42	Textile and charcoal fragments, many	--/--	--/--	--/++	k 1933/7.19d
OV.43	Bone fragments, 6x	--/--	--/--	++	k 1933/7.17d

References: Fokkens *et al.* 2012; Fokkens/Jansen 2004; Holwerda 1934; Jansen/Fokkens 2007; Modderman 1964; Van der Vaart 2011.

Tab. C26.2 (continued).

in turn identified no less than *eight* different weaves. The results of this technical analysis are available from the Natural History Museum Vienna as Report Textile Archaeology 2015/7. I summarize the results here and the technical details for each textile are given in Table C26.1 and CA1. As already mentioned above there is textile corroded onto a number of objects and present as loose fragments. There are several different kinds of cloth preserved on the sword. The textile on the sword handle (Textile A) is a coarse tabby weave (Figs. C26.10 and CA1.1). This is a very common type for the Urnfield and Hallstatt cultures, especially the use of plied yarn. This same cloth is present on some of the iron rings. There are only two loose fragments of this textile identified, and they are very small (less than 10 x 10 mm). Grömer and I identify as a functional wrapping textile used to wrap up the iron rings. This is Textile A. There is a multilayered microstratigraphy on the blade of the sword (see Fig. CA1.1). Textile B is a tabby found directly on the blade of the sword and is interpreted as the wrapping of the blade. Only two loose fragments survive. They are single layers and less than 10 by 10 mm. On top of the Textile B tabby on the sword blade are multiple layers of Textile C, with Textile D on top of that. Textile C is a very fine diamond twill and is the most abundant weave in the grave. It comes in quite large lumps of multiple layers. There are four chunks bigger than 35 by 35 mm, with the largest chunk measuring ca. 40 by 50 mm. Some nine fragments are 20 m long and 10–20 mm wide, and there are over a dozen smaller chunks. Very few chunks are single or double layers of textile, and most appear to be between 4–8 layers of textile, with one fragment being four layers folded double. This textile can be identified as a grave good in its own right. There are delicate, regular stitches on one such piece, made with sZ-plied thread slightly thicker than the woven cloth and ca. 3 mm. Textile D is a tabby that in two cases is attached to a lump of Textile C textile. In one case the Textile D is on Textile C, but the other case shows a single layer of Textile D folded inside several layers of Textile C. Textile C and D came to rest against the sword but are interpreted as grave goods due to the exceptional quality of in particular Textile C, the amount and multilayeredness of Textile C, and the fact that Textile D was found folded into several layers of Textile C. This folded packet of cloth likely lay against the sword in the urn (see below and Fig. 4.9). There is also textile on the knife (*OV.24*), which is identified as Textile F and is only found on the knife. The textile adheres to the knife blade, and there is some leather on top of it. This can be interpreted as a leather sheath with a textile interior, or as a textile wrapping of the knife with the leather being from the adjacent bridle (see below). There are also three types of cloth found only as loose fragments (*i.e.* they do not adhere to any objects). Textile E is also a diamond twill, though slightly coarser than Textile D. It is more stable than Textile C. Textile G is a coarse twill. Textile H is a plied yarn, wrap, band weave. We suggest that this band may have been used to wrap the Textile C and D cloths deposited as grave goods.

C26.3 Dating

This grave has been dated to the Hallstatt C period, the Hallstatt D period, and to both. As this burial is frequently used to date similar complexes, a discussion of the dates ascribed to this burial in the past and why these should now be adjusted is warranted. Overall Warmenbol (1993, 102–5) dates this burial to the 7th century or to the first half of the 6th century BC. He bases this on the supposed Hallstatt D date of the pins (*Nadeln mit Hohlkugelkopf*) and the supposed 6th century BC dating of the situla. However, similar pins are also found in Hallstatt C contexts (Trachsel 2004, 68), and Prüssing (1991, 49–52) in fact states that similar type Kurd buckets most likely date to the Hallstatt C1 period, but can also date Hallstatt C2, making the Oss bucket likely earlier than 6th century BC. Lanting and Van der Plicht (2001/2, 173) base their dating of Oss on Warmenbol's (1993, 104–5) date and on Modderman's (1964) publication in which an antenna dagger was listed, and claim this confirms Warmenbol's dating of this grave to the end of the 7th or first half of the 6th century BC. This dagger, however, does not exist. The possible dagger fragment listed by Modderman (1964) was identified as part of the Mindelheim sword and reattached to it at least a decade prior to Lanting and Van der Plicht's publication (2002/2; see Section C26.2).

Given the lack of consensus regarding the date of this burial and its importance as a key find, it was deemed worthwhile to attempt a ^{14}C-date, despite the likelihood of any given date falling within the Hallstatt plateau. The RMO was kind enough to provide two samples – one wood, the other human cremation – from the Chieftain's grave of Oss in an attempt to procure a useable absolute date (see also Section 3.3.4). Together with wood and charcoal experts E. van Hees and C. Vermeeren a wood fragment suitable for ^{14}C-dating was selected from the available fragments that could not be identified as being from an object. The sample selected was possibly alder (*Alnus*), but certainly was not oak (*Quercus*) or beach (*Fagus*). Old wood effect therefore can be mostly ruled out based on the life span of the possible trees from which this fragment could have originated (Van Hees/Vermeeren 2014, pers. comm.). The only recognizable wooden artifacts from this situla burial are the fragmented remains of a grooved bowl (*OV.33*) and the hilt of the Mindelheim sword (*OV.06*). The fragmented bowl is made of oak and therefore can be ruled out as the source of the dated sample. The sword handle is likely not made of oak, as

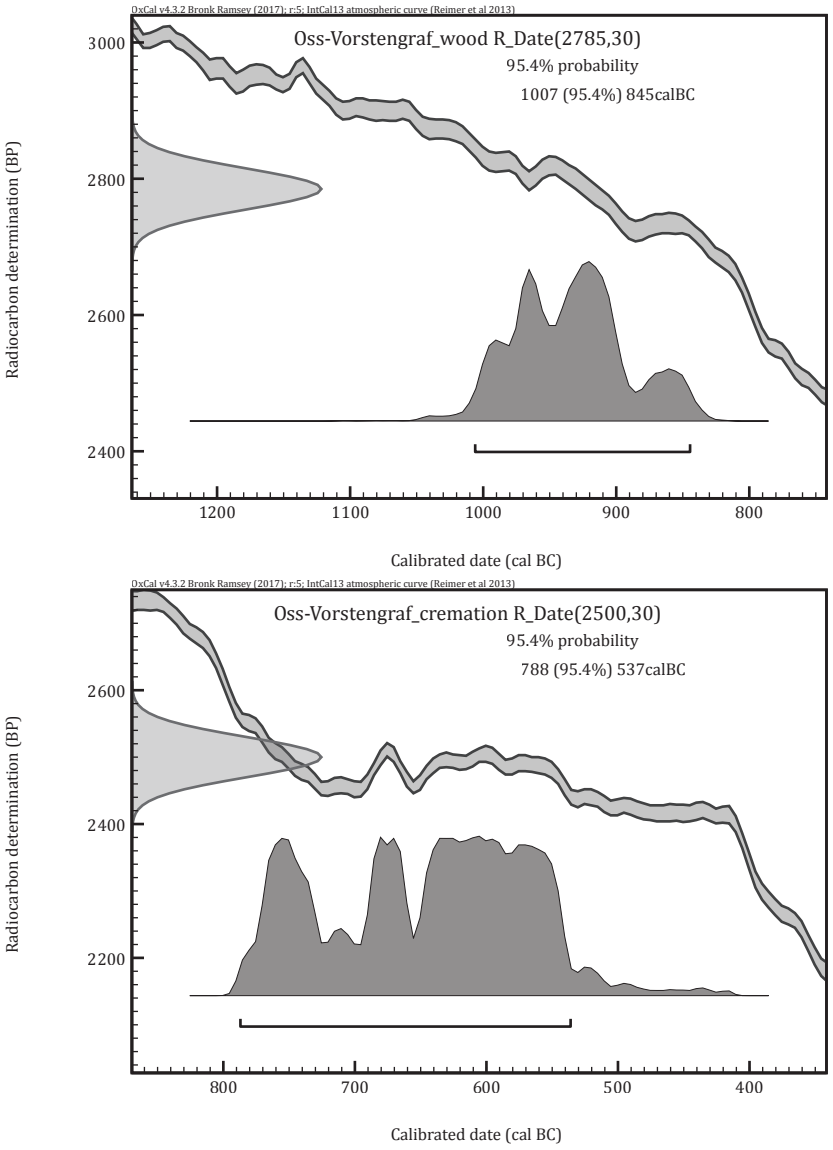


Fig. C26.11 The calibrated ^{14}C-dates (with OxCal v4.3.2 at the 2σ range) of a sample of cremation remains and a wood fragment from the burial of Oss-Vorstengraf.

determined by Van Hees and Vermeeren by analyzing a newly discovered wood sample of the sword handle. This means that the dated fragment could be from the sword handle (though note that *Alnus* would be a strange choice for a handle as noted by accomplished bronze sword smith J. van Zuiderwijk 2016, pers. comm.), or otherwise must be from an unknown wooden item interred in the bronze vessel. This wood fragment gave a date of 2785 ± 30 BP (GrA-55555), which calibrates to ca. 1005–855 BC (Fig. C26.11). Physical anthropologist and cremation expert S. Lemmers selected a suitable long bone fragment from the cremation remains that was calcinized sufficiently for ^{14}C-dating dating. This cremation fragment gave a date of 2500 ± 30 BP (GrA-55551), which calibrates to ca. 790–540 BC (Fig. C26.11).

The typochronological date of the grave goods indicates that the date provided by the wood fragment cannot relate directly to the burial event as it is far too early. The Mindelheim sword most likely dates to the 8th century BC or the first half of the 7th century BC (Milcent 2012, fig. 9.A; Trachsel 2004, 124–31; Section 3.4.1.2). The yoke decorations and horse-gear can all be identified as Kossack's (1954; Pare 1992, Ch. 10) characteristic early Hallstatt C1 horse-gear, which is typically dated to the 8th century BC (see also Section 3.4.1.3). And as noted above, both the bronze bucket and the pins are also consistent with a Hallstatt C date (Prüssing 1991, 49–52; Trachsel 2004, 68). Overall it would appear that this burial dates early in the date range provided by the ^{14}C-date derived from the cremation fragment – most likely somewhere in the 8th century BC (which is consistent with Trachsel's (2004, 369) dating of the burial; Fig. 3.5).

C26.4 Actions taken and reconstructing the (burial) ritual

This grave presents the unique situation of a 'traditional' chieftain's burial (*cf.* the definition given in Section 2.2.1.1) in a closed context. The recovery and subsequent treatment of this find have allowed for an unusually detailed reconstruction of the creation of the cinerary urn. In other words, we can reconstruct how the grave goods and the Chieftain were placed in the bronze bucket in which they were buried. The bronze urn was lifted as a block, therefore everything that was in the bucket at the time of discovery made it to the restoration lab in Leiden. Only objects that did not survive the test of time *in situ* are absent. The other special feature of this burial is the extensive documentation of the restoration in 1992/'93. Before this restoration many artifacts were still corroded together. Information regarding the final position of many objects within the vessel is therefore available. The examination of the restoration reports and accompanying X-rays were used to establish how (most of) the artifacts had been positioned within the vessel when it was excavated. The order in which the grave goods were placed into the bucket was reconstructed by stratigraphically examining the content of the vessel. The organic materials originally present, as well as the shifting of objects that may have occurred during their decomposition were taken into account. Figure 4.9 gives a reconstruction of how artifacts were located in relation to each other in the bucket upon interment.

C26.4.1 Artifacts that belong together

The location of specific objects within the bucket as well as the characteristics of the artifacts themselves indicate that certain objects belong together. For example, the distribution of the horse-bits and horse-gear decorations indicate that complete bridles were placed in the vessel, rather than loose metal components. The tubular cross-shaped object, which would have been part of a bridle, was located in association with one of the bits underneath the axe and knife. The solid bronze rings were probably part of the bridles as well. One of these rings was located underneath the axe in association with one of the horse-bits. The other two rings were located near the other horse-bit.

Discussing the bridles involves speculating about another type of object: the bronze hemispherical sheet-knobs. In all cases where the legs survive, they are bent inwards, indicating that they were fastened to leather. It is, however, slightly problematic to determine *what* leather object they decorated. Parallels of these sheet-knobs are often part of the decoration on yokes, but it is also possible that they decorated bridles. The bridles from Frankfurt-Stadwaldt, for example, were covered in slightly smaller versions of the hemispherical sheet-knobs (Fischer 1979; Willms 2002). A single small stud recently was found depicted on original drawings of the Chieftain of Oss' grave goods (Fig. C26.1). In the case of Oss several of the sheet-knobs were discovered in the bottom of the bucket near one of the bits, while all yoke components were located higher up. Moreover, the sheet-knobs are positioned with the underside (the side attached to leather) angled toward the bit. Several sheet-knobs were located near the horse-bit higher up in the bucket as well. There are bronze fragments that seem to be the legs of hemispherical sheet-knobs corroded onto the bits (Fig. C26.7). From this it follows that the sheet-knobs probably decorated the bridles.

A possible association between the knife and axe also warrants discussion. It is probable that the axe was interred unhafted and the close proximity of the axe and knife to each other in the vessel as well as the fact that they are oriented in the same direction, could indicate that they were placed into the vessel together. Their supposed connection with (ritual) slaughtering practices also makes a deliberate association between the two seem probable (Section 6.4.2; Huth 2003). The textile adhering to the knife may be from it being wrapped up, and it may be that the axe was wrapped up with it as well.

C26.4.2 The burial ritual of Oss

Cremating the Chieftain of Oss would at minimum have involved the collecting of fuel and building of a pyre, preparing the deceased's corpse in some manner and actually cremating him. The burned animal bones indicate that food offerings likely were burned on the pyre as well, but none of the grave goods appear to be cremation artifacts. After the pyre had cooled the remains were collected. The weight of the cremated remains from Oss does not suggest a *pars pro toto* collection of remains, nor does it prove they collected everything (*cf.* Lemmers 2011). It is unclear whether the next phase, the construction of the cinerary urn, would have immediately followed the cremation process. At some point in time, however, the grave goods were brought together and prepared for placement in the bucket. As already mentioned, it was possible to reconstruct how artifacts were located within the vessel when excavated (Fig. 4.9). Working stratigraphically, the order in which the grave goods were placed in the bucket was established. Certain treatments of the grave goods also could be recognized, such as the wrapping or dismantling of objects. From this, certain 'steps' of the burial ritual were extrapolated. The following describes how the objects were placed and in the bronze vessel.

The first thing placed in the bucket were multiple iron rings which likely were removed from a yoke or wagon. There is textile (Textile A, a coarse tabby) corroded onto the rings (of *OV.16*), only on the *outer* side of the *outer* rings, suggesting that they were wrapped in one package.

Even a loose ring (*OV.18*), the precise location of which within the bucket is unknown, only has textile on the *outer* edge. The restored mass (*OV.16*) at present shows the rings forming an outstretched and flattish group (Fig. C26.1). This, however, is at least partially post-depositional shifting after the textile and rings started to degrade as the rings would not have fit in the bottom of the bucket in this configuration (note that the rings were highly fragmented, and today are mostly reconstruction; Fig. C3.2). They must have been kept together by some means. Furthermore, one ring fragment (*OV.20*) still has the imprint of the base of the bucket visible in its corrosion (Fig. C26.1). Taken together, this indicates that the iron rings were wrapped in textile and placed on the bottom of the bucket. They must have been packed tightly when originally interred. The next thing to be placed in the bucket was one of the bridles, complete with horse-bit (*OV.09*) and bronze trappings (*OV.12* and *OV.15*). The bit was located at the bottom of the bucket, but partially overlying one of the iron rings. This indicates that it was placed after the rings were already in the vessel. The bronze tubular cross-shaped object (*OV.12*) originally was located by the bit underneath the axe. The imprint of this object on the corrosion of the axe was still visible during the 1992/'93 restoration. One of the bronze rings, thought to be part of the bridles, also was located by the bit underneath the axe.

The next step discernible from the archeological evidence is the placing of the sword in the bucket. The 'traditional' story of the sword is that restorer Versloot discovered it in 1933 in six pieces halfway down the bucket in a horizontal position. However, the sword would not have fit into the bucket in the manner suggested by Versloot when still intact. It would have had to be in a more vertical position, likely at an angle. There are fragments of gold leaf decoration from the sword pommel on one of the iron rings (Fig. C26.9) which indicates that the sword was placed with the hilt facing down. Kempkens (2011, pers. comm.) suggested a similar scenario. In order to come to rest against the rings the sword was likely the next thing to be placed in the bucket. This research established also that a folded packet of high-quality diamond twill textile rested against the sword, filling up the inner 'circle' of the blade and in a way formed a barrier down the middle of the bucket (as shown in Fig. 4.9).

The knife and axe were then placed on top of the bridle, perhaps both wrapped in textile. The other bridle was the next thing to go in, placed on the other side of the sword and textile 'divider' as evidenced by the horse-bit (*OV.10*) lying on top of both the mass of rings and the knife and axe. Two bronze rings thought to be bridle components were located in association with the horse-bit.

The dismantled yoke components were the next items placed into the bucket, as evidenced by the yoke rosettes and toggles being the next discernible 'layer' in the contents of the bucket. Based on archeological parallels, the yoke rosettes originally would have attached (decorative leather panels) to the wooden yoke. The wooden yoke would not have fit in the bronze vessel, so it seems that the metal components and possibly the leather panels were removed from the yoke and interred instead. The artifacts associated with the yoke, *i.e.* the rosettes and toggles, are resting on top of most other objects, indicating that they were one of the last things placed in the vessel. This supports the suggestion that the hemispherical sheet-knobs did not decorate the yoke panels since the sheet-knobs were discovered against the bottom of the bucket.

The razors then were placed on top of the yoke panels. During the 1992/'93 restoration one of the razors (*OV.28*) was discovered in among the group of rings (*OV.16*). However, it is unlikely that it 'started' in this position. As Figure C3.3 shows, the rings were very badly degraded before restoration, and in my opinion the razor was placed in the bucket higher up and later slipped down when the textile wrapping and the rings degraded. The other razor (*OV.27*) was located on top of one of the toggles from the yoke. This indicates that the razors were placed in the bucket after the yoke components had gone in.

There are, however, also several objects whose original location, and therefore their place within the construction of the urn full of grave goods, cannot be determined. These include the (whet)stone and the worked bone fragments as well as the bronze *Tutulus*. It can be assumed that the *Tutulus* was located by one of the two horse-bits, as it would have decorated one of the bridles. Which bridle, however, cannot be determined. The wooden fragments that likely formed a drinking cup also cannot be repositioned within the bucket. There are also three hollow-headed pins among the grave goods. This kind of pin generally was used to fasten clothing, and it is possible that they were interred with that function in mind. However, it may be that these pins were used to fasten the cloth wrappings of the various objects. There are three (packages of) objects that appear to have been wrapped in textile: the sword, the iron rings and the knife (and axe). The location of two pins within the bucket upon excavation is known. One was positioned in such a way that it could have fastened the wrapping of the knife (and axe). The other pin might be from the wrapping of the sword and have fallen down after the textile degraded. The original location of the third pin is unknown, but it may have fastened the wrapping of the iron rings. This is conjecture, but it would explain the presence of *three* pins.

It is impossible to determine where and how the Chieftain himself was placed in the bucket. Given that several of the objects were wrapped in textile, it seems probable that the cremation remains were wrapped in cloth as well. When the bucket was excavated, the cremation

remains were found throughout the bucket. They were present higher up in the bucket, making it probable that the remains were placed last and then dispersed downwards as the organic container disintegrated. In this scenario placing the Chieftain would then have been the final act of creating the cinerary urn.

The bucket and the grave goods it contained were then buried. The mourners chose to inter the Chieftain in an old barrow now known to date from the Bronze Age. They dug a pit clean through the barrow and about another 50 cm below the old surface. This pit was positioned slightly off-center in the old mound. This is taken to indicate that they did not want to disturb the central burial, but rather wanted to link up the Chieftain's burial with this 'ancestor burial' (Fokkens/Jansen 2004, 133–5). A new, enormous barrow was constructed over the old barrow with the new burial in it. This new barrow was 53 meters in diameter and would have required stripping vast stretches of heath. It represents an enormous investment of time and manpower (Fokkens/Jansen 2004, 133–5).

C27 Oss-Zevenbergen

Oss-Zevenbergen is a barrow landscape located about 500 m to the east of Oss-Vorstengraf where the Chieftain's grave of Oss was excavated (Fig. 5.13). This barrow landscape consisted, among other things, of two enormous Early Iron Age mounds (>30 m in diam.). Excavation revealed that both covered exceptional deposits, though of a different kind than the 'traditional' chieftains' graves. These two mounds, Mound 3 and Mound 7, and the deposits they contained are discussed here. The cemetery as a whole is discussed further in Section 5.6.1.3. The first excavations to take place at Oss-Zevenbergen were conducted in 1964/'65. The barrows under discussion in this section, however, were not excavated until quite recently. Archol BV and archeologists from Leiden University excavated Mound 3 in 2004. Mound 7 was excavated in 2007 as part of the *Ancestral Mounds* project of Leiden University. I was involved in the analysis and publication of the latter excavation both as a student assistant, research assistant and during my PhD-research. It has been analyzed in a manner very similar as the methodology used in this dissertation. As the finds and the manner in which we interpreted them are described in detail elsewhere (Fontijn *et al.* 2013a), only the conclusions are summarized here.

C27.1 Mound 3

This barrow is unusual not only because of its very large size and find complex, but also because of its location within the Zevenbergen barrow landscape. While the other barrows are positioned more or less in a straight line, this mound is off to the side on the opposite side of a post row that seems to divide this landscape (Fig. 515). This is discussed further in Section 5.6.1.3.

C27.1.1 Find circumstances

Archol BV and archeologists of Leiden University excavated Mound 3 in 2004. It was a large barrow, measuring 30 m in diameter and between 60 and 80 cm in height at the time of excavation. It originally would have been higher. Excavation revealed that this mound was built in a single phase with heather sods and that the foot of the mound was marked by a widely spaced post circle. A most unusual complex was found underneath it, which as discussed below, has been interpreted as an extreme *pars pro toto* burial deposition (Fokkens *et al.* 2009, 88–103). In the center lay a charred oak plank, at least 2.5 m long, 80 cm wide and 2 cm thick, with some other fragments (Fig. C27.1). It was cut from a massive tree that would have had to be at least 180 years old (Fokkens *et al.* 2009, 91). Around this plank lay four fragments of bronze and iron objects. The careful manner of excavation means that nothing could have been missed. This plank and these fragments are all that was deposited here.

C27.1.2 The material remains

Human remains Only a single piece of cremated bone was found in this barrow, which has been identified as a fragment of human long bone (Fokkens *et al.* 2009, 93).

Weaponry A fragment of bronze (*OZ.M3.*2) with a plastic decoration has been interpreted as a sword fragment due to the cutting edges present on both side. It appears to be from the transition from hilt to blade, but its decoration is completely without parallel. This is a raised semi-circle on both sides. The broken edges are patinated and therefore were identifiable as ancient breaks (*cf.* Fokkens *et al.* 2009, 94).



Fig. C27.1The finds from Oss-Zevenbergen M.3 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix OZ.M3. Figure by R.J. Looman ©RMO.

Oss-Zevenbergen Mound 3 **Noord-Brabant, the Netherlands**					**Data quality:** excellent	
Method of recovery: excavation (excellent) **Year of discovery:** 2004 **Date:** Ha C2–LTA **Current location:** National Museum of Antiquities, Leiden		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Excavation find no.	RMO inv. no.
	Human remains					
OZ.M3.1	Human cremation, single piece	Indet	Indet	++	-	-
	Weaponry					
OZ.M3.2	Bronze sword fragment, plastic decoration	--/--	--/++	+	7	k 2010/9.7byzm
	Personal appearance					
OZ.M3.3	Iron pin, fragment	--/--	--/+-	--	6	k 2010/9.8byzm
	Other					
OZ.M3.4	Iron pin-like object	--/--	--/+-	--	8	k 2010/9.122byzm
OZ.M3.5	Bronze fragment	--/--	--/+-	++	9	k 2010/9.9mbr
References: Fokkens *et al.* 2009.						

Tab. C27.1 Inventory and numbering information Oss-Zevenbergen M.3.

Personal appearance An iron fragment (*OZ.M3.3*) appears to be an iron pin of some kind.

Other Two fragments from as yet unidentified objects were also found. They are an iron pin-like object (*OZ. M3.4*), and a burned, unrecognizable piece of bronze (*OZ.M3.5*).

C27.1.3 Dating

Typochronologies cannot help date this burial as the object fragments cannot be identified as specific types. Luckily two samples taken from the oak plank in the mound center were ^{14}C-dated (Fig. C27.2). One of these samples was taken at the heartwood side of the plank and the other at the bark side. C. Vermeeren sampled roughly ten years at each side and estimated that there were ca. 130 (± 20) year rings between the samples (Van Wijk *et al.* 2009, 102). The bark side sample gave a date of 2460 ± 40 BP (GrA-27852) and the heartwood side sample delivered a date of 2555 ± 40 BP (GrA-27851). These were calibrated using the Gap function (which allows one to enter the number of years between two samples), which yielded a calibration of 675–604 cal BC (52.2%), 561–529 (13.7%) or 522–416 cal BC (29.5%) for the felling date of the tree from which the plank was cut (Fig. 3.4). Mound 3 most likely dates to one of these timespans (Fig. 3.5), and while this cannot be narrowed down further, it does indicate that this was likely the last of three monumental barrows erected at Oss.

C27.1.4 Actions taken and reconstructing the (burial) ritual

This mound covered an unusual find complex that has been interpreted as an extreme *pars pro toto* burial. A

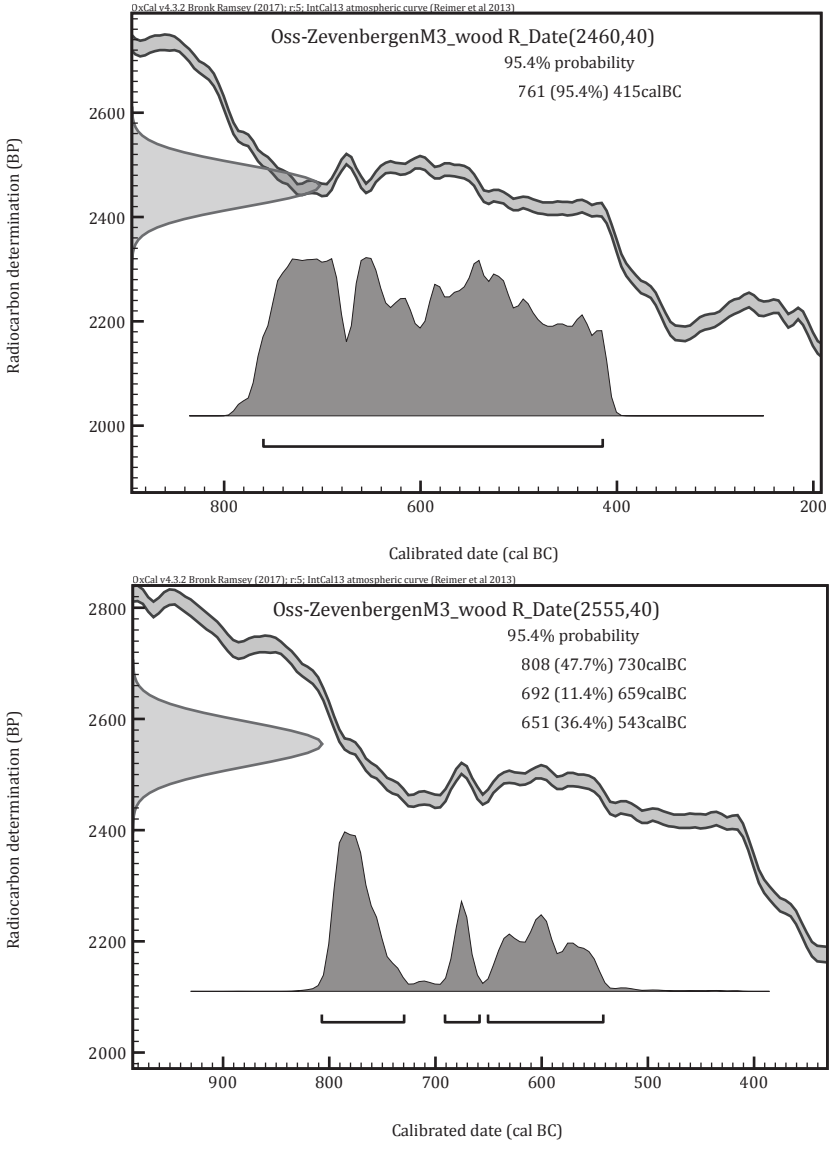


Fig. C27.2 The calibrated ^{14}C-dates (with OxCal v4.3.2 at the 2σ range) of samples of wood from Oss-Zevenbergen M.3.

single cremation fragment, together with a few (burned) object fragments and a plank cut from a monumental oak, apparently warranted erecting one of the largest sod-built barrows of the Netherlands. It is unknown whether an individual was cremated specifically to have only one fragment of their remains deposited under this barrow, or whether this fragment was kept apart following a different cremation ritual (see also Section 7.2.1.8), to eventually end up deposited here. What can be determined is that this oak plank was cut from a massive tree (with a trunk at least 2 m in diam.; Van Wijk *et al.* 2009, 93). It then was exposed deliberately to fire. The size of the plank indicates that this fire must have been substantial. We know at least one bronze object was exposed to fire until it melted, and a bronze sword (or razor?) was broken deliberately. The charred plank was placed on the old surface, and the melted and broken bronze fragments, an iron pin and another objects were laid around it. A single fragment of human cremation was placed on the old surface as well. The whole complex was covered with sods and a barrow erected.

The pollen spectra from the sods used to build this barrow differ from the spectra taken from underneath the barrow, suggesting they were cut some distance from the mound (Van Wijk *et al.* 2009, 101). A core of horizontally stacked sods, with diagonally placed sods against them created the desired slope in the barrow profile (*cf.* Van Wijk *et al.* 2009, fig. 6.19). The very top of this barrow was missing at the time of excavation. It is estimated that at least 30 to 50 cm is missing, and it has been suggested



Fig. C27.3 A selection of the finds from Mound 7 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix OZ.M7. Photographs by Restauratieatelier Restaura, Haelen.

that the mound was originally 1 m high. This barrow was marked with a post circle, which is an unusual feature for an Early/Middle Iron Age burial mound.

C27.2 Mound 7

This barrow is the largest one of this barrow group and is located on a barrow line (Fig. 5.15).

C27.2.1 Find circumstances

Mound 7 was the largest barrow in the Zevenbergen barrow group, over 36 m in diameter. It was excavated by mechanical digger and by hand in 2007, with two quadrants and part of the mound center excavated in horizontal layers. Sods, when recognizable, were documented. The discovery of a complex and extraordinary find complex at the center of this barrow required a specific excavation strategy. Cremation remains lay interred in a ceramic urn next to a massive spread of charcoal and tiny bronze objects, over 5 m long and 2 m wide (Figs. C27.3 and C27.4). The whole complex of charcoal and finds was lifted professionally in a block and excavated in the restoration lab of Restaura, Haelen. The assemblage soon was revealed to have been lying on the ablated top of a natural dune that the Early Iron Age mourners opportunistically had used to erect a massive barrow (Fontijn *et al.* 2013a).

C27.2.2 The material remains

Human remains The cremated remains of a man had been interred in the Early Iron Age *Schräghals*-urn. Examination revealed that they were the remains of a man who was between 23 and 40 years old when he died. Some cremation fragments were found among the charcoal spread. These have the same degree of burning as the cremation remains deposited in the urn, and do not contain 'double' elements. They therefore could have been from the same individual, but even if this is true, a fair portion of the remains is absent (Smits 2013). This indicates a portion of the cremation remains was removed from the deposit, prior to the construction of the barrow.

Pottery The urn used in this grave is an Early Iron Age *Schräghals*-pot (for more detail, see Fontijn *et al.* 2013c).

Horse-gear Some unusual bronzes lay among the charcoal spread. Several bronze rings and ring fragments were found, with both round and square cross-sections. Only

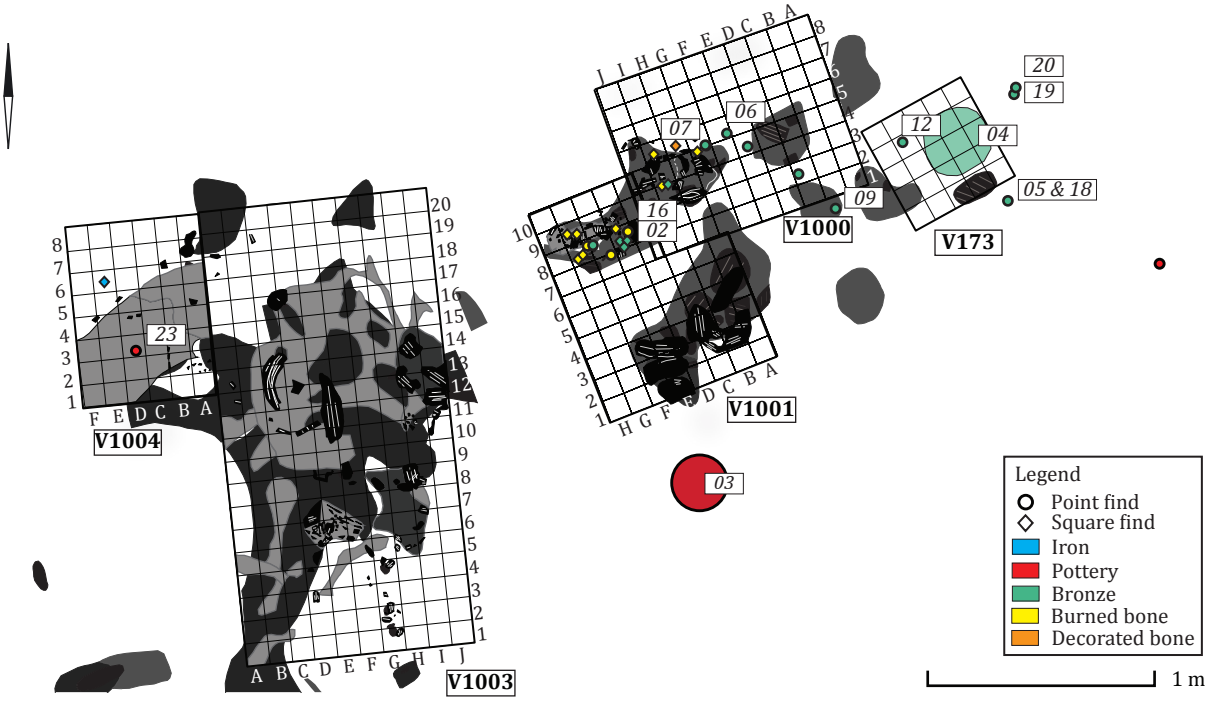


Fig. C27.4 An overview of the charcoal and artifacts that make up the central find assemblage of Oss-Zevenbergen M.7 (note that only the horizontal relations between artifacts are portrayed, not vertical). The charcoal distribution depicted is a compilation of various excavation levels and therefore represents the maximum distribution. Point finds were lifted by the excavators prior to the Restaura block liftings. Square finds were lifted by Restaura in their lab and recorded per square. Numbers preceded by V (V1000 for example) refer to the excavation block find numbers, the others are the numbers used in this research for finds. Figure after Van der Vaart et al. 2013, fig. 5.2.

Oss-Zevenbergen Mound 7 **Noord-Brabant, the Netherlands**					**Data quality:** excellent	
Method of recovery: excavation (excellent) **Year of discovery:** 2007 **Date:** Ha C1–2 **Current location:** National Museum of Antiquities, Leiden		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Excavation find no.	 RMO inv. no.
	Human remains					
OZ.M7.01	Cremation remains, found in *OZ.M7.03*	Indet	Indet	++	-	-
OZ.M7.02	Cremation remains, point finds	Indet	Indet	++	V177; V187–8; V259; V349–354	k 2010/9.177; 2010/9.187–8; k 2010/9.259; k 2010/9.349–354
	Pottery					
OZ.M7.03	Schräghals-urn, contained OZ.M7.01	--/--	--/--	--	V151	k 2010/9.151
	Horse-gear					
OZ.M7.04	Bronze studs and fragments, in concentration, 893x	--/--	--/--	++	V173	k 2010/9.173
OZ.M7.05	Bronze studs and stud fragments, 32x	--/--	--/--	++	V165	k 2010/9.165
OZ.M7.06	Bronze studs and stud fragments, 7x	--/--	--/--	++	V175	k 2010/9.175
OZ.M7.07	Bronze studs and stud fragments, 55x	--/--	--/--	++	V176	k 2010/9.176
OZ.M7.08	Bronze studs and stud fragments, 13x	--/--	--/--	++	V177	k 2010/9.177
OZ.M7.09	Bronze studs and stud fragments, 1x	--/--	--/--	++	V211	k 2010/9.211
OZ.M7.10	Bronze studs and stud fragments, 66x	--/--	--/--	++	V217	k 2010/9.217
OZ.M7.11	Bronze studs and stud fragments, 1x	--/--	--/--	++	V218	k 2010/9.218
OZ.M7.12	Bronze studs and stud fragments, 1x	--/--	--/--	++	V223	k 2010/9.223
OZ.M7.13	Bronze studs and stud fragments, 7x	--/--	--/--	++	V1000	k 2010/9.1000
OZ.M7.14	Bronze studs and stud fragments, 4x	--/--	--/--	++	V1001	k 2010/9.1001
OZ.M7.15	Bronze ring fragment, square cross-section, 2x	--/--	--/--	++	V1000	k 2010/9.1000
OZ.M7.16	Bronze ring with square cross-section, fragment	--/--	++/++	++	V177	k 2010/9.177
OZ.M7.17	Bronze ring fragments with square cross-section	--/--	++/++	++	V1001 1-3	k 2010/9.1001
OZ.M7.18	Bronze ring with round cross-section, gilt?	--/--	--/--	+	V165	k 2010/9.165
OZ.M7.19	Bronze ring with round cross-section	--/--	--/--	+	V218	k 2010/9.218
OZ.M7.20	Bronze hemispherical sheet-knob	--/--	--/--	+	V217	k 2010/9.217
	Yoke and wagon components					
OZ.M7.21	Wooden knobs with bronze studs	--/--	--/--	++	V173A; V176	k 2010/9.176; 173A
	Other					
OZ.M7.22	Decorated bone, fragment	--/--	--/+-	++	V1000	k 2010/9.1000
OZ.M7.23	Iron fragment	--/--	--/+-	+	V245	k 2010/9.245
References: Fontijn *et al.* 2013a.						

Tab. C27.2 Inventory and numbering information Oss-Zevenbergen M.7.

two of these rings are complete. Some of the fragments had been broken intentionally, with only certain fragments being deposited among the charcoal, while others were removed. The most unusual find was a concentration of over a thousand tiny bronze studs, with a few spread out among the charcoal. These studs were made from sheet bronze and have hollow hemispherical heads and two legs (Fontijn/Van der Vaart 2013). The shape of the studs (with both folded and straight legs) and parallels from Germany indicate that these studs originally were affixed to a combination of wood and leather. Detailed study of X-rays taken of this concentration determined that the organic components had degraded in such a way that the studs were left in the pattern they had formed in the organic material. A geometric pattern was recognizable. It was determined that this concentration of studs was most likely the remains of leather and wooden horse-gear and yoke components that had been decorated with the bronze studs and had incorporated the bronze rings (Fontijn/Van der Vaart 2013). Note that the majority of the studs are listed as horse-gear above as it is now impossible to distinguish which studs decorated horse-

gear and which yoke components, though it is argued that both are represented (Fontijn/Van der Vaart 2013). A range of analytical techniques demonstrated that the bronze studs had been tinned intentionally, giving them a silvery appearance (Nienhuis *et al.* 2013).

Yoke and wagon components As stated above it is believed that the dismantled stud-decorated panels of a yoke were interred in this burial mound. Two wooden knobs with bronze studs were part of this yoke (see Fontijn/Van der Vaart 2013, fig. 7.30).

Other The massive spread of charcoal was made up of both substantial beams and a thin layer of charcoal dust spread out over the area. No pattern to the charcoal remains could be discerned. Instead it appeared that the charcoal beams had been moved about. Analysis showed the charcoal to be primarily oak, but there was also some ash and a single fragment of willow. These species are extremely suitable for a funeral pyre (Bakels *et al.* 2013). A pair of bone fragments was found with concentric circles carved into their surface. The fragments join, and are clearly from a larger object (Fontijn *et al.* 2013c). An iron object was also found among the charcoal remains, though unfortunately it was too small and corroded to reconstruct its function (Fontijn *et al.* 2013c).

C27.2.3 Dating

Several samples from Oss-Zevenbergen Mound 7 were ^{14}C-dated (see Fontijn *et al.* 2013d). These were a fragment of charcoal and two charcoal twigs to minimize the margin of error as well as a fragment of cremation from the urn (Fontijn *et al.* 2013d, 115–6). These yielded the following dates. Charcoal twig V189 (V = find no.) was dated 2550 ± 35 BP (GrA-41260) and charcoal twig V190 was dated 2445 ± 35 BP (GrA-41261). Charcoal fragment V209 gave a ^{14}C-date of 2490 ± 35 BP (GrA-41264), and the cremation fragment V151 gave a ^{14}C-date of 2520 ± 35 BP. Figure C27.5 gives the calibrated dates. Fontijn *et al.* (2013d, 116; fig. 4.36) argue that the oldest tail of the dating of V189 and the youngest tail of the dating of V190 can be discarded as all the charcoal

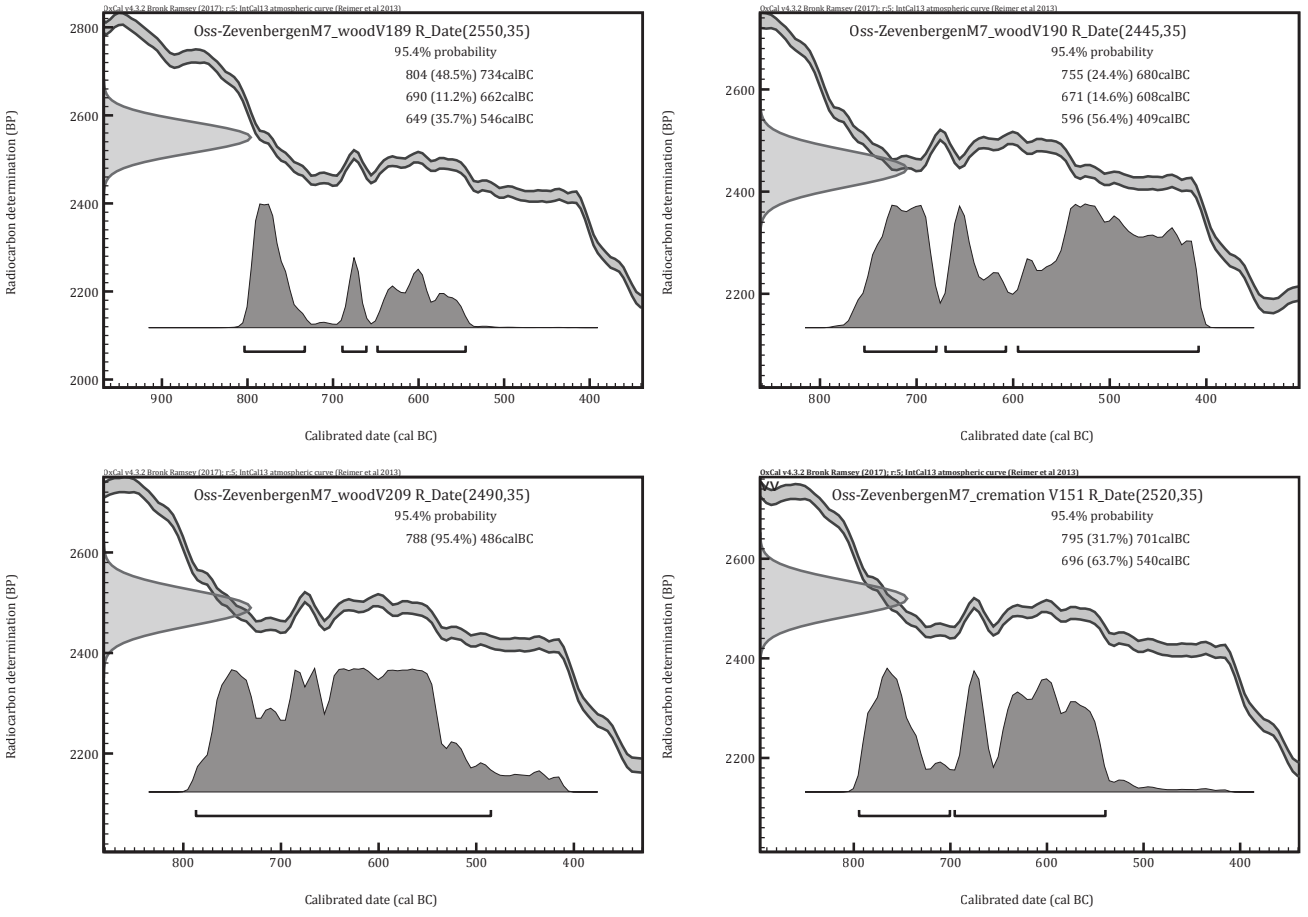


Fig. C27.5 The calibrated ^{14}C-dates (with OxCal v4.3.2 at the 2σ range) of charcoal and cremation remains samples from Oss-Zevenbergen M.7.

relates to the same event and that this gives a date between ca. 780 and 520 BC. This fits with the date from the cremation remain. It was argued that this supported a dating of the central find assemblage to the Hallstatt C period, which confirmed the typochronological dating of the associated bronzes and urn (Fontijn *et al.* 2013cd; Fontijn/Van der Vaart 2013; Fig. 3.5).

C27.2.4 Actions taken and reconstructing the (burial) ritual

The exceptionally detailed method of excavation yielded very detailed insights into how Mound 7 was created. Taken together with the various specialist analyses conducted, we can say how a young man was cremated here, on top of an ablated dune that later would be incorporated into a barrow.

The natural dune may have appeared to be an ancestral barrow to the people of the time, given its round appearance and location on a barrow line. After ablating the top of it, they constructed a pyre from oak, ash and possibly willow. These wood species all grew in the immediate vicinity (Bakels *et al.* 2013). The body of a man was placed on this pyre. At the edge of the pyre, away from where the main concentration of heat would be, the dismantled leather and some wooden components of a yoke and horse-gear were placed. These elements were decorated richly with over a thousand tiny bronze studs and several bronze rings. It is likely that other objects, including something that was decorated with bone with carved circles, were placed near the pyre are well. The pyre was lit and the man's remains were cremated.

It seems that for some reason the fire was extinguished prior to the complete conflagration of the wooden pyre, though the cremation itself was complete. It is possible that due to the high location in the landscape, on top of an ablated dune, that a wind picked up and extinguished the fire. The cremated remains were collected from among the pyre remains, and some were placed in a ceramic urn. Some pieces were (probably intentionally) left among the pyre remains deliberately, while a portion of the collected remains were kept out of the funerary deposit. While searching through the pyre remains, the bronze-studded horse-gear and yoke components were shoved to one side and left lying there. Some bronze rings were broken intentionally, and only a part placed back among the burned-out pyre. In short, a man's pyre, pyre goods and cremated remains were moved about and searched through. Several elements were dismantled, manipulated and broken, some things were interred and others were removed. In essence, this man's remains and belongings were *transformed through destruction*. The urn was then buried near the burned-out pyre, and the funeral deposit so created was covered with sods, and a mound erected. By opportunistically using the natural dune upon which they had cremated this man, a very large barrow was created (Fontijn *et al.* 2013a).

C28 Rhenen-Koerheuvel

The burial from Rhenen (Fig. C28.1) is one of the more recently excavated rich Hallstatt C burials in the Low Countries and is known as the Chieftain's burial of Rhenen even though it is 'lacking' a sword (see Section 2.2.1.1). An unfortunate confluence of events resulted in the incomplete recovery of this complex. The finds from this burial currently are located in Museum Het Rondeel in Rhenen. Curator B. Huiskes was of great help and provided me with access to the artifacts. They all were examined and photographed by myself in 2011, revealing some new characteristics and objects. However, several questions remained. It therefore was decided to reexamine these artifacts and take new photographs of higher quality (two small fragments (*RK.04* and *RK.05*) were only examined in 2011 as these were no longer available).

C28.1 Find circumstances

In 1935 work started on the building of a water tower and hotel on the northwest edge of Rhenen on the Koerheuvel. The toponym Koerheuvel derives from the Middle Dutch words *coer* or *coere*, meaning vantage point or watch point (Van Iterson 1960, 45, as cited by Van Heeringen 1998, 71). At ca. 51 mNAP the Koerheuvel is one of the highest points on the Utrechtse Heuvelrug and a very striking location (Van Heeringen 1998, 71–3). It is likely that the Koerheuvel was leveled to prepare the site for building. A newspaper clipping from 1938 reports charcoal layers, a bronze ring, bronze fragments and burned bone being observed during the construction of the water tower. Further investigation in June of 1938 uncovered remains of one or more Harpstedt-urns (Van Heeringen 1998, 69). These finds gradually were forgotten until new housing development plans resulted in a rescue excavation in 1990 which uncovered the remains of an urnfield. Attempts to locate the finds from the 1930s have so far remained unsuccessful (Huiskes 2011, pers. comm.; Van Heeringen 1998, 73).

In 1993 a chestnut tree was moved on the Koerheuvel. J. Mom, an accomplished local amateur archeologist, was present during the big move. He reports that A. van Middelkoop, a teacher at a nearby school, and one of his pupils found fragments of thin bronze sheet and part of an axe in the cavity left by the uprooted tree. After viewing Middelkoop's discoveries, Mom returned to the find spot and collected more bronze fragments using his metal detector. In his notes of the event he states that the digging machine struck the bucket and tore through it repeatedly, while digging around the chestnut tree. In his opinion the axe was in the vessel when broken and moved by the digger (see below). He also found bucket rim fragments on the same level, but a meter removed from the rest of the vessel. Mom (1993) determined that the top of the bucket had been damaged previously, likely during the construction of the water tower in the 1930s. A. van Hagen reported the find to the provincial archeologist S. van Dockum of the State Service for Archaeological Investigations (ROB). Recognizing the find as a rich Early Iron Age burial, she had an excavation performed under extreme conditions in November 1993 (Van Heeringen 1998, 77).

Trenches were dug in three directions from where the metal fragments had been uncovered. Areas that would be disturbed by the building were examined as well, but this yielded little new information. The work was hindered by World War II disturbances on site. There was a sub-recent disturbance a meter down from the surface level (52.40 mNAP) above the pit where the bronze finds were uncovered. This pit had a roughly flat base at 50.74 mNAP. It was 70 cm wide and preserved to a level of 60 cm. The bottom of the pit was filled with reddish-brown sand. A black spot indicated the



Fig. C28.1 The finds from Rhenen-Koerheuvel (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix RK. Photographs by J. van Donkersgoed.



Fig. C28.1 (continued).

original location of the metal finds. According to Van Heeringen (1998, 74–5) this indicates that the deposition was done in a pit dug to at least 60 cm deep from the Early Iron Age ground level. In this pit the fragmented remains of the bronze bucket, some bronze horse-gear fittings and parts of a wagon (described in detail below) were found. Damage to the bucket indicates that the pit had been disturbed, probably in the 1930s. Restoration work revealed that the greater part of the side and base of the bucket was missing (Van Heeringen 1998, 75). It is extremely likely that the content of the vessel was disturbed to such a degree that the artifact complex as we know it today is incomplete, as also evidenced by the recently broken but partially recovered bronze axe. Van Heeringen (1998, 75) argues that the finds mentioned in the newspaper article should be counted as part of this find, which seems probable.

It was reported that no circular ditch was found around the deposition spot (Van Heeringen 1998, 75). It cannot be stated that there never was one, however, considering the varying depths of sub-recent disturbances. Ditches also were not observed at the other cremation graves in the Koerheuvel urnfield. Cremation burials without structures are not uncommon. However, cemeteries without circular ditches are unusual (Van Heeringen 1998, 75). It is also very possible that any structures present were not recognized during the extreme weather conditions. The somewhat confusing manner in which this find was discovered and the emergency excavation conducted under extreme conditions make it probable that there was much more to this burial than we can now know. The same is also true for the artifacts belonging to this Chieftain's burial.

Van Heeringen (1998, 77) lists the following artifacts as being found in 1993: upper part of bronze socketed axe, bronze hemispherical ring-footed knob, bronze spherical fitting, two iron buckles, cemented (fused) objects with fragments of three iron linchpins, small iron plate, fragments of iron bands, two bronze sheet fragments and loose rings and possibly fragments of nave fittings. However, examination at the Museum in Rhenen revealed that there were several other objects among the material from the Koerheuvel. Some of these appear to be relatively modern and do not belong to the Early Iron Age burial. A set of bronze tweezers, however, likely does. I stress again that the manner in which the Chieftain's burial of Rhenen was disturbed and discovered makes it almost certain that the complex is incomplete. For the same reason it is also possible that some objects previously assumed to belong to the complex might not. This is discussed further below.

C28.2 The material remains

Human remains The newspaper clipping from 1938 reports the presence of burned bone during the construction

















of the water tower. Van Heeringen (1998, 75) argues that this was part of the Chieftain's grave discovered later on. It seems likely that these might be the disturbed remains of the Chieftain of Rhenen-Koerheuvel. Van Heeringen (1998, 75) also suggests that the absence of cremation remains could be the result of them having been wrapped in a sturdy cloth (?) covering that was pulled apart in 1938 some distance from the pit. This is a plausible scenario given the preservation of textile on the inside of the situla.

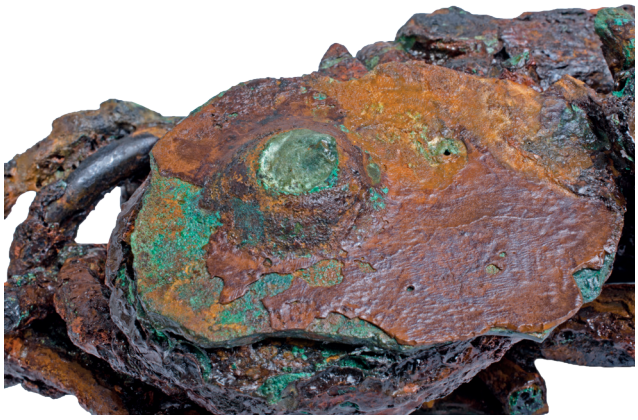
Bronze vessel This bronze bucket likely originated in the (East?) Alpine region (Fokkens/Jansen 2004, 57; Roymans 1991, 37–9). Soil pressure and corrosion had caused the bucket to disintegrate into ca. 500 fragments. The upper part of the bucket had survived best while the bottom was almost completely disintegrated. The fragments were refitted and the missing pieces reconstructed in the restoration atelier of the ROB (Van Heeringen 1998, 77). The walls of the bucket are made of two sheets of bronze plate riveted together. The bottom is a separate bronze sheet with a raised edge riveted onto the base of the walls. The domed sides of the rivets are on the inside, with the tops on the outside carefully hammered flat. The shoulder of the bucket has two ribs and the rim has been hammered outwards around a metal core (ca. 6 mm thick). The vessel is ca. 45 cm high. The strap-shaped handles are located over the seams where the two sheets that make up the walls meet. They are made from decorated bronze plate (Fig. C28.2). The attachment plates on the outside of the bucket have an embossed circumpunct flanked by two dots. The handles themselves have three raised ribs, and nine embossed dots are visible on the handle-attachment on the inside of the rim of the bucket (on one side this is incomplete and there are only seven dots). The rings hanging from the strap-handles have a square cross-section and a thickening. They show wear that matches the width of the strap-handles, which are worn at the top where the handle goes over the rim of the bucket. Taken together the wear to the strap-handles and rings indicates that the bucket was suspended by the rings (Fig. C28.2). All the rivets that attach the strap-handle to the bucket have square re-enforcement plates. Van Heeringen (1998, 78) notes that the cast bronze rings must have been fitted over the handles before the attachment lips were hammered out. There are several repairs visible on the bucket, the largest being at the base of the wall, to the right of the seam (Fig. C28.2, bottom four). A bronze plate has been riveted on, with eight rivets discernible. The rivets appear to have roughly square heads which are very distinct from the production rivets. They are domed on the inside and flattened on the outside. There is a repair plate riveted on with four rivets to the left of the seam on the shoulder of the bucket. The rivets on the two repairs do not resemble each other, indicating two separate incidents. On the other side, a repair plate is riveted on with four rivets at the base of the bucket, to the right of the seam. One of the rivet heads appears to be square. There is also a single rivet on the shoulder of the bucket to the left of the seam. A bronze plate is riveted to the inside of the rim with four rivets. The rivets are arranged symmetrically and hammered flat on the outside of the bucket.

Fig. C28.2 (left) A strap-shaped handle on the bronze vessel (RK.02) from diffent angles (top), wear on the handles (second row) and repairs on the bucket (bottom four). Photographs are different scales and by J. van Donkersgoed.

Fig. C28.3 (below) Possible wear on the ring-footed rein-knob (RK.03; left) and the probable phalera on the linchpin concretion (RK.05b; right). Photographs by J. van Donkersgoed.

Horse-gear As already mentioned, the inventory of grave goods is probably incomplete due to recent disturbances and the manner of excavation. This likely is reflected in the horse-gear and wagon components. The only loose object that can be identified definitively as horse-gear is a small bronze cast hemispherical ring-footed rein-knob (*RK.03*).





It is ca. 1.7 by 1.7 cm wide and ca. 1.5 cm high. Two of the four holes (located across from each other) appear larger than the others. This could be wear from the leather strap running through them (Fig. C28.3). A fragment of bronze plate (*RK.05b*) is likely a *phalera* (Fig. C28.3, right). This object is still affixed to a mass of linchpins, making a definitive interpretation impossible. It originally was round with a dome in the middle. On the X-ray depicted in Van Heeringen (1998, 81) it appears to have a protruding base in the center for attachment to a leather strap. A bronze protrusion of some kind is visible on its back, amidst the various iron rings. Another possible item of horse-gear is a fragment of a bronze spherical fitting (*RK.07*). It could be some kind of decoration from a horse harness, a hemispherical sheet-knob for example (though it could also be part of a pin head, but this is deemed less likely due to the thickness of the bronze).

Yoke and wagon components The wagon parts consist of three iron linchpins. The presence of only three, rather than the usual four, is another indication that the disturbances on site and haphazard retrieval of the finds very likely resulted in an incomplete find assemblage. These linchpins originally were flattened iron pins (9 mm thick) which forked at the top to form two large loops and then loop at right angles to the large loops and end at the fork (Fig. C28.4). The large loops have a flattened cross-section; the smaller loops are round in cross-section. Loose rings would have dangled from the smaller loops, with three rings attached to each loose ring (Van Heeringen 1998, 80–1). The linchpins fit into the type described by Pare (1992, 92) as Bohemian linchpins, a well-defined group. This type of linchpin does not seem to have been used in combination with axle-caps (Pare 1992, 92). Two linchpins are corroded into one of the masses of cemented objects, and the third is in the other concretion. The loose rings, when still present are all in their original form, and do not appear to have been bent or broken. No deliberate bending of the linchpins is discernable, though it is noteworthy that all three are broken at the point where the loops connect to the stem. They could have been broken deliberately as all three are broken at the thickest and strongest part of the linchpin and their stems are not present in these concretions. The stems may then have been kept out of the bucket, or they may have been deposited but just not recovered. There are also several more rings present, both bronze and iron. Based on their diameters it is unlikely that these belong to the linchpins. There are five rings in the concretions, a loose fragment of another (*RK.04*) and small fragments of two more. The rings all have a round cross-section and are likely from either the horse tack or the wagon.

The burial from Rhenen also contains two corroded masses made up of multiple metal bands corroded onto each other. The bands appear to be iron, but they are covered in copper corrosion. It is unclear what caused this. One mass is made up of seven superimposed bands, three of which appear connected as though they are from a single piece of bronze rather than loose bands (*RK.08*; Fig. C28.5, left). The individual bands are roughly 1.2 cm wide and have a concave cross-section. There are gaps between some of the different bands. They overlap in different directions, with the concave side up, but the curve of the bands down. They, however, originally may have been solid, with the gaps appearing post-depositionally because of pressure exerted on the objects. This is supported by the observation that some of the bands still appear to be connected. The other mass has six similar superimposed iron/bronze bands (*RK.09*). Several (likely three) of these bands are affixed to one of the linchpin masses (*RK.06c*). On the smaller of these band concentrations a rivet appears to connect two bands on top of each other, complicating interpretation even further (Fig. C28.5, right). According to Van Heeringen (1998) the bands in concretions *RK.08* and *RK.09* are the paltry remains of a type Breitenbonn nave. This type is found along the Danube in southern Germany and Bohemia (Van Heeringen 1998, 84–5). In my MA-thesis I questioned this conclusion (Van der Vaart 2011). Renewed consideration of these objects, after more experience with similar find material, has led me to concur with Van Heeringen, especially considering that Bohemian linchpins have been found only with Breitenbonn and Erkenbrechtsweiler nave fittings (Pare 1992, 92). The

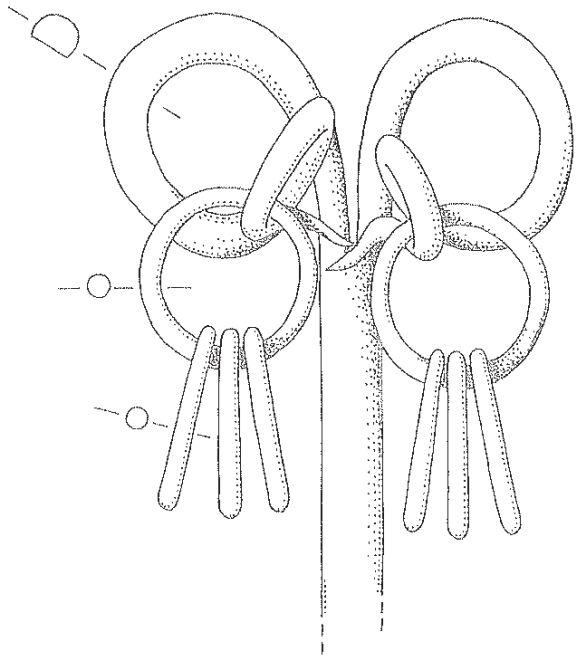


Fig. C28.4 Reconstruction of a linchpin. Figure after van Heeringen 1998, fig. 13.

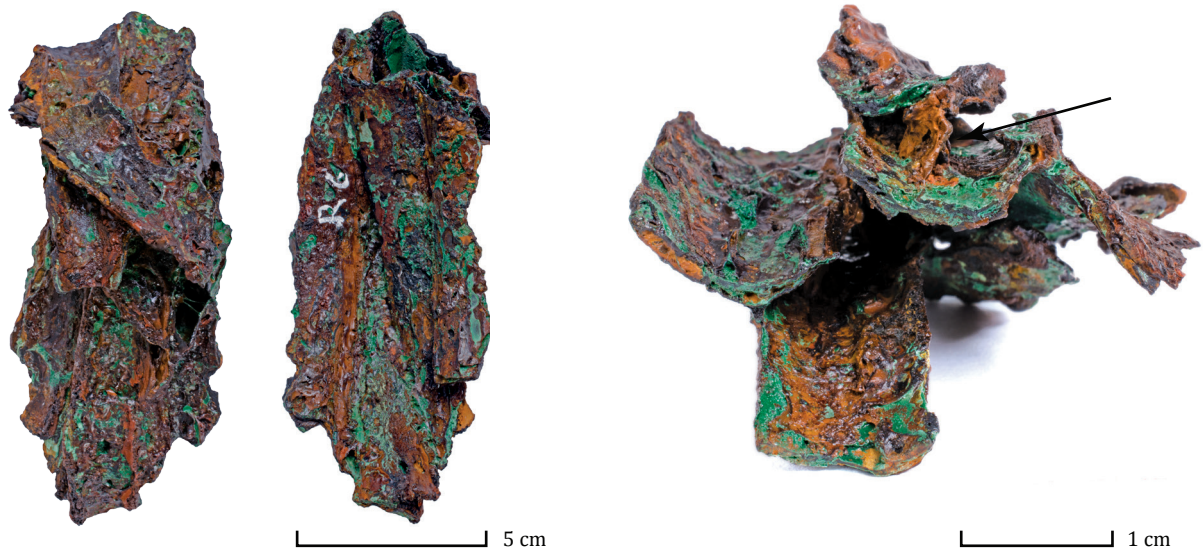


Fig. C28.5 The bronze bands of a nave (RK.08; left) and a rivet(?) on the nave bands (RK.09; right). Photographs by J. van Donkersgoed.



Fig. C28.6 The recent break on the axe (RK.10). Photograph by J. van Donkersgoed.

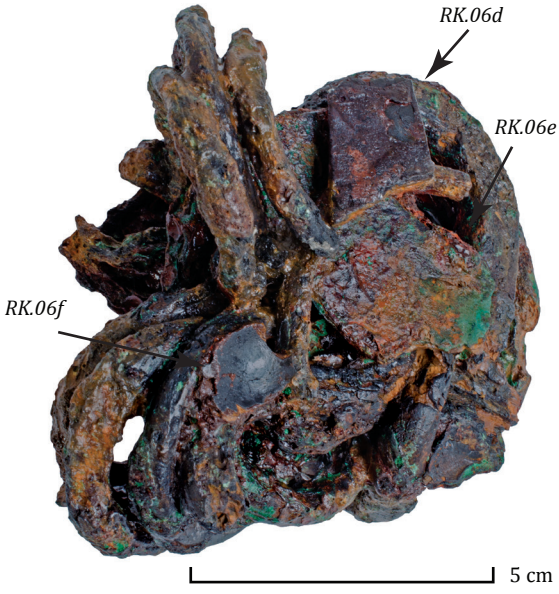


Fig. C28.7 The possible knife fragment (RK.06d), possible winged chape fragment (RK.06e) and impression of a spherical object (RK.06f) on a linchpin concretion (RK.06). Photograph by J. van Donkersgoed.

naves would have had to be removed from the wheels and made smaller to fit in the bronze vessel, which would have been quite a destructive process.

Tools The upper half of a bronze socketed axe (*RK.10*) is among the grave goods (Fig. C28.6). The casting seams are still visible. The axe opening is 33 mm wide and has a slight thickening and ridge. The socket is roughly square and the loop under the rim is quite small. The cutting edge is missing entirely and the axe body ends with a very sharp edge. Mom (1993) postulated that this axe was cut in half by the mechanical digger. However, the axe is not, for lack of a better word, squashed, and I therefore find it unlikely that the mechanical digger broke this axe. However, the break is not corroded and appears recent. The cause of this break remains unclear. According to J. Butler (in Van Heeringen 1998, 93–4) this is a plain Wesseling type axe and likely was made in the eastern part of the Netherlands

Rhenen-Koerheuvel **Utrecht, the Netherlands**					**Data quality:** medium	
Method of recovery: chance find followed by excavation (medium) **Year of discovery:** 1935;1993 **Date:** Ha C1–2 **Current location:** Het Rondeel, Rhenen		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Van der Vaart 2011	 Rondeel inv. no.
	Human remains					
*RK.01**	Cremation remains, lost	Indet	Indet	++	-	-
	Bronze vessel					
RK.02	Bronze bucket	++/++	--/--	--	R1	R1
	Horse-gear					
RK.03	Bronze hemispherical ring-footed rein-knob	+/--	--/--	--	R3	R3
RK.04	Bronze/iron ring fragment	--/--	--/+-	--	R8	R8
RK.05a	Ring fragments, 2x (corroded together with *RK.05b–d*)	--/--	--/-	--	R4e	R4
RK.05b	Bronze *phalera*, fragment (corroded together with *RK.06a, c–e*)	--/--	--/-	--	R4c	R4
RK.06a	Rings, 5x (corroded together with *RK.06b–f*)	--/--	--/-	--	R5d	R5
RK.07	Bronze spherical fragment (part of a sheet knob?)	--/--	--/-	-	R9	R9
	Yoke and wagon components					
RK.05cd	Iron linchpin, 2xs (incomplete; corroded together with *RK.05ab,e*)	--/--	+-/+	+	R4ab	R4
RK.06b	Iron linchpin (incomplete), five rings (corroded together with *RK.06a, c–f*)	--/--	+-/+	+	R5a	R5
RK.06c	Iron/bronze bands (corroded together with *RK.06ab, d– f*)	--/--	+-/+	+	R5e	R5
RK.08	Superimposed iron/bronze bands cemented together (larger), possibly from the nave	--/--	+-/+	+	R6	R6
RK.09	Superimposed iron/bronze bands cemented together (smaller), possibly from the nave	--/--	+-/+	+	R7	R7
	Tools					
RK.10	Socketed bronze axe (top half)	--/--	--/-	--	R2	R2
RK.06d	Iron knife fragment (corroded together with *RK.06a–c, ef*)	--/--	--/+-	--	R5b	R5
	Personal appearance					
RK.11	Bronze tweezers	--/--	++/--	+	R12	R12
	Other					
RK.05e	Bronze plate, fragment (corroded together with *RK.05a–d*)	--/--	+-/+-	--	R4d	R4
RK.06e	Bronze plate fragment (corroded together with *RK.06a–d, f*)	--/--	--/+-	--	R5c	R5
RK.06f	Impression of a spherical object (corroded together with *RK.06a–e*)	Indet	Indet	Indet	R5f	R5
References: Van Heeringen 1998.						

Tab. C28.1 Inventory and numbering information Rhenen-Koerheuvel.

or adjacent parts of western Germany. Butler argues that this axe was just an ordinary tool, despite the special circumstances in which it was deposited. In his opinion the axe is "too small, too plain, and, too common" to have been a battle-axe or prestige object (in Van Heeringen 1998, 94). However, we should not underestimate the importance and significance of the manner and location in which this axe was deposited (see also Section 7.2.3.3).

A small iron fragment roughly 1 by 2 cm (*RK.06d*) may be a fragment of a tool (Fig. C28.7). The cross-section of the fragment indicates that is likely is a fragment of a knife blade. It has a flat back and a possible cutting edge. It also has the curve one would expect on a knife. If the iron fragment is indeed part of a knife, then the grave from Rhenen would fit into the pattern of burials containing both a knife and an axe (see also Section 6.4.2).

Personal appearance A very interesting object discovered among the stray finds from this context are some small bronze tweezers (Fig. C28.8). Tiny ridges on the interior surface of the tweezers possibly served for gripping (similar to the ridges on modern tweezers). These tweezers had not been recognized as such prior to my MA-thesis research in 2011. Due to the problems with the recovery of this burial it cannot be proven that the tweezers belong to the Early Iron Age complex. This is unfortunately a

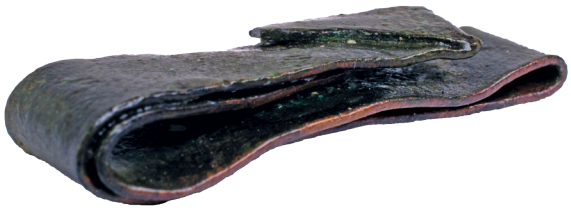


Fig. C28.8 The folded tweezers (RK.11). Photograph by J. van Donkersgoed.

problem encountered with several objects, but in this case it is almost certain that the tweezers do belong to the Chieftain's grave goods. Not only was it in a box full of fragments from the Chieftain's grave, but tweezers and other kinds of personal care paraphernalia are common in this kind of burial. Moreover, the intentional folding up of this object is a feature that fits. Accepting that these tweezers belong to the Chieftain's burial adds a new dimension to this burial: personal care items in addition to a bucket, horse-gear and wagon components.

Other There are bronze plate fragments on both of the linchpin masses. One of these is an incomplete bronze plate object (*RK.06e*) on one concretion that measures roughly 2 by 3 cm. It originally appears to have had a curved edge. At present the only interpretation I can offer of this fragment is that it could be from a winged chape. This remains a tentative suggestion and it is therefore not listed under weaponry. On the other concretion there is an indeterminate bronze plate fragment (*RK.05e*) that measures roughly 2 by 4 cm. It is unclear what this is from. Van Heeringen (1998, 80) is of the opinion that two iron buckles (one complete, one fragment) were part of the horse harness or that they were part of the deceased's clothing. If these buckles indeed are from the Chieftain's burial these would seem plausible assumptions. The iron of the buckles and the manner in which they have corroded, however, are different than the other iron objects and I have not found a single parallel of such a buckle from any contemporary context. This kind of buckle is, however, a common medieval type of object. It is my opinion that these buckles do not belong to the Early Iron Age burial, although once again the problems with the retrieval of the finds make it impossible to determine for certain.

C28.3 Dating

The linchpins and hub fittings are likely from a type 3 wagon which date to the whole Hallstatt C period (Pare 1992, 114; 161; Trachsel 2004, 504; 534). The ring-footed rein-knob (and probably the *phalera* as well) is an early type of horse-gear (Kossack 1954; Pare 1992, Ch.2; Trachsel 2004, 53; 525). The bronze vessel found in this burial is of the same type as the one found in Oss-Vorstengraf, and is of a type that predominantly occurs in Hallstatt C1, but also can date to the Hallstatt C2 (Prüssing 1991, 49–52). A date (later) in the Hallstatt C1 phase is therefore the most likely for this burial, though it could also date Hallstatt C2 (Fig. 3.5).

C28.4 Actions taken and reconstructing the (burial) ritual

The Chieftain's burial from Rhenen is likely incomplete because its discovery and excavation occurred under less than ideal circumstances. This makes reconstructing the burial ritual difficult. However, even though neither the complete content of the bucket nor the locations of all the objects within it can be reconstructed, certain steps in the burial ritual are still discernible.

A base fragment from the bucket corroded onto one of the iron concretions and rust spots on the inside of the base of the vessel suggest that the iron finds were located at the bottom of the bucket. The base fragment from the vessel corroded onto one of the iron concretions, indicates that the linchpins and the nave fragments were placed in the bucket first. The Bohemian linchpins and naves would have had to be removed from the wagon and wheels. The wooden wheels may have had to be broken to remove the naves, and it appears that both naves and linchpins subsequently were fragmented. If these were indeed the only wagon components interred and intended as a *pars pro toto* deposition of a wagon, then the removal of them from the wagon could have been a highly significant act. The presence of bridle decoration pieces indicates that bridles probably were interred, even though no horse-bits were recovered. It is also possible that the bridles deposited never contained bits. There are some faintly visible traces of textile present on some of these objects, indicating that they may have been wrapped in cloth prior to placement in the bucket.

An axe was interred in the bucket as well. A probable iron knife fragment indicates at least part of an iron knife likely was placed in the vessel. It remains unclear whether this knife was fragmented intentionally or deposited complete. The provenance of the tweezers is slightly uncertain, but assuming they belong to the Early Iron Age burial reveals another act from the burial ritual. The tweezers have been folded up into a tiny package. The top of the bucket was disturbed in the 1930s, during which burned bone was observed. It is likely that these are the cremation remains of the Chieftain of Rhenen. It follows from this that the cremation remains were located high up in the bucket, and were therefore probably one of the last things placed in the vessel (as was also the case with the Chieftain of Oss, see Section C26.4). Textile fragments were observed on the bucket rim, making it plausible that the cremation remains were wrapped in cloth.

C29 Someren-Kraayenstark

This find includes one of two iron swords found by Someren (Fig. C29.1). It is unknown where these finds currently reside, and the drawings published by Kam (1956) are the only depictions known.

C29.1 Find circumstances

In the 1930s indications for an urnfield on the border between the municipalities of Sterksel and Someren were noted. In 1939, Kupers and Van der Vorst, two workers from Someren, discovered the sherds of an urn that had been covered with a bowl used as a lid. The broken fragments of an iron sword were found roughly a meter below the urn. W. Kam purchased the sherds and iron fragments from another party. Kam later returned to the site and recovered several of the missing sherds, a bronze ring and more iron fragments, as well as cremated bone (Kam 1956, 13). According to Roymans (1991, 77) this burial was found in a barrow, though Kam makes no mention of this. The Archis

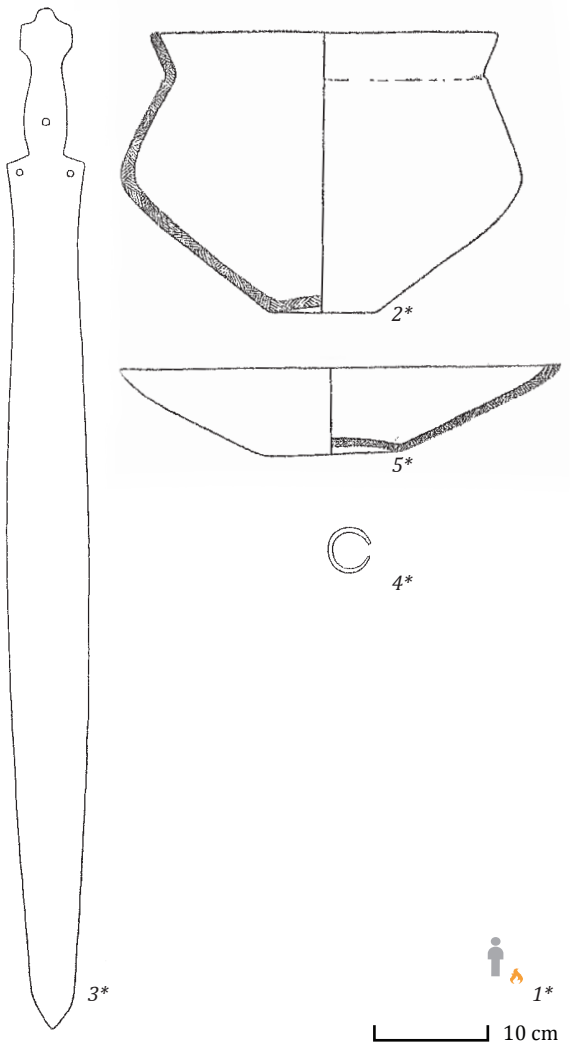


Fig. C29.1 The finds from Someren-Kraayenstark (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix SK. Figure after Kam 1956, fig. 1.

Someren-Kraayenstark **Noord-Brabant, the Netherlands**					**Data quality:** medium
Method of recovery: chance find (medium) **Year of discovery:** 1939 **Date:** Ha C1–2 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Human remains				
*SK.1**	Cremation remains, lost	Indet	Indet	++	-
	Pottery				
*SK.2**	Pot	--/--	--/-	-	-
*SK.5**	Bowl	--/--	--/-	-	-
	Weaponry				
*SK.3**	Iron sword (type Mindelheim)	--/--	++/--	+	-
	Other				
*SK.4**	Bronze ring	--/--	--/+-	-	-
References: Kam 1956, 13.					

Tab. C29.1 Inventory and numbering information Someren-Kraayenstark.

database likewise states that this sword burial was found in a very large barrow (Archis-no. 32790 + 32798).

C29.2 The material remains

The human remains Cremated bone was recovered but it appears to have since been lost.

Pottery The urn and bowl were recovered in fragments and are incomplete, probably due to plow damage. They are sand-tempered and polished.

Weaponry The Mindelheim sword was at least 90 cm long, and was bent prior to deposition (Figs. A2.3 and C29.1). Three bronze rivets that originally would have fastened an organic grip to the tang still survive (Kam 1956, 13). In a letter Kam (unknown date) writes that the sword was broken and bent. Given that I could not examine the sword, it is impossible to determine whether the break(s) described by Kam were ancient or post-depositional.

Other A bronze ring was recovered at the same site. Based on the depiction by Kam (Fig. C29.1) it appears that the ring has an opening. Whether this opening is original or whether the ring was broken (intentionally or otherwise) cannot be determined.

C29.3 Dating

I have not examined this sword, and as far as I know the drawing published by Kam (1956, fig. 1) is the only image that exists of this blade. Assuming that this drawing is accurate, the iron sword from this burial appears to be a type Mindelheim sword (Milcent 2012, 48; Trachsel 2004, 124–31), which indicates that this burial probably dates ca. 800–650 BC, which is consistent with the pottery (Fig. 3.5; Section 3.4.1.2),

C29.4 Actions taken and reconstructing the (burial) ritual

Though the cremation remains have never been analyzed, we know that someone was cremated here. The cremated remains were collected and placed in an urn. An iron sword was heated and bent. As the sword was found underneath the urn (and would not have fit in the urn), it appears that the sword was placed in the ground first, after which the urn with cremation remains was placed above it, with the bowl used as a lid.

C30 Someren-Philipscamping

According to Roymans (1991, 77) a second iron sword was found in a possible barrow at Someren, known as the sword of Someren-Philipscamping (Fig. C30.1). He also writes that it was found inside an urnfield (Roymans 1991, 57). Beyond the notes in Roymans' publication little is known regarding this find. Two pots may be from the same context, but this remains unclear (Kortlang/Van Ginkel 2016, 59). The finds currently are housed in the Archeologiehuis Someren, but were deemed too degraded to give any further information.

C30.1 Find circumstances

All that is known regarding this sword is that it was found in a possible barrow (Roymans 1991, 57–77).



Fig. C30.1 The sword fragments from Someren-Philipscamping (SP.1). Figure adapted from Kortlang/Van Ginkel 2016, 59.*



Fig. C30.2 Pottery that may be from Someren-Philipscamping. Figure adapted from Kortlang/Van Ginkel 2016, 59.

Someren-Philipscamping **Noord-Brabant, the Netherlands**					**Data quality:** poor
Method of recovery: chance find? **Year of discovery:** unknown **Date:** Ha C1–2 **Current location:** Archeologiehuis Someren, Someren		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** -
	Weaponry				
*SP.1**	Iron sword (type Mindelheim?)	Indet	++/indet	+	-
References: Kortlang/Van Ginkel 2016, 59; Roymans 1991, app. 2.					

Tab. C30.1 Inventory and numbering information Someren-Philipscamping.

C30.2 The material remains

Weaponry An iron sword, recovered in fragments. All that could be determined was that the sword was bent prior to deposition.

C30.3 Dating

I have not examined this sword, but Roymans (1991, 77) identifies it as an early Hallstatt sword, and I therefore date it to the Hallstatt C period (as does Roymans 1991, 38; tab. 4), similar to the date range used for Mindelheim blades. I stress though that this is based solely on a series of assumptions, my own and those of others.

C30.4 Actions taken and reconstructing the (burial) ritual

All that is known of the actions that took place here is that an iron sword was bent and somehow ended up in or under a barrow.

C30.5 Two pots that may belong with the sword

On a photo obtained by N. Roymans from collectors, the brothers Houben from Nederweert, of the sword from Philipscamping there are also two pots depicted (Fig. C30.2). However, it is unclear whether these were found with the sword, so for that reason they are depicted separately here (Kortlang 2017, pers. comm.).

C31 Stoquoy Tombelle 5

In an area of about 100 to 125 m, and roughly east-west at the *Bois du Stoquoy* are eight barrows (see also Fig. C19.1). Four of these were between 12 and 15 m in diameter and between 50 and 185 cm high. They were excavated in 1902 (Gerdsen 1986, 107) and the remains of pyres and cremated bone were found in them (Mariën 1958, 213–4). Tombelle 5 is interesting to the current study as it yielded a folded iron sword. This barrow was located to the east, south of the road to Limelette, on the territory of Limal. It was 12 m in diameter and 60 cm high and was excavated in 1863 and 1880 by the Marquis of Wavrin (Dens 1903, 142; Gerdsen 1986; Mariën 1958, 213–4). Unfortunately, the sword appears to have been lost, and nothing else regarding its appearance or find context is known.

C31.1 The material remains

Human remains Cremated bone was found in this barrow, but neither it nor information regarding it survives.

Weaponry An iron sword was found in this barrow. While it is unknown what type, it is assumed to be Early Iron Age in date. It does not survive, though Dens did record that it was folded.

C31.2 Dating

I have not examined this sword, and as far as I know no images exist of this blade. Roymans (1991, 77) identified it as early Hallstatt sword, and I therefore date it to the Hallstatt C phase (as does Roymans 1991, 38; tab. 4), similar to the date range used for Mindelheim blades (Fig. 3.5). I stress though that this is based on a series of assumptions, my own and those of others.

C31.3 Actions taken and reconstructing the (burial) ritual

All that can be reconstructed of this burial ritual is that someone was cremated and buried with an iron sword that was folded prior to deposition.

Stoquoy Tombelle 5 **Walloon Brabant, Belgium**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1863 and 1880 **Date:** Ha C1–2 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:**
	Human remains				
*S.T5.1**	Cremation remains, lost	Indet	Indet	++	-
	Weaponry				
*S.T5.2**	Iron sword, folded	--/--	++/--	+	-
References: Dens 1903, 142; Gerdsen 1986; Mariën 1958, 213–4.					

Tab. C31.1 Inventory and numbering information Stocquoy T.5.

C32 Uden-Slabroek

In 2010 an Early Iron Age inhumation burial containing a very rich grave set of ornaments was discovered in an urnfield on the Slabroekse Heide near Uden (Fig. C32.1). This grave is one of a very few discussed in this research to have been excavated recently and with modern techniques and as a result provides detailed insights. It was excavated by the Faculty or Archaeology of Leiden University and Archol BV. I was involved in the post-excavation analysis of this burial. The objects from this grave were studied by myself and photographed by J. van Donkersgoed. Together with Q. Bourgeois and R. Jansen, who excavated this inhumation grave, I analyzed this burial and the results are published elsewhere (Bourgeois/Van der Vaart-Verschoof 2017; Jansen/Van der Vaart-Verschoof 2017; Jansen *et al.* 2011; Jansen in prep.).

C32.1 Find circumstances

The excavation of this burial will be published in detail elsewhere (Jansen in prep.) and the necessary facts therefore are discussed only summarily here. The deceased was found inhumated in a burial pit located in the northern part of an urnfield in an open area surrounded by ring ditches (though the burial pit itself was not marked by a ditch). The lack of overcutting by other monuments in this densely packed cemetery suggests that the burial pit was marked above ground in some way and respected during later activities. The very top of this pit was exposed by mechanical excavator, and then deepened by hand in layers of 5 cm. Every level was photographed and every second or third level was drawn, so a lot of detailed information is available regarding find circumstances. The remains of charred planks and blocks enclosed a small area on the bottom of the burial pit underneath which the remains of an inhumation were found. The majority of the bones themselves had decomposed almost completely and only traces of the legs and the right arm could be clearly distinguished. The other skeletal elements of the individual survived only as vague discolorations. Several bronze and iron artifacts were found on and around the body. These were lifted in blocks and minutely excavated, conserved and restored by Restauratieatelier Restaura in Haelen. Credit goes to them for salvaging as much information as possible from objects that were in very poor condition, once again showing the value of close cooperation between archeologists and restorers (*cf.* Kempkens 2013; Chapter C3). Even textile fragments that had survived in the bronze corrosion of several objects were conserved beautifully, allowing rare insights into materials that usually do not survive.

Working our way up from the feet (assuming this person was buried face-up), (s)he was wearing matching bronze anklets (right ankle: *US.06*; left ankle: *US.09*) and bronze bracelets around both wrists. A sizable, hollow bronze bracelet (*US.07*) lay around the wrist on the right. Two solid bronze bracelets (*US.08*) were found, interlocked, around the left wrist. All three bracelets are open and have everted oval terminals, and were positioned with the open sides facing downwards. An iron pin and bronze ring were located by the right arm. Near the left shoulder iron tweezers were found together with an iron nail cutter. A small iron ring lay by the eye of the tweezers. It is likely that the tweezers dangled from this ring, and perhaps the nail cutter as well. The ring has a piece of leather knotted around it. An amber bead was found near this toilet set as well. Some 10 cm next to the toiletry items a small fragment of burned bone was found within a purplish discoloration. The fragment was too degraded to determine whether it is human or animal bone and its function remains unclear. A bronze pin, broken into many pieces, was found right by this toilet set. A small piece of textile was preserved



Fig. C32.1 The finds from Uden-Slabroek (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix US. Photographs by Restauratieatelier Restaura, Haelen.

underneath one fragment. As argued below, this pin was broken deliberately prior to deposition. Two small metal spiraled rings were found by the head of the deceased. One of the many special features of this grave is the good preservation of textile. Fragments of cloth were preserved in the bronze corrosion by both anklets, both bracelets and underneath the bronze pin.



Fig. C32.2 The breaks on one of the anklets (US.06; left) and the bracelet set (US.08; right). Note the wear where the bracelets have rubbed together. Photographs by Restauratieatelier Restaura, Haelen.

C32.2 The material remains

Human remains With the exception of a few bone fragments (some preserved through interaction with the bronze corrosion of the bracelets and anklets), all that remained of the deceased was the discolored silhouette of the body, with only traces of the legs and the right arm clearly distinguishable. The sex could no longer be determined. (S)he was short, 160 cm as measured in the field.

Personal appearance A bronze anklet was found on each ankle. They are hollow, with a seam running along the inside and were (likely) cast using the *cire perdue* technique. The anklet around the right ankle has two old breaks on the inside surface (Fig. C32.2). It is unclear whether these two breaks are post-depositional, but they certainly are not recent. The deceased wore bracelets around both wrists. Around the right wrist was a sizable, hollow bronze bracelet. It is an open bracelet, triangular in cross-section, with everted oval terminals and was positioned with the open side facing downwards. Two solid bronze bracelets were found around the left wrist. The bracelets are open and have everted oval terminals, and were positioned with the open sides facing downwards. Their exterior surfaces are decorated with hatched triangles. Wear on the bracelets indicates that they were worn in the same configuration for an extended period of time, so long in fact that notches wore into the bronze on the spots where they interlocked, and the surfaces where the bracelets touched were worn down (Fig. C32.2, right). Though clearly a set of matching bracelets, they were not cast in the same mold. On one of the bracelets the everted ovals were cut on one side, possibly to remove the casting jet.

An iron pin found by the right shoulder has a twisted decoration similar to the nail cutter (see below). A bronze ring was located a few centimeters from the top of the pin. It is unclear whether the ring originally was associated with the pin, or whether the ring is from something separate. A toilet set and a pin were found by the left shoulder. The iron nail cutter is torqued in opposite directions with a straight section in the middle, thereby creating an attractive decoration. It is striking that the nail cutter and iron pin are decorated with the same torqued design (Fig.). At a time when iron burial goods were not terribly common, the presence of two similarly decorated iron objects might suggest that they were made at the same time or by the same individual. The toilet set also included bronze tweezers. They and the nail cutter likely dangled from the iron ring with knotted leather. Such toilet sets have been found deposited in leather pouches elsewhere. The *Fürstengrab* of Frankfurt-Stadtwald, for example, yielded a leather pouch containing a toilet set that had an amber bead as a closing (Fischer 1979; Willms 2002). A similar amber bead lay by the Slabroek toilet set, and use-wear traces on this bead are consistent with use as a closing for some kind of pouch (Verschoof 2013, pers. comm.). I therefore argue that the Slabroek toilet set likely was deposited in a leather pouch of some kind with an amber bead serving as a closing. The bronze pin found with this toilet set likely was broken deliberately and then placed next to toilet set. The X-ray of the bronze pin *in situ* (Fig. C32.3) shows that the pin was broken and that the fragments were located in two distinct concentrations. This configuration only could have resulted from intentional breaking and deposition of the pin (see also Bourgeois/Van der Vaart-Verschoof 2017).

Metal spiraled rings were found at the height of the head. A single ring made from the same wire was found by the neck. They probably are made of bronze, though their small size and poor conservation makes it impossible to positively confirm this (Nienhuis 2013, pers. comm.). They 'start' with the wire bent into a loop. The double wire is then bent into the spiral, and 'ends' with the wires twisted around each other. The rings probably were worn in the hair (Grömer 2015, pers. comm.), with the single ring perhaps decorating the end of a long braid.

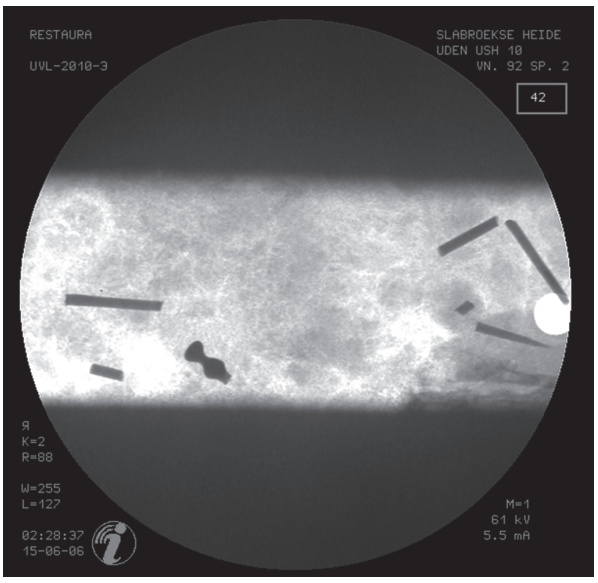


Fig. C32.3 X-ray of the bronze pin (US.14) in situ showing its fragmented distribution (the tips of the tweezers and nailcutter are visible at bottom right). X-ray by Restauratieatelier Restaura, Haelen.

Other To the left of the head a small (burned) fragment of bone (*US.19*) was discovered. It could not be determined whether it is a fragment of human or animal bone due to its poor preservation. The purple discoloration of the soil surrounding the fragment suggests it was placed within an organic pouch of some kind.

Textile fragments were found by both anklets and bracelets. J. Nientker of the Cultural Heritage Agency (RCE) analyzed several textile samples taken from both. However, additional analyses were needed as it was unclear where exactly the samples were taken from (as in from the inside/outside of the bronze). To this end K. Grömer and I reexamined all textile surviving from this grave. The results of this technical analysis are available from the Natural History Museum Vienna as Report Textile Archaeology 2015/7 (see also App. CA1), and the results are summarized here and in Tables CA1.6–8. Two different kinds of cloth survive in this burial, identified as Textile A and Textile B. Textile A is found directly on the surface of all three bracelets and both anklets, sometimes in several layers. It is found both on the inside and outside of the bracelets, both underneath and on top. It was found only on top of the anklets. The threads used in this textile are woolen, z-spun threads (twisted from right to left), and each thread is made of about 25 fibers. The weft and warp threads vary in thickness between 0.558 and 0.997 mm, with an average thread thickness of 0.8 mm. This cloth is a coarse 2/2 twill, meaning that the weft thread passes over two warp threads, and then underneath two warp threads, with a step or offset between rows (see Fig. C2.10). This gives a diagonal pattern, and the textile would drape well. This textile is almost felted both inside and out and appears well worn and used (though this could perhaps be from the degradation processes). A woven check pattern made with different colors survives. One thread system is dark, the other light, probably blue and red. It was probably a check pattern because there are patches that are only one color, but there are also areas that are striped, perhaps forming a hound's tooth pattern (Fig. C32.4). The striking blue discoloration was analyzed using HPCL-analysis by M. van Bommel. He determined that the textile originally would have been red, and likely dyed using common madder (*Rubia tinctorum*) or scale insects (*Coccoidea*). It is also possible, though deemed less likely, that the red colorant found was the result of the degradation process and the chemical reaction between the bronze ornaments and the textile. Textile B was found by both wrists as well. It is a finer twill and in both cases it was located on top of the layers of coarser twill (Textile A; see Fig. CA1.2 for the microstratigraphy). Textile B is a plied yarn. Around the right bracelet the Textile B textile is located on top of Textile A on the 'front side' (of the body) as it is the farthest away from the textile which was around the everted ending. The same microstratigraphy is present around the bracelet set worn around the left wrist, only with fragments of leather on top of Textile B.

Grömer and I postulate that the decedent was buried wearing a dress with large, loose sleeves that easily could have become wrapped around the bracelets. This garment was made of the colored checked twill with point repeat (Textile A). In the past I postulated that the absence of textile on the bottom of the anklets indicated the textile was from a shroud rather than a dress/skirt. However, Grömer's experience is that such garments can easily move 'up' in the back when the deceased was interred, and while the mourners often would straighten the easily accessible front of the dress, the layer underneath the body would be left as is. This certainly would be a plausible scenario explaining the absence of textile underneath the anklets. The second cloth (Textile B), the finer twill, was found only by the wrists and we postulate that this may from some kind of headdress that reached to the hands, or perhaps more likely Textile B is from a shroud lain over the body. The closest parallels for this type of textile are from Veruchio (early Etruscan, Villanova, 800–750 BC) or Hochdorf (though that is much later).

C32.3 Dating

Six charcoal samples from this grave have been ^{14}C-dated (Fig. C32.5). They all, however, fall within the Hallstatt plateau of the calibration curve. Therefore, a more precise dating than Early Iron Age, approximately 780–430 BC, cannot be given based on the ^{14}C-dates alone. However,



Fig. C32.4 Textile from Uden-Slabroek with magnified insets of the woven color pattern. Photographs by R.J. Looman ©RMO; J. van Donkersgoed.

Textile A: coarse (2/2) twill
Localisation: bronze bracelets (*US.07–08*) and anklets (*US.06 and US.09*) **Microstratigraphy:** 2–3 layers on the bracelets and anklets, covered by fragments of a finer twill (Textile B) **Color and material:** sheep wool, some kemp; more or less brownish, in oblique light some colours visible (brighter, reddish) and darker. Under microscope bluish threads visible. Dyestuff analysis carried out by M. van Bommel **Thread system 1:** 0.5–0.7 mm z-yarn; 9 threads per cm **Thread system 2:** 0.6–0.8 mm z-yarn; 11 threads per cm **Patterns:** color pattern: different colors in warp and weft visible; perhaps a regular checkered pattern **Remarks:** soft and warm textile, yarns irregularly spun **Interpretation:** long sleeved garment that reached the ankles
Textile B: finer (2/2) twill
Localisation: bronze bracelets (*US.07–08*) **Microstratigraphy:** on top of Textile A Color and material: brownish sheep wool **Thread system 1:** 0.3–0.4 mm zS plied yarn; 16–18 threads per cm **Thread system 2:** 0.3–0.4 mm zS plied yarn; ca. 16 threads per cm **Remarks:** not well preserved, microstratigraphically on top of Textile A **Interpretation:** veil or shroud
Leather
Localisation: bronze bracelet (*US.08*) **Microstratigraphy:** on top of Textile B **Color and material:** brownish; no grain could be identified, therefore no animal type determinable

Tab. C32.1 Summary technical data textile analysis by K. Grömer.

by combining them with the typochronology of the objects found with this person, we can narrow down when this individual was buried. The bracelets resemble Late Bronze Age ones with everted terminals found in hoards such as the Lutlommel-Konijnepijp hoard (Fig. 5.1), but appear to have no exact parallel in the Low Countries. The hatched decoration on the bracelet set frequently is found on Late Bronze and Early Iron Age bracelets (*e.g.* Dyselinck/Warmenbol 2012, 60–1; Fontijn 2002, fig. 9.5). It appears that these bracelets incorporate both

Uden-Slabroek **Noord-Brabant, the Netherlands**					**Data quality:** excellent
Method of recovery: excavation (excellent) **Year of discovery:** 2010 **Date:** Ha C1–2 **Current location:** Noordbrabants Museum, 's-Hertogenbosch		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Excavation find no.
	Human remains				
US.01	Inhumation silhouette, a few fragments of bone surviving (*US.02–05*)	Indet	Indet	--	-
US.02	Bone fragments, found with *US.06*	Indet	Indet	--	58c
US.03	Bone fragments, found with *US.07*	Indet	Indet	--	70c
US.04	Bone fragments, found with *US.08*	Indet	Indet	--	71c
US.05	Bone fragment	Indet	Indet	--	118
	Personal appearance				
US.06	Bronze anklet, found by right ankle with *US.02*, *US.20–22*	--/--	--/--	--	58a
US.07	Bronze bracelet, found with *US.03*, *US.23–24*	--/--	--/--	--	70a
US.08	Bronze bracelet set, found with *US.25–27*	--/--	--/--	--	71
US.09	Bronze anklet, found around the left ankle with *US.28*	--/--	--/--	--	72
US.10	Hair ring	--/--	--/--	--	91
US.11	Bronze tweezers, found with *US.12–13*	--/--	--/--	--	92-1
US.12	Iron nail cutter, found with *US.11* and *US.13*	--/--	--/--	--	92-2
US.13	Iron ring with leather knotted around it, found with *US.11–12*	--/--	--/--	--	92-3
US.14	Bronze pin, deliberately broken, found with *US.29*	--/--	--/++	--	92-4
US.15	Amber bead	--/--	--/--	--	93
US.16	Bronze ring, found with *US.17* and *US.30*	--/--	--/--	--	94-1
US.17	Iron pin, found with *US.16* and *US.30*	--/--	--/--	--	94-2
US.18	Hair rings	--/--	--/--	--	111
	Other				
US.19	Bone fragment, found in purplish discoloration	--/--	--/--	--	90
US.20	Textile, found by *US.06* with *US.02* and *US.21–22*	--/--	--/--	--	58b
US.21	Wood fragments, found by *US.06* with *US.02*, *US.20* and *US.22*	--/--	--/--	--	58d
US.22	Charcoal fragments, likely oak, found by *US.06* with *US.02* and *US.20–21*	--/--	--/--	++	58e
US.23	Textile fragments, found by *US.07* and *US.24*	--/--	--/--	--	70b
US.24	Wood fragments, found by *US.07* and *US.23*	--/--	--/--	--	70c
US.25	Textile fragments, found by *US.08* and *US.26*	--/--	--/--	--	71b
US.26	Hide fragments, found by *US.08* and *US.25*	--/--	--/--	--	71d
US.27	Charcoal and wood fragments, some determined to be oak, found by bracelet set *US.08* with *US.28*	--/--	--/--	++	72b
US.28	Textile fragments, found by anklet *US.09*	--/--	--/--	--	72c
US.29	Textile, found by *US.14*	--/--	--/--	--	92-4a
US.30	Charcoal, found with *US.16–17*	--/--	--/--	++	94-3
References: Bourgeois/Van der Vaart-Verschoof 2017; Jansen *et al.* 2011; Jansen in prep.; Jansen/Van der Vaart-Verschoof 2017.					

Tab. C32.2 Inventory and numbering information Uden-Slabroek.

typical Late Bronze and Early Iron Age characteristics. The anklets are hollow bronze rings known as *Hohlwulsten* or *Wulstringen* (Schacht 1982). The *Hohlwulsten* are a north European phenomenon, with similar rings found in the Low Countries in Balloo (both decorated and undecorated) and possibly also in Gasteren (decorated; De Wit 1998) and Beerse-Beekakkers (undecorated) in Belgium (Hertoghs 2011; Van Impe *et al.* 2011). While the first two examples come from burial contexts, at the latter site a pair of *Hohlwulsten* were found broken, compressed and (ritually) deposited together with two bronze axes in the posthole of an outbuilding (Hertoghs

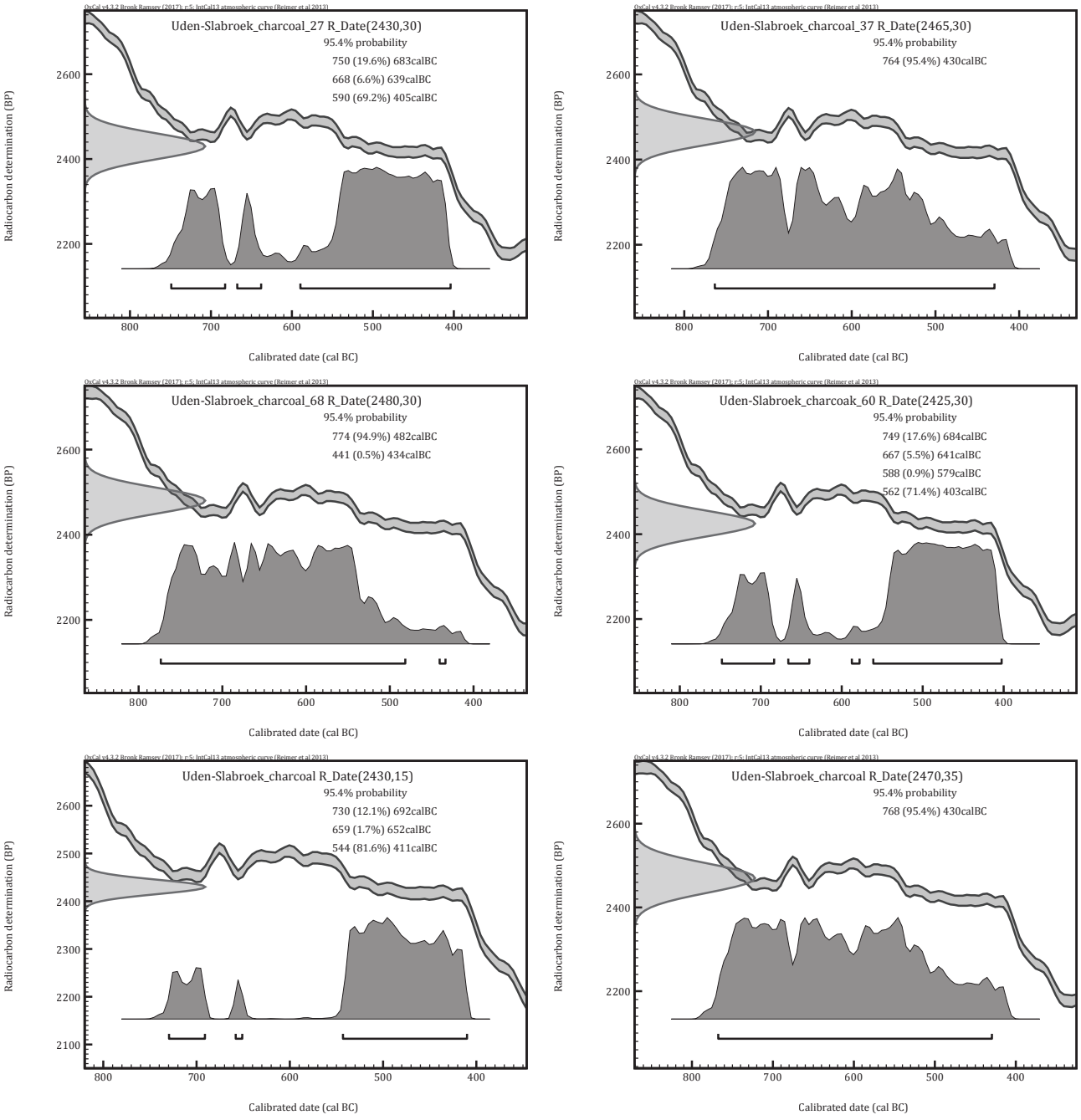


Fig. C32.5 The calibrated ^{14}C-dates (with OxCal v4.3.2 at the 2σ range) of charcoal and cremation remains samples from Uden-Slabroek.

2011). These rings usually are dated to the Early Iron Age (Butler/Steegstra 2007/2008; Van Impe *et al.* 2011). As argued above, the Slabroek toilet set likely was deposited in a leather pouch with an amber bead used as a way of fastening a drawstring of a pouch. Similar toilet sets predominantly date to the Early Iron Age. A close parallel is a toilet set in the Hallstatt C Frankfurt-Stadtwald burial which was buried in a little pouch that also had an amber bead as a closing (Willms 2002). Bronze hair rings, of different designs than the ones from Slabroek, also have been found in several Early and Middle Iron Age inhumation graves around Nijmegen (Van den Broeke 2002; 2011). In short, the combination of the ^{14}C-dates with the typochronological date ranges of the more narrowly datable objects indicates that this burial likely dates somewhere in the Hallstatt C1–2 phase (Fig. 3.5; see also Section 3.4.3.4).

C32.4 Actions taken and reconstructing the (burial) ritual

The following sequence of events of the burial ritual can be reconstructed. A deep pit was dug in an open area on the edge of a large urnfield. This pit was shored up with large oak blocks at the narrow ends and planks along the sides. The blocks and planks had been charred deliberately in what must have been a large fire prior to being used to construct the small burial chamber. Surviving textile fragments indicate the body was dressed in a longsleeved garment and lain to rest in the chamber. The arms and legs were adorned with several exceptional bronze ornaments that likely were used extensively in life. A long iron pin and bronze ring lay (or was pinned on) by the right side of the body. By the left shoulder lay a pouch with an iron and bronze toilet set. The pouch likely closed with an amber bead. A bronze pin was broken and placed on the body next to it the pouch containing the toilet set. Coiled metal rings likely adorned the hair. Perhaps another pouch containing a small fragment of bone was placed to the left of the head. Another piece of clothing (a veil?), or more likely a shroud, was placed or positioned in such a way that it came to rest on top of the dress sleeves over the outside of the bracelets. Two fragments of what appears to be animal hide were also found with the bracelet set worn on the left wrist, though exactly in what relation to the bracelets is unclear. Perhaps they decorated the cuffs of the garment. The small burial chamber was sealed off with more charred oak planks. The burial pit was then back-filled, with the mourners depositing large quantities of partially burned oak branches in the top half of the pit. They may have demarcated the burial pit above ground somehow, but this remains unknown due to the extensive plow damage at the site.

C33 Venlo

A bronze vessel from Venlo was examined by myself at the Limburgs Museum in Venlo (Fig. C33.1). As it could not be removed from its exhibition case at the time, I could examine only one side of the vessel through glass. This also prevented me from taking quality pictures. Still, a number of observations could be made.

C33.1 Find circumstances

The bronze vessel was found in the vicinity of Venlo, but its specific find context is unknown (Fig. C33.1). The patination suggests a land find and it may be a grave find (as also indicated by Roymans 1991, 42).

C33.2 The material remains

Bronze vessel The bronze cauldron recovered here has cross-shaped attachments. There is observable wear on the eyes of the attachments, indicating that the vessel was suspended by its handles for some time. This wear was observed while the vessel was still in its exhibition case, so unfortunately could not be photographed. Roymans (1991, 42) describes a recent crack in the cauldron and determines this to likely be the result of plowing. The handles show iron oxidation which could indicate it was buried with iron objects. Similar vessels have been found primarily in Slovenia, Istria and the Venice region, though they are also found scattered north of the Alps (Egg 1985, 376*ff.*; Roymans 1991, 42–3; Von Merhart 1969, 287*ff.*).

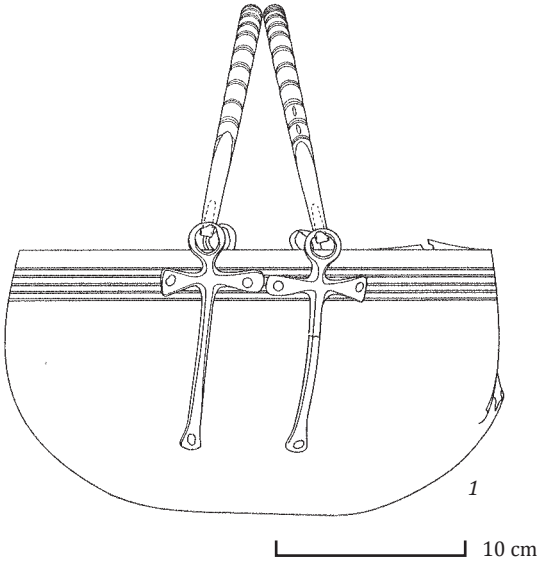


Fig. C33.1 The finds from Venlo. The number has the prefix V. Figure after Roymans 1991, fig. 15.

Venlo **Limburg, the Netherlands**					**Data quality:** poor
Method of recovery: chance find (poor) **Year of discovery:** unknown **Date:** Ha C1–D3 **Current location:** Limburgs Museum, Venlo		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** LM inv. no.
	Bronze vessel				
V.1	Bronze vessel with cross-attachments	++/--	--/--	--	G10580
References: Fokkens/Jansen 2004; Roymans 1991.					

Tab. C31.1 Inventory and numbering information Venlo.

C33.3 Dating

The cauldron from Venlo with its characteristic cross-shaped attachments belongs to Von Merhart's (1969, 286) group C of such vessels (Roymans 1991, 42). This type of cauldron regularly is found in burials dating to the Hallstatt C period, though they are also known from Hallstatt D contexts (Egg 1985, 376*ff*.; Roymans 1991, 42–3; Stöllner 2002, 145–6; Von Merhart 1969; Fig. 3.5).

C34 Weert-Boshoverheide

The burial field of Weert-Boshoverheide is one of the most famous urnfields of the Netherlands due to its large size and the very high number of bronzes found here, reportedly over a hundred objects and fragments thereof (Hissel *et al.* 2012; Ubaghs 1890, 215). Several of these finds are of interest to this study as they include three bronze Gündlingen swords, a bronze chape, some horse-gear components and a bracelet that is a possible parallel for a bracelet from Uden-Slabroek. The bronzes unfortunately have been lost. The Dutch Heritage Agency (RCE), however, has been conducting a research project into this urnfield for several years (Hissel *et al.* 2012). It is hoped that in future these bronzes may be found in any number of museums to which objects from this site have been sold in the past. The original article regarding them and published drawings (Ubaghs 1890) and the RCE publication (Hissel *et al.* 2012) are used in this chapter.

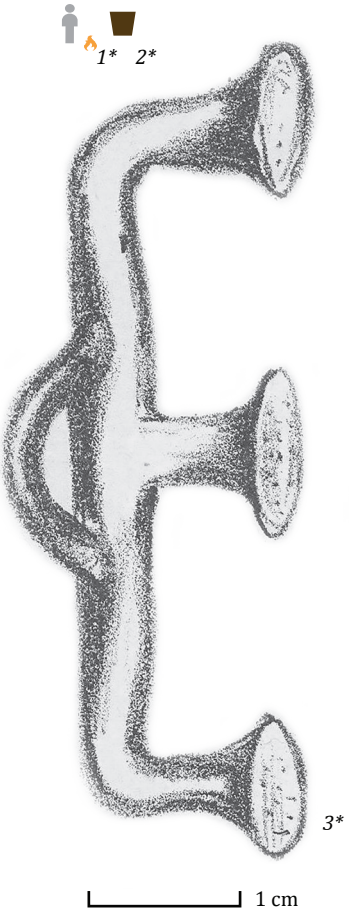


Fig. C34.1 The finds from Weert-Boshoverheidet.1 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix WB.t1. Figure after Ubaghs 1890, pl. IV.

C34.1 Find circumstances

The urnfield of the Boshoverheide yielded chance finds in 1823 and 1864 and was excavated in 1889–'90 by C. Ubaghs (1890, 153) during reclamation activities on the heathlands between Weert and Budel. Several bronze objects were found in urn burials that are of interest to this research as they are related to horse-gear and ornaments that serve as parallels for other finds discussed in this Catalogue. Of these it is known only that the urn burials were excavated from the Boshoverheide. No mention is made of any burial structures. These graves do not appear to have been numbered, so they are assigned numbers in this research. The burial monument of primary interest to this research is a long barrow (16 m long) that yielded three very large urns (one was 133 cm in circumference) that each contained broken fragments of bronze swords. This long barrow is known in other publications as Tumulus O (for example Gerdsen 1986), though not named so by Ubaghs it appears. The sword fragments lay among the cremation remains and other 'bronze fragments'. Another three urn burials also were found in this long barrow. All six urn burials were found at a depth of 125 cm below the surface of the mound (Ubaghs 1890, 212). The location of this unusual burial monument is unknown. Those long barrows still visible in the landscape are longer than the long barrow described by Ubaghs. This leads Hissel *et al.* (2012, 129) to conclude that this monument likely was located in the central area of the cemetery which has since been leveled.

C34.2 Weert-Boshoverheide t.1

A bronze three-pronged horse-gear decoration is described by Ubaghs (1890, 207–8) as a ladies brooch (Fig. C34.1). He found it in an urn burial (which this research numbers tombe 1). It is actually a rare type of horse-gear ornament, typically dated to the Hallstatt C1–2 phase, which is therefore the date ascribed to this burial (Trachsel 2004, 464–6; Fig. 3.5; see also Section 3.4.1.3).

C34.3 Weert-Boshoverheide t.2

A bronze cross-shaped object is described by Ubaghs (1890, 209) as an ornament or button (Fig. C34.2). He notes how the four arms of the cross are decorated with raised edges and that it has a loop on the back. This object was found in an urn burial. While such cross-shaped ornaments are usually associated with horse-gear, in some cases they may relate to sword scabbard (Metzner-Nebelsick 2002, 331; see also Section C2.4.5).

Weert-Boshoverheide t.1 **Limburg, the Netherlands**					**Data quality:** poor
Method of recovery: excavation **Year of discovery:** 1889–'90 **Date:** Ha C1–2 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Ubaghs 1890
	Human remains				
*WB.t1.1**	Cremation remains	Indet	Indet	++	-
	Pottery				
*WB.t1.2**	Urn	Indet	Indet	Indet	-
	Horse-gear				
*WB.t1.3**	Horse-gear ornament	--/--	--/--	Indet	Fig. 19
References: Hissel *et al.* 2012; Ubaghs 1890.					

Tab. C34.1 Inventory and numbering information Weert-Boshoverheide t.1.

Weert-Boshoverheide t.2 **Limburg, the Netherlands**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1889–'90 **Date:** Ha C1 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Ubaghs 1890
	Human remains				
*WB.t2.1**	Cremation remains, found in	Indet	Indet	++	-
	Pottery				
*WB.t2.2**	Urn	Indet	Indet	Indet	-
	Weaponry/horse-gear				
*WB.t2.3**	Horse-gear ornament/scabbard element	--/--	--/--	Indet	Figs. 24 and 25
References: Hissel *et al.* 2012; Ubaghs 1890.					

Tab. C34.2 Inventory and numbering information Weert-Boshoverheide t.2.

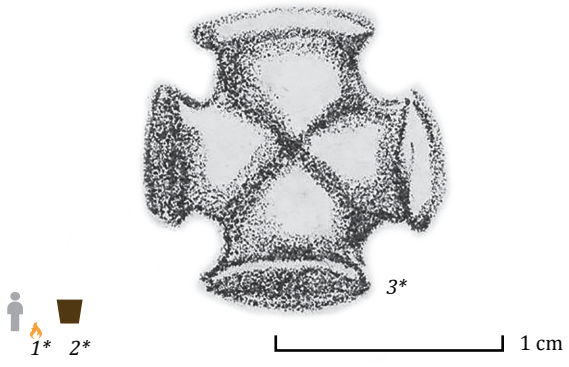


Fig. C34.2 The finds from Weert-Boshoverheide t.2 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix WB.t2. Figure after Ubaghs 1890, pl. IV.

This burial most likely dates to the Hallstatt C1 phase (Trachsel 2004, 53–4; Fig. 3.5).

C34.4 Weert-Boshoverheide t.3

A bronze bracelet described by Ubaghs (1890, 210) as being made of a thick strip of bronzes, rounded on the exterior surface and terminating in two everted terminals is of interest to this research as it could be a parallel for the bracelet set found at Slabroek (Figs. 5.3 and C34.3). The exterior surface of the bracelet is decorated by groups of lines etched across the bracelet. Groups of five of these lines are present towards the everted terminals, and three groups of seven lines are present on the middle of the bracelet. This bracelet is similar to the ones found in Slabroek. Such bracelets can date to the Late Bronze Age or to the Hallstatt C1 phase (Fig. 3.5; see also Section C32.3; *e.g.* Dyselinck/Warmenbol 2012, 60–1; Fontijn 2002, fig. 9.5; Trachsel 2004).



Fig. C34.3 The finds from Weert-Boshoverheide t.3 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix WB.t3. Figure after Ubaghs 1890, pl. V.

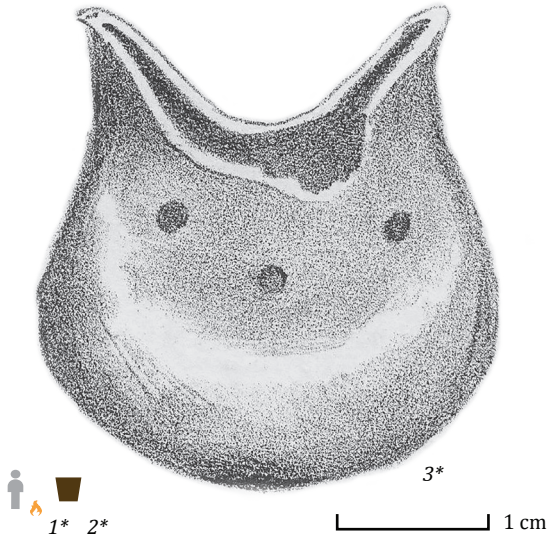


Fig. C34.4 The finds from Weert-Boshoverheide t.4 (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix WB.t4. Figure after Ubaghs 1890, pl. V.

Weert-Boshoverheide t.3 **Limburg, the Netherlands**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1889–'90 **Date:** Ha C1 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Ubaghs 1890
	Human remains				
*WB.t3.1**	Cremation remains, found in	Indet	Indet	++	-
	Pottery				
*WB.t3.2**	Urn	Indet	Indet	Indet	-
	Personal appearance				
*WB.t3.3**	Bronze bracelet	--/--	--/--	Indet	Fig. 29
References: Hissel *et al.* 2012; Ubaghs 1890.					

Tab. C34.3 Inventory and numbering information Weert-Boshoverheide t.3.

Weert-Boshoverheide t.4 **Limburg, the Netherlands**					**Data quality:** poor
Method of recovery: excavation (poor) **Year of discovery:** 1889–'90 **Date:** Ha B3 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Ubaghs 1890
	Human remains				
*WB.t4.1**	Cremation remains, found in *WB.t4.2**	Indet	Indet	++	-
	Pottery				
*WB.t4.2**	Urn	Indet	Indet	Indet	-
	Weaponry				
*WB.t4.3**	Bronze chape (type Beutelortband/ Han-sur-Lesse)	--/--	--/--	Indet	Fig. 33
References: Hissel *et al.* 2012; Ubaghs 1890.					

Tab. C34.4 Inventory and numbering information Weert-Boshoverheide t.4.

C34.5 Weert-Boshoverheide t.4

A bronze chape was found in an urn burial with cremation remains (Fig. C34.4; Ubaghs 1980, 212–3). Nothing is known of the urn, and only a drawing of the chape survives. It is a bag-shaped chape, and appears to be a type Beutelortband/Han-sur-Lesse and most likely dates to the second half of the 9th century (Milcent 2012, 48; fig. 9.A; Trachsel 2004, 112–3). This makes it one of the earlier burials in this dataset (Fig. 3.5).

C34.6 Tumulus O

This long barrow yielded six different urn burials, three of which contained bronze sword fragments (Fig. C34.5). Those three are discussed per grave. The remaining three burials are discussed together as little is known regarding them.

C34.6.1 The material remains grave A

Human remains Cremation remains were found in this urn-grave, but nothing more is known (Ubaghs 1890, 212).

Pottery An unusually large pot served as an urn for this burial. The urn was 133 cm in circumference and 45 cm high (Ubaghs 1890, 212).

Weaponry The bronze sword found in this urn is described by Ubaghs (1890, 212) as being broken into four fragments and measuring a total of 28 cm. The tang is described as having a raised edge and seven holes in the middle, of which five still hold a rivet. Ubaghs (1890, pl. V, fig 31) depicts the four fragments of this sword as fitting together. However, the drawing and the very short length as determined by Ubaghs demonstrate that this sword is incomplete. The progressing thickening and thinning of a Gündlingen sword (which this is) indicate that it is probably the middle break as depicted by Ubaghs (1890, pl. V, fig. 31) that actually does not connect, though it could also be the top break. In any case, this sword appears to have been deposited incomplete, indicating some sword fragments deliberately were kept out of the burial.

C34.6.2 The material remains grave B

Human remains Cremation remains were found in this urn-grave, but nothing more is known (Ubaghs 1890, 212).

Pottery An unusually large pot served as an urn (Ubaghs 1890, 212).

Weaponry A blade fragment of a bronze sword which could be from a Gündlingen type sword was found in this urn burial. It shows heavy damage from fire, particularly at the top end as depicted and described by Ubaghs (1890, pl. V, fig. 32). The fragment is 22.5 cm long.

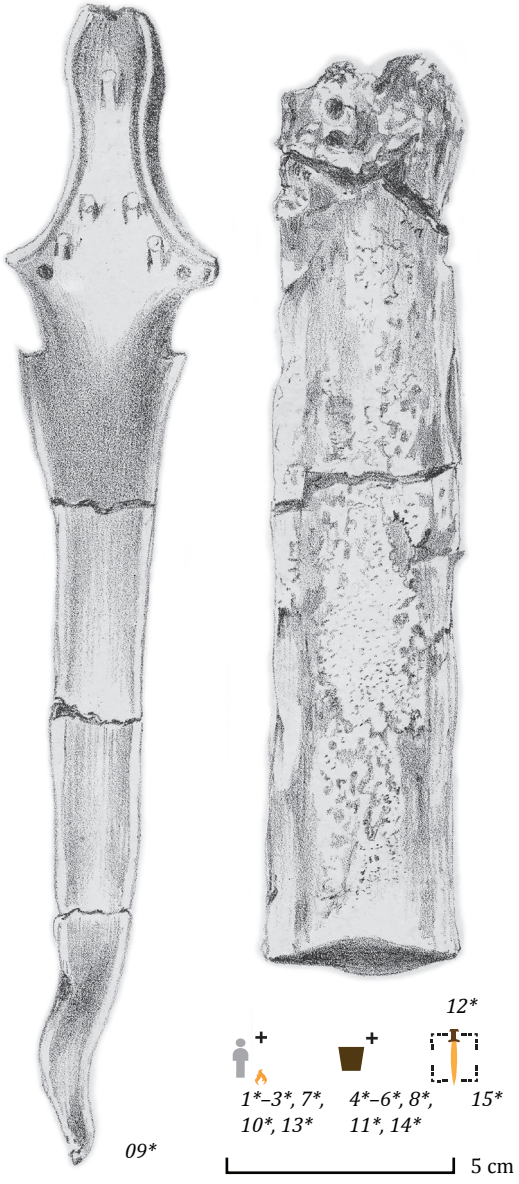


Fig. C34.5 The finds from Weert-Boshoverheide T.O (lost finds are shown with icons, see the legend of Figure C1.1). All numbers have the prefix WB.TO. Figure after Ubaghs 1890, pl. V.

C34.6.3 The material remains grave C

Human remains Cremation remains were found in this urn-grave, but nothing more is known (Ubaghs 1890, 212).

Pottery An unusually large pot served as an urn for this burial (Ubaghs 1890, 212).

Weert-Boshoverheide Tumulus O, grave a, b & c **Limburg, the Netherlands**					**Data quality:** poor		
Method of recovery: excavation **Year of discovery:** 1889–'90 **Date:** Ha B3–C1 **Current location:** unknown		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Ubaghs 1890	Mariën 1958	Roymans 1991
	Human remains						
*WB.TO.01**	Cremation remains, found in *WB.TO.04**	Indet	Indet	++	-	-	-
*WB.TO.02**	Cremation remains, found in *WB.TO.05**	Indet	Indet	++	-	-	-
*WB.TO.03**	Cremation remains, found in *WB.TO.06**	Indet	Indet	++	-	-	-
	Pottery						
*WB.TO.04**	Large urn, contained cremation *WB.TO.01**	--/--	--/--	--	-	-	-
*WB.TO.05**	Large urn, contained cremation *WB.TO.02**	--/--	--/--	--	-	-	-
*WB.TO.06**	Large urn, contained cremation *WB.TO.03**	--/--	--/--	--	-	-	-
Grave A							
	Human remains						
*WB.TO.07**	Cremation remains, found in *WB.TO.08**	Indet	Indet	++	-	-	-
	Pottery						
*WB.TO.08**	Large urn	--/--	--/--	--	-	a	-
	Weaponry						
*WB.TO.09**	Bronze sword (type Gündlingen), fragments, found in *WB.TO.08**	--/--	++/++	+	Fig. 31	-	a
Grave B							
	Human remains						
*WB.TO.10**	Cremation remains, found in *WB.TO.11**	Indet	Indet	++	-	-	-
	Pottery						
*WB.TO.11**	Large urn	--/--	--/--	--	-	b	-
	Weaponry						
*WB.TO.12**	Bronze sword, fragments, found in *WB.TO.11**	--/--	-/++	++	Fig. 32	-	b
Grave C							
	Human remains						
*WB.TO.13**	Cremation remains, found in *WB.TO.14**	Indet	Indet	++	-	-	-
	Pottery						
*WB.TO.14**	Large urn	--/--	--/--	--	-	c	-
	Weaponry						
*WB.TO.15**	Bronze sword, fragments, found in *WB.TO.14**	--/--	+-/++	++	-	-	c
References: Bloemers 1988; Gerdsen 1986; Hissel *et al.* 2012; Roymans 1991.							

Tab. C34.5 Inventory and numbering information Weert-Boshoverheide T.O.

Weaponry The bronze sword from this urn-grave is described by Ubaghs (1890, 212) as 29 cm long and broken into five pieces. It is described as being in poor condition, and partially affected by fire and melted. The point has melted onto the inside of the blade in two pieces. Ubaghs (1890) does not depict this sword, so his description is all we have to go on. Once again, the short length indicates the sword was broken, then burned and deposited incomplete.

C34.6.4 Other material remains

Human remains Three deposits of cremation remains were found in three large urns (Ubaghs 1890, 212).

Pottery Three unusually large pots served as urns for three deposits of cremation remains. Nothing more is known regarding these finds (Ubaghs 1890, 212).

C34.6.5 Dating

One of the bronze swords (*WB.TO.9*) from this burial appears to be an early type Gündlingen (Etappe 1/Holme

Pierrepoint) sword based on the shape of the shoulders and tang (Milcent 2012, 48; Trachsel 2004, 118–24), I stress that this is based on a somewhat unreliable drawing (see above). If correct, this sword most likely would date to the early part of the date range determined for Gündlingen swords (ca. 850–750 BC; see Section 3.4.1.1; Fig. 3.5). Note that while this is the date ascribed to the long barrow as a whole, *this date is based on only one sword*.

C34.6.6 Actions taken and reconstructing the (burial) ritual

The long barrow known as Tumulus O yielded six urn burials containing cremation remains. If we assume that each urn with cremation remains represents a single cremation, then six people were cremated, their remains collected in an urn and deposited in or under a long barrow. Three of these people were interred in very large urns and accompanied by bronze swords which all were exposed to fire and bent or broken. In all cases it is very likely that parts of the swords deliberately were kept out of the burial. Why these three people were buried with swords, while the other three were not is unknown. The sword fragments were found among the cremation remains in the urns, and may have been accompanied by other objects or fragments thereof. It unfortunately also is unknown whether these people all were buried at the same time, or whether some might be later additions to the long barrow. While we do not know where exactly this long barrow was located, it may have lain in the central area of the urnfield (Hissel *et al.* 2012, 129).

C35 Wijchen

The wagon-grave of Wijchen is one of the most spectacular prehistoric finds in the Netherlands, famous for its beautiful axle-caps and unique linchpins with Etruscan-style protomes (Figs. 4.12 and C35.1). There are, however, many interesting objects in this burial that rarely are mentioned or even have never been published. P.J.R. Modderman studied this burial together with G. Kossack in the 1960s. They also had many of the artifacts drawn by G.J. de Vries in 1961. Modderman, still at the State Service for Archaeological Investigations (ROB) at the time, never published his findings. His notes and detailed drawings luckily were still available for the present study. In 1992 Pare published the burial from Wijchen in his iconic book on Early Iron Age wagon-graves. However, the book neither gives a full overview nor depicts all the (fragmented) objects belonging to this burial (most likely because the 'unattractive' finds were housed elsewhere). This is the first comprehensive publication of the complete burial complex.

The artifacts from the wagon-grave currently reside in Nijmegen. The more attractive and complete objects are on display in Museum het Valkhof, while the smaller and more corroded fragments are in the depot at Museum Kam. Curator L. Swinkels was kind enough to grant me access to the finds from the wagon-grave on multiple occasions. I examined all artifacts from this complex for the first time in 2011 for my MA-thesis. This revealed the presence of several new (types of) objects in this burial complex. Some of the bronze artifacts show signs of having been exposed to high temperatures, while others appear undamaged. The damage ranges in severity from a slight bubbling of the surface to near liquefaction. Heat-damage on objects was used to determine whether the entire wagon was placed on the pyre and where objects might have been located within the pyre (the temperatures reached in open-air funeral pyres can vary significantly throughout the pyre). This is discussed further in Section 2.2.3.4.

When I first examined them, the iron artifacts were in extremely poor condition. They were corroded and fragmented. A sword, though recognizable as such, was in several dozen pieces. The corrosion and fragmentation made it almost impossible to observe diagnostic features. An iron knife was also recognizable (though at the time it was unknown this grave contained a knife). At the start of this PhD-research curator L. Swinkels and in-house restorer R. Meijers were kind enough to grant my request to restore these objects in the hope of uncovering diagnostic features that might help date and understand this grave. This restoration work was extremely successful and is discussed further below (see also Section C3.2).

Since my first examination of the Wijchen finds in 2011, my experience in handling and understanding such find material had increased significantly. I also had access to new research techniques. It therefore was deemed worthwhile to revisit this grave. All artifacts were studied again for this research, including again the smaller and unattractive fragments. J. van Donkersgoed photographed all finds. Table C35.1 gives a complete inventory of all artifacts that survive. Some of the fragments are so small or in such bad condition that little more can be said regarding them beyond the characteristics listed in the table. The other finds are discussed further in the following sections.

C35.1 Find circumstances

The wagon-grave of Wijchen was found in December 1897 (Fig. C35.2). Due to this early date the find circumstances are somewhat shrouded in mystery. The burial probably was uncovered while sand was being quarried (Vissers 1996, 6). The finds were in a ceramic urn when discovered, though the urn unfortunately has been lost (Abeleven/Bijleveld


01
02
05
04
03
09*
07a
07b
06
08
10
11a
11b
12a
12b
13
14
15
16
17
18a
18b
5 cm



Fig. C35.1 The finds from Wijchen as they appear today. All numbers have the prefix WIJ. Drawing by G.J. de Vries; photographs by J. van Donkersgoed.

1898, 12; Vissers 1996, 5). A small pottery fragment survives among the finds, but it is unknown what this sherd is from. At the time of its discovery the complex was thought to be of Roman date. Documentation survives from the committee that was responsible for arranging the purchase of this assemblage. This states that the finds were in an urn that has since been lost, in sandy soil about a meter deep (Abeleven/Bijleveld 1898, 12; Vissers 1996, 5). The committee managed to purchase the entire find for the Museum and describes some of the finds "four axle-pins, bronze socket […], two horse-bits, two double rings likely belonging to horse tack, fragments of a dagger (?) and two fragments of the belly-band of a notable Roman (?)" (Abeleven/Bijleveld 1898, 3; Vissers 1996, 5; my translation). The exact find location of the wagon-grave is as yet unknown. According to Vissers

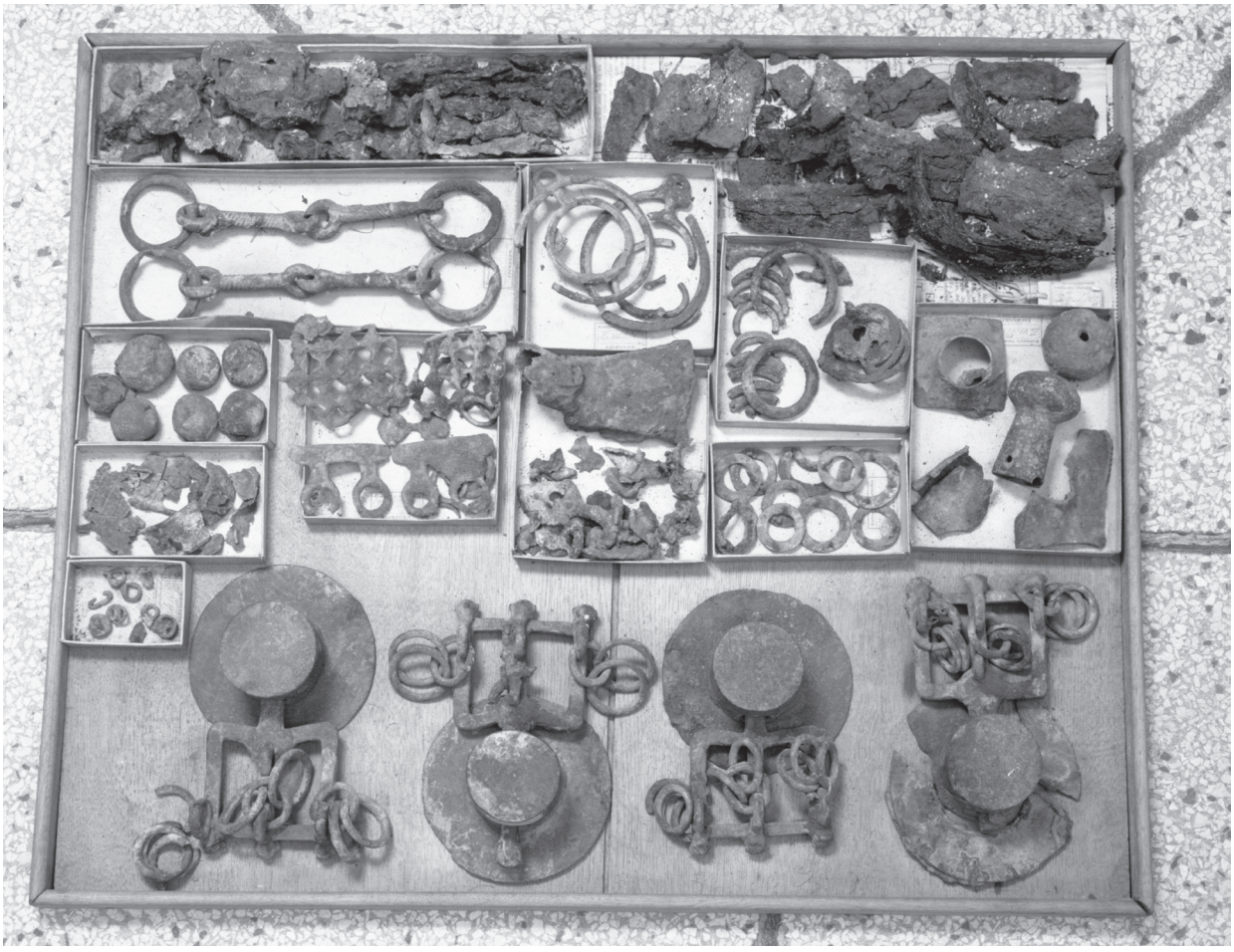


Fig. C35.2 The finds from Wijchen as they appeared in the past (note the fragmented sword at the top). Photograph provided by Museum het Valkhof, Nijmegen.

(1996, 6) local lore indicates that the burial was found on the Wezels(ch)e berg to the north of where the current Kavelpad intersects the A326. No trace has been found of an urnfield on the Wezels(ch)e Berg, though there are several large Late Bronze–Early Iron Age urnfields near Wijchen. These, however, all are located several kilometers to the south of the Wezels(ch)e Berg (Roymans 1991, 58).

C35.2 The material remains

Human remains No loose human remains from this grave were deposited in the museum. The only cremation remains that survive were found in the corrosion of the iron sword. Prior to this discovery the only evidence that this was a cremation grave came from the burned nature of some of the artifacts. Unfortunately, the cremation pieces are too small to yield any physical anthropological information. So while these fragments indicate that originally there were cremation remains in this burial, it cannot be determined how much of the cremation remains were interred. As it is not unusual for cremation remains to be discarded by collectors or museums, it may be possible that a full cremation was interred.

Pottery As mentioned above, a single small fragment of pottery was found among the artifacts of this grave. It is unclear what this fragment is from. It may be from the urn that contained this burial (which has been lost), but this cannot be confirmed.

Bronze vessel A ribbed bronze bucket (*Rippenziste* in German) survives in a very fragmented state. This type of vessel has a limited distribution in the eastern part of central Italy and the Wijchen specimen likely was produced in this area (Roymans 1991, 39–42). Only one of the two handles, two handle-attachments, two rim fragments and some decorated fragments of the body remain of this ribbed bucket. The movable handle (*WIJ.03*) with knobbed ends is of Stjernquist's type E5, while the handle attachments are type AH3 (Stjernquist 1967, 31). The



Fig. C35.3 The surviving bucket fragments (WIJ.03–05). Photographs by J. van Donkersgoed.

handle attachments each have two loops and were riveted on with two rivets each. The rivets have small round heads on the outside and have been flattened on the inside. There appears to be wear in one of the loops. The rim fragments indicate that the rim was hammered outwards around a thin metal core. The fragment of wall attached to one of the rim fragments shows the seam of the bronze sheet was fastened with flat-headed rivets. There are four fragments of decorated bronze plate that definitely belong to the wall of the bucket. These indicate that it was decorated with horizontal tripartite ribs (a broad rib flanked by narrow ones) and point-boss decoration that occasionally was arranged with diagonal ribs (Fig. C35.3). It is striking how little of the bucket ended up in the urn. At some point the bucket was fragmented completely, possibly on the pyre. Only a small percentage of the fragmented bucket then was placed in the urn. The mourners deliberately seem to have collected various components of the bucket, such as a handle, the attachments and wall fragments.

Weaponry An iron sword that was buried with the deceased was in truly terrible condition when I examined it in 2011. I was able to make a number of observations, but it was clear that restoration work was needed to draw any definite conclusions regarding type and manner of deposition. After consulting with curator L. Swinkels and restorer R. Meijers (both of Museum het Valkhof) at the start of my PhD-research it was decided that Meijers would restore the sword (and an iron knife, see below) in the hope that this would reveal more diagnostic details regarding a remarkable find (see also Section C3.2). He was able fit together many of the small fragments, and

through cleaning work revealed the following details (see also Fig. 6.5).

The tang of this sword has a square cross-section with a square knob with rounded edges as pommel piece. An iron object that I previously had identified as a possible nail (Van der Vaart 2011), turned out to be the core of the sword hilt, fitting perfectly into two corroded iron fragments that Modderman already had identified as pieces of the tang. There are several bronze bucket fragments corroded onto these tang fragments (Fig. C35.4, bottom left). The restoration of the sword also revealed a raised central rib with engraved lines running alongside. At the very tip of the sword the blade only has a central raised rib (Fig. C35.4, bottom middle). Slightly further up the sword there are grooves on either side of the central rib, forming an additional small rib on either side (Fig. C35.4, bottom middle). Even further up the blade there are another two grooves, creating two small raised ribs on either side of the central rib (Fig. C35.4, bottom right). The sword also has an unusually pointed tip and visible sharpening facet, with the sword from Oss-Vorstengraf being the only other sword with such a sharply pointed tip in the Low Countries (Figs. 6.5 and C35.4, bottom middle). This sword was curled up tightly. As Figure C35.4 shows it was not curled up flat in one line, the tip is 'higher' than the tang. The tang at present does not connect with the blade, and though mounted very close to the blade for exhibition purposes, it originally would have been located further from the surviving blade fragments (see also Fig. 6.5). These blade fragments are pure blade and show no signs of widening into the shoulders, suggesting at least 5 to 10 cm are missing here. Part of the inner curve of the blade, from the tip fragment to the rest, is also missing. Meijers and I estimate that this sword originally was *at least* 105 cm long, and more likely roughly 115 cm. Even at 105 cm this sword would be longer than the average Early Iron Age sword, and if it were 115 cm it would have been almost as long at the Oss sword (Fig. 6.5).

Overall, this sword appears to be unique. It is certainly one of a kind in the Low Countries, and as of yet no parallels have been found from elsewhere. All other Early Iron Age swords with their tang surviving have flat tangs (see Fig. A2.3 and Section 6.2.1.3). The ever-increasing design of grooves and ribs also has not been found on any other sword from the Low Countries. The form of corrosion on the exterior surface of the sword indicates that it corroded in a hollow space (Meijers 2015, pers. comm.). Combined with a lack of copper corrosion products (note that the bronze presently visible on the sword are bucket fragments) on the sword surface this corroborates the story that this sword and the other objects were found in a ceramic urn that has not survived excavation. Meijers was able to take a sample of the original iron of the sword. The sample was taken from the center of the blade, roughly in the middle of the sword and is being analyzed by V. Fontani and I. Joosten.

Horse-gear There are two bronze horse-bits in this burial. They are simple snaffle-bits with free moving bit rings and false twisted decoration on the mouthpieces. There is extensive wear both on the mouthpieces and the rings (Fig. C35.5). The false twisted decoration shows wear from contact with the horses' mouths. The joints of the mouthpieces are so worn that they lock into the position they would have taken within the mouth. The eyes that form the joint are so worn that they had to be pinched together to continue use. The opposite loops where the mouthpiece connects with the bit rings also show extensive wear. Strangely enough, they show wear at opposite ends of the eyes (Figs. 6.9 and C35.5). The wear corresponds with the horse-bits having been in the mouth in both directions. This indicates that the leather bridles were remade, at least once, with the bronze bits mounted the other way around. By placing them the other way around the bronze bits started wearing in different spots, thereby extending their use-lives. The bit rings show extensive wear. They have one to three spots of wear of varying severity per ring.

Six cast bronze ring-footed rein-knobs were part of the construction of the bridle. The head straps presumably would have run through them (Fig. 4.11). One of the knobs is slightly larger (29.5 mm in diam.) than the other five (23 mm in diam.). Only one of the knobs is intact, the others are all missing at least part of the ring. Some of the rein-knobs show wear on the legs that run to the ring. The wear is always on the openings across from each other, indicating that the same strap caused the wear. One of the knobs is dented on the top and generally distorted in shape. All the rein-knobs show possible slight heat-damage. A number of bronze rings of various sizes and cross-sections also were found in this grave. It is likely that at least some of these were part of the horse-gear. However, as discussed in Section C2.4.4, it is practically impossible to positively identify the function of loose rings. For this reason the rings are discussed below under the 'other' heading.

Yoke and wagon components Several fragments of so-called yoke-bands survive. These are thin strips of bronze sheet with a raised rib on each side. They are 22 mm wide. The fragments have a yellow residue on the underside, the origin of which is unclear (Fig. C35.6). One fragment is bent. These small fragments of bronze sheet may seem insignificant, but they indicate the presence of the yoke during the burial ritual. There are several scenarios explaining how the yoke-bands might have ended up in the grave. The entire yoke could have been placed on the pyre and the bands collected after the



Fig. C35.4 The restored sword (WIJ.06; top) with details of bronze bucket fragments attached to the tang (bottom left), the pointed tip of the sword showing the raised central rib as well as the ribs on either side of the raised central rib on the blade (bottom middle) and the central rib flanked by two ribs and grooves on each side (bottom right). All different scales. Photographs by J. van Donkersgoed.



Fig. C35.5 Details of use-wear on the bits from Wijchen (top row: WIJ.07a; bottom row: WIJ.07b; different scales). Photographs by J. van Donkersgoed.

wood burned away, or the decorations could have been removed and placed either in the pyre or directly in the urn. Either way, it was apparently important that the yoke be represented in the burial urn.

Wagon-box and other decorations

Several wagon-box components and decorations survive, though most are very fragmented. They are discussed in no particular order. A cast bronze socket with a bulbous

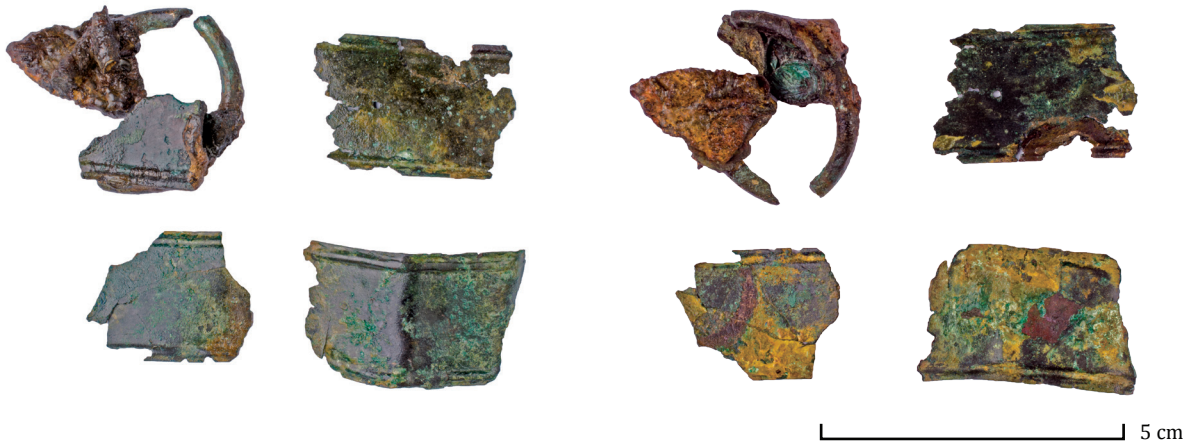


Fig. C35.6 The yoke bands (WIJ.10). Note the discoloration on the bottom. Photographs by J. van Donkersgoed.

head (*WIJ.11a*) has a hole on the top and two across from each other at the bottom. It is 59.5 mm long. It likely belongs with a square cast bronze base (*WIJ.12a*), which measured 49.5 by 49.5 mm. The socket likely rested on top of the base. It would seem that something wooden ran through the base and into the socket, where it would have been nailed in place through the holes in the socket. Both objects are in perfect condition. Interestingly enough, there is a second set of these objects that are both fragmented. Only the bulbous head of the other socket (*WIJ.11b*) survives, and the base (*WIJ.12b*) is broken into three pieces and appears melted. It is not certain where exactly these sockets and bases were positioned on the wagon, but archeological parallels indicate they were probably nailed atop the corners of the wagon-box (Fig. 4.11). With regard to the discussion on the placement of objects on or near the pyre below, it is interesting to note that one set (socket and base) survives in excellent condition, while the other set is fragmented and appears heavily affected by heat. If the metal fittings were still on the wagon when placed on the pyre, this could indicate that the position of the wagon near or in the fire resulted in different parts of the vehicle being subjected to different levels of heating.

There are eleven more or less complete flat bronze rings with a pair of pins each, and the fragments of four more (Fig. 35.7). There is one ring with a diameter of 33 mm, one of 30 mm, and eight of 25.5 mm. They have very nicely finished surfaces. Archeological parallels indicate that these rings likely were nailed to the wagon-box as decoration (Fig. 4.11). It is striking that most of the rings are in very good condition, while one is distorted and melted. The intact ones are in perfect condition and do not appear to have been wrenched out of the wooden wagon-box, making the differential survival of these objects all the more interesting (see below). Three bronze nails (*WIJ.14*) with hollow domed heads also are assumed to have been on the wagon-box, perhaps as decorations. The nails are straight, indicating that they were not removed forcibly from the wagon prior to deposition.

Cast bronze plaques made up of hollow hemispherical cups linked together with a bar on the top and rings suspended from loops on the bottom, would have made both attractive and noisy decorations on the wagon-box. There are two reasonably intact plaques (*WIJ.15*) and fragments of more, some with larger cups. One of the more intact plaques has a small ring with square cross-section suspended from the bottom on a u-shaped clip which runs through two perforated cups. It is unclear why this system was used, when all the other cups appear to have had loops cast-on for suspending rings. This plaque shows damage from heat and was intentionally bent at a 90° angle. There is also a decorative bronze band from the wagon-box (*WIJ.16*). It currently is made up of two fragments that originally would have been a single cast bronze band with openwork decoration folded together. The band was 57 mm wide, with the middle 33 mm forming a decorated zone. The openwork decoration is made of triangles and circles. There were short blunt tongues projecting from the edges of the band. The band tapered to a blunt point at the end. It shows damage from heat, and seems to have been folded up after being burned.

Last, but not least, are two large circular bronze pendants (*WIJ.17*) that likely decorated the wagon-box (Fig. 4.11). Two rings with square cross-sections (ca. 70–75 mm and 47–48 mm in diam.) make up the body of each pendant. There is a D-shaped loop on the outer ring for suspension. One of the pendants is mostly complete, only a small part of the outer circle is missing. The outer ring, below the missing fragment, appears to be somewhat bent as the center ring is off-center. The other pendant is broken into three pieces. It shows signs of heat-damage and has been distorted intentionally. The

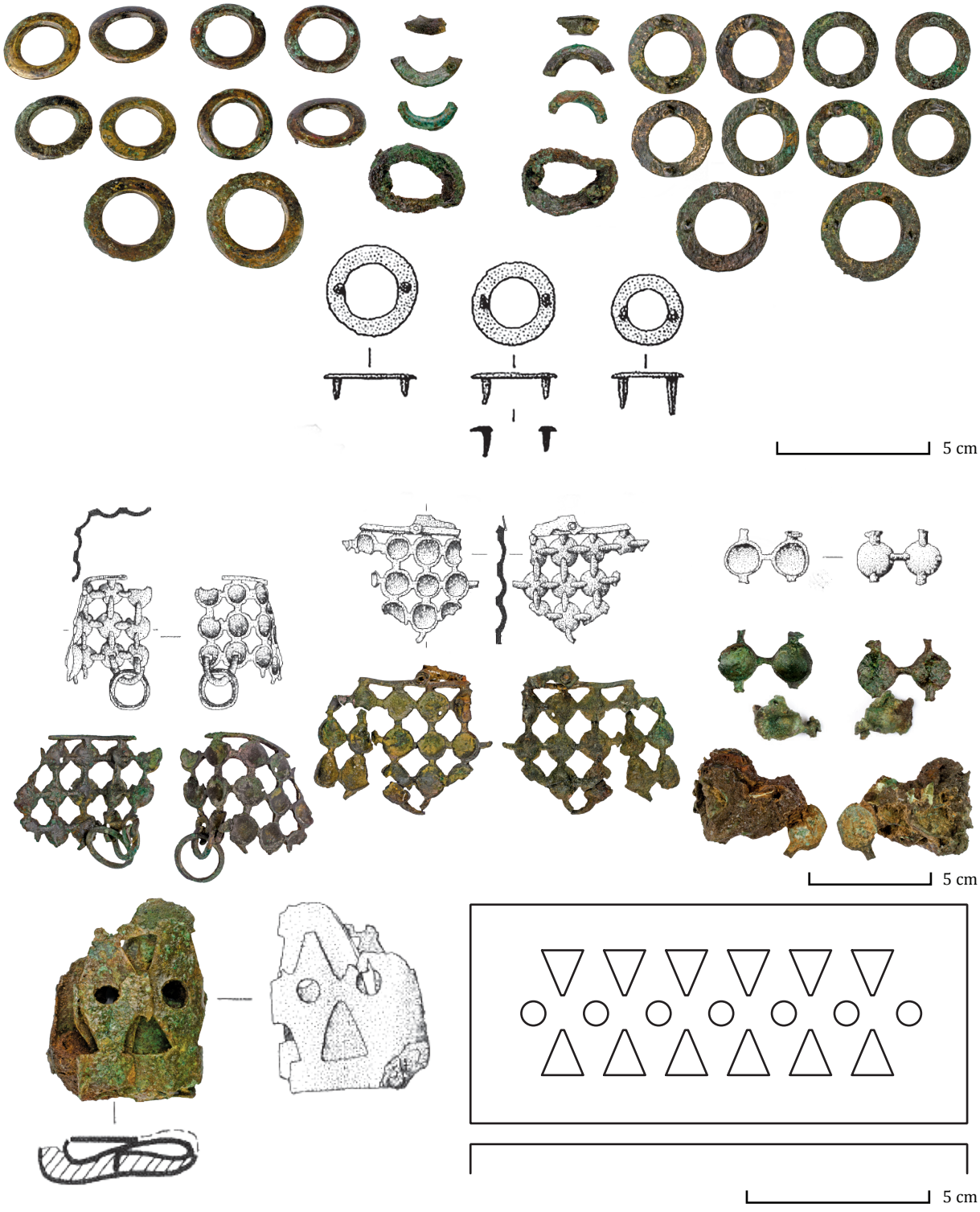


Fig. C35.7 The flat rings with pins from both sides plus a technical drawing, note that only one is heavily melted (WIJ.13; top), the decorative plaques from various angles and technical drawings (WIJ.14; middle) and the folded decorative plaque and reconstruction (WIJ.16; bottom). Drawings after Pare 1992, pl. V; photographs by J. van Donkersgoed.

pieces are bent in three different directions. One pendant appears to have been wrenched apart.

The axle-caps and linchpins

There are four bronze linchpins and four bronze axle-caps in the Wijchen wagon burial. The axle-caps have a flat disc decorated with stamped dot-and-circle decoration arranged in four sets of two, a cylindrical neck and a broad flat flange. The axle-caps are in varying states of preservation. Though visible to different degrees depending on their condition, they all show wear on the back from the movement of the wheel (Fig. 4.12). In some cases wear from the linchpin is visible in the more or less square holes. There is a fragment of iron sheet on the back of one of the axle-caps (*WIJ.19b*) that Pare (1992, 219) interprets as part of a nave cap. The cast bronze linchpins are trident-shaped, with a crossbar at the top. A zoomorphic head tops each of the prongs on the linchpins. A ring has been cast-on at the top of each prong right below the heads. Rings dangled from these cast-on rings and jingled noisily, though about half these rings no longer are attached and instead are loose artifacts. There is also a cast-on ring at the base of the middle-prong. Rings may have dangled from this cast-on ring, but none survive. The four linchpins are all slightly different; no two are exactly alike.

Linchpin *WIJ.18a* is quite finely made (Figs. 4.12 and C26.1). Both the shaft and the prongs have a square cross-section. The hole in the bottom of the shaft for fastening the linchpin is round. There is a thickening at the point where the shaft divides into the three prongs. The sides of the trident bear diagonal decoration. The three heads atop the prongs have sharp features and relatively large ears, the noses are wide and angular and the eyes are deep hollows. The heads have complex hairstyles (Fig. 4.12). A wide central rib, to either side of which the hair is shown by diagonal lines, parts the hair on top of the head. On the back the cap-shaped hairstyle is separated from the braid, which is shown by alternating groups of diagonal incised lines. The three rings cast-on to the trident prongs below the heads are worn. The two left rings still have their pendant rings. The ring attached to the cast-on ring has been pinched closed and has two dangling rings. The pinched rings have a diameter of ca. 25 mm, and the bottom rings have a diameter of ca. 30 mm. On the back of the pin there is wear from the axle-cap.

The other three linchpins are stylistically different from the first one. All three have roughly comparable zoomorphic heads, though of a different style than pin *WIJ.18a*. The heads have small button noses and round little ears. The eyes are round hollows and incised crossed lines portray the mouths. The hair does not have the raised central rib seen on linchpin *WIJ.18a.* A simple line down the middle with diagonal lines angled downwards on either side portrays the braids. Linchpin *WIJ.18d* has a combination of the two hairstyles. Linchpin *WIJ.18b* has a rounded shaft and the fastening hole at the bottom is rectangular. The trident prongs are all square in cross-section. It has a thickening at the split of the trident. The horizontal arms angle slightly downwards at this point. Both left and right cast-on rings have a single ring pinched on, each with two dangling ones. The pinched rings have diameters of ca. 25 mm, while the loose rings have diameters of roughly 33 mm. There is wear on the cast-on, the pinched and the dangling rings. There is a fragment of a ring with a square cross-section corroded onto the middle prong of the trident. This linchpin has the 'crudest' heads. The mouth is made of two crossed lines rather than the usual three. The hair is portrayed with the simple split and the diagonal lines down the side already described. The middle braid on the back shows extensive wear, with the outer braids also showing wear, but less so. The back of the shaft shows very clear wear from the axle-cap. Linchpin *WIJ.18c* has a very thick and crude shaft with a rounded cross-section. The hole at the bottom is round. The split where the shaft meets the trident again has a thickening. The three cast-on rings show a lot of wear (Fig. C35.8). The left prong has the one pinched and both dangling rings. The dangling rings are smaller though, only 25 mm in diameter. The middle cast-on ring has the pinched ring (25 mm in diam.) and one dangling ring (ca. 30 mm in diam.). The faces are slightly different, though stylistically the same as *WIJ.18b* and *WIJ.18d.* The 'hair decoration' lines go past the eyes. The braid on the middle head shows very extensive wear. There is wear on the shaft from the axle-cap. Linchpin *WIJ.18d,* in contrast, again has a shaft with a square cross-section. This linchpin does not have the thickening at the split where the shaft meets the trident prongs. The prongs of the trident look rather refined compared to the other linchpins. The middle cast-on ring is the only one with pendant rings still attached. The cinched ring is 25 mm in diameter, as is one of the dangling ones. The other dangling one is 30 mm. The heads have different hairstyles among them. The middle head has hair that on the back is similar to linchpin *WIJ.18a* (without the 'cap' or raised rib on top of the head), while the other two have the simple part with diagonal lines angled downwards. The shaft has extensive wear from the axle-caps.

The Wijchen linchpins were most likely made in Central Europe, but the heads atop the tridents show central Italian influence. The hairstyles, especially the braids down the back, resemble depictions of Etruscan women. Figure C35.9 shows several amber figurines from the 'Circulo dei Monili', Vetulonia (Pare 1992, 170). Both the hairstyle and the ears show similarities to the heads on the Wijchen linchpins. Pare argues (1992, 91–2) that *WIJ.18b–d* are copies of linchpin *WIJ.18a.* In his opinion



Fig. C35.8 Wear on the linchpins from Wijchen (WIJ.18bc). Photographs by J. van Donkersgoed.

WIJ.18a is much "finer" than the others, as evidenced by its "lighter construction, well-made rectangular shaft and the form of the zoomorphic heads" (Pare 1992, 92). In my opinion, the construction of the rectangular shaft of *WIJ.18d* surpasses *WIJ.18a*. Linchpin *WIJ.18d* is the only pin that does not have a 'thickening' at the split where the shaft meets the trident. The heads, in my opinion, are better made than on *WIJ.18a.* They are more refined and detailed, just in a different style. The mouth represented by the crossed lines might be considered crude and simple by Pare (1992, 170), but in my opinion it is more distinctive than the barely visible mouths on pin *WIJ.18a*. Moreover, the Etruscan figurines depicted in Figure C35.9 seem to have more in common with linchpins *WIJ.18b–d* than with *WIJ.18a.* Both the braids with simple parting and diagonal lines and the short protuberances (ears or possibly hair buns?) are present on the figurines and linchpins *WIJ.18b–d*, and *not* on linchpin *WIJ.18a*. Either way, *WIJ.18a* is stylistically the odd one out.

Returning to the suggestion that three of the linchpins might be copies of a first pin, it would be a plausible assumption that one pin was used to make a mould for casting the other pins. When one uses an object to make a mould, and that mould is then used to cast other objects, the features of the other objects become more rounded and less defined. No similar pattern is discernible on the Wijchen linchpins. Linchpins *WIJ.18b–d* might be comparable stylistically, with *WIJ.18a* being different, but the shape and finish of the shafts vary. It is therefore unlikely that any single pin was used to create the mould to cast the other pins. It remains something of a mystery why one pin is so different stylistically.

There are several rings with round cross-sections (*WIJ.25*) that have a diameter of 25–30 mm. One ring appears significantly thicker, and one of the thin ones has a possible spot of wear. Considering their size and numbers, it is likely these dangled from the linchpins (as discussed below, an old picture of the linchpins shows that originally many more of the rings were still attached to the pins; Fig. C35.2).

Tools The melted appearance of the bronze axe indicates that it was exposed to extremely high temperatures (Fig. C35.10). The shoulders of the axe are emphasized and there is a decoration on the socket. The actual socket of the axe has not only liquefied but also broken off from the body of the axe. It is possible that the axe was located on or close to the body, as this is generally the hottest part of the pyre. This is discussed further below. The melted appearance of the axe makes determining the type very difficult, but it is mostly like a Niedermaas (or perhaps a Helmeroth) axe which is a regional type (Butler/Steegstra 2003/4; Fontijn 2015, pers. comm.).

The wagon-grave from Wijchen also contained an iron knife. When I first examined this knife in 2011 it was covered with a thick layer of corrosion and in two pieces (and at the time I postulated that these could be from two knives, which subsequent restoration proved incorrect; see Section C3.2). This made it hard to discern its exact original shape. Since then Meijers has restored this knife. The two pieces have been reattached to each other, and the knife has been (partially) cleaned. It has a straight back and curved blade. The tang has a rectangular cross-section.

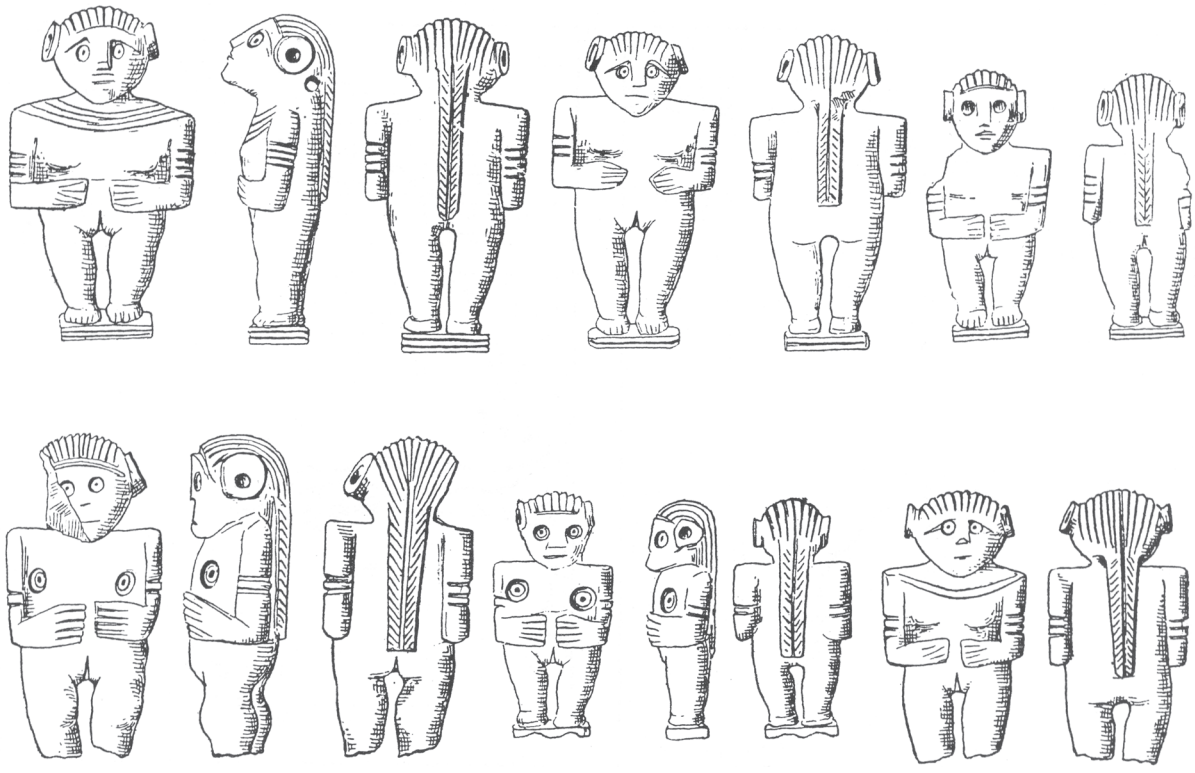


Fig. C35.9 Etruscan figurines showing backbraids similar to those found on the Wijchen linchpins. Figure after Pare 1992, fig. 115.

Reattaching the tip revealed this knife to have been bent prior to deposition.

Personal appearance The hollow head of a pin is ca. 21 mm in diameter. Iron corrosion on the pinhead indicates that it is likely iron, though this type of object more commonly is made from bronze. There is an iron pin running through the center of the hollow sphere, but otherwise the pin has not survived. There are two linked bronze rings affixed to the pinhead, but these are not part of the pin.

Several fragments of decorated bronze sheet with bronze 'staples' are an intriguing phenomenon (Fig. C35.11). They all bear the same decoration in the form of panels of vertical lines separated by horizontal ribs and lines of embossed dots. Four of the 'staples' are attached to the various fragments and there is also a loose 'staple'. Some of the fragments are bent and twisted and appear heavily affected by heat, while another fragment seems untouched. It is my opinion that these could very well be from a belt plate (see for comparable examples Kilian-Dirlmeier 1972). Two pieces of bronze and another fragment with the same embossed rib and dot decoration have been folded deliberately and are likely also from the belt plate (Fig. C35.11, top left). A punched hole is visible, indicating it likely was fastened to something. Similar decoration patterns can be found on belt plates, indicating that these fragments also may be from the belt plate. The hole in the folded piece certainly makes it likely as the other fragments have similar holes for the placement of the staples.

Other Rings are the most common artifact type in this burial. They are present in various sizes and cross-sections. Though presumed to be part of the wagon and horse-gear, it is not always possible to determine where on a wagon or bridle the rings would have been located. The rest of this section discusses the rings in more detail and suggests possible functions for the rings. Bear in mind that in some cases this involves a fair amount of speculation.

The rings from Wijchen (with one exception) have either a square or round cross-section, and all are made of bronze. The largest rings have a square cross-section. There are two rings with diameters of 46.5 mm and one with a diameter of 42.5 mm (*WIJ.24*). One of the larger ones shows wear. In one spot the inside of the ring has become rounded, with the wear running over the edge. This indicates that the wear was caused by something that could move, like another ring.

Small linked rings with square cross-sections have diameters of 21 mm. There are two pairs of linked rings (*WIJ.26*), and fragments of four more rings. One of the



Fig. C35.10 The partially liquefied axe (WIJ.18; top) with details from various angles (bottom). Photographs are different scales. Photographs by J. van Donkersgoed.

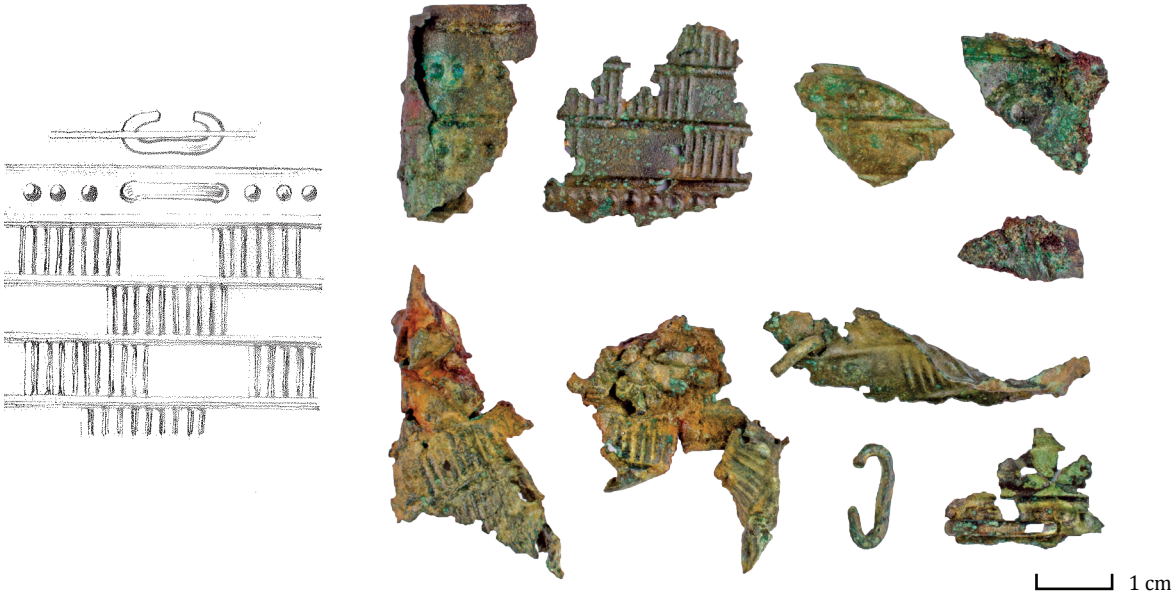


Fig. C35.11 Belt plate fragments (WIJ.23). Photograph by J. van Donkersgoed; reconstruction by G.J. de Vries.

sets of linked rings is affixed to the pinhead, and the other has two spots of wear on each ring. One of the fragments shows wear. These small rings with square cross-sections likely dangled from the bottom of the decorative plaques made up of hemispherical cups (*WIJ.15*; Fig. C35.7). The bent plaque still has a single ring of this size and cross-section attached to the bottom. Furthermore, the linked rings would have jingled when dangling from these plaques. As already has been indicated for several other objects, jingling and noise seem to have been a desired feature (see also Section 6.3). There are a further five ring fragments (*WIJ.27*), which all have either a square or flattened diamond-shape cross-section. Two fragments likely belong together. There are two sizes of rings with square cross-sections that occur linked together.

Rings with round cross-sections occur in several different sizes. Several of these are of the same dimensions as the rings still attached to the axle-pins and are likely from those pins, and some are even still linked together (*WIJ.25*). An old photograph of the Wijchen objects confirms that in the past many more rings were still attached to the pins than there are today (Fig. C35.2). The largest ring present would have had a diameter of at least 33 mm, but only a fragment survives. The next largest are three rings with a diameter of 30 mm, one ring of which is thinner on one side than the other. There are three fragments from rings with a diameter of ca. 28 mm and three fragments from rings with a diameter of ca. 25 mm. The linked rings have a diameter of ca. 30 mm. Of this size there are two rings that are linked together, and one that is loose. The linked rings have two spots of wear each, located across from each other. The rings are a little distorted in shape. The loose ring is slightly less distorted and has one possible spot of wear. It is unclear where these rings originally were located or what their function was. That the two rings are linked suggests that they may have dangled from something, both as decoration and to jingle noisily (a recurring feature in wagon decorations).

Three of the fragments have some kind or residue or discoloration on them that at first glance appeared to be iron corrosion but may also be leather residue. There are another two ring fragments with round cross-section. One is corroded onto a small plate of decorated bronze (*WIJ.10*). Lastly, there are also several fragments that cannot be further identified (*WIJ.28–29*).

C35.3 Dating

The bronze horse-bits and rein-knobs argue for a Hallstatt C date, while the wagon axle-caps have parallels both in Hallstatt C and D1 (Pare 1992, 139–40; 151; Trachsel 2004, 53; 371). The axe seems to be an early type, related to an Urnfield form but belonging in the Hallstatt period. The ribbed bucket cannot be dated more accurately than the Hallstatt period. As the iron sword appears to be unique, it provides no typochronological date. For the most part this grave seems to belong to the earlier Hallstatt period, possibly to the transition from Hallstatt C2–D1 (Fig. 3.5; Pare 1992, 139–40; 151; Trachsel 2004, 53; 371).

C35.4 Actions taken and reconstructing the (burial) ritual

The find circumstances of this burial are shrouded in mystery. Beyond a notation indicating that the finds were discovered in a ceramic urn there is no information available. The condition of the objects themselves, however, reveals at least some of the actions undertaken during the burial ritual.

C35.4.1 A wagon (and other objects) on fire?

As noted above, some of the artifacts from Wijchen were exposed to high temperatures, while others appear unaffected. There is significant variation in the degree of damage observable, indicating exposure to different temperatures. As mentioned in Section 2.2.3, the temperatures reached in a funeral pyre depend on various circumstances and can vary substantially throughout. The fire can burn much hotter in the immediate surroundings of the body, even melting objects placed on it. Objects positioned at the edge of the pyre can remain completely unaffected by heat. Any shifting of the pyre while it burns also can affect the conditions within the fire. As discussed in Section 2.2.3.4, the melting point of bronze can be reached under certain conditions. It is also possible that bronze objects placed on or against the pyre would not show visible signs of heat-damage, even though they were exposed to the fire. The variations in heat-damage observed on the artifacts therefore could be explained by varying conditions within the pyre. It is also possible that some objects were placed near the pyre, or against it, rather than actually on it. If iron objects were on the pyre, it is unlikely that they would have been (visibly) affected by the heat as iron has a melting point of ca. 1500 °C, a temperature unlikely to be reached in an open air funeral pyre. The following discusses whether the signs of exposure to heat on the various bronze artifacts can show how objects were placed on the pyre during cremation.

Starting at the 'front' of the wagon, the rein-knobs (*WIJ.08*) have a slightly bubbly surface. This could be the result of exposure to heat, but might also be the result of post-depositional processes. Considering that the bits show no sign of heat exposure, I would conclude that the bridles where either not placed on the pyre, or were located

Tab. C35.1 (next page) Inventory and numbering information Wijchen.

Wijchen **Gelderland, the Netherlands**					**Data quality:** poor
Method of recovery: chance find (poor) **Year of discovery:** 1897 **Date:** Ha C1–D1 **Current location:** Museum het Valkhof, Nijmegen		**Use/ repair**	**Bending/ breaking**	**Fire**	**Other numbering systems:** Van der Vaart 2011
	Human remains				
WIJ.01	Cremation fragments	Indet	Indet	-	-
	Pottery				
WIJ.02	Fragment	--/--	--/-	29	29
*WIJ.30**	Urn, contained all other finds	Indet	Indet	-	-
	Bronze vessel				
WIJ.03	Bucket handle and handle attachments	++/--	--/+	51a-c	51a-c
WIJ.04	Fragments of decorated bronze sheet from the ribbed bucket.	++/--	--/+	49a–d	49a–d
WIJ.05	Fragment of decorated bronze sheet from the ribbed bucket	++/--	--/+	50b–d	50b–d
	Weaponry				
WIJ.06	Iron sword (and fragments of sword)	--/--	++/-	19, 26a, 31–47	19, 26a, 31–47
	Horse-gear				
WIJ.07ab	Bronze horse-bit, 2x	++/+	--/--	1ab	1ab
WIJ.08	Bronze ring-footed rein-knobs, 6x	++/+	--/--	2a–f	2a–f
*WIJ.09**	Bronze rings with a thickening, missing	--/--	--/--	3a–e	3a–e
	Yoke and wagon components				
WIJ.10	Bronze sheet yoke band fragments	--/--	+/+	16a–g, 27ab	16a–g, 27ab
WIJ.11ab	Hollow cast bronze socket, 2x	--/--	--/+	10ab	10ab
WIJ.12ab	Square cast bronze base, 2x	--/--	+/+	48ab	48ab
WIJ.13	Flat bronze rings with a pair of nails, ca. 11x	--/--	--/--	5a–o	5a–o
WIJ.14	Bronze nails with domed heads, 3x	--/--	--/--	4a–c	4a–c
WIJ.15	Fragments of cast bronze plaques composed of hollow hemispherical cups linked together	++/--	++/+	6a–c, 26	6a–c, 26
WIJ.16	Bronze band decoration	--/--	++/-	7	7
WIJ.17	Bronze pendants, 2x	-/--	+/++	9ab	9ab
WIJ.18a–d	Bronze linchpins, 4x	++/--	--/-	14a–d	14a–d
WIJ.19a–d	Bronze axle-caps, 4x	++/--	--/-	52a–d	52a–d
	Tools				
WIJ.20	Bronze socketed axe	--/--	--/-	18 & 24	18 & 24
WIJ.21	Iron knife	--/--	++/--	15	15
	Personal appearance				
WIJ.22	Iron hollow-headed pin with linked rings with square cross-section affixed	--/--	--/+-	--	8
WIJ.23	Fragments of decorated bronze sheet, probably from a belt plate	--/--	++/++	++	17a–f, 50a
	Other				
WIJ.24	Bronze rings with a square cross-section (42.5 and 46.5 mm in diam.)	--/--	--/--	+-	12a–c
WIJ.25	Bronze rings with a round cross-section that likely dangled from the linchpins (25-30 mm in diam.)	++/--	--/+-	--	11ab, 13a–g, 21, 25
WIJ.26	Bronze (linked) rings and fragments with a square cross-section (21 mm in diam.)	++/--	--/+-	+	20ab & 8
WIJ.27	Bronze ring fragments with square and flattened diamond cross-sections	--/--	--/+-	+	22
WIJ.28	Bronze fragmented sphere fragment	--/--	-/+-	+-	23
WIJ.29	Bronze corroded fragments	--/--	-/+-	++	28
References: Pare 1992; Vissers 1996.					

in a part of the pyre that did not burn particularly hot. The same seems true for the yoke, given that the bronze yoke bands (*WIJ.10*) show no obvious signs of burning. There was no clear heat-damage evident on the vast array of rings. The linchpins (*WIJ.18a–d*) and axle-caps (*WIJ.19a–d*) show no obvious signs of heat-exposure, indicating either that they were not in the fire or that they were on a part of the pyre that did not reach high temperatures. Several wagon components are in slightly odd condition. An example is a decorative bronze band with openwork decoration (*WIJ.16*) from the wagon-box that has been folded up. It shows damage from heat. The strip has angled edges that would have fastened the band to the wagon-box (Fig. C35.1). If the band had been wrenched from wood the angled edges would not have survived. In my opinion, therefore, this band was burned first and then folded up. Another odd phenomenon is that one bulbous-headed socket (*WIJ.11a*) and square base (*WIJ.12a*) are in perfect condition, while the other set (*WIJ.11b* and *WIJ.12b*) has been extensively damaged by exposure to heat. The affected base is in three fragments and appears almost melted. It is thought that these were located on the corners of the wagon-box. If the sockets and bases were still on the wagon-box when one set was so affected by heat, it would mean that there was a significant difference in temperatures over a small distance. The other possible scenario is that one set was removed from the wagon and burned on the pyre, while the other was removed from the wagon for direct placement in the urn. Similar scenarios can be envisaged for the flat bronze rings with a pair of pins (*WIJ.13*) that would have decorated the wagon-box. Ten, more or less complete, flat bronze rings with a pair of pins and the fragments of four more are in perfect condition, while one is distorted and melted. However, it is unlikely that only one ring was placed on the pyre and the others removed from the wagon for interment since the intact rings show no signs of having been wrenched from the wooden wagon-box. This means that we must envision a scenario in which the wagon-box (or at least the wooden components) with the bronze rings nailed-on was burned on the pyre in such a way that the wood burned without affecting all but one ring. Once again indicating vastly different conditions throughout the pyre.

It is my opinion that taken together the above indicates that the wagon from Wijchen most likely was placed on the pyre in its entirety. For as the above shows, certain metal wagon components show heat-damage and definitely were burned on the pyre. This fact taken alone could be the result of the wagon being dismantled and only certain wagon components being placed on the pyre. However, there are also metal wagon components that may not appear burned, but also were not forcibly removed from the wooden wagon by hand. The bronze rings with a pair of nails (*WIJ.13*) would be distorted in shape had they been wrenched off the wagon-box. The decorative bronze band (WIJ.16) would no longer have the 90° angle fastening edge. These facts taken together indicate that the wagon most likely was burned in its entirety. The documented differences in temperature that can occur in open-air pyres then explain the differences in observable heat-damage. The lack of heat damage to the axle-caps and linchpins could indicate that they were removed from the wagon prior to it being placed on the pyre. The dismantling of the wagons and wheels is something also seen in chamber inhumations in the Hallstatt Culture area (Pare 1992, 195–200). However, the presence of part of the nave cap on one of the axle-caps would seem to suggest that the axle-caps, and therefore the wheels and linchpins still were attached to the wagon as it burned. The object most affected by high temperatures is the axe (*WIJ.20*), which has liquefied partially. The belt plate (*WIJ.23*) also shows significant heat-damage, and it is possible that the curling up of the various fragments was caused by exposure to the fire. It seems likely that the belt was worn on the body during cremation, which would explain the high temperatures it was exposed to as the immediate surroundings of a body burn the hottest. Considering this, it seems plausible that the axe was placed near the corpse. As rich as the bronze objects are regarding indications for their placement on the funeral pyre, the iron artifacts offer no information. There is only circumstantial evidence. Given that iron would not melt in the temperatures reached in an open air fire, the iron objects just as well could have been on the pyre as not. However, considering that the bronze personal belongings seem to have been positioned on or near the body as it was cremated, it seems probable that certain iron objects were burned on the pyre as well.

C35.4.2 The burial ritual

Several small fragments of cremated bone encountered during the examination of the artifacts indicate that a cremation took place. The previous section showed that the wagon likely was burned on the pyre. It is impossible to determine how the wagon was positioned on the pyre in relation to the deceased. The corpse may have been placed on top of the wagon, or the pyre may have been large enough for the wagon to be positioned next to the body. The deceased likely was adorned with a belt plate and an axe probably was placed by the body on the pyre. With regard to the iron objects in this burial, such as the knife and sword, it is impossible to determine based on their appearance whether they were burned. Given that the wagon and the axe were burned, however, it would not be unreasonable to assume that all or some of the

other grave goods were placed on the pyre as well. After the pyre cooled the cremated remains and objects were collected. Attention was paid to collecting components from the bridles, yoke and wagon. For the most part the mourners seem to have been very thorough in their collecting, making it rather odd that the bucket is so fragmentarily present. During this process several artifacts were manipulated in some manner or other. A fragment of bronze yoke band (*WIJ.10*) and one of the decorative plaques (*WIJ.15*) were bent. The bronze band with openwork decoration (*WIJ.16*) was folded multiple times. The same is true for a fragment of bronze plate (*WIJ.23*) from the belt plate. One of the bronze pendants (*WIJ.17*) appears almost wrenched apart. As already discussed, it seems that they were manipulated *after* having been on the pyre. It is impossible to determine whether the sword was placed on the pyre, but it does reveal another step in the funeral process. It was intentionally curled up. Likewise, the iron knife was bent at some point prior to deposition. This practice of 'interfering' with grave goods seems to be characteristic of Early Iron Age burial practices in the Low Countries (see Chapter 7). The collected cremation remains and objects were placed in a ceramic urn that no longer survives. This urn was buried, but it remains unclear exactly where this was done and whether the burial was covered by a barrow.

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App. CA1 Hallstatt period textile finds from the Netherlands

By K. Grömer

This appendix summarizes the technical data regarding the textiles from Oss-Vorstengraf and Uden-Slabroek as determined by K. Grömer from the Vienna Natural History Museum. She performed an extensive analysis of all material, and while her results are also available as Report Textile Archaeology 2015/7 from the Natural History Museum Vienna they are included here as this Catalogue brings together all the new research into the elite burials. Section C2.7.2 discusses the technical aspects and terminology used in textile analysis. For this research measurements of technical details of the textile were carried out with a DinoLite Digital Microscope. Using the thread diameter, fine structures of the textile and details of patterns and seams could be documented. Fiber analysis was carried out by means of a Scanning Electron Microscope (JEOL, JSM-6610LV) at the Central Research Laboratories, located at the Vienna Natural History Museum. Electron microscopy is applied to study objects down to micro- and even nanometer scale (0.000001 mm) in a structural or analytical way.

CA1.1 Textiles from Oss-Vorstengraf

Textile on Mindelheim sword (*OV.06*; see Fig. CA1.1)

Description of the find: sword with four kinds of textiles on different parts of the object: There is a coarser tabby *OV.06*-1 (Textile A) on the side of the handle. The blade is covered by three different fabrics: on the outside coarser tabby *OV.06*-2 (Textile B), multiple layers of a fine diamond twill *OV.06*-3 (Textile C) and finer tabby *OV.06*-4 (Textile D). The strongly destroyed remains on the inner side of the blade might be identified as deriving from the fine diamond twill *OV.06*-3 (Textile C)

Coarser tabby *OV.06*-1 (Textile A)

Size: 35 x 15 mm
Color and material: rust-red, material not detected, no sampling possible
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	z	s
Twist angle	?	?
Thread thickness	0.5 mm	0.4–0.5 mm
Thread count (threads per cm)	5–6	not countable

Weave type: tabby
Surface, seams, hems, patterns: -
Remarks: due to conservation practices, textile destroyed and rubbed-off

Medium fine tabby *OV.06*-2 (Textile B)

Color and material: rust-red, material not detected, no sampling possible
Size: ca. 7 x 8 mm visible
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	z	z
Twist angle	20–30°	20–30°
Thread thickness	0.4 mm	0.4 mm
Thread count (threads per cm)	ca. 15	14–15

Weave type: tabby
Surface, seams, hems, patterns: -
Remarks: dense fabric: micro-stratigraphy: weave *OV.06*-2 between sword blade and diamond twill *OV.06*-3

Fine diamond twill *OV.06*-3 (Textile C)

Color and material: rust-red, material not detected, no sampling possible
Size: ca. 85 x 40 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	s	z
Twist angle	30°	30°
Thread thickness	0.2 mm	0.2 mm
Thread count (threads per cm)	ca. 20–24	ca. 20–24

Weave type: diamond twill, with point repeat in one direction, displacement in the other
Surface, seams, hems, patterns: -
Remarks: multiple layers (more than 6), covering the sword blade on different parts on the out- and inner side, going through one edge; textile on the inner side of the sword very destroyed, but might belong to this fabric. Between sword blade and diamond twill sometimes the tabby *OV.06*-2 can be seen and on the diamond twill there are fragments of another tabby *OV.06*-4.

Tab. CA1.1 Technical data textile analysis on Mindelheim sword (OV.06) by K. Grömer.

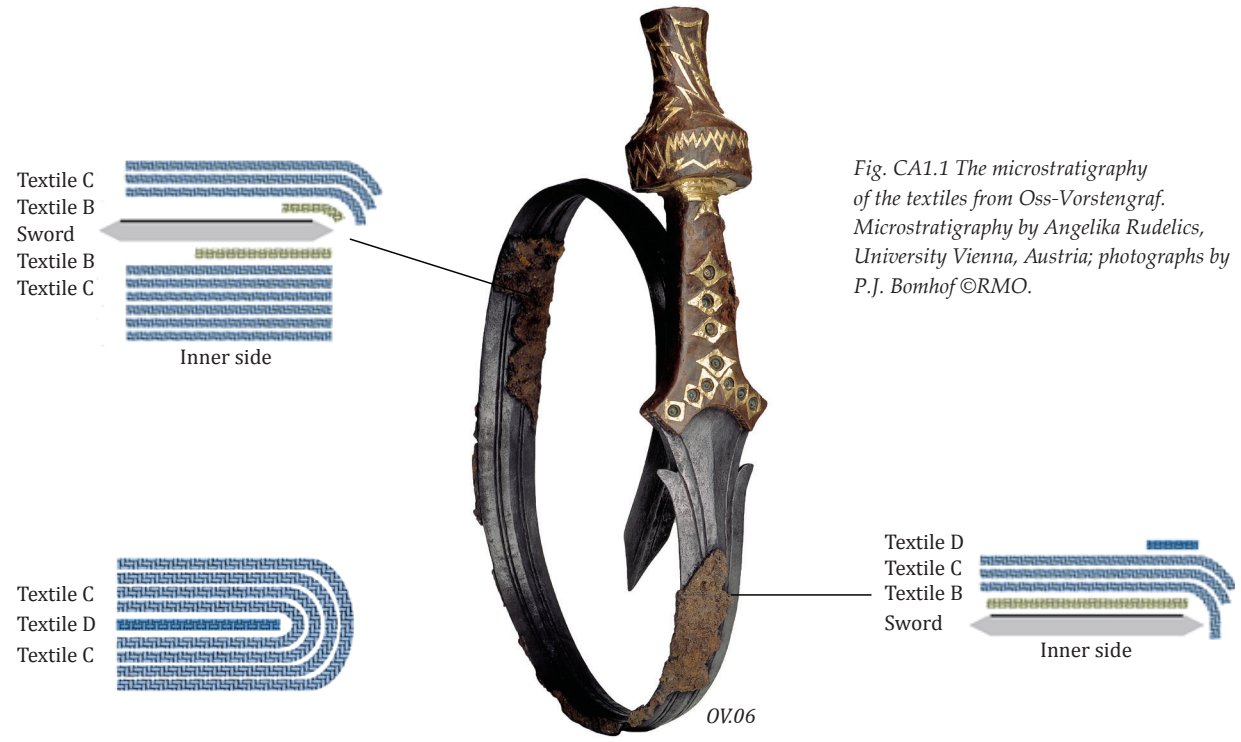
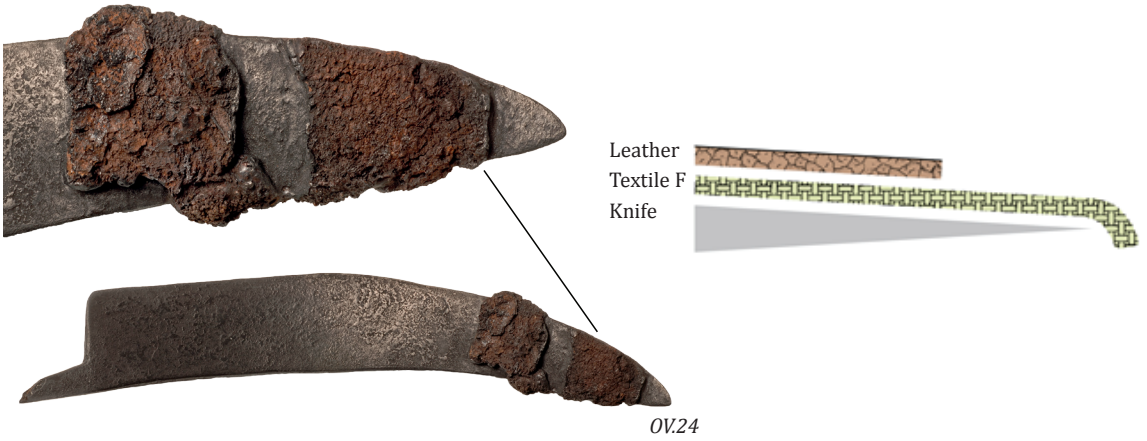


Fig. CA1.1 The microstratigraphy of the textiles from Oss-Vorstengraf. Microstratigraphy by Angelika Rudelics, University Vienna, Austria; photographs by P.J. Bomhof ©RMO.





Finer tabby *OV.06*-4 (Textile D)

Color and material: rust-red, material not detected, no sampling possible
Size: ca. 5 x 5 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	s	z
Twist angle	30°	30°
Thread thickness	0.3–0.4 mm	0.3–0.4 mm
Thread count (threads per cm)	16	16

Weave type: tabby
Surface, seams, hems, patterns: -
Remarks: this tabby is partly visible as top layer on the diamond twill

Tab. CA1.1 (continued).

Textile on iron knife (*OV.24*)

Description of the find: iron knife with coarse textile fragments (*OV.24*-1) on one side of the blade preserved, folding over the edge of the back of the knife. The textile can be identified on two parts of the blade, in one case it is covered by leather (*OV.24*-2). On old photos (before restoration) the textile was better visible.

Coarse tabby *OV.24*-1 (Textile F)

Color and material: rust-red, material not detected, no sampling possible
Size: 30 x 26; 30 x 25 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	s	z
Twist angle	30°	30–40°
Thread thickness	0.6 mm	0.6 mm
Thread count (threads per cm)	12	7

Weave type: tabby
Surface: very dense, slightly ribbed appearance due to different thread counts in warp and weft
Seams, hems, patterns: -
Remarks: Microstratigraphy: the tabby *OV.24*-1 is directly attached to the knife blade; it is partly covered by leather

Leather (*OV.24*-2)

The leather is clearly visible, but the type of animal and the type of tanning cannot be identified, because clear identifying characteristics (grain pattern, texture) are missing.

Tab. CA1.2 Technical data textile analysis on iron knife sword (OV.06) by K. Grömer.

Textile on iron rings (*OV.16*)

Description of the find: pack of iron rings, items strongly restored, but still on 2 rings textiles of two different kinds are visible: on a smaller ring a coarse tabby (*OV.16*-1) and on the side of the multiple-packed rings a diamond twill in at least 4 layers (*OV.16*-2).

Coarse tabby *OV.16*-1 (Textile A)

Color and material: rust-red, material not detected, no sampling possible
Size: 18 x 6 mm
Identification warp and weft: no selvedge survived

Technical details: comparable to *OV.06*-1 and *OV.18*

Weave type: tabby
Surface: open weave
Seams, hems, patterns: -
Remarks: surface worn out; on top of the textile a blackish substance visible. It could not ne identified clearly, maybe leather or residues from conservation process

Fine diamond twill *OV.16*-2 (Textile E)

Color and material: rust-red, material not detected, no sampling possible
Size: 36 x 19 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	s	z
Twist angle	40–50°	40°
Thread thickness	0.3 mm	0.3–0.4 mm
Thread count (threads per cm)	not countable	not countable

Weave type: diamond twill
Surface, seams, hems, patterns: -
Remarks: folded textile? Poor visibility due to heavy restoration

Tab. CA1.3 Technical data textile analysis on iron rings (OV.16) by K. Grömer.

Textile on iron ring (*OV.18*)

Description of the find: iron ring with textile on one side, not going around

Coarser tabby *OV.18*-1 (Textile A)

Color and material: rust-red, no SEM possible
Size: 24 x 7 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	s	z
Twist angle	25°	30°
Thread thickness	0.4 mm	0.4–0.5 mm
Thread count (threads per cm)	5–7	ca. 6

Surface: open weave, low cover factor
Seams, hems, patterns: -
Remarks: very destroyed

Tab CA1.4 Technical data textile analysis on iron rings (OV.16) by K. Grömer.

Loose textile (*OV.39–42*)

Description of the find: box with different textile fragments in decomposed state from the inside of the situla. No exact localization of single elements possible. The content of the box was sorted by different weave types. Those were compared with the weave types identified on the bronze and iron objects from the situla. All weave types except the coarse tabby *OV.24*-1 (Textile F) from knife could be identified. Here, the descriptions just extend the information given for the bronze objects. Additionally, two more weave types (Textiles G and H) were recognized, which differ from those recorded on the artifacts. Those will be described here in detail.
Textile A There are two loose fragments of this textile identified in box *OV.42*. They are very small, less than 10 x 10 mm).
Textile B There are two loose fragments of this textile identified in box *OV.42*, they are single layers, less than 10 x 10 mm.
Textile C This is the most abundant textile In box *OV.42*. There are a lot of loose fragments of this textile with quite large lumps of multiple layers. There are four chunks bigger than 35 x 35 mm, with the largest chunk measuring ca. 40 x 50 mm. Some nine fragments are 20 m long and between 10-20 mm wide, and there are over a dozen smaller chunks. Very few chunks are single or double layers of textile, and most appear to be between 4-8 layers of textile, with one fragment being four layers folded double.
Textile D Tabby that in two cases is attached to a lump of Textile C textile. In one case the Textile D is on Textile C, but the other case shows a single layer of Textile D folded inside several layers of Textile C. This means that Textile D can *also* be identified as a grave good.
Textile E There are only a few very small fragments of this textile in box *OV.42*.
Textile G Coarse twill, only very small sample in box *OV.42*
Textile H Plied yarn, wrap, band weave, only very small sample in box *OV.42*

Coarser tabby (Textile A)

Color and material: rust-red and blackish, sample for SEM taken
Size: < 10 x 10 mm (2 fragments)

Technical details: comparable to *OV.06*-1, *OV.16*-1 and *OV.18*

Weave type: tabby
Surface: open weave
Seams, hems, patterns: -
Remarks: some fragments identified

Medium fine tabby (Textile B)

Color and material: rust-red and blackish, sample for SEM taken
Size: < 10 x 10 mm (2 fragments)

Technical details: comparable to *OV.06*-2

Weave type: tabby
Surface: open weave
Seams, hems, patterns: -
Remarks: -

Fine diamond twill (Textile C)

Some lumps of the weave were separately stored in boxes *OV.39–40*; more items has been sorted out from box *OV.42*. Fine diamond twill, folded into multiple layers
Color and material: black to reddish-brown, sample for SEM taken
Size: there are a lot of loose fragments of this textile with quite large lumps of multiple layers. There are four chunks bigger than 35 x 35 mm, with the largest chunk measuring ca. 40 x 50 mm. Some nine fragments are 20 mm long and between 10–20 mm wide, and there are over a dozen smaller chunks.

Technical details: comparable to *OV.06*-3; but here a thread count of 20–22 in one system; 24–26 in the other recorded

Weave type: diamond twill, with point repeat in one direction, displacement in the other
Surface: surface sometimes very destroyed; different preservation conditions
Seams, hems: in box *OV.42* a bigger blackish lump with stitches (overcast-stitch?).
Sewing thread: ca. 0.3 mm sZ-plied yarn
Stitch distance: 3 mm, regular
Twill structure: diamond twill repeats 15 in one direction, 20 in the other. After Bender Jorgensen 24(?)
Remarks: folded lumps of Textile C, sometimes one layer of Textile D folded (see mcrostratigraphy)
Very few chunks are single or double layers of textile, and most appear to be between 4–8 layers of textile, with one fragment possibly being a total of 10 layers. One textile chunk is four layers folded double around a single layer of Textile D textile.

Finer tabby (Textile D)

Color and material: dark, sample for SEM taken
Size: unknown (2 fragments, attached to fragments of Textile C)

Technical details: comparable to *OV.06*-4

Weave type: tabby
Surface: open weave
Seams, hems, patterns: -
Remarks: Textile D in box *OV.42* only identified, when still attached to fine diamond twill Textile C, there are 2 lumps of multilayered Textile C with one layer Textile D folded in

Medium fine diamond twill (Textile E)

Color and material: rust-red and blackish, sample for SEM taken
Size: ca. 15 x 15 mm (ev. no. of fragments), several fragments

Technical details: comparable to *OV.16*-2. Additional identification: thread count ca. 20 threads per cm in warp and weft. No repeat countable, fragments are too small; but it must be more than 10

Weave type: diamond twill with point repeat
Surface: on the better preserved items surface very flat and regular, high quality object
Seams, hems, patterns: -
Remarks: also multilayered, at least 6 layers; maybe it was the bottom textile placed, folded

Coarse twill (Textile G)

Color and material: rust-red and blackish, SEM sample taken
Size: <10 x 10 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	z	s
Twist angle	20°	20°
Thread thickness	0.4 mm	0.4–0.5 mm
Thread count (threads per cm)	5–7	ca. 6

Weave type:
Surface: on some fragments the surface is heavily worn; use-wear or caused by degradation process?
Seams, hems, patterns: -
Remarks: threads low twist

Repp (Textile H)

Color and material: rust-red and blackish, SEM sample taken
Size: 5 x 12 mm (2 fragments)
Identification warp and weft: no selvedge, but due to weave structure (repp) it seems feasible to identify the plied yarn as warp

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	plied yarn	single yarn
Twist direction	zS	z
Twist angle	20°	20°
Thread thickness	0.8 mm	0.3–0.4 mm
Thread count (threads per cm)	not countable	not countable

Weave type: repp
Surface: -
Seams, hems, patterns: -
Remarks: no selvedge survived, maybe it was a repp band, as comparable finds from Hallstatt demonstrate

Tab. CA1.5 Technical data textile analysis on iron rings (OV.16) by K. Grömer.

CA1.2 Textiles from Uden-Slabroek

Textile on bracelet (*US.07*)

Description: coarse twill (*US.07*-1; Textile A) in 2–3 layers on the right bracelet, covered by fragments of a finer twill (*US.07*-2; Textile B)

Coarse twill (no. *US.07*-1; Textile A)

Color and material: sheep wool, some kemp; more or less brownish, in oblique light some colours visible (brighter, reddish) and darker. In Microscope bluish threads visible. Dyestuff analysis carried out by N. van Bommel
Size: 2 major pieces (ca. 70 x 30 mm and 40 x 20 mm)
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	single yarn	single yarn
Twist direction	z	z
Twist angle	30–40°	30–40°
Thread thickness	0.5–0.7 mm	0.6–0.8 mm
Thread count (threads per cm)	9	11

Weave type: 2/2 twill (more than 30 threads countable without point repeat)
Surface: rubbed off and worn out, looks felted inside and outside: maybe from degradation process or use-wear
Seams, hems: -
Patterns: color pattern: different colors in warp and weft visible, especially well seen on the small fragment
Remarks: soft and warm textile, yarns irregularly spun

Finer twill (no. *US.07*-2; Textile B)

Color and material: sheep wool, brownish
Size: ca. 15 x 15 mm
Identification warp and weft: no selvedge survived

Technical details:	**Thread system 1**	**Thread system 2**
Yarn/plied yarn	plied yarn	plied yarn
Twist direction	zS	zS
Twist angle	20°	20°
Thread thickness	0.3–0.4 mm	0.3–0.4 mm
Thread count (threads per cm)	16–18	ca. 16

Weave type: 2/2 twill weave
Surface, seams, hems, patterns: -
Remarks: not well preserved, microstratigraphically over Textile A

Tab. CA1.6 Technical data textile analysis of textiles on large bronze bracelet (US.07) by K. Grömer.

Textile on bracelet set (*US.08*; see Fig. CA1.2)

Description: coarse twill (No. *US.08*-1; **Textile A**) in layers, covered by fragments of a finer twill (*US.08*-2; **Textile B**). Here leather (No. *US.08*-3) could be detected above **Textile B**.

Coarser twill (no. *US.08*-1; Textile A)

Color and material: brownish
Size: 3 larger fragments: ca. 30 x 15mm; ca. 35 x 20 mm; ca. 45 x 20mm

Technical details: comparable to *US.07*-1

Weave type: 2/2 pointed twill (unlike to no. *US.07-1* here the point repeats could be detected)
Surface: very decomposed state
Seams, hems, patterns: -
Remarks: bigger parts of the textile survived, sometimes more layers (2–3)

Finer twill (no. *US.08*-2; Textile B)

Color and material: brownish
Size: -

Technical details: comparable to *US.07*-2

Weave type: 2/2 twill
Surface: very decomposed state
Seams, hems, patterns: -
Remarks: the textile is poorly visible

Leather (no. *US.08*-3)

Surface visible and texture, no grain could be identified, therefore no animal type determinable

Tab. CA1.7 Technical data textile analysis of textiles on bronze bracelet set (US.08) by K. Grömer.



Fig. CA1.2 The microstratigraphy of the bracelet set (US.08; left) and the bracelets in excavation at Restauratieatelier Restaura (right). Microstratigraphy by Angelika Rudelics, University Vienna, Austria; photograph by Restauratieatelier Restaura, Haelen.

Textile on anklet (*US.09*)

Description: layers of coarse twill (**Textile A**) with a pattern visible on bronze anklet

Coarser twill (*US.09*-1; Textile A)

Color and material: brownish and light
Size: four larger fragments (ca. 65 x 45 mm; 35 x 30; 50 x 15 mm; 40 x 20 mm) and roughly a dozen fragments smaller than 20 x 20 mm

Technical details: comparable to *US.07*-1 and *US.08*-1

Weave type: 2/2 pointed twill; point repeat on the smaller one: repeat after more than 20 threads
Surface: very well preserved, under oblique light even the pattern is visible
Seams, hems: -
Patterns: pattern countable: from left to right: 6 dark threads, 8 light threads, 8 dark, 2 light; from top to bottom: 4 dark threads, 8 light, 8 dark. Maybe it was a regular checkered pattern of alternating 8 dark and 8 light threads in warp and weft. After the dyestuff analysis red and blue dyestuffs could be detected. It was a pattern in bright red and blue block checks
Remarks: folded textile, two layers at least; bigger parts of the textile survived, sometimes more layers (2–3 layers)

Tab. CA1.8 Technical data textile analysis on bronze anklet (US.09) by K. Grömer.

App. CA2 Chieftain's grave of Oss through three restorations

The restoration history of the Chieftain's grave of Oss is described in this appendix. Any comments made by Holwerda (1934) or Modderman (1964) regarding specific objects are directly quoted. Their comments, combined with those made by Kempkens and Lupak (1993a), are needed to understand how the physical appearance, and our understanding, of the artifacts have changed through time. This information was needed to clarify the mistakes that were made in the numbering of artifacts following the last restoration (see Section C3.1 and C26.2). The inventory numbers of the National Museum of Antiquities in Leiden (RMO) given are those as they appear on the physical objects today. Objects that have been renumbered also have their previous inventory number listed. A '2011' number therefore refers to the current number, while a '1964' number refers to the number an object had prior to the 1992/'93 restoration.

CA2.1 Explanation of the categories

No.: Gives the unique number used in this dissertation.

RMO inventory number: Gives the individual Museum inventory number of the object(s).

Object description: Gives a short description of the object(s), see also Section C26.2.

Inventaris boek 1933: Describes the object(s) listed under that number in the inventory book of the Dutch National Museum of Antiquities from 1933, quoted in the original Dutch (©RMO).

Holwerda (1934): Quotes how Holwerda described an object in his article *"Een vroeg Gallish vorstengraf bij Oss (N.B)"*. Figures mentioned are those in Holwerda (1934).

Modderman (1964): Quotes how Modderman described an object in his article *"The Chieftain's grave of Oss reconsidered"*. Figures mentioned are those in Modderman (1964). Includes my own comments regarding numbering problems.

Kempkens and Lupak (1993a): Summarizes how Kempkens and Lupak treated an object during the 1992/'93 restoration. Information listed here is ©RMO.

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
		"De nummers 2–11 gevonden binnen de bronzen urn nr 1 te zammen met verbrande beenderen, en met de volgende voorwerpen, die ten deele bij de reeds genoemde nummers behooren."			Note: in this column only the structural changes to these objects are summarized, the technical terminology of the different restoration processes has been left out.
Human remains					
OV.01 Cremated remains (and burned animal bone)	k 1933/7.21	"Grote massa grof verbrande beenderen, waaronder mogelijk ook dierenbeenderen."	-	See Modderman 1964, 57 for more information regarding the research done on the cremation remains by. J. Huizinga	-
Bronze vessel					
OV.02 Bronze bucket	k 1933/7.1	"Urn van geslagen brons, uiterst dunwandig, besstaande uit zeer vele stukken. De deelen waren met koperen spijkertjes aan elkaar bevestigd. De rand is scherp geprofileerd, de schouder geribd. Aan wand en wand zijn de overblijfselen van met spijkertjes eraan genagelde ooren herkenbaar. Vgl. Von Sackens, das Grabfeld von Hallsstatt, Taf xx, 1 en 2. Het geheel, thans op een gipsen vorm bevestigd, vormde de bekleeding van een houten tonvormige urn, waarvan afkomstig is:"	"Zoo bleek mij de bronzen urn een typische situla te zijn waarvan slechts een deel van den bovenrand verdwenen was. Deze bronzen situla was gemaakt uit twee trapeziumvormige stukken bronsblik en een afzonderlijken bodem, door nagels aan elkaar bevestigd. Ze was 50 cM hoog en voorzien geweest van twee bandvormige ooren van bronsblik, welke boven aan den rand bevestigd onder het schoudergedeelte eveneens door nagels aan den vaaswand geklonken waren." (Holwerda 1934, 39)	"The situla (k 1933/7.1) was made of three bronze sheets, held together by rivets. These rivets have small knobs on the inside, and must therefore have been beaten flat from the outside. The bottom of the situla is not flat but concave. On the shoulder just under the vertical rim, two ridges are found. Unfortunately, the rim is in a bad state of preservation, the greater part being missing, which is also true of the handles. The handles were mounted where the two bronze sheets forming the wall are joined. The lower attachment of one of the handles is still present and measures about 125 mm. The handle itself must have been much smaller but probably more than 30 mm. Traces of vertical lines show that they were decorated. The upper part of the handles was attached by two rivets to the inside of the rim, an extra small square piece of sheet-bronze was placed on the outside of the rim. The only remaining upper attachment of one of the handles has a decoration composed of two sizes of dots." (Modderman 1964, 58)	During a previous restoration a plaster model was made on the inside of the bucket. It was heavily corroded and brittle. The entire thing is covered in a crusty layer and affected by bronze rot. There are fractures throughout and the bucket is heavily distorted. Parts of the rim, body and bottom of the bucket are missing. The crusty layer and the old plaster model were removed. Loose fragments were refitted and missing pieces reconstructed. The entire surface of the bucket was covered in a layer of polyester reinforced with glass fiber (Kempkens/Lupak 1993a, 1–1.20).
OV.03 Bronze plate fragments from the bucket. -One rim piece with lead. -One possible handle piece with decoration?	k 1933/7.12a	"Kleine stukjes geslagen brons, waarschijnlijk horende bij nr 1."	-	-	-
OV.04 Multiple bronze plate fragments from the bucket. And: -Fragments with possible decoration (handle?) -Rivet? -Bone fragment	k 1933/7.12b	"Kleine stukjes geslagen brons, waarschijnlijk horende bij nr 1."	-	-	-
OV.05 Fragments of bronze plate, many	k 1933/7.20b	-	-	-	-

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
Weaponry					
OV.06 Mindelheim sword	k 1933/7.3	"Rond gebogen ijzeren zwaard, gevonden in nr. 1. De houten knop was versierd met bladgouden, bliksemvormige ornamenten. Onder den knop sporen van wollen weefsel op het gevest, dat verder versierd is aan de breede zijden met opgelegde, ruitvormige, gouden versieringen, die tevens aanwezig zijn op het eensgezins boogvormig, verbreede ondergedeelte van het gevest. Waarschijnlijk was het gehele gevest oorspronkelijk bedekt met hout of been, het welk met bronzen spijkertjes door de uitgespaarde gaatjes midden in de gouden ruitjes op het ijzer bevestigd was. Vgl Von Sacken, Tafel V, 1 en 2."	"Binnen langs den wand van den emmer kwamen zes ijzerfragmenten voor den dag, die aan elkaar bleken te passen en te zamen een zeer sterk verroest, ongeveer 90 cM lang, krom gebogen Hallstattzwaard bleken te vormen van het bekende groote type. Het gevest was met doek bekleed geweest, waarvan nog de sporen aanwezig waren. Midden over het gevest en onder aan in een boogje langs zijn rand waren aan beide zijden een aantal kleine ruitvormig uitgesneden stukjes goudblik met bronzen pennetjes bevestigd geweest. Deze ruitjes waren in het midden rond uitgesneden en waarschijnlijk aangevuld geweest met eenige stof die geheel vergaan was. Ook de knop moet uit vergankelijk materiaal vervaardigd zijn geweest. Hij was echter geheel bezet geweest met zigzag- en bliksemvormige ornamentjes uit goudblik gesneden en uit de ligging en aansluiting dezer ornamentjes onderling liet zich nog de vorm van den knop opmaken en restaureeren, gelijk onze afbeelding" (Holwerda 1934, 40).	"The sword (k 1933/7.3; fig 2) with its decorations of gold leaf is well known because the find lay outside the known distribution area. The present knob on the hilt is a plaster restoration to which the decoration has been attached. Mr. Versloot measured the decayed material showing the original form, and according to him the greatest error is at most a few millimeters. The knob was probably made of wood, whereas the hilt proper may have been of wood or bone. The drawing gives the decoration in detail. Gold leaf is to be found on all sides of the knob. The gold shows incisions in some places. The logenze-shaped figures on the hilt show a circular opening containing a round, hollow piece of bronze. On the edge of the hilt and the blade very small triangles of gold are found, placed at right angles to the surface of the blade. The blade itself had a central, broad rib with a minor one on each side (see cross-section in Fig. 2). The central rib can be followed to within a few mm. of the very point of the sword; its width is constant over the whole length." (Modderman 1964, 58)	During a previous restoration breaks were repaired. The blade of the sword was covered in a thick layer of iron oxide. The crusty layer was hard and grainy. It was heavily corroded. The hilt with gold inlay was also covered with iron oxide. In certain places the gold inlay was distorted and had come loose. Parts are missing. Wood and textile remains had survived on the sword. The crusty layer was removed. The old repairs of the fractures were undone, reinforced and reattached. During this process the 'new' tip (7.8) of the sword (the fragment that Holwerda and Modderman had interpreted as belonging to another sword/knife) was refitted onto the sword. Some missing pieces were reconstructed. The missing pieces of gold inlay on the hilt were replaced (Kempkens/Lupak 1993a, 2–2.14).
OV.07 Gold fragments from hilt including six triangles	k 1933/7.13	"Stukjes bladgoud, deelen van de knopversiering van nr 3."	-	-	-
OV.08 Lead and tin (?) fragments	k 1933/7.14	"Kleine stukjes been (?), waarop de gouden versierselen gelegd waren van nr 3."	-	-	The fragments were heavily corroded, brittle and fragile. Certain pieces are distorted and the surface was damaged. The fragments were impregnated with epoxi but otherwise left untreated (Kempkens/Lupak 1993a, 22).
Horse-gear					
OV.09 Iron horse-bit. On the hinged part of the bit there is a bronze fragment, possibly one of the 'legs' of a sheet-knob	k 1933/7.10h	-	-	"One [of the two iron cheek-snaffles discovered by Mr. Ypey] was found near the axe (10h). […] Both are incomplete." (Modderman 1964, 60)	The horse-bit was broken into several pieces. It was covered with a thick crusty layer. The separate components rusted onto each other and were hollow and fragile. The whole thing is fragmentary and there are pieces missing. The loose fragments were restored and the missing fragments reconstructed. It was cleaned and made movable again. On the hinged part of the bit there is a bronze fragment, possibly one of the 'pins' of a sheet-knob (Kempkens/Lupak 1993a, 7–7.3).

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
OV.10 Iron horse-bit. On the left ring and the right fastening eye there are bronze fragments, possibly 'pins' from sheet-knobs	k 1933/7.10i	-	-	"One [of the two iron cheek-snaffles discovered by Mr. Ypey] was found […] in a separate lump (loi). Both are incomplete." (Modderman 1964, 60).	The whole thing was covered in a thick layer of corrosion. The separate pieces rusted onto each other and the entire thing is fragmented. It is hollow and fragile, and there were pieces missing from the bit. These loose pieces were restored onto the bit and missing pieces were reconstructed. The whole thing was cleaned and made movable again. On the left ring and the right fastening eye there are bronze fragments, possibly 'pins' from sheet-knobs (Kempkens/Lupak 1993a, 6–6.3).
OV.11 Bronze hemispherical sheet-knobs, 12x	k 1933/7.4a-l	"Een achttal ronde knopjes, hol, oorspronkelijk bestemd als beslag, bestemd als beslag, waarschijnlijk van de houten zwaardschede"	"[Aan de kling van bet zwaard waren op verschillende plaatsen nog de fragmenten van een houtenschede vastgehecht], terwijl een achttal kleine ronde knopjes van brons, ongeveer als v. Sacken .J. XVIII 7 e. v. v. waarschijnlijk tot beslag van deze hadden gediend" (Holwerda 1934, 40).	"Eight small, hemispherical, bronze "buttons" were found in the urn. They must have been attached to some leather object, because each of them has two points resembling those of a staple." (Modderman 1964, 58)	The sheet-knobs were covered with a layer of oxide. They were corroded, brittle, fragile and affected by bronze rot. Some sheet-knobs are missing fragments. The sheet-knobs were stabilized and cleaned. There are 15 in total (three are corroded onto rings) (Kempkens/Lupak 1993a, 21–21.1).
OV.12 Bronze tubular cross-shaped object	k 1933/7.7	"Bronzen kruis met vier horizontale armen en één naar onderen gericht armpje, alle met verdikte einden. Bij het midden zijn de horizontale armen aan de bovenzijde weer kruisvormig uitgesneden. Het geheel heeft klaarblijkelijk aan ijzer vast gezeten, zoodat een enkele der armern, die oorspronkelijk alle hol waren, met ijzerroest gedicht is. Vgl. Sacken, taf XVIII, 15."	"Een kruisvormig sierstukje van brons als von Sackenl.l. XVIII 15" (Holwerda 1934, 40).	"To the same group of bronzes [decoration on a horse's harness] we may assign the remarkable tubular cross-shaped object." (Modderman 1964, 58)	The object was covered with a layer of iron oxide and had been affected by bronze rot. Some fragments were missing. The object was stabilized, the missing pieces reconstructed and cleaned (Kempkens/Lupak 1993a, 20–20.2).
OV.13 Bronze *Tutulus*	k 1933/7.18	"Rond bronzen voorwerp, plat, met verhevenheid in het midden."	-	"A heavily corroded and distorted object of bronze [which must have served as decoration on a horses harness]." (Modderman 1964, 58)	The object is heavily corroded, brittle and fragile. It is covered in a layer of iron oxide crust, and affected by bronze rot. The object is heavily distorted and fragments are missing. It was probably burned. The object was stabilized, the missing pieces reconstructed and cleaned (Kempkens/Lupak 1993a, 18-18.1).
OV.14 Fragmented circular bronze object which has a profilation, likely harness decoration. In 1964 this had no. *k 1933/7.18*.	k 1933/7.20c	-	-	"Half of a circular object which has a profilation (fig. 2). No explanation can be offered to its function."(Modderman 1964, 58)	A large part of this object is missing. The remaining piece is covered with a crusty layer, The object was stabilized and cleaned (Kempkens/Lupak 1993a, 19-19.1).
OV.15 Bronze rings, 3x	k 1933/7.5	"Een drietal bronzen ringen, massief, waaraan ijzer is gesmolten."	"Drie kleine massieve bronzen ringen" (Holwerda 1934, 40).	"Three heavy bronze rings belong to the equipment. We are unable to suggest any explanation of their function." (Modderman 1964, 58)	The rings were covered with a layer of iron oxide and affected by bronze rot. The rings were stabilized and cleaned (Kempkens/Lupak 1993a, 16–16.1)

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
OV.16 2011: Mass of 10 iron rings, an iron rod with flattened end & 2 bronze sheet-knobs. On the outer 2 rings textile remains have survived. On a fragment of one of the rings an impression of the sword hilt with gold inlay survives. Fragments of two iron objects. 1964: A bent piece of rounded iron with a knob at one end, in 1993 this piece was refitted onto one of the cheek-pieces	k 1933/7.10j	-	-	2011-7.10j: "Probably belonging to the harness are a number of iron rings the different sizes of which are shown in a drawing (Fig. 4). Of numbers A, E, G, and H only one was found, whereas numbers. B, C, D, and F each occurred twice. Number E is somewhat Unusual because it varies in width from 0.5 - cm. on one side to 0.3/0.4 cm. on the other." (Modderman 1964, 61). 1964-7.10j: "A bent piece of rounded iron with a knob at one end (10j) was found near the socketed axe. We are sure that it is not part of the reconstructed cheek-snaffle (10i) because it is impossible to join them." (Modderman 1964. 60).	2011-7.10j: The iron ring fragments were rusted onto a horse-bit. The ring fragments were brittle and fragile. The whole thing was covered in corrosion and for the most part hollow. Pieces were missing. The iron bit and knife were removed. Loose pieces were restored onto the rings and the gaps filled in. The entire thing was cleaned (Kempkens/Lupak 1993a, 3–3.3). 1964-7.10j: refitted onto one of the horse-bits.
OV.17 2011: Iron ring. Fragment was attached to knife (7.9 most likely) 1964: A piece of iron cheek-piece	k 1933/7.10k	-	-	1964-7.10k: "It consists of a rounded rod with a knob and two rectangular openings. It is impossible to explain this piece as part of the horsebit (10h), because the size of the rectangular eyes is different." (Modderman 1964, 60)	The iron ring survived in fragments on the knife (7.9). It was corroded, hollow and fragile. The fragment was cleaned and the ring reconstructed (Kempkens/Lupak 1993a, 5–5.1).
OV.18 2011: Iron ring from loose fragments, with textile remains 1964: Part of a toggle (7.10l), which now has no. k 1933/7.10e	k 1933/7.10l	-	-	1964-7.10l: "A comparable piece [tok 1933/7.10k] is the rod with knob and only one eye, which is bigger than the eyes in the other." (Modderman 1964, 60) This object now has no. k 1933/7.10e.	The iron ring was reconstructed from several loose fragments. It was heavily corroded, hollow, fragile and incomplete. The gaps were filled in and it was cleaned. Textile remains survive on the ring (Kempkens/Lupak 1993a, 4).
OV.19 2011: Iron ring fragments, 2x 1964: Iron knob belonging to a cheek-piece	k 1933/7.10m	-	-	1964-7.10m: "A stray knob [that] cannot be placed with any certainty." (Modderman 1964, 60)	This knob was restored onto a cheek-piece
OV.20 -Iron or ring fragments with part of a bronze sheet-knob rusted on -4 corroded fragments of hollow iron rod/ring, one piece with textile remains. -Miscellaneous iron fragments	k 1933/7.20a	"Een massa aaneengeroest ijzer, waaronder ook aangeroeste stukjes brons."			
Yoke and wagon components					
OV.21 Bronze yoke rosettes, 2x	k 1933/7.6	"Een tweetal plaatjes van ellipsvorm, aan de onderzijde hol, aan de kleinere bovenzijde eveneens verdiept. In het midden een klein rond gaatje. Deze plaatjes hebben waarschijnlijk gediend als beslagstukken en de holte aan de bovenzijde zal gevuld zijn geweest met een of andere vergankelijke stof, hout of been bijvoorbeeld. Met beide stukken is ijzerroest verbonden, doch zonder herkenbare vorm."	"Twee ovale schaalvormig verdiepte bronzen plaatjes, van mij onbekende bestemming" (Holwerda 1934, 40).	"Two elliptical plates of bronze must have served as decoration on a horse's harness."(Modderman 1964, 58)	The yoke rosettes were covered with a crusty layer and affected by bronze rot. The yoke rosettes were stabilized and cleaned (Kempkens/Lupak 1993a, 17–17.1)

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
OV.22 2011 k1933/7.10e: iron toggle, described in 1964 as an iron rod. In 1964 this object had no. k 1933/7.10l. 1964 k 1933/7.10e: iron square razor with 2011 no. k 1933/7.8	k 1933/7.10e	-	-	2011-7.10e: "[…] rod with knob and only one eye, which is bigger than the eyes in the other [cheek-snaffles] (fig. 3, 101)" (Modderman 1964, 60). In 1964 this object had no. k 1933/7.10l. 1964-7.10e: "The other [knife] is in three parts; it has a straight back and a curved cutting edge. (Fig. 3, 10e)." (Modderman 1964, 59). This object now has now has no. k 1933/7.8.	2011-7.10e: The toggle was covered with a thick crusty layer and was brittle and hollow. The crusty layer was removed and the hollow spaces filled in (Kempkens/Lupak 1993a, 10–10.1). 1964-7.10e: The razor survived only in fragments, which were covered in a crusty layer. The fragments were refitted and the missing pieces reconstructed (Kempkens/Lupak 1993a, 12–12.1).
OV.23 Iron toggle	k 1933/7.10f	-	-	"Unexplainable as to its function is an iron rod with a rounded cross-section. No further details are available." (Modderman 1964, 60)	The toggle fragment was covered with a thick crusty layer and was brittle and hollow. The crusty layer was removed and the hollow spaces filled in. The missing piece was reconstructed (Kempkens/Lupak 1993a, 10–10.1).
Tools					
OV.24 Iron knife with leather and textile remains adhered	k 1933/7.9	"Onderste punt van een dergelijk dolkje, bedekt met wollen stof."	1964: "Het andere [fragment van dolken of kleine zwaarden] ook puntig doch eensneedig en met een verdikten rug" (Holwerda 1934, 40).	"The other is a knife with a sharp edge and a blunt back on the straight side." (Modderman 1964, 59)	The present day knife with no. k 1933/7.9 has been reconstructed from Modderman's k 1933/7.9 and k 1933/7.10c. The two pieces were corroded, hollow and fragile. There were fragments missing, also the tip of the tang is missing. The pieces were refit and the missing fragments reconstructed. The whole thing was cleaned, while preserving the textile and leather remains on the knife. (Kempkens/Lupak 1993a, 8–8.3).
OV.25 Iron socketed axe	k 1933/7.10g	-	-	"The iron objects never before described include a very simple iron socketed axe with a more or less circular mouth. A cross-section through the middle of the object could not be drawn with sufficient exactitude because of its position between the other objects." (Modderman 1964, 59–60)	The axe was covered with a crusty layer, distorted in places and cracked. The iron was heavily corroded and brittle. One corner of the cutting edge was missing. The crusty layer was removed and the breaks repaired. The missing corner was reconstructed. (Kempkens/Lupak 1993a, 9–9.1)
OV.26 (Whet)stone(?)	k 1933/7.11	"Platte wetsteen, puntig toeloopend."	"Slijpsteentje" (Holwerda 1934, 40).	"A whetstone" (Modderman 1964, 61).	The whetstone was partially covered with iron oxide and broken. The break was repaired and the whetstone was cleaned (Kempkens/Lupak 1993a, 23–23.1).

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
Personal appearance					
OV.27 2011: Iron razor (?) (in 1964/1992 this object had no. k 1933/7.10e) 1964: tip of the Mindelheim sword (k 1933/7.3), interpreted at the time as a separate sword	k 1933/7.8	1964-7.8: "Sterk geroest, puntig ijzeren voorwerp, waarschijnlijk een deel van een dolkje. Blijkbaar is dit voorwerp met wollen stof bekleed geweest."	1964k 1933/7.8: "[…] groote fragment-en van dolken of kleine zwaarden, het ééne lang en puntig als van een antennezwaard" (Holwerda 1934, 40).	2011 k 1933/7.8: "The other [knife] is in three parts; it has a straight back and a curved cutting edge. (Fig. 3, 10e)." (Modderman 1964, 59) 1964 k 1933/7.8: "One of them is certainly a dagger with cutting edges on both sides (k 1933/7 8)."(Modderman 1964, 59) In 1992 this object was restored onto the Mindelheim sword k 1933/7.3 as the tip.	1964 k 1933/7.10e: The razor survived only in fragments, which were covered in a crusty layer. The fragments were refitted and the missing pieces reconstructed (Kempkens/Lupak 1993a, 12–12.1)
OV.28 Iron razor	k 1933/7.10d	-	-	"One [of the knives] has a curved back and a straight cutting edge (Fig. 3; Id). Only one small part is hidden between some other objects, and a broken line indicates this." (Modderman 1964, 59)	The knife was in, and rusted onto, the clump of iron rings. It was heavily corroded, hollow and fragile. The knife was broken, covered in a crusty layer and a piece was missing. The knife was cleaned and repaired (Kempkens/Lupak 1993a, 11).
OV.27 Bronze & iron *Bombenkopf* pin In 1964 this object had no. k 1933/7.10a	k 1933/7.10b	-	-	1964- k 1933/7.10b: "Two objects of bronzeplate require attention. They consist of two separate cones joined by an iron pin. The find provides hardly any indication as to the object to which these cones belonged, although a dress-pin seems most probable." (Modderman 1964, 58–59)	The pin only survives in fragments. It was heavily corroded, brittle and fragile. The missing parts of the kopf were reconstructed and the whole thing was cleaned (Kempkens/Lupak 1993a, 14–14.1).
OV.28 Bronze & iron *Bombenkopf* pin In 1964 this object had no. k 1933/7.10b	k 1933/7.10c	-	-	"Two objects of bronzeplate require attention. They consist of two separate cones joined by an iron pin. The find provides hardly any indication as to the object to which these cones belonged, although a dress-pin seems most probable." (Modderman 1964, 58–59). 1964k 1933/7.10c: "One of [the three knives found by Mr. Ypey in the rusty mass of iron] has a tang protruding in a straight line from the back of the blade (Fig. 3, 10c). In the drawing the maximum possible length of this tang is given, as derived from its situation among the other objects. The length of the blade could not be traced."(Modderman 1964, 59)	The pin was rusted onto the axe. It was heavily corroded, hollow and fragile. A fragment of the kopf part of the pin was missing, as is most of the pin. The missing parts of the kopf were reconstructed and the whole thing was cleaned (Kempkens/Lupak 1993a, 13–13.1).
OV.29 Bronze & iron *Bombenkopf* pin Received no. k 1933/7.10c after 1992/'93 restoration	k 1933/7.10a	-	-	-	This pin was 'discovered' rusted onto the knife (7.9) during the restoration process. It is the only one to survive intact. It was covered with a layer of aanslag, heavily corroded, hollow and fragile. The whole thing was cleaned, and a bronze rod was inserted into the pin as reinforcement (Kempkens/Lupak 1993a, 15–15.2)

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
Other					
OV.33 Wood fragments, 10x, of which 9x with carved grooves	k 1933/7.15	"Stukjes hout van de zwaardschede, diep ingekerfde versieringen."	"Aan de kling van bet zwaard waren op verschillende plaatsen nog de fragmenten van een houtenschede vastgehecht" (Holwerda 1934, 40).	"Extremely interesting are some small fragments of, carved wooden object (k 1933/7 15"; fig. 6). The carving was done at right angles to the grain of the wood. Since the carved ridges are not all of the same width, the object may have been bowl-shaped, I but this is all that can be said about its identity." (Modderman 1964, 61)	The fragments are soft and fragile. Two pieces that fit together were refitted (Kempkens and Lupak 1993, 30).
OV.33 Wood fragments, 4x	k 1933/7.15b	-	-	-	
OV.34 Worked bone object, fragment	k 1933/7.17b	-	-	-	The object was brittle, soft and covered with iron oxide. The object was cleaned (Kempkens/ Lupak 1993a, 25).
OV.35 Worked bone object, fragment	k 1933/7.17c	-	-	-	The object was brittle, soft and covered with iron oxide. The object was cleaned (Kempkens/ Lupak 1993a, 25).
OV.36 Worked bone object, fragment	k 1933/7.17a	"Twee bewerkte stukjes been."	-	"Two small pieces of worked bone. It is impossible to determine the use of these objects." (Modderman 1964, 61)	The object was brittle and covered with iron oxide. The object was cleaned (Kempkens/ Lupak 1993a, 24).
OV.37 Leather fragments, 2x, one with a bronze 'stud' (?)	k 1933/7.16	"Stukje leder, rond gebogen."	-	"Some pieces of leather of which it is impossible to determine the use." (Modderman 1964, 61)	The leather fragment was broken in four pieces and soft and fragile. The fragments were refitted and cleaned (Kempkens/Lupak 1993a, 28).
OV.38 Leather fragments					
OV.39 Textile fragments, 5x	k 1933/7.19a	"Vele stukken wollen stof."	"Geringe resten van een weefsel, waarschijnlijk een kleedingstuk." (Holwerda 1934, 40)	"Ypey was so kind as to give us some information concerning the determination of the textiles. Near the tip of the iron sword, a fragment of plain weave is found. Per square centimeter, to every 7 S-spun threads about 10 Z-spun ones are found. On the big knife a fragment of another type of plain weave has been preserved by iron-rust. Per cm2 about 19 Z-spun to 8 S-spun threads were counted (see fig. 3). Along the right edge of the dagger bits of' fine twill weave are found. Many layers of other cloth in a bad state of preservation give us some more information. Most of it is twill weave. In Fig. 3 below the principle of this type of weaving is given. Per square cm, 25 Z-spun to 19 S-spun threads were counted. Some layers of plain weave could be identified, the count showing per cm2 about 16 Z-spun to 10 S-spun threads. All in all, three different plain-woven textiles and at least one twill weave have been determined so far." (Modderman 1964, 61)	The textile is extremely brittle. It was left untreated (Kempkens/Lupak 1993a, 27).
OV.40 Textile fragments, 3x	k 1933/7.19b				The textile is extremely brittle. It was left untreated (Kempkens/Lupak 1993a, 27).
OV.41 Textile fragments, 2x	k 1933/7.19c				The textile is extremely brittle. It was re-enforced with paraloid but otherwise left untreated (Kempkens/ Lupak 1993a, 26).

Object no. Description	RMO inv. no.	Inventaris boek 1933	Holwerda (1934)	Modderman (1964)	Kempens and Lupak (1993a)
OV.42 Textile and charcoal fragments, many	k 1933/7.19d				Not seen by Kempkens and Lupak
OV.43 Bone fragments, 6x	k 1933/7.17d	-	-	-	-
Not in use anymore	k 1933/7.10	"Ondefinieerbare stukken aaneengesmolten ijzer en brons."	-	In 1964 the following objects were uncovered in this corroded lump of iron and bronze: k 1933/7.10a Bombenkopf pin k 1933/7.10b Bombenkopf pin k 1933/7.10c tang end of an iron knife k 1933/.10d iron knife (razor) k 1933/7.10e iron knife (razor) k 1933/7.10f iron rod (toggle) k 1933/7.10g iron socketed axe k 1933/7.10h iron horse-bit k 1933/7.10i iron cheek-snaffle k 1933/7.10j mass of iron rings k 1933/7.10k iron cheek-snaffle k 1933/7.10l part of an iron toggle k 1933/7.10m iron knob from a cheek-snaffle	-
Not in use anymore.	k 1933/7.10n	-	-	"A stray eye (10n) most likely belongs to cheek-snaffle 10i." (Modderman 1964, 60)	This eye was restored onto a cheek-piece

Tab CA2.1 Inventory Chieftain's grave of Oss through three restorations.