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DAVID R. FONTIJN

SACRIFICIAL LANDSCAPES

CULTURAL BIOGRAPHIES OF PERSONS, OBJECTS AND 'NATURAL' PLACES
IN THE BRONZE AGE OF THE SOUTHERN NETHERLANDS, C. 2300-600 BC



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*Non multo post in Cantabriae lacum fulmen decidit repertaeque sunt duodecim
securae, haud ambiguum summae imperii signum.*

(Suetonius, book VII: Galba, Otho, Vitellius)

*Und dast Sterben, dieses Nichtmehrfassen
Jenes Grunds, auf dem wir täglich stehn,
Seinem ängstlichen Sich-Niederlassen -:*

*In die Wasser, die ihn sanft empfangen
Und die sich, wie glücklich und vergangen,
Unter ihm zurückziehn, Flut um Flut*

(R.M. Rilke 'der Schwan')

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6.1 SPEARHEADS FROM THE MBA A

Spearheads of types discussed in chapter 6 (MBA A and transition to MBA B). * According to Butler 1987 this spear is his fig. 1:3.

This is incorrect. ** Idem: Butler 1987, fig. 1:4

Site	Type	Use	Context	Patina	Info	Reference
NL: Gelderland Oosterhout-Verburgtskolk	Tréboul	Heavily Resharpended	River/swamp	Blackish green	P	Modderman/Montforts 1991. 147; this book fig. 6.11
NL: Limburg Blerick	Bagterp	-	-	-	-	Jacob-Friesen 1967 no. 1741.
Echt	Decorated	Edges battered	-	Well preserved	-	Butler unpublished, coll. Keuren (K.21)
Grathem	Tréboul	Torn peg holes	Barrow?	D. green	P	Butler 1987, fig. 1:2
Meerlo-Swolgensche Broek	‘Westbaltische Typ’	Resharpended	Marsh	Black	S	Jacob-Friesen 1967 no. 1740
Roermond-Hateboer*	Tréboul?	-	River	Blackish	P	Butler 1987
Smakter Spurkt	Tréboul	Sharpened	-	-	-	Butler 1987, fig. 1:1
NL: Noord-Brabant Cuijk/Alem-Meuse**	Tréboul	Torn peg hole	River	Black-brown	S	Butler 1987
B. Limburg Tongeren	Tréboul	-	-	-	-	O’Connor 1980 list 18: 4

6.2 SPEARHEADS FROM THE MBA B

MBA B spearheads (flame-shaped and British types) and pseudo flame-shaped spears.

Site	Type	Use traces	Context	Patina	Info	Reference
NL: Gelderland						
Huissen	Flame-shaped	-	River	-	-	Butler 1987, note 5: no. 8
Oosterhout-De Boel	Flame-shaped	Torn rivet holes	-	D.green	-	Unpublished, pers. comm. P. van den Broeke, find no Db2
Nijmegen-Waal (dubious)	Flame-shaped	Sharp.	River	Bronze	P	Jacob-Friesen 1967: no. 1732
Nijmegen-Waal	Flame-shaped	Sharp.	River	Brown	P	Felix 1945: no. 314; Abb. 310
Nijmegen	Flame-shaped	-	-	-	-	Butler 1987, note 5: no. 5
Nijmegen-Winsseling	Flame-shaped	Sharp.	River	Brown/bronze	P	Butler 1987, 32: note 5: no. 4
Millingen (dubious)	Flame-shaped	-	River	-	P	Butler 1987, 32: note 5: no. 7
River Waal	Flame-shaped	Sharp., reworked blade	River	Bronze	P	Butler 1987, note 5: no. 13
NL: Limburg						
Berg en Terblijt (Vilt)	Pseudo-flame	Broken	Lavish LBA hoard on land near source	-	P	Butler 1987, note 5: no. 3
Kessel-Maas	Pseudo-flame	Resharp.	River	Blackgreen	P.	Butler 1987, note 5: no. 1
Neer-Boshei	Flame-shaped?	Resharp.	-	-	-	Kierkels 2001
Roermond-Maas	Flame-shaped	Sharp.	River	Black?	P	Butler unpublished, coll. Schokker
Swartbroek	Flame-shaped	-	-	-	-	Butler 1987, note 5: no. 2
Wessem-Maas	Flame-shaped	Sharp., wood of shaft preserved	River	Bronze	P	Butler unpublished, coll. Niessen; this book fig. 7.12
NL: Noord-Brabant						
's-Hertogenbosch	British, side-looped	Converted to pegged spearhead in antiquity	-	Brown	-	Butler 1961b
Veldhoven	British, side-looped	Sharp.	Stream valley	Black	P	Roymans 1980
B: Antwerpen						
Antwerpen-Schelde	Pseudo-flame	-	River	-	P	Warmenbol 1987: no. 8
Battel	British, basal-looped, straight-based	-	-	-	-	O'Connor 1980, list 56: 11
Duffel-Nethe	British, basal-looped	-	Stream	-	P	O'Connor 1980, list 20: 15
B. Limburg						
Eksel	Flame-shaped	-	-	-	-	Mariën 1952, afb. 254, 4
B: Oost-Vlaanderen (just west of research region)						
Temse	Flame-shaped	-	River	-	P	Verlaeckt 1996: no. 203
Temse	Pseudo-flame	Wooden shaft preserved	River?	Bronze	S	Verlaeckt 1996: no. 204

6.3 SPEARHEADS WITHOUT PRECISE DATING (PLAIN PEGGED SPEARHEADS) AND ARROWHEADS

Plain pegged spearheads and arrowheads (indicated) without a precise dating within the Middle or Late Bronze Age (or even first part of Early Iron Age).

Legend:

AW= Arts/ Van de Wijdeven 2001.

* C14-dating of wood: 3110 ± 60 BP (Verwers 1990, 140-1).

Calibrated dating (2σ): 1517-1257 cal BC and 1235-1215 cal BC, which places this find in the MBA B.

** Its unusual colour and excellent state of preservation makes me wonder whether the object stored in the museum might be a modern product.

*** Wood has been C14-dated: 2870 ± 40 (UtC-3736). Calibrated dating (2σ): several ranges within 12th to 9th century cal BC (Verlaeck 1996)

Site	Remarks	use traces	Context	Patina	Info	Reference
NL: Gelderland Arnhem (dubious)	-	-	-	Green	-	Unpublished, mus. Nijmegen no. 25.1.22.3
Arnhem (dubious)	-	-	-	Black-bronze	-	Unpublished, mus. Nijmegen no. 27.5.22.7
Batenburg-Maas?	Probably fake!	-	-	-	-	Unpublished, mus. Leiden no. E.1937/7.2
Duiven-Loowaard	Arrowhead	Sharp.	River	Black-d.bronze	S	Butler unpublished, coll. Kuijpers, Arnhem.
Duiven-Loowaard	-	Sharp.	River	Black-d.bronze	S	Butler unpublished, coll. Kuijpers, Arnhem.
Kerkdriel	-	-	River	-	P	Unpublished, coll. Stolzenbach
Lent-Steltse straat	-	-	-	D.green	-	Unpublished, mus. Nijmegen, excavation 1999, find no. 4/85
Lobith-Rijn	-	-	River	Brown	P	Unpublished, mus. Nijmegen no. 1.1946.1
Mook-Middelaarsche Broek	Not pegged!	-	Marsh?	Bronze	S	Unpublished, mus. Nijmegen AC 31
Millingen/Kekerdome-Rijn (dubious)	Decorated with incised lines	Impact marks?	River?	D.brown	P	Unpublished, mus. Nijmegen 10.1951.6
Nijmegen	'Saxo-Thuringian type'	Sharp.	-	Black	-	Jacob-Friesen 1967, no. 1731
Nijmegen	-	-	-	-	-	Felix 1945, no. 315, Abb. 305
Nijmegen-Hunerberg (dubious)	'Lüneburg Typ II'	Impact marks?	-	Brown-black	-	Jacob-Friesen 1967, no. 1733
Nijmegen-Hunerberg	-	-	-	-	P	Abeleven/Bijleveld 1895, 152: E.XIV.12. Location find unknown
Nijmegen-Hunerpark	-	-	Dry, near ridge high plateau, in vicinity: LBA urnfield	L.green	P	Daniëls 1955, 63, mus. Nijmegen no. AC 36
Nijmegen-Kopse Hof?	-	-	Dry? In vicinity: MBA and LBA graves	Brown-green	P	Unpublished, mus. Nijmegen no. 6.1940.3

Site	Remarks	use traces	Context	Patina	Info	Reference
Nijmegen-Kraayenhof	Fragm.	-	-	Green	-	Brunsting 1949, 60, afb. 2:8
Nijmegen-Maasplein	Fragm.	-	-	Green	-	Unpublished, mus. Nijmegen excavation 1992 find no. 1/32
Nijmegen-'garden of Mr Smith'	-	Sharp.	Dry, c. 100 m. away: settlement traces	D. green	P	Unpublished, mus. Nijmegen no. xxx.e.26.
Nijmegen-Winsseling	-	Torn socket mouth	River	Brown-bronze	P	Felix 1945, no.. 462
Nijmegen-Waal	Fragm.	Resharp.?	River	Green-black	P	Felix 1945, no. 317
Nijmegen-Waal (dubious)	-	Sharp.	River	Black-brown	P	Felix 1945, no. 311
Nijmegen-Waal (dubious)	-	Sharp.	River	Well preserved	P	Unpublished, mus. Leiden e.1947/5.1
Nijmegen/Wijchen (dubious)	Long socket (9 cm)	Resharp.	-	D.brown	-	Unpublished, mus. Leiden no. e. 1947/8.3
Oosterhout-Hoge hof?	-	-	-	Black-d.brown	-	Unpublished, mus. Nijmegen no. 11.1952.23
Wijchen	-	-	-	-	-	Felix 1945, no. 468, Abb. 303
Wijchen	-	-	-	-	-	Felix 1945, no. 476
Just north of research region 's-Heerenbergh	-	-	-	-	-	Felix 1945: no. 189
Ede-Edensche Bosch	-	Sharp.?	-	D.green	-	Felix 1945: no. 106, Abb. 302
NL: Limburg Asenray-Thuserhof	Fragm.	-	-	-	-	Butler, unpublished, coll. Schatorjé
Echt	-	-	-	-	-	Felix 1945, no. 99a
Echt	-	-	-	-	-	Butler unpublished, mus. Brussels B. 594
Echt-Hambroek	-	-	Marsh?	-	S	Butler unpublished, mus. Echt no. 2719
Echt-Farm 'De Horst'	-	-	-	-	-	Butler unpublished, mus. Echt no. 2999
Echt-Kranenbroekveld	-	-	(Near) marsh	-	S	Unpublished, doc. ROB: letter R. Geurts to Glazema (1-11-1962)
Echt-Ophoven	-	-	River/marsh	-	S	Van Hoof 2000, catalogue
Ell-Heijkersbroek	-	-	Marsh?	-	S	Butler unpublished, coll. Bouts
Gennep-Stamelberg	-	-	-	-	-	Excavation AAC 1989/1990, pers.comm. H. van Enckevort (Nijmegen)
Herkenbosch	-	-	-	Black-green	-	Unpublished, mus. Leiden no. L.1911/5.1
Herkenbosch	Blade has been bent down	-	-	Green	-	Butler unpublished, coll. Dahmen (St.Odiliënberg)
Herten-Mussenberg	-	Reworked blade, broken in antiquity	-	Black-l.brown	-	Butler unpublished, coll. Hansen (Linne)

Site	Remarks	use traces	Context	Patina	Info	Reference
Heythuysen?	Fake?	-	-	-	-	Unpublished, mus. Leiden no. L.1937/12.3
Ittervoort	Fragm.	Sharp.	-	Green	-	Butler unpublished, coll. Hansen (Linne)
Kessel-Maas	-	Resharp.	River	Black-bronze	P	Felix 1945, no. 229
Koningsbosch	-	-	-	-	-	Butler unpublished, mus. Echt no. 2283
Kronenberg	-	-	Marsh	-	S	Doc. mus. Leiden, letter L.D. Keus to F. Bursch, 3-7-1938
Linne-Maas	-	-	River	-	P	Butler unpublished, Heemkunde Vereniging Roerstreek no. 248/3
Maastricht-Kanaal Maastricht-Luik	-	-	-	-	-	Sprenger 1948, 21
Melick	-	-	-	-	-	Felix 1945, no. 259
Melick-Melickerheide	-	Resharp.	-	Green	-	Butler unpublished, coll. Hansen (Linne)
Nederweert-Molenbeek	3 spearheads	-	At same spot in stream valley: hoard?	-	P	Bruekers 1986
‘Noord-Limburg’	-	Sharp.	-	D.green	-	Unpublished, mus. Leiden no. l.1912/12.2
Roermond	-	-	-	-	-	Butler unpublished, coll. Houtakkers
Roermond-Roerbrug	-	-	Wet?	-	-	ARCHIS no. 33779
Roermond-Hatenboer?	Long socket (9.3 cm)	Resharp.	River	Black-bronze	P	Unpublished, mus. Leiden l.1971/11.2
St.Joost	-	-	-	Green	-	Felix 1945, no. 224
Swalmen	-	Resharp.	At same spot: LBA urnfield. However: find not from burial	Black-green	P	Lanting/Van der Waals 1974, 78: no. L.1938/8.43
Swartbroek	-	-	-	-	-	Felix 1945, no. 400, Abb. 297
Swartbroek	-	-	-	-	-	Felix 1945, no. 402
Unknown	-	-	-	-	-	Felix 1945, no. 235
Wessem-Maasgrind	Fragm.	Sharp.	River	Green-black	S	Butler unpublished, coll. Niessen
NL: Noord-Brabant						
Aarle-Rixtel-Aa	-	-	Stream valley?	-	S	AW no. 102
Alem-Empel	-	-	River	-	P	Unpublished, doc. G. Beex, mus. 's-Hertogenbosch no. 8422
Alem-Maas	-	-	River	-	P	Felix 1945, no. 2, doc. G. Beex
Alem-Maas	-	-	River	-	P	Felix 1945, no. 3, doc. G. Beex
Alem	-	-	-	-	-	Doc. G. Beex, mus. 's-Hertogenbosch no. 8496

Site	Remarks	use traces	Context	Patina	Info	Reference
Bergeyk	Arrowhead	-	-	-	-	Felix 1945, no. 39
Beugen-Maas		Sharp., wood in socket preserved	River	Well preserved	P	Verwers 1981, 27-8; this book fig. 10.2
Boxmeer-De Kater	-	-	(Near) marsh?	Black	S	Butler unpublished, coll P. Hutten (Boxmeer)
Boxtel-Munsel	-	-	Stream valley? But might be in disturbed position!	-	S	Verwers/Kooistra 1990, 251, fig. 7: 2
Boxtel-St.-Petruskerk	-	-	Stream valley	Black-green	S	Felix 1945, no. 55; doc. G. Beex
Cromvoirt	-	Resharp.	Marsh?	-	S	Verwers 1986, 29
Dongen-Kasteel	-	-	-	-	-	Stoepker 1986, 30-1
Duizel-Duiselsche Broek	No peg holes!	Resharp.	Marsh	Bronze	S	Felix 1945, no. 70 (incorrectly provenanced as 'Deurne')
Eindhoven-TU/Diaconessehuis	-	-	Stream valley	-	S	Verwers 1990, 140-1
Eindhoven?	-	-	-	-	-	Doc. G. Beex, coll. P. van Elst (Eindhoven), find lost
Eindhoven-Eindhovenkanaal	-	-	Stream valley	Well preserved	S	Arts/Van de Wijdeven 2001, no. 73 and personal communication
Engelen?	-	-	-	-	-	Doc. G. Beex, mus. 's-Hertogenbosch no. 8679
Escharen	Socket mouth decorated with lines and pointillé	-	Near stream valley	Green	S	Butler unpublished, coll. J. de Wit (Grave)
Geertruidenberg-Haven	-	-	-	-	-	Doc. G. Beex
Goirle	-	-	-	-	-	<i>Archeologisch Nieuws</i> 1973, 13
Grave-Maas	-	-	River	-	P	Felix 1945, no. 177, Abb. 308
Grave-Maas	-	Resharp.	River	D.green	P	Felix 1945, no. 176, mus. Leiden no. k. 1938/9.3
Hapert-crossterrein	-	-	-	-	-	Doc. Liesbeth Theunissen (ROB)
Heeswijk-Dinther-Beekgraaf*	Logenze-shaped blade	Wood preserved	Stream valley	D.bronze	S	Verwers 1990, 140-1
Helmond-Eenselaar	2 spearheads	-	At same spot in stream valley: hoard?	-	S	Felix 1945, no. 197-8; AW no. 99
's-Hertogenbosch-Gr. Ziekengasthuis	-	-	-	-	-	Verwers 1983, 22-3
's-Hertogenbosch	-	-	-	-	-	Doc. G. Beex, mus. 's-Hertogenbosch no. 8326
's-Hertogenbosch	-	-	-	-	-	Doc. G. Beex, mus. 's-Hertogenbosch no. 8325
Liessel-Fringes of Peel bog (dubious)**	-	Resharp.	Peat bog	Black	S	Unpublished, mus. Leiden no. k. 1949/12.1

Site	Remarks	use traces	Context	Patina	Info	Reference
Lith-De Bergen	Fragm.	-	River	-	S	ARCHIS no. 14427
Lith-Lithse Ham	-	-	River	-	S	Kleij/Verwers 1994, 144-6
Mill-Tongelaar	1 Fragg./ or arrowhead?, 1 spear close to flame-shaped type	Spear: resharp.	River/marsh; both objects at distance of 1,5 m: hoard?	D.brown (both)	S	Butler unpublished, coll. C. van Riet (Beers)
Oirschot?	-	Resharp.	-	‘Wet context patina’	-	AW no. 24
Oss-IJsselstraat	-	-	Near MBA settlement site	-	S	Verwers/Beex 1978, 16
Oss-Paalakker	Fragm.	-	Near river	D.green	P	Unpublished, coll. G. Smits (Oss)
Rosmalen-Nieuwstraat 24	-	Resharp.	-	-	-	Verwers 1988, 29-30
Somerens-Vlerken	-	-	Stream valley	-	S	AW no. 104
St.-Oedenrode-Groot Laar	-	-	Stream valley (from same site: socketed axe: hoard?)	-	S	AW no. 70
Teefelen-De Kampen	Fragm.	-	-	-	-	Unpublished, coll. P. Haane (Oss)
Teteringen	Fragm.	-	Marshy terrain; from same site: sickle (hoard?)	Green	S	Verwers 1992, 149; personal communication J. Verhagen (Tilburg)
Unknown (dubious)	Long socket (12,5 cm)	Resharp.	-	Black-bronze	-	Unpublished, mus. Leiden no. k.1948/9.2
NL: Utrecht (just north of research region Rhenen	-	-	-	-	-	Personal communication E. van Hagen (ROB)
Wijk bij Duurstede-De Geer	-	Resharp.	Settlement?	-	P	Drenth 1996, note 3;
Wijk bij Duurstede-De Horden	-	Resharp.	Settlement?	-	P	Drenth 1996, note 3;
B: Antwerpen Antwerpen	Arrowhead	-	River	-	S	Warmenbol 1983 no. 9; Mus. Antwerpen no. 56.35.1352.1
Antwerpen	Arrowhead	-	River	-	S	Warmenbol 1983 no. 10; Mus. Antwerpen no. 56.35.1352.2
Battel	-	-	-	-	-	Warmenbol 1987b, 52; Mus. Antwerpen no. 56.35.3545
Bornem***	-	Wood in socket preserved	Marsh	Green-brown	S	Verlaeckt 1996
Hoogstraten	Arrowhead (socketed)	-	-	-	-	O’Connor 1980, list 59: 5
Turnhout	3 arrowheads (socketed)	-	It is uncertain whether the 3 were found together	-	-	O’Connor 1980, list 237: 6-8

Site	Remarks	use traces	Context	Patina	Info	Reference
B: Brabant (south of research region)						
Schaerbeek-Kattepoel	Arrowhead (socketed)	-	-	-	-	O'Connor, list 238: 7
Terafene	-	-	'Bog'	D. green, well preserved	S	Verlaeckt 1996

7.1 DAGGERS, KNIVES, HALBERDS, ORNAMENTS FROM THE LATE NEOLITHIC B AND THE EARLY BRONZE AGE, MAINLY FROM BURIALS

Legend: NL: Netherlands; B: Belgium; A province of Antwerpen; G: province of Gelderland; L: province of Limburg;

N-H; province of Noord-Holland; D = Drenthe, Northern Netherlands

Site	Objects	Context	Reference
Research region Beers-Gassel (N-B)	2 gold ornaments (LN B)	With a Bell Beaker of Veluwe type, amber pendant, stone, 2 pieces of flint; presumably grave	Verwers 1990, 30-1
Geldermalsen-‘Boog C-Noord’ (G)	Bronze awl (EBA)	In settlement debris	Butler/Tulp 2001
Mol (A)	Copper/bronze indet. (EBA/MBA A)	In inhumation burial in barrow, with amber and fluorite bead	Beex/Roosens 1963
Overasselt-St. Walrick (G)	Copper/bronze <i>Schleifen-nadel</i> (EBA)	Central inhumation grave in barrow, second phase	Butler/Van der Waals 1966: no. 55; Butler 1990, 71
Roermond-Hatenboer (NL: L)	Halberd (EBA)	River	Glasbergen/Butler 1961
NL: Gelderland (just north of research area)			
Bennekom (G)	2 oar-shaped ornaments of gold; (LN B)	Presumably barrow grave with Bell Beaker	Glasbergen/Butler 1956
Doorwerth (G)	Copper/bronze dagger with rounded butt; 2 rivets (LN B/EBA)	Uncertain; possibly in central burial in barrow, with Bell Beaker and wrist guard	Bursch 1933, 89
Ede-Ginkelse Heide (G)	Copper tanged dagger (lost) (LN B)	Cremation grave in barrow, with Bell Beaker type 2Ib, 4-holed wrist guard, flint objects	Butler/Van der Waals 1966: no. 9
Ede-Lettense Berg (G)	Tanged copper dagger (LN B)	Grave in barrow, with 3 V-bored amber buttons	no. 2
Ede-Lunterse Hei (G)	Tanged copper dagger (LN B)	Grave in barrow, with Bell Beaker type 2Id, two 2-holed wrist guards, 2 flint arrowheads	no. 5
Ede-De Kweekerij (G)	Tanged copper dagger (LN B)	Secondary grave in barrow, with Bell Beaker type 2Ib	no. 4
Wageningen-hoard (G)	1 Halberd, 1 Migdale axe, 1 knife, 2 penannular rings, 2 ring fragm., 1 ingot bar, 1 stone polished axe, 1 awl, 2 halberd rivets, 1 bar, 5 fragm. sheet metal (LN B-EBA)	Dry hoard on gentle slope. In vicinity: Late Neolithic barrows	Butler 1990, 68-71; this book fig. 5.14; fig. 5.15
NL: Further north of research area			
Bargoosterveld (D)	Bronze knife/dagger; horn hilt with tin nails (EBA)	Peat bog	Butler/Van der Waals 1966: no. 54
Buinen-Hunebed XXVIII (D.)	2 copper spiral ornaments (Dating: Middle Neolithic to EBA)	In Hunebed (megalithic tomb; Middle Neolithic); possibly later deposit	nos. 14-15

Site	Objects	Context	Reference
Drie (G)	Copper knife/dagger, 2 rivet holes (LN B/EBA)	-	no. 53
Exloo (D.)	Tanged copper dagger, copper awl, copper spiral bracelet, gold bead (LN B)	Grave in barrow, with Bell Beaker type 2Ib and amber beads	no. 6
Hilversum-Tum. I (N-H)	Tanged copper dagger (LN B)	Grave, no further information	no. 7
Laren-Tum. 10 (N-H)	Tanged copper dagger (LN B)	With 3 flint arrowheads	no. 8
Lunteren-De Valk (G)	Copper awl (LN B)	Grave in barrow, with Bell Beakers of Veluwe type 2Id-e, 2-holed wrist guard, flint objects, stone metal workers' tools	no. 12; this book fig. 5.3
Nieuw-Millingen (G)	Tanged copper dagger (LN B)	Grave in barrow, with Bell Beaker of Veluwe type 2Ie, amber lunate pendant, flint arrowhead and knife	no. 10
Stroeërzand (G)	Tanged copper dagger (LN B)	Grave in barrow, with 4-holed curved wrist guard	no. 3
Vaassen-Tum. III (G)	Tanged copper dagger (LN B)	Secondary grave in barrow, with Bell Beaker of Veluwe type 2ID, amber button, pendant	no. 1

7.2. BURIAL GIFTS FROM THE MIDDLE BRONZE AGE AND DEPOSITS IN BURIAL MOUNDS (METALWORK AND OTHER MATERIALS)

Based on Theunissen 1999, table 3.13 with new finds added. All are from the southern Netherlands, except those with an *. All are from barrows

Site	Object	Position	Human remains	Reference
Alphen-Kwaalburg (N-B)	<i>Bronze</i> flanged axe	Primary in <i>ringwalheuvel</i>	Cremated, adult	Theunissen 2001; this book fig. 6.6
Alphen-Op de Kiek (N-B)	Flint arrowhead or scraper	Secondary	Cremated remains in urn	Theunissen 1999, table 3.13
Berghem-Zevenbergen 1.2 (N-B)	Decorated bone fragm.	Primary	Cremated remains in urn	Verwers 1966
Doorwerth (G)	<i>Bronze</i> palstave, type Niedermockstadt	Presumably primary	-	Butler/Steegstra 1997/1998: no. 239
Goirle-De Vijfberg 2.1 (N-B)	Decorated bone fragm.	Secondary	Cremated	Theunissen 1999, table 3.13
Goirle-De Vijfberg 4.1 (N-B)	Flint knife	Primary	Cremated	Theunissen 1999, table 3.13
Goirle-De Vijfberg 6.1 (N-B)	<i>Bronze</i> East-European axe, <i>bronze</i> tweezer, 1 <i>bronze</i> ring, 2 <i>bronze</i> indet. fragm.	Primary in barrow	Inhumation in trunk on surface	Butler 1995/1996, no. 72; this book fig. 7.9
Grathem (NL: L)	<i>Bronze</i> Tréboul spearhead, allegedly in 'barrow'	-	-	Butler 1987, fig 1: 2; pers. comment H. Steegstra
Gronsveld-Savelsbosch (NL: L)	<i>Bronze</i> item? Flint artefact(s)?	Primary	Cremated remains on stones	Theunissen 1999, table 3.13
Holset-'Sickle grave' (NL: L)	2 <i>bronze</i> sickle, 1 type Bühl <i>bronze</i> spearhead	No association with burial! Deposition in mound	-	Butler 1990, 98-100; this book section 7.13.4
Hoogeloon-Smousenberg (N-B)	Flint arrowhead	Primary	Cremated	Theunissen 1999, table 3.13
Hoogeloon-Zwartenberg (N-B)	<i>Bronze</i> nick-flanged chisel	Primary in large <i>ringwalheuvel</i>	Cremated	Theunissen 1999, table 3.13, this book section 6.4.4; fig. 6.8
Malensbosch-Franzosengrab (NL:L)	<i>Bronze</i> dagger (now lost, dubious find)	Primary?	?	Theunissen 1999, 88
Meteren-De Bogen burial no. 3 (G)	<i>Bronze</i> rapier, two <i>bronze</i> tanged arrowheads, <i>bronze</i> wire and small indet. <i>bronze</i> item	Primary in large barrow	Inhumation, adult male	Butler/Hielkema 2002 (but see comments in chapter 7)
Meteren-De Bogen burial no. 5 (G)	1 amber (?) bead with <i>bronze</i> wire, 1 bead made of pure <i>tin</i> (dating uncertain: possibly LBA or even later?)	Secondary in barrow	Inhumation, child. Amber on skull, tin bead on breast	Butler/Hielkema 2002
Neer-Boshei 1 (NL:L)	Ceramic pot	Primary	Cremated in tree trunk	Theunissen 1999, table 3.13
Nijmegen-Kops Plateau no. 18 (G)	Green discolouration, indet. animal bones	Secondary	Cremated, remains in urn. Adult (34-40) and infant (2-5 years)	Fontijn/Cuijpers in press
Nijmegen-Kops Plateau no. 20	Green discolouration, indet. animal bones	Secondary	Cremated, adult, male, age: 40-47	Fontijn/cuijpers in press

Site	Object	Position	Human remains	Reference
Nijmegen-Kops Plateau no. 21	Green discolouration, bones large + medium sized mammal	Secondary	Cremated, remains in urn. Adult (16-27) and infant (2-5 years)	Fontijn/Cuijpers in press
Nijmegen-Kops Plateau no. 22	Animal bones: bird and indet.	Secondary	Cremated juvenile (13-19)	Fontijn/Cuijpers in press
Nijmegen-Kops Plateau no. 37	Animal bones, indet.	Primary	Cremated, remains in urn. Adult (34-40)	Fontijn/Cuijpers in press
Nijmegen-Kops Plateau no. 38	Animal bones, medium sized mammal	Secondary	Cremated, remains in urn. Juvenile (14-19) and infant (2-5)	Fontijn/Cuijpers in press
Oss-Vorstengrafdonk (N-B)	Bone awl	Secondary	Cremated, remains in urn	Theunissen 1999, table 3.13
Riethoven-Boshoven 7.2 (N-B)	<i>Bronze?</i> Indet.	Primary	Cremated	Theunissen 1999, table 3.13
Swalmen-Hillenraad tum. 1 (NL-L)	<i>Bronze</i> Grigny axe and whetstone	No association with burial! Deposition in mound	-	Butler 1990, 100-2, this book section 7.13.4
Swalmen-Hillenraad tum. 2	2 <i>bronze</i> Grigny axes	No association with burial! Deposition in mound	-	Butler 1990, 100-2, this book section 7.13.4
Toterfout-Halve Mijl 1a (N-B)	Bone pin	Primary in <i>ringwalheuvel</i>	Cremated, adult, male (22-40); adult, male? (20-40); female (12-24 years)	Theunissen 1999, table 3.13; personal comments
Toterfout-Halve Mijl (1c)	Green discolouration	Secondary	Cremated, adult, male (22-40 years)	Theunissen 1999, table 3.13, 3.14
Toterfout-Halve Mijl (1d)	Green discolouration	Secondary	Cremated, female adult (22-30 years)	Theunissen 1999, table 3.13, 3.14
Toterfout-Halve Mijl 1B (60a)	Green discolouration, stone arrow straighter	Secondary	Cremated, remains in urn. Female, adult (22-40 years)	Theunissen 1999, table 3.13, 3.14
Toterfout-Halve Mijl 1B (61a)	Bone pins	Secondary	Cremated remains in urn	Theunissen 1999, table 3.13
Toterfout-Halve Mijl 1B (62a)	Green discolouration	Secondary	Cremated, remains in urn. Female, aged (40-60 years)	Theunissen 1999, table 3.13, 3.14
Toterfout-Halve Mijl 1B (63)	Green discolouration, bone pendant, antler fragm.	Secondary	Cremated. Child (8-12 years)	Theunissen 1999, table 3.13, 3.14
Toterfout-Halve Mijl 1B (65a)	Green discolouration	Secondary	Cremated, remains in urn. Female, adult (20-40 years)	Theunissen 1999, table 3.13, 3.14
Toterfout-Halve Mijl 5.1	Decorated bone fragm., antler fragm.	Primary	Cremated, child, 2 years $\pm$ 8 months	Theunissen 1999, table 3.13
Toterfout-Halve Mijl 5.2	Brown bear phalanx, antler fragm.	Secondary	Cremated, child 0-3 years	Theunissen 1999, table 3.13

Site	Object	Position	Human remains	Reference
Toterfout-Halve Mijl 10	Ceramic pot	Primary	Cremated, adult, female? (20-40); child 7 years $\pm$ 24 months; adult, female, 20-40 years	Theunissen 1999, table 3.13; personal comment
Weelde-Groenendaelsche Hoef; grave IV(A)	2 flint scrapers	Secondary	Cremated, remains in tree trunk; child	Theunissen 1999, table 3.13; Beex 1959
Weelde-Hoogeindse Bergen (A)	Green discolouration	Secondary	Cremated, remains in urn. Female, adult (c. 25 years)	Theunissen 1999, table 3.13, 3.14

7.3. METALWORK FROM URNFIELD GRAVES IN THE DUTCH PART OF THE STUDY REGION

Unless otherwise specified, the objects are made of bronze

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
NL: Gelderland				
Ede	Bronze vessel, possibly other items (EIA) (incompletely recovered)	-	-	Roymans 1991, table 4
Nijmegen-Kops Plateau no. 32	Pin, triangular-headed, sherds (LBA)	Flat grave?	-	Fontijn 1995
Idem no. 71	Bracelet, bronze fragm. (LBA/EIA)	Flat grave	-	Fontijn 1995
Idem no. 72	6 iron spearheads, 1 iron ferrule (EIA-MIA)	Circular ring-ditch (D= 6.5 m)	-	Fontijn 1995
Idem no. 76	(Finger?)ring (LBA/EIA)	Flat grave	-	Fontijn 1995
Idem no. 78	3 iron spearheads (EIA-MIA)	Flat grave	-	Fontijn 1995
Idem no. 79	2 iron spearheads (EIA-MIA), 1 ferrule	Flat grave	-	Fontijn 1995
Idem no. 81	1 iron spearhead, 1 iron ferrule, 1 iron pin fragm. (<i>Kropfnadel?</i>) (EIA-MIA))	Flat grave?	-	Fontijn 1995; unpublished, doc. of author
Idem no. 83	1 iron spearhead (EIA-MIA)	Flat grave?	-	Fontijn 1995
Idem no. 87	2 iron pins, small pot in urn (EIA)	-	-	Unpublished., do. of author
Idem no. 88	Golden ring (fragm), bracelet, urn grave (EIA)	-	-	Unpublished, doc. of the author
Nijmegen-‘terrein O’ (Hugo de Grootstraat)	Urn (?), large armring (D =18 cm), fragm. of bracelet; burnt; LBA/EIA	-	-	Unpublished, Mus. Nijmegen, no inv no.
Nijmegen-near ‘Kwakkenberg’ (dubious!)	Urn, small pot, some lightly burnt ornaments: 2 penannular bracelets, one decorated, fragm. bracelet decorated, fingerring, spiral, necklace of joint rings; LBA	-	-	Desittere 1968, (Catalogus), 125
Oosterhout-Van Boetzelaer- straat no. 11	Small piece bronze indet., small sherds; LBA (EIA)	Flat grave	-	Pers. comm. P. van den Broeke (Nijmegen)
Idem no. 17	Burnt pieces of bronze, indet. In urn (LBA)	Flat grave	-	Pers. comm. P. van den Broeke
Wijchen	Iron sword, wagon pars, bronze vessel, horse gear, bronze axe (burnt)	-	-	Pare 1991a, 219-20
Wijchen-Valendries	Several rings (from 1 or more graves?) (LBA/EIA)	-	-	Unpublished, mus. Nijmegen

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
NL: Limburg Baarlo	Bronze vessel, probably other items as well (incompletely recovered; EIA)	Large barrow	-	Roymans 1991, table 4
Baarlo-De Bong	2 tweezers (probably from 2 graves (LBA/EIA)	-	-	Butler unpublished
Beegden no. 17	1 iron <i>Kropfnadel</i> in urn (EIA)	Circular ring-ditch grave (D= 4.5 m)	Adult, 18-30	Roymans 1999
Beegden no. 22	Indet. fragm.	Multiple-grave: remains of at least 7 individuals in one urn in large long barrow (L= 52,5 m)	Juvenile: 2-4; 8-12; 8-12; adult, female, 18-80; adult, female, 18-80, adult, female?, 18-80, adult, male, 30-40	Roymans 1999; Tol 2000b, appendix 2
Beesel-Dreesen Campken	2 pins, burnt, in urn (LBA)	-	-	Willems 1983, 214-6
Heythuizen-Bisschop	Iron sword	-	-	Roymans 1991, app. 2, table 4
Horst-Hegelsom	Iron sword, folded up	Circular barrow (D=19 m)	-	Roymans 1991, app. 2, table 4
Kessel no. 4	1 iron <i>Schaelchenkopfnadel</i> in urn (EIA)	-	-	Willems 1984, 376
Kessel no. 16	Indet. bronze fragm., burnt in urn, 1 twisted bracelet fragm. (LBA)	-	-	Willems 1984, 377
Kessel-Hoeve St. Jan no.2	Indet fragm. in urn (EIA)	-	-	Willems 1983, 209-10
no. 3	Burnt fragm, spiral ring, twisted ring (EIA)	-	-	
no. 4	8 burnt fragm., in urn (EIA)	-	1 juvenile	
no. 6	Spiral fragm. in urn (EIA)	-	-	
Meerlo	Iron sword, horsegear in urn with lid	-	-	Roymans 1991, app. 2, table 2
Neer-Kappersberg	Pin	-	-	Butler unpublished, coll. Silvrants
Panheel no. 3	Spiral socket, ring, sherd, 2 small pots in urn (EIA)	-	-	Bloemers 1973
Posterholt-Het Vinke A	1 or 2 iron pins, burnt pin, spiral in urn (EIA)	Long barrow (25/4 m), secondary grave?	-	Willems 1983
D	Iron pin (EIA)	Flat grave?	-	
H	Twisted bracelet (LBA/EIA)	Circular ring-ditch grave (D= 7.5 m)	-	
L	Decorated bracelet fragm. (LBA/EIA)	Flat grave	-	
J	Several indet. burnt fragm., spiral, fragm. of twisted bracelet (LBA/EIA)	Flat grave or secondary grave	-	

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
Roermond-Musschenberg:				Schabbink/Tol 2000
All EIA				
no. 1	2 fragm. <i>Brillspirale</i> , 1 ring, 1 iron indet. 1 small pot in urn	-	Adult, female, 20-40 years	
no. 10	Indet fragm. in urn	-	Adult	
no. 18	Fragm. of bracelet in urn	-	Infant, 0-2 years	
no. 21	Fragm. iron indet. In urn	-	-	
no. 25	Indet fragm. in urn, pot	-	Adolescent, 10-16 years	
no. 34	3 fragm. of <i>Brillspirale</i> , 1 conical pendant, 3 indet. (2 burnt)	-	Adult, 16-20 years	
no. 39	Brac. Fragm, ring, small pot, 3 indet.	-	Adult, female, 19-28 years	
no. 41	1 indet., animal bones, small pot in urn	-	Female, 30-60 years	
no. 42	Many indet fragm., fragm. of bracelet and ring (for finger or ear)	-	Adult, 24-40 years	
no. 45	2 indet. Fragm., 1 animal bone (sheep/ goat) in urn	-	Adult, female 24-40	
no. 50	Iron pin fragm. in urn	-	Adult, > 20 years	
no. 53	Indet. Fragm. in urn	-	Adult, 30-60 years	
no. 57	6 indet. Fragm. in urn	-	Female, 20-40 years	
no. 58	2 indet. Fragm. in urn	-	-	
no. 59	2 bracelet fragm, 2 indet, small pot in urn	-	Adult, female, 40-60 years	
no. 60	Iron ring, spindle whorle	-	Adolescent, 9-16 years	
no. 63	Bracelet fragm., burnt, in urn	-	-	
no. 72	Ring	-	Juvenile, 11-12	
no. 73	Burnt bracelet fragm. and indet., animal bone (cow), in urn	-	Adult, female, 30-60 years	
no. 88	Many small burnt fragments	-	Adult, female, 20-40 years	
no 92	3 indet. fragm., small pot, in urn	-	-	
no. 102	2 burnt indet. fragm. in urn	-	-	
no. 104	Iron indet. in urn	-	Adult	
no. 106	Burnt (?) pin, small pot in urn	-	Adult, female, 30-60 years	
no. 107	Indet. fragm. in urn	-	-	
No. 109	Indet. fragm., rib fragm. of cow in urn	-	Juvenile, 6-12 years	

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
no. 126	Indet. fr., stone fragm. in urn	-	Adult, 20-40 years	Tol 2000a
no. 127	Iron fragm. in urn	-	Adult?, Female?	
no. 130	Fragm. folded bronze in urn	-	Adult, female, 20-40 years	
no. 135	4 indet. fragm., iron wire	-	Adult, female, 20-40 years	
no. 137	Burnt bracelet with everted terminals, 5 flint flakes, 1 scraper, 2 fragm. stone, sherds, 2 indet. bronze fragm.	Circular ring-ditch grave (D=16,25 m)	Adult, male, 30-60 years	
no. 138	Indet. fragm. in urn	-	Adult, 35-40 years	
Sittard Hoogveld: All EIA				
No. 32	Burnt fragm pig jaw in urn; association uncertain: pin, iron ring, iron nail	Flat grave	Adult male, 30-60 years	
no. 47	Iron fragm.	Flat grave	-	
no. 48	Iron pin	Flat grave	-	
no. 98	Ring with hook in urn	Flat grave	Adult, male, 30-60 years	
Venlo	Bronze vessel, possibly other items as well (EIA; incompletely recovered)	Possibly large barrow	-	Roymans 1991, table 4 and own documentation
Venlo-De Hamert: All EIA				Holwerda n.d.
no. 33	Indet. burnt fragm.	Circular barrow		
no. 35	Bracelet with everted terminal in urn	Circular barrow		
no. 64	Ring in urn	Circular barrow		
no. 66	Indet. fragm. in urn	Circular barrow		
no. 67	Indet. fragm.	Circular barrow		
no. 69	1 or 2 rings, small pot in urn	Circular barrow		
no. 79	Indet. fragm. in urn	Circular barrow		
no. 87	Indet. fragm. in urn	Circular barrow		
no. 90	Indet. fragm., small pot in urn	Circular barrow		
Weert-Boshoverheide				
-	Convex-profile button (LBA/EIA)	-	-	O'Connor 1980, liat 173: no. 15
-	Chape (LBA)	Presumably isolated grave	-	Gerdson 1986: no. 284b
Tum. O	5 fragm. Gündlingen sword (broken) in very large urn (EIA)	In large barrow (D= 16 m) with 6 graves	-	Cowen 1967: no. 142
Tum. O	3 fragm. Gündlingen sword (burnt, broken) in large urn (EIA)	In large barrow (D= 16 m) with 6 graves	-	Cowen 1967: 141

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
Tum. O	4 fragm. Gündlingen sword (broken, burnt), in large urn (EIA)	In large barrow (D= 16 m) with 6 graves	-	Cowen 1967: no. 140
-	Fragm. of spiral ring (LBA/EIA)	-	-	Willems 1984
-	Twisted bracelet (LBA/EIA)	-	-	Bloemers/Willems 1980/1981
-	Twisted bracelet, small pot in urn (LBA)	-	-	Bloemers/Willems 1980/1981
-	5 bracelets with everted terminals	From 5 graves?	-	O'Connor 1980, list 235: no. 3
-	Bifid razor (LBA/EIA)	-	-	O'Connor 1980, list 222, 3
II.136	Fragm. of spearhead in urn (LBA/EIA)	-	-	Felix 1945: no. 449
-	Tutulus head (LBA/EIA)	-	-	Felix 1945, no. 450
-	Ring (LBA/EIA)	-	-	Felix 1945, no. 451
I.1891/8.8a	Finger ring (LBA/EIA)	-	-	Felix 1945, no. 452
WST 61	Spiral fragm. (LBA/EIA)	-	-	Felix 1945, no. 453
I.1891/12.115	Ring (LBA/EIA)	-	-	Felix 1945, no. 454
No. 2	Ring (LBA/EIA)	-	-	Van Ginkel 1982 (esp. P. 40-1)
No. 8	Indet. fragm., burnt (LBA/EIA)	-	-	
H72	Possibly elements of horse harness, burnt? (EIA)	—	-	
H91g	Pin (LBA/EIA)	—	-	
H246	1 <i>Scheibenkopfnadel</i> (LBA)	—	-	
H248	14 fragm. of bracelets, 1 twisted (LBA/EIA)	—	-	
H249	Bracelet, twisted (LBA/EIA), 2 spirals	—	-	
He 7	Indet., burnt (LBA/EIA)	—	-	
He 10	Fragm. of <i>Steigbügelformiger Armring</i> (LBA)	—	-	
He11	4 Indet. fragm., burnt, fragm. of bracelet (LBA/EIA)	—	-	
He 12	8 Rings; horsegear 'ratelringen'? (EIA)	—	-	
He 13	100 fragm., most indet., including fragm. of bracelets, wires, pins (LBA/EIA)	—	-	
He 14	Vase-headed pin (LBA)	—	-	
He 14a	Biconical-headed pin (LBA)	—	-	
He 15	2 fragm. of pins, 2 fragm. of wires (1 twisted) (LBA/EIA)	—	-	
He 16	Stud; horsegear?; 50 fragm. (pins, bracelets, rings)	—	-	
Weert-Raak (all: EIA) 70B	Fragm. of bracelet	Circular ring-ditch grave (D=5.5 m)	Adult, 18-80 years	Tol 2000b, appendix 2

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
180	Indet. fragm.	Flat grave?	Adult, male?, 24-40 years	
252	Indet. fragm.	Flat grave?	Adult, 20-40 years	
NL: Noord-Brabant				
Bedaf no. 7	Spiral in urn (LBA/EIA)	-	-	Verhagen 1984
Bergeyk-Witrijt no. 4	Fragm. of pin in urn (LBA)	-	-	Van Giffen 1937, 49
Bergeyk-Witreit no. 10	Pin, 2 small pots (LBA)	Circular ring-ditch grave (D=7 m)	-	Van Giffen 1937, 50
Best no. 3	10 conical pendants (EIA), razor fragment, all burnt, small pot, in urn	Circular ring-ditch grave (D=5 m)	-	Willems 1935, 96-9
no. 12b	Bracelet with everted terminals in urn (EIA)	Circular ring-ditch grave (D=9 m)	-	
no. 41	Spiral in urn (LBA/EIA)	Flat grave	-	
no. 42	2 biconical-headed pins (LBA/EIA)	Circular ring-ditch grave	-	
no. 53	Pin (LBA/EIA)	Circular ring-ditch grave (D= 6 m)	-	
no. 54a	Ring (LBA/EIA)	Circular ring-ditch grave (D = 6 m)	-	
Noord-Brabants museum no. 120	Pin, conical-headed?, decorated (LBA/EIA)	-	-	
Best-Potjesbergen	Pin	-	-	AW no. 65
Cuyk-Heeswijkse Kampen no. 4	Spiral, small pot (LBA)			JAWN-Nijmegen 1981
Deurne	Dutch bifid razor (LBA/EIA)	-	-	Felix 1945, no. 69
Deurne-St. Josephs Parochie: all LBA/EIA				Doc. G. Beex
no. 96-103	Rings from several graves	-	-	
no. 141-2	Rings from several graves?	-	-	
no. 588-9	Pins from several graves?	-	-	
no. 591	Spirals	-	-	
-	Ring	-	-	
-	Pin (bent)	-	-	
-	3 pins	-	-	
-	Ring (fragm.)	-	-	
-	2 round-headed pins	-	-	
-	Conical pendants?	-	-	
Goirle no. 36	Iron pin, iron ring (EIA?)	Circular ring-ditch grave	-	Desittere 1968, 122

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
Goirle no. 55	Dutch bifid razor in urn (LBA/EIA)			Desiterre 1968, 122
Goirle no. 60	Biconical-headed pin (LBA), small pot, in urn	-	-	Verwers 1966b, 45
Goirle no. 62	Pin in urn	-	-	Van Ginkel 1982
Haps-Kamps Veld no. 81	<i>Wendelring</i> (Ha D), burnt	Circular ring-ditch grave	-	Verwers 1972
no. 190	Iron dagger, 3 iron arrowheads, iron swan's neck pin (Ha D)	Circular ring-ditch grave		
no. 166	Fragm. of ring (EIA)	Circular ring-ditch grave		
no. 222/231	Bronze wire, 5 glass beads	Circular ring-ditch grave	-	
Hasselt NBM 153	Needle (LBA/EIA)	-	-	Felix 1945, no. 183
Knegsel no. 34	Penannular gilded ring, pair of tweezers (EIA)	-	-	Braat 1936
Knegsel no. 51	Indet. fragm. (LBA/EIA)	-	-	Braat 1936
Laag Spul no. 32	Fragm. of wire	Circular ring-ditch grave (D= 3.9 m)	-	Verwers 1975
Laag Spul no. no. 42	Fragm. of wire (LBA/EIA)	Long barrow (24.4/5 m)	-	Verwers 1975
Laag Spul no. 81	Fragm. of wire	Flat grave	-	Verwers 1975
Luyksgestel	15 burnt conical pendants (EIA)	-	-	De Loë 1931, 81; this book fig. 9.6; 9.7
Luyksgestel	Indet. fragm. (LBA/EIA)	-	-	
Luyksgestel	Penannular bracelet (LBA/EIA)	-	-	
Luyksgestel	2 fragm. of fingerrings	-	-	
Luyksgestel	Fragm. of bracelet	-	-	
Mierlo-Hout no. 1	1 indet. iron object, 1 iron bar fragm., 4 burnt pottery fragments, 1 burnt rib of sheep/pig (EIA)	Boat-shaped ditch grave (20/7 m)	Adult, female, 43-52 years	Tol 1999
Mierlo-Hout no. 4	Iron pin (EIA0)	Rectangular ditch grave (6.5/7 m)	-	Tol 1999
Mierlo-Hout no. 87	Indet. fragm., burnt	Circular ring-ditch grave (D =5.5 m)	Adult, female, 20-40 years	Tol 1999
Oss-IJsselstraat no. 3	Iron torque (Ha D)	Rectangular ditch grave	-	Wesselingh 1993
Oss-IJsselstraat no. 4	Iron knife/dagger (fragm.), Ha D?, iron pin, indet.	Rectangular ditch	-	Wesselingh 1993
Oss-IJsselstraat no. 7	Iron indet. (EIA)	Circular ring-ditch grave		
Oss-Vorstengraf	Iron Mindelheim sword, folded up, bronze vessel, horse gear, iron axe, dagger?, 3 knives? All in bronze vessel	Circular ring-ditch, extremely large barrow (D=52 m); on top of MBA-A barrow	Adult, male	Roymans 1991, table 4, appendix 2, pers. comm. H. Fokkens

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
Riethoven no. 6	Biconical-headed pin (LBA)	-	-	Desittere 1968
Riethoven no. 10	Ring	-	-	Willems 1938, 39
Riethoven no. 19	Biconical-headed pin	-	-	Desittere 1968
Someren-Waterdael no. 2	Green discolouration on bone (EIA)	Flat grave	Adult, male, 30-47 years	Kortlang 1999
no. 4	Iron ring, iron pin (EIA)	Circular ring-ditch with posts (D=14.75 m)	Adult, male, 30-40 years	Kortlang 1999
no. 6	3 burnt iron arrowheads (Ha D)	Circular ring-ditch with posts (10.10/12.75)	Adult, 30-60 years	Kortlang 1999
no. 175	Fragm. red deer bone, iron pin, fragm. of dagger, all burnt	Long barrow (9.75/4.5 m)	Adult, male, 23-40 years	Kortlang 1999
Someren-Philipsdalling	Iron sword	-	-	Roymans 1991, table 4, appendix 2
Someren-Kraaijenstark	Iron sword	-	-	Roymans 1991, table 4, appendix 2
St. Oedenrode-Haagakkers no. 11a	Fragm. of bracelet, 2 indet. fragm., burnt (EIA)	Circular ring-ditch, interrupted in southeast	Adult	Van der Sanden 1981
no. 11b	1 indet. fragm. (EIA)	Circular ring-ditch, interrupted in southeast	Adult	
no. 12	Green discolouration on bone (LBA/EIA)	Circular ring-ditch, interrupted in south		
no. 13a	7 small beads, burnt?, in/near ceramic bowl (EIA)	Circular ring-ditch, interrupted in southeast	Adult	
no. 26	Thin rod, U-shaped fragm. (EIA?)	Circular ring-ditch, interrupted	Child	
no. 43	Spiral, rod fragm., 3 pieces of flint (LBA?/EIA)	Flat grave	Adult	
no. 67	2 indet. fragm., burnt (LBA/EIA)	Flat grave	Adult	
Valkenswaard-Het Gegraaf no. 51	Roll-headed pin (LBA/EIA)	Flat grave	-	Brunsting/Verwers 1975
Valkenswaard-Het Gegraaf no. 55	Ring, indet. fragm., burnt (LBA/EIA)	Long barrow	-	Brunsting/Verwers 1975
Veldhoven-De Heibloem no. 48	Iron pin in urn (EIA)	Barrow with posts	-	Modderman/Louwe Kooijmans 1966
Veldhoven-De Heibloem no. 51	Biconical-headed pin (LBA/EIA)	-	-	Modderman/Louwe Kooijmans 1966
Verhoven	Small ring	-	-	Verhagen 1984
Verhoven	Indet fragm., burnt	-	-	Verhagen 1984

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
NL: Utrecht (just north of research area)				
Rhenen-Koerhevel	Bronze vessel, axe (burnt), wagon parts (a.o. iron linch pins) (EIA)	-	-	Van Heeringen 1998-1999
Wijk bij Duurstede no. 1c	Bracelet or neck ring fragm., in urn (EIA)	Secondary grave in Bronze Age barrow	Adult, female, 30-35 years	Hessing 1989
Idem no. 26	Small ring (no finger ring) (EIA)	Parallel ditches (1.75/2 m)	Adult, female, 30-40 years	Hessing 1989
Idem no. 60	Bracelet/neck ring fragm., in urn, with small sherds (EIA)	Flat grave?	-	Hessing 1989
Idem no. 63	Bronze strips, folded, in urn (EIA)	Flat grave?	-	Hessing 1989
Idem no. 70	Iron <i>Kropfnadel</i> (fragm.), sherds, charcoal in urn (EIA)	Flat grave?	1 Adolescent, 14-18 years	Hessing 1989
Idem no. 87	Bronze strip, folded (association with grave uncertain)	Circular ring-ditch grave (c. 3.5 m)	-	Hessing 1989

7.4. METALWORK FINDS FROM URNFIELD GRAVES FROM THE BELGIAN PART OF THE STUDY REGION

Unless otherwise specified, the objects are made of bronze

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
B: Antwerpen				
Borsbeek no. 10	Bracelet, gilded ring (EIA), several pots	-	-	Van Impe 1972
Donk (all: LBA/EIA)				Van Impe 1980a
no. 2	Green discolouration on bone, small pot in urn	Flat grave?	-	
no. 22	Indet. fragm., in urn	Flat grave?	-	
no. 23	Indet fragm., bracelet fragm., burnt, small pot	Flat grave?	-	
no. 33	Green discolouration on bone	Flat grave?	-	
no. 35	Spearhead, burnt in urn	Flat grave?	Adult, male	
no. 40	Pin, small pot in urn	Flat grave?	Adult, female	
no. 44	Tweezer, animal bone, flint, flint arrowhead, all burnt in urn	Flat grave?	Infans I	
no. 52	Bracelet, 2 ring fragm., in urn	Flat grave?	Adult, male	
no. 58	Green discolouration on bone, urn	Flat grave?	Adult, femal	
no. 60	Indet. fragm., burnt, small pot, in urn	Flat grave?	Adult, female	
no. 78	Pin fragm., flint, burnt in urn,	Flat grave?	Infans I	
no. 98	Green discolouration on bone	Flat grave?	Adult, female	
no. 100	Green discolouration on bone, urn	Flat grave?	Adult, female	
no. 103	Green discolouration on bone	Flat grave?	Adult, female	
no. 133	Iron indet., 2 pots	Flat grave?	Adult, male	
no. 134	Iron indet.	Flat grave?	Adult, female	
no. 136	Indet. fragm. burnt	Flat grave	Adult, female	
no. 137	Ring in urn	Flat grave?	Adult, female	
no. 138	Knife fragm.?, burnt	Flat grave?	-	
no. 141	Indet. fragm., burnt, 2 pots	Flat grave?	Adult, female	
Grobbendonk B 1127	Decorated pin in urn (LBA)	-	-	Desittere 1968, 135
Ranst (all: LBA)				Lauwers/Van Impe 1980
no. 1	Green discolouration on bone, small pot in urn	-	Adult, male?	
no. 5	Gilded penannular ring in urn	-	-	
no. 6	Bracelet fragm., ceramic bead	-	Adult, female	
no. 10	2 pins, small pot	-	Adult, female	
no. 12	Bracelet fragm. burnt	-	-	
Zitaart-Meerhout no. 7	Pin, conical pendants, several beads (LBA/EIA)	-	-	
Zitaart-Meerhout no. 8	Biconical beads, bracelet (LBA/EIA)	-	-	

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
B: Limburg				
Achel-Pastoorbos no. 6	Indet. fragm., burnt, in urn (EIA?)	-	-	Beex/Roosens 1967
Achel-Pastoorbos no. 38a	Conical pendants, burnt, ceramic cup (<i>Eierbecher</i>) in urn (EIA)	Circular ring-ditch grave	-	Beex/Roosens 1967
Achel-Pastoorbos no. 38b	Indet. fragm., in urn (LBA/EIA)	Circular ring-ditch grave	-	Desittere 1968, 134
Achel-Pastoorbos no. 50	Indet. fragm., spiral fragm. (burnt), blue glass bead (LBA/EIA)	Circular ring-ditch grave, objects partly outside urn	-	Desittere 1968, 134
Celwol-Dorperheide	Bracelet	-	-	Van Impe 1995/1996, 30
Celwol-Dorperheide	Bracelet	-	-	Van Impe 1995/1996, 30
Grote-Brogel no. 73	Indet. fragm., pin, burnt	-	-	Roosens <i>et al.</i> 1963
Lommel-Kattenbosch: all EIA				De Laet/Mariën 1950
no. 19	Ring in urn (LBA/EIA)	Circular ring-ditch grave (D=10 m)	-	
no. 20	Pair of iron tweezers, iron razor, whetstone in urn	-	-	
no. 22	Iron neckring in urn	-	-	
no. 24	Fingerring, armring, beads	-	-	
no. 47	Small bracelets	-	-	
Neerharen-Rekem				Van Impe 1980b
no. 1	2 bracelets in urn (LBA/EIA)			
no. 8	Socketed spiral in urn (LBA/EIA)			
no. 18	Fragm. of pin in urn (LBA/EIA)			
no. 21	Stud? (LBA/EIA)			
no. 41	2 bracelets (LBA/EIA)			
no. 72	3 bent swords, 3 spearheads, 2 chapes, 1 ring with iron bar, all damaged/burnt (EIA)			
-	4 pins, from several graves? (LBA/EIA)			De Boe 1986, 24
-	4 rings/bracelets from several graves? (LBA/EIA)			
-	Decorated bracelet (LBA/EIA)			This book fig. 9.5
-	Ferrule (LBA/EIA)			
-	<i>Brillspirale</i> (LBA/EIA)			
Neerpelt-Achelse Dijk no. 1	Ring in urn (LBA/EIA)			Roosens <i>et al.</i> 1975
Neerpelt-Achelse Dijk no. 20	Pin in urn (LBA/EIA)	pin as fastener shroud?		Roosens <i>et al.</i> 1975
Neerpelt-Roosen: all EIA				Roosens/Beex 1960/1961; Van Impe <i>et al.</i> 1973; Van Impe 1995/1996, 30

Site	Object(s)	Grave type	Analysis of cremation remains	Reference
no. 4	Bracelet	-	-	
no. 19	Indet. fragm. burnt in urn	Ring-ditch grave	-	
no. 47	Indet. fragm.	-	-	
no. 55	Fragm. bracelet	Ring-ditch grave, opening in eastern part	-	
no. 56	Conical pendants, spiral, indet. fragm. (burnt) in urn, some flint part, bronze fragm. in ditch!	Circular ring-ditch, opening in eastern 2 individuals, both adults, male and female		
no. 65	Bracelet fragm.	Circular ring-ditch, opening in eastern part, fragm. in ditch!	Adult, male	
no. 70	Knife	Circular ring-ditch, opening in the eastern part, knife in ditch!	Adult, female	
no. 72	Bead in urn, conical pendants in urn	Ring-ditch grave, opening in eastern part, posts in ditch	Adult, female	
no. 77	Indet. fragm. in urn	Ring-ditch grave, opening in eastern part	Adolescent?	
no. 78	Bracelet fragm. in ditch	Ring-ditch grave, opening in eastern part	Adult, male	
no. 82	Bracelet fragm.		-	
no. 85	Bracelet fragm.	Ring-ditch grave, opening in north-eastern part		
no. 87	Bracelet fragm., flint	Ring-ditch grave, opening in north-eastern part	-	
no. 93	Bracelet fragm, conical pendants, hook	Ring-ditch grave, opening in north-eastern part		

8 INDICATIONS FOR METALWORKING (MIDDLE AND LATE BRONZE AGE)

Site	Objects	Find context and interpretation
NL: Gelderland Meteren-De Bogen site 29	Small piece of melted bronze	Found in settlement debris (Butler/Hielkema 2002). This find apart there are no other indications for metalworking
Nijmegen-Hunerberg youth prison	Small piece of melted bronze	Found in MBA pot of which the upper part was already missing when placed in the pit. The pot lay at its side at the bottom of the pit. Inside the pot the bronze was found. No other objects were found. The excavation yielded a number of traces of posts and pits of pre-Roman date. Some of them contained MBA sherds (unpublished ROB excavation, documented by present author)
Buggenum-Meuse	Fragment of bronze half-mould for palstave with trapeze-shaped blade	Dredged from the river. Given to the Museum in Roermond by J. Rumen (Haelen) Butler/Steegstra 1997/98, 227: no. 323. Originally thought to be the mould of a typical type of palstave, made in the southern Netherlands (Butler 1973, 322). It is now clear that palstaves that could be cast in this mould are lacking in the Low Countries (Butler/Steegstra 1997/98, 271).
Maastricht-groeve Klinkers	Tiny fragments of bronze	Found in the fill of two pits which also contained MBA sherds (Theunissen 1990, 211).
Roermond-Meuse	One half of bronze mould for socketed axe (LBA)	Dredged from the river. Type of axe that was produced in it is uncertain. Butler and Steegstra (in press) recently suggested that we are dealing with a mould for producing axes of the regional Helmeroth type (chapter 8)
NL: Noord-Brabant Cuijk	Fragments of one part of a two-piece clay mould for large dagger (or spearhead)	Said to have been found in a pit fill which also contained MBA sherds. Amateur find (chapter 7; fig. 7.16)
Oss-Horzak	Fragment of one part of a two/three-piece clay mould for palstave, arrowheads, wheel-headed pin	Found during excavation of University of Leiden in fill of large pit, containing numerous MBA sherds, lumps of loam and much charcoal (chapter 7; fig. 7.17; Fontijn <i>et al.</i> 2002)

9 METALWORK FINDS FROM SETTLEMENTS (DISCUSSED IN
CHAPTER 7)

Legend: *: just north of the study region

Site	Objects	Find context and interpretation
NL: Gelderland		
Dodewaard site 20	Dagger	Find layer where also MBA sherds, some stone, flint and bone remains were found. Only partially excavated (Jongste 1997, 14)
Dodewaard site 38	Sickle, rivet	Find layer in clayey sediment with a concentration of MBA sherds, some stone and flint artefacts, and a number of soil traces that can be interpreted as the remains of a settlement site. Only partially excavated. The bronze objects were found in the centre of the artefact concentration. Objects dating to the Neolithic and Late Bronze Age were found as well (Drenth/Bulten 1997).
Eigenblok site 5	Heavily worn sickle, awl, spiral	Find layer in clayey sediment where MBA sherds and some stone and flint objects were found. Not disturbed by ploughing. Sickle and awl were found at about one m west of group of soil traces interpreted as remains of a MBA house (no. 1), at a relatively high position in the find layer. The spiral lay more remote: seven m northwest of the recognized house plan (Hielkema 2002)
Eigenblok site 6	Hook, 5 indet. fragments, 2 awls, arrowhead, heavily worn Wohlde dagger, 3 spirals, roll-headed pin	Find layer in clayey sediment where MBA sherds and some stone and flint objects were found. Disturbed by ploughing. An awl, two spirals and the arrowhead were found within a cluster of soil traces interpreted as the remains of a MBA house (no. 1). Awl and arrowhead had a relatively high position in the find layer, probably due to ploughing. All objects may be close to the location of the probable entrance of this house. The dagger, another awl and a third spiral lay at several metres from the recognized house plan. Much more remote is the find spot of the pin (Hielkema 2002)
Kesteren 230 N	Awl, roll-headed pin	Find layer in clayey sediment with a concentration of MBA and EBA sherds, some stone and flint artefacts. Finds were done at a considerable distance from each other, and therefore probably belong to different clusters of settlement traces (unpublished)
Manen*	Sickle	Amateur find, said to have been found together with MBA sherds (Modderman/Montforts 1991, 149)
Meteren De Bogen site 28-1	2 small indet. pieces of bronze, 2 possible beads	Found in MBA settlement debris. Objects were found apart, no indication that they were related to man-made constructions (Butler/Hielkema 2002)
Meteren De Bogen site 28-2	2 small pieces of lead, indet.	Found in MBA settlement debris. Objects were found apart, no indication that they were related to man-made constructions (Butler/Hielkema 2002). In my opinion it cannot be ruled out that these items are younger than the Bronze Age
Meteren De Bogen site 29	Small bronze bead, small chisel (?), melted piece of bronze	Bead was found in fill of pit for posts of house 28-1AH. The other objects were found in MBA settlement debris (Butler/Steegstra 2002).
Opheusden (Brienen)	2 sickles (1 incomplete)	Find layer in clayey sediment, containing MBA sherds of the HVS and DKS variety. Not excavated. The layer was recorded when an existing ditch was widened (Modderman/Montforts 1991, 149)
NL: Limburg		
Blerick	Pin	Allegedly in MBA settlement site, unpublished (pers. comment L. Theunissen)
Venray-Hoogriebroek	1 sickle (heavily worn)	In pit fill which also contained MBA sherds of the Drakestein type. A post was dug through the fill of this pit. This post is interpreted as one of the constructional posts of MBA house A (Krist 2000, 21)

Site	Objects	Find context and interpretation
NL: Noord-Brabant Breda-Moskes	Sickle, worn	Found in the fill of a pit, located near an MBA farmyard. It also contained six MBA sherds (pers. comm. C. Brandenburg).
Boxmeer	Chisel	Found in the fill of a pit, belonging to a distinct cluster of soil traces interpreted as the remains of a farmyard (no. 1). The pit seems to have been used to store grain (Hiddink 2000, 72; Van de Velde 1998, 32-3)
Sint-Oedenrode	1 pin (fragment), <i>Kolbenkopfnadel</i>	Stray find. Found during excavation, near a cluster of soil traces, interpreted as the remains of a LBA settlement (unit C; Van der Sanden 1981, 323).
Utrecht (NL) Wijk bij Duurstede De Geer*	1 sickle (worn), 1 spearhead (resharpened), 1 chisel, 2 awls	Found during large-scale excavation where some settlement traces from the MBA were uncovered. Exact relationship of bronze finds to these traces is at the moment unclear, as the prehistoric finds are unpublished (Drenth 1996, note 3)
Wijk bij Duurstede de Horden*	1 spearhead	Found during large-scale excavation of traces of an MBA settlement and an EIA urnfield (Hessing 1989). The relationship of the bronze find to these sites is unclear as the find material is unpublished.

10.1 METAL TYPES DISTINGUISHED BY BUTLER/VAN DER
WAALS (1966, TABLE 1)

Metal types	Composition
Singen metal	Cu + moderate to high As, Sb, Ag, Ni
Bell Beaker metal	Cu + high As, moderate to high Ni
Arsenical copper	Cu + high As
Arsenical bronze	Cu + Sn > 1 %
Ösenring metal	Cu + high As, Sb, Ag
A deviant	Cu+ high As and Ni, moderate Pb, Sb, Fe
Qualifications used:	
‘High’	Values between 1 and 10 %
‘Moderate’	Between 0,1 and 1 %
‘Low’	Between 0,01 and 0,1 %
‘Very low’	Below 0,01 %

10.2 METAL ANALYSES OF FLAT AND LOW-FLANGED AXES

Butler’ s and Van der Waals’ metal analyses of flat and low-flanged axes in the research area based on Butler 1995/1996 and Butler/Van

der Waals 1966. 52 en 53: inv. numbers of Veluwe ‘hoard’; Gross-G= Gross-Gerau; British-de= British type, decorated; British aff.: type with affinities to British types.

Site	type	Sn	Pb	As	Sb	Ag	Ni	Bi	Fe	Interpretation
Late Neolithic										
Beek	Bygholm	n.d.	n.d.	0.2	1.1	0.6	0.01	0.01	n.d.	Ösenring-Piding series
Limburg	Bygholm	n.d.	0.01	4.0	0.05	0.015	0.37	0.003	0.005	BB-metal
Veluwe-53	Bygholm	n.d.	n.d.	2.8	0.2	0.12	0.52	n.d.	n.d.	BB-metal
Veluwe-52	Bygholm	n.d.	n.d.	0.1	0.29	0.45	0.14	0.003	0.0-5	Singen, a-typical?
Early Bronze Age										
Bergen	Gross-G	0.21	0.05	0.3	1.6	2.7	0.40	0.006	0.005	Singen metal
Exaten	Salez	11.0	n.d.	0.5	0.60	0.83	0.64	n.d.	n.d.	Singen-high tin?
Haren	British-de	9.0	n.d.	0.2	0.04	0.02	n.d.	n.d.	n.d.	British-Irish
Nuenen/Gemert	British-aff	7.2	n.d.	0.2	0.24	0.26	0.05	n.d.	0.01	Únětice-like
’s-Heerenberg	Emmen	9.3	n.d.	0.2	n.d.	0.01	0.02	n.d.	n.d.	Arsenical bronze
’s-Hertogenbosch	British aff	1.0	n.d.	0.2	0.6	1.6	1.5	n.d.	0.01	Singen, modest tin
Wageningen-hoard	Migdale	1.6	0.01	0.2	0.13	0.33	0.66	n.d.	n.d.	Singen, a-typical

10.5 CONTENTS OF THE WAGENINGEN HOARD

Contents of the Wageningen hoard with metal analyses

(Butler/van der Waals 1966). Numbers 10 and 11 are inventory numbers of the RMO.

[illegible]

