

Two Thousand Years in Dendi, Northern Benin

Archaeology, History and Memory

Edited by

Anne Haour



BRILL

LEIDEN | BOSTON

Contents

Acknowledgments	XI
List of Figures and Tables	XIII
List of Maps	XVIII

PART 1

- 1 Introduction 3
Anne Haour
- 2 Crossing Archaeology and Oral Tradition: Approaching Dendi History from Sites of Memory 6
Olivier Gosselain and Lucie Smolderen
- 3 Palaeoenvironmental Data on Dendi, in the Last 3000 Years 20
Anne Haour
- 4 The Archaeology of the Eastern Niger Valley 23
Anne Haour and Didier N'Dah
- 5 An Archaeological and Ethnographic Approach to a Site and Its Region 26
Anne Haour, Olivier Gosselain, Alexandre Livingstone Smith, Sam Nixon and Didier N'Dah

PART 2

- 6 Landforms, Hydrography, and Vegetation 31
Raoul Laibi, Didier N'Dah and Paul Adderley
- 7 The Archaeological Landscape: Survey and Settlement 41
Nadia Khalaf, Anne Haour, Didier N'Dah and Alexandre Livingstone Smith

PART 3

- 8 Ethnographic Methods 53
Olivier Gosselain, Lucie Smolderen, Victor Brunfaut, Jean-François Pinet and Alexandre Livingstone Smith
- 9 Architecture and Settlements Today 58
Victor Brunfaut and Jean-François Pinet
- 10 Textile Production in Dendi: An Ethnographic and Historical Study of a Chain of Production 73
Lucie Smolderen

PART 4

- 11 Excavation Strategies and Methods: Approaching an Archaeological Terra Incognita 85
Anne Haour, Didier N'Dah, Carlos Magnavita, Sam Nixon and Alexandre Livingstone Smith
- 12 The Mound of *Tombo*: Introduction to the Site 92
Didier N'Dah, Carlos Magnavita, Sam Nixon, Anne Haour and Alexandre Livingstone Smith
- 13 The Geophysical Prospection of Birnin Lafiya 96
Carlos Magnavita
- 14 The Pavements at *Tombo* Birnin Lafiya 103
Didier N'Dah and Barpougouni Mardjoua
- 15 Pavements and Other Architectural Features 112
Sam Nixon
- 16 Stratigraphy and Dating: Excavation Units and Associated Dates 132
Alexandre Livingstone Smith, Louis Champion, Nicolas Nikis and Anne Haour
- 17 The Pottery 139
Anne Haour, Sam Nixon, Alexandre Livingstone Smith, Nicolas Nikis and David K. Kay
- 18 Ironworking 174
Caroline Robion-Brunner
- 19 Metal Objects and Slag from Birnin Lafiya 193
Anne Filippini
- 20 Beads and Pendants 199
Sonja Magnavita
- 21 The Cowrie Shells 205
Annalisa Christie and Anne Haour
- 22 Figurines and Terracotta Objects 211
Romuald Tchibozo
- 23 Archaeobotanical Remains 216
Louis Champion and Dorian Fuller
- 24 Wood Charcoal 234
Barbara Eichhorn

25 Animal Remains 240
Veerle Linseele and Wim Wouters

26 Human Skeletal Material 254
Ronika K. Power and Anne Haour

PART 5

27 Birnin Lafiya within West African Archaeology 283
Anne Haour and Sam Nixon

28 The Site within West African Political and Craft History 294
Olivier Gosselain and Anne Haour

PART 6

Catalogue of Trench Descriptions

A Pekinga (PEK) 307
Abubakar Sule Sani

B Toutokayeri (TTO-14-SI, II & III) 316
Nicolas Nikis, Alexandre Livingstone Smith and Anne Haour

C Kompa Dune (KOD) 325
Anne Haour and Nadia Khalaf

D Torouwey (TRO-14-SI) 333
Alexandre Livingstone Smith and Olivier Gosselain

E Kompanti (PTI-14-SI) 336
Alexandre Livingstone Smith and Nicolas Nikis

F Tin Tin Kanza 339
Louis Champion, Nadia Khalaf and Anne Haour

G Boyeri (BOY-14-SI & II) 359
Nicolas Nikis, Alexandre Livingstone Smith and Olivier Gosselain

H Bogo Bogo (GOG-14-SI) 366
Nicolas Nikis and Alexandre Livingstone Smith

I Kwara zeno (KAZ-14-SI & II) 373
Pascal Gnankpo Amoussou, Inès Corolin Amoussou, Nicolas Nikis, Olivier Gosselain and Alexandre Livingstone Smith

J Gorouberi (GOB-13-SII) 379
Caroline Robion-Brunner

- K Gorouberi (GOB-14-SI & II) 390
Nicolas Nikis, Alexandre Livingstone Smith, Anne Filippini and Anne Haour
- L Karimama (KAR-14-SI) 395
Alexandre Livingstone Smith and Nicolas Nikis
- M Kusulabu (KUS-14-SI & SII) 399
Alexandre Livingstone Smith, Nicolas Nikis and Barpougouni Mardjoui
- N Kozungu (KOZ-14-SI) 405
Alexandre Livingstone Smith and Nicolas Nikis
- O Tondo windi (TOW-14-SI) 416
Louis Champion and Anne Haour
- P Bokorobu (BOK) 421
Franck N'Po Takpara
- Q Birnin Lafiya (S1) 427
Anne Haour
- R Birnin Lafiya (S4) 434
Anne Haour and Barpougouni Mardjoui
- S Birnin Lafiya (S5) 450
Alexandre Livingstone Smith, Nicolas Nikis, Louis Champion and Anne Haour
- T Birnin Lafiya (S8) 460
Richard Lee
- U Birnin Lafiya (S9) 467
Alexandre Livingstone Smith and Nicolas Nikis
- V Birnin Lafiya (S3/10) 485
Sam Nixon
- W Birnin Lafiya (S11) 498
Richard Lee
- X Birnin Lafiya (S13) 519
Jennifer Wexler and Nestor Labiyi
- Y Kargui (KGI-14-SI) 526
Alexandre Livingstone Smith and Anne Filippini
- Z Alibori I 532
Didier N'Dah
- AA Alibori Site 2 536
Didier N'Dah

AB	Molla (MOL-14-SI)	541
	<i>Inès Corolin Amoussou, Nicolas Nikis, Alexandre Livingstone Smith and Anne Haour</i>	
AC	Tomboutou (TOU-14-SI)	546
	<i>Pascal Gnankpo Amoussou, Alexandre Livingstone Smith, Nicolas Nikis and Anne Haour</i>	
AD	Kantoro (KRO-14)	551
	<i>Louis Champion, Anne Haour and Anne Filippini</i>	
AE	Garou (GAR-14-SI)	575
	<i>Alexandre Livingstone Smith</i>	
AF	Guene zeno (ENE-14-SI & II)	579
	<i>Alexandre Livingstone Smith</i>	
AG	Guene (GUE-14-SI)	582
	<i>Alexandre Livingstone Smith</i>	
AH	Kouboukourou (ROU-14-SI)	585
	<i>Alexandre Livingstone Smith</i>	
AI	Madekali (KLI-14-SI & RCI)	590
	<i>Alexandre Livingstone Smith, Louis Champion and Nicolas Nikis</i>	
	Pottery Plates	601
	Catalogue of Small Finds	640
	Radiocarbon Dates	696
	Gazetteer	710
	References	755
	Maps	779
	Index	786

Kozungu (KOZ-14-SI & SII)

Alexandre Livingstone Smith and Nicolas Nikis

1 Location

Kozungu was described to us as a place occupied by people who were unseated by those who subsequently founded Birni Lafia. Kozungu refers to the forest of baobabs for which the place is known, and the site is located a few hundred metres east of the modern village.

2 Geographical Coordinates

LAT: 11,98057003 LONG: 3,226440037 (WGS84)

3 Discovery

Researchers of the project visited the site in 2012 (Julien Jourand) and 2013 (Nadia Khalaf). Alexandre Livingstone Smith and Nicolas Nikis identified the excavation locus on 24 January 2014.

4 Destruction Risks

The site is ploughed regularly by a farmer from Birni Lafia and thus is probably subject to erosion. Mitigation measures are not urgent.

5 Excavation

The site had never been excavated before. The test pits were 1 × 1 m in size and excavated by spits of 10 cm (except for the superficial layer which was excavated in one spit of 20 cm). Within each spit, archaeological contexts (i.e. distinct units) were separated and sieved and bagged separately. All the spits were sieved down to 5 mm.

6 Site

The site of Kozungu appears to be a large settlement mound overlooking the Niger flood plain. It appears as an

open sandy mound with baobabs scattered on a crest. The land is used for agriculture and archaeological material is visible as a medium density scatter of pottery. The extent of this site is unknown.

7 Stratigraphy

7.1 KOZ-14-SI

The stratigraphy at KOZ-14-SI displays three or four units beneath the ploughed layer:

Level 1 is a layer of compact brown grey sand overlaying a layer of brown grey loose sand.

Level 2 consists of compact grey sand overlaying a layer of loose grey sand. Part of the compacted layer is in fact a floor made of compacted and hardened laterite (north-east corner of the square).

The third level is probably a pit, sealed by a thin layer of sand overlaying its stabilisation layers (i.e. the last filling of the pit).

The fourth level is barely visible at the bottom of the trench, and appeared to be either a part of Pit 1 or a distinct level. Taking the situation in KOZ-14-SII into account, we consider this as a distinct level (Level 3). It is a layer of loose brown sand.

The test pit was interrupted at 120 cm for logistical reasons, although archaeological layers were still yielding material.

7.2 KOZ-14-SII

The stratigraphy at KOZ-14-SII displays three levels and a pit below the ploughed layer:

The first level (Level 1) is made of a layer of compact brown sand overlaying loose grey brown sand (Contexts 1a and 1b to Context 3). It is similar to Level 1 in KOZ-14-SI, but it includes a thick layer of compact red sand (Context 2).

Level 2 consists of a layer of loose grey sand, much thinner than its equivalent in S1.

The third level (Feature 1) is a pit, possibly cutting in part through Levels 1 and 2.

Level 3 consists of a thick layer of loose brown sand. It is probably the same as that observed in S1.



FIGURE N.1 Site under excavation

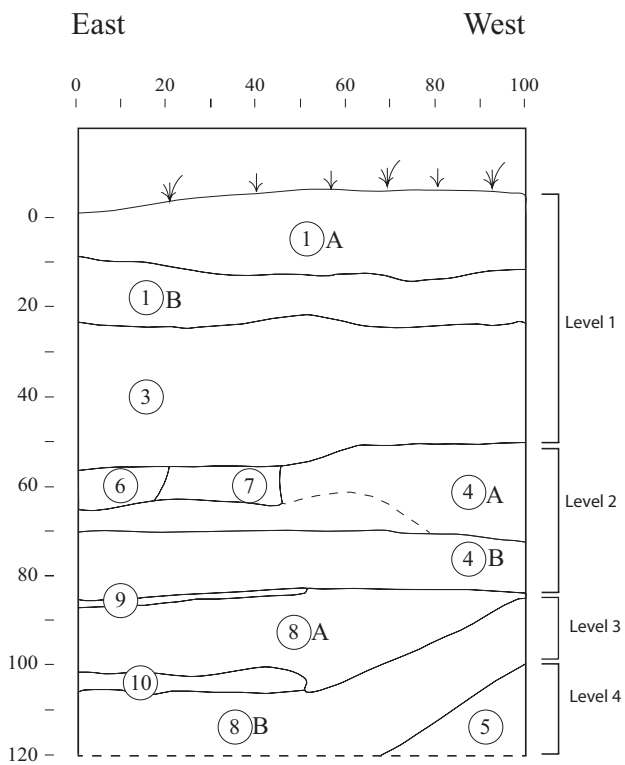


FIGURE N.2
Kozungu S1, South section.
1A Ploughing zone. Loose dark grey sand with pottery and charcoal. Abundant roots and rootlets
1B Dark brown compact sand, with pottery, charcoal and bone
3 Grey brown sand, with pottery, charcoals and bones
4A Indurated grey sand pottery and abundant charcoal
4B Loose grey sand pottery and abundant charcoal
6 Hard orange clay sand (burnt?)
7 Indurated grey brown sand
8A loose brown sand with pottery and charcoal
8B loose dark brown sand with pottery
9 Orange sediment (burnt surface?)
10 Orange sediment (burnt surface?)

8 Finds

White on red painted pottery was found during the survey. Regarding S1, the two upper levels seem to be dominated by pottery decorated with loose folded strip roulette. Two iron objects were recovered from this unit (SF 2014-95 and 96): one rod fragment, and one elongated and curved plaque fragment belonging to the indeterminate category.

In S11 the two upper levels also seem to be dominated by pottery decorated with loose folded strip roulette. Level 3 seems to be associated with a distinct style of pottery. In this test pit two ring fragments were recovered representing items of very different sizes (SF 2014-98 and -99), and an item (SF 2014-97) which appears to be a metal hinge or pendant.



FIGURE N.3
Possible floor in Kozungu SI



FIGURE N.4 Kozungu SII, east section at completion

9 Interpretation and Cultural Attribution

Levels 1 and 2 may be post-thirteenth century. Level 3 is probably much earlier (Early Iron Age or Neolithic, dated in SII). Radiocarbon dates show the long time span of the occupation at the site.

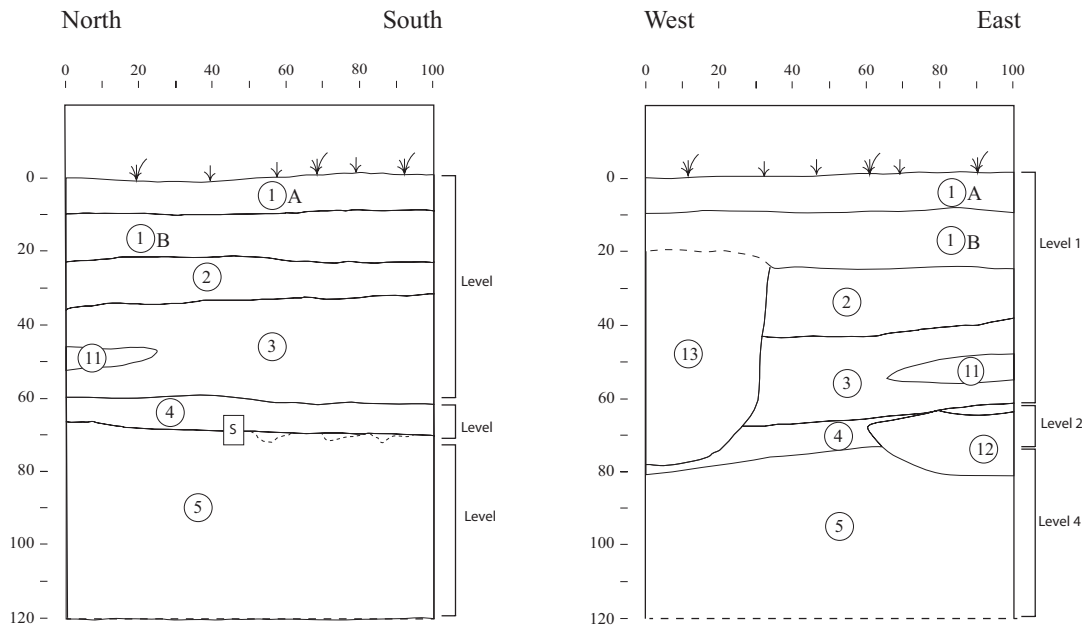


FIGURE N.5 Kozungu SII, east and north sections

- 1A Ploughing zone. Loose dark grey sand with pottery and charcoal. Abundant roots and rootlets
 1B Dark brown compact sand, with pottery, charcoal and bone
 2 Red indurated sand, with pottery, charcoal and bone.
 3 Grey brown sand, with pottery, charcoal and bone
 4A Indurated grey sand pottery and abundant charcoal.
 4A Loose grey sand pottery and abundant charcoal
 5 Loose brown sand with abundant pottery and charcoal
 11 Black sand, very abundant charcoal.
 12 Bioturbation
 13 Compact dark grey sand (pit structure starting in 1B)

10 Radiocarbon Dates

OxA-31042	351	27	KOZ 14 SI, 20–30	Phase 5
OxA-31043	357	28	KOZ 14 SI, 20–30	Phase 5
OxA-31580	609	25	KOZ 14 SI, 30–40	Phase 4
OxA-31577	557	27	KOZ 14 SI, Context 4, 80–100	Phase 4
OxA-31578	607	25	KOZ 14 SI, Context 4, 80–100	Phase 4
OxA-31579	339	26	KOZ 14 SI, Context 5, 110–120	Phase 5
OxA-31044	605	27	KOZ 14 SII, Context 4, 60–70	Phase 4
OxA-x-2600-42	601	30	KOZ 14 SII, 80–90	Phase 4
Beta-411136	2920	30	KOZ 14 SII, 110–120	Phase 1
Beta-411137	2910	30	KOZ 14 SII, 120–130	Phase 1
Beta-411138	2860	30	KOZ 14 SII, 130–140	Phase 1

II KOZ SI

TABLE N.1 Desampling

Level	Number
0-20	379
20-30	72
30-40	49
40-50	59
50-60	61
60-80	76
80-90	51
90-100	95
100-110	92
110-120	64
Total	998

Analysis in the field by Alexandre Livingstone Smith, Xavier Grégoire Olesgun, Agathe Choukpin, Carolin Amoussou and Nicolas Nikis and at UEA by Sam Nixon

Levels 60-70 and 70-80 were recorded together as 60-80 because of a labelling error

TABLE N.2 Category 4

Context	Undecorated	Illegible
0-20		63
20-30		43
30-40		48
40-50		31
50-60		36
60-70		44
60-80		32
80-90		9
90-100	5	4
100-110	8	1
110-120	5	1
Total	≤ 324	≥ 6

Analysis in the field by Ali Livingstone Smith and Nicolas Nikis, and at UEA by Sam Nixon.

Above 90cm, analysts in the field made no distinction between undecorated and illegible sherds

TABLE N.3 Category 3

Context	#	Burn	Dec1	Dec2	Dec3	Dec4
0-20	1		rfp-1c			
	1	ext	mch-3	plain		
	1	int	plain	sl-1	sh	sl-1
	1	ext	sl-3	plain	sc-4	plain
	1		sx-7			
	27		rce-8			
	5		rc-1			
	40		rfp-1			
	13	Y	undec			
	1	ext/int				
	1	ext/int	rfp-1b	undec		
20-30	1	ext	plain	rc-3	plain	
	1	ext/int	plain	ch-1	rc-1a	plain
	9		rce-8			
	2		rc-1			
	26		rfp-1			
	9	Y	undec			
	5		incision			
30-40	2		rce-8			
	2		rc-1			
	29		rfp-1			
	8	Y	undec			
	2		incision			

TABLE N.3 Category 3 (cont.)

Context	#	Burn	Dec1	Dec2	Dec3	Dec4
40-50	1		roul			
	1	ext	plain	sl-6 over rfp-1a		
	4		rce-8			
	3		rc-1			
	33		rfp-1			
	7	Y	undec			
	1		roul			
50-60	2	ext				
	1	ext	plain	rc-3	ch-1	rfp-1b
	1	ext/int	plain	rc-1a		
	1	ext	plain	sl-2	plain	indis
	1		sl-4	rfp-1a		
	1	ext	plain	sl-1	rc-1a	
	1	ext	plain	rc-3		
	2	ext/int				
	1		rfp-1b			
	3		rce-8			
	3		rc-1			
	32		rfp-1			
	10	Y	undec			
	60-70	1		roul	undec	
9			rce-8			
1			rc-1			
28			rfp-1			
6		Y	undec			
60-80	1	ext/int				
	1		plain	rc-3		
	1	ext	plain	rc-3	roul	
	1	ext	plain	sl-1	rc-1a	sl-1
	1	ext	sl-7	sc-4		
	1	ext/int	plain	herb	roul	
	1	ext	sl-4	roul		
	1	ext	plain	ch-1	roul	sp4-v
	1	ext	plain	st over rc-1a	sl-1	
	1		plain	roul		
	1	int	roul	sx over roul		
	1	ext	plain	mch-3		
	4		rce-8			
	2		rc-1			
	19		rfp-1			
	12	Y	undec			
	1	ext	roul	undec		
	1		rfp-1b			
	1		rfp-1b	undec		
	1	ext/int	indis	sx	undec	
80-90	1	ext/int				
	1	int	roul			

TABLE N.3 Category 3 (cont.)

Context	#	Burn	Dec1	Dec2	Dec3	Dec4
	1	int	rc-1a	rce-8		
	2		roul			
	1	int	plain	rc-3		
	1		plain	sh over sl-2		
	4		rce-8			
	16		rfp-1			
	2	Y	undec			
	19		indis			
90-100	1	ext/int	plain	rfp-1b		
	1	ext/int	sp4-v over roul			
	1		rc-1a			
	2	ext	plain	ch-1	rc-3	
	1	ext	sl-5 over roul	roul		
	1	ext	roul			
	1		plain	ch-1 over roul		
	1	int	roul			
	14		rfp-1			
	3	Y	undec			
	3		rce-8			
100-110	1		sl-2	rfp-1b		
	1	ext/int	plain	rc-3	rc-1b	plain
	1		indis			
	1		rce-8			
	9	Y	undec			
	15		rfp-1			
110-120	1	int	rc-3			
	1		rce-8			
	3	Y	undec			
	12		rfp-1			
Total	517					

Analysis by Sam Nixon and Anne Haour

Levels 60-70 and 70-80 were recorded together as 60-80 because of a labelling error

TABLE N.4 Rims

Context	#	R. Type	Brn	Dec1	L	Dec2	L2	Dec3	L3	Dec 4	L 4	Ang.	Diam.	Mx. thick
0-20	1	S1										4	9	0.6
	1	S1												0.6
	1	S4		sl-1	u	roul	u							0.5
	1	E21	ext/int	is-geo 21	u	sl-1	u	indis	u	undec	c	4		0.45
20-30	1	T21	ext/int									4	18	0.95
40-50	1	E10		rc-1a	c	sl-2	c							0.65
60-80	1	S1	ext/int											1.05
	1	E4	ext/int											0.9
90-100	1	S3	int	su	u									1.2

TABLE N.4 Rims (*cont.*)

Context	#	R. Type	Brn	Dec1	L	Dec2	L2	Dec3	L3	Dec 4	L 4	Ang.	Diam.	Mx. thick
	1	S1	ext	rfp	u							3		0.75
	1	S1	ext/int											0.7
	1	S1		roul	u							3	10	0.8
	1	S1	ext/int									5		0.8
	1	E41	int	rc-1a	u							4	16	0.55
100-110	1	T7	ext/int									4	11	1.1
	1	S1										3	17	0.5
110-120	1	E11	ext/int											1.1
	1	E4	int	rc-1b	u									0.7
	1	E4	ext/int									4		0.8
	1	E32	int									5		0.7
	1	E1	ext/int											0.6
Total	21													

Analysis by David Kay

12 KOZ SII

TABLE N.5 Desampling

Level	#
0-20	404
20-30	295
30-40	183
40-50	250
50-60	243
60-70	99
70-80	5
80-90	151
90-100	106
100-110	206
110-120	237
120-130	415
130-140	345
Total	2939

Analysis in the field by Alexandre Livingstone Smith, Xavier Grégoire Olesgun, Agathe Choukpin, Amoussou Inès Carolin, Nicolas Nikis, and Alidou Abdou Dramane and at UEA by Sam Nixon

TABLE N.6 Category 4

Context	Undecorated	Illegible
0-20	40	1
20-30	66	0
30-40	90	11
40-50	19	22
50-60	22	3
60-70	6	7
70-80	18	14
80-90	4	3
90-100	7	3
100-110	7	13
110-120	11	14
120-130	69	25
130-140	70	16
Total	429	132

Analysis in the field by Nicolas Nikis, Jennifer Wexler and Agathe Choukpin, and at UEA by Sam Nixon

TABLE N.7 Category 3

Context	#	Burn	Dec1	Dec2	Dec3	Dec4
0-20	1	ext/int	plain	sl-2	roul	
	1		plain	sx		
	12		rfp-1			
	4	Y	undec			
	13		rce-8			
	2		rc-1			
20-30	1		sx	plain	sl-1	sx
	1	ext	plain	ch		
	3		rce-8			
	4		rc-1			
	33		rfp-1			
	6	Y	undec			
30-40	1	int	rfp-1b			
	1	int	rfp-1c	smth		
	2		rce-8			
	1		roul			
	1		rc-1			
	3		rfp-1			
40-50	5	Y	rc-1			
	1	ext/int	undec			
	1	ext/int	ch			
	1	int	perf	roul		
	2	ext/int	undec	roul		
	1	ext/int	is-geo 12			
	1		roul			
	1		is-geo 13			
	23		rfp-1			
	1		rce-8			
50-60	1	ext	plain	rc-3	rfp-1a	
	1	ext/int	is-geo 12			
	1		plain	rc-3		
	1		plain	roul		
	1	ext/int	plain	rc-1a		
	1	ext/int	ch	plain	ch	sl-5
	1	ext/int	sl-7	sx		
	1		rce-8			
	32	Y	rfp-1			
	3		rc-1			
60-70	1		roul			
	1	int	plain	roul		
	1		plain	sh-17		
	1	int	perf	roul		
	1		roul			
	3	Y	undec			
	12		rfp-1			
	1		rc-1			
	2		rce-8			

TABLE N.7 Category 3 (cont.)

Context	#	Burn	Dec1	Dec2	Dec3	Dec4
70-80	1	ext/int	is-geo 11			
	4	Y	undec			
	9		rfp-1			
	3		rc-1			
80-90	1	Y	undec			
	2		rfp-1			
	1		rc-1			
90-100	2		rce-8			
100-110	2		rfp-1			
	1		rce-8			
	2		rc-1			
110-120	1	int	rfp-1a	roul		
	1		rfp-1			
	1		rc-1			
	12		rce-8			
	1		sl-2 over rfp-1b			
120-130	1		plain	sl-5 over roul		
	1	int	roul			
	1	int	plain	sl-1 over roul		
	1	ext	plain	is-geo 11		
	1	Y	undec			
	1		rfp-1			
	14		rce-8			
130-140	1		sl-5 over rc-1a			
	1		plain	sl-2 over rc-1a		
	1		plain	sl-3 over roul		
	1		is-geo 7			
	1	int	plain	roul		
	1		rc-1			
	5		rce-8			
Total	268					

Analysis by Sam Nixon and Anne Haour

TABLE N.8 Rims

Context	#	R.Typ	Brn	Dec1	L1	Dec2	L2	Dec3	L3	Dec 4	L44	Ang.	Diam.	Mx. thick
0-20	1	E4	ext/int									5		0.8
	1	S1										3	20	0.6
	1	S1		rc-1b	u	sl-2	u					1		0.6
20-30	1	E11										4		0.7
	1	E37	int									4		0.9
	1	S1	ext/int									4		0.8
	1	T21	ext/int									4		1.2
	1	T21	ext									4		1.4

TABLE N.8 Category 3 (cont.)

Context	#	R.Type	Brn	Dec1	L1	Dec2	L2	Dec3	L3	Dec 4	L44	Ang.	Diam.	Mx. thick
30-40	1	S1	ext/int									4		0.6
	1	E8		roul	u	undec	c					4		0.7
	1	T19		rfp-1b	u	rfp-1b	l					3	19	0.9
40-50	1	T19		rfp-1b	u	rfp-1b	l					3	40	1.3
	1	S1	int	is-geo 22	u							3		0.5
	1	T23	ext/int	roul	u	sl-1(hor)	u	sl-4	u			3	25	0.9
	1	T23	ext/int	roul	u	sl-3 (hor)	u	sl-1	u			3		0.7
50-60	1	E4	ext/int											0.8
	1	T22	ext/int	rc-3	u							2		1.1
	1	S1	ext/int											0.6
70-80	1	S1		is-geo 23	u							2		0.6
	1	S1		is-geo 23	u	sp4-v	u					2		0.5
80-90	1	S4		roul	u	undec	u							0.8
	1	T11		sh-13	l							3	12	1.0
90-100	1	S4		roul										0.5
	1	S4		roul								2		0.7
	1	E12	ext/int	indis	u	sl-3	u	sx-4	u	undec	c	4		0.4
100-110	1	S1		rc-1a	u	undec	u	rc-1a	u					0.5
	1	S1	int	peigEL-10	u	peigEL-1	u					3	20	0.7
110-120	1	E51		sh-8	l							3		0.7
	1	S4		roul	u							3	21	0.5
	1	S4	ext/int	is-geo 21	u	sl-2	u	undec	u			2		0.6
	1	E12		rc	u	sl-1	u	sh-4	u	undec	c	4		0.5
	2	E12		is-geo 21	u	undec	c	roul	u			4		0.5
	1	S4		rc-1a	u	sl-1	u	undec	u			2		0.5
	1	S4		rc-1a	u	undec	u					2	11	0.5
	1	S4		roul	u							3	21	0.6
120-130	1	S1		sl-1	u	sx-9	u	undec	u					0.7
	1	S1		sl-1	u	indis	u					2		0.5
	1	E2	ext/int									3		0.6
	1	E7	ext/int	rc-1a	c/u	undec	c	sl-2	u			3		0.7
	1	E11	ext/int									2	9	0.3
	1	S4		sl-1	u	sh-7	u							0.6
	1	S4		rc-1a	u	undec	u	rc-2a	u	sl-2	u	2		0.6
	1	S4		roul	u	sl-5	u					3	25	0.8
	1	S1	ext/int	roul	u	sl-1	u	undec	u			3		0.4
	1	S1		is-geo 23	u									0.8
	1	S1		is-geo 23	u							2	21	0.6
	1	S1		is-geo 23	u							2		0.6
	1	S1		is-geo 23	u							2	25	0.5
	1	S1		is-geo 23	u							2	18	0.5
	Total	51												

Analysis by David Kay