

**Findaid 2/106**

**A.0910**

**Iron Smelting in the  
Kavango Region**

**Compiled by Eileen Kose  
National Archives of Namibia, 2008**

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**Findaid 2/106: A.0910 Iron Smelting in the Kavango Region**  
**Compiled by Eileen Kose**  
**Arranged by Werner Hillebrecht**  
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## **Introduction**

# **Interviews on historical iron making in Kavango, northern Namibia and southern Angola held in 2006 and 2007**

**Conducted by Eileen Kose, University of Cologne, Department of Prehistory**

In 2006 I developed a questionnaire on iron metallurgy that was basically focusing on issues arising from an archaeological background such as furnace types, spatial patterns, mines and trade relationships. During the first contacts and questionings with local blacksmiths, I revised and expanded my questionnaire in accordance with new information from the socio-cultural background. For this reason, the type of interviews is slightly different. During the interviews I did not always follow the order of the given questions since the informants frequently talked freely about the topic. This was inasmuch important as they provided me with information that I as a cultural outsider would never have considered in my interviews. After finishing I usually summarized the interviews and revised open questions together with the informants a couple of days later. Many problems and misunderstandings evolved from translation problems since I am not able to speak the local languages.

Most interviews are recorded on videotape. However, in 2007, my video camera got stolen and I continued with a digital voice recorder.

Interviews that were translated by Michael Hakusembe were held in Rukwangali, interviews translated by Cosmas Kashongo were held in Thimbukushu.

This research was part of the collaborative research centre SFB 389 'ACACIA' of the University of Cologne, Germany. It was financed by the German Research Foundation (DFG).

*Eileen Kose*

The material consists of paper records, which are also reproduced in this finding aid, 37 video cassettes with field recordings, 36 DVDs with copies of the same recordings, and 10 CDs with audio field recordings.

## Details of interviews

### 1. Alberto Munoma Makayi (Born 1948)

Resident: Rundu

Interview: Nyemba iron making in Kafuma, southern Angola.

7 hours interview on videotape & 4.05 MB voice record (text, songs, iron weapons and tools filmed at the Open Market in Rundu). Translated by Michael Hakusembe and Hilda Ndumba. Interviews were held on the 7<sup>th</sup> August 2006, 1<sup>st</sup> August 2007, 7<sup>th</sup> August 2007, 6<sup>th</sup> of October 2007 at the Open Market and at his homestead in Rundu.

### 2. Johannes Mashela Kenga 'Salikumbe' (Date of birth unknown, around 1945)

Resident: Vungu-Vungu

Interview: Chokwe iron making in Kwango, southern Angola.

8 hours interview from the 26<sup>th</sup> July 2007, the 31<sup>st</sup> July 2007, 06<sup>th</sup> of August 2007, 5<sup>th</sup> of October 2007 (text, some tools).

### 3. George Kahiata (Born 1951)

Resident: Karrangana

Interview: Iron making in Mupini, Kavango and Rushinga/Baixo Longa in southern Angola. His grandparents were smelters of Chokwe origin who continued to produce iron after their migration to the Kavango River in Mupini.

A total of 61.8 MB (4 parts) voice record (approximately 3 to 4 hours of interview) from the 7<sup>th</sup> of October 2007 (text). Translated by Michael Hakusembe.

### 4. Petrus Kudumo Kampanzela 'Mukisi Koro' (Born 22<sup>nd</sup> February 1927)

Resident: Kayengona

Interview: Iron making in Vungu-Vungu, Kavango

Interviews were held on the 14<sup>th</sup> August 2006, 23<sup>rd</sup> August 2006, 31<sup>st</sup> of July 2007, 4<sup>th</sup> October 2007. (Text, songs, tool forging).

8 hours interview on videotape, 4 of them Petrus Kampanzela while he was forging tools.

Further 5,86 MB voice record of a folktale. Translated by Michael Hakusembe.

After the first interview from the 14<sup>th</sup> Aug. in 2006 I asked if we could assist him one day while he was forging tools. So we came on the 23<sup>rd</sup> August to his place and recorded his work for 4 hours. While observing him working, I continued my interview and asked again questions on issues that I did not understand previously. Thus the smithing tapes are part of the whole interview. In 2007 we visited him again in order to get more information on the songs that the people used to sing whilst operating the bellows. In the course of the interview he told us the folktale of the giant who was killed by a swallowed blacksmith. In some parts of Kavango this folktale reflects the magic power of blacksmiths and smelters in the mythological world.

### 5. Paulus Ndumba (Born 1914)

Resident: Rucara

Interview: Dciriku iron making in Kashivi, southern Angola

3 hours of interview on video tape and 20 MB voice record from the 20<sup>th</sup> of August 2007, 05<sup>th</sup> of October 2007, 08<sup>th</sup> of October 2007 (text).

Unfortunately this interview was not completely recorded due to a malfunction of the dictating machine on the 5<sup>th</sup> of October. Thus only field notes exist from that part.

**6. Modestus Kashera Shimbiringua (Born 1924)**

Resident: Kamboho

Interview: Tjaube/Shambyu iron making in Kauti, Gove and Vungu-Vungu

09<sup>th</sup> October 2007

21,9 MB interview (text).

This is only a brief interview in order to acquire a basic knowledge of iron making in this area. I did not follow the questionnaire.

**7. Petrus Kashako Kaputura (Born 1<sup>st</sup> February 1911; passed away in early 2007)**

Resident: Havo

Interview: Hambukushu iron making in Kapongo, Kavango

5 hours interview on videotape (text) translated by Cosmas Kashongo; held the 26<sup>th</sup> and 27<sup>th</sup> of August 2006.

**8. Marembo Bernardo Tovero (Born 1952); Yimadhara Joseph Matende (Born 1951); Manyandero Filipus Mukura (Born 1958); (Peter Kandjendje); (Marcus Kandunda)**

Residents: Dikundu

Interview: Hambukushu iron making in Dikundu, Kavango

5 hours interview from the 12<sup>th</sup> August 2006 on 5 videotapes, translated by Cosmas Kashongo.

Open questions from both interviews from Kapongo and Dikundu were revised the 3<sup>rd</sup> September 2006 in Dikundu village with the aforementioned informants. 1 hour videotape, translated by Cosmas Kashongo.

## **Interview questionnaire**

### **INTRODUCTION**

- 1- Date of interview
- 2- Place of interview
- 3- Names of participants:
  - Name of interviewee:
  - Name of translator:
  - Name of others:
- 4- Personal details:
  - Occupation, profession, trade
  - Place of birth
  - Age (date of birth)
  - Ethnicity
  - How long have you lived in this region (and why did you come here) ?
  - Which languages do you speak ?
  - Are you yourself a blacksmith/smelter ?
- 5- From whom did you get the information on iron making? Did somebody tell you about it ?
- 6- Are blacksmith and smelter independent trades in your society ? Does every man in your society know how to smelt and to forge?

### **QUESTIONS ON THE SMELTING PLACE**

- 7- Where did they usually smelt and why did they choose this place ?
- 8- Did they always smelt close to the source of ore ?
- 9- How many people used to smelt there at the same time ?
- 10- How many furnaces were usually in use at the same time ?
- 11- How big was the entire smelting area ?
- 12- How long has this smelting place been used ?

### **QUESTIONS ON THE SOURCE OF ORE AND MINING**

- 13- What kind of ore did they use (colour, texture, quality) ?
- 14- How many iron ore mines does he know ?
- 15- Where were these mines located ?
- 16- How big were these mines ?
- 17- Which mines were important and which ones were less important ? Why were they less important ?
- 18- How was the consistency/quality of the ore ?
  - Sandy, soft stones/nodules, hard stones/nodules ?
  - Reddish, yellowish, brown, black/metallic ?
- 19- What colour was good quality ore and what colour was bad quality ore ?
- 20- How did they extract the ore ?
  - Above ground, from surface deposits ?
  - Subsurface from deeper deposits ?
- 21- Who extracted the ore ?
  - Men, women, children ?

- 22- What kind of tools did they use ?
- 23- Did they crush the ore and sort it out ? (To what size/how small) ?
- 24- How did they carry the ore to the smelting site (the furnaces) ?
- 25- Who carried the ore ?
- 26- How many ore did they use for one smelt (smelting process) ?

### **QUESTIONS ON CHARCOAL**

- 27- What type of wood did you use and why did you choose it ?
- 28- How far away from the smelting sites were these trees ?
- 29- Who burnt the charcoal ?
- 30- Where did they burn the charcoal ?
- 31- How much charcoal was needed for one smelting process ?

### **QUESTIONS ON THE SMELTING FURNACE**

- 32- What type of furnaces did they use ?  
Pit furnace, clay aboveground furnace, termite hill
- 33- Did they choose a particular place for the construction of the furnace ?  
Flat area, slope, hill
- 34- What was the shape of the furnace (sketch) ?  
Length, width, depth
- 35- In terms of pit furnaces: did they made a mud or clay lining first ?
- 36- Where (how) did the slags come out of the furnace ?
- 37- Where (how) did the iron come out of the furnace ?
- 38- What type of tools did they use for building the furnace ?
- 39- How many bellows were part of the furnace ?
- 40- Where were the bellows put in ? How were they attached ?
- 41- What were the bellows made out of?
- 42- Did they use a particular wood for the carving of the bellows and why did they use it ?
- 43- How big were the bellows ?
- 44- What were the blowing pipes made out of? And how did they make them ?
- 45- Size of the blowing pipes:  
Diameter air supply, diameter air outflow, length
- 46- Has he ever heard of stone blowing pipes ?
- 47- Who operated the bellows ?
- 47- Were the furnaces and the bellows ornamented/decorated ?

### **QUESTIONS ON THE SMELTING PROCESS**

- 48- When and in which season did people usually smelt ?
- 49- How many times a year/a month/a week did people smelt ?
- 50- How many days of work did it take, starting from the extraction of the ore till the raw iron was molten ?
- 51- How did they stack the charcoal and the iron ore in the furnace, and how thick were the layers ?
- 52- From which side did they stack the furnace ?
- 53- Is there anything else that they put in the furnace apart from ore and charcoal ? (e. g. flux, 'medicine')
- 54- Were the furnaces then closed/Did they close the furnace ?

- 55- From which side did they light the fire ?
- 56- How many hours did the smelting process take ?
- 57- What was the consistency of the raw iron like ?  
Lumpy, liquid, thick/viscous ?
- 58- How long did they wait until they could remove the bloom from the furnace (cooling of the furnace ) ?
- 59- How did they remove the bloom ?
- 60- Where exactly within the furnace was the quality iron and where were the waste and slags?
- 61- What did they exactly look like and what were the differences in regard to quality ?
- 62- Did they forge the bloom at the smelting site or did they carry it to another place ?
- 63- How did they carry the bloom to the smithy ?
- 64- What amount of iron did they extract from one smelt and how much of the raw iron was considered to be a successful smelt ?
- 65- What was considered to be not successful ?
- 66- How did the waste look ?
- 67- What did they do with the waste/slags ?
- 68- Did they re-use the furnace for another smelt or did they destroy the furnace when they took out the bloom ?

### **QUESTIONS ON FORGING**

- 69- How far away from each other were the smithing and the smelting site ?
- 70- Did they establish particular zones/areas for smithing ?  
Within the village ?  
Within the homestead ?
- 71- What type of tools did they use for smithing ?  
Hammer, anvil, callipers, sharpening stone, bellows, (chisel), water, others
- 72- What kind of wood did they use for the smithing fire and why did they use this particular type of wood ?
- 73- How does the waste from forging look like ?
- 74- What type of items did they produce ?  
Hoe, axe, hammer, knives, spear, harpoon, arrow head, fire lighter, (needle), (chisel), (wire), razor/knife for cosmetic purposes, jewellery

### **QUESTIONS ON PROPORTIONS OF SMELTING SITE AND SETTLEMENT**

- 75- Did the people live close to the smelting sites ?
- 76- Did they live in permanent settlements close to the smelting sites or did they live in temporary housings ?
- 77- Did the entire family live in these villages or only parts of it, e. g. the workers only ?
- 78- Was it forbidden for some people to go to the smelting place ?
- 79- Who was allowed to go there ?  
Women, men, young, old
- 80- Was the area fenced/enclosure around the smelting site ?
- 81- Was it allowed to smelt iron in the villages ?
- 82- Was it allowed to forge in the villages ?
- 83- Was it allowed to carry iron ore to the villages ?
- 84- How did the workers live during the smelting period ?
- 85- What did they eat during the smelting period ?



86- Were people allowed to approach the smithy ?

87- Were women allowed to cross the smithy ?

### **QUESTIONS ON THE TRADE/PROFESSION**

88- What different kinds of profession do you generally distinguish in your culture ? What kind of professions exist in your culture ?

Smelter, blacksmith, potter, carpenter/woodworker, healer, fisher, hunter, (basket maker), others

89- From whom did the iron workers learned their skills ?

In their families, from other people

90- Were smelters and blacksmiths respected people ?

91- Was there a difference between smelters and blacksmiths in terms of being more or less respected ?

92- What kind of power did they poses ?

93- Was the Hompa himself a blacksmith ?

94- Were smelters or blacksmiths able to heal (because of their trade) ?

95- Were they able to do magic ?

96- Were smelters and blacksmiths rich people (compared to farmers for instance) ?

97- Did they own cattle and fields ?

98- Did smelters and blacksmiths hunt ?

99- Were they allowed to marry only particular women ?

100- Who showed the xxx people how to smelt iron and how to forge ?

101- Does he know for how long have the xxx people worked iron ?

102- Does he remember a time where the xxx people did not know yet how to make iron ?

### **QUESTIONS ON RITES AND CEREMONIES**

103- What kind of ceremonies or rituals did they hold before they started with the smelting activities / during the smelting activities ?

104- Did they make offerings ?

105- What did they give/sacrifice ?

106- Did they sing during the smelting activities and what was the meaning of their songs ?

107- Did they wear a particular dress during the smelting activities ?

108- Did they celebrate if the smelt was successful ?

109- Did they also celebrate if the smelt was not successful ?

110- Who was to blame if the smelt did not succeed ?

### **QUESTIONS ON THE ETHNIC BACKGROUND AND TRADE RELATIONSHIPS**

111- According to him what people does he remember who used to smelt their own iron ?

Ovambo, Herero, Kwanyama, Kwangali, Mbunza, Dciriku, Shambyu, Mbukushu, Nyemba, Umbundu, Chokwe, San, others

112- Did they make iron tools only for their own use or did they also produce tools for selling them to other people ?

113- Did they only trade with their surrounding areas or did they sell tools (and perhaps raw iron) further afield ?

114- With whom did they trade ?

115- What kind of items did they usually sell ?

Iron bloom, raw iron, bars/ingots, finished products

116- What were the prices of the finished products ? (Axe, hoe, hammer etc., refers to question no. 74)

### **QUESTIONS ON IRON WORKERS AMONG SAN PEOPLE**

117- Were San people able to smelt ?

118- Were they able to forge ?

119- From whom did they learn it ?

120- What role did they play during

Mining and smelting, forging, in respect to trade

121- Did I overlook something important/May he add something important ?

**B. DVD (video recordings) These are copies from the video cassettes (Part D)**

<b>ADV</b>	<b>Resourceperson</b>	<b>Subject</b>	<b>#</b>	<b>Date</b>
0021 0022 0023 0024	Alberto Munoma Makayi	Nyemba iron smelting in Kafuma. Part 1-4	4	2006-08-07
0025 0026 0027	Alberto Munoma Makayi	Nyemba iron smelting in Kafuma. Part 5-7	3	2007-08-01
0028 0029 0030 0031 0032	Johannes Marbela Kenga	Iron smelting in Kwango, Southern Angola (Chokwe). Part 1-5	5	2007-07-31
0033 0034 0035	Johannes Marbela Kenga	Iron smelting in Kwango, Southern Angola (Chokwe). Part 6-8	3	2007-08-24
0036 0037 0038	Paulus Ndumba	Dciriku iron smelting in Kashivi. Part 1-3	3	2007-08-24
0039 0040 0041 0042	M. Tovero, J.G. Matende, M.F. Mukura, P. Kandjendje, M. Kandundu	Mbukushu iron smelting at Dikundu. Part 1-4	4	2006-08-12
0043	M. Tovero, J.G. Matende, M.F. Mukura, P. Kandjendje, M. Kandundu	Mbukushu iron smelting at Dikundu. Part 5 + Mbukushu iron smelting Havo & Dikundu Supplement	1	2006-08-12 + 2006.09.03
0044 0045 0046 0047	Petrus Kudumo Kampanzela	Shambyu iron smelting in Vungu- Vungu. Part 1-4	4	2006-08-14
0048 0049 0050 0051	Petrus Kudumo Kampanzela	Shambyu iron smelting in Vungu- Vungu. Part 5-8	4	2006-08-23
0052 0053 0054 0055 0056	Petrus Kashako Kaputura	Mbukushu iron smelting in Kapongo. Part 1-5	5	26&27-08- 2006

**C. CD (voice records) These are copies of digital recordings**

<b>ACD</b>	<b>Resource person</b>	<b>Subject</b>	<b>#</b>	<b>Date</b>
0129 0130	Petrus Kudumo Kampanzela	Shambyu iron smelting in Vungu-Vungu. Part 9	2	2007-10-04
0131 0132	Modestus Kasherwa Shimbiringwa	Shambyu iron smelting in Gove and Vungu-Vungu. Kamboho	2	2007-10-08
0133 0134	George Kahiata	Chokwe iron smelting Rushinga, Angola and Mupini, Kavango. Part 1-4	2	2007-10-07
0135 0136	Paulus Ndumba	Dciriku iron smelting at Kashivi. Part 4	2	2007-10-08
0137 0138	Alberto Munoma Makayi	Nyemba iron smelting in Kafuma. Part 8	2	2007-10-06

**D. Video Cassettes**

<b>MV</b>	<b>Resource person</b>	<b>Subject</b>	<b>#</b>	<b>Date</b>
0408 0409 0410 0411	Alberto Munoma Makayi	Nyemba iron smelting in Kafuma. Part 1-4	4	2006-08-07
0412 0413 0414	Alberto Munoma Makayi	Nyemba iron smelting in Kafuma. Part 5-7	3	2007-08-01
0415 0416 0517 0418 0419	Johannes Marbela Kenga	Iron smelting in Kwango, Southern Angola (Chokwe). Part 1-5	5	2007-07-31
0420 0421 0422	Johannes Marbela Kenga	Iron smelting in Kwango, Southern Angola (Chokwe). Part 6-8	3	2007-08-24
0423 0424 0425	Paulus Ndumba	Dciriku iron smelting in Kashivi. Part 1-3	3	2007-08-24
0426 0427 0428 0429	M. Tovero et al.	Mbukushu iron smelting at Dikundu. Part 1-4	4	2006-08-12
0430	M. Tovero et al.	Mbukushu iron smelting at Dikundu. Part 5	1	2006-08-12
0431		Mbukushu iron smelting Havo & Dikundu Supplement	1	2006.09.03
0432 0433 0434 0435	Petrus Kudumo Kampanzela	Shambyu iron smelting in Vungu- Vungu. Part 1-4	4	2006-08-14
0436 0437 0438 0439	Petrus Kudumo Kampanzela	Shambyu iron smelting in Vungu- Vungu. Part 5-8	4	2006-08-23
0440 0441 0442 0443 0444	Petrus Kashako Kaputura	Mbukushu iron smelting in Kapongo. Part 1-5	5	26-08-2006 27-08-2006