Title: Preliminary proposal for encoding the Medefaidrin (Oberi Okaime) **script in the SMP of the UCS**

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1. Introduction. The Medefaidrin script was created for an artificial language *Medefaidrin* used by members of an indigenous Christian church Oberi Okaime (Obɛri Ɔkaimɛ, 'Church freely given'), which was active in the Nigerian province of Calabar in the 1930s near Itu on the Western bank of Cross-River. The authors are, most probably, Michael Ukpɔn and Akpan Udɔfia. A natural language for them is Ibibio-Efik, which belongs to the Atlantic family of the Niger-Congo languages [Hau 1961; Gibbon et al 2010; Rovenchak & Glavy 2011]. The Medefaidrin script shows a strong influence of the English orthography, in particular, the use of capital and small letters, a special sign for a pronoun "I".

The community tradition is that the language is a 'spirit language' (of which there are other examples in West Africa) revealed to one of the founders of the community in 1927 by divine inspiration:
"[...] Bishop Aikeld Ukpong (alias Michael Ukpong) on a 'spiritual board' visible only to the initiated, after having been taken into seclusion by the Holy Spirit, known as the 'Seminant' in Medefaidrin. Since Bishop Aikeld Ukpong was not literate, it fell on the Secretary of the group, Prophet Jakeld Udofia to transcribe the spiritual writings revealed in a vision to Bishop Ukpong." [Gibbon et al. 2010]. According to other sources, the actual date the Holy Spirit descended was 1927, but the language was revealed or impacted in 1932 [Moses Ekpenyong, interview with a consultant from the community, 2015].

Currently the Medefaidrin language has less than 20 adult speakers, is critically threatened and mainly used for saying prayers or meditation of the scriptures.

2. Structure. Medefaidrin is written left to right.

3. Collating order. Collation order is that in the code chart. It is based on the traditional arrangement of letters found in the Medefaidrin instruction materials [Adams 1947; Hau 1961]. Small letters are coded with a shift of 32 (hexadecimal 20), similarly to e.g., Latin or Cyrillic alphabets.

m	s	v	w	atiu	z	kp	p
t	g	f	i	k	a	j	e
b	c	u	yu	l	q	h	ñ
x	d	ö	n	r	o	ai	y

4. Character names. The usual UCS conventions are used, with NY representing *ñ* and OE representing *ö*. Script-specific ideographs for the first-person singular pronoun (*atiu*, with some distinction in meaning for upper and lower case forms) has the name ATIU.

5. Linebreaking. Letters and digits behave as do the letters and numbers in Latin.

6. Punctuation and digits. In Medefaidrin, a vigesimal (base-20) number system is used, so it requires 20 digits [Hau 1961; Chrisomalis 2010; Rovenchak 2012]. Script-specific punctuation marks are comma and period. Some other marks are given by Adams [1947], including the vocative mark ↳ . Encoding of such signs is possible at codepoints which are not yet used in the current proposal 16ECB–16ECF and 16EDB–16EDF.

Digits 0–19 are as follows:

θ	↮	4	4	▽	ż	⅋	↓	↑	⋀	7	⑂	⑂	Ⱈ	S	Ѧ	⑁	Ꞩ	Ꞩ	Ɛ
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

Simplified shapes of digits 1, 2, and 3 are used for compound numerals (above 19), cf. Figure 4.

7. Unicode Character Properties.

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16E80;MEDEFAIDRIN CAPITAL LETTER M;Lu;0;L;;;;;N;;;;16EA0;
16E81;MEDEFAIDRIN CAPITAL LETTER S;Lu;0;L;;;;;N;;;;16EA1;
16E82;MEDEFAIDRIN CAPITAL LETTER V;Lu;0;L;;;;;N;;;;16EA2;
16E83;MEDEFAIDRIN CAPITAL LETTER W;Lu;0;L;;;;;N;;;;16EA3;
16E84;MEDEFAIDRIN CAPITAL LETTER ATIU;Lo;0;L;;;;;N;;;;16EA4;
16E85;MEDEFAIDRIN CAPITAL LETTER Z;Lu;0;L;;;;;N;;;;16EA5;
16E86;MEDEFAIDRIN CAPITAL LETTER KP;Lu;0;L;;;;;N;;;;16EA6;
16E87;MEDEFAIDRIN CAPITAL LETTER P;Lu;0;L;;;;;N;;;;16EA7;
16E88;MEDEFAIDRIN CAPITAL LETTER T;Lu;0;L;;;;;N;;;;16EA8;
16E89;MEDEFAIDRIN CAPITAL LETTER G;Lu;0;L;;;;;N;;;;16EA9;
16E8A;MEDEFAIDRIN CAPITAL LETTER F;Lu;0;L;;;;;N;;;;16EAA;
16E8B;MEDEFAIDRIN CAPITAL LETTER I;Lu;0;L;;;;;N;;;;16EAB;
16E8C;MEDEFAIDRIN CAPITAL LETTER K;Lu;0;L;;;;;N;;;;16EAC;
16E8D;MEDEFAIDRIN CAPITAL LETTER A;Lu;0;L;;;;;N;;;;16EAD;
16E8E;MEDEFAIDRIN CAPITAL LETTER J;Lu;0;L;;;;;N;;;;16EAE;
16E8F;MEDEFAIDRIN CAPITAL LETTER E;Lu;0;L;;;;;N;;;;16EAF;
16E90;MEDEFAIDRIN CAPITAL LETTER B;Lu;0;L;;;;;N;;;;16EB0;
16E91;MEDEFAIDRIN CAPITAL LETTER C;Lu;0;L;;;;;N;;;;16EB1;
16E92;MEDEFAIDRIN CAPITAL LETTER U;Lu;0;L;;;;;N;;;;16EB2;
16E93;MEDEFAIDRIN CAPITAL LETTER YU;Lu;0;L;;;;;N;;;;16EB3;
16E94;MEDEFAIDRIN CAPITAL LETTER L;Lu;0;L;;;;;N;;;;16EB4;
16E95;MEDEFAIDRIN CAPITAL LETTER Q;Lu;0;L;;;;;N;;;;16EB5;
16E96;MEDEFAIDRIN CAPITAL LETTER HP;Lu;0;L;;;;;N;;;;16EB6;
16E97;MEDEFAIDRIN CAPITAL LETTER NY;Lu;0;L;;;;;N;;;;16EB7;
16E98;MEDEFAIDRIN CAPITAL LETTER X;Lu;0;L;;;;;N;;;;16EB8;
16E99;MEDEFAIDRIN CAPITAL LETTER D;Lu;0;L;;;;;N;;;;16EB9;
16E9A;MEDEFAIDRIN CAPITAL LETTER OE;Lu;0;L;;;;;N;;;;16EBA;
16E9B;MEDEFAIDRIN CAPITAL LETTER N;Lu;0;L;;;;;N;;;;16EBB;
16E9C;MEDEFAIDRIN CAPITAL LETTER R;Lu;0;L;;;;;N;;;;16EBC;
16E9D;MEDEFAIDRIN CAPITAL LETTER O;Lu;0;L;;;;;N;;;;16EBD;
16E9E;MEDEFAIDRIN CAPITAL LETTER AI;Lu;0;L;;;;;N;;;;16EBE;
16E9F;MEDEFAIDRIN CAPITAL LETTER Y;Lu;0;L;;;;;N;;;;16EBF;
16EA0;MEDEFAIDRIN SMALL LETTER M;Ll;0;L;;;;;N;;;16E80;;16E80
16EA1;MEDEFAIDRIN SMALL LETTER S;Ll;0;L;;;;;N;;;16E81;;16E81
16EA2;MEDEFAIDRIN SMALL LETTER V;Ll;0;L;;;;;N;;;16E82;;16E82
16EA3;MEDEFAIDRIN SMALL LETTER W;Ll;0;L;;;;;N;;;16E83;;16E83
16EA4;MEDEFAIDRIN SMALL LETTER ATIU;Lo;0;L;;;;;N;;;16E84;;16E84
16EA5;MEDEFAIDRIN SMALL LETTER Z;Ll;0;L;;;;;N;;;16E85;;16E85
16EA6;MEDEFAIDRIN SMALL LETTER KP;Ll;0;L;;;;;N;;;16E86;;16E86
16EA7;MEDEFAIDRIN SMALL LETTER P;Ll;0;L;;;;;N;;;16E87;;16E87
16EA8;MEDEFAIDRIN SMALL LETTER T;Ll;0;L;;;;;N;;;16E88;;16E88
16EA9;MEDEFAIDRIN SMALL LETTER G;Ll;0;L;;;;;N;;;16E89;;16E89
16EAA;MEDEFAIDRIN SMALL LETTER F;Ll;0;L;;;;;N;;;16E8A;;16E8A
16EAB;MEDEFAIDRIN SMALL LETTER I;Ll;0;L;;;;;N;;;16E8B;;16E8B
16EAC;MEDEFAIDRIN SMALL LETTER K;Ll;0;L;;;;;N;;;16E8C;;16E8C
16EAD;MEDEFAIDRIN SMALL LETTER A;Ll;0;L;;;;;N;;;16E8D;;16E8D
16EAE;MEDEFAIDRIN SMALL LETTER J;Ll;0;L;;;;;N;;;16E8E;;16E8E
16EAF;MEDEFAIDRIN SMALL LETTER E;Ll;0;L;;;;;N;;;16E8F;;16E8F
16EB0;MEDEFAIDRIN SMALL LETTER B;Ll;0;L;;;;;N;;;16E90;16E90
16EB1;MEDEFAIDRIN SMALL LETTER C;Ll;0;L;;;;;N;;;16E91;16E91
16EB2;MEDEFAIDRIN SMALL LETTER U;Ll;0;L;;;;;N;;;16E92;16E92
16EB3;MEDEFAIDRIN SMALL LETTER YU;Ll;0;L;;;;;N;;;16E93;16E93
16EB4;MEDEFAIDRIN SMALL LETTER L;Ll;0;L;;;;;N;;;16E94;16E94
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16EB5;MEDEFAIDRIN SMALL LETTER Q;Ll;0;L;;;;;N;;;16E95;16E95
16EB6;MEDEFAIDRIN SMALL LETTER HP;Ll;0;L;;;;;N;;;16E96;16E96
16EB7;MEDEFAIDRIN SMALL LETTER NY;Ll;0;L;;;;;N;;;16E97;16E97
16EB8;MEDEFAIDRIN SMALL LETTER X;Ll;0;L;;;;;N;;;16E98;16E98
16EB9;MEDEFAIDRIN SMALL LETTER D;Ll;0;L;;;;;N;;;16E99;16E99
16EBA;MEDEFAIDRIN SMALL LETTER OE;Ll;0;L;;;;;N;;;16E9A;16E9A
16EBB;MEDEFAIDRIN SMALL LETTER N;Ll;0;L;;;;;N;;;16E9B;16E9B
16EBC;MEDEFAIDRIN SMALL LETTER R;Ll;0;L;;;;;N;;;16E9C;16E9C
16EBD;MEDEFAIDRIN SMALL LETTER O;Ll;0;L;;;;;N;;;16E9D;16E9D
16EBE;MEDEFAIDRIN SMALL LETTER AI;Ll;0;L;;;;;N;;;16E9E;16E9E
16EBF;MEDEFAIDRIN SMALL LETTER Y;Ll;0;L;;;;;N;;;16E9F;16E9F
16EC0;MEDEFAIDRIN DIGIT ZERO;No;0;L;;;;;N;;;;;
16EC1;MEDEFAIDRIN DIGIT ONE;No;0;L;;;;;N;;;;;
16EC2;MEDEFAIDRIN DIGIT TWO;No;0;L;;;;;N;;;;;
16EC3;MEDEFAIDRIN DIGIT THREE;No;0;L;;;;;N;;;;;
16EC4;MEDEFAIDRIN DIGIT FOUR;No;0;L;;;;;N;;;;;
16EC5;MEDEFAIDRIN DIGIT FIVE;No;0;L;;;;;N;;;;;
16EC6;MEDEFAIDRIN DIGIT SIX;No;0;L;;;;;N;;;;;
16EC7;MEDEFAIDRIN DIGIT SEVEN;No;0;L;;;;;N;;;;;
16EC8;MEDEFAIDRIN DIGIT EIGHT;No;0;L;;;;;N;;;;;
16EC9;MEDEFAIDRIN DIGIT NINE;No;0;L;;;;;N;;;;;
16ED0;MEDEFAIDRIN DIGIT TEN;No;0;L;;;;;N;;;;;
16ED1;MEDEFAIDRIN DIGIT ELEVEN;No;0;L;;;;;N;;;;;
16ED2;MEDEFAIDRIN DIGIT TWELVE;No;0;L;;;;;N;;;;;
16ED3;MEDEFAIDRIN DIGIT THIRTEEN;No;0;L;;;;;N;;;;;
16ED4;MEDEFAIDRIN DIGIT FOURTEEN;No;0;L;;;;;N;;;;;
16ED5;MEDEFAIDRIN DIGIT FIFTEEN;No;0;L;;;;;N;;;;;
16ED6;MEDEFAIDRIN DIGIT SIXTEEN;No;0;L;;;;;N;;;;;
16ED7;MEDEFAIDRIN DIGIT SEVENTEEN;No;0;L;;;;;N;;;;;
16ED8;MEDEFAIDRIN DIGIT EIGHTTEEN;No;0;L;;;;;N;;;;;
16ED9;MEDEFAIDRIN DIGIT NINETEEN;No;0;L;;;;;N;;;;;
16EE1;MEDEFAIDRIN DIGIT ONE COMBINED;No;0;L;;;;;N;;;;;
16EE2;MEDEFAIDRIN DIGIT TWO COMBINED;No;0;L;;;;;N;;;;;
16EE3;MEDEFAIDRIN DIGIT THREE COMBINED;No;0;L;;;;;N;;;;;
16EEA;MEDEFAIDRIN COMMA;Po;0;L;;;;;N;;;;;
16EEB;MEDEFAIDRIN PERIOD;Po;0;L;;;;;N;;;;;
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8. Bibliography

Abasiattai, Monday B. 1989. The Oberi Okaime Christian mission: Towards a history of an Ibibio independent church. *Africa: Journal of the International African Institute*, 59(4): 496–516.

Adams, R. F. G. 1947. Obɛri Ɔkaimɛ: A new African language and script. *Africa: Journal of the International African Institute*, 17(1): 24–34.

Chrisomalis, Stephen. 2010. *Numerical Notation: A Comparative History*. Cambridge University Press.

Gibbon, Dafydd, Moses Ekpenyong, and Eno-Abasi Urua. 2010. "Medefaidrin: Resources documenting the birth and death language life-cycle", in *Proceedings of the Seventh International Conference on Language Resources and Evaluation (LREC'10),* edited by Nicoletta Calzolari et al. Valetta, Malta: European Language Resources Association, 2702–2708.

Hau, Kathleen. 1961. Obɛri Ɔkaimɛ script, text, and counting system. *Bulletin del'IFAN*, 23(1–2): 291–308.

Rovenchak, Andrij. 2012. Numerical Notation in Africa. *Afrikanistik online*, 9: Available from: <http://www.afrikanistik-online.de/archiv/2012/3553>.

Rovenchak, Andrij and Jason Glavy. 2011. "Oberi Okaime", in *African Writing Systems of the Modern Age: The Sub-Saharan Region*. New Haven, Buena Park, New Rochelle, London, Lviv, Abidjan: Athinkra, 79–82. ISBN 978-0-9818294-1-8

	16E8	16E9	16EA	16EB	16EC	16ED	16EE
0					θ		
1							
2							
3							
4							
5							
6							
7							
8							
9							
A							
B							
C							
D							
E							
F							

Also, it is possible to assign a block starting at 16E50 (immediately after the proposed Mwangwego script).
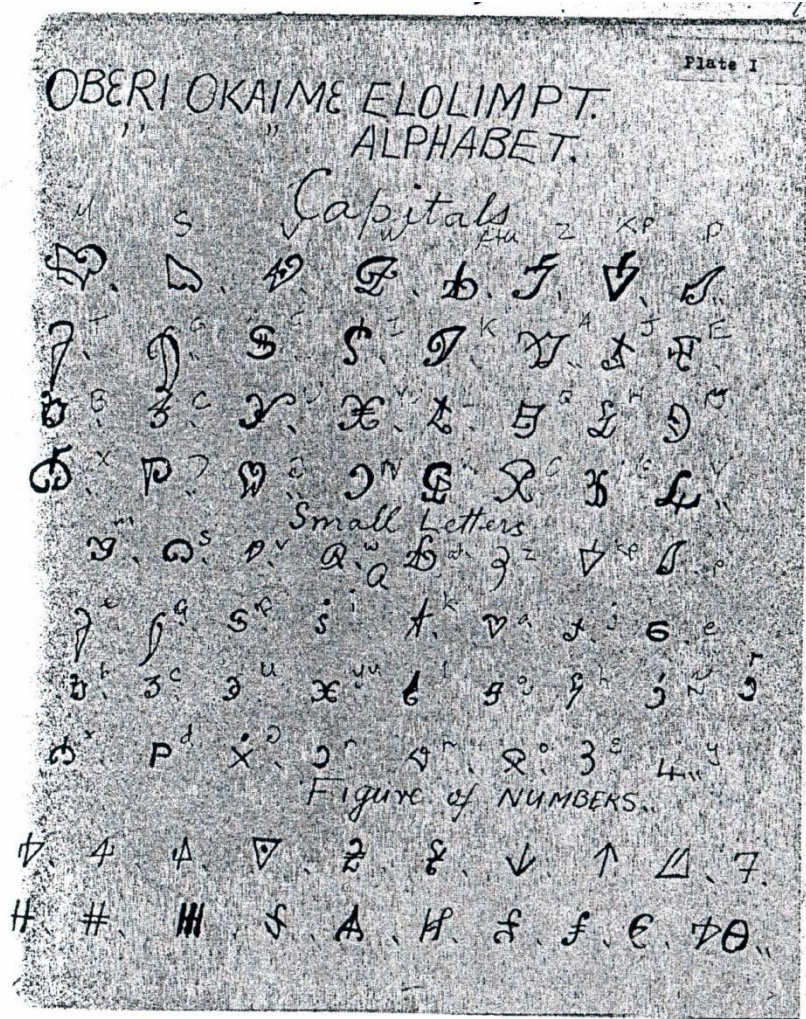
9. Figures

PLATE I. — Script and numeral symbols.

Figure 1: The Medefaidrin (Oberi Okaime) alphabet and numerals from [Hau 1961].
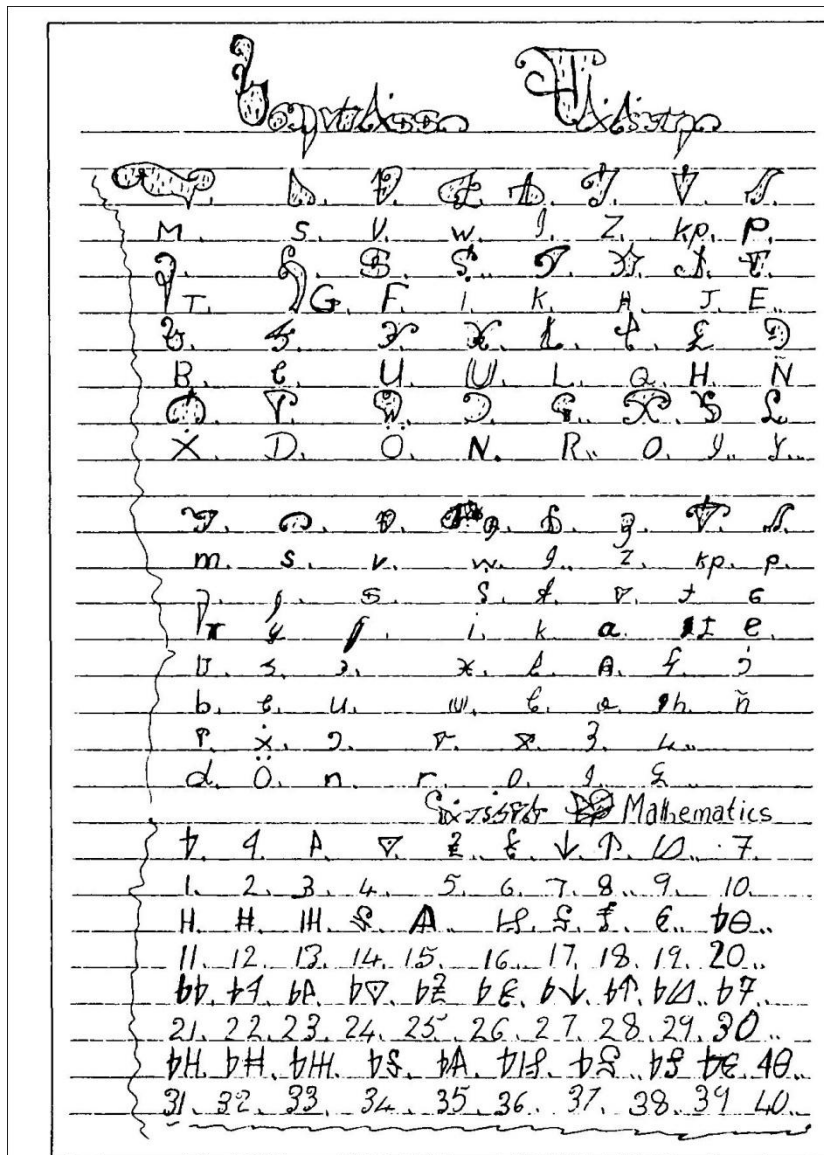
FIG. 2 *The Oberi Okaime alphabet and numerals (by Makreta Abony, 14 October 1986)*

Figure 2: The Medefaidrin (Oberi Okaime) alphabet and numerals from [Abasiattai 1989].

Figure 3: The Medefaidrin sample from [Adams 1947].

Figure 4: The Medefaidrin numerals from [Adams 1947].

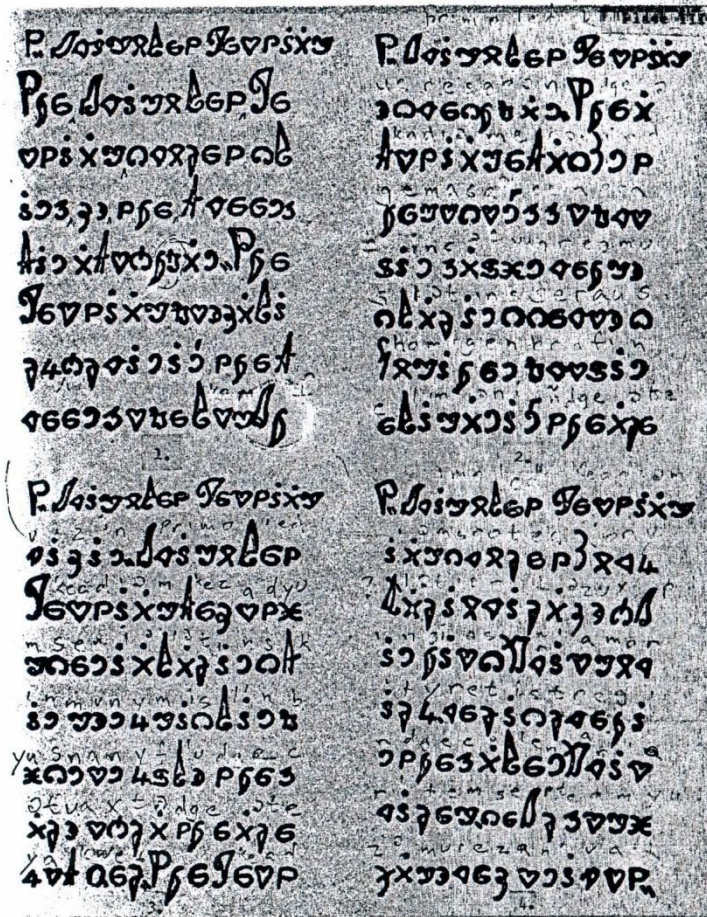Figure 5: The Medefaidrin sample from [Adams 1947].

PLATE III.

Dge Primoled Keadiom : The Beloved Father from *Dge Gibreant Tökkizan*.
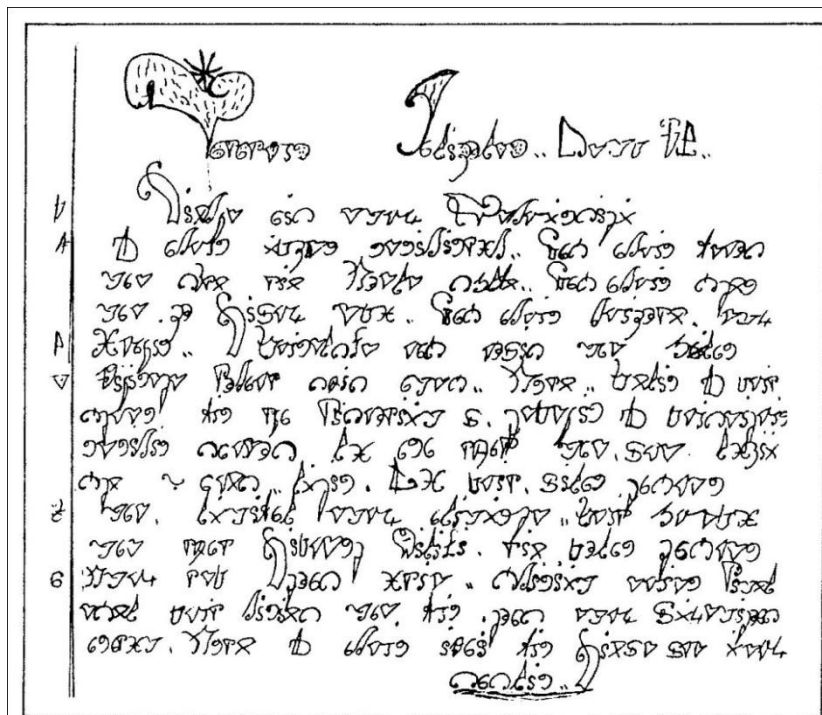
Figure 6: The Medefaidrin sample from [Hau 1961].

FIG. 1 *The Twenty-third Psalm in the Oberi Okaime language and alphabet (by Makreta Abony, 14 October 1986)*

Figure 7: The Medefaidrin sample from [Abasiattai 1989].