

Proposal to encode the Hanifi Rohingya script in Unicode

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October 27, 2015

1 Introduction

This is a proposal to encode the Hanifi Rohingya script in Unicode. It replaces “Preliminary Proposal to Encode the Rohingya Script” (L2/12-214). Major changes from the preliminary proposal include the addition of the letter va , renaming of some characters, changes to character properties, the reallocation of the script block to a new range within the SMP, and the unification of the Rohingya *tatweel* with the corresponding Arabic character. The glyphs used in the code chart are sourced with permission from the “Rohingya Gonya Leyka Noories” typeface developed by Muhammad Noor and contains new glyphs produced by the proposal author.

2 Background

The Hanifi Rohingya script (𑄆𑄇𑄈𑄉𑄊𑄋 *ruwainggya*, 𑄌𑄍𑄎𑄏𑄐𑄑 *ruhainggya*) is used for writing Rohingya (ISO 639-3: rhg), an Indo-Aryan language spoken by one million people in Myanmar (Rakhine State) and by two-hundred thousand people in Bangladesh (Cox’s Bazaar District). Rohingya is also spoken in several other countries as a result of the dispersion of the Rohingya community on account of persecution in Myanmar. The Rohingya language is closely related to Bengali. There are four different scripts used for writing the Rohingya language: Burmese, Arabic, the Latin-based ‘Rohingylish’, and the script described here.

The script was developed by Maulana Mohammed Hanif and others in the 1980s. A chart showing the script as approved by a steering committee is shown in figure 1. It is modeled upon the Arabic script and shows the influence of other scripts. However, it is a constructed script and has no direct genetic affiliation to other scripts.

There is limited information available on the Rohingya script in English. Most of the materials on the script are written in the Rohingya language. The Rohingya Language Committee and the Rohingya Education Board Myanmar have published multilingual primers of the script (see figures 3–16). There are also instructional videos available on YouTube (see figures 23–24). Educational materials and newspapers are published the script. Two typefaces have been developed by Muhammad Noor (see table 4).

3 Script Details

3.1 Structure

Hanifi Rohingya is an alphabetic script modeled upon Arabic. It is written right to left. Consonant letters possess an inherent vowel /ɔ/. The inherent vowel is changed by placing a vowel mark after the consonant. A mark called *sakin* (= *sukun*) is placed after a letter to silence the inherent vowel. Tones are indicating using combining signs placed above a letter or vowel mark. Nasalization is indicated using a mark placed after a letter or vowel mark. Consonant gemination is marked using the sign *tassi* (= *shadda*).

The script is structurally conjoining. Letters join to following letters at the right edge. In several hand-written sources, the conjunction between letters is broken at the baseline. This does not indicate any particular joining property of the unattached letter to the left of break. In texts printed using digitized fonts, the connections between letters at the baseline is consistently maintained.

3.2 Character Names

Names for characters are based upon common Latin transliterations given in various script primers. The Latin names for most characters are uniform across different publications; however, there are different spellings for certain characters. For example, 𞤢 DDA is named ‘*rda*’ in one source and ‘*rā*’ in another; 𞤣 KHA is alternately called ‘*xa*’; 𞤤 GA is also called ‘*gha*’. The 𞤥 NGA is known as *gan* and 𞤦 NYA is known as *nayya*. In cases where there are multiple names for a character, an appropriate name has been chosen based upon consultation with the user community. Indigenous names are given as annotations in the names list.

3.3 Letters

There are 28 letters:

	Character name	Joining	Value
𞤢	HANIFI ROHINGYA LETTER A	dual	/ɔ/, /ʔ/
𞤣	HANIFI ROHINGYA LETTER BA	dual	/b/
𞤤	HANIFI ROHINGYA LETTER PA	dual	/p/
𞤥	HANIFI ROHINGYA LETTER TA	dual	/t/
𞤦	HANIFI ROHINGYA LETTER TTA	dual	/t̪/
𞤧	HANIFI ROHINGYA LETTER JA	dual	/ʃ/
𞤨	HANIFI ROHINGYA LETTER CA	dual	/c/
𞤩	HANIFI ROHINGYA LETTER HA	dual	/h/
𞤪	HANIFI ROHINGYA LETTER KHA	dual	/x/
𞤫	HANIFI ROHINGYA LETTER FA	dual	/f/
𞤬	HANIFI ROHINGYA LETTER DA	dual	/d/

ᄁ	HANIFI ROHINGYA LETTER DDA	dual	/d/
ᄂ	HANIFI ROHINGYA LETTER RA	dual	/r/
ᄃ	HANIFI ROHINGYA LETTER RRA	dual	/r̥/
ᄄ	HANIFI ROHINGYA LETTER ZA	dual	/z/
ᄅ	HANIFI ROHINGYA LETTER SA	dual	/s/
ᄆ	HANIFI ROHINGYA LETTER SHA	dual	/ʃ/
ᄇ	HANIFI ROHINGYA LETTER KA	dual	/k/
ᄈ	HANIFI ROHINGYA LETTER GA	dual	/g/
ᄉ	HANIFI ROHINGYA LETTER LA	dual	/l/
ᄊ	HANIFI ROHINGYA LETTER MA	dual	/m/
ᄋ	HANIFI ROHINGYA LETTER NA	dual	/n/
ᄌ	HANIFI ROHINGYA LETTER WA	dual	/ʊ/, /v/
ᄍ	HANIFI ROHINGYA LETTER SMALL WA	dual	/u/
ᄎ	HANIFI ROHINGYA LETTER YA	dual	/j/
ᄏ	HANIFI ROHINGYA LETTER SMALL YA	dual	/i/
ᄐ	HANIFI ROHINGYA LETTER NGA	dual	/ŋ/
ᄑ	HANIFI ROHINGYA LETTER NYA	dual	/ɲ/

The letter A is a vowel carrier. It represents the vowel /ɔ/. The letters SMALL WA (*‘kinna wa’*) and SMALL YA (*‘kinna ya’*) are used for representing /u/ and /i/ in diphthongs (see section 3.6).

3.4 *Sukun*

The following character is used for indicating a bare consonant:

Character name	Joining	Value
ᄒ HANIFI ROHINGYA MARK SUKUN	right	—

It is called *sakin* in Rohingya and is similar in function to ^o U+0652 ARABIC SUKUN. It is placed after a letter in the encoded sequence, as shown below.

b ڤ <ڤ BA, ڤ MARK SUKUN>
p ڤ <ڤ PA, ڤ MARK SUKUN>
t ڤ <ڤ TA, ڤ MARK SUKUN>

It is generally used with letters that occur in isolation or at the end of a word. There is no formal convention regarding its usage and it may be considered optional. For instance, the charts in figures 3, 4, and 5 show SUKUN written with certain consonants, yet the chart in figure 6 shows the sign written with every consonant letter. When SUKUN does occur, it is used generally with the following letters:

ڤ	ڤ	BA	ڪ	ڪ	KHA	غ	غ	GA
ڤ	ڤ	PA	ڦ	ڦ	FA	ڬ	ڬ	LA
ڤ	ڤ	TA	ڊ	ڊ	DA	ڙ	ڙ	WA
ڤ	ڤ	TTA	ڦ	ڦ	SA	ښ	ښ	SMALL WA
ڤ	ڤ	HA	ڦ	ڦ	SHA	ښ	ښ	SMALL YA

3.5 Alternate forms of letters

The following alternate forms are proposed for encoding:

	Character name	Joining	Value
ڤ	HANIFI ROHINGYA FINAL LETTER DA	right	/d/
ڬ	HANIFI ROHINGYA FINAL LETTER LA	right	/l/
ڙ	HANIFI ROHINGYA FINAL LETTER MA	right	/m/

These are variant forms of the letters ڊ DA, ڬ LA, ڙ MA used in word-final position or for representing the letter in isolated contexts.

	Letter + sukun	Alternate representation
final <i>da</i>	ڊ	ڤ
final <i>la</i>	ڬ	ڬ
final <i>ma</i>	ڙ	ڙ

The alternate final forms are semantically identical to sequences of the respective letter + SUKUN, but as the two occur concurrently in various sources, they need to be represented separately.

3.6 Vowel marks

There are 5 vowel marks:

	Character name	Joining	Value
ا	HANIFI ROHINGYA VOWEL MARK A	dual	/a/
ي	HANIFI ROHINGYA VOWEL MARK I	dual	/i/
و	HANIFI ROHINGYA VOWEL MARK U	dual	/u/
ه	HANIFI ROHINGYA VOWEL MARK E	dual	/e/
و	HANIFI ROHINGYA VOWEL MARK O	dual	/o/

When vowels occur in word-initial position, they are represented using a combination of the letter A and a vowel mark:

<i>a</i>	ا	<ا A>
<i>ā</i>	ا	<ا A, ا VOWEL MARK A>
<i>i</i>	ي	<ي A, ي VOWEL MARK I>
<i>u</i>	و	<و A, و VOWEL MARK U>
<i>e</i>	ه	<ه A, ه VOWEL MARK E>
<i>o</i>	و	<و A, و VOWEL MARK O>

When modifying a consonant, they are placed after the letter:

<i>bā</i>	ا	<ا BA, ا VOWEL MARK A>
<i>bi</i>	ي	<ي BA, ي VOWEL MARK I>
<i>bu</i>	و	<و BA, و VOWEL MARK U>
<i>be</i>	ه	<ه BA, ه VOWEL MARK E>
<i>bo</i>	و	<و BA, و VOWEL MARK O>

Script charts show the vowel marks independently, unaccompanied by the letter A. These cases are intended for illustrating the mark and are not indicative of actual usage; the same applies to the other marks shown alongside the vowel marks in charts. Independent or initial vowels are expressed in combination with the letter A.

Diphthongs are represented by placing ي SMALL YA and و SMALL WA after a vowel mark. The SMALL YA represents the sound /i/ and SMALL WA represents /u/:

<i>bai</i>	بب	<J BA, ٲ SMALL YA>
<i>bāi</i>	ببٲ	<J BA, ٲ VOWEL MARK A, ٲ SMALL YA>
<i>bui</i>	ببٲ	<J BA, ٲ VOWEL MARK U, ٲ SMALL YA>
<i>boi</i>	ببٲ	<J BA, ٲ VOWEL MARK O, ٲ SMALL YA>
<i>bou</i>	ببٲ	<J BA, ٲ VOWEL MARK O, ٲ SMALL WA>

3.7 Nasalization mark

The following character is used for marking nasalization:

	Character name	Joining	Value
ن	HANIFI ROHINGYA MARK NA KHANNA	dual	/n/

It is placed after the consonant or vowel mark to be nasalized:

<i>baṃ</i>	ببن	<J BA, ن NA KHANNA>
<i>bāṃ</i>	ببٲن	<J BA, ٲ VOWEL MARK A, ن NA KHANNA>
<i>baṃba</i>	بببن	<J BA, ن NA KHANNA, J BA>

3.8 Tonal Signs

There are three tonal signs:

- ٲ
○ HANIFI ROHINGYA SIGN TONE-1
- س
○ HANIFI ROHINGYA SIGN TONE-2
- ~
○ HANIFI ROHINGYA SIGN TONE-3

Their properties are as follows:

	R name	type	Arabic analogue
◌ ^ٲ	TONE-1	<i>hārbāy</i>	short high tone
◌			◌ U+08EA ARABIC TONE ONE DOT ABOVE ◌ U+08ED ARABIC TONE ONE DOT BELOW
◌ ^ٳ	TONE-1	<i>ṭelā</i>	long falling tone
◌			◌ U+08EB ARABIC TONE TWO DOTS ABOVE ◌ U+08EE ARABIC TONE TWO DOTS BELOW
◌ ^ٴ	TONE-1	<i>ṭānā</i>	long rising tone
◌			◌ U+08EC ARABIC TONE LOOP ABOVE ◌ U+08EF ARABIC TONE LOOP BELOW

The placement of tonal signs in the available sources is imprecise and not uniform. In some instances they are placed between the consonant and a vowel mark, in others they are positioned above the consonant, and in others upon the vowel; compare the placement of tones 2 and 3 in Figure 10, or compare lines 1 and 2 and the examples in Figure 13.) These may be considered stylistic choices. In the encoded representation, the tone signs are to be placed after a vowel mark if it is present:

bá ٲ <J A, ٲ VOWEL MARK A, ٲ SIGN TONE-1>
baa ٳ <J A, ٳ VOWEL MARK A, ٳ SIGN TONE-2>
báa ٴ <J A, ٴ VOWEL MARK A, ٴ SIGN TONE-3>

3.9 Gemination sign

The following character is used for indicating consonant gemination:

◌^ٵ HANIFI ROHINGYA SIGN SHADDA

It is called *tassi* in Rohingya and is similar in function to ◌^ٶ U+0651 ARABIC SHADDA. It is positioned above the letter that is doubled. The HANIFI ROHINGYA SIGN SHADDA is placed after the respective letter in the encoded sequence:

baba ٲٲ <J BA, J BA>
babba ٲٲ^ٵ <J BA, J BA, ٵ SHADDA>

If there is a vowel mark after the doubled letter, then the SHADDA is placed before the vowel mark in the encoded sequence:

babbā ٲٲ^ٵ <J BA, J BA, ٵ SHADDA, ٲ VOWEL MARK A >

3.10 Digits

There is a full set of decimal digits:

0	HANIFI ROHINGYA DIGIT ZERO	٥	HANIFI ROHINGYA DIGIT FIVE
1	HANIFI ROHINGYA DIGIT ONE	٦	HANIFI ROHINGYA DIGIT SIX
٢	HANIFI ROHINGYA DIGIT TWO	٧	HANIFI ROHINGYA DIGIT SEVEN
٣	HANIFI ROHINGYA DIGIT THREE	٨	HANIFI ROHINGYA DIGIT EIGHT
٤	HANIFI ROHINGYA DIGIT FOUR	٩	HANIFI ROHINGYA DIGIT NINE

As in Arabic, the Rohingya digits are written from left to right. The Arabic style ٠ is attested as a glyphic variant for 0 ZERO.

3.11 Punctuation

There is no script-specific punctuation. The U+002E FULL STOP is commonly used, as are Arabic signs, such as the , U+060C ARABIC COMMA and ؟ U+061F ARABIC QUESTION MARK.

3.12 ‘Tatweel’

A *tatweel*-like character is used for graphical elongation or justification. The . U+0640 ARABIC TATWEEL should be used for representing *tatweel* in Rohingya.

3.13 Collation

The sort order for Hanifi Rohingya is as follows:

١ A < ٢ VOWEL MARK A < ٣ VOWEL MARK I < ٤ VOWEL MARK U <
 ٥ VOWEL MARK E < ٦ VOWEL MARK O < ٧ BA < ٨ PA < ٩ TA < ١٠ TTA < ١١ JA <
 ١٢ CA < ١٣ HA < ١٤ KHA < ١٥ FA < ١٦ FINAL DA < ١٧ DA < ١٨ DDA < ١٩ RA <
 ٢٠ RRA < ٢١ ZA < ٢٢ SHA < ٢٣ SA < ٢٤ KA < ٢٥ GA < ٢٦ FINAL LA < ٢٧ LA <
 ٢٨ FINAL MA < ٢٩ NA KHANNA < ٣٠ NA < ٣١ WA < ٣٢ SMALL WA < ٣٣ YA <
 ٣٤ SMALL YA < ٣٥ NGA < ٣٦ NYA <

4 Character Properties

4.1 Unicode Character Data

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10D00;HANIFI ROHINGYA LETTER A;Lo;0;AL;;;;;N;;;;;
10D01;HANIFI ROHINGYA LETTER BA;Lo;0;AL;;;;;N;;;;;
10D02;HANIFI ROHINGYA LETTER PA;Lo;0;AL;;;;;N;;;;;
10D03;HANIFI ROHINGYA LETTER TA;Lo;0;AL;;;;;N;;;;;
10D04;HANIFI ROHINGYA LETTER TTA;Lo;0;AL;;;;;N;;;;;
10D05;HANIFI ROHINGYA LETTER JA;Lo;0;AL;;;;;N;;;;;

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10D06;HANIFI ROHINGYA LETTER CA;Lo;0;AL;;;;;N;;;;;
10D07;HANIFI ROHINGYA LETTER HA;Lo;0;AL;;;;;N;;;;;
10D08;HANIFI ROHINGYA LETTER KHA;Lo;0;AL;;;;;N;;;;;
10D09;HANIFI ROHINGYA LETTER FA;Lo;0;AL;;;;;N;;;;;
10D0A;HANIFI ROHINGYA LETTER DA;Lo;0;AL;;;;;N;;;;;
10D0B;HANIFI ROHINGYA LETTER DDA;Lo;0;AL;;;;;N;;;;;
10D0C;HANIFI ROHINGYA LETTER RA;Lo;0;AL;;;;;N;;;;;
10D0D;HANIFI ROHINGYA LETTER RRA;Lo;0;AL;;;;;N;;;;;
10D0E;HANIFI ROHINGYA LETTER ZA;Lo;0;AL;;;;;N;;;;;
10D0F;HANIFI ROHINGYA LETTER SA;Lo;0;AL;;;;;N;;;;;
10D10;HANIFI ROHINGYA LETTER SHA;Lo;0;AL;;;;;N;;;;;
10D11;HANIFI ROHINGYA LETTER KA;Lo;0;AL;;;;;N;;;;;
10D12;HANIFI ROHINGYA LETTER GA;Lo;0;AL;;;;;N;;;;;
10D13;HANIFI ROHINGYA LETTER LA;Lo;0;AL;;;;;N;;;;;
10D14;HANIFI ROHINGYA LETTER MA;Lo;0;AL;;;;;N;;;;;
10D15;HANIFI ROHINGYA LETTER NA;Lo;0;AL;;;;;N;;;;;
10D16;HANIFI ROHINGYA LETTER WA;Lo;0;AL;;;;;N;;;;;
10D17;HANIFI ROHINGYA LETTER SMALL WA;Lo;0;AL;;;;;N;;;;;
10D18;HANIFI ROHINGYA LETTER YA;Lo;0;AL;;;;;N;;;;;
10D19;HANIFI ROHINGYA LETTER SMALL YA;Lo;0;AL;;;;;N;;;;;
10D1A;HANIFI ROHINGYA LETTER NGA;Lo;0;AL;;;;;N;;;;;
10D1B;HANIFI ROHINGYA LETTER NYA;Lo;0;AL;;;;;N;;;;;
10D1C;HANIFI ROHINGYA MARK SUKUN;Lo;0;AL;;;;;N;;;;;
10D1D;HANIFI ROHINGYA VOWEL MARK A;Lo;0;AL;;;;;N;;;;;
10D1E;HANIFI ROHINGYA VOWEL MARK I;Lo;0;AL;;;;;N;;;;;
10D1F;HANIFI ROHINGYA VOWEL MARK U;Lo;0;AL;;;;;N;;;;;
10D20;HANIFI ROHINGYA VOWEL MARK E;Lo;0;AL;;;;;N;;;;;
10D21;HANIFI ROHINGYA VOWEL MARK O;Lo;0;AL;;;;;N;;;;;
10D22;HANIFI ROHINGYA MARK NA KHANNA;Lo;0;AL;;;;;N;;;;;
10D23;HANIFI ROHINGYA SIGN TONE-1;Mn;230;NSM;;;;;N;;;;;
10D24;HANIFI ROHINGYA SIGN TONE-2;Mn;230;NSM;;;;;N;;;;;
10D25;HANIFI ROHINGYA SIGN TONE-3;Mn;230;NSM;;;;;N;;;;;
10D26;HANIFI ROHINGYA SIGN SHADDA;Mn;230;NSM;;;;;N;;;;;
10D27;HANIFI ROHINGYA FINAL LETTER DA;Lo;0;AL;;;;;N;;;;;
10D28;HANIFI ROHINGYA FINAL LETTER LA;Lo;0;AL;;;;;N;;;;;
10D29;HANIFI ROHINGYA FINAL LETTER MA;Lo;0;AL;;;;;N;;;;;
10D30;HANIFI ROHINGYA DIGIT ZERO;Nd;0;AN;;0;0;0;N;;;;;
10D31;HANIFI ROHINGYA DIGIT ONE;Nd;0;AN;;1;1;1;N;;;;;
10D32;HANIFI ROHINGYA DIGIT TWO;Nd;0;AN;;2;2;2;N;;;;;
10D33;HANIFI ROHINGYA DIGIT THREE;Nd;0;AN;;3;3;3;N;;;;;
10D34;HANIFI ROHINGYA DIGIT FOUR;Nd;0;AN;;4;4;4;N;;;;;
10D35;HANIFI ROHINGYA DIGIT FIVE;Nd;0;AN;;5;5;5;N;;;;;
10D36;HANIFI ROHINGYA DIGIT SIX;Nd;0;AN;;6;6;6;N;;;;;
10D37;HANIFI ROHINGYA DIGIT SEVEN;Nd;0;AN;;7;7;7;N;;;;;
10D38;HANIFI ROHINGYA DIGIT EIGHT;Nd;0;AN;;8;8;8;N;;;;;
10D39;HANIFI ROHINGYA DIGIT NINE;Nd;0;AN;;9;9;9;N;;;;;

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4.2 Arabic Shaping Data

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10D00; HANIFI ROHINGYA LETTER A; D; No_Joining_Group
...
10D1C; HANIFI ROHINGYA MARK SUKUN; R; No_Joining_Group
10D1D; HANIFI ROHINGYA VOWEL MARK A; D; No_Joining_Group
...
10D22; HANIFI ROHINGYA MARK NA KHANNA; D; No_Joining_Group
10D23; HANIFI ROHINGYA SIGN TONE-1; U; No_Joining_Group
..
10D26; HANIFI ROHINGYA SIGN SHADDA; U; No_Joining_Group
10D27; HANIFI ROHINGYA FINAL LETTER DA; R; No_Joining_Group
...

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10D29; HANIFI ROHINGYA FINAL LETTER MA; R; No_Joining_Group
10D30; HANIFI ROHINGYA DIGIT ZERO; U; No_Joining_Group
...
10D39; HANIFI ROHINGYA DIGIT NINE; U; No_Joining_Group

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4.3 Script Extensions

The following characters should be extended for usage in Rohingya:

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0640 ; # Lm ARABIC TATWEEL
060C ; # Po ARABIC COMMA
061B ; # Po ARABIC SEMICOLON
061F ; # Po ARABIC QUESTION MARK

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4.4 ‘Confusable’ Characters

Some Rohingya letters resemble those found of Arabic. Attention to these ‘confusables’ is particularly important because Arabic is commonly used in Rohingya documents.

10D03 HANIFI ROHINGYA LETTER PA	;	0648 ARABIC LETTER WAW
10D07 HANIFI ROHINGYA LETTER HA	;	06BE ARABIC LETTER HEH DOACHASHMEE
10D08 HANIFI ROHINGYA LETTER KHA	;	06A9 ARABIC LETTER KEHEH
10D09 HANIFI ROHINGYA LETTER FA	;	06CF ARABIC LETTER WAW WITH DOT ABOVE
10D0B HANIFI ROHINGYA LETTER DDA	;	0637 ARABIC LETTER TAH
10D0C HANIFI ROHINGYA LETTER RRA	;	0637 ARABIC LETTER TAH
10D11 HANIFI ROHINGYA LETTER KA	;	0637 ARABIC LETTER TAH
10D12 HANIFI ROHINGYA LETTER GA	;	FECB ARABIC LETTER AIN INITIAL FORM
10D13 HANIFI ROHINGYA LETTER LA	;	0644 ARABIC LETTER LAM
10D14 HANIFI ROHINGYA LETTER MA	;	FEE3 ARABIC LETTER MEEM INITIAL FORM
10D19 HANIFI ROHINGYA LETTER SMALL YA	;	FE91 ARABIC LETTER BEH INITIAL FORM
10D1D HANIFI ROHINGYA LETTER NA KHANNA	;	0632 ARABIC LETTER ZAIN
10D1D HANIFI ROHINGYA LETTER NA KHANNA	;	FEE7 ARABIC LETTER NOON INITIAL FORM
10D1E HANIFI ROHINGYA VOWEL MARK A	;	FEBB ARABIC LETTER SAD INITIAL FORM
10D24 HANIFI ROHINGYA SIGN TONE-2	;	0654 ARABIC HAMZA ABOVE
10D25 HANIFI ROHINGYA SIGN TONE-3	;	0653 ARABIC MADDAAH ABOVE
10D26 HANIFI ROHINGYA SIGN SHADDA	;	0651 ARABIC SHADDA

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6 Acknowledgments

I am thankful to Mattias Persson and Ian James for bringing the Rohingya script to my attention. Lorna Priest introduced me to James Lloyd-Williams, who very generously provided copies of Rohingya primers. I am all the more grateful to Muhammad Noor, who provided me with numerous books and other materials written and printed in the script. This proposal would not be possible without the assistance of these individuals.

This project was made possible in part by a grant from the United States National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at the University of California, Berkeley). Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the National Endowment for the Humanities.

	10D0	10D1	10D2	10D3
0	0 10D00	1 10D10	2 10D20	3 10D30
1	4 10D01	5 10D11	6 10D21	7 10D31
2	8 10D02	9 10D12	10 10D22	11 10D32
3	12 10D03	13 10D13	14 10D23	15 10D33
4	16 10D04	17 10D14	18 10D24	19 10D34
5	20 10D05	21 10D15	22 10D25	23 10D35
6	24 10D06	25 10D16	26 10D26	27 10D36
7	28 10D07	29 10D17	30 10D27	31 10D37
8	32 10D08	33 10D18	34 10D28	35 10D38
9	36 10D09	37 10D19	38 10D29	39 10D39
A	40 10D0A	41 10D1A		
B	42 10D0B	43 10D1B		
C	44 10D0C	45 10D1C		
D	46 10D0D	47 10D1D		
E	48 10D0E	49 10D1E		
F	50 10D0F	51 10D1F		

Letters

10D00	Ɱ	HANIFI ROHINGYA LETTER A
10D01	Ɱ	HANIFI ROHINGYA LETTER BA
10D02	Ɱ	HANIFI ROHINGYA LETTER PA
10D03	Ɱ	HANIFI ROHINGYA LETTER TA
10D04	Ɱ	HANIFI ROHINGYA LETTER TTA
10D05	Ɱ	HANIFI ROHINGYA LETTER JA
10D06	Ɱ	HANIFI ROHINGYA LETTER CA
10D07	Ɱ	HANIFI ROHINGYA LETTER HA
10D08	Ɱ	HANIFI ROHINGYA LETTER KHA
10D09	Ɱ	HANIFI ROHINGYA LETTER FA
10D0A	Ɱ	HANIFI ROHINGYA LETTER DA
10D0B	Ɱ	HANIFI ROHINGYA LETTER DDA
10D0C	Ɱ	HANIFI ROHINGYA LETTER RA
10D0D	Ɱ	HANIFI ROHINGYA LETTER RRA
10D0E	Ɱ	HANIFI ROHINGYA LETTER ZA
10D0F	Ɱ	HANIFI ROHINGYA LETTER SA
10D10	Ɱ	HANIFI ROHINGYA LETTER SHA
10D11	Ɱ	HANIFI ROHINGYA LETTER KA
10D12	Ɱ	HANIFI ROHINGYA LETTER GA
10D13	Ɱ	HANIFI ROHINGYA LETTER LA
10D14	Ɱ	HANIFI ROHINGYA LETTER MA
10D15	Ɱ	HANIFI ROHINGYA LETTER NA
10D16	Ɱ	HANIFI ROHINGYA LETTER WA
10D17	Ɱ	HANIFI ROHINGYA LETTER SMALL WA = kinna wa
10D18	Ɱ	HANIFI ROHINGYA LETTER YA
10D19	Ɱ	HANIFI ROHINGYA LETTER SMALL YA = kinna ya
10D1A	Ɱ	HANIFI ROHINGYA LETTER NGA = gan
10D1B	Ɱ	HANIFI ROHINGYA LETTER NYA = nayya

Sukun

10D1C	Ɱ	HANIFI ROHINGYA SIGN SUKUN = sakin
-------	---	---------------------------------------

Vowel marks

10D1D	Ɱ	HANIFI ROHINGYA VOWEL MARK A = aa-for
10D1E	Ɱ	HANIFI ROHINGYA VOWEL MARK I = i-for
10D1F	Ɱ	HANIFI ROHINGYA VOWEL MARK U = u-for
10D20	Ɱ	HANIFI ROHINGYA VOWEL MARK E = e-for
10D21	Ɱ	HANIFI ROHINGYA VOWEL MARK O = o-for

Nasalization mark

10D22	Ɱ	HANIFI ROHINGYA MARK NA KHANNA
-------	---	--------------------------------

Tone marks

10D23	Ɱ	HANIFI ROHINGYA SIGN HARBHAY • short high tone
10D24	Ɱ	HANIFI ROHINGYA SIGN THELA • long falling tone
10D25	Ɱ	HANIFI ROHINGYA SIGN TANA • long rising tone

Gemination sign

10D26	Ɱ	HANIFI ROHINGYA SIGN SHADDA = tassi
-------	---	--

Final letters

10D27	Ɱ	HANIFI ROHINGYA FINAL LETTER DA
10D28	Ɱ	HANIFI ROHINGYA FINAL LETTER LA
10D29	Ɱ	HANIFI ROHINGYA FINAL LETTER MA

Digits

10D30	0	HANIFI ROHINGYA DIGIT ZERO
10D31	1	HANIFI ROHINGYA DIGIT ONE
10D32	2	HANIFI ROHINGYA DIGIT TWO
10D33	3	HANIFI ROHINGYA DIGIT THREE
10D34	4	HANIFI ROHINGYA DIGIT FOUR
10D35	5	HANIFI ROHINGYA DIGIT FIVE
10D36	6	HANIFI ROHINGYA DIGIT SIX
10D37	7	HANIFI ROHINGYA DIGIT SEVEN
10D38	8	HANIFI ROHINGYA DIGIT EIGHT
10D39	9	HANIFI ROHINGYA DIGIT NINE

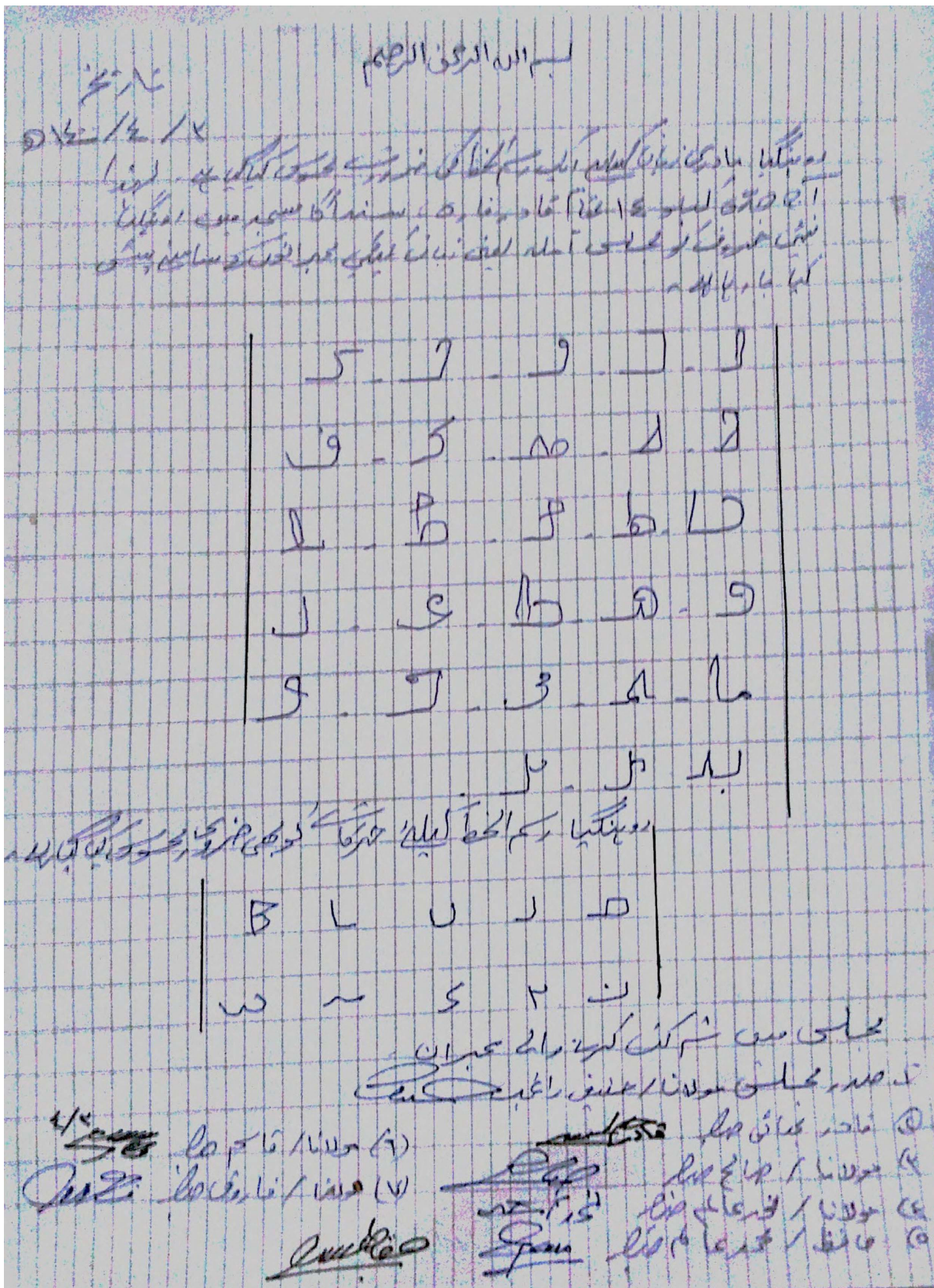


Figure 1: A document containing the Rohingya script as finalized by Hanif and others on February 19, 1980, with signatures of the individuals involved in the creation of the script.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

لَبَّ لَبَّ لَبَّ لَبَّ لَبَّ لَبَّ

ا	ب	ج	د	ه	و
ز	ح	ط	ق	ك	ل
م	ن	هـ	و	ز	ح
ط	ق	ك	ل	م	ن
		هـ	و	ز	ح

:- لَبَّ لَبَّ لَبَّ لَبَّ لَبَّ لَبَّ :-

ب , ل , ن , د , و

و , ح , ك , ز , ن

Figure 3: Chart of Rohingya script from a hand-written primer (from Ruwaingya Zuban Komiti (A): 1).

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

گھمبےبیہ لسمکمہ لیمفہ لہفہ لہطہ لہلمہ

روہینگان زبان کے حروف تہجی Alpha bets Rohingya Language.

ڈا Dda	ڈا Tda	ڈا Ta	ڈا Pa	ڈا Ba	ڈا Aa
ڈا Pha	ڈا Kha	ڈا Ha	ڈا Cha	ڈا Ja	
ڈا Za	ڈا Rda	ڈا Ra	ڈا Dha	ڈا Da	
ڈا La	ڈا Ga	ڈا Ka	ڈا Sha	ڈا Sa	
ڈا Ya	ڈا Kinnawa	ڈا Wa	ڈا Na	ڈا Ma	
	ڈا Naiya	ڈا Nga	ڈا Kinnaya		

گھمبےبیہ لسمکمہ لیمفہ لہفہ لہطہ لہلمہ

Vowels For Rohingya Language

اوفر ofor	اے فر Aefor	اوفر Ufor	ای فر efor	اوفر Aafor
تسی Tossi	ڈانا Tana	ڈھیلہ Tela	ہاربیہائ Haarbai	ناخٹنا Nakhonna

گھمبےبیہ لسمکمہ لہلمہ

10	9	8	7	6	5	4	3	2	1
10	9	8	7	6	5	4	3	2	1
๐	၉	၈	၇	၆	၅	၄	၃	၂	၁

Figure 4: Chart showing Rohingya letters and signs with Urdu and Burmese names.

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

چا	جا	تا	ثا	پا	با	آ
چا	جا	تا	ثا	پا	با	آ
CHA	JA	TA	TA	PA	BA	AA
ڑا	را	ڈا	دا	فا	خا	ھا
ڑا	را	ڈا	دا	فا	خا	ھا
R̄A	RA	DA	THA	FA	KHA	HA
ما	لا	گا	کا	شا	سا	زا
ما	لا	گا	کا	شا	سا	زا
MA	LA	GA	KA	SHA	SA	ZA
نایا	گان	کینا یا	یا	کینا وا	وا	نا
نایا	گان	کینا یا	یا	کینا وا	وا	نا
NAYYA	GAN	KINNA YA	YA	KINNA WA	WA	NA
اَفر	اَفر	اَفر	اَفر	اَفر	اَفر	اَفر
اَفر	اَفر	اَفر	اَفر	اَفر	اَفر	اَفر
OFOR	EFOR	UFOR	FOR	AFOR		
نتی	تا	ٹیل	ھا-ہائی	ناننا		
نتی	تا	ٹیل	ھا-ہائی	ناننا		
TASSI	TANA	TELA	HARIPAY	NAKONNA		

Figure 5: Chart showing Rohingya letters with Arabic correspondences and names in Latin transliteration.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

تَسْمِعْتَهُمْ لِكَلِمَاتِكَ سُبْحَانَكَ { لَد. تَد. }
 لَمَّا لَبِثُوا لِيَوْمِهِمْ لَمَّا مَرَدُوا

TA	تَد	THA	تَد	PA	فَد	BA	تَد	AA	لَد
FA	فَد	KHA	كَد	HA	هَد	CHA	لَد	JA	جَد
ZA	زَد	RDA	ظَد	RA	رَد	DA	طَد	DHA	خَد
LA	لَد	GHA	عَد	KA	ظَد	SHA	فَد	SA	سَد
YA	يَد	KINNAWA	نَد	WA	وَد	NA	اَد	MA	مَد
				NAYA	نَد	GHAN	لَد	KINNAYA	بَد

{ لَبِثُوا }

لَمَّا لَبِثُوا لِيَوْمِهِمْ لَمَّا لَبِثُوا لِيَوْمِهِمْ لَمَّا لَبِثُوا لِيَوْمِهِمْ
 لَمَّا لَبِثُوا لِيَوْمِهِمْ لَمَّا لَبِثُوا لِيَوْمِهِمْ لَمَّا لَبِثُوا لِيَوْمِهِمْ

WOFOR	و	EAFOR	ا	UOFOR	و	EIFOR	ر	AFOR	م
TASSI	س	TANA	ا	TAHALA	ا	HAR BAY	ب	NAKIHANNA	ن

Figure 6: Chart showing Rohingya letters with Latin transliteration.

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

حروف الروهنجيه

سهمبئيہ سؤلف آلد!

ڪڊ ڪا	ڪڊ ڪا	فڊ فا	لڊ لا	ا ا
فڊ فا	ڪڊ ڪا	هد حا	لم لما	جم جا
هڊ ها	طڊ طا	رڊ را	طڊ طا	دڊ دا
رڊ را	هد ها	طڊ طا	فڊ فا	سد سا
بڊ با	ڪڊ ڪا	وڊ وا	امڊ اما	مڊ ما
		نڊ نا	گڊ گا	اڊ اا

سهمبئيہ سؤلف آلد! ، لڊ ، لڊ ، لڊ ، لڊ ، لڊ

هڊ اؤفر	پڊ اؤفر	مڊ اؤفر	پڊ اؤفر	مڊ اؤفر
سڊ تسئي	نڊ ثانا	وڊ ٿهلا	مڊ هاربهائي	نڊ نختا



Figure 7: Page from a Rohingya primer showing Rohingya letters with names in Arabic transliteration.

فوق المملاء (۲)

حركات نحو ملا حر الخمسين

المقدمات الخمسة مملوءة لام فتحة

لم	لم	لم	لم	لم
آ + أفر = آ	با + أفر = بآ	جا + أفر = جآ	دا + أفر = دآ	سا + أفر = سآ
لم	لم	لم	لم	لم
جا + أفر = جآ	چآ + أفر = چآ	دا + أفر = دآ	سا + أفر = سآ	ما + أفر = مآ
لم	لم	لم	لم	لم
زا + أفر = زآ	ثآ + أفر = ثآ	کا + أفر = کآ	نا + أفر = نآ	ما + أفر = مآ
لم	لم	لم	لم	لم
لا + أفر = لآ	کا + أفر = کآ	کا + أفر = کآ	نا + أفر = نآ	ما + أفر = مآ
لم	لم	لم	لم	لم
غان + أفر = غآ	کتاوا + أفر = وا	وا + أفر = وا	نا + أفر = نا	ما + أفر = ما

لی نیا

لکھنے اور پڑھنے کا مثال !

{ م } المقدمات الخمسة مملوءة لام لينة

آ : - م+م-م	۲ : - ل+ل+م+م-لم	۱ : - ل+م+ل+م-لم
۳ : - ل+م+م+م-لم	۴ : - ل+م+ل+م-لم	۵ : - ل+م+م+م-لم

{ پ } المقدمات الخمسة مملوءة لام لينة

کپ	کپ	کپ	کپ	کپ
آ + ایفر = ئی	تا + ایفر = تی	پا + ایفر = پی	با + ایفر = بی	یا + ایفر = یی

۳ : - ل+پ+م+م-کم	۲ : - ل+پ+ل+م-کم	۱ : - ل+پ+م+م-کم
۴ : - ل+م+م+م-کم	۵ : - ل+پ+ل+م-کم	۶ : - ل+پ+م+م-کم

Figure 8: Page from a Rohingya primer showing the method of writing ۲ VOWEL MARK A and پ VOWEL MARK I.

فَوْقَ لَمَلِ (ؤ)

لَسْلَسْ لَسْ قَسْ قَسْلَسْ لَسْ لَسْطِلَسْ مِبْعَمْلَا !

ك	ل	و	ب	ا
آ+ اوڤر= ثو	با+ اوڤر= بو	پا+ اوڤر= پو	تا+ اوڤر= تو	ثا+ اوڤر= ثو
ا : ل+م+ف+م+م - لَسْلَسْ	؟ : ل+م+ف+م+م - لَسْلَسْ	؟ : ل+م+ف+م+م - لَسْلَسْ	؟ : ل+م+ف+م+م - لَسْلَسْ	ا : ل+م+ف+م+م - لَسْلَسْ
ا : ل+م+ف+م+م - لَسْلَسْ	ا : ل+م+ف+م+م - لَسْلَسْ	ا : ل+م+ف+م+م - لَسْلَسْ	ا : ل+م+ف+م+م - لَسْلَسْ	ا : ل+م+ف+م+م - لَسْلَسْ

لِپْ لِسْ قَسْ قَسْلَسْ لَسْ لَسْطِلَسْ مِبْعَمْلَا !

ک	لپ	وپ	بپ	اپے
آ+ اوڤر= ثپے	با+ اوڤر= بوپے	پا+ اوڤر= پپے	تا+ اوڤر= توپے	ثا+ اوڤر= ثپے
ا : ل+م+ف+م+م - لِسْطِلم	؟ : ل+م+ف+م+م - لِسْطِلم	؟ : ل+م+ف+م+م - لِسْطِلم	؟ : ل+م+ف+م+م - لِسْطِلم	ا : ل+م+ف+م+م - لِسْطِلم
ا : ل+م+ف+م+م - لِسْطِلم	ا : ل+م+ف+م+م - لِسْطِلم	ا : ل+م+ف+م+م - لِسْطِلم	ا : ل+م+ف+م+م - لِسْطِلم	ا : ل+م+ف+م+م - لِسْطِلم

لِسْ لِسْ قَسْ قَسْلَسْ لَسْ لَسْطِلَسْ مِبْعَمْلَا !

ک	ل	و	ب	ا
آ+ اوڤر= ثو	با+ اوڤر= بو	پا+ اوڤر= پو	تا+ اوڤر= تو	ثا+ اوڤر= ثو
ا : ل+و+ط+م+م+م - لِسْطِلَسْ	؟ : ل+و+ط+م+م+م - لِسْطِلَسْ	؟ : ل+و+ط+م+م+م - لِسْطِلَسْ	؟ : ل+و+ط+م+م+م - لِسْطِلَسْ	ا : ل+و+ط+م+م+م - لِسْطِلَسْ
ا : ل+و+ط+م+م+م - لِسْطِلَسْ	ا : ل+و+ط+م+م+م - لِسْطِلَسْ	ا : ل+و+ط+م+م+م - لِسْطِلَسْ	ا : ل+و+ط+م+م+م - لِسْطِلَسْ	ا : ل+و+ط+م+م+م - لِسْطِلَسْ

مِطِطِمْ لَسْ قَسْ قَسْلَسْ لَسْ لَسْطِلَسْ مِبْعَمْلَا !

لِمْ	لِمْ	فِمْ	فِمْ	فِمْ	مِطِطِمْ
لِمْ	لِمْ	فِمْ	فِمْ	فِمْ	مِطِطِمْ

Figure 9: Page from a Rohingya primer showing the method of writing ۞ VOWEL MARK U, ۞ VOWEL MARK E, ۞ VOWEL MARK O.

فونم لملل (۵۱)

{ ۵ } ھمکنھم لھو فونلھم لھل لھطھلھم مھھم!

لھم	لھن	فھن	لھن	کھن
+ افرنھئا - ل	+ با افرنھئا - ہن	+ با افرنھئا - ہون	+ تا افرنھئا - تھن	+ تا افرنھئا - ٹاؤن

۱ - : ل+م+ن+ہ+و+ج+ل+م - لھنھلھم
 ۲ - : ط+پ+ز+ط+م - طھنطھم
 ۳ - : ل+م+ن+ہ+و+ج+ل+م - لھنھلھم
 ۴ - : ط+پ+ز+ط+م - طھنطھم

{ ۶ } ھمکنھم لھو فونلھم لھل لھطھلھم مھھم!

لم	لھ	فھ	لھ	کھ
+ افرھنھئا - اھ	+ با افرھنھئا - بھ	+ با افرھنھئا - پھو	+ تا افرھنھئا - تھ	+ تا افرھنھئا - ٹاؤھ

لھلھ مھنھ: عھنھ عھنھ: فھنھ: فھنھنھنھ: کھلھنھ طھنھنھ:

{ ۷ } کھلھ لھو فونلھم لھل لھطھلھم مھھم!

لم	لھ	فھ	لھ	کھ
+ افرٹھلا - اھ	+ با افرٹھلا - بھ	+ با افرٹھلا - پھو	+ تا افرٹھلا - تھ	+ تا افرٹھلا - ٹاؤھ

لھنھ: عھنھ: کھنھ: فھنھنھ: ھمھنھ طھنھنھ: فھنھنھنھ:

{ ۸ } لھنھ لھو فونلھم لھل لھطھلھم مھھم!

لھنھ: طھنھنھ: لھنھ: عھنھنھ: لھنھنھ: فھنھنھنھنھنھ
 لھنھنھ: لھنھنھنھنھنھنھ: لھنھنھنھ: عھنھنھ: کھنھنھ

(۹) کھنھ لھو فونلھم لھل لھطھلھم مھھم!

لم	لھ	فھ	لھ	کھ
ا	ہی	پو	تھ	ٹاؤ
لھنھ	لھنھ	کھنھ	فھنھ	لھنھ

Figure 10: Page from a Rohingya primer showing the method of writing ن LETTER NA KHANNA, ۲, ۱, ۰ TONE-1, ˘ TONE-2, ˜ TONE-3, ˆ SIGN SHADDA.

فوق ليليا (٤)

{ ل } طيقم نم ليا قانيلا لما لبطيلا ميملا

ليا للمعلا فمقعاي { ٣ } قانم نسلا مولايا نم الاملا امح ليا
المعلا طيقم نم لبطيلا :
ميملا اسعلا ، كعلا ، قيعلا ، لعلا ، حملا ، قولا ،

{ ل } طيقم نم ليا قانيلا لما لبطيلا ميملا

ليا للمعلا فمقعاي { ٣ } قانم نسلا مولايا نم الاملا امح ليا للمعلا
طيقم نم ليطم للملا -
ميملا ا عيلا : عميلا : قويلما : ليعيما : اسميما

{ ل } سملا ليا قانيلا لما لبطيلا ميملا

ليا للمعلا همكلا لما لمح ، ، ليا لمح الاملا اسعلا
همكلا ليعلا ليا ليا للمعلا ليعيما ليعيما ، ، ليا
لبطيلا -

املا : قلا : قلا : كلا : لسا : سلا :

اسميما مولايا ليا ، ليا

0 2 ٦ ٢ ٣ ٤ ٦ ٨ ٩ ا

اسميما ليا ليا طميلا

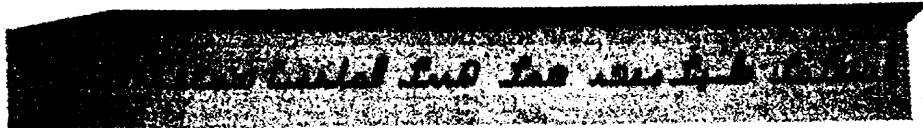


Figure 11: Page from a Rohingya primer describing the use of ل SMALL WA and ل SMALL YA.

ان فہم ہو گئے ہیں، سو !

0 2 6 2 6 4 6 7 ? 1

تہذیب و تمدن {ادبی}

ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !
 ان فہم ہو گئے ہیں، سو !

ان فہم ہو گئے ہیں، سو !



ان فہم ہو گئے ہیں، سو !

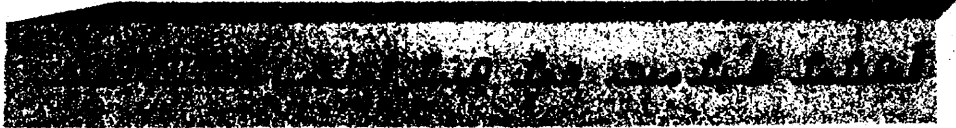


Figure 12: Page from a Rohingya primer showing the use of *tatweel*.

11

baṭaṭa fāṭaṭa aṭaṭa

« 5 » ṭāṭa « 1 » ṭāṭa

ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa
ṭāṭa	ṭāṭa	ṭāṭa

Figure 13: Table showing use of tonal signs from a hand-written primer (from Ruwainggya Zuban Komiti (A): 11).

ꠁꠞꠠꠃ
 ꠠꠞꠠꠃ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ
 ꠠꠞꠠꠃ ꠠꠞꠠꠃ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ
 ꠠꠞꠠꠃ ꠠꠞꠠꠃ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ
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 ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ ꠠꠞ

Figure 14: Example of running Rohingya text from a hand-written primer (from Ruwainggya Zuban Komiti (B): 1).

၁၈

၁၂၃၄၅၆၇၈၉၁၀

၁၁	၂၁	၃၁	၄၁	၅၁	၆၁	၇၁	၈၁	၉၁	၁၀
၁၂	၂၂	၃၂	၄၂	၅၂	၆၂	၇၂	၈၂	၉၂	၁၁
၁၃	၂၃	၃၃	၄၃	၅၃	၆၃	၇၃	၈၃	၉၃	၁၂
၁၄	၂၄	၃၄	၄၄	၅၄	၆၄	၇၄	၈၄	၉၄	၁၃
၁၅	၂၅	၃၅	၄၅	၅၅	၆၅	၇၅	၈၅	၉၅	၁၄
၁၆	၂၆	၃၆	၄၆	၅၆	၆၆	၇၆	၈၆	၉၆	၁၅
၁၇	၂၇	၃၇	၄၇	၅၇	၆၇	၇၇	၈၇	၉၇	၁၆
၁၈	၂၈	၃၈	၄၈	၅၈	၆၈	၇၈	၈၈	၉၈	၁၇
၁၉	၂၉	၃၉	၄၉	၅၉	၆၉	၇၉	၈၉	၉၉	၁၈
၁၁၀	၂၁၀	၃၁၀	၄၁၀	၅၁၀	၆၁၀	၇၁၀	၈၁၀	၉၁၀	၁၁၀

၁၂၃၄၅၆၇၈၉၁၀

၁၂၃၄၅၆၇၈၉၁၀

၁၂၃၄၅၆၇၈၉၁၀

Figure 15: Chart of digits from a hand-written primer (from Ruwainggya Zuban Komiti (B): 34).

၇၂

(၇၁) (၇၂) (၇၃) (၇၄)

(၇၅) (၇၆) (၇၇) (၇၈)

(၇၉) (၈၀) (၈၁) (၈၂)

(၈၃) (၈၄) (၈၅) (၈၆)

(၈၇) (၈၈) (၈၉) (၉၀)

(၉၁) (၉၂) (၉၃) (၉၄)

(၉၅) (၉၆) (၉၇) (၉၈)

(၉၉) (၁၀၀)

၂၀

Figure 16: Excerpt from an primary-level arithmetic book written in Rohingya (from Ruwaingya Education Board Myanmar: 21).



Figure 17: The cover page of *Haq-Dar*, a Rohingya language news weekly (December 5, 2002).



Figure 18: The cover page of Serak, a Rohingya language news weekly (October 13, 2007).

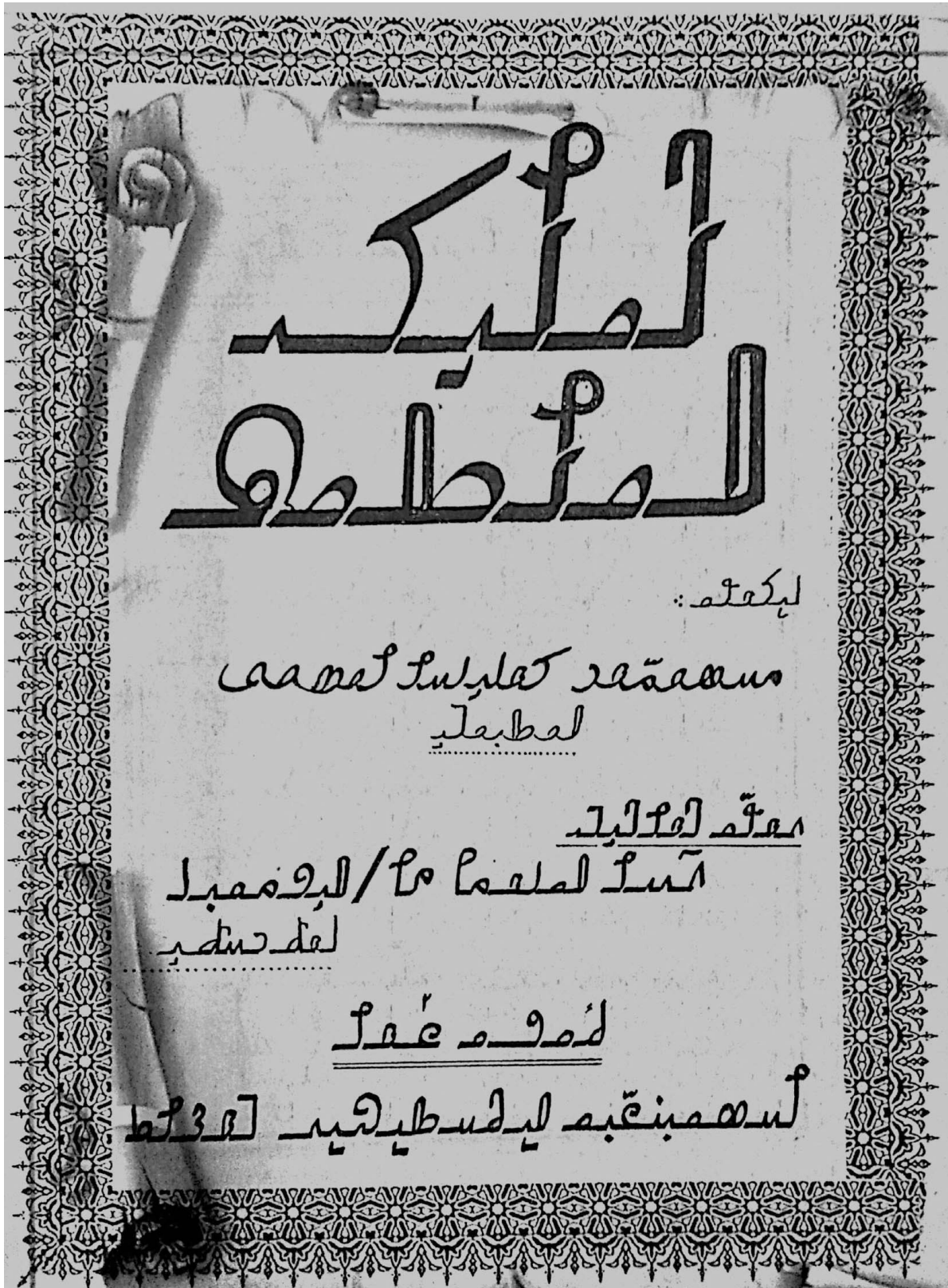


Figure 19: Cover page of *History of Arakan*.

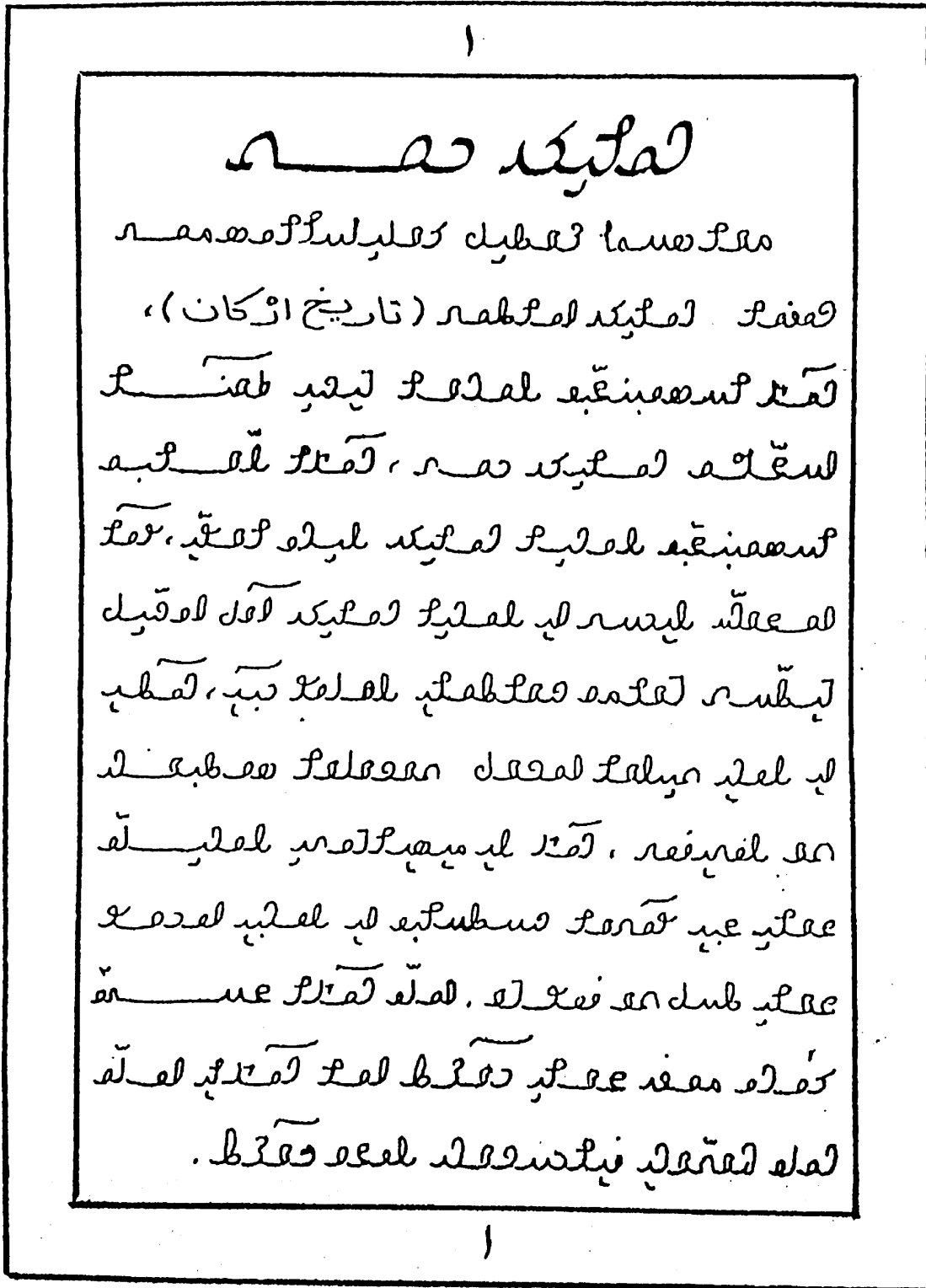


Figure 20: First page of *History of Arakan*.

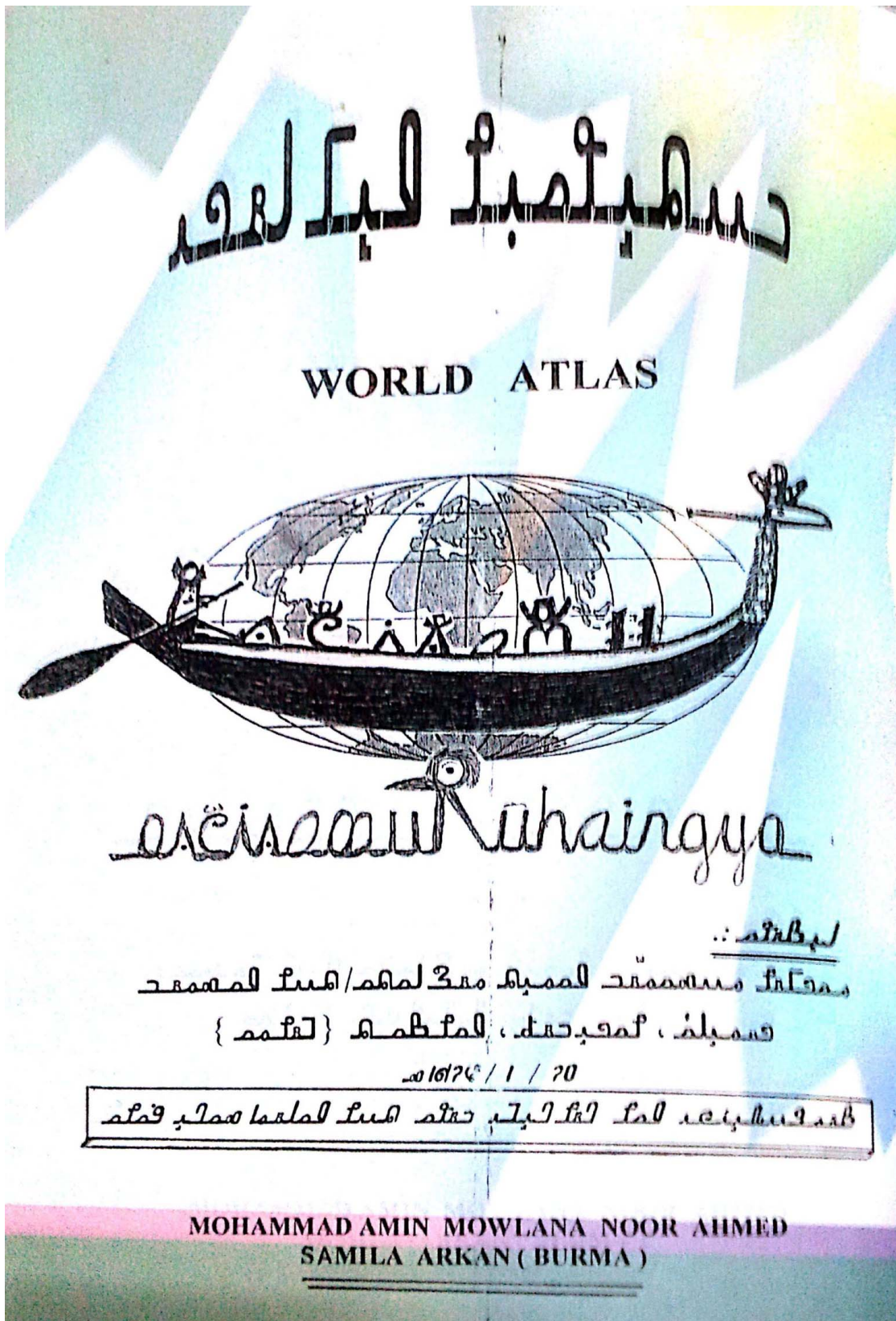


Figure 21: Cover of *World Atlas*

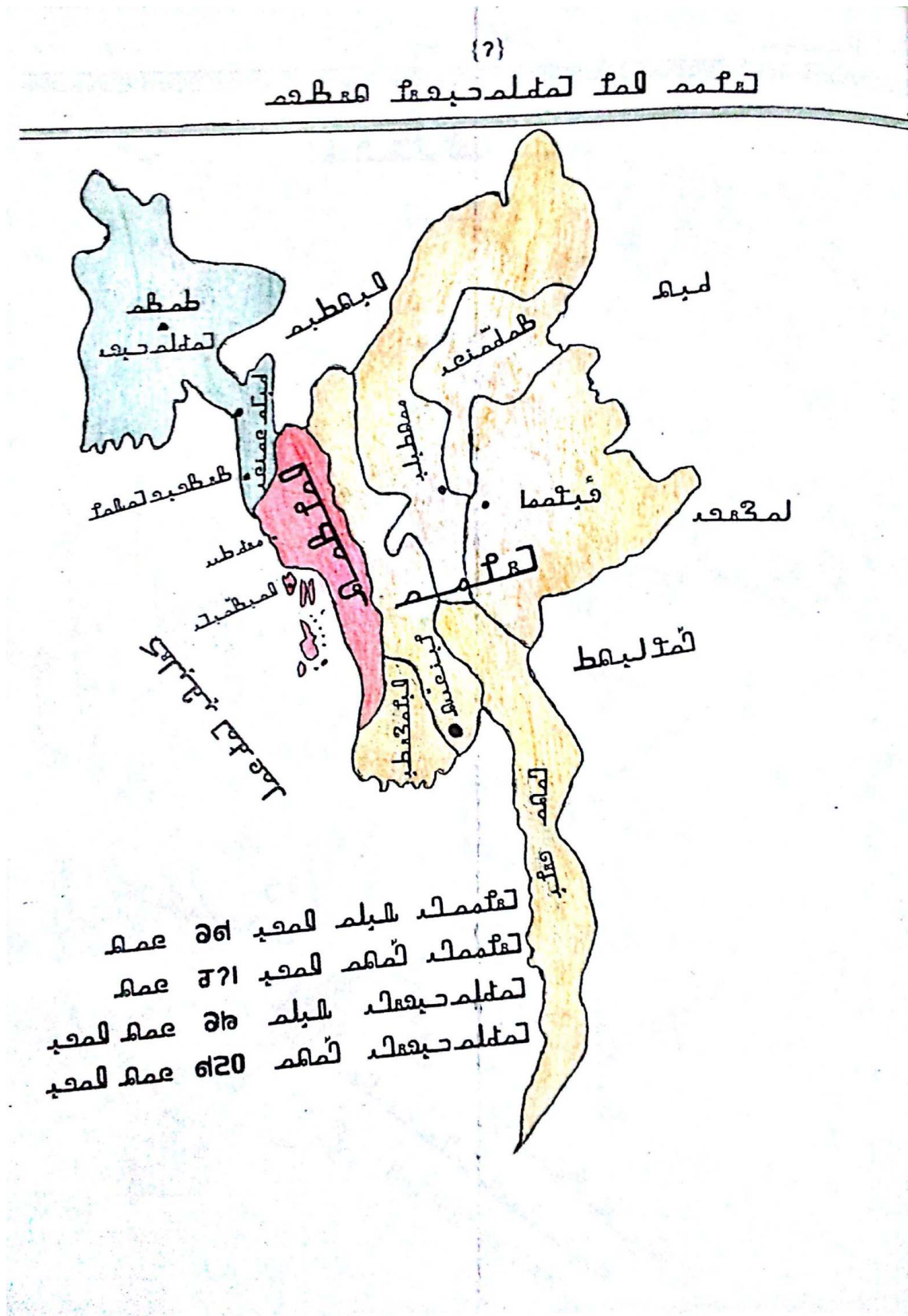


Figure 22: Page from *World Atlas* showing Myanmar with the Arakan region highlighted.

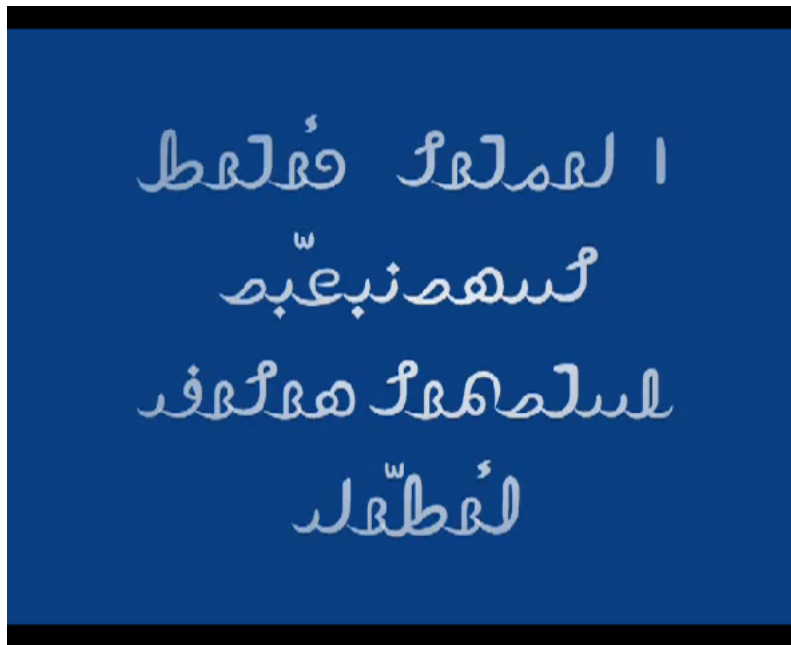


Figure 23: Use of a Rohingya typeface in a digital video (from noorismail52 2011a: frame 3).



Figure 24: Use of a Rohingya typeface in a digital video (from noorismail52 2011b: frame 103).

	G	K		G	K		G	K
A	ⵏ	ⵎ	KA	ⵓ	ⵔ	NA KHANNA	ⵊ	ⵋ
BA	ⵑ	ⵒ	GA	ⵇ	ⵈ	TONE-1	◌̣	◌̣
PA	ⵓ	ⵔ	LA	ⵑ	ⵒ	TONE-2	◌̣	◌̣
TA	ⵑ	ⵒ	MA	ⵎ	ⵏ	TONE-3	◌̣	◌̣
TTA	ⵑ	ⵒ	NA	ⵓ	ⵔ	SHADDA	◌̣	◌̣
JA	ⵑ	ⵒ	WA	ⵓ	ⵔ	ZERO	0	0
CA	ⵑ	ⵒ	SMALL WA	ⵓ	ⵔ	ONE	1	1
HA	ⵑ	ⵒ	YA	ⵓ	ⵔ	TWO	2	2
KHA	ⵑ	ⵒ	SMALL YA	ⵓ	ⵔ	THREE	3	3
FA	ⵑ	ⵒ	NGA	ⵓ	ⵔ	FOUR	4	4
DA	ⵑ	ⵒ	NYA	ⵓ	ⵔ	FIVE	5	5
DDA	ⵑ	ⵒ	SUKUN	ⵓ	ⵔ	SIX	6	6
RA	ⵑ	ⵒ	AA	ⵓ	ⵔ	SEVEN	7	7
RRA	ⵑ	ⵒ	I	ⵓ	ⵔ	EIGHT	8	8
ZA	ⵑ	ⵒ	U	ⵓ	ⵔ	NINE	9	9
SA	ⵑ	ⵒ	E	ⵓ	ⵔ			
SHA	ⵑ	ⵒ	O	ⵓ	ⵔ			

Table 4: Comparison of digitized Rohingya typefaces: “Rohingya Gonya Leyka Noories” (‘G’) and “Rohingya Kuna Leyka Noories” (‘K’) designed by Muhammad Noor.