

Proposal to Encode the Nag Mundari Script in the Universal Character Set

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1 Introduction

This is a proposal to include the Nag Mundari script in the Universal Character Set (UCS). It supercedes the following document:

- L2/21-031 “Proposal to Encode the Mundari Bani Script” [17]

Apart from editorial improvements, the major changes from the preliminary proposal include:

- Renaming of the block and character names to refer to “Nag Mundari”, after script creator Rohidas Singh Nag, rather than “Mundari Bani”. Note that the document’s prose itself continues to reference “Mundari Bani” which is the most common name for the script.

2 Background

The Mundari Bani script (Mundari Bani: ᱠᱟᱱᱢᱟᱨᱢᱟᱝ ᱵᱤᱨᱫᱟ ; Devanagari: मुंडारी बानी; Bengali: মুন্ডারী বানী; Oriya: ମୁଣ୍ଡାରୀ ବାନି) is used for writing Mundari (ISO 639-3: unr; Mundari Bani: ᱠᱟᱱᱢᱟᱨᱢᱟᱝ ; Devanagari: मुंडारी; Bengali: মুন্ডারী; Odiya: ମୁଣ୍ଡାରୀ), an Austroasiatic language spoken by 1.1 million people in India, primarily in the states of Jharkand, West Bengal, and Odisha [4]. Mundari has been written in Devanagari, Bengali script, Odiya script, and Latin script, as well as the script in question here, Mundari Bani, which was invented by Rohidas Singh Nag (1934 - 2012) in the latter half of the 20th century. While for the technical purposes of this proposal, we will refer to the script as ‘Nag Mundari’, most institutions and people using the script refer to it as ‘Mundari Bani’, along with less common names such as ‘Mundari Lipi’ and ‘Hoḍo Jagar’.

Following the precedent set by the encoding of other relatively new scripts with a known creator, such as Hanifi Rohingya [5], we suggest referring to the script as “Nag Mundari” within the Unicode Standard itself and character names, if

accepted. We note though that most institutions and people using the script refer to it as ‘Mundari Bani’, along with less common names such as ‘Mundari Lipi’ and ‘Hoḍo Jagar’.

There has been a huge surge of interest in recent years in the script. There are schools teaching Mundari Bani as well as workshops throughout nearly all Munda-inhabited districts of Odisha, the districts of Jhargam, Purulia, and Medinipur in West Bengal, and the districts Ranchi, East Singhbhum, West Singhbhum, Saraikela-Kharsawan, and Kunti in Jharkhand. It is estimated that approximately 10% of Mundari speakers can read Mundari Bani.

There is limited information available on Mundari Bani in English. Most of the materials on the script are written in Mundari, Hindi, and Oriya. A number of different organizations and individuals have published primers for the script [8, 10, 11, 13–15] (see Fig. 14). Anthologies of stories and poems have also been published [2, 9]. There are also instructional videos by schools and individuals available on YouTube and Mundari advocacy Facebook groups with content released in Mundari Bani. Five Mundari Bani typefaces were developed by Baidyanath Singh [7] (see Fig. 6 for a comparison between the typefaces).

2.1 Timeline

Rohidas Singh Nag, a writer, poet and community advocate, originally began working on the earliest iteration of the Mundari Bani script in the early 1950s while in grade school. Later, Nag simplified the Mundari Bani script and by the early 1980s began sharing it with others in the Munda community [6]. By 1994 Mundari Bani had spread further throughout Odisha state and in 2004 ten different Mundari Bani schools opened in Odisha. In 2004, the first book written in Mundari Bani, *Mundari Bani Hisir*, was published under the auspices of Bharat Munda Samaj [14], and was handwritten as there was no typeface available at the time. In 2008, Bharat Munda Samaj and Mundari Samaj Sanwar Jamda, with the collaboration of original script inventor Rohidas Nag, reformed the script, altering some letterforms deemed confusing or hard to read or write, as well as inventing one new basic letter and one new ‘Tong’ (see §3.10). Additionally, the first Mundari Bani fonts were developed at this time. Since 2008, all (attested) books have been under this new standard, which is the one presented in this proposal.

3 Script Details

3.1 Structure

Mundari Bani is an alphabetic script that is written from left to right. There are no attested ligatures.

◌̇	◌̈	◌̇	-	ɛ	◌̃
MUHOR	IKIR	TOYOR	ECED	OJOD	SUTUH

The typical didactic presentation of Mundari Bani (see Figs. 1 and 2) is shown with two major sections. The first section is a chart with five rows, where each row’s first letter is a vowel, and the letter names for the row match the vowel of the first letter [8, 11, 13, 15]. Note the similarity in this traditional organization and structure to that of the Santali language’s Ol Chiki script [1] (see Fig. 5a).

ɔ	O	ɥ	OP	ɒ	OL	ɔ̃	OY	e	ONG				
ʌ	A	ɥ	AJ	ʌ	AB	ɥ	ANY	ʌ	AH				
ɪ	I	ɥ	IS	ɪ	IDD	ɥ	IT	ɪ	IH				
ɔ	U	ɥ	UC	ɔ	UD	ʌ	UK	ɔ	UR				
ɛ	E	ɥ	ENN	ɛ	EG	ɪ	EM	v	EN	ɥ	ETT	ɥ	ELL

The second section is a collection of “Tong” (ɥɔ̃e) which are a collection of symbols and diacritics who play a secondary role in the script. Depending on the orthographic tradition of the writer, they may use none, some, or all of the “Tong”. Note again the similarity to Ol Chiki’s modifier letters both in name and in function (see Fig. 5b).

3.2 Basic Alphabet

The basic letters of Mundari Bani are enumerated below. In addition, for phonetic clarity, they are compared to Devanagari, Bengali, and Oriya scripts in Fig. 3 and to its phonemic inventory in Fig. 4.

Mundari Bani	Character Name
ɔ	NAG MUNDARI LETTER O
ɥ	NAG MUNDARI LETTER OP
ɒ	NAG MUNDARI LETTER OL
ɔ̃	NAG MUNDARI LETTER OY
e	NAG MUNDARI LETTER ONG
ʌ	NAG MUNDARI LETTER A
ɥ	NAG MUNDARI LETTER AJ
ʌ	NAG MUNDARI LETTER AB
ɥ	NAG MUNDARI LETTER ANY
ʌ	NAG MUNDARI LETTER AH

ɪ	NAG MUNDARI LETTER I
ɨ	NAG MUNDARI LETTER IS
ɨ̃	NAG MUNDARI LETTER IDD
ɨ̄	NAG MUNDARI LETTER IT
ɨ̅	NAG MUNDARI LETTER IH
<hr/>	
ʊ	NAG MUNDARI LETTER U
ʊ̃	NAG MUNDARI LETTER UC
ʊ̄	NAG MUNDARI LETTER UD
ʊ̅	NAG MUNDARI LETTER UK
ʊ̆	NAG MUNDARI LETTER UR
<hr/>	
ɛ	NAG MUNDARI LETTER E
ɛ̃	NAG MUNDARI LETTER ENN
ɛ̄	NAG MUNDARI LETTER EG
ɛ̅	NAG MUNDARI LETTER EM
ɛ̆	NAG MUNDARI LETTER EN
ɛ̇	NAG MUNDARI LETTER ETT
ɛ̈	NAG MUNDARI LETTER ELL
<hr/>	

3.3 Muhor

Vowel nasalization is indicated by ◌̃ MUHOR (ḥ̃ḥ̃ḥ̃ḥ̃). The sign is written in the top-right corner of the vowel in question. For example, the word ḥ̃ḥ̃ /mū:/ *nose*. We note that unifying this with COMBINING DOT ABOVE RIGHT would not be appropriate as 2004-style ◌̃ MUHOR takes on an open circle shape rather than a dot (see §3.10).

Mundari Bani	Character Name
◌̃	NAG MUNDARI SIGN MUHOR

3.4 Toyor

The ◌̄ TOYOR (ḥ̄ḥ̄ḥ̄ḥ̄) indicates a long vowel. For example, ḥ̄ /u/ vs ḥ̄̄ /u:/. Use of TOYOR depends on the orthographic tradition of the writer and the lack of TOYOR does not necessarily imply a short vowel. The word ‘Mundari’ for example, can be seen both as ḥ̄ḥ̄ḥ̄ḥ̄ḥ̄ and as ḥ̄ḥ̄ḥ̄ḥ̄ḥ̄ depending on the text in question.

Mundari Bani	Character Name
◌̣	NAG MUNDARI SIGN TOYOR

3.5 Ikir

The ◌̣ IKIR (𑌶𑌷𑌸𑌹) is used to represent that a vowel is preceded by the /w/ sound [11, Pg. 15]. For example, 𑌶 /a/ versus 𑌷 /wa/.

Mundari Bani	Character Name
◌̣	NAG MUNDARI SIGN IKIR

3.6 Ojod

The 𑌺 OJOD (𑌺𑌻𑌼𑌽) has different uses depending on author, or may not be used at all. In Mundari phonology, word-final /b/ and /d/ take on their so-called ‘checked’ forms [4], which can be indicated in writing using OJOD. It generally immediately precedes the 𑌶 AB or 𑌺 UD that it is to affect. For example, Singh [13] has the word 𑌶𑌺𑌻𑌼𑌽 *scissors* (see Fig. 14), which in Singh [8] is spelled without OJOD as 𑌶𑌺𑌻𑌼𑌽.

Some sources also use OJOD to indicate consonant gemination in close-transcription of neighboring Indo-Aryan languages such as Hindi or Oriya, giving examples such as 𑌺 𑌺𑌺𑌻 *bbo*, 𑌺 𑌺𑌺𑌻𑌼 *ddho*, and 𑌺 𑌺𑌻𑌼 *jjo* [15] (see Fig. 13 for more such examples).

Note that while 𑌺 OJOD and 𑌺 UD may have shapes reminiscent of each other to someone unfamiliar with the script, they are entirely distinct graphemes. Note also that the glyphic variant of 𑌺 OJOD present in Fig. 2, 𑌺, is also well attested in recent (post-2008) texts.

Mundari Bani	Character Name
𑌺	NAG MUNDARI SIGN OJOD

3.7 Sutuh

The $\tilde{\circ}$ SUTUH (୧୦୫୦୭) is applied to existing letters of the alphabet to derive new sounds. It can be applied to both vowels and consonants and is used most often for close transcription of neighboring Indo-Aryan languages (see Fig. 12). For example, \tilde{u} (IS, SUTUH) can be used to transliterate Devanagari \tilde{u} , Bengali \tilde{u} , and Oriya \tilde{u} . Note that unifying this with COMBINING TILDE would not be appropriate as 2004-style $\tilde{\circ}$ SUTUH takes on a “seagull” shape¹ rather than a tilde (see §3.10).

Mundari Bani	Character Name
$\tilde{\circ}$	NAG MUNDARI SIGN SUTUH

3.8 Digits

There is a full set of decimal digits (୦୧୨୩୪୫୬୭): **୦** ZERO, **୧** ONE, **୨** TWO, **୩** THREE, **୪** FOUR, **୫** FIVE, **୬** SIX, **୭** SEVEN, **୮** EIGHT, **୯** NINE. While some publications and people use the native digits, others may use digits from Latin, Devanagari, Bengali, or Oriya depending upon author preference (Note Mundari Bani verse numbers in Fig. 9 and Mundari Bani page numbers in Fig. 8, but European-style page numbers in Figs. 7, 12 and 17). The following table compares against Devanagari, Bengali, and Oriya digits:

Mundari Bani	Character Name	Deva	Beng	Orya
୦	NAG MUNDARI DIGIT ZERO	୦	୦	୦
୧	NAG MUNDARI DIGIT ONE	୧	୧	୧
୨	NAG MUNDARI DIGIT TWO	୨	୨	୨
୩	NAG MUNDARI DIGIT THREE	୩	୩	୩
୪	NAG MUNDARI DIGIT FOUR	୪	୪	୪
୫	NAG MUNDARI DIGIT FIVE	୫	୫	୫
୬	NAG MUNDARI DIGIT SIX	୬	୬	୬
୭	NAG MUNDARI DIGIT SEVEN	୭	୭	୭
୮	NAG MUNDARI DIGIT EIGHT	୮	୮	୮
୯	NAG MUNDARI DIGIT NINE	୯	୯	୯

¹The shape of $\tilde{\circ}$ SUTUH in 2004-style is similar to $\tilde{\circ}$ U+033C COMBINING SEAGULL BELOW except located above the base rather than below.

3.9 Punctuation

European-style punctuation is used, as in English including FULL STOP, COMMA, EXCLAMATION MARK, QUESTION MARK, HYPHEN-MINUS and “quotes above”.

3.9.1 Eced

The - ECED (ᱫᱮᱛᱟᱜ) is used for marking compound verbs [4, Pg. 74], reduplicative expressives [4, Pg. 103], and other such constructions. Examples include ᱫᱷᱟᱱᱵᱟᱫᱽᱯᱩᱨ *mother-father*, the compound verb constructions ᱵᱤᱨᱫᱟᱹᱜᱟᱲᱤ-ᱵᱤᱨᱫᱟᱹᱜᱟᱲᱤ *to eat and drink* and ᱵᱤᱨᱫᱟᱹᱜᱟᱲᱤ *to be able to write*, and the reduplicative expressive ᱵᱤᱨᱫᱟᱹᱜᱟᱲᱤ ᱵᱤᱨᱫᱟᱹᱜᱟᱲᱤ *glittering in the sun* [14, Pg. 32]. ECED can be represented by either U+002D HYPHEN-MINUS or U+2010 HYPHEN.

3.10 Historical Forms

Mundari Bani possesses some glyphic variants that are resultant of a script reform in 2008. Prior to the reform, neither letter ᱠ ENN nor ᱡ IKIR existed. The reform also fundamentally changed the basic shapes of ᱢ OP, ᱣ OL, ᱤ I, and ᱥ UK to unrecognizably different forms. Additionally, the glyphs of ᱦ MUHOR and ᱧ SUTUH were modified, and many other letters were relatively minorly adjusted typographically. See Figs. 17 to 19 for examples and further details. We *do not* recommend disunifying the pre- and post-reform letters, and consider them mere variants. Modern users are unlikely to want to type in this pre-reform style, but if they wish to, a pre-reform font would be the appropriate way to achieve this.

For each letter or mark in modern Mundari Bani, the below chart gives an example word from the first Mundari Bani book, Mundari Bani Hisir [14], published in 2004, as well as a rendering in modern print (see §2.1 for history of the script). The letter or mark being analyzed is highlighted in *red* if the glyph has changed to a very significant degree, in *violet* if the glyph has changed in a minor way, and in *blue* if the glyph hasn’t meaningfully changed since 2004. If the letter or mark did not exist in 2004, it is marked as such.

Letter	2004-Style Example	Modern Print
ᱠ O	ᱠᱤ	ᱠᱤ
ᱢ OP	ᱢᱤᱱᱤ	ᱢᱤᱱᱤ
ᱣ OL	ᱣᱤᱱᱤ	ᱣᱤᱱᱤ
ᱤ OY	ᱤᱱᱤᱱᱤ	ᱤᱱᱤᱱᱤ
ᱥ ONG	ᱥᱤ	ᱥᱤ

Letter	2004-Style Example	Modern Print
አ A	አዎኒ	አዎኒ
ሣ AJ	ሣጓጌ	ሣጓጌ
ዳ AB	ዳጋ	ዳጋ
ዓ ANY	ዓገ	ዓገ
ዓ AH	ዓዎ	ዓዎ
ኦ I	ኦዎ	ኦዎ
ዛ IS	ዛጌ	ዛጌ
ዐ IDD	ዐጌ	ዐጌ
ተ IT	ተጌ	ተጌ
ሪ IH	ሪጌ	ሪጌ
ኃ U	ኃዎ	ኃዎ
ኼ UC	ኼዎ	ኼዎ
ቲ UD	ቲጌ	ቲጌ
ሉ UK	ሉጌ	ሉጌ
ቆ UR	ቆጌ	ቆጌ
ደ E	ደጌጌ	ደጌጌ
ሀ ENN	N/A	
ዳ EG	ዳዎ	ዳዎ
ሽ EM	ሽጌ	ሽጌ
ህ EN	ህጋ	ህጋ
ሣ ETT	ሣጌ	ሣጌ
ገ ELL	ገጌጌ	ገጌጌ
ሰ MUHOR	ሰጌ	ሰጌ
ሰ TOYOR	ሰጌ	ሰጌ
ሰ IKIR	N/A	
- ECED	ሣጌ-ሰጌ	ሣጌ-ሰጌ
ቲ OJOD	ቲጌ	ቲጌ

Letter	2004-Style Example	Modern Print
ॐ SUTUH	ॐ, उॐ	ॐ, उॐ

3.11 Character Names

The characters are named in accordance with their traditional names, and are romanized so that the vowels ॐ, अ, इ, उ, ए are romanized O, A, I, U, E respectively. All the consonants are romanized to match the customary name, while matching UCS conventions. For example, ए has the name ENN since it has the sound of ए DEVANAGARI LETTER NNA. The exception to this is अ AH which has a glottal stop sound and is generally transliterated into Devanagari using visarga.

3.12 Collation

Mundari Bani does not seem to have a consensus collation order, but native readers would likely expect a lexicographic order which matches with the typical didactic order (which is emulated in the code charts). This would require that the letters (basic alphabet and ए OJOD) have primary weight and the combining characters have secondary weight.

3.13 Unicode Data

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1E4D0;NAG MUNDARI LETTER O;Lo;0;L;;;;;N;;;;;
1E4D1;NAG MUNDARI LETTER OP;Lo;0;L;;;;;N;;;;;
1E4D2;NAG MUNDARI LETTER OL;Lo;0;L;;;;;N;;;;;
1E4D3;NAG MUNDARI LETTER OY;Lo;0;L;;;;;N;;;;;
1E4D4;NAG MUNDARI LETTER ONG;Lo;0;L;;;;;N;;;;;
1E4D5;NAG MUNDARI LETTER A;Lo;0;L;;;;;N;;;;;
1E4D6;NAG MUNDARI LETTER AJ;Lo;0;L;;;;;N;;;;;
1E4D7;NAG MUNDARI LETTER AB;Lo;0;L;;;;;N;;;;;
1E4D8;NAG MUNDARI LETTER ANY;Lo;0;L;;;;;N;;;;;
1E4D9;NAG MUNDARI LETTER AH;Lo;0;L;;;;;N;;;;;
1E4DA;NAG MUNDARI LETTER I;Lo;0;L;;;;;N;;;;;
1E4DB;NAG MUNDARI LETTER IS;Lo;0;L;;;;;N;;;;;
1E4DC;NAG MUNDARI LETTER IDD;Lo;0;L;;;;;N;;;;;
1E4DD;NAG MUNDARI LETTER IT;Lo;0;L;;;;;N;;;;;
1E4DE;NAG MUNDARI LETTER IH;Lo;0;L;;;;;N;;;;;
1E4DF;NAG MUNDARI LETTER U;Lo;0;L;;;;;N;;;;;
1E4E0;NAG MUNDARI LETTER UC;Lo;0;L;;;;;N;;;;;
1E4E1;NAG MUNDARI LETTER UD;Lo;0;L;;;;;N;;;;;

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1E4E2;NAG MUNDARI LETTER UK;Lo;0;L;;;;;N;;;;;
1E4E3;NAG MUNDARI LETTER UR;Lo;0;L;;;;;N;;;;;
1E4E4;NAG MUNDARI LETTER E;Lo;0;L;;;;;N;;;;;
1E4E5;NAG MUNDARI LETTER ENN;Lo;0;L;;;;;N;;;;;
1E4E6;NAG MUNDARI LETTER EG;Lo;0;L;;;;;N;;;;;
1E4E7;NAG MUNDARI LETTER EM;Lo;0;L;;;;;N;;;;;
1E4E8;NAG MUNDARI LETTER EN;Lo;0;L;;;;;N;;;;;
1E4E9;NAG MUNDARI LETTER ETT;Lo;0;L;;;;;N;;;;;
1E4EA;NAG MUNDARI LETTER ELL;Lo;0;L;;;;;N;;;;;
1E4EB;NAG MUNDARI SIGN OJOD;Lm;0;L;;;;;N;;;;;
1E4EC;NAG MUNDARI SIGN MUHOR;Mn;232;NSM;;;;;N;;;;;
1E4ED;NAG MUNDARI SIGN TOYOR;Mn;232;NSM;;;;;N;;;;;
1E4EE;NAG MUNDARI SIGN IKIR;Mn;220;NSM;;;;;N;;;;;
1E4EF;NAG MUNDARI SIGN SUTUH;Mn;230;NSM;;;;;N;;;;;
1E4F0;NAG MUNDARI DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
1E4F1;NAG MUNDARI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
1E4F2;NAG MUNDARI DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
1E4F3;NAG MUNDARI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
1E4F4;NAG MUNDARI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
1E4F5;NAG MUNDARI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
1E4F6;NAG MUNDARI DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
1E4F7;NAG MUNDARI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
1E4F8;NAG MUNDARI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
1E4F9;NAG MUNDARI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;

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	1E4D	1E4E	1E4F
0	ॐ 1E4D0	ॐ 1E4E0	ॐ 1E4F0
1	ॐ 1E4D1	ॐ 1E4E1	ॐ 1E4F1
2	ॐ 1E4D2	ॐ 1E4E2	ॐ 1E4F2
3	ॐ 1E4D3	ॐ 1E4E3	ॐ 1E4F3
4	ॐ 1E4D4	ॐ 1E4E4	ॐ 1E4F4
5	ॐ 1E4D5	ॐ 1E4E5	ॐ 1E4F5
6	ॐ 1E4D6	ॐ 1E4E6	ॐ 1E4F6
7	ॐ 1E4D7	ॐ 1E4E7	ॐ 1E4F7
8	ॐ 1E4D8	ॐ 1E4E8	ॐ 1E4F8
9	ॐ 1E4D9	ॐ 1E4E9	ॐ 1E4F9
A	ॐ 1E4DA	ॐ 1E4EA	
B	ॐ 1E4DB	ॐ 1E4EB	
C	ॐ 1E4DC	ॐ 1E4EC	
D	ॐ 1E4DD	ॐ 1E4ED	
E	ॐ 1E4DE	ॐ 1E4EE	
F	ॐ 1E4DF	ॐ 1E4EF	

Letters

1E4D0	ॐ	NAG MUNDARI LETTER O
1E4D1	ॐ	NAG MUNDARI LETTER OP
1E4D2	ॐ	NAG MUNDARI LETTER OL
1E4D3	ॐ	NAG MUNDARI LETTER OY
1E4D4	ॐ	NAG MUNDARI LETTER ONG
1E4D5	ॐ	NAG MUNDARI LETTER A
1E4D6	ॐ	NAG MUNDARI LETTER AJ
1E4D7	ॐ	NAG MUNDARI LETTER AB
1E4D8	ॐ	NAG MUNDARI LETTER ANY
1E4D9	ॐ	NAG MUNDARI LETTER AH
1E4DA	ॐ	NAG MUNDARI LETTER I
1E4DB	ॐ	NAG MUNDARI LETTER IS
1E4DC	ॐ	NAG MUNDARI LETTER IDD
1E4DD	ॐ	NAG MUNDARI LETTER IT
1E4DE	ॐ	NAG MUNDARI LETTER IH
1E4DF	ॐ	NAG MUNDARI LETTER U
1E4E0	ॐ	NAG MUNDARI LETTER UC
1E4E1	ॐ	NAG MUNDARI LETTER UD
1E4E2	ॐ	NAG MUNDARI LETTER UK
1E4E3	ॐ	NAG MUNDARI LETTER UR
1E4E4	ॐ	NAG MUNDARI LETTER E
1E4E5	ॐ	NAG MUNDARI LETTER ENN
1E4E6	ॐ	NAG MUNDARI LETTER EG
1E4E7	ॐ	NAG MUNDARI LETTER EM
1E4E8	ॐ	NAG MUNDARI LETTER EN
1E4E9	ॐ	NAG MUNDARI LETTER ETT
1E4EA	ॐ	NAG MUNDARI LETTER ELL

Tong

1E4EB	ॐ	NAG MUNDARI SIGN OJOD
1E4EC	ॐ	NAG MUNDARI SIGN MUHOR
1E4ED	ॐ	NAG MUNDARI SIGN TOYOR
1E4EE	ॐ	NAG MUNDARI SIGN IKIR
1E4EF	ॐ	NAG MUNDARI SIGN SUTUH

Digits

1E4F0	ॐ	NAG MUNDARI DIGIT ZERO
1E4F1	ॐ	NAG MUNDARI DIGIT ONE
1E4F2	ॐ	NAG MUNDARI DIGIT TWO
1E4F3	ॐ	NAG MUNDARI DIGIT THREE
1E4F4	ॐ	NAG MUNDARI DIGIT FOUR
1E4F5	ॐ	NAG MUNDARI DIGIT FIVE
1E4F6	ॐ	NAG MUNDARI DIGIT SIX
1E4F7	ॐ	NAG MUNDARI DIGIT SEVEN
1E4F8	ॐ	NAG MUNDARI DIGIT EIGHT
1E4F9	ॐ	NAG MUNDARI DIGIT NINE

<div style="border: 1px solid black; padding: 2px; display: inline-block;"> ᱠᱟᱨᱱᱟᱜᱚᱸᱰᱤ ᱠᱚᱨᱱᱟᱜᱚᱸᱰᱤ मुनडारी लिपी </div>														
ॐ	ᱠ	ᱡ	ᱢ	ᱣ										
अ	अप्	अल्	अय्	अं										
ᱤ	ᱥ	ᱦ	ᱧ	ᱨ										
आ	आज्	आब्	आज्	आ :										
ᱩ	ᱪ	ᱫ	ᱬ	ᱭ										
इ	इस्	इड्	इत्	इह्										
ᱮ	ᱯ	ᱰ	ᱱ	ᱲ										
उ	उच्	उद्	उक्	उर्										
ᱴ	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ								
ए	एण्	एग्	एम्	एन्	एट्	एळ्								
<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 5px auto;"> ᱠᱚᱨᱱᱟᱜᱚᱸᱰᱤ तोड् </div>														
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 5px;">•</td> <td style="padding: 5px;">/</td> <td style="padding: 5px;">.</td> <td style="padding: 5px;">१</td> </tr> <tr> <td style="padding: 5px;">मुँहर तोड्</td> <td style="padding: 5px;">तोयोर् तोड्</td> <td style="padding: 5px;">इकीर् तोड्</td> <td style="padding: 5px;">ओजोद् तोड्</td> </tr> </table>							•	/	.	१	मुँहर तोड्	तोयोर् तोड्	इकीर् तोड्	ओजोद् तोड्
•	/	.	१											
मुँहर तोड्	तोयोर् तोड्	इकीर् तोड्	ओजोद् तोड्											
<div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 5px auto;"> ᱠᱚᱨᱱᱟᱜᱚᱸᱰᱤ मुनडारी संख्या </div>														
᱐	᱑	᱒	᱓	᱔	᱕	᱖	᱗	᱘	᱙	ᱚ				
शून	मोद्	बार्	आपी	उपुन्	मोणे	तुरी	एया	इयाल्	आरे	गेल				
<div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 0 auto;"> 3 </div>														

Figure 2: Mundari Bani-Devanagari Alphabet Correspondence [10]

		Deva	Beng	Orya
ॐ	O	अ	অ	ଅ
ॠ	OP	अप्	অপ্	ଅପ୍
ॡ	OL	अल्	অল্	ଅଲ୍
ॢ	OY	अय्	অয়্	ଅୟ্
e	ONG	अं	অং	ଅଂ
ॣ	A	आ	আ	ଆ
।	AJ	आज्	আজ্	ଆଜ୍
॥	AB	आब्	আব্	ଆব୍
०	ANY	आञ्	আঞ্	ଆଞ୍
१	AH	आः	আঃ	ଆଃ
ॡ	I	इ	ই	ଇ
ॢ	IS	इस्	ইস্	ଇସ্
ॣ	IDD	इड्	ইড্	ଇড୍
।	IT	इत्	ইত্	ଇত্
॥	IH	इह्	ইহ্	ଇহ্
०	U	उ	উ	ଉ
ॠ	UC	उच्	উচ্	ଉଚ୍
ॡ	UD	उद्	উদ্	ଉଦ୍
ॢ	UK	उक्	উক্	ଉକ୍
ॣ	UR	उर्	উର୍	ଉର୍
।	E	ए	এ	ଏ
॥	ENN	एण्	এণ্	ଏଣ୍
०	EG	एग्	এগ্	ଏଗ୍
ॢ	EM	एम्	এম্	ଏମ୍
ॣ	EN	एन्	এন্	ଏନ୍
।	ETT	एट्	এট্	ଏট্
॥	ELL	एळ्	এড়্	ଏଲ୍

Figure 3: Transliteration of the basic Mundari Bani letter names into the other common scripts used in the writing of Mundari: Devanagari, Bengali, and Oriya.

3 /o/	Ⓜ /p/	Ⓝ /l/	Ⓢ /y/	ⓔ /ŋ/		
ⓐ /a/	Ⓜ /j/	Ⓢ /b/	Ⓢ /ñ/	Ⓢ /ʔ/		
Ⓢ /i/	ⓔ /s/	Ⓢ /d/	Ⓢ /t/	Ⓢ /h/		
Ⓝ /u/	Ⓢ /c/	Ⓢ /d/	Ⓢ /k/	Ⓢ /r/		
ⓔ /e/	Ⓜ /ŋ/	Ⓢ /g/	Ⓢ /m/	Ⓢ /n/	Ⓜ /t/	Ⓢ /tʃ/

Figure 4: A (nearly) one-to-one mapping between Osada [3]’s analysis of the Mundari phonemic inventory and the basic Mundari Bani alphabet. Only the phoneme /w/ is missing, which is represented in Mundari Bani as ɔ IKIR. Note that Osada [3] does not consider vowel nasalization, vowel length, or word-final ‘checking’ of /b/ and /d/ to be phonemic distinctions.

Ɔ O	Ɔ OP	Ɔ OL	Ɔ OY	Ɔ ONG		
Ɔ A	Ɔ AJ	Ɔ AB	Ɔ ANY	Ɔ AH		
Ɔ I	Ɔ IS	Ɔ IDD	Ɔ IT	Ɔ IH		
Ɔ U	Ɔ UC	Ɔ UD	Ɔ UK	Ɔ UR		
Ɔ E	Ɔ ENN	Ɔ EG	Ɔ EM	Ɔ EN	Ɔ ETT	Ɔ ELL

Ɔ LA	Ɔ AT	Ɔ AG	Ɔ ANG	Ɔ AL	
Ɔ LAA	Ɔ AAK	Ɔ AAJ	Ɔ AAM	Ɔ AAW	
Ɔ LI	Ɔ IS	Ɔ IH	Ɔ INY	Ɔ IR	
Ɔ LU	Ɔ UC	Ɔ UD	Ɔ UNN	Ɔ UY	
Ɔ LE	Ɔ EP	Ɔ EDD	Ɔ EN	Ɔ ERR	
Ɔ LO	Ɔ OTT	Ɔ OB	Ɔ OV	Ɔ OH	

(a) Both Ol Chiki and Mundari Bani are organized in similar, grid-style charts where each row begins with a vowel letter and all consonant members of a row have a name starting on a matching vowel. Though past this organizational resemblance, there is little graphical similarity in the basic alphabet of each. The primarily apparent parallels are the very similar glyphs for Ɔ ANY and Ɔ INY as well as the way that letters Ɔ A / Ɔ LAA are graphically derived from Ɔ O / Ɔ LA through the addition of a rightward-then-downward stroke.

◌̇	MUHOR	·	MU TTUDDAG
◌̈	IKIR	.	GAAHLAA TTUDDAAG
◌̇̈	TOYOR	:	MU-GAAHLAA TTUDDAAG
-	ECED	~	RELAA
Ɔ	OJOD	-	PHAARKAA
◌̇̈̈	SUTUH	Ɔ	AHAD

(b) The extended marks (called ‘Tong’ in Mundari Bani) have a very significant number of parallels in form and function between the two scripts. ◌̇ MUHOR and · MU TTUDDAG have a very similar name and form, and an identical function (nasalization). Both Ɔ OJOD and Ɔ AHAD have very similar names, letter-like shapes, and nearly identical function (marking glottalization / ‘checking’ of certain stop consonants). We note that while the Ol Chiki block encodes - PHAARKAA, we propose Mundari Bani’s - ECED to instead be represented with existing encoded characters (see §3.9.1). We note that the remaining similar marks between these scripts differ in being combining marks versus modifier letters respectively.

Figure 5: A side-by-side comparing Ol Chiki to Mundari Bani. Both are unicameral scripts for related Munda family languages with a very reminiscent organizational style.

	(a)	(b)	(c)	(d)	(e)		(a)	(b)	(c)	(d)	(e)
O	꠆	꠆	꠆	꠆	꠆						
OP	ꠇ	ꠇ	ꠇ	ꠇ	ꠇ						
OL	ꠈ	ꠈ	ꠈ	ꠈ	ꠈ						
OY	ꠉ	ꠉ	ꠉ	ꠉ	ꠉ						
ONG	ꠊ	ꠊ	ꠊ	ꠊ	ꠊ						
A	ꠋ	ꠋ	ꠋ	ꠋ	ꠋ						
AJ	ꠌ	ꠌ	ꠌ	ꠌ	ꠌ						
AB	ꠍ	ꠍ	ꠍ	ꠍ	ꠍ						
ANY	ꠎ	ꠎ	ꠎ		ꠎ						
AH	ꠏ	ꠏ	ꠏ	ꠏ	ꠏ						
I	ꠐ	ꠐ	ꠐ	ꠐ	ꠐ						
IS	ꠑ	ꠑ	ꠑ	ꠑ	ꠑ	ZERO	ꠐ	ꠐ	ꠐ	ꠐ	ꠐ
IDD	ꠒ	ꠒ	ꠒ	ꠒ	ꠒ	ONE	ꠑ	ꠑ	ꠑ	ꠑ	ꠑ
IT	ꠓ	ꠓ	ꠓ	ꠓ	ꠓ	TWO	ꠒ	ꠒ	ꠒ	ꠒ	ꠒ
IH	ꠔ	ꠔ	ꠔ	ꠔ	ꠔ	THREE	ꠓ	ꠓ	ꠓ	ꠓ	ꠓ
U	ꠕ	ꠕ	ꠕ	ꠕ	ꠕ	FOUR	ꠔ	ꠔ	ꠔ	ꠔ	ꠔ
UC	ꠖ	ꠖ	ꠖ	ꠖ	ꠖ	FIVE	ꠕ	ꠕ	ꠕ	ꠕ	ꠕ
UD	ꠗ	ꠗ	ꠗ	ꠗ	ꠗ	SIX	ꠖ	ꠖ	ꠖ	ꠖ	ꠖ
UK	ꠘ	ꠘ	ꠘ	ꠘ	ꠘ	SEVEN	ꠗ	ꠗ	ꠗ	ꠗ	ꠗ
UR	ꠙ	ꠙ	ꠙ	ꠙ	ꠙ	EIGHT	ꠘ	ꠘ	ꠘ	ꠘ	ꠘ
E	ꠚ	ꠚ	ꠚ	ꠚ	ꠚ	NINE	ꠙ	ꠙ	ꠙ	ꠙ	ꠙ
ENN	ꠛ	ꠛ	ꠛ	ꠛ	ꠛ						
EG	ꠜ	ꠜ	ꠜ	ꠜ	ꠜ						
EM	ꠝ	ꠝ	ꠝ	ꠝ	ꠝ						
EN	ꠞ	ꠞ	ꠞ	ꠞ	ꠞ						
ETT	ꠟ	ꠟ	ꠟ	ꠟ	ꠟ						
ELL	ꠠ	ꠠ	ꠠ	ꠠ	ꠠ						
MUHOR	ꠡ	ꠡ	ꠡ	ꠡ	ꠡ						
IKIR	ꠢ	ꠢ	ꠢ	ꠢ	ꠢ						
TOYOR	ꠣ	ꠣ	ꠣ	ꠣ	ꠣ						
ECED	-	-	-	-	-						
OJOD	ꠤ	ꠤ	ꠤ	ꠤ	ꠤ						

Figure 6: Side-by-side comparison of all five Mundari Bani typefaces released by Baidyanath Singh in 2008 [7]. (a) Mundari Lipi Arial (b) Mundari Lipi (c) Mundari Lipi Standard (d) Mundari Lipi JagaMohan (e) Mundari Lipi Stoneage. We note that the omission of ꠛ SUTUH is intentional, as these fonts *do not* currently contain it.

ຕຸຊໄທໄທ ຈຸຮຸໄທໄທ າຊກໄທໄທ.....(L)
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ
 ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ ມຸຊໄທໄທ

Figure 9: Excerpt from Mundari Gaumuidi Hamar (ໄທໄທໄທໄທ ມຸຊໄທໄທ າຊກໄທໄທ) [9, Pg. 4]. Circled in red is an instance of ◊ IKIR, and in blue are instances of ◊ TOYOR.

ନିଠାବୃତ୍ତିକକ୍ଷ କ୍ଷୁଦ୍ର ଧ୍ୱନି ଧ୍ୱନି
ଓଁକ୍ଷୁଦ୍ର, ଧ୍ୱନିକ୍ଷୁଦ୍ର କ୍ଷୁଦ୍ର କ୍ଷୁଦ୍ର ଧ୍ୱନିକ୍ଷୁଦ୍ର

ନିଠାବୃତ୍ତିକକ୍ଷ	ଓ	ଫ	ନ	ତ	ଈ
ଓଁକ୍ଷୁଦ୍ର	ଅ	ଫ	ଲ	ୟ	ଈ
ହିନ୍ଦୀ	ଅ	ଫ	ଲ	ୟ	ଈ
ବାଙ୍ଗଳା	ଅ	ଫ	ଲ	ୟ	ଈ



କ	ଫ	କ୍ଷ	ତ	ଈ
କ୍ଷ	ଫ	କ୍ଷ	ତ	କ୍ଷ
କ୍ଷ	ଫ	କ୍ଷ	ତ	କ୍ଷ
କ୍ଷ	ଫ	କ୍ଷ	ତ	କ୍ଷ



କ୍ଷ	ଫ	କ୍ଷ	ତ	ଈ
କ୍ଷ	ଫ	କ୍ଷ	ତ	କ୍ଷ
କ୍ଷ	ଫ	କ୍ଷ	ତ	କ୍ଷ
କ୍ଷ	ଫ	କ୍ଷ	ତ	କ୍ଷ

Figure 11: Excerpt from Bani Upurum (କ୍ଷୁଦ୍ର ଧ୍ୱନିକ୍ଷୁଦ୍ର) [13, Pg. 6], titled ନିଠାବୃତ୍ତିକକ୍ଷ କ୍ଷୁଦ୍ର ଧ୍ୱନି ଧ୍ୱନି ଓଁକ୍ଷୁଦ୍ର, ଧ୍ୱନିକ୍ଷୁଦ୍ର, କ୍ଷୁଦ୍ର କ୍ଷୁଦ୍ର ଧ୍ୱନିକ୍ଷୁଦ୍ର. Circled in green are instances of ଓ SUTUH.

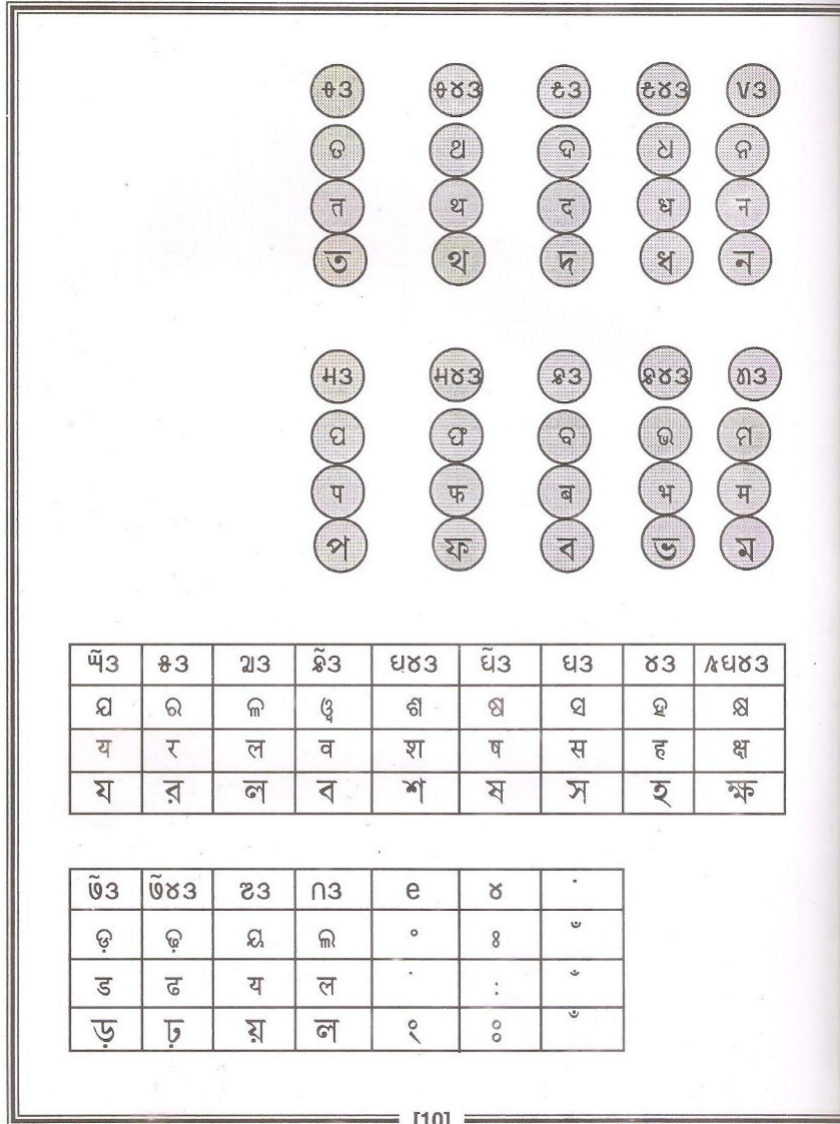


Figure 12: Excerpt from Bani Upurum (ୱୱୱୱୱୱୱୱୱୱ) [13, Pg. 10], showing examples of ୱ SUTUH being used to closely represent sounds from neighboring Indo-Aryan languages.

ନିଧିକୃତ

ନେନ ନେନି ନିକୃତ
 ନୃକ ନେକ ନିକୃତ
 ନୃକ ନୃକ ନିକୃତ

ନିଧିକୃତ ନିଧିକୃତ,
 ନିଧିକୃତ ନିଧିକୃତ,

ନିଧିକୃତ, ନିଧିକୃତ ନିଧିକୃତ !
 ନିଧିକୃତ ନିଧିକୃତ, ନିଧିକୃତ ନିଧିକୃତ ?

[19]

Figure 14: Excerpt from Bani Upurum (ନିଧିକୃତ ଉପୁରୁ) [13, Pg. 19] on the letter ନ OL. Circled in pink are instances of ଃ OJOD.

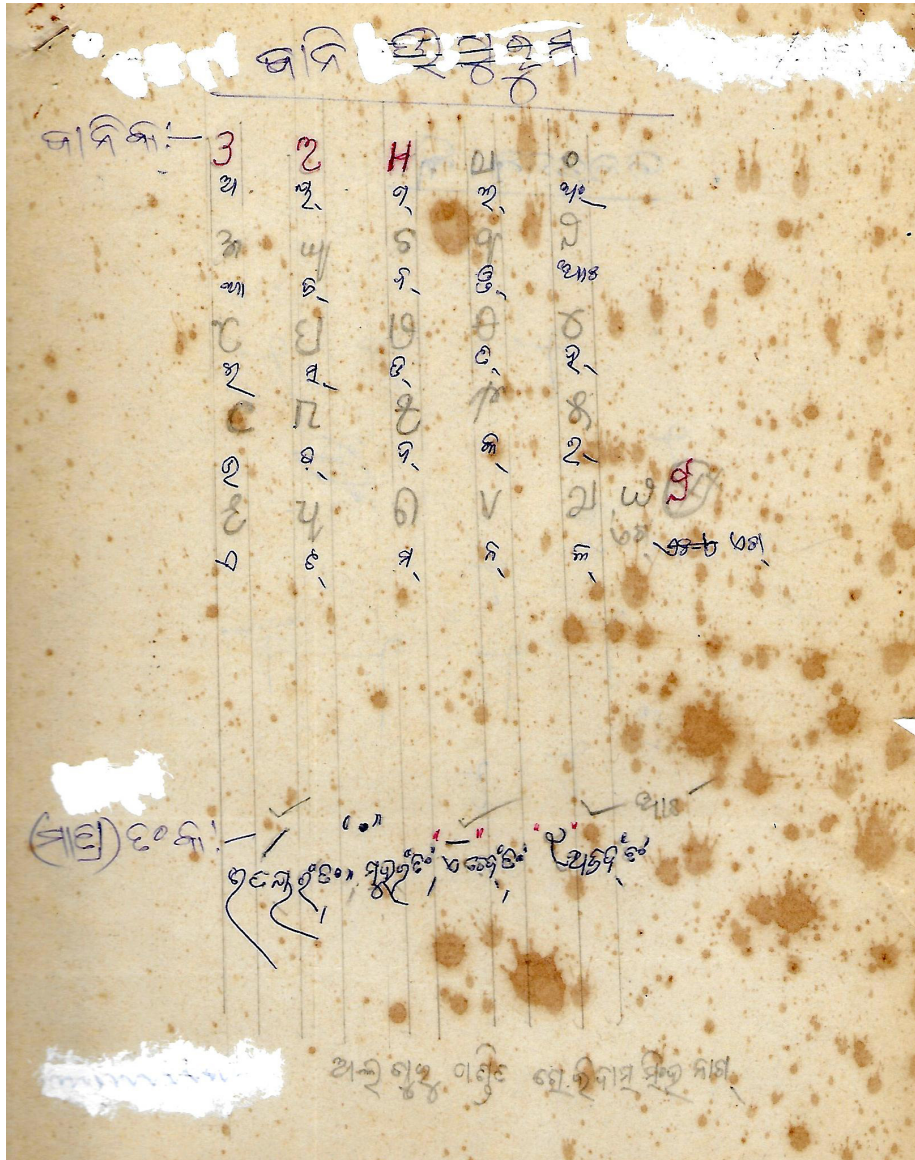



Figure 15: Original manuscript, dated July 10th 1982, by script creator, Ol Guru Rohidas Singh Nag, showing an earlier iteration of Mundari Bani, a predecessor to the pre-reform style shown in Figs. 17 to 19 and §3.10.

ତବେ ଜାଗାରରେୟାଃ ନାରାଦୁରା ଦିଆଁତେ ଶ୍ରୀଯୁକ୍ତ ରୋହିଦାସ
 ସିଂହ ନାଗ ତାକିନ ୧୯୮୨ ମସିହା ଲଃତେ “ମୁଣ୍ଡାରୀ ବାନି” ମେନ୍ତେ
 ମୁଣ୍ଡାରୀ ଜାଗାର ନାଗେନ୍ତେ ଲିପି (ଲିପି) ସିର୍ଜାନ
 ଲେଦାକିନ୍ ଆର ନେ ହାତୁକରେ ୧୦ଟା ସୁଲକ
 ଜାମଡ଼ାଃ ଦେଜାତେ ତିଙ୍ଗୁକାତେ ଏନ୍ ସୁଲକରେ
 ମୁଣ୍ଡାରୀ ଜାଗାର ବାନିତେ ଅଲ ଏଚେଃ ଲେନା ।
 (୧) ହେଁସଡ଼ା (୨) ବାଜିଘୋଷି, (୩)
 ବଡ଼କୁଲଡ଼ିହା, (୪) ଶାଲବନୀ, (୫) କିସନ ଡାହି
 (୬) ମୁଚିୟା ସାହି, (୭)
 କମଲାଶୋଲ୍ (୮) କାଳିଆପଦା
 (୯) ଜାମବୁନୀ, (୧୦) ମଧୁପୁର
 - ଏମାନ ।
 ମୁଣ୍ଡାରୀ ବାନି ଆବୁ
 ସମାଜରେ ମୟଦ୍ ନାଉଁ ସେନ



ୱ	ୱ	ୱ	ୱ	ୱ	ୱ
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ୱ	ୱ	ୱ	ୱ	ୱ	ୱ
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ଡିଡିଡ ଅକ୍ଷରକ ହୁସାଂ						
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ୱ	ୱ	ୱ	ୱ	ୱ	ୱ	ୱ

ହରାରେ ଉଲଗୁଲାନ ଆଉ ତାଦାଃ ।
 ତରା ଆବୁ ଯତହଲ କାବୁ ଇତୁଠାନା ।
 ଇନା ଲିପି (ବାନି) ନେ ଲେକା - ।
 ଅକ ବାନିଚି ମୁସିଂ ଓଡ଼ିଶା ସରକାର
 ତାଃରେ ସିକ୍ତି ନାତେନ୍ତେ ଅମଲେନା
 ମେନ୍ତେ ମେନଠାଁ ।

କାହାନି ତାଲି : ୨୯

Figure 16: Excerpt showing an older version of Rohidas Nag’s version of Mundari Bani script [12]. Note that this proposal does not attempt to cover encoding of these original manuscripts with which, to our knowledge, no books were published.

MUNDARI BANI HISIR				
ମାଠିଆକର ଚକ୍ର				
ମୁଣ୍ଡାବା ବାଜି				
୩ (ଅ)	୪ (ଅଘ)	୫ (ଅଘ)	୬ (ଅଲ)	୭ (ଅଂ)
୮ (ଆ)	୯ (ଆଲ)	୧୦ (ଆଢ଼)	୧୧ (ଆଞ୍ଜ)	୧୨ (ଆଂ)
୧୩ (ଇ)	୧୪ (ଇଘ)	୧୫ (ଇଘ)	୧୬ (ଇଢ଼)	୧୭ (ଇଢ଼)
୧୮ (ଉ)	୧୯ (ଉଢ଼)	୨୦ (ଉଢ଼)	୨୧ (ଉଢ଼)	୨୨ (ଉଢ଼)
୨୩ (ଏ)	୨୪ (ଏଢ଼)	୨୫ (ଏଢ଼)	୨୬ (ଏଢ଼)	୨୭ (ଏଢ଼) (ଏଢ଼)
୩୩୧'୩୩ '୩' କ				
'/' (ଚନ୍ଦ୍ର)	'୦' (ମୁଁହର)	'—' (ଚେତ)	'୧' (ଜଢ଼)	'୨' (ସୁଫୁ)

Figure 17: Pre-reform alphabet chart from Mundari Bani Hisir [14]. For discussion on these forms, see §3.10.

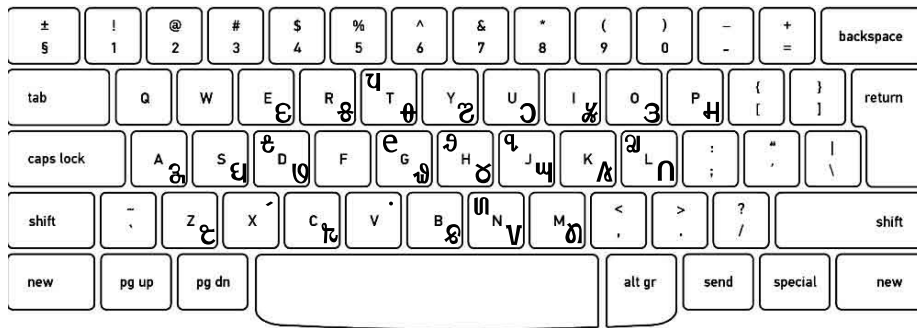


Figure 20: De-facto Mundari Bani keyboard layout, for those that use the current ASCII-encoded fonts [16].



MUNDARI SAMAJ SANWAR JAMDA

ନିଠିଏଠାଏଠା ଉତ୍ତରୀୟ ଉତ୍ତରୀୟ ଉତ୍ତରୀୟ

Regd. No- 9164/643-1975 Date.....
Regd. No- 9164/643 - 1975-76 Dt. 06/12/1975, At/PO-Poda Astia, Baripada, Odisha.

Ph: 91-9437841247, 91-7064683929. Email: mss.jamda@gmail.com/ birbal.77@rediffmail.com

L.No. 3/2021 Dt 18/01/2021

To
Dr Deborah Anderson, Unicode Technical Director,
Unicode Technical Committee
USA

From
Nandalal Singh, President, Mundari Samaj Sanwar Jamda
And
Birbal Singh, Secretary, Mundari Samaj Sanwar Jamda

Dear Dr. Deborah and other members of Unicode Committee
Ref: Mundari Bani Unicode L2/L2021/21031

We, on behalf of Mundari Samaj Sanwar Jamda Organisation, would like to thank you and your team for extending continuous support for Mundari language and its script, the Mundari Bani. For favour of your information I would like to mention here that MSS Jamda Social organization is working in Odisha State for the Munda tribe focusing on the preservation and development of Mundari language, cultural values and education that can make people discover their potential for action and change since the year 1976-77. Today in this point of time we see many languages die out gradually as successive generations of speakers become bilingual and then begin to lose proficiency in their traditional languages. We experience that the Mundari speakers seek to learn more-prestigious language in order to gain social and economic advantages or to avoid discrimination. Mundari is categorized as a vulnerable language. For the preservation of Mundari language though a good number of books has been written in English, Hindi and other regional scripts, but there is a problem of accurate pronunciation of Mundari and that is leading to poor acceptance of these literary works by the Mundari speakers.

Necessity of a script for the preservation and development of Mundari language was deeply felt by Rohidas Singh Nag who worked about 30 years on it and invented the Mundari bani (script). During 1960s he along with some like-minded social workers formed this organisation, Mundari Samaj Sanwar Jamda. Since then this organization is running dedicatedly to give shape of its aim and objectives. The Mundari bani has gone through several verifications and simplified to its

**ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹**

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	<i>Proposal to Encode the Nag Mundari Script in the Universal Character Set</i>
2. Requester's name:	<i>Lawrence Wolf-Sonkin (lawrencewolfsonkin@gmail.com) and Biswajit Mandal (biswajitmandal.bm90@gmail.com)</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual Contribution</i>
4. Submission date:	<i>2021-04-23</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<i>Yes</i>
(or) More information will be provided later:	

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<i>Yes</i>
Proposed name of script:	<i>Nag Mundari</i>
b. The proposal is for addition of character(s) to an existing block:	
Name of the existing block:	
2. Number of characters in proposal:	<i>42</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary <input checked="" type="checkbox"/> B.1-Specialized (small collection) <input type="checkbox"/> B.2-Specialized (large collection) <input type="checkbox"/>	
C-Major extinct <input type="checkbox"/> D-Attested extinct <input type="checkbox"/> E-Minor extinct <input type="checkbox"/>	
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/> G-Obscure or questionable usage symbols <input type="checkbox"/>	
4. Is a repertoire including character names provided?	<i>Yes</i>
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	<i>Yes</i>
b. Are the character shapes attached in a legible form suitable for review?	<i>Yes</i>
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Lawrence Wolf-Sonkin</i>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>Baidyanath Singh</i>
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<i>Yes</i>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<i>Yes</i>
7. Special encoding issues:	
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?	<i>Yes</i>

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES explain	No
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? If YES, with whom? If YES, available relevant documents:	Yes <i>Mundari Samaj Sanwar Jamda and Bharat Munda Samaj</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	Yes <i>This document</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>Mild, and developing</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	Yes <i>The Indian states of Jharkhand, Orissa, and West Bengal</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	No
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	Yes
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	No
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:	No
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	Yes Yes <i>This document</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:	Yes Yes <i>This document</i> No
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)	No
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	No