



Far Western Muria (Gaita Koitor Boli) Phonology Summary

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Abstract

Far Western Muria [fmu] (Gaita Koitar Boli) has 21 consonant phonemes and 10 vowels (5 short and 5 long). Word-medial geminated (long) consonants and half-long consonants are conditioned by vowel quantity. There are no vowel clusters, but consonant clusters occur both word medially and finally. The phonetic non-syllabic high vowels that occur between some consonants are analysed as open transitions.

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1 Introduction

1.1 The Far Western Muria People

This phonological summary outlines the phonemic system of the Far Western Muria language [fmu]. The name ‘Far Western Muria’ refers to both the tribe as well as the language they speak. Speakers of Far Western Muria live in the northern part of Gadchiroli district and the southern part of Gondia district in Maharashtra state, India. Their population is approximately 4 lakh (400,000), according to the sociolinguistic survey by NLCI, Bangalore, 2007.

The people call themselves Koitor, but others refer to them by the name Gondi. They claim their caste is Gaita and their language is Gaita Koitori Boli; thus the people are known as Gaita Koitor. The people live together in peace and harmony in homogenous villages under the leadership of a *Pujari* and *Patlal*. The Far Western Muria economy is based on agriculture and forest products. Most of the men are addicted to hashish or alcohol. The male population is gradually declining due to illness.

The literacy rate among the Far Western Muria is very low. There is no published information regarding the degree of literacy, but we estimate it at about 10 percent. Even though there is better access to schools than in the past, boys generally drop out at the High School level. The majority of students fail English language. The people show strong affinity towards their mother tongue. Their earnest desire is to have a mother tongue literacy programme available to them. Therefore, preparation of mother tongue literacy materials is one of our prominent goals. With the promotion of a language development programme we hope to help them connect to the mainstream society.

1.2 The Far Western Muria language

Far Western Muria is one of the distinct varieties of the Gondi language in central India. It has been regarded as belonging to the Central Dravidian subgroup of Dravidian. More recently, it has been classified as belonging to the South Dravidian II subgroup, or South Central Dravidian (Krishnamurti 2003:19). The name Far Western Muria applies to the geographical extension and linguistic

distinctions of this variety of Gondi. The speakers of this language call it Koitor Boli, Koitori, and Gondi Boli.

1.3 The Study

The specific local dialect studied for the analysis presented in this summary is the one spoken at Kurkheda Tehsil in Gadchiroli district. This study was undertaken following the recommendations of the Indian Institute for Cross Cultural Communication (IICCC) sociolinguistics surveys among the Far Western Muria (1991, 2005) for language development.

The analysis presented here is based on research conducted between 2004–2008. The analysis was done on a corpus of 1100 words.

1.4 Symbols and Abbreviations

[]	Phonetic data
/ /	Phonemic data
adj.	Adjective
C	Consonant
V	Vowel
.	Syllable break
˙	Half-long consonant
:	Long vowel or geminated consonant
ˈ	Stress
n	Noun
v	Verb

All the phonetic symbols used are from the International Phonetic Alphabet (revised to 2005) except the voiced velar stop which is symbolized as [g]. In the phonemic transcriptions and lists the following non-IPA symbols are used (some are from Krishnamurti 2003:69).

/c/	[tʃ]	/t/	[t]
/j/	[dʒ]	/d/	[d]
/y/	[j]	/r/	[r]
/w/	[v]	/l/	[l]
/t/	[t̪]	/n/	[ŋ]
/d/	[d̪]	/V̄/	[V:]
/r/	[r]		

2 Interpretation

2.1 Unit Phonemes

2.1.1 [tʃ] and [dʒ] are interpreted as units and not sequences because

- a. There are no univalent word-initial consonant clusters in Far Western Muria, and
- b. If [ʃ] and [ʒ] were interpreted as separate phonemes, this would add two more phonemes to the inventory of Far Western Muria consonants. Furthermore, their distribution would be limited to following /t/ and /d/, respectively.

2.1.2 The velar nasal consonant [ŋ] is interpreted as a unit phoneme, /ɲ/, and not as a consonant sequence /ŋg/ because contrast exists between occurrences of /ɲ/ and /ŋg/ as in the following pair of words:

/le:ɲ/	लेङ	[le:ŋ]	<i>sound</i>	0363
/nu:ŋg/	नूंग	[nu:ŋg]	<i>sesame</i>	0535

2.1.3 Long vowels contrast with short vowels in word-initial syllables of non-compound words and are interpreted at the segmental level as unit phonemes, not as phoneme sequences; that is, as phonemically long vowels, not as geminate vowel clusters. This we have done because no unambiguous vowel clusters occur in the data. We have therefore interpreted the vowel system of Far Western Muria Gondi to consist of ten vowel phonemes, five long and five short.

2.1.4 Long (geminate) consonants are interpreted as units in complementary distribution with their unlengthened (non-geminate) counterparts. That is to say, long consonants occur between phonemically short vowels when the first vowel is stressed, while their unlengthened and half-lengthened counterparts occur elsewhere. Consonants /r/, /r̥/, and /h/ do not undergo lengthening and therefore occur following either short or long vowels.

In words of the $(C_1)V_1r_2(V_2)C_3(V_3)$ and $(C_1)V_1\dot{r}_2(V_2)C_3(V_3)$ shapes, C_3 sometimes undergoes compensatory half-lengthening due to the inability of $/r_2/$ and $/\dot{r}_2/$ to undergo such lengthening. At other times, as an option to C_3 undergoing compensatory half-lengthening, V_2 undergoes compensatory lengthening. This compensatory lengthening of C_3 and/or V_2 in such phonological word-patterns is not consistently marked in the phonetic transcriptions of sections 5, 6, 7 and 8.

Examples of words in which C_3 and/or V_2 following $/r_2/$ and $/\dot{r}_2/$ undergo compensatory lengthening are:

$/herami/$	हेरमि	$[he\dot{r}am'i]$	<i>name of a clan</i>	0722
$/poreti/$	पोरोटि	$[pore\dot{t}i]$	<i>name of a clan</i>	0717
$/kuru\dot{j}/$	कुरुज	$[ku'ru:d\dot{z}]$	<i>heel</i>	0527
$/ha\dot{r}ap/$	हळप	$[ha'\dot{r}a:p]$	<i>cow dung</i>	0697
$/hi\dot{r}nj/$	हिळंज	$[hi'\dot{r}i\dot{n}d\dot{z}]$	<i>fingernail</i>	0007
$/u\dot{r}k/$	उळक	$[u'\dot{r}uk']$	<i>urinate</i>	0643

2.2 Glides

The approximants $[v]$ and $[j]$ are interpreted as consonants, not as vowels because

- Both $[v]$ and $[j]$ occur word initially followed by univalent vowels, and
- To interpret them as vowels would introduce vowel sequences. Since there are no univalent vowel sequences (clusters) in our data, it seemed best to interpret $[v]$ and $[j]$ as consonants and not as vowels.

2.3 Syllabic Consonant Co-occurring with Non-syllabic Vowels

Related to the compensatory lengthening phenomenon discussed in section 2.1.4 with respect to $/r_2/$ and $/\dot{r}_2/$, when consonant $/\dot{r}/$ occurs in the syllable nucleus as syllabic $[r]$ in the environment of a preceding unstressed short vowel $/i/$ or $/u/$ and when this $[r]$ is followed immediately by a plosive (stop) consonant, its occurrence following these unstressed short vowels results in $/i/$ and $/u/$ being reduced to non-

syllabic [i̥] and, [u̥], respectively. Such [i̥r] and, [u̥r], sequences are interpreted as /i̥r/ and /u̥r/, there being no reason to interpret [r] as a vowel since it occurs elsewhere in our data as a unit consonant. The occurrence of [r] as syllabic is accounted for by its flapped articulatory feature: the flapping movement of [r] preceding a following plosive (stop) consonant reduces short unstressed vowels in the immediately preceding environment to non-syllabic vowels. It also happens that when [r] is followed by a voiceless plosive, a preceding non-syllabic [i̥] or [u̥] may be echoed in the space following syllabic [r] as a non-syllabic vowel, [i̥] or [u̥].

However, when [r] is followed by a sonorant, for example /m/, the preceding non-syllabic [i̥] or [u̥] is echoed following [r] in the space preceding /m/ as a *fully syllabic* [i] or [u]. In such instances [r] is not strictly syllabic since it occurs as syllable onset rather than syllable nucleus. Note the following examples and placement of word-stress. (The syllabic nucleus, /r̥/, in the first two examples is stressed.) The first example is pronounced as a bisyllabic word, the second, third, and fourth examples are pronounced as monosyllabic words.

/ur̥pna/	उठप्ना	[ʼu̥r̥ʌpˈna]	<i>remove</i>	0879
/ur̥k/	उठक	[ʼu̥r̥ʌkˈ]	<i>urinate</i>	0643
/ur̥m/	उठम	[u̥r̥ʌmˈ]/[u̥r̥uːm]	<i>louse</i>	0889
/hi̥rnj/	हिळंज	[hi̥r̥ʌndʒˈ]	<i>fingernail</i>	0007

Except for one example in section 5.1, others in the subsection describing the vowels /i̥/, and /u̥/ in section 5.2, and those in section 9 on **Stress**, non-syllabic vowels such as [i̥], [u̥], and [ə̥] have not been represented in our phonetic transcription whether occurring in the environment of /r̥/ or /r/, or occurring at the junction of consonants within non-homorganic -CC- and -CCC- clusters.

2.4 Non-constrastive Stress

In general, words carry primary stress on the first syllable. And while this is true, in some sentence frames and for some phonological word types primary stress is carried by the final syllable. Statements in this summary regarding the conditioning environments of half-long allophones of consonant phonemes are based on this statement regarding the location of primary stress on the first syllable of words.

(See section 2.1.4 for statement of conditions under which the half-lengthening of consonants may shift, along with primary stress to the second syllable.) However, except for marking stress in sections **2.3** and **9**, stress is left unmarked in the phonetic data sections of this paper. (See Section **9 Stress**.)

2.5 Homorganic Nasal + Plosive

Phonetic sequences of homorganic nasal + plosive are interpreted as sequences of nasal consonant + plosive since there are also sequences of heterorganic nasal + plosive. For example:

/mɪnta/	मिडता	[mɪŋˈt̪a]	<i>sweet</i>	0865
/kamka/	कमका	[kamˈka]	<i>turmeric</i>	0156

Note, however, that the nasal is almost always homorganic preceding voiced plosives. For example:

/nūŋg/	नूंग	[nuːŋg]	<i>sesame</i>	0535
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Furthermore, nasal consonants /m/, /n/, /ɳ/ and voiced and voiceless plosive consonants /p/, /b/, /t̪/, /d̪/, /t/, /d/, /tʃ/, /dʒ/, /k/, /g/ occur as independent phonemes. Interpreting homorganic nasal plus plosive consonants as unit phonemes would add up to six additional consonants to the inventory. Note that unambiguous sequences of consonant plus consonant occur with the same distributions in phonological words as nasal plus homorganic plosive sequences.

3 The Phonetic Chart

3.1 Consonant Chart

	Bilabial		Labiodental		Dental		Alveolar		Retroflex		Palatal		Velar		Glottal	
Plosive	p	b			t̪	ɖ			t̠	ɖ̠	tʃ	dʒ	k	g		
	pː	bː			t̪ː	ɖː			t̠ː	ɖ̠ː	tʃː	dʒː	kː	gː		
	pʰ	bʰ			t̪ʰ	ɖʰ			t̠ʰ	ɖ̠ʰ	tʃʰ	dʒʰ	kʰ	gʰ		
Nasal		m				ɱ		n		ɳ		ɲ		ŋ		
		mː						nː								
		mʰ						nʰ				ɲʰ		ŋʰ		
Tap or Flap								ɾ		ɽ						
Fricative							s									h
							sː									
							sʰ									
Approximant			ʋ									j				
			ʋː									jː				
			ʋʰ									jʰ				
Lateral approximant							l		ɭ							
							lː		ɭː							
							lʰ									

3.2 Vowel Chart

	Front		Central		Back
Close	i				u
	iː				uː
		ɪ		ʊ	
Close-mid	e				o
	eː	ə			oː
Open		a			
		aː			

4 The Phonemic Inventory

4.1 Consonant Chart

	Bilabial		Dental		Alveolar		Retroflex		Palatal		Velar		Glottal
Plosive	p	b	t	d			ʈ	ɖ	c	j	k	g	
Nasal		m				n						ŋ	
Tap or Flap						r		ɽ					
Fricative					s								h
Approximant		w							y				
Lateral approximant						l		ɭ					

4.2 Vowel Chart

	Front	Central		Back
Close	i			u
	ī			ū
Close-mid	e			o
	ē			ō
Open		a		
		ā		

5 Description and Distribution of the Phonemes

Consonant and vowel phonemes are distributed according to the following syllable patterns:

V
CV
VC
CVC
(C)VCC
(C)VCCC

5.1 Consonants

5.1.1 Plosives

/p/ the voiceless bilabial stop phoneme is realized as

[p:] voiceless geminated bilabial stop occurring between two short vowels when the first vowel is stressed, as in

/hipi/	हिपि	[hip:i]	<i>oyster</i>	0680
/gapa/	गपा	[gap:a]	<i>drain</i>	0649

[p'] voiceless half-long bilabial stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/pop̄te/	पोप्टे	[pop'te]	<i>pea</i>	0745
/jupna/	जुप्ना	[dʒup'na]	<i>plough (n)</i>	0750

[p] voiceless bilabial stop occurring in all other environments, as in

/pal/	पल	[pal]	<i>tooth</i>	0168
/pir/	पिर	[pir]	<i>rain</i>	0185
/t̄opi/	टोपि	[t̄o:pi]	<i>hat</i>	0158
/pēpi/	पेपि	[pe:pi]	<i>brother</i>	0405
/nulpe/	नुलपे	[nul'pe]	<i>evening</i>	0132
/kalpanj/	कल्पंज	[kal'pandʒ]	<i>trap</i>	0506

/haɾap/	हळप	[ha'ɾa:p]	<i>cow dung</i>	0697
/hāp/	हाप	[ha:p]	<i>thorn</i>	0196

/b/ the voiced bilabial stop phoneme is realized as

[b:] voiced bilabial geminated stop occurring between two short vowels when the first vowel is stressed, as in

/ɖabi/	डबि	[ɖab:i]	<i>tin</i>	0099
/babal/	बबल	[bab:al]	<i>father</i>	0075

[b̄] voiced half-long bilabial stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/ɖobri/	डोबरि	[ɖob̄:ri]	<i>ditch</i>	0892
/kobri/	कोबरि	[kob̄:ri]	<i>pot</i>	0639

[b] voiced bilabial stop occurring in all other environments, as in

/bilal/	बिलल	[bil:al]	<i>cat</i>	0287
/bēra/	बेरा	[be:ra]	<i>time</i>	0644
/bība/	बीबा	[bi:ba]	<i>plant</i>	0264
/sōbata/	सोबता	[so:baɽa]	<i>beautiful</i>	0794
/darba/	दरबा	[ɖarba]	<i>paddy husk</i>	0450
/sībla/	सीबला	[si:bla]	<i>basket</i>	0340

/t/ the voiceless dental stop phoneme is realized as

[t̪:] voiceless geminated dental stop occurring between two short vowels when the first vowel is stressed, as in

/bita/	बिता	[bit̪:a]	<i>span</i>	0532
/nati/	नति	[naɽ̪:i]	<i>granddaughter</i>	0381

[t̪̥] voiceless half-long dental stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/watna/	वतना	[vaɪ̪̥na]	<i>dried up (river)</i>	1001
/citral/	चितरल	[tʃiɪ̪̥ral]	<i>deer (spotted)</i>	0304

[t̪̥] voiceless dental stop occurring in all other environments, as in

/tala/	तला	[t̪̥ala]	<i>head</i>	0085
/toɖi/	तोडि	[t̪̥oɖi]	<i>soil</i>	0356
/hēti/	हेति	[heɪ̪̥ti]	<i>winnower</i>	0341
/āti/	आति	[aɪ̪̥ti]	<i>mother-in-law</i>	0404
/miɳta/	मिडता	[miɳɪ̪̥ta]	<i>sweet</i>	0865
/puhta/	पुहता	[puɪ̪̥hta]	<i>heavy</i>	0248
/ētna/	एतना	[eɪ̪̥tna]	<i>buy</i>	0907
/lāt/	लात	[laɪ̪̥t]	<i>foot</i>	0449

/d/ the voiced dental stop phoneme is realized as

[ɖ̪̥] voiced geminated dental stop occurring between two short vowels when the first vowel is stressed, as in

/muda/	मुदा	[muɖ̪̥a]	<i>ring</i>	0046
/adi/	अदि	[aɖ̪̥i]	<i>sunlight</i>	0547

[ɖ̪̥] voiced half-long dental stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/gudmare/	गुदमरे	[guɖ̪̥mare]	<i>suffocate</i>	1000
/udna/	उदना	[uɖ̪̥na]	<i>sit</i>	0926

[ɖ̪̥] voiced dental stop occurring in all other environments, as in

/dāra/	दाळा	[ɖ̪̥aɾa]	<i>molar</i>	0916
/darba/	दरबा	[ɖ̪̥arba]	<i>paddy husk</i>	0450

/dāda/	दादा	[daːda]	<i>brother</i>	0666
/dādi/	दादि	[daːdi]	<i>grandfather</i>	0401
/kōnda/	कोन्दा	[koːnda]	<i>bullock</i>	0003
/kānda/	कांदा	[kaːnda]	<i>branch (small)</i>	0063
/ēnd/	एन्द	[eːnd]	<i>dance</i>	0618
/pōrd/	पोरद	[poːrd]	<i>sun</i>	0058

/ɽ/ the voiceless retroflex stop phoneme is realized as

[ɽː] voiceless geminated retroflex stop occurring between two short vowels when the first vowel is stressed, as in

/maɽa/	मटा	[maɽːa]	<i>mountain</i>	0104
/ɽote/	टोटे	[ɽoɽːe]	<i>dog (female)</i>	0127

[ɽː] voiceless half-long retroflex stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/kaɽwal/	कटवल	[kaɽːwal]	<i>fish</i>	0512
/ɽotri/	डोटरि	[ɽoɽːri]	<i>hole</i>	0150

[ɽ] voiceless retroflex stop occurring in all other environments, as in

/ɽalal/	टलल	[ɽalːal]	<i>cow</i>	0002
/ɽoɽi/	टोडि	[ɽoɽːi]	<i>mouth</i>	0030
/pāɽlal/	पाटलल	[paːɽlal]	<i>leader</i>	0541
/wāɽna/	वाटना	[vaːɽna]	<i>vomit</i>	0849
/gūɽe/	गूटे	[guːɽe]	<i>firewood</i>	0834
/gāɽo/	गाटो	[gaːɽo]	<i>rice (cooked)</i>	0027
/pāɽ/	पाट	[paːɽ]	<i>song</i>	0177
/māɽ/	माट	[maːɽ]	<i>we</i>	0278

/ɖ/ the voiced retroflex stop phoneme is realized as

[ɖ:] voiced retroflex geminated stop occurring between two short vowels when the first vowel is stressed, as in

/koɖi/	कोडि	[koɖ:i]	<i>tip</i>	0909
/moɖi/	मोडि	[moɖ:i]	<i>navel</i>	0919

[ɖ̌] voiced half-long retroflex stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/laɖke/	लडके	[laɖ̌'ke]	<i>hang</i>	0798
/guɖra/	गुडरा	[guɖ̌'ra]	<i>hill</i>	0498

[ɖ] voiced retroflex stop occurring in all other environments, as in

/ɖiɔ/	डीटो	[ɖi:ɔ]	<i>stilts</i>	0545
/ɖoɭi/	डोलि	[ɖo:ɭi]	<i>basket</i>	0352
/piɾɖagi/	पीरडगि	[pi:ɾɖagi]	<i>heap (n)</i>	0552
/rāɖi/	रांडि	[ra:ɳɖi]	<i>widow</i>	0415
/pāɖi/	पाडि	[pa:ɖi]	<i>name of a clan</i>	0670
/jāɖi/	जाडि	[dʒa:ɖi]	<i>grass</i>	0654
/ɖaɳɖ/	डन्ड	[ɖaɳɖ]	<i>farm (n)</i>	0433
/kumɔɖ/	कुमोड	[kum:ɔɖ]	<i>pumpkin</i>	0349

/tʃ/ the voiceless palato-alveolar affricate phoneme is realized as

[tʃ:] voiceless palato-alveolar geminated affricate occurring between two short vowels when the first vowel is stressed, as in

/caceri/	चचेळि	[tʃatʃ:eri]	<i>scale (n)</i>	0706
/hicami/	हिचमि	[hitʃ:ami]	<i>name of a clan</i>	0736

[tʃ̌] voiceless half-long palato-alveolar affricate occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/kocka/	कोचका	[kotʃ̌ka]	<i>bag</i>	0767
/hicki/	हिचकि	[hitʃ̌ki]	<i>hiccup</i>	0491

[tʃ] voiceless palato-alveolar affricate occurring in all other environments, as in

/cokot̪/	चोकोट	[tʃokot̪]	<i>delivery</i>	0637
/cara/	चरा	[tʃara]	<i>worm</i>	0682
/mūhcana/	मूहच्ना	[mu:htʃana]	<i>bark</i>	0819
/kācna/	काचना	[ka:tʃna]	<i>spin</i>	0922
/gaci/	गचि	[gatʃi]	<i>neck</i>	0515
/kāca/	काचा	[ka:tʃa]	<i>spin</i>	0627
/kūc/	कूच	[ku:tʃ]	<i>wipe</i>	0598
/guc/	गुच	[gutʃ]	<i>move</i>	0818

/j/ the voiced palato-alveolar affricate phoneme is realized as

[dʒ:] voiced palato-alveolar geminated affricate occurring between two short vowels when the first vowel is stressed, as in

/hajor/	हजोर	[hadʒ:or]	<i>elder</i>	0051
/bujaran/	बुजळन	[budʒ:aɾan]	<i>scarecrow</i>	0781

[dǯ] voiced half-long palato-alveolar affricate occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/anjna/	अंजना	[andǯna]	<i>climb</i>	0582
/ijgur/	इजगुर	[idǯgur]	<i>lizard</i>	0525

[dʒ] voiced palato-alveolar affricate occurring in all other environments, as in

/jāli/	जालि	[dʒa:li]	<i>net</i>	0335
/jāgli/	जागलि	[dʒa:gli]	<i>watcher</i>	0457
/wanji/	वंजि	[vaɳdʒi]	<i>paddy</i>	0068

/rānji/	रांजि	[ra:ɳdʒi]	<i>tree</i>	0699
/ōja/	ओजा	[o:dʒa]	<i>weight</i>	0427
/rājal/	राजल	[ra:dʒal]	<i>king</i>	0037
/ponj/	पोन्ज	[pɔɳdʒʰ]	<i>chicken</i>	0282
/hiɳnj/	हिळंज	[ʰiɽɳɳdʒʰ]	<i>finger nail</i>	0007

/k/ the voiceless velar stop phoneme is realized as

[k:] voiceless geminated velar stop occurring between two short vowels when the first vowel is stressed, as in

/huko/	हुको	[huk:o]	<i>star</i>	0060
/tokar/	तौकर	[t̪ok:ar]	<i>tail</i>	0217

[kʰ] voiceless half-long velar stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/sakɽi/	सकळि	[sakʰɽi]	<i>chain</i>	0367
/wakna/	वकना	[vakʰna]	<i>bend</i>	0683

[k] voiceless velar stop occurring in all other environments, as in

/kir/	किर	[kir]	<i>abscess</i>	0121
/kira/	किरा	[kira]	<i>kidney</i>	0755
/kamka/	कमका	[kamʰka]	<i>turmeric</i>	0156
/sawkar/	सवकर	[saukar]	<i>rich</i>	0676
/wīke/	वीके	[vi:ke]	<i>name of a clan</i>	0715
/mūkal/	मूकल	[mu:kal]	<i>dumb (man)</i>	0463
/māk/	माक	[ma:k]	<i>we</i>	0863
/tupak/	तुपक	[t̪up:ak]	<i>gun</i>	0164

/g/ the voiced velar stop phoneme is realized as

[g:] voiced geminated velar stop occurring between two short vowels when the first vowel is stressed, as in

/boga/	बोगा	[bog:a]	<i>name of a clan</i>	0720
/hoga/	होगा	[hog:a]	<i>there</i>	0507

[g̣] voiced half-long velar stop occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/cugli/	चुगलि	[tʃug̣li]	<i>rumour</i>	0792
/buṅgra/	बुंगरा	[buṅg̣ra]	<i>beetle</i>	0139

[g] voiced velar stop occurring in all other environments, as in

/girne/	गिरने	[girne]	<i>lizard</i>	0385
/gaṭa/	गटा	[gaṭ:a]	<i>cloth bundle</i>	0443
/jāgli/	जागलि	[dʒa:gli]	<i>watcher (n)</i>	0457
/ijgur/	इजगुर	[idʒ̣gur]	<i>lizard</i>	0525
/pīrdagi/	पीरडगि	[pi:rdagi]	<i>heap (n)</i>	0552
/gāgal/	गागल	[ga:gal]	<i>optical</i>	0787
/deg/	देग	[deg]	<i>separate (v)</i>	0657
/nūṅg/	नूंग	[nu:ṅg]	<i>sesame</i>	0535

5.1.2 Nasals

/m/ bilabial nasal phoneme is realized as

[m:] voiced bilabial geminate nasal occurring between two short vowels when the first vowel is stressed, as in

/nima/	निमा	[nim:a]	<i>your</i>	0870
/kamek/	कमेक	[kam:ek]	<i>silent</i>	0175

[m̐] voiced half-long nasal occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/gumya/	गुमया	[gum̐ja]	<i>pit</i>	0387
/kamka/	कमका	[kam̐ka]	<i>turmeric</i>	0156
/kurmi/	कुरमि	[kur̐m̐i]	<i>bran</i>	0897

[m] voiced bilabial nasal occurring in all other environments, as in

/mīn/	मीन	[mi:n]	<i>fish (n)</i>	0073
/mari/	मरि	[mari]	<i>son</i>	0224
/tārami/	ताळमि	[t̪a:rami]	<i>name of a clan</i>	0718
/hēma/	हेमा	[he:ma]	<i>don't give</i>	0877
/usmal/	उसमल	[us̐mal]	<i>pestle</i>	0180

/n/ alveolar nasal phoneme is realized as

[n̐] voiced dental nasal occurring before or after a dental consonant, as in

/potna/	पोत्ना	[po̐t̪na]	<i>burn</i>	0927
/tēdna/	तेदना	[t̪e:̐dna]	<i>awake</i>	0928
/pāntona/	पान्तोना	[pa:̐n̐tona]	<i>pot (big)</i>	0343

[ŋ̐] voiced half-long alveolar retroflexed nasal occurring before a retroflexed stop when a short stressed vowel occurs in the nucleus of the first syllable, as in

/paṇḍi/	पंडि	[paŋ̐ḍi]	<i>fruit</i>	0505
/maṇḍil/	मंडिल	[maŋ̐ḍil]	<i>temple</i>	0494

[ŋ] voiced alveolar retroflexed nasal occurring before or after a retroflexed stop, as in

/paṇḍna/	पंडना	[paṇḍ̪na]	<i>make</i>	0578
/ṭaṇḍna/	टंडना	[ṭaṇḍ̪na]	<i>take</i>	0585

[ɲ] voiced alveo-palatal nasal occurring before an alveo-palatal consonant, as in

/kalpanj/	कल्पंज	[kalˈpandʒ]	<i>trap (n)</i>	0506
/rānji/	रांजि	[raːndʒi]	<i>tree</i>	0699

[nː] voiced alveolar geminate nasal occurring between two short vowels when the first vowel is stressed, as in

/hanum/	हनुम	[hanːum]	<i>festival</i>	0071
/punal/	पुनल	[punːal]	<i>new</i>	0237

[n˙] voiced half-long alveolar nasal occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/jinka/	जिन्का	[dʒin˙ka]	<i>basket</i>	0766
/wanyar/	वनयर	[van˙jar]	<i>labour (n)</i>	0368

[n] voiced alveolar nasal occurring in all other environments, as in

/nelenj/	नेलेंज	[nelːɛndʒ]	<i>moon</i>	0059
/narka/	नरका	[narka]	<i>night</i>	0061
/kārni/	कारनि	[kaːrni]	<i>sin</i>	0483
/cāwni/	चावनि	[tʃaːvni]	<i>roof</i>	0176
/alhana/	अलहना	[al˙hana]	<i>desire (n)</i>	0152
/rāni/	रानि	[raːni]	<i>queen</i>	0041
/bān/	बान	[baːn]	<i>arrow</i>	0323
/harpun/	हरपुन	[harpun]	<i>chappal</i>	0822

/ɳ/ velar nasal phoneme is realized as

[ɳ˙] voiced half-long velar nasal occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/miṇta/	मिडता	[miɳ˙ta]	<i>sweet</i>	0865
/iṅgo/	इंगो	[iɳ˙go]	<i>yes</i>	0394

[ŋ] voiced velar nasal occurring syllable finally, as in

/nālun/	नालुङ	[na:lun]	<i>four</i>	0013
/darinta/	दळिङता	[da:ɽiŋta]	<i>cold thing</i>	0242

5.1.3 Flaps

/r/ voiced alveolar flap phoneme is realized as

[r] voiced alveolar flap occurring in all environments, as in

/rāṇḍi/	रांडि	[ra:ṇḍi]	<i>widow</i>	0415
/rāksas/	राकसस	[ra:ksas]	<i>giant</i>	0442
/ḍobri/	डोबरि	[ḍobˈri]	<i>ditch</i>	0892
/kirkaṛ/	किरकळ	[kirkaṛ]	<i>kingfisher</i>	0318
/kira/	किरा	[kira]	<i>kidney</i>	0755
/pera/	पेरा	[pera]	<i>drum</i>	0393
/hīr/	हीर	[hi:r]	<i>root (tree)</i>	0195
/nīr/	नीर	[ni:r]	<i>ashes</i>	0190

/ɽ/ voiced retroflex flap phoneme is realized as

[ɽ] voiced retroflex flap occurring word medially and word finally, as in

/kēra/	केळा	[ke:ɽa]	<i>forest</i>	0105
/dāra/	दाळा	[da:ɽa]	<i>molar</i>	0916
/oṛhana/	ओळहना	[oṛhana]	<i>peel</i>	0519
/kāwṛi/	कावळि	[ka:vṛi]	<i>stick (n)</i>	0895
/gaṛ/	गळ	[gaṛ]	<i>bunch of plantains</i>	0873
/āṛ/	आळ	[a:ɽ]	<i>wife</i>	0113

5.1.4 Fricatives

/s/ alveolar grooved fricative phoneme is realized as

[s:] voiceless geminated alveolar grooved fricative occurring between two short vowels when the first vowel is stressed, as in

/kasur/	कसुर	[kas:ur]	<i>bullock cart</i>	0111
/wisi/	विसि	[vis:i]	<i>fly</i>	0044

[s'] voiceless half-long grooved fricative occurring in the syllable coda when a short stressed vowel occurs in the nucleus, as in

/misna/	मिसना	[mis'na]	<i>burial</i>	0656
/masram/	मसरम	[mas'ram]	<i>name of a clan</i>	0723

[s] voiceless alveolar grooved fricative occurring in all other environments, as in

/sībla/	सीबला	[si:bla]	<i>basket</i>	0340
/siwra/	सिवरा	[siv'ra]	<i>nail</i>	0747
/mursul/	मुरसुल	[mursul]	<i>back</i>	0292
/pisk/	पिसक	[pisk]	<i>knead</i>	0630
/pāseṛi/	पासेळि	[pa:seṛi]	<i>rib</i>	0225
/nas/	नस	[nas]	<i>vein</i>	0489
/toms/	तौमस	[toms]	<i>imitate</i>	0593

/h/ voiceless glottal fricative stop phoneme is realized as

[h] voiceless glottal fricative occurring in all environments, as in

/hipi/	हिपि	[hip:i]	<i>oyster</i>	0680
/hamul/	हमुल	[ham:ul]	<i>tortoise</i>	0921
/dulhi/	दुलहि	[d̪ul'hi]	<i>bride</i>	0160
/wēhc/	वेहच	[ve:htʃ]	<i>light (n)</i>	0851

/aha/	अहा	[aha]	<i>name of a clan</i>	0735
/puha/	पुहा	[puha]	<i>plough!</i>	0814
/paduh/	पदुह	[paɖ:uh]	<i>intestines</i>	0759
/padih/	पदिह	[paɖ:iɦ]	<i>wriggle</i>	0238

5.1.5 Approximants

/w/ voiced labiodental approximant phoneme is realized as

[u:] voiced geminated labiodental approximant occurring between two short vowels when the first vowel is stressed, as in

/cuwa/	चुवा	[tʃuʋ:a]	<i>well</i>	0358
/kowe/	कोवे	[kov:e]	<i>monkey</i>	0128

[uː] voiced half-long labiodental approximant occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/piwsi/	पिवसि	[piuːsi]	<i>purse</i>	0306
/kawɾi/	कवळि	[kauːɾi]	<i>bird</i>	0014

[u] voiced labiodental approximant occurring in all other environments, as in

/wāru/	वारु	[va:ru]	<i>sand</i>	0523
/wadūr/	वदूर	[vaɖu:r]	<i>bamboo</i>	0101
/siwra/	सिवरा	[siuːra]	<i>nail</i>	0747
/julwa/	जुलवा	[ɖʒulva]	<i>poem</i>	0536
/tāwi/	तावि	[ta:vi]	<i>oar</i>	0354
/jīwa/	जीवा	[ɖʒi:va]	<i>soul</i>	0174
/māw/	माव	[ma:ʋ]	<i>reindeer</i>	0296
/pow/	पौव	[pov]	<i>split</i>	0704

/y/ voiced palatal approximant phoneme is realized as

[j:] voiced geminated palatal approximant occurring between two short vowels when the first vowel is stressed, as in

/maya/	मया	[maj:a]	<i>love (n)</i>	0188
/seyuŋ/	सेयुङ	[sej:uŋ]	<i>five</i>	0828

[j̣] voiced half-long palatal approximant occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/koyna/	कोयना	[koj̣ːna]	<i>reap</i>	0923
/bayral/	बयरल	[baj̣ːral]	<i>deaf (man)</i>	0459
/naytam/	नयतम	[naj̣ːtam]	<i>name of a clan</i>	0709

[j] voiced palatal approximant occurring in all other environments, as in

/yawo/	यवो	[jav:o]	<i>mother (vocative)</i>	0076
/yaya/	यया	[jaj:a]	<i>mother</i>	0366
/gumya/	गुमया	[gumːja]	<i>pit</i>	0387
/kaṭiya/	कटिया	[kaṭːija]	<i>firewood</i>	0833
/koḍiyar/	कोडियर	[koḍːijar]	<i>daughter-in-law</i>	0398
/taṛay/	तळय	[ṭaṛaj]	<i>lake</i>	0004
/māney/	मानेय	[maːnej]	<i>man</i>	0222

5.1.6 Laterals

/l/ alveolar lateral approximant phoneme is realized as

[l:] voiced alveolar geminated lateral approximant occurring between two short vowels when the first vowel is stressed, as in

/bilal/	बिलल	[bil:al]	<i>cat</i>	0287
/pala/	पला	[pal:a]	<i>ground</i>	0081

[l̥] voiced half-long alveolar lateral approximant occurring as the last consonant in a syllable coda when a short stressed vowel occurs in the nucleus, as in

/hilwi/	हिलवि	[hil̥vi]	<i>lip</i>	0029
/nulpe/	नुल्पे	[nul̥pe]	<i>evening</i>	0132

[l] voiced alveolar lateral approximant occurring in all other environments, as in

/lūli/	लूलि	[lu:li]	<i>paralytic (woman)</i>	0470
/lōpa/	लोपा	[lo:pa]	<i>swallow (v)</i>	0575
/bowla/	बोवला	[bouːla]	<i>verandah</i>	0695
/pōlka/	पोलका	[po:lka]	<i>blouse</i>	0083
/kālo/	कालो	[ka:lo]	<i>umbrella</i>	0543
/jōli/	जोलि	[dʒo:li]	<i>cradle</i>	0333
/pēl/	पेल	[pe:l]	<i>defecate</i>	0162
/kōḍal/	कोडल	[ko:ḍal]	<i>mongoose</i>	0651

/ɭ/ voiced retroflex lateral approximant is realized as

[ɭ:] voiced geminated retroflex lateral approximant occurring between two short vowels when the first vowel is stressed, as in

/puḷa/	पुला	[pu:ḷa]	<i>curry</i>	0079
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[ɭ] voiced retroflexed lateral approximant occurring elsewhere word medially, as in

/ḍōli/	डो़लि	[ḍo:li]	<i>basket</i>	0352
/sakḷek/	सक़्लेक	[saḳːḷek]	<i>deposit</i>	0638

5.2 Vowels

There is contrast between long and short vowels in root syllables of all word types but this contrast is neutralized beyond root syllables in non-compound words.

/i/ voiced close front vowel is realized as

[i̠] voiced non-syllabic close front vowel occurring before retroflex flap when its echo also occurs following the retroflex flap, as in

/piɾɕ/	पिळच	[pi̠ɾɪtʃ]	<i>grey</i>	0875
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[i] voiced close front vowel occurring in all other environments, as in

/idu/	इदु	[id̪u]	<i>this</i>	0258
/iŋgo/	इंगो	[iŋˈgo]	<i>yes</i>	0394
/bita/	बिता	[bi̠t̪a]	<i>span</i>	0532
/miŋta/	मिङता	[miŋˈt̪a]	<i>sweet</i>	0865
/pēpi/	पेपि	[peːpi]	<i>brother</i>	0405
/heɾami/	हेळमि	[heɾam̪i]	<i>name of a clan</i>	0722

/ī/ voiced long close front vowel is realized as

[iː] voiced long close front vowel, as in

/hīr/	हीर	[hiːr]	<i>root (tree)</i>	0195
/hīyana/	हीयना	[hiːjana]	<i>give</i>	0935
/pīri/	पीरि	[piːri]	<i>straw</i>	0446
/pīto/	पीटो	[piːto]	<i>story</i>	0206
/wīndi/	वींदि	[viːnd̪i]	<i>ladder</i>	0338
/wīrsi/	वीळसि	[viːɾsi]	<i>pass (v)</i>	0905

/e/ voiced close-mid front vowel is realized as

[e] voiced close-mid front vowel occurring in all environments, as in

/epur/	एपुर	[epːur]	<i>sweat</i>	0286
/erandi/	एरंडि	[eraɳdi]	<i>castor</i>	0701
/leya/	लेया	[lej̪a]	<i>maiden</i>	0431
/koreti/	कौरेटि	[kore̠ti]	<i>name of a clan</i>	0719

/tʊtʁe/	टुटरे	[tʊtʁe]	<i>shiver</i>	0275
/mane/	माने	[manːe]	<i>day after tomorrow</i>	0234

/ē/ voiced long close-mid front vowel is realized as

[eː] voiced long close-mid front vowel, as in

/ētna/	एतना	[eːtna]	<i>buy</i>	0907
/ēndna/	एन्दना	[eːndna]	<i>dance (v)</i>	0934
/dēti/	डेति	[dēti]	<i>stem of leaf</i>	0785
/mēra/	मेळा	[meːra]	<i>fence</i>	0499

/a/ voiced open front-central vowel is realized as

[ə] when followed by /r/ in some two-syllable words. (See section 9.)

[a] voiced open front-central vowel occurring in all other environments, as in

/awal/	अवल	[avːal]	<i>mother</i>	0223
/aɽwal/	अटवल	[aɽːval]	<i>cook (n)</i>	0796
/masram/	मसरम	[masːram]	<i>name of a clan</i>	0723
/paɽa/	पटा	[paɽːa]	<i>plough (n)</i>	0653
/kaywa/	कयवा	[kajːva]	<i>bitter</i>	0503
/buŋgra/	बुंगरा	[buŋgːra]	<i>beetle</i>	0139

/ā/ voiced long open front-central vowel is realized as

[aː] voiced long open front-central vowel, as in

/āsk/	आसक	[aːsk]	<i>women</i>	0793
/āriwur/	आळिवुर	[aːriwur]	<i>couple</i>	0117
/pāḍi/	पाडि	[paːḍi]	<i>name of a clan</i>	0670
/bāṭi/	बाटि	[baːṭi]	<i>eye</i>	0671

/o/ voiced close-mid back rounded vowel is realized as

[o] voiced half close-mid back rounded vowel occurring in all environments, as in

/olcana/	ओलचना	[oltʃana]	<i>stitch (v)</i>	0092
/oɾhana/	ओळहना	[oɾhana]	<i>peel</i>	0519
/poreṭi/	पोरोटि	[poreṭ'i]	<i>name of a clan</i>	0717
/bowṭi/	बोवटि	[bowṭi]	<i>verandah</i>	0280
/wēgro/	वेगरो	[ve:gro]	<i>divide</i>	0471
/pōkro/	पोकरो	[po:kro]	<i>tree</i>	0100

/ō/ voiced long close-mid back rounded vowel is realized as

[o:] voiced long close-mid back rounded vowel, as in

/ōja/	ओजा	[o:dʒa]	<i>weight</i>	0427
/ōm/	ओम	[o:m]	<i>sing</i>	0854
/pōlka/	पोलका	[po:lka]	<i>blouse</i>	0083
/tōḍi/	टोडि	[tō:ḍi]	<i>group</i>	0855

/u/ voiced short close back rounded vowel is realized as

[ʊ] voiced non-syllabic back rounded vowel occurring before retroflex flap when its echo also occurs following the retroflex flap. In the word /uṛm/ the echo is realized as a fully syllabic vowel.

/uṛpna/	उळपना	['ʊṛʊpˈna]	<i>remove</i>	0879
/uṛk/	उळक	['ʊṛʊkː]	<i>urinate</i>	0643
/uṛm/	उळम	[ʊˈṛʊmː]	<i>louse</i>	0889

[u] voiced close back rounded vowel occurring in all other environments, as in

/uskul/	उसकुल	[uskul]	<i>saliva</i>	0803
/usa/	उसा	[us:a]	<i>flood</i>	0549

/pipuli/	पिपुलि	[pip:uli]	<i>butterfly</i>	0313
/mune/	मुने	[mun:e]	<i>next</i>	0135
/hawu/	हवु	[hav:u]	<i>those</i>	0261
/gudu/	गुदु	[guḍ:u]	<i>titillate</i>	0661

/ū/ voiced long close back rounded vowel is realized as

[u:] voiced long high back rounded vowel, as in

/ūti/	ऊति	[u:ti]	<i>bird</i>	0604
/ūhna/	ऊहना	[u:hna]	<i>wear</i>	0762
/tūri/	तूरि	[tu:ri]	<i>pea</i>	0692
/hūri/	हूळि	[hu:ɽi]	<i>bird</i>	0664

6 Evidence of Contrast

6.1 Consonants

6.1.1 Labials

/p/ /b/

/peḍi/	पेडि	[peḍ:i]	<i>girl</i>	0078
/beḍi/	बेडि	[beḍ:i]	<i>belt</i>	0751
/hipi/	हिपि	[hip:i]	<i>oyster</i>	0680
/ḍabi/	डबि	[ḍab:i]	<i>tin</i>	0099
/pāpe/	पापे	[pa:pe]	<i>uvula</i>	0672
/bābo/	बाबो	[ba:bo]	<i>father</i>	0492

/b/ /m/

/boḍi/	बोडि	[boḍ:i]	<i>pond</i>	0005
/moḍi/	मोडि	[moḍ:i]	<i>navel</i>	0919
/babal/	बबल	[bab:al]	<i>father</i>	0075
/mamal/	ममल	[mam:al]	<i>father-in-law</i>	0399
/ḍobri/	डोबरि	[ḍobːri]	<i>ditch</i>	0892
/tumri/	तुमरि	[t̪umːri]	<i>tree</i>	0776

/p/ /m/

/pala/	पला	[pal:a]	<i>ground</i>	0081
/mala/	मला	[mal:a]	<i>pot</i>	0791
/topa/	तोपा	[t̪op:a]	<i>name of a clan</i>	0713
/tamo/	तमो	[t̪am:o]	<i>brother</i>	0684

/hāp/	हाप	[ha:p]	<i>thorn</i>	0196
/hām/	हाम	[ha:m]	<i>die!</i>	0952
/b/ /w/				
/bona/	बोना	[bon:a]	<i>whose</i>	0438
/wona/	वोना	[ʋon:a]	<i>their</i>	0211
/darba/	दरबा	[ɖarba]	<i>paddy husk</i>	0450
/parwa/	परवा	[parva]	<i>sick</i>	0419
/babal/	बबल	[bab:al]	<i>father</i>	0075
/mawal/	मवल	[mau:al]	<i>our</i>	0033
/m/ /w/				
/mari/	मरि	[mari]	<i>son</i>	0224
/wari/	वरि	[ʋari]	<i>fear (n)</i>	0379
/mamal/	ममल	[mam:al]	<i>father-in-law</i>	0399
/mawal/	मवल	[mau:al]	<i>our</i>	0033
/mōm/	मोम	[mo:m]	<i>sell</i>	0436
/māw/	माव	[ma:ʋ]	<i>reindeer</i>	0296

6.1.2 Coronals

/t/ /d/				
/ta/	ता	[ṭa]	<i>give</i>	0272
/da/	दा	[ɖa]	<i>go</i>	0616
/muytor/	मुयतोर	[muɟṭor]	<i>man</i>	0428
/hoydel/	होयदेल	[hoɟṭdel]	<i>fireplace</i>	0285
/āti/	आति	[a:ṭi]	<i>mother-in-law</i>	0404
/dādi/	दादि	[ɖa:ɖi]	<i>grandfather</i>	0401

/t/ /ḍ/

/tāḍi/	टाडि	[t̪aːḍi]	<i>clap (v)</i>	0689
/ḍēṭi/	डेटि	[ḍeːṭi]	<i>stem of leaf</i>	0785
/pēṭi/	पेटि	[peːṭi]	<i>trunk</i>	0821
/peḍi/	पेडि	[peḍːi]	<i>girl</i>	0078
/kūṭ/	कूट	[kuːṭ]	<i>lame</i>	0560
/ūḍ/	ऊड	[uːḍ]	<i>comb (v)</i>	0761

/c/ /j/

/ciṭi/	चिटि	[tʃiṭːi]	<i>snake</i>	0841
/jiṭi/	जिटि	[dʒiṭːi]	<i>firewood</i>	0840
/kāca/	काचा	[kaːtʃa]	<i>spin</i>	0627
/ōja/	ओजा	[oːdʒa]	<i>weight</i>	0427
/piṛc/	पिळच	[piṛːitʃ]	<i>grey</i>	0875
/kurūj/	कुरुज	[kuːruːdʒ]	<i>heel</i>	0527

/t/ /ṭ/

/toḍi/	तोडि	[t̪oḍi]	<i>soil (n)</i>	0356
/ṭoḍi/	टोडि	[t̪oḍːi]	<i>mouth</i>	0030
/pota/	पोता	[poṭːa]	<i>locket</i>	0756
/poṭa/	पोटा	[poṭːa]	<i>belly</i>	0169
/wat/	वत	[vaṭː]	<i>dry</i>	0621
/waṭ/	वट	[vaṭ]	<i>belch</i>	0609

/d/ /ḍ/

/dand/	दंड	[ḍaṇḍ]	<i>punishment</i>	0479
/ḍand/	डंड	[ḍaṇḍ]	<i>farm (n)</i>	0433

/adi/	अदि	[aḍ:i]	<i>sunlight</i>	0547
/aḍi/	अडि	[aḍ:i]	<i>down</i>	0194
/nānd/	नांद	[na:nḍ]	<i>wet</i>	0620
/nēnd/	नेन्ड	[ne:nḍ]	<i>today</i>	0233
/t/	/c/			
/taṛi/	तळि	[taṛi]	<i>ring</i>	0432
/cara/	चरा	[tʃara]	<i>worm</i>	0682
/kātna/	कातना	[ka:tṇa]	<i>dig</i>	0929
/kācna/	काचना	[ka:tʃna]	<i>spin</i>	0922
/kut/	कुत	[kuṭ]	<i>break out</i>	0570
/kuc/	कुच	[kuṭʃ]	<i>slip off</i>	0597
/d/	/j/			
/dāri/	दारि	[da:ri]	<i>sickle's side</i>	0345
/jāḍi/	जाडि	[dʒa:ḍi]	<i>grass</i>	0654
/pada/	पदा	[paḍ:a]	<i>name of a clan</i>	0727
/paja/	पजा	[padʒ:a]	<i>after</i>	0228
/nānd/	नान्द	[na:nḍ]	<i>wet</i>	0620
/hanj/	हन्ज	[haṇdʒ]	<i>went</i>	0131
/ṭ/	/c/			
/ṭaṭi/	टटि	[ṭaṭ:i]	<i>axe</i>	0953
/ciṭi/	चिटि	[tʃiṭ:i]	<i>snake</i>	0841
/gaṭa/	गटा	[gaṭ:a]	<i>cloth bundle</i>	0443
/gaci/	गचि	[gaṭʃ:i]	<i>neck</i>	0515
/kūṭ/	कूट	[ku:ṭ]	<i>lame</i>	0560
/kūc/	कूच	[ku:ṭʃ]	<i>wipe</i>	0598

/d/ /j/

/dōli/	डोलि	[d̪oːli]	<i>basket</i>	0352
/jāli/	जालि	[dʒaːli]	<i>net</i>	0335
/paḍa/	पडा	[paḍːa]	<i>calf</i>	0852
/paja/	पजा	[paɖʒːa]	<i>after</i>	0228
/ūḍ/	ऊड	[uːḍ]	<i>comb (v)</i>	0761
/ūnj/	ऊन्ज	[uːɳɖʒ]	<i>extortion</i>	0954

/t/ /s/

/tamo/	तमो	[t̪amːo]	<i>brother</i>	0684
/sama/	समा	[samːa]	<i>ready</i>	0458
/uta/	उता	[utːa]	<i>inhale</i>	0497
/usa/	उसा	[usːa]	<i>flood (n)</i>	0549
/wīt/	वीत	[viːt̪]	<i>sow(v)</i>	0579
/wīs/	वीस	[viːs]	<i>thresh</i>	0568

/d/ /n/

/da/	दा	[d̪a]	<i>go</i>	0616
/ni/	नि	[ni]	<i>you</i>	0555
/adi/	अदि	[aḍːi]	<i>sunlight</i>	0547
/ani/	अनि	[anːi]	<i>and</i>	0038
/ad/	अद	[aḍ]	<i>she</i>	0277
/un/	उन	[un]	<i>drink (v)</i>	0605

/d/ /r/

/dand/	दंड	[d̪aɳḍ]	<i>punishment</i>	0479
/rand/	रंड	[raɳḍ]	<i>two</i>	0016

/dādi/	दादि	[d̪aːd̪i]	<i>grandfather</i>	0401
/dāri/	दारि	[d̪aːri]	<i>sickle's side</i>	0345
/ad/	अद	[aɖ]	<i>she</i>	0277
/ar/	अर	[aɾ]	<i>put</i>	0615
/d/ /l/				
/deg/	देग	[d̪eg]	<i>separate</i>	0657
/lak/	लक	[lak]	<i>far</i>	0245
/pada/	पदा	[paɖːa]	<i>name of a clan</i>	0727
/pala/	पला	[paːla]	<i>ground</i>	0081
/tēd/	तेद	[t̪eːd̪]	<i>awake</i>	0434
/pēl/	पेल	[peːl]	<i>defecate</i>	0162
/r/ /l/				
/rājāl/	राजल	[raːdʒal]	<i>king</i>	0037
/laja/	लजा	[ladʒa]	<i>shame</i>	0758
/arhana/	अरहना	[arhana]	<i>tear (v)</i>	0887
/alhana/	अलहना	[alˈhana]	<i>desire (n)</i>	0152
/kir/	किर	[kir]	<i>abscess</i>	0121
/kil/	किल	[kil]	<i>cry</i>	0602
/n/ /r/				
/nāñ/	नाङ	[naːŋ]	<i>cobra</i>	0843
/rāñ/	राङ	[raːŋ]	<i>quarrel</i>	0437
/mani/	मनि	[manːi]	<i>enough</i>	0544
/mari/	मरि	[mari]	<i>son</i>	0224
/mīn/	मीन	[miːn]	<i>fish (n)</i>	0073
/nīr/	नीर	[niːr]	<i>ashes</i>	0190

/n/	/l/				
/nār/	नार	[na:r]	village	0422	
/lār/	लार	[la:r]	skin	0294	
/kawna/	कवना	[kau'na]	laugh	0214	
/bowla/	बोवला	[bou'la]	verandah	0695	
/pēn/	पेन	[pe:n]	god	0757	
/pēl/	पेल	[pe:l]	defecate	0162	
/ḍ/	/ṛ/				
/moḍi/	मोडि	[moḍ:i]	navel	0919	
/moṛi/	मोळि	[moṛi]	snoring	0910	
/ūḍ/	ऊड	[u:ḍ]	comb (v)	0761	
/ār/	आळ	[a:r]	wife	0113	
/r/	/ṛ/				
/wari/	वरि	[ʋari]	fear (v)	0379	
/waṛi/	वळि	[ʋaṛi]	wind	0187	
/hīr/	हीर	[hi:r]	root (tree)	0195	
/hīṛ/	हीळ	[hi:ṛ]	parrot	0373	
/l/	/ṛ/				
/kila/	किला	[kil:a]	piece	0824	
/kiṛa/	किळा	[kiṛa]	fly	0938	
/kuṛal/	कुळल	[kuṛal]	spider	0221	
/kudaṛ/	कुदळ	[kuḍ:aṛ]	spade (n)	0357	
/s/	/c/				
/siwar/	सिवर	[siʋ:aṛ]	rafter	0089	
/ciwal/	चिवल	[tʃiʋ:al]	chick	0281	

/kāsta/	कासता	[ka:st̪a]	<i>hot thing</i>	0243
/kāca/	काचा	[ka:tʃa]	<i>spin</i>	0627
/us/	उस	[us]	<i>sugarcane</i>	0186
/ūc/	ऊच	[u:tʃ]	<i>plane wood</i>	0599

6.1.3 Velars

/k/	/g/			
/kar/	कर	[kar]	<i>burn</i>	0640
/gaɾ/	गळ	[gaɾ]	<i>bunch of plantains</i>	0873
/jinka/	जिन्का	[dʒinˈka]	<i>basket</i>	0766
/jingi/	जिन्गि	[dʒinˈgi]	<i>life</i>	0269
/tēk/	तेक	[t̪e:k]	<i>fit</i>	0968
/deg/	देग	[d̪eg]	<i>separate (v)</i>	0657
/g/	/ŋ/			
/mōgra/	मोगरा	[mo:gra]	<i>jasmine</i>	0687
/miŋta/	मिङता	[miŋˈt̪a]	<i>sweet</i>	0865
/deg/	देग	[d̪eg]	<i>separate (v)</i>	0657
/lēŋ/	लेङ	[le:ŋ]	<i>sound</i>	0363

6.1.4 Velars and /h/

/k/	/h/			
/kuri/	कुरि	[kuri]	<i>hoof</i>	0290
/hari/	हरि	[hari]	<i>road</i>	0118
/kocka/	कोचका	[kotʃˈka]	<i>bag</i>	0767
/kācha/	काचहा	[ka:tʃha]	<i>hot</i>	0628
/wak/	वक	[vak]	<i>bend</i>	0850
/weh/	वेह	[veh]	<i>tell</i>	0858

/g/ /h/

/gapa/	गपा	[gap:a]	<i>drain</i>	0649
/hapa/	हपा	[hap:a]	<i>brinjal</i>	0202
/deg/	देग	[deg]	<i>separate (v)</i>	0657
/doh/	दोह	[doh]	<i>tie (v)</i>	0590

/ñ/ /h/

/boṇsa/	बोडसा	[boṇ'sa]	<i>hole</i>	0315
/behra/	बेहरा	[behra]	<i>big</i>	0246
/lēñ/	लेड	[le:ŋ]	<i>sound</i>	0363
/leh/	लेह	[leh]	<i>untie</i>	0591

6.1.5 Nasals

/m/ /n/

/mēṇḍi/	मेन्डि	[me:ṇḍi]	<i>sheep</i>	0291
/nēṇḍi/	नेन्डि	[ne:ṇḍi]	<i>tree</i>	0686
/kamka/	कमका	[kam'ka]	<i>turmeric</i>	0156
/kanki/	कन्कि	[kan'ki]	<i>rice</i>	0899
/hām/	हाम	[ha:m]	<i>die!</i>	0952
/han/	हन	[han]	<i>go!</i>	0964

/n/ /ñ/

/pēn/	पेन	[pe:n]	<i>god</i>	0757
/poñ/	पोड	[poŋ']	<i>flow</i>	0574
/pāntona/	पान्तोना	[pa:ṇṭona]	<i>pot (big)</i>	0343
/daṛiṇṭa/	दळिडता	[daṛiṇṭa]	<i>cold thing</i>	0242

6.2 Vowels

6.2.1 Vowel Quantity

/i/ /ī/

/hita/	हिता	[hiṭ:a]	<i>tree</i>	0700
/hīkna/	हीकना	[hi:kna]	<i>tear (v)</i>	0957
/piṭe/	पिटे	[piṭ:e]	<i>bird</i>	0069
/pīṭo/	पीटो	[pi:ṭo]	<i>story</i>	0206

/e/ /ē/

/emna/	एमना	[emˈna]	<i>sift</i>	0958
/ēndna/	एन्दना	[e:nd̪na]	<i>dance (v)</i>	0934
/peḍi/	पेडि	[peḍ:i]	<i>girl</i>	0078
/pēḍi/	पेडि	[pe:ḍi]	<i>situation</i>	0652

/a/ /ā/

/ar/	अर	[ar]	<i>put</i>	0615
/ār/	आळ	[a:ɽ]	<i>wife</i>	0113
/pal/	पल	[pal]	<i>tooth</i>	0168
/pāl/	पाल	[pa:l]	<i>milk</i>	0215

/o/ /ō/

/oṛhana/	ओळहना	[oṛhana]	<i>peel (v)</i>	0519
/ōhna/	ओहना	[o:hna]	<i>crash (v)</i>	0966
/polo/	पोलो	[pol:o]	<i>word</i>	0141
/pōlo/	पोलो	[po:lo]	<i>prohibition</i>	0675

/u/ /ū/

/udna/ उदना [uɖːna] *sit* 0926/ūhna/ ऊहना [uːhna] *wear* 0762/kuc/ कुच [kutʃ] *slip off* 0597/kūc/ कूच [kuːtʃ] *wipe* 0598

6.2.2 Vowel Quality

/i/ /e/

/ir/ इर [ir] *put* 0565/er/ एर [er] *this one* 0985/tika/ तिका [t̪ika] *in* 0144/teka/ तेका [t̪ekːa] *teak* 0984/kunji/ कुंजि [kunjːdʒi] *key* 0384/kunje/ कुन्जे [kunjːdʒe] *coppersmith* 0316

/ī/ /ē/

/hīr/ हीर [hiːr] *root (tree)* 0195/ēr/ एर [eːr] *water* 0072/kīṛa/ कीळा [kiːṛa] *nail* 0230/kēṛa/ केळा [keːṛa] *forest* 0105

/e/ /a/

/eni/ एनि [enːi] *braid* 0967/ani/ अनि [anːi] *and* 0038/pera/ पेरा [pera] *drum* 0393/paro/ परो [paro] *above* 0250

/hare/	हरे	[hare]	<i>nanny goat</i>	0054
/hara/	हरा	[hara]	<i>pillar</i>	0095
/ē/	/ā/			
/ēr/	एर	[e:r]	<i>water</i>	0072
/ār/	आळ	[a:r]	<i>wife</i>	0113
/wēhc/	वेहच	[ve:htʃ]	<i>light</i>	0851
/wāhc/	वाहच	[va:htʃ]	<i>quarrel</i>	0153
/a/	/o/			
/arhana/	अरहना	[arhana]	<i>tear (v)</i>	0887
/orhana/	ओळहना	[orhana]	<i>peel (v)</i>	0519
/tala/	तला	[ṭa:la]	<i>head</i>	0085
/tola/	तोला	[ṭo:la]	<i>skin</i>	0172
/ḍupṭa/	डुपटा	[ḍupṭa]	<i>shawl</i>	0831
/sōno/	सोनो	[so:no]	<i>gold</i>	0192
/ā/	/ō/			
/ārt/	आरत	[a:rṭ]	<i>cold (things)</i>	0901
/ōrt/	ओरत	[o:rṭ]	<i>chip (v)</i>	0965
/jāli/	जालि	[dʒa:li]	<i>net</i>	0335
/jōli/	जोळि	[dʒo:li]	<i>cradle</i>	0333
/o/	/u/			
/olcana/	ओलचना	[oltʃana]	<i>stitch (v)</i>	0092
/utana/	उतना	[uṭ:ana]	<i>inhale</i>	0497
/koṭa/	कोटा	[koṭ:a]	<i>take</i>	0890
/kuṭa/	कुटा	[kuṭ:a]	<i>measurement</i>	0531

/kālo/	कालो	[ka:lo]	<i>umbrella</i>	0543
/kalu/	कलु	[kal:u]	<i>stone</i>	0070
/ō/				
/ū/				
/ōhna/	ओहना	[o:hna]	<i>crash</i>	0966
/ūhna/	ऊहना	[u:hna]	<i>wear</i>	0762
/nōr/	नोर	[no:r]	<i>grind</i>	0622
/nūr/	नूर	[nu:r]	<i>hundred</i>	0018

7 Distribution of Phonemes in Words

7.1 Single Consonants

7.1.1 Word-initial Consonants

All consonants except /ŋ/ and /ʈ/ and /ʌ/ occur word initially.

7.1.2 Word-medial Consonants (intervocalic)

All consonants occur intervocalically.

7.1.3 Word-final Consonants

All consonants occur word finally except /b/ and /ʌ/.

7.2 Consonant Clusters

7.2.1 Word-medial Consonant Clusters

7.2.1.1 Word-medial CC Clusters

/pr/				
/tɐpri/	टैपरि	[tɐˈri]	<i>fish (n)</i>	0959
/pɾ/				
/pipɾi/	पिपळि	[pipˈɾi]	<i>tree</i>	0780
/pk/				
/lōpka/	लोपका	[loːpka]	<i>swallow (future)</i>	1009
/ps/				
/lōpsi/	लोपसि	[loːpsi]	<i>swallowed</i>	1010
/pw/				
/kepwal/	केपवल	[kepˈval]	<i>guard (n)</i>	1041

/tr/				
/catral/	चतरल	[tʃaṭːral]	<i>bore</i>	0322
/tl/				
/hātlam/	हातलम	[haṭːlam]	<i>slip down</i>	1015
/tk/				
/wīṭka/	वीतका	[viṭːka]	<i>saw (future)</i>	1013
/tm/				
/ētma/	एतमा	[eṭːma]	<i>don't buy</i>	1012
/tn/				
/kātna/	कातना	[kaṭːna]	<i>dig</i>	0929
/ts/				
/kātsi/	कातसि	[kaṭːsi]	<i>dug</i>	1014
/tw/				
/watway/	वतवय	[vaṭːvaj]	<i>dry (not)</i>	1016
/ṭk/				
/ciṭkuli/	चिटकुलि	[tʃiṭːkuli]	<i>snap</i>	0882
/ṭm/				
/iṭma/	इटमा	[iṭːma]	<i>don't touch</i>	1017
/ṭl/				
/keṭli/	केटलि	[keṭːli]	<i>vessel</i>	0145
/ṭn/				
/laṭni/	लटनि	[laṭːni]	<i>instrument</i>	0832

/ʈs/				
/koʈsi/	कोटसि	[koʈˈsi]	<i>stitched</i>	1018
/ʈr/				
/ʈuʈre/	टुटरे	[ʈuʈˈre]	<i>shiver</i>	0275
/ʈk/				
/ciʈkuli/	चिटकुलि	[tʃiʈˈkuli]	<i>snap</i>	0882
/ʈw/				
/aʈwal/	अटवल	[aʈˈval]	<i>cook (n)</i>	0796
/ct/				
/rīcti/	रीचति	[ri:tʃˈti]	<i>cut (question)</i>	1020
/ck/				
/kocka/	कोचका	[kotʃˈka]	<i>bag</i>	0767
/cs/				
/kācsi/	काचसि	[ka:tʃˈsi]	<i>spun (past)</i>	1021
/cw/				
/bicwa/	बिचवा	[biʈˈva]	<i>knife</i>	0788
/ch/				
/kācha/	काचहा	[ka:tʃˈha]	<i>hot</i>	0628
/cl/				
ācla/	आचला	[a:tʃˈla]	<i>name (n)</i>	1022
/kr/				
/pōkro/	पोकरो	[po:kro]	<i>tree</i>	0100

/kɾ/				
/bokɾa/	बोकळा	[bokˈɾa]	<i>lamb</i>	0504
/kl/				
/saklək/	सकल्लेक	[sakˈlək]	<i>deposit</i>	0638
/ks/				
/rāksas/	राकसस	[raːksas]	<i>giant</i>	0442
/br/				
/kobri/	कोबरि	[kobˈri]	<i>pot</i>	0639
/bɾ/				
/bobɾal/	बोबळल	[bobˈɾal]	<i>toothless</i>	1023
/bl/				
/sībla/	सीबला	[siːbla]	<i>basket</i>	0340
/dw/				
/kudwa/	कुदवा	[kuɖˈva]	<i>attack (v)</i>	1027
/dk/				
/tēdka/	तेदका	[t̪eːdka]	<i>awake (future)</i>	1025
/dm/				
/gudmare/	गुदमरे	[guɖˈmare]	<i>suffocate</i>	1000
/ds/				
/ūdsi/	ऊदसि	[uːdsi]	<i>seated</i>	1026

/dy/				
/mudyal/	मुदयल	[muɖːjal]	man (old)	0115
/ɖk/				
/laɖke/	लडके	[laɖːke]	hang	0798
/ɖn/				
/ūɖna/	ऊडना	[uːɖna]	comb (v)	0956
/ɖw/				
/t̪aɖwa/	टाडवा	[t̪aːɖva]	chin	0109
/jr/				
/kijral/	किजरल	[kidʒːral]	rogue	1042
/jg/				
/ijgur/	इजगुर	[idʒːgur]	lizard	0525
/gr/				
/begror/	बेगळोर	[begror]	where	1024
/gl/				
/cugli/	चुगलि	[tʃugːli]	rumour	0792
/mb/				
/ɖāmbar/	डामबर	[ɖaːmbar]	wedge (n)	0749
/mk/				
/kamka/	कमका	[kamːka]	turmeric	0156
/mn/				
/mōmna/	मोमना	[moːmna]	sell	0976

/mr/				
/jāmr̥un/	जामरुन	[dʒaːmr̥un]	<i>tree</i>	0770
/my/				
/gumya/	गुमया	[gumˈja]	<i>pit</i>	0387
/nk/				
/jinka/	जिन्का	[dʒinˈka]	<i>basket</i>	0766
/nt/				
/pāntona/	पान्तोना	[paːn̪ːtona]	<i>pot (big)</i>	0343
/ng/				
/pāngaṭ/	पानगट	[paːngaṭ]	<i>place (washing)</i>	0893
/ny/				
/wanyar/	वनयर	[vanˈjaɾ]	<i>labour (n)</i>	0368
/ñt/				
/daɾiñta/	दळिङ्ता	[daɾiñ̪ːta]	<i>cold thing</i>	0242
/ñs/				
/boñsa/	बोडसा	[boɱˈsa]	<i>hole</i>	0315
/rp/				
/harpun/	हरपुन	[harpun]	<i>chappal</i>	0822
/rk/				
/kirkaṭ/	किरकळ	[kirkaṭ]	<i>kingfisher</i>	0318
/rb/				
/berbaṭi/	बेरबटि	[berbaṭːi]	<i>pea</i>	0789

/rd/				
/pirde/	पिरदे	[pir̥de]	winter	0550
/rm/				
/kurmi/	कुरमि	[kur̥m̥i]	bran	0897
/rn/				
/irna/	इरना	[ir̥na]	put	0994
/rw/				
/hirwo/	हिरवो	[hir̥vo]	green	0021
/rc/				
/mirca/	मिरचा	[mir̥tʃa]	chili	0203
/rɖ/				
/pīrɖagi/	पीरडगि	[pi:r̥ɖagi]	heap (n)	0552
/rh/				
/arhana/	अरहना	[ar̥hana]	tear (n)	0887
/rɾ/				
/pārɾi/	पारळि	[pa:r̥ɾi]	wanderer	0685
/rj/				
/burja/	बुरजा	[bur̥dʒa]	decay (v)	0662
/rɸ/				
/hiɾpe/	हिळपे	[hiɾ̥pe]	bark (n)	0961
/ɾk/				
/hiɾko/	हिळको	[hiɾ̥ko]	name of a clan	0737

/ṛm/				
/dermi/	देळमि	[d̪er̪mi]	<i>shadow</i>	0137
/ṛl/				
/hur̪la/	हुडला	[hur̪la]	<i>small</i>	0247
/ṛw/				
/paṛwa/	पळवा	[paṛva]	<i>wave</i>	0371
/ṛn/				
/hur̪na/	हुळला	[hur̪na]	<i>see</i>	0274
/ṛh/				
/paṛha/	पळहा	[paṛha]	<i>paddy</i>	0648
/wṭ/				
/bowṭi/	बोवटि	[bowṭi]	<i>verandah</i>	0280
/wṛ/				
/kāwṛi/	कावळि	[ka:vṛi]	<i>stick</i>	0895
/ws/				
/piwsi/	पिवसि	[piw'si]	<i>purse</i>	0306
/wn/				
/cāwni/	चावनि	[tʃa:vni]	<i>roof</i>	0176
/wh/				
/awhari/	अवहरि	[avhari]	<i>mother</i>	0439
/wd/				
/cawdari/	चवदरि	[tʃav'dari]	<i>name of a clan</i>	0729

/wk/				
/sawkar/	सवकर	[saukar]	<i>rich</i>	0676
/wr/				
/siwra/	सिवरा	[siu'ra]	<i>nail</i>	0747
/wl/				
/bowla/	बोवला	[bou'la]	<i>verandah</i>	0695
/st/				
/pista/	पिसता	[pis'ta]	<i>leftover, remaining</i>	0969
/sd/				
/usdi/	उसडि	[us'di]	<i>fish (n)</i>	0962
/sm/				
/usmal/	उसमल	[us'mal]	<i>pestle</i>	0180
/sr/				
/masram/	मसरम	[mas'ram]	<i>name of a clan</i>	0723
/sn/				
/usna/	उसना	[us'na]	<i>sweep</i>	0406
/sy/				
/husyar/	हुसयर	[hus'jar]	<i>voice</i>	0375
/hr/				
/behra/	बेहरा	[behra]	<i>big</i>	0246
/hn/				
/pihna/	पिहना	[pihna]	<i>close</i>	0936

/hk/				
/hahki/	हहकि	[hahki]	<i>mortar</i>	0179
/hr/				
/johre/	जेहळे	[dʒohɾe]	<i>millet</i>	0201
/hm/				
/hohma/	होहमा	[hohma]	<i>don't scratch</i>	1033
/ht/				
/dohtan/	दोहतन	[dohɽan]	<i>tied</i>	1034
/yk/				
/wāyka/	वायका	[va:jka]	<i>come (future)</i>	0987
/yd/				
/hoydel/	होयदेल	[hojɽdel]	<i>fireplace</i>	0285
/yn/				
/wāyna/	वायना	[va:jna]	<i>come</i>	0988
/yw/				
/pāywa/	पायवा	[pa:jva]	<i>foundation</i>	0035
/ym/				
/wāyma/	वायमा	[va:jma]	<i>don't come</i>	1036
/yl/				
/keyla/	केयला	[kejɽla]	<i>call</i>	1035
/yh/				
/bayhal/	बयहल	[bajhal]	<i>mad</i>	0421

/ys/				
/kaysūr/	कयसूर	[kajsur]	<i>broom</i>	0502
/yr/				
/bayri/	बयरि	[bajˈri]	<i>deaf (woman)</i>	0460
/lp/				
/kalpanj/	कल्पंज	[kalˈpandʒ]	<i>trap (n)</i>	0506
/lk/				
/pōlka/	पोलका	[poːlka]	<i>blouse</i>	0083
/ls/				
/kilsī/	किलसि	[kilˈsi]	<i>cried</i>	1040
/lw/				
/mālwanḍ/	मालवंड	[maːlvaṇḍ]	<i>snake</i>	0844
/lm/				
/malma/	मलमा	[malˈma]	<i>don't return</i>	1038
/ln/				
/cālṇi/	चालनि	[tʃaːlṇi]	<i>sieve</i>	0473
/lh/				
/alhana/	अलहना	[alˈhana]	<i>desire (n)</i>	0152
/lc/				
/olcana/	ओलचना	[oltʃana]	<i>stitch (v)</i>	0092
/ly/				
/halyal/	हलयल	[halˈjal]	<i>buffalo (male)</i>	0213

7.2.1.2 Word-medial CCC Clusters

/msn/

/umsna/	उमस्ना	[umsˈna]	<i>pat</i>	1006
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/ndn/

/ēndna/	एन्दना	[eːnd̪na]	<i>dance (v)</i>	0934
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/nɟn/

/anjna/	अंजना	[andʒˈna]	<i>climb</i>	0582
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/ndr/

/andri/	अंन्द्रि	[aṇḍˈri]	<i>blind (woman)</i>	0462
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/nɟn/

/kēnjna/	केन्जना	[keːɲdʒˈna]	<i>hear</i>	0940
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/nɟn/

/ṭandna/	टंडना	[ṭaṇḍˈna]	<i>take</i>	0585
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/nɟm/

/paṇḍma/	पंडमा	[paṇḍˈma]	<i>don't make</i>	1028
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/ndr/

/pāṇḍri/	पांडरि	[paːṇḍˈri]	<i>white</i>	0019
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/nɟs/

/paṇḍsi/	पंडसि	[paṇḍˈsi]	<i>made</i>	1029
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/ɾkn/

/waɾkna/	वळकना	[vaɾkˈna]	<i>say</i>	0273
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/njɔ/				
/hanjka/	हंजका	[haɳdʒˈka]	<i>go (future)</i>	1005
/ndh/				
/tundhana/	टुंडहना	[tundˈhana]	<i>affix</i>	0642
/ngr/				
/bungra/	बुंगरा	[bunɡˈra]	<i>beetle</i>	0139
/ndy/				
/dondyal/	डोन्डयल	[dondʒal]	<i>snake</i>	0845
/skm/				
/piskma/	पिसकमा	[piskˈma]	<i>don't knead</i>	1002
/skn/				
/piskna/	पिसकना	[piskˈna]	<i>knead</i>	1003
/skt/				
/kasktu/	कसकतु	[kaskˈtu]	<i>bit (past)</i>	0948
/skn/				
/uskna/	उसकना	[uskˈna]	<i>spit (v)</i>	0802
/rsn/				
/barsna/	बरसना	[barsˈna]	<i>grow</i>	0995
/rnd/				
/marndar/	मरंडळ	[marndar]	<i>uncle's daughter</i>	0409
/rng/				
/sarngar/	सरंगळ	[sarngar]	<i>skeleton</i>	0741

/r̥ch/				
/mir̥chana/	मिळचहना	[miɾtʃhana]	<i>lightning (n)</i> <i>(with thunder)</i>	0876
/r̥sk/				
/bir̥skna/	बिळस्कना	[biɾʃskˈna]	<i>slip</i>	0915
/r̥nj/				
/kēnjna/	केन्जना	[keːndʒˈna]	<i>hear</i>	0940
/r̥kn/				
/waɾkna/	वळकना	[vaɾkˈna]	<i>say</i>	0273
/r̥pn/				
/uɾpna/	उळपना	[ˈuɾʊpˈna]	<i>remove</i>	0879
/r̥pm/				
/uɾpma/	उळपमा	[uɾʊpˈma]	<i>don't remove</i>	1011
/r̥dn/				
/muɾdna/	मुळदना	[muɾd̪na]	<i>immerse</i>	0930
/r̥ŋg/				
/guɾŋga/	गुळंगा	[guɾŋga]	<i>neck</i>	0108
/lkn/				
/talkna/	तळकना	[t̪alkˈna]	<i>ask</i>	0997
/hcn/				
/hehcna/	हेहचना	[hehtʃˈna]	<i>sift</i>	0972
/hcm/				
/hehcma/	हेहचमा	[hehtʃˈma]	<i>don't sift</i>	1019

/hkn/

/huhkna/	हुहकना	[huhkˈna]	<i>launder</i>	0382
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/hŋg/

/kohŋgi/	कोहंगि	[kohŋˈgi]	<i>elbow</i>	0170
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7.2.1.3 Word-medial CCCC Clusters

/rksn/

/marksna/	मरकसना	[marksˈna]	<i>search</i>	1044
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/ɾskn/

/biɾskna/	बिळस्कना	[biɾskˈna]	<i>slip</i>	0915
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/ɾnjn/

/kaɾnja/	कळंजना	[kaɾndʒˈna]	<i>dirty</i>	1045
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7.2.2 Word-final Consonant Clusters

7.2.2.1 Word-final CC Cluster

/nj/

/kalpanj/	कल्पंज	[kalˈpandʒ]	<i>trap (n)</i>	0506
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/hk/

/tuhk/	तुहक	[tuhk]	<i>sneeze</i>	0619
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/rt/

/pirt/	पिरत	[pirt]	<i>burst</i>	0896
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/ɾt/

/kiɾt/	किळत	[kiɾt]	<i>break</i>	0496
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/yt/				
/wiyt/	वियत	[viɪt̪]	<i>dawn (n)</i>	0556
/ms/				
/dums/	दुमस	[d̪um̐s]	<i>hit</i>	0594
/nd/				
/dand/	दंड	[d̪aɳd̪]	<i>punishment</i>	0479
/rd/				
/pōrd/	पोरद	[poːr̪d̪]	<i>sun</i>	0058
/ɾc/				
/piɾc/	पिळच	[piɾit̪]	<i>grey</i>	0875
/hc/				
/wēhc/	वेहच	[veːht̪]	<i>light</i>	0851
/nj/				
/gūnj/	गूज	[guːndʒ]	<i>bandicoot</i>	0490
/rk/				
/ork/	ओरक	[ork̐]	<i>they</i>	0279
/sk/				
/pisk/	पिसक	[pisk̐]	<i>knead</i>	0630
/ɾk/				
/uɾk/	उळक	[ʼuɾuk̐]	<i>urinate</i>	0643
/nd/				
/and/	अंद	[aɳd̐]	<i>blindness</i>	0558

/ŋg/				
/nūŋg/	नूंग	[nu:ŋg]	<i>sesame</i>	0535
/rs/				
/ars/	अरस	[ars]	<i>piquancy</i>	0786
/wt/				
/hawt/	हवत	[havt̪]	<i>trap (n)</i>	0142
/lk/				
/talk/	तलक	[t̪alk]	<i>want</i>	0577

7.2.2.2 Word-final CCC Clusters

/rks/				
/marks/	मरकस	[marks̪]	<i>search</i>	1061
/rɳj/				
/hiɳj/	हिळंज	[ʰiɳdʒ̪]	<i>finger nail</i>	0007
/rsk/				
/hiɾsk/	हिळस्क	[hiɾsk̪]	<i>finger nails</i>	1046
/ɾsk/				
/waɾsk/	वळस्क	[vaɾsk̪]	<i>fingers</i>	1047

7.3 Vowels

7.3.1 Vowels in Open Syllables

All short and long vowels occur in word-initial open syllables. All vowels occur in non-initial open syllables, but there is no contrast in non-initial syllables between short and long vowels in non-compound words.

/i/				
/iṭa/	इटा	[iṭ:a]	<i>brick</i>	0526
/e/				
/peḍi/	पेडि	[peḍ:i]	<i>girl</i>	0078
/a/				
/pada/	पदा	[paḍ:a]	<i>name of a clan</i>	0727
/o/				
/boḍi/	बोडि	[boḍ:i]	<i>pond</i>	0005
/u/				
/uda/	उदा	[uḍ:a]	<i>sit</i>	0025
/ī/				
/pīri/	पीरि	[pi:ri]	<i>straw</i>	0446
/ē/				
/ḍeṭi/	डेटि	[ḍeṭ:i]	<i>stem of leaf</i>	0785
/ā/				
/pāṭa/	पाटा	[paṭ:a]	<i>piglet</i>	0853
/ō/				
/pōlo/	पोलो	[po:lo]	<i>prohibition</i>	0675
/ū/				
/tūri/	तूरि	[ṭu:ri]	<i>pea</i>	0692
/i/				
/piṇḍi/	पिंडि	[piṇḍi]	<i>flour</i>	0484

/e/				
/nulpe/	नुल्पे	[nulˈpe]	<i>evening</i>	0132
/a/				
/paṭa/	पटा	[paṭːa]	<i>plough (n)</i>	0653
/o/				
/polo/	पोलो	[polːo]	<i>word</i>	0141
/u/				
/gudu/	गुदु	[guḍːu]	<i>titillate</i>	0661

7.3.2 Vowels in Closed Syllables

All vowels, both short and long, occur in word-initial closed syllables. All vowels occur in non-initial closed syllables, but there is no vowel length contrast in non-initial syllables in non-compound words.

/i/				
/irna/	इरना	[irna]	<i>put</i>	0994
/e/				
/berbaṭi/	बेरबटि	[berbaṭːi]	<i>pea</i>	0789
/a/				
/anjna/	अंजना	[andʒˈna]	<i>climb</i>	0582
/o/				
/olna/	ओलना	[olˈna]	<i>hide</i>	0508
/u/				
/umsna/	उमसना	[umsˈna]	<i>pat</i>	1006

/ī/				
/pīkna/	पीकना	[pi:kna]	<i>fart</i>	0937
/ē/				
/ēr/	एर	[e:r]	<i>water</i>	0072
/ā/				
/ācla/	आचला	[a:tʃla]	<i>name (n)</i>	1022
/ō/				
/pōkro/	पोकरो	[po:kro]	<i>tree</i>	0100
/ū/				
/ūnja/	ऊंजना	[u:ɲdʒˈna]	<i>extort</i>	0955
/i/				
/harcim/	हरचिम	[hartʃim]	<i>pelt (v)</i>	0425
/e/				
/korwenj/	कोळवेन्ज	[koɽveɲdʒ]	<i>fat</i>	0209
/a/				
/kapar/	कपर	[kap:ar]	<i>forehead</i>	0320
/o/				
/molol/	मोमोल	[mol:ol]	<i>rabbit</i>	0305
/u/				
/garcul/	गरचुल	[gartʃˈul]	<i>necklace</i>	0359

7.4 Vowel Clusters

There are no vowel clusters in the data. Sequences of vowels plus semi-vowels [ʋ] and [j] occur. These might have been interpreted as vowel clusters. But since both

[ʋ] and [j] occur word initially and there pattern as initial consonants, and since syllable finally following vowels, [ʋ] and [j] also pattern as consonants, we have interpreted them as consonants and not as vowels.

/watna/	वतना	[ʋaɽːna]	<i>dry (adj.) (river)</i>	1001
/kawi/	कवि	[kaʋːi]	<i>ear</i>	0031
/kāwɾe/	कावळे	[kaːʋɾe]	<i>name of a clan</i>	0726
/yawo/	यवो	[jaʋːo]	<i>mother</i>	0076
/kāya/	काया	[kaːja]	<i>fruit</i>	0197
/maytur/	मयतुर	[majɽːur]	<i>lost</i>	0806

8 The Syllable

The syllable nucleus is realized by a single vowel and is obligatory. The onset and the coda are optional and are realized by consonants.

8.1 Syllable Types

There are seven syllable types in Far Western Muria. The syllable types are as follows:

V

/uda/	उदा	[ud̪:a]	<i>sit</i>	0025
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CV

/ta/	ता	[t̪a]	<i>give</i>	0272
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VC

/ad/	अद	[aḍ]	<i>she</i>	0277
------	----	------	------------	------

CVC

/pal/	पल	[pal]	<i>tooth</i>	0168
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VCC

/and/	अंद	[aṇḍʰ]	<i>blindness</i>	0558
-------	-----	--------	------------------	------

CVCC

/pisk/	पिसक	[piskʰ]	<i>knead</i>	0630
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CVCCC

/waɽnj/	वळंज	[vaɽɳdʒʰ]	<i>finger</i>	0008
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8.2 Distribution of Phonemes in Syllables

All consonant phonemes occur in syllable onsets and as syllable codas in the CVC syllable pattern. In the CVCC syllable pattern, only /m/, /n/, /ɳ/,

/s/, /r/, /ɾ/, /l/, and /h/ occur as initial consonants in the CC coda sequence. In the CVCCC syllable pattern only /r/ and /ɾ/ occur as initial consonants in the CCC coda sequence. (See section 7.2 for examples of distribution of consonants in syllables.)

All vowel phonemes occur as syllable nuclei. (See section 7.3 for examples of distribution of vowels in syllables.)

8.3 Distribution of Syllables in Words

Far Western Muria words can have one to four syllables. Following are possible syllable combinations in words:

8.3.1 Monosyllabic Words

VC, CV, and CVC, VCC, CVCC, and CVCCC syllable patterns occur in monosyllabic words.

VC

/iw/	इव	[iʋ]	<i>these</i>	0524
------	----	------	--------------	------

CV

/pu/	पु	[pu]	<i>know</i>	0595
------	----	------	-------------	------

CVC

/pir/	पिर	[pir]	<i>rain (n)</i>	0185
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VCC

/and/	अंद	[aṇḍ]	<i>blindness</i>	0558
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CVCC

/mēnj/	मेज	[me:jṇdʒ]	<i>egg</i>	0212
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CVCCC

/marks/	मरकस	[mark's]	<i>search (v)</i>	1061
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8.3.2 Disyllabic Words

All seven syllable types in Muria Far Western occur in disyllabic words.

V.CV

/uda/	उदा	[uḍːa]	<i>sit</i>	0025
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VC.CV

/ācla/	आचला	[aːtʃla]	<i>name (n)</i>	1022
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VCC.CV

/ūjna/	ऊजना	[uːɲdʒˈna]	<i>extort</i>	0955
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CV.CV

/piṭe/	पिटे	[piṭːe]	<i>bird</i>	0069
--------	------	---------	-------------	------

CV.CVC

/piyal/	पियल	[pijːal]	<i>day</i>	0062
---------	------	----------	------------	------

CVC.CV

/piṇḍi/	पिंडि	[piṇḍːi]	<i>flour</i>	0484
---------	-------	----------	--------------	------

CVC.CVC

/pāṭlal/	पाटलल	[paːṭlal]	<i>leader</i>	0541
----------	-------	-----------	---------------	------

CVCC.CV

/piskma/	पिस्कमा	[piskˈma]	<i>don't knead</i>	1002
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CVCC.CVC

/marṇḍaṛ/	मरंडळ	[marṇḍaṛ]	<i>uncle's daughter</i>	0409
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CVCCC.CV

/biṛskna/	बिळस्कना	[biṛiskˈna]	<i>slip (v)</i>	0915
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8.3.3 Trisyllabic Words

Syllable types CV, CVC, and CVCC occur in trisyllabic words.

CV.CV.CV

/pipuli/	पिपुलि	[pip:uli]	<i>butterfly</i>	0313
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CVC.CV.CV

/morhana/	मोरहना	[morhana]	<i>crack (v)</i>	0883
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CV.CVCC.CV

/kaniskna/	कनिसकना	[kaniskna]	<i>dream (v)</i>	0862
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9 Stress

Stress is not contrastive in Far Western Muria. Stress is phonetically realized by loudness, a rise in pitch and a slight lengthening of the vowel of the stressed syllable. Words can carry primary stress on the first syllable. And while this is particularly true for words whose first syllable nucleus is filled by a long vowel, in some sentence frames word-final syllables can carry the primary stress. In particular, with words whose first syllable nuclei are filled by short vowels and whose second syllable onset is phonetically a tap or a flap, primary stress is not only (a) carried by the word-final syllable, but also (b) the word-initial syllable loses its syllabicity and (c) the second syllable vowel is lengthened. The result in such cases is that two-syllable words are virtually reduced to a single syllable, as the following illustrate:

/uɾm/	उळम	[ṳ'ɾum̩]/[ṳ'ɾu:m̩]	<i>louse</i>	0889
/taras/	तरस	[t̪ə'ras]/[t̪ə'ra:s]	<i>snake</i>	0218

This being the case, the rule that in non-compound words contrastive vowel length does not reach beyond the first syllable is preserved. Words such as 'louse' and 'snake' are effectively reduced to a single syllable, and when the result of this reduction is a long vowel in that syllable, that long vowel occurs in what has, by virtue of that reduction, become the first syllable of such words. (At the current stage, the pronunciation of such words is variable, sometimes being pronounced as two syllables with no lengthening of the second syllable vowel, and sometimes being pronounced as a single syllable with occasional lengthening of the vowel. If such words eventually are pronounced only as monosyllables with long vowels, this will introduce word-initial consonant clusters. Elsewhere in this paper, first-syllable vowel reduction from /a/ to / [ə] and resultant lengthening of the second syllable has not been noted in the phonetic transcription, such words being phonologically interpreted as examples of a (C)VCVC pattern.)

10 Practical Alphabet

A few matters need to be taken into consideration regarding the practical alphabet that is recommended for writing Far Western Muria. Far Western Muria being a Dravidian language should ideally be represented by a Dravidian script. But the native speakers live in a state where the linguistic background is Indo-Aryan. Marathi is the state language. Using an Indo-Aryan language script for a Dravidian language can be quite uncomfortable. The consonants do not present much of a problem since Devanagari has a rich inventory of consonant symbols. However, if the alveolar lateral approximant /l/ and the retroflex lateral approximant /ɭ/ are taken as distinct phonemes, we have a problem because the state language has no separate symbol for the retroflex approximant /ɭ/. We have recommended writing the latter with the Devanagari symbol for /l/ together with a subscript dot, **ल.**

The representation of vowels presents a bigger challenge as Devanagari does not have such a clear orthographic division into short and long vowels as required by Far Western Muria phonemes. We have recommended representing long vowel /ē/ and long vowel /ō/ by Devanagari **ऐ** and **ओ**, respectively. While there is no phonemic vowel length contrast beyond the first syllable in non-compound words, word-final vowels are nevertheless pronounced with a degree of length. Therefore, we have accommodated this length by writing word-final long matras of Devanagari script to express word-final vowels in Far Western Muria. So, for example, Muria words such as /kōnda/ meaning ‘bullock’ will be represented in Devanagari as **कोन्दा**.

We also find some borrowed aspirated sounds used by the Far Western Muria speakers due to the influence of Marathi, e.g., [p^harsi] ‘floor’. These, of course, are easily represented using Devanagari script.

While long consonants do not contrast phonemically with unlengthened consonants, we recommend writing them as geminates in Devanagari since Marathi writes long consonants as geminates.

	Labial	Dental/Alveolar	Retroflex	Palatal	Velar	Glottal
Stops/Affricates						
Voiceless	p प	t त	ʈ ट	c च	k क	
Voiced	b ब	d द	ɖ ड	j ज	g ग	
Nasals	m म	n न			ŋ. ङ	
Fricatives		s स				h ह
Laterals		l ल	ɭ ल			
Flaps		r र	ɽ ळ			
Approximants	w व			y य		

	Front unrounded	Central unrounded	Back rounded
Close	i इ ि ī ई ी		u उ ु ū ऊ ू
Half-close	e ऐ े ē ए ो		o ओ ो ō ओ ो
Open		a अ ā आ ा	

Bibliography

- Daniels, Peter T. and William Bright (editors). 1996. *The World's Writing Systems*. New York: Oxford University Press.
- Gangadhar Amar (compiler). 2007. A sociolinguistic survey on Muria Gondi varieties spoken in Maharastra, Chhattisgarh and Orissa. Bangalore: NLCI. Manuscript.
- Lincoln, John Nevelle. 1986. A descriptive analysis of the Adilabad dialect of Gondi. Ph.D. dissertation, Cornell University.
- Kurian, Benny and Mary Kurian. 2000. Phonemic analysis of Southern Gondi. Manuscript.
- Vas, Christopher and Ruth Vas. 1999. A phonemic summary of Hill Madia. Manuscript.
- Krishnamurti, Bhadriraju. 2003. *The Dravidian Languages*. Cambridge: Cambridge University Press.