

## Segmental Phonemes in Tripura: A variety of Kokborok

Timothy Tripura<sup>1</sup>  
Khawlsongkim Suantak<sup>2</sup>

### Abstract

The present paper attempts to provide the description of the segmental phonemes in Tripura, a variety of kokborok which is a Tibeto-Burman language of Bodo-Garo branch. In Tripura state, this variety is spoken in Sabroom and Belonia sub-divisions of South Tripura, Amarpur and Karbook sub-divisions of Gomati District, North Tripura, Longtharai valley and Gandacherra sub-divisions of Dhalai district and Agartala. Tripura speakers are also scattered in Hailakandi, Karimganj and Cachar districts of Assam state, and Mamit District of Mizoram. According to the Census of India 2011 the total population of Tripura and Tripuri is 5,92,255 persons in the state and highest in number among all the other scheduled tribal groups. However, no specific number of Tripura speakers is mentioned. Tripura is also spoken in present-day eastern Bangladesh. This paper is the first attempt of linguistic work undertaken in Tripura variety.

### Aims of the study

The main aim of this paper is to describe the segmental phonemes occurring in Tripura variety focusing on the number of phonemes (monophthongs, diphthongs, triphthongs, consonants) marked in this variety. In respect of place of articulation, Tripura consonants can be divided into five bilabials sounds, seven alveolar, three palatals, four velars and one glottal. And with regard to the manner of articulation and voicing, Tripura consonants can be further categorized into (i) stops {/p, t, c, k, b, d, ʃ, g, p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/}, (ii) nasals {/m, n, ŋ/}, (iii) fricatives {/s, h/}, (iv) tap or flap {/r/}, (v) lateral {/l/} and (vi) semivowels {/w, y/}.

**Keywords:** Segmental phonemes, Tripura, Kokborok, Tibeto-Burman, Bodo-Garo.

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<sup>1</sup> Research Scholar, Department of Linguistics & Tribal Languages, Tripura University, Suryamaninagar, Tripura. [timothymcveigh2@gmail.com](mailto:timothymcveigh2@gmail.com)

<sup>2</sup> Assistant Professor, Department of Linguistic & Tribal Languages, Tripura University, Suryamaninagar, Tripura. [skimvaiphei@gmail.com](mailto:skimvaiphei@gmail.com)

### 1. Introduction

'Tripura' is one of the scheduled tribes among the 19 scheduled tribes in the state of Tripura. It is located in serial no.18 (The Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1976 (No. 108 of 1976) & The Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 2002 (No.10 of 2003), The Gazette of India of Scheduled Tribes list of the state.

Tripura variety of Kokborok belongs to Bodo-Garo group of Tibeto-Burman, branch of Sino-Tibetan family. According to G.A. Grierson (1904), the Bodo group comprises of Mech and Kachari and the cognates languages spoken by other tribes like Tripuri, Garo, Rabha, Chutiya, Dimasa, Lalung, Hojai etc. The speakers of Kokborok and the different dialects of Kokborok in the state of Tripura are Debbarma (puranTripuri), Tripura, Jamatia, Noatia (New Tripuri), Reang, Uchoi, Rupini, Kalai, and Murasing. Tripura variety is used only in spoken word such as folk songs, folk tales and religious songs like goria dance. This variety has no script of its own. It is written in both Bengali and Roman Scripts. The clans of Tripuras are (1) Naitong (2) Anok (3) Khaklu (4) Khali (5) Gorjong (6) Kewa (7) Dendak (8) Phatung (9) Gaigra (10) Gabing (11) Tongbai (12) Mongbai (13) Totaram (14) Harbang (15) Mwiching (16) Bilok (17) Saka Rupini (18) Aslong (19) Kema (20) Charai and (21) Masbeng. The dialects and sub-dialects of Kokborok are recognised and label after the speakers of the Tribes or sub-tribes and clans who use the patronym namely Debbarma, Tripura, Reang, Jamatia, Murasing, Koloï, Rupini and Noatia.

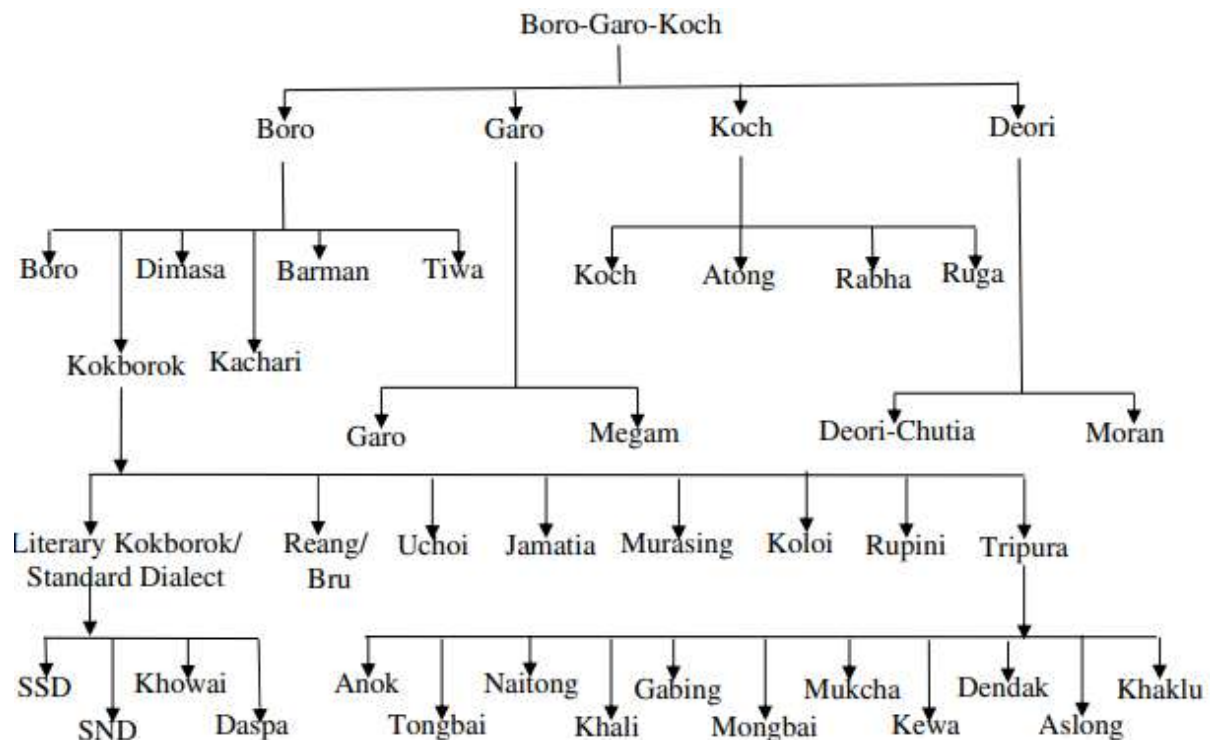


Fig 1: Kokborok Language Family and its Dialects

## **2. Phonemic Inventory**

The phonemic inventory of the Tripura variety of Kokborok comprises of six pure vowels, six diphthongs and twenty consonants as segmental phonemes. The term segment refers to the individual speech sounds that make up syllables whereas phoneme is the minimal distinctive unit of speech in a language. Segments are distributed into two kinds; vowels and consonants. Typical vowel segments are [i a u]; a few examples of typical consonants are [m b k f s]. At first, we will discuss about the vowels in Tripura and followed by consonants thereafter.

### **2.1. Vowels in Tripura**

Phonetically, vowels are sounds articulated without a complete CLOSURE in the mouth or a degree of narrowing which would produce audible Friction; the air escapes evenly over the centre of the TONGUE. When the air escapes solely through the mouth, the vowels are said to be ORAL whereas if some of the air is simultaneously released through the nose, the vowels are said to be NASAL. At the phonological level, vowel is defined as syllabic, the sound that forms the peak of a syllable (Crystal, 2003, p.496).

At the phonological level, Tripura does not have instances of long and short vowels phonemes. The length of vowels does not affect the meaning in this variety.

Based on the quality of the vowel sounds, vowel is classified into two types: monophthongs and diphthongs.

#### **2.1.1 Monophthongs in Tripura**

A vowel whose quality remains relatively constant and does not glide is called a pure vowel or monophthongs. Tripura has six pure vowel sounds, they are /i, e, a, ɔ, u and ʊ/. Among the six pure vowels in Tripura, five vowels are primary whereas the other one /ʊ/ is secondary. Figure 1 shows the primary and secondary cardinal vowels of Tripura on the vowel quadrilateral.

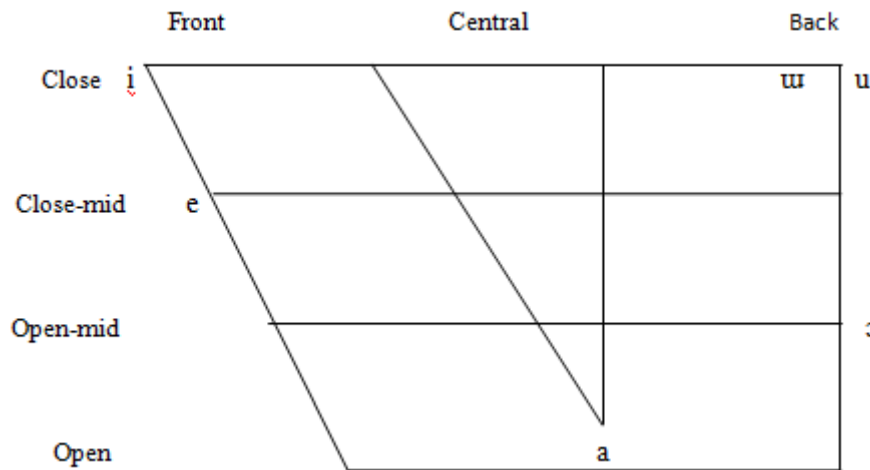


Figure 2: Pure Vowels or Monophthongs chart in Tripura.

The vowels occurring in different language of the world can be classified into three different parameters such as (i) **vowel frontness and backness** (horizontal dimension) (ii) **vowel height** (vertical dimension) and (iii) **rounding** (lip position or shape of the lips). The first parameter classifies the vowels into (a) **front** (b) **central** and (c) **back** and the second parameter classifies the vowels into (a) **high** (close) (b) **mid** and (c) **low** (open). The third parameter classifies the vowels into (a) **rounded** (round lips) and **unrounded** (spread lips).

For the purpose of describing speech sounds we need to recognise five areas of the tongue which are given here for reference.

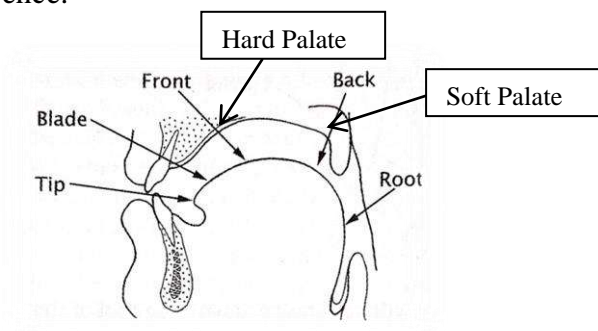


Figure 3: Areas of the tongue.

Monophthongs in Tripura can be described on the basis of these three qualities as shown in (1-3).

1. **Vowel frontness and backness** (horizontal dimension).

Tripura encompasses two front vowels, one central vowel and three back vowels which are described underneath.

(a) Front Vowels: /i, e/. Front vowels are produced by raising the front of the tongue towards the hard palate.

(b) Central Vowel: /a/. This vowel is produced by raising the central part of the tongue towards the junction of the hard and soft palates.

(c) Back Vowels: /ɔ, u, ʊ/. These vowels are produced by raising the back of the tongue towards the soft palate.

**2. Vowel height** (vertical dimension). It refers to the relationship between the highest point of the tongue and the roof of the oral cavity. Tripura consists of three high vowels, two mid vowels and one low vowel as shown in (2a), (2b) and (2c) respectively.

(a) High (close) Vowels: /i, u, ʊ/. During the articulation of high vowel the tongue is raised towards the roof of the mouth.

(b) Mid Vowels: /e, ɔ/. If the tongue body is positioned at a neutral height in the oral cavity, the vowels articulated are mid vowels.

(c) Low (open) Vowel: /a/. If the tongue is only slightly raised, so that there is a wide gap between its highest point and the roof of the oral cavity, then an open or low vowel is produced.

**3. Rounding** (lip position or shape of the lips). The lips are the second articulator involved in the production of vowels. Thus the position of the lips controls the vowel quality.

In Tripura variety, the phonemic inventory comprises of two rounded vowels and four unrounded vowels which are displayed below in (a) and (b).

(a) **Rounded** (round lips): /ɔ, u/

(b) **Unrounded** (spread lips): /i, e, a, ʊ/.

Vowels in (3a) are called ‘rounded’ because during the articulation of these vowels the lips are rounded. Similarly, those in (3b) are called ‘unrounded’ because the lips are spread apart during articulation.

This Tripura variety highlighted in having a high back unrounded vowel feature.

**2.1.1.1. Description of Tripura vowel monophthongs**

The six vowel monophthongs in Tripura are described below with an example of each vowel monophthongs.

Phoneme	Description	Example
/i/	high/close front un-rounded vowel	as in /kisip/ ‘hand fan’
/e/	close-mid front un-rounded vowel	as in /ceper/ ‘narrow’
/a/	low open central un-rounded vowel	as in /kabaŋ/ ‘many’

/ɔ/	open-mid back rounded vowel	as in /kɔbɔŋ/ ‘pillow’
/u/	high/close back rounded vowel	as in /buduk/ ‘rope’
/ʉ/	high/close back un-rounded vowel	as in /mʉsu/ ‘chilli’

**2.1.1.2. Description and Distribution of Vowel phonemes and their occurrence:**

All the vowels phonemes or monophthongs of Tripura can occur in all word positions i.e., in initial, medial and final positions.

The following table shows the distribution of vowels in Tripura variety:

Vowels	Initial	Gloss	Medial	Gloss	Final	Gloss
i	/irʉ/	‘here’	/kitiŋ/	‘round’	/cini/	‘our’
	/imaŋ/	‘dream’	/bihik/	‘wife’	/peli/	‘liver’
e	/er/	‘to increase’	/bekereŋ/	‘bone’	/tɔte/	‘frog’
	/emprɔ/	‘tadpole’	/beŋ/	‘spider’	se	‘shift’
a	/aŋ/	‘I’	/kacak/	‘red’	/la/	‘take’
	/ani/	‘my/mine’	/katal/	‘new’	/basa/	‘offspring’
ɔ	/ɔk/	‘belly’	/mɔkɔl/	‘eye’	/bɔrɔ/	‘where’
	/ɔkra/	‘elder’	/kɔlɔk/	‘long’	/ʒɔtɔ/	‘all/everybody’
u	/ulʉ/	‘later’	/kutʉŋ/	‘hot’	/ru/	‘boil’
	/ul/	‘grind’	/bukʉŋ/	‘nose’	/lu/	‘pour’
ʉ	/ʉi/	‘response to calling’	/tʉi/	‘water’	/sʉrʉ/	‘who’
	/ʉk/	‘yes’	/sʉi/	‘dog’	/mʉsu/	‘chilli’

Table 1: Distribution of Tripura vowel phonemes

**2.1.2. Diphthongs in Tripura**

A diphthong is a sound which consists of a movement or glide from one vowel to another within a single syllable. Examples of diphthongs in English words are **tie**, **toy** and **town** etc.

Tripura has six vowel glides or diphthongs, i.e, /ai/, /ɔi/, /ui/, /ʉi/, /au/ and /ɔa/, and one triphthong, i.e, /aui/. Tripura has one centring and five closing diphthongs. See the classifications of diphthong in Figure 2 and the ‘trajectory’ involved in the formation of each of the diphthongs of Tripura shown in Figure 3, 4 and 5.

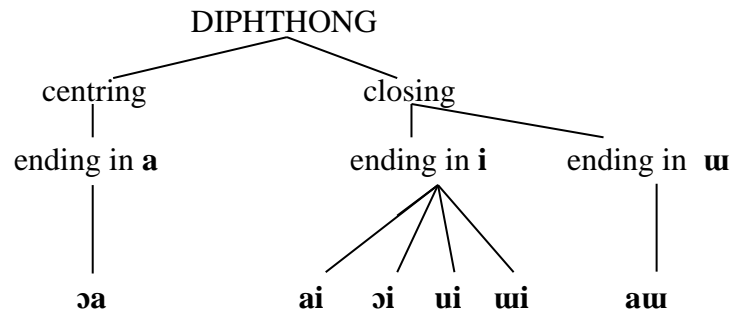


Figure 4: Classifications of Tripura diphthongs.

**2.1.2.1. a-ending diphthongs: /ɔa/**

There is only one a-ending diphthongs /ɔa/ in Tripura as demonstrated in Figure 3 below.

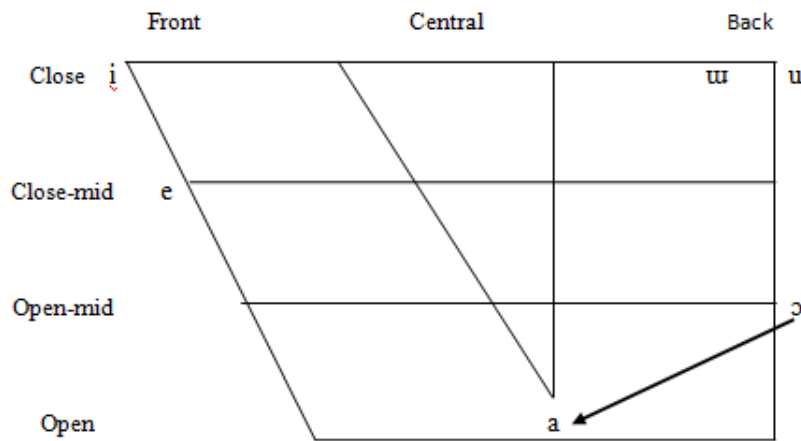


Figure 5: a-ending diphthongs in Tripura.

**2.1.2.2. i-ending diphthongs: /ai, ɔi, ui, ui/**

Tripura retain four i-ending diphthongs viz. /ai, ɔi, ui, ui/. It is one of the idiosyncratic features of Tripura diphthongs. Consider the Figure below.

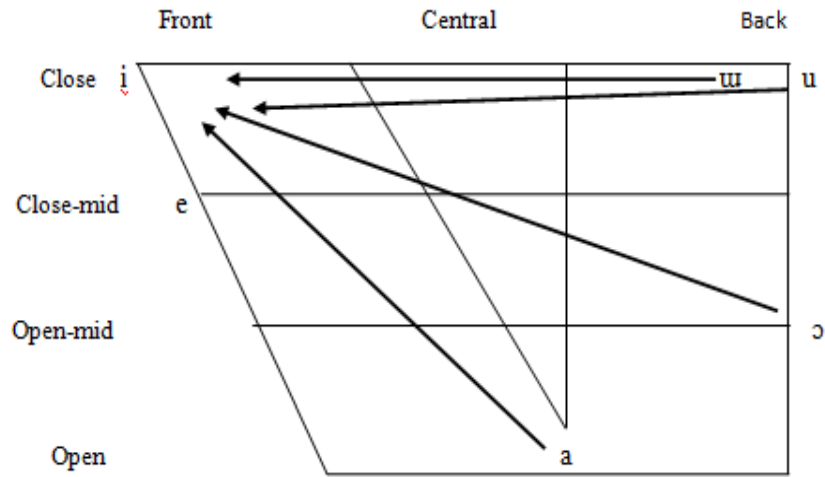


Figure 6: i-ending diphthongs in Tripura.

**2.1.2.3. u-ending diphthongs: /au/**

Figure 5 shows the u-ending diphthong gliding towards the **u** vowel, as the symbol indicates.

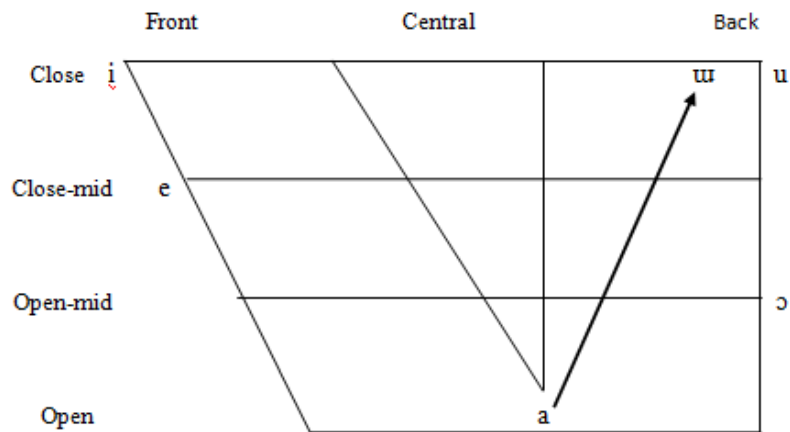


Figure 7: u-ending diphthongs in Tripura.

**2.1.2.4. Distribution of diphthongs in Tripura.**

The diphthongs cannot occur in all the word positions in Tripura. Only two diphthongs such as /ai, ui/ can occur in all the positions of words whereas /ei, oi/ and /oa/ take place only in the medial and final position of words. There is one distinctive diphthong, namely /au/ which occurs primarily in the word final position. See the table below.

Diphthongs	Initial	Gloss	Medial	Gloss	Final	Gloss
ai	/aisri/	‘early morning’	/t <sup>h</sup> aipɔŋ/	‘jackfruit’	/balai/	‘leaf’
	/ai/	‘just’	/mairɔŋ/	‘rice grain’	/slai/	‘instead of’
ɔi	-	-	/sɔitan/	‘devil’	/tɔtɔi/	‘uncle’
ui	-	-	/lɔiɣya/	‘shame’	/bɔi/	‘water flow’
			/kuica/	‘eel’	/sukui/	‘wheel’
au	-	-	/buruima/	‘woman’	/sui/	‘write’
			-	-	/cau/	‘eating’
uui	uui	‘responses to calling’	-	-	/sau/	‘paining’
	-	-	muik <sup>h</sup> an	‘meat’	suui	dog
ɔa	-	-	/pɔaha/	‘250 gm’	yuɣuui	mother
			/mɔani/	‘kind of superstitious belief’	/gɔa/	‘sharp bamboo’
					-	

Table 2: Distribution of Diphthongs

From the above data it is comprehensible to state that all the diphthongs in Tripura conclude with a closing diphthong /ai, ɔi, ui, uui and au/ except one with a centring diphthong that is /ɔa/. The closing diphthongs predominantly end in /i/.

### 2.1.3 Triphthong in Tripura

When the three auditory elements are involved in a single syllable, the vowel glide is referred to as a triphthong, e.g. power, player. “Precisely, Tripura has no triphthongs; however certain combinations of /a/ and closing diphthong, specifically /auui/ as in /caui/ ‘eating’ are generally called triphthong”.

Tripura has only one triphthong, i.e. /auui/. It occurs when the glide /au/ is followed by the vowel /i/. For example:

- (1) caui ‘eating’
- (2) laui ‘taking’
- (3) k<sup>h</sup>auui ‘tightening’
- (4) rauui ‘cutting’
- (5) wauui ‘raining’

#### 2.1.3.1 Distribution of Tripura Triphthong

Tripura triphthong is found only in the word final position.

Triphthong	Initial	Gloss	Medial	Gloss	Final	Gloss
auui	-	-	-	-	caui k <sup>h</sup> auui	eating tightening

Table 3: Distribution of Triphthong

## 2.2. Consonants in Tripura

Crystal, David (2003:98) define consonant as ‘those UNITS which functions at the MARGINS of SYLLABLES, either singly or in CLUSTERS.

Tripura has twenty consonants sounds which are further classified on the basis of place of articulation; based on the manner of articulation and voicing. In respect of place of articulation, Tripura consonants can be divided into five bilabials sounds, seven alveolars, three palatals, four velars and one glottal. And with regard to the manner of articulation and voicing, Tripura consonants can be further categorized into (i) voiceless unaspirated stops {/p, t, c, k/}, (ii) voiceless aspirated stops {/p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/}, (iii) voiced stops {/b, d, ʒ, g/}, (iv) nasals {/m, n, ŋ/}, (v) fricatives {/s, h/}, (vi) tap or flap {/r/}, (vii) lateral {/l/} and (viii) semivowels {/w, y/}. Tripura dialect does not have voiced aspirated stops. On the whole Tripura has eleven voiced and nine voiceless sounds. The semi vowel /j/ in IPA is written here as /y/.

Aspiration is phonemic in Tripura.

Manner of Articulation		Place of Articulation									
		Bilabial		Alveolar		Palatal		Velar		Glotal	
		vl	vd	vl	vd	vl	vd	vl	vd	vl	vd
Stop	Un-aspirated	p	b	t	d	c	ʒ	k	g		
	Aspirated	p <sup>h</sup>		t <sup>h</sup>				k <sup>h</sup>			
Nasal			m		n				ŋ		
Fricative				s						h	
Tap or Flap					r						
Lateral					l						
Semi-vowel			w				y				

Table 4: Tripura Consonant chart.

### 2.2.1 Description of Tripura consonants

Descriptions of Tripura consonants phonemes are presented in Table 5 below.

Sl. no	Consonants	Phonemic descriptions	Tripura	Gloss
1.	/p/	Voiceless unaspirated bilabial stop	/pɔlək/	‘forget’
2.	/p <sup>h</sup> /	voiceless aspirated bilabial stop	/p <sup>h</sup> ai/	‘come’
3.	/b/	voiced unaspirated bilabial stop	/bedek/	‘branch’
4.	/t/	voiceless unaspirated alveolar stop	/tan/	‘chop’
5.	/t <sup>h</sup> /	voiceless aspirated alveolar stop	/t <sup>h</sup> ui/	‘blood’
6.	/d/	voiced unaspirated alveolar stop	/dui/	‘interrogative marker’
7.	/c/	voiceless aspirated palatal stop	/cati/	‘traditional lamp’
8.	/ʃ/	voiced unaspirated palatal stop	/ʃala/	‘rice sapling’
9.	/k/	voiceless unaspirated velar stop	/kuk/	‘grasshopper’
10.	/k <sup>h</sup> /	voiceless aspirated velar stop	/k <sup>h</sup> iri/	‘naughty’
11.	/g/	voiced unaspirated velar stop	/gɔra/	‘fermented rice’
12.	/m/	voiced bilabial nasal	/muŋ/	‘name’
13.	/n/	voiced alveolar nasal	/nuŋui/	‘paternal aunt’
14.	ŋ	voiced velar nasal	/puŋuŋ/	‘to make sound’
15.	/s/	voiceless alveolar unaspirated fricative	/sui/	‘dog’
16.	/h/	voiceless glottal fricative	/hiŋ/	‘cold’
17.	/r/	voiced alveolar tap or flap	/ruŋ/	‘touch’
18.	/l/	voiced alveolar lateral	/luŋ/	‘drink’
19.	/w/	voiced bilabial approximant	/wayeŋ/	‘cradle’
20.	/y/	voiced palatal approximant	/yat <sup>h</sup> ek/	‘leg’

Table 5: Description of Tripura consonants phonemes.

### 2.2.2 Distribution of Tripura Consonants phonemes and their occurrence

Tripura has nineteen consonants occurring in the initial word positions, nine final consonants and eight consonants which occur in all the word position. Table 6 illustrates the distribution of Tripura consonants phonemes.

Phonemes	Initial	Gloss	Medial	Gloss	Final	Gloss
<b>p</b>	/pəɔk/	‘forget’	/t <sup>h</sup> aipəŋg/	‘jackfruit’	/but <sup>h</sup> uɔp/	‘nest’
<b>t</b>	/tək/	‘bird’	kətək	‘neck’	cat	a roof to support the edible climber plants
<b>k</b>	/kəsək/	‘rotten’	yakuŋ	‘leg’	hilik	‘heavy’
<b>p<sup>h</sup></b>	/p <sup>h</sup> andək/	‘brinjal’	bəp <sup>h</sup> aŋ	‘tree’	-	-
<b>t<sup>h</sup></b>	/t <sup>h</sup> apla/	‘ashes’	əkmat <sup>h</sup> ai	‘navel’	-	-
<b>k<sup>h</sup></b>	/k <sup>h</sup> unɟur/	‘ear’	bak <sup>h</sup> a	‘heart’	-	-
<b>b</b>	/bukuŋ/	‘nose’	bəbar	‘flower’	gab	‘gum’
<b>d</b>	/duwar/	‘door’	bedek	‘branch’	-	-
<b>g</b>	/gəbər/	‘cow dung’	geguma	‘wolf’	-	-
<b>ɟ</b>	/ɟabuɪ/	‘everyone’	k <sup>h</sup> unɟur	‘ear’	-	-
<b>m</b>	/makk <sup>h</sup> ra/	‘monkey’	lama	‘road’	‘gam’	‘good’
<b>n</b>	/nək/	‘house’	munuɪma	‘to laugh’	karan	‘dry’
<b>ŋ</b>	-	-	/k <sup>h</sup> aŋa/	‘cheek’	bekreŋ	‘bone’
<b>c</b>	cuwak	‘wine’	kacak	‘red’	-	-
<b>s</b>	sui	‘dog’	kuustum	‘black’	-	-
<b>h</b>	hər	‘night’	bihik	‘his wife’	-	-
<b>r</b>	raŋ	money	gufusa	‘small’	bukur	‘skin’

<b>l</b>	lecu	‘litchi’	kələk	‘tall’	məkəl	‘eye’
<b>w</b>	watui	‘rain’	‘muiwa’	‘bambooshoot’	-	-
<b>y</b>	yak	‘hand’	miya	yesterday	-	-

Table 6: Distribution of Tripura Consonants phonemes

## Conclusion

After the analysis of the segmental sounds of Tripura, it is found that Tripura has six vowels and twenty consonants phonemes. All the vowels phonemes of Tripura can occur in all word positions i.e., in initial, medial and final. There are six diphthongs and one triphthong in Tripura. Among all the six diphthongs, only /ai/ and /ui/ occur in all the word positions. A triphthong /awi/ exclusively occurs only in the word final position. At the phonological level, Tripura does not have instances of long and short vowels phonemes. The length of vowels does not affect the meaning in this variety. The voiced stops /d, g/ and the voiceless aspirated stops /p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/ are missing in the word final position in Tripura which is one of the typological features of Tibeto-Burman languages shared by this variety.

There are no dental, labiodentals, retroflex, uvular and pharyngeal sounds in Tripura. It is also found that aspirated consonants and voiced consonant (except velar nasal /ŋ/) cannot occur in the word final position. Tripura does not have voiced aspirated stops. Aspiration is phonemic in Tripura. Fricative sound /f/ is absent in Tripura, however at the present time it is observed to be utilized by the young speakers due to the influence of Indo-Aryan languages viz. Bengali, Assamese and Hindi in the state of Tripura.

This paper has brought forth the segmental phonemes of Tripura which would be a great interest for the Tripura community in particular and other Kokborok speakers and researchers in general who are keen to do research in Kokborok language. This will also further enrich the development of the Kokborok language.

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