ZEITGESCHICHTE
ISSN / eISSN 0256-5250 / 2569-5304
Publisher BRILL DEUTSCHLAND GMBH,
VIENNA UNIV PRESS, ROBERT BOSCH BREITE 6,
Volume 25-issue 1-(2025)

Tonal Variations of Tripura (Usoi) Language

Md. Mostafa Rashel
Associate Professor of Linguistics, Department of English, Faculty of Humanities and Social Sciences, Daffodil International University

Abstract
Tripura, also known as Tripuri, is one of the major languages spoken in the state of Tripura, located in the North-East region of India and belongs to the Bodo-Garo group of the Tibeto-Burman (TB) branch of the Sino-Tibetan (ST) family. The tone has almost disappeared among the speakers of the Tripura (Usoi) language in Bangladesh, especially young speakers due to the influence of the majority of languages in Bangladesh like Bangla, Chakma, and Marma. The study highlights how tones operate in both monosyllabic and disyllabic words, with clearer contrasts observed in single-syllable words, and provides a brief description of tones of other TB languages. The research explains that there are three tones in the Tripura (Usoi) language: High tone and Falling tone are represented by an acute accent (ˊ) and grave accent (ˋ) respectively while Mid tone is unmarked, and also identifies minimal sets of words differing only in tone, illustrating the functional role of tones in distinguishing meaning in Tripura language. The analysis of the Usoi variety suggests that most monosyllabic word roots carry a mid-tone. Overall, the study sheds light on the tone system of the Tripura (Usoi) language with a particular emphasis on the southern part of Chittagong Hill Tracts (CHT) in Bangladesh and provides valuable insights into its variations, functions, and implications for further research.

Keywords: Tibeto-Burman (TB), tones, frequency, triplets, monosyllabic, disyllabic

1. Introduction

Tripura language, also known as Tripuri, is one of the major languages of Tripura state in North-East India. Tripura belongs to the Bodo-Garo group of the TB branch of the ST family. Tripuri is also known as Kokborok (ISO 639-3 trp), which is also known as Tipperah, Tippurah, Tipra, Tipura, Triperah, and Tripura in Tripura state and is also spoken in some parts of Bangladesh, especially in the CHT. The word 'Tripra' is said to originate from the word's tui 'water' and pra (which means confluence) in Tripura language. Therefore, the meaning is the people who live at the confluence of rivers (Tripura 1978: 4). These people were also known as Debbarmas, after the long-term rulers of this kingdom until it united with the Indian republic in 1949. Tripura is also the third largest population of the tribes in the CHT, Bangladesh. According to the 2022 Census of Bangladesh, the total number of Tripura in Bangladesh is about 156,578. Ethnically related to the Boro people of Assam, they refer to themselves as Borok or Twiprasa (Hoque, 2014: 34; Jamatia 1996: 1670). The researcher will use 'Tripura' to refer to the spoken language of Tripura people in Bandarban instead of 'Kokborok' throughout the article. In Bangladesh, Tripura people themselves call their language 'Tripura', 'Tipera', or 'Tipra'. In addition, they learn Bangla, the principal language of Bangladesh. In Bangladesh, Tripura is spoken in Bandarban, Rangamati, and Khagrachari in CHT. 'Kok' in Tripura means 'word' or 'language' and 'Borok' means 'people'. Thus, the literal meaning of Kokborok is the language spoken by the people (Bulbul 2000: 11; Baskaran 2015: 33; Jamatia

1996: 1670). Tripura is also recognized as a state language and the second official language of Tripura State in India and it is used in daily conversation at home and the marketplace in Bandarban, Rangamati, Khagrachari in Bangladesh, and Tripura State in India.

1.1 Linguistic Environment of Tripura Language

Long ago, Tripura State was predominantly Tripura-speaking, but numerous Bengalis have now settled there and the indigenous Tibeto-Burman speaking Tripuri, once the dominant group, have been reduced to a minority in their own homeland (Burling 2003: 169). Many Tripuris in Bangladesh and Tripura State are bilingual, or even multilingual, due to the influence of the dominant Bangla language (Baskaran 2015: 33), and Bengalis form a major part of the local population. Currently, some Bengalis who are living in Tripura can speak both Bangla and Tripura language (Jacquesson 2008: 6), but in general Bangla language is overpowering Tripura language. Today, apart from farmers, many Bangladeshi Tripura are traders, service-people, and professionals such as doctors, engineers, etc. When they move to urban centres, Tripura people do not use Tripura language. As with other linguistic minorities in Bangladesh, Tripura also endure a disadvantage as the medium of instruction in schools is Bangla. Tripura people do not currently use their own script to write their language. Koloma was the traditional script of Kokborok, which has now disappeared (Hasan 2011: 116). This Koloma script is based on the Bengali/Assamese. Tripura written language is traditionally said to have existed in its various forms since at least the 1st century AD, the traditional starting date of the historical records of Tripura Kings. The Tripura script is found on ancient coins of Tripura from the 16th century (Jacquesson 2008: 7). The history of Tripura includes two distinct periods- the largely legendary period described in the Rajamala, a chronicle of the supposed early kings of Tripura, and the period since the reign of the great king Dharma Manikya (reigned c. 1431-62). The ancient book Rajratnakar, also known as Rajmala, was originally written in Koloma script by Durlobendra Chantai. It is a chronicle of 184 Tripuri kings. Later, this book was translated into Sanskrit by the Brahmans, Sukreshwar and Vaneshwar in the court of Dharma Manikya (reigned c. 1463-1515) and later translated into Bangla language. The script is still sometimes used for traditional astrology.

2. Research Methodology

Preliminary steps include an extensive review of previous work on all varieties of the Tripura (Usoi) language. The researcher, for field data collection, had visited Bandarban, Rangamati, and Khagrachari, but the research work was primarily carried on in the southern part of the Chittagong Hill Tracts (CHT) because the speakers live mostly in this area. The researcher applied the language documentation approach and naturalistic data analysis for the tone study in the Tripura language. The methodology is conducting linguistic data collection from the samples of native speakers' spoken texts, assembling a corpus of the samples, and representing it in the Tripura language. The data are systematically extracted to determine the patterns of tone and functions of the tone concerning different syllables. The comparative analysis of other Tibetan languages mainly those which lie in the Bodo-Garo group shed light on variations. The researcher used qualitative approaches like interviews, focus group discussions, an observational method, and documentary research, in addition to field methods such as audio and video recording, to analyze and distinguish the function and differences of tones across the linguistic varieties. This approach intends to realize comprehensive insights using linguistic aspects from the descriptive linguistics domain regarding the tonal issue in Tripura (Usoi)

language. The study identifies three tones in the Tripura language: High tone, Mid-tone, and Falling tone. These tones are analyzed based on data collected from native speakers, with measurements of fundamental frequency (F0) and duration.

3. Previous Discussion on Tripura (Usoi) Tones

The research done on the Tripura language in India, such as Pai (1976: 17) and Jacquesson (2008: 6) collected data based on the speech of Agartala, Tripura in India. Pai mentioned that Kokborok has two tones: level tone and high tone, and Jacquesson (2008: 29) refers to high tone (*ɟaskuˀ* 'knee') and low tone (*ɟasku* 'nail'). Both analyses suggest a contrast of two-level tones. This is unlike the most widespread pattern in a variety of Bodo-Garo languages, as in Bodo which has a level tone and a falling tone. Huziwara (2008: 198) collected data at the Rowangchari region in the Karnaphuli basin, Bandarban (CHT), Bangladesh, and found two distinctive tones: high tone and falling tone. Tripura in India is fully tonal, like many Bodo-Garo (BG) languages (but not Garo). It appears that Bangladesh Tripura is like Deori (Jacquesson 2005) which has marginal tonal distinctions in the speech of the oldest people but has lost tonal contrasts in the speech of all younger speakers. It also appears that the oldest speakers have a system different from that of Tripura in India and Bodo, among other BG languages, with a High tone, a Mid-tone, and a Falling tone. A similar analysis has also been proposed for Manipuri/Meithei (Chelliah 2003: 428; Singh & Singh 2007: 1), which is not a BG language but is spoken in the same area. Some BG systems (and another analysis of Manipuri/Meithei) have only two tones, one level and one falling. Karbi (Konnerth 2014: 76) discusses the issues involved in low functional load for tones, which means that tones are there but because the speakers do not rely on the tone differences as much as speakers of, for example, Thai or Mandarin, there may be variation in the way that speakers pronounce and feel about the tones. In the paper by Konnerth and Teoh (2014: 23), they showed that when playing back recordings of words where speakers clearly distinguished three tones, the listeners did not always perceive and distinguish them correctly. The tone has almost disappeared among the speakers of Tripura in Bangladesh, especially young speakers, probably due to the influence of the majority languages in Bangladesh like Bangla and Chakma (Huziwara 2003).

4. Core Tone Analysis

For the tone analysis, data from three older speakers is presented here (two males and one female). The recordings were processed and analyzed using Praat (Boersma and Weenink 2018) after the collection of the speech data. Each iteration of the target word was segmented based on information in the waveform and the spectrogram. The sound files were annotated in a Praat text grid. For getting the measurements (e.g., duration, F0 mean, onset and offset value, pitch range) F0 script was used. The speakers pronounced each word in isolation with three repetitions. Three tokens were used to allow for possible influences of prosody. These were recorded in audio and video mode. For identifying the tone, monosyllabic and disyllabic roots were used. The duration and fundamental frequency of each word were measured. From the data, it appears that three tones exist in Tripura. The 'High' tone is somewhat rising, 'Mid' tone is mid slightly falling, and 'Falling' tone is indeed falling sharply from fairly high.

The existing data shows that the pitch of all tones differs from speaker to speaker. Naturally, the pitch frequency is quite high for the female (speaker 3). Data from two speakers, both male, was used for the analysis of the Mid-tone. The female speaker did not have this tone

in her speech; she used a Falling Tone in words where the male speakers have a Mid-tone. The values of High Tone, Mid Tone, and Falling Tone are given in Tables 4, 5, and 6. Table 1 shows the mean value of onset and offset F0 and duration of the High-tone first syllable for three speakers. For one male and one female speaker, there is a substantial rise in F0, for the other male speaker the rise is less substantial.

High Tone	Speaker	Onset	Offset	Duration	Rise of pitch
Mean value	1 (M)	150	165	0.36	15
	2 (M)	93	96	0.29	3
	3 (F)	195	253	0.58	58

Table 1 Mean fundamental frequency of onset and offset of High Tone (3 speakers)

Table 2 shows the mean value of onset and offset F0 and duration of the Mid-tone first syllable for two male speakers. This shows a very short fall.

Mid-tone	Speaker	Onset	Offset	Duration	Fall of pitch
Mean value	1 (M)	156	154	0.42	2
	2 (M)	93	91	0.36	2
	3 (F)	-	-	-	-

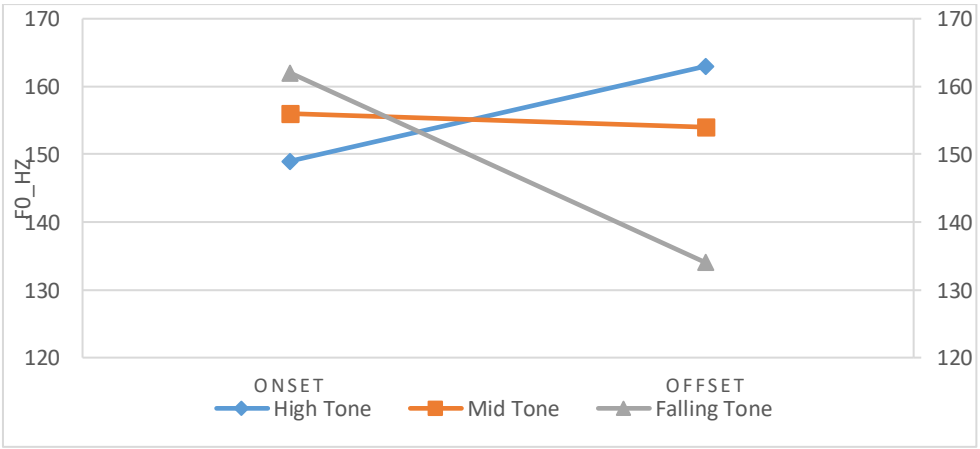
Table 2 Mean fundamental frequency of onset and offset of Mid Tone (2 speakers)

Table 3 shows the mean value of onset and offset F0 and duration of the Falling tone for three speakers. Here the fall is substantial.

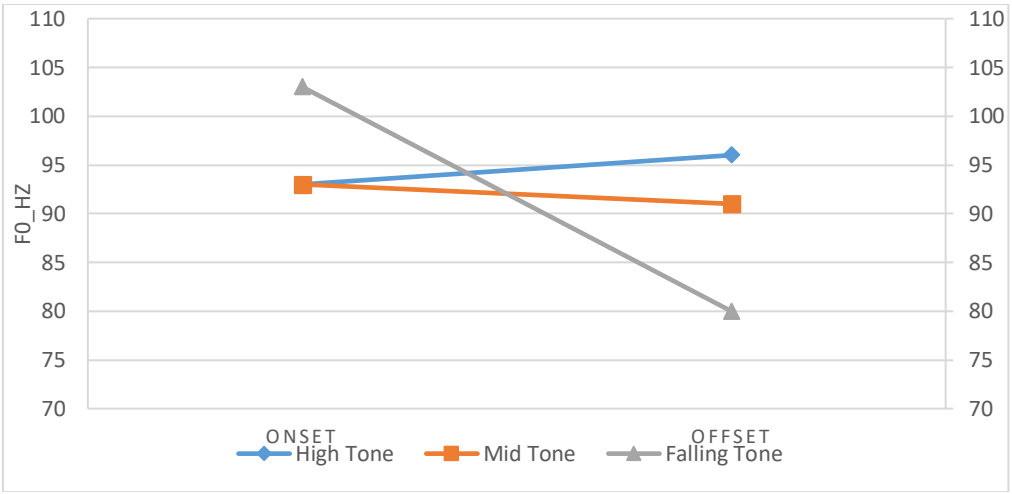
Falling Tone	Speaker	Onset	Offset	Duration	Fall of pitch
Mean value	1 (M)	162	134	0.36	28
	2 (M)	103	80	0.32	23
	3 (F)	194	146	0.35	48

Table 3 Mean fundamental frequency of onset and offset of Falling Tone (3 speakers)

Graphs 1 and 2 show the F0 means for the two male speakers. Note that the Falling tone covers nearly the entire pitch range, from high to low. The three tones can be contrasted in minimal sets, for the oldest speakers, as shown in the Tonal Minimal Triplets section.



Graph 1 Tone position of Tripura (Speaker 1)



Graph 2 Tone position of Tripura (Speaker 2)

High Tone in Tripura morpheme with Gloss	Speaker 1 (M)				Speaker 2 (M)				Speaker 3 (F)			
	On set	Off-set	Duration	Rise of pitch	On set	Off-set	Duration	Rise of pitch	On set	Off-set	Duration	Rise of pitch
tʰó 'drop of liquid'	163	169	0.17	6	140	108	0.18	-32	224	318	0.44	94
ká 'cry'	167	170	0.16	3	122	87	0.19	-35	184	280	0.47	96
kʰú 'bad smell'	162	163	0.28	1	147	123	0.19	-24	224	342	0.46	118
kʰí 'stool, closet'	164	166	0.24	2	158	117	0.22	-41	217	320	0.52	103
dú 'six'	165	187	0.3	22	129	110	0.2	-19	172	129	0.23	-43
rí 'scratch', 'draw'	155	177	0.39	22	104	120	0.23	16	188	132	0.52	-56
wá 'bite'	158	169	0.33	11	95	97	0.16	2	173	237	0.42	64
lṹ 'fever'	154	210	0.66	56	-	-	-	-	194	175	0.32	-19
ró 'brush/soft'	143	161	0.26	18	106	105	0.36	-1	189	289	0.49	100
hó.du 'many'	140	155	0.52	15	108	101	0.18	-7	188	166	0.23	-22
sán~sám 'pain'	143	149	0.56	6	114	98	0.35	-16	114	163	0.32	49
tʰúŋ 'deep'	155	160	0.47	5	126	129	0.38	3	129	350	0.33	221
próí 'soon'	143	170	0.19	27	142	102	0.19	-40	126	305	0.4	179
rwá 'leech'	143	155	0.38	12	107	82	0.27	-25	180	142	0.35	-38
pʰáí 'study'	154	171	0.24	17	104	103	0.29	-1	208	162	0.23	-46
ráí 'cane'	147	212	0.37	65	98	86	0.23	-12	209	318	0.58	109
á.juŋ 'uncle'	142	147	0.61	5	94	102	0.48	8	-	-	-	-
tó.kja 'cap', 'crown'	102	104	0.31	2	112	104	0.13	-8	176	171	0.06	-5
bé 'other'	194	131	0.34	-63	79	83	0.51	4	196	143	0.36	-53
lá.ci 'shame'	185	161	0.2	-24	87	90	0.15	3	184	164	0.2	-20
bú.a 'teeth'	162	147	0.38	-15	93	96	0.3	3	184	131	0.41	-53
slái 'than'	183	152	0.31	-31	140	141	0.42	1	225	145	0.39	-80
kráiŋ 'extreme fun'	198	143	0.48	-55	102	105	0.33	3	180	293	0.56	113
kró 'curly hair'	181	166	0.32	-15	89	90	0.13	1	-	-	-	-
bró 'man'	161	178	0.34	17	89	91	0.31	2	186	152	0.28	-34
krá 'ripe/deep forest'	189	150	0.38	-39	82	88	0.29	6	169	141	0.43	-28
brúŋ 'Tripura nation'	169	171	0.47	2	81	84	0.23	3	182	142	0.45	-40
sá 'tell'	169	140	0.3	-29	114	95	0.22	-19	196	243	0.43	47
ɟú.mi 'lean/decrease'	157	216	0.54	59	102	91	0.13	-11	193	259	0.67	66
rú.na 'open yam'	185	137	0.51	-48	103	92	0.48	-11	181	260	0.7	79
sú.na 'making rice'	185	155	0.44	-30	122	119	0.37	-3	196	250	0.51	54
só.na 'wash'	-	-	-	-	125	136	0.35	11	211	256	0.6	45

Table 4 Three speakers' production of the same morphemes in High Tone

Table 4 shows tokens of High Tone from all three speakers. Speakers 1 and 2 have overall higher F0 compared to speaker 3. The contour of this tone varies greatly for the female speaker 3, sometimes showing a large rise, but also sometimes showing a smaller fall. A minus sign in the 'Rise of F0' column in this table indicates that the F0 falls; similarly, a minus sign in the 'Fall of F0' column in Tables 6 and 7 indicates that the F0 rises. Note that there is some variation in the High Tone; it is sometimes replaced by a Mid or Falling Tone in some words by some speakers.

Mid Tone in Tripura morpheme with Gloss	Speaker 1 (M)				Speaker 2 (M)				Speaker 3 (F)			
	On set	Offset	Duration	Fall of pitch	On set	Offset	Duration	Fall of pitch	On set	Offset	Duration	Fall of pitch
ha 'soil'	156	154	0.30	2	113	92	0.26	21	191	153	0.39	38
ho 'belly'	164	162	0.21	2	130	109	0.16	21	184	101	0.25	83
bu 'beat'	157	153	0.62	4	108	101	0.24	7	0	0	0	0
ci.ni 'our'	174	170	0.39	4	116	101	0.38	15	196	139	0.55	57
ma.do 'cigarette'	145	144	0.53	1	111	123	0.21	-12	180	151	0.39	29
be.ra 'keep'	143	143	0.49	0	106	104	0.37	2	189	157	0.57	32
kʰnai 'hair'	153	149	0.45	4	122	91	0.34	31	205	145	0.4	60
kʰnu 'show'	156	155	0.3	1	115	103	0.25	12	209	140	0.43	69
la 'take'	153	143	0.42	10	93	88	0.49	5	165	150	0.39	15
ba.ri 'small fence'	173	150	0.48	23	94	92	0.46	2	175	137	0.48	38
bu.lai 'fight'	160	133	0.53	27	95	94	0.29	1	195	156	0.53	39
pʰo.ha 'piece'	181	138	0.54	43	93	89	0.42	4	216	151	0.43	65
toŋ 'big rice pot'	203	160	0.34	43	107	105	0.3	2	189	152	0.39	37
grai 'kidney stone'	182	192	0.33	-10	78	77	0.23	1	187	142	0.43	45

Table 5 Three speakers' production of the same morphemes in Mid-tone

Table 5 shows the forms for which male speakers 1 and 2 have Mid Tone; note that female speaker 3 has Falling Tone for these forms. Thus, Speakers 1 and 2 have what appears to be an innovative system with a Mid Tone, while Speaker 3, the female speaker, has a conservative system similar to Tripura in India with a High Tone, sometimes rising, and a Falling Tone.

Falling Tone in Tripura morpheme with Gloss	Speaker- 3 (F)				Speaker-1 (M)				Speaker-2 (M)			
	Onset	Offset	Duration	Fall of pitch	Onset	Offset	Duration	Fall of pitch	Onset	Offset	Duration	Fall of pitch
sà 'little'	188	155	0.27	33	174	147	0.24	27	123	109	0.22	14
sò 'who'	194	141	0.3	53	172	131	0.27	41	131	96	0.29	35
kà 'climb'	183	140	0.37	43	182	128	0.3	54	123	87	0.29	36
kʰì 'stool', 'closet'	212	155	0.4	57	189	138	0.33	51	109	103	0.19	6
kʰì 'treenail', 'pin'	208	146	0.33	62	193	139	0.32	54	124	99	0.24	25
tà 'moon'	210	129	0.33	81	207	123	0.35	84	117	87	0.28	30
tʰù 'lime'	202	152	0.4	50	186	138	0.37	48	-	-	-	-
hò 'fire'	207	144	0.34	63	170	146	0.33	24	113	100	0.2	13
hò 'night'	207	135	0.36	72	174	146	0.31	28	112	81	0.3	31
cà 'eat'	160	131	0.26	29	193	155	0.33	38	123	99	0.23	24

ɟì 'Kobra snake'	190	139	0.36	51	164	140	0.46	24	-	-	-	-
nù 'see'	187	165	0.44	22	160	195	0.41	+35	112	96	0.22	16
rì 'cloth'	198	149	0.4	49	177	132	0.4	45	101	98	0.27	3
là 'path, road'	142	114	0.44	28	178	129	0.45	49	117	87	0.38	30
ka□mi 'village'	173	132	0.43	41	193	143	0.47	50	113	90	0.46	23
tòm 'rice basket'	197	137	0.41	60	209	153	0.37	56	-	-	-	-
slài 'arm'	208	149	0.28	59	181	138	0.38	43	128	100	0.31	28
klài 'easy', cheap'	186	125	0.39	61	188	148	0.33	40	113	87	0.38	26
klài 'fall'	200	125	0.33	75	190	163	0.35	27	102	100	0.34	2
krà 'dry'	222	196	0.33	26	198	160	0.41	38	106	97	0.32	9
snùs 'dirty'	250	234	0.23	16	-	-	-	-	110	94	0.29	16
sòi 'dog'	195	143	0.39	52	184	157	0.36	27	110	99	0.27	11
sòi 'write'	194	138	0.38	56	176	134	0.26	42	114	89	0.31	25
tʰòi 'blood'	185	135	0.34	50	181	149	0.35	32	125	102	0.25	23
pài 'finish'	187	163	0.49	24	182	163	0.36	19	109	99	0.27	10
pài 'buy'	176	162	0.45	14	187	141	0.36	46	116	94	0.22	22

Table 6 Three speakers' production of the same morphemes in Falling tone.

Table 6 shows the forms with Falling Tones for all three speakers. As for the other tones, male speaker 2 uses an overall lower F0 range. All three speakers show a substantial fall in F0 for most forms.

There is some variation in the distribution of tones between speakers. For example, in some instances, both male speakers have a High Tone, but the female speaker has a Falling Tone; in a few tokens where two of the three speakers have a Falling Tone, the third speaker has a High Tone; for example, male speaker 1 appears to have a High Tone *nú* for 'see', while the other two have a Falling Tone *nù*.

This study has identified that for the male speakers that we recorded, a system of three distinct tones can be proposed. However, the variation discussed here suggests that more research is needed to fully understand the system.

4.1 Tonal Minimal Triplets

/á/ vs. /à/ vs. /a/

lài 'rice pots'
lái 'banana leaves'

bisà 'poison'
bisa 'fly'

wà 'bamboo'
wá 'bite'

klài 'easy', 'cheap'
klai 'must'

kà 'climb', 'run'
ká 'cry', 'arise'

ka 'footsteps', 'promote'

krá 'ripe'
krà 'hard', 'father-in-law'

sà 'sun', 'day'
sa 'please-politeness', 'one'
sá 'tell'

sài 'thousand'
sai 'army officer'

rwá 'leech
rwà 'axe'

lṹ ‘fever’
là ‘road’
la ‘take’

/é/ vs /è/ vs /e/
rèiŋ ‘call’
réiŋ ‘prompt’

sè ‘scales’
se ‘only/animate marker’

tʰè ‘small dam’
tʰe ‘CLF. fruits’

/í/ vs. /ì/ vs/ i/
kʰì ‘trenail’, ‘nail’
kʰí ‘stool’, ‘closet’

rí ‘scratch’
rì ‘cloth’
ri ‘look after’

/ó/ vs. /ò/ vs. /o/
tóŋ ‘carrying rice’
toŋ ‘completed’

ró ‘brush/soft’
rò ‘here’

hò ‘fire’, ‘night’
ho ‘belly’

sò ‘who’, ‘iron’
so ‘pull’

tòi ‘bring’, ‘water’, ‘egg’
toi ‘CLF. egg’

/ú/ vs. /ù/ vs. /u/
túŋ ‘roof’
tùŋ ‘warm’

lṹ ‘fever’
lù ‘carry’, ‘sick’

nù ‘see’
nu ‘drink’
bú ‘mix’
bu ‘beat’, ‘snap’
bù ‘body swelling’

kʰnu ‘show’
kʰnù ‘hello’

ku.tʰùŋ ‘deep’
ku.tʰuŋ ‘green’

/ə́/ vs /ə̀/ vs /ə/
kə́.cà ‘half’
kə̀.cà ‘old/tight/second’
kə.cà ‘middle’

4.2 Tone in Monosyllabic and Disyllabic Words

In single-syllable words, the contrast among rising, falling, and mid tones is clearer than in words with two or more syllables. Mostly, one tone can occur per word. There can be two tones in some disyllabic or trisyllabic compound words in Tripura as in *hó.tu* ‘paper balloon’, *tòi.kù.na* ‘bath’, *hà.pʰa.toŋ* ‘residence’. Table 7 shows combinations of initial consonants, vowels, and High vs. Falling tones.

The most frequent combinations of vowel and tone of Tripura are */á, à, ì, ò, ú, ù/*. Initial */k/* can combine with sesquisyllabic */ə/* with High and Falling tones, and */m/* only allows */ə̀/*. The stop palatal */c/* does not combine with High tone.

	á	à	é	è	í	ì	ó	ò	ú	ù	ə́	ə̀
p	-	√	-	-	-	-	-	-	-	-	-	-
t	√	√	-	-	-	√	√	√	-	√	-	-
c	-	√	-	√	-	√	-	-	-	√	-	-
k	√	√	-	√	-	√	-	-	√	-	√	√
p^h	√	√	-	-	-	-	-	√	-	-	-	-
t^h	-	√	-	√	-	-	√	√	√	√	-	-
k^h	√	-	-	-	√	√	-	√	√	-	-	-
d	-	√	-	-	-	-	-	-	√	-	-	-
b	√	-	-	√	-	-	-	-	√	√	-	-
ɟ	√	-	-	-	-	√	-	-	√	-	-	-
g	-	-	-	-	-	-	-	√	-	-	-	-
s	√	√	-	√	√	√	-	√	√	√	-	-
h	√	√	-	-	-	-	√	√	√	-	-	-
m	-	√	-	-	√	-	√	-	-	-	-	√
n	√	√	-	-	-	√	-	√	√	√	-	-
ŋ	-	-	-	-	-	-	-	-	-	-	-	-
r	√	√	-	-	√	√	√	√	√	√	-	-
l	√	√	-	√	√	√	-	-	√	√	-	-
j	-	-	-	-	-	-	-	-	-	-	-	-
w	√	√	-	-	-	-	-	-	-	-	-	-

Table 7 Initial Consonant and Tone

Table 8 shows the relatively few tone contrasts after initial consonant clusters. The */ə/* with a High or Falling tone and */í/* with a High tone do not occur after any consonant clusters. */è, ì, ò/* occur after *spl-*, *sn-*, and *kr-* respectively while */a/* with High tone occurs only after cluster *rw-*. Diphthongs after an initial consonant cluster also have some tonal restrictions in Tripura. For instance, */ái/* only occurs after *kr-*, */òi/* after *st-*, */ói/* after *pr,* and */àɔ/* after *kl-*. Diphthong */ei/* with High or Falling tone and */áɔ/* with High tone does not occur after any cluster. Examples are given in the data tables.

	á	à	é	è	ì	ó	ò	ú	ù	ái	ài	ói	òi	àɔ
pr-	-	-	-	-	-	-	-	-	-	-	-	√	-	-
cr-	-	-	-	-	-	-	-	-	-	-	√	-	-	-
kl-	-	-	-	-	-	-	-	-	-	√	-	-	-	√
kr-	√	√	-	-	-	√	√	-	-	√	-	-	-	-
k^hn-		√	-	-	-	-	-	-	√	-	-	-	-	-
br-	-	-	-	-	-	√	-	√	√	-	-	-	-	-
bl-	-	-	-	-	-	-	-	-	-	√	-	-	-	-
st-	-	-	√	-	-	-	-	-	-	-	-	-	√	-
sn-	-	-	-	-	√	-	-	-	√	-	-	-	-	-
sl-	-	-	-	-	-	-	-	-	-	√	√	-	-	-
spl-	-	-	-	√	-	-	-	-	-		-	-	-	-
rw-	√	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 8 Consonant cluster plus tone (diphthongs)

4.3 Sequences of Tones

For tone sequences in two-syllable words, data from the first speaker is presented here. The duration of the two syllables is shown separately in Tables 9 to 13. Where words contain two tones, the sequence can be HF, HM, FH, FF or MF. Table 9 shows the HF data.

High-Falling (HF)	Syllable	On set	Offset	Duration	Change of pitch
sí.kàŋ 'hip'	*sí*	178	183	0.11	5
	kàŋ	175	166	0.30	9
mú.sù 'cow'	*mú*	160	164	0.08	4
	sù	171	162	0.25	9
kȗ.tài 'shirt'	*kȗ*	161	163	0.20	2
	tài	182	144	0.21	38

Table 9 HF tone pattern

The HM pattern is shown in Table 10.

High-Mid (HM)	Syllable	On set	Offset	Duration	Change of pitch
kə́.cà 'half'	*kə́*	156	167	0.09	11
	cà	174	171	0.04	3
lí.lì 'about to die'	*lí*	154	170	0.29	16
	lì	160	159	0.29	1
kʰá.kʰnú 'pumpkin'	*kʰá*	142	149	0.04	7
	kʰnú	155	157	0.27	2

Table 10 HM tone pattern

The FH pattern is shown in Table 11.

Falling-High (FH)	Syllable	On set	Offset	Duration	Change of pitch
mà.ɟrú 'to add'	*mà*	157	151	0.25	6
	ɟrú	144	154	0.37	10
bì.sí 'wife'	*bì*	136	133	0.05	3
	sí	159	164	0.21	5
kài.skú 'nine'	*kài*	164	108	0.23	56
	skú	156	217	0.13	61
kè.sí 'hand fan'	*kè*	173	163	0.05	10
	sí	175	179	0.21	4

Table 11 FH tone pattern

The FF pattern is shown in Table 12. In general, the second Falling tone falls more.

Falling-Falling (FF)	Syllable	On set	Offset	Duration	Change of pitch
sì.gò 'neckless'	*sì*	174	155	0.15	19
	gò	157	134	0.17	23
rì.tào 'weave'	*rì*	156	146	0.42	10
	tào	160	136	0.17	24
hàŋ.gò 'coal'	*hàŋ*	161	146	0.24	15
	gò	149	134	0.25	15
tlù.tlù 'slowly'	*tlù*	169	152	0.29	17
	tlù	167	132	0.31	35
kə̀.cà 'old/sick'	*kə̀*	167	160	0.11	7
	cà	177	146	0.12	31
kì.sì 'wet'	*kì*	177	166	0.07	11
	sì	157	137	0.23	20
kài.cà 'eight'	*kài*	171	128	0.29	43
	cà	164	152	0.17	12
kè.sì 'fan'	*kè*	162	157	0.04	5

	sì	171	161	0.16	10

Table 12 FF tone pattern

The MF pattern is seen in Table 13.

Mid-Falling (MF)	Syllable	On set	Offset	Duration	Change of pitch
mu.sù 'spines'	*mu*	166	164	0.11	2
	sù	171	164	0.28	7
u.tùŋ 'after/behind'	*u*	165	163	0.26	2
	tùŋ	169	137	0.21	32

Table 13 MF tone pattern

Therefore, the tones of Tripura are in the process of disappearing. Even for the three older speakers whose elicited careful speech data is discussed here, there are substantial interspeaker differences; two speakers have three tones, one has two, and all vary somewhat in their use. Younger speakers do not produce these tonal differences in their speech. Even older speakers often show variation between tones in the same word in similar situations. In examples in this paper where older speakers use a tone consistently, it is indicated with acute for High tone and grave for Falling tone.

5. Conclusions

In conclusion, for the oldest speakers, Tripura has three tones (High, Mid, and Falling) in Bangladesh; two tones (High and Falling) contrast in Tripura in India. The Mid-tone is a new development in Tripura in Bangladesh**.** It perhaps is a stage on the way to the loss of tones, with the High and Falling tones sometimes neutralising to Mid-tone in some words for some speakers. The female speaker whose data for High and Falling tones is presented in this paper does not have the Mid-tone. Therefore, the tone system of Usoi is an area where further research would be useful, particularly concerning the Mid-tone which is not reported in Tripura as spoken in India.

Acknowledgements: I collected these data during my PhD fieldwork and would like to express my gratitude to La Trobe University for awarding me the La Trobe University Postgraduate Research and Full Free Scholarships. These scholarships enabled me to conduct research on this language.

References

Bangladesh Population Census (2011). Dhaka: Bangladesh Population Census.

Baskaran, S. G. (2015). Classifiers in Kokborok. *International Journal of Linguistics and Literature*, 4(5): 33-42.

Boersma, P. & Weenink, D. (2018). Praat: doing phonetics by computer. Version 6.0.37. Netherlands: Amsterdam University. Retrieved from http://www.praat.org/.

Bulbul, A. (2000). *Parbotto Chottogramer Tripura Bhasa Poriciti (Introducing Tripura Language of Chittagong Hill Tracts)*. Dhaka: Agami Publishers.

Burling, R. (2003). The Tibeto-Burman Languages of Northeastern India. In G. Thurgood & R. J. LaPolla (eds), The Sino-Tibetan Languages, 169-191. London & New York: Routledge.

Chelliah, S. L. (2003). Meithei. In G. Thurgood & R. J. LaPolla (eds), *The Sino-Tibetan*

Languages, 427-438. London & New York: Routledge.
Hasan, M. K. (2011). Causative Constructions in Kok-Borok. Dhaka University Journal of Linguistics 2(4): 115-
137.
Hoque, F. (2014). Kokborok: A Major Tribal Language of Tripura. *IOSR Journal of Humanities And Social Science (IOSR-JHSS)* 19 (10, V): 30-35.
Huziwara, K. (2003). Tone Sandhi in Chakma and Cak. Paper presented at the 36th International Conference on Sino-Tibetan Languages and Linguistics, La Trobe University.
Huziwara, K. (2008). Notes on Usoi Tripura Phonetics and Phonology. In G. Hyslop, S. Morey & M. W. Post (eds) *Northeast Indian Linguistics* 4: 197-215. New Delhi: Cambridge University Press.
Jacquesson, F. (2005). *Le deuri: langue tibéto-birmane d'Assam*. Leuven & Dudley, MA: Peeters.
Jacquesson, F. (2008). *A Kokborok Grammar (Agartala dialect)*. Agartala, Tripura: Kokborok Tei Hukumu Mission.
Jamatia, N. (1996). Kokborok is One of the Rich Languages of the World. Paper presented at the 4th International Symposium on Language and Linguistics, Bangkok.
Konnerth, L. A. (2014). *A Grammar of Karbi.* (PhD), University of Oregon, Oregon. Retrieved from https://scholarsbank.uoregon.edu/xmlui/handle/1794/17928.
Konnerth, L. A. & Teoh, A. (2014). Acoustic-statistical and perceptual investigations of Karbi tones: A peculiar case of incomplete neutralization of F0. In G. Hyslop, L. Konnerth, S. Morey & P. Sarmah (eds) *North Easy Indian Linguistics 6*. *Pacific Linguistics* A-PL 014: 13-38.
Pai, P. (1976). *Kokborok Grammar*. Mysore, India: Central Institute of Indian Languages.
Singh, H. D. & Singh, S. I. (2007). Exotic Phonemes: A Study of Manipuri Phonemes. *Language in India* 7(13).
Tripura, B. (1978). *The Tripuras of Chittagong Hill Tracts*. Chittagong: Tripura Upajati Shikha-O-Sanskritik Sangsad.