

Phonology of T'ap'anta Abaza: examples from Inzhig-Chkun and Gumlokt

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1 Introduction

1.1 General information about Abaza

In this article I describe two varieties of Tapanta dialect of Abaza (ISO-639-3 *abq*, glottocode *abaz1241*) spoken in two villages in the Karachay-Cherkess Republic: Inzhig-Chkun (in Abaza /jən'dʒəgʲ-tʃk'wən/) and Krasniy Vostok (in Abaza /g'wəm'lɔkt/). Abaza is a language of the Abkhaz-Abaza group of Northwest Caucasian family of languages. After the Caucasian War (1817–1864) a lot of Abaza, Abkhaz, Ubykh and Adyghe people were forced either to resettle from higher mountains or to immigrate to the Ottoman Empire. As a result Abaza people were split into those who remain in Russia (mostly in the Karachay-Cherkess Republic, see Figure ?? created with *lingtypology* (Moroz 2017)) and who moved to Turkey. According to the 2010 Russian census, there are slightly less than 38 thousand speakers of Abaza in Russia. The exact number of speakers in other countries, mainly in Turkey (Chirikba 2012: 21–23), is unknown. The data analyzed in this study were collected in 2018, 2019 and 2021 during a field trip to the villages. Even though traditionally Abaza is treated as a separate language with two dialects T'ap'anta and Shkharawa (Genko 1955: 5–7; Tabulova 1976: 3–4; Lomthathidze 2006: 98), some of the researches consider Abkhaz and Abaza to be a dialect continuum (e. g. Hewitt 1979: 1; Colarusso 1988: 7–9; Chirikba 1996). However varieties of Inzhig-Chkun and Gumlokt belong to the same dialect, those lects have their own differences, e. g. Abaza language is /abaza bəzʂa/ in Inzhig-Chkun and /abaza bəzʂa/ in Gumlokt.

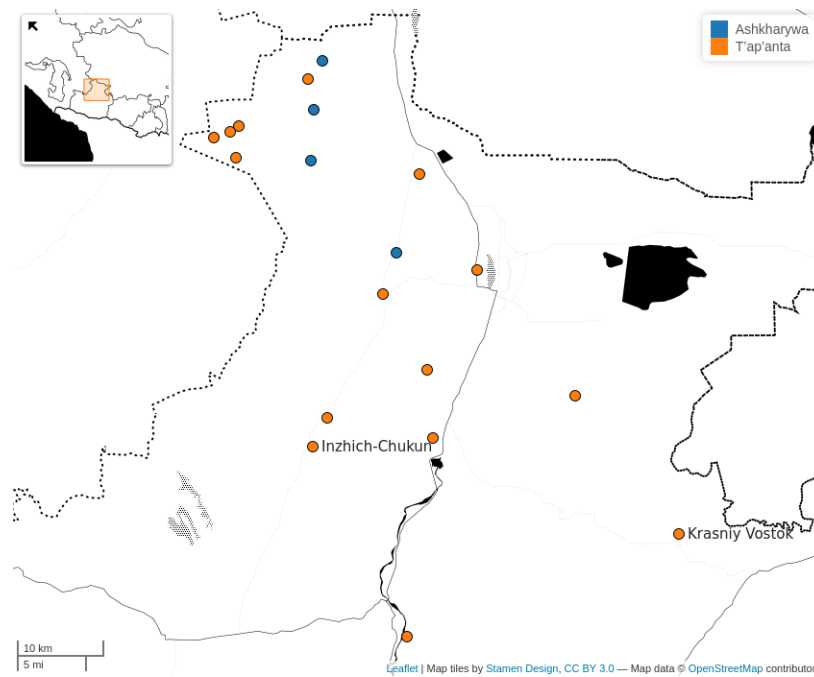


Figure 1: Abaza settlements of the Karachay-Cherkess Republic colored by the dialect (mostly based on (Chirikba 2020)). In Abazakt, Adyghe-Khabl, Ersakon, Khumara, and Psauche-Dakhe Circassians are predominant. In Koydan Karachay are predominant.

1.2 State of research

Phonological inventory of Abaza can be found in multiple sources (Bouda 1940; Lomthathidze 1944, 2006; Genko 1955; Allen 1956; Tabulova 1976; Colarusso 1988; O'Herin 1992, 2021; Chirikba 1996; Arkadiev 2019), however more detailed phonological description is limited to (Bouda 1940; Lomthathidze 1944; Genko 1955; Catford 1972; Tabulova 1976; Colarusso 1988; Arkadiev 2019) and lack any acoustic analysis that appears just recently (Mamonova, Moroz 2019). It is also worth mentioning works by V. Chirikba (Chirikba 1985, 2020), where he provides data from huge amount of Abaza settlements, explores correspondences of post-alveolar sibilants among them and compare obtained data with data from Abkhaz and Adyghe.

2 Phonological inventory

2.1 Consonants

Phonological inventory of T'ap'anta is present in Table ?? . I illustrate¹ consonant inventory with some examples in Appendix 1.

Table 1: Joint consonant system of Inzhig-Chkun and Gumlokt. Parenthesis denote the system that is common for Gumlokt, where the vast majority of speakers use labialised post-alveolar segments.

	aspirated plosives	ejective plosives	voiced plosives	voiceless affricates	ejective affricates	voiced affricates	voiceless fricatives	voiced fricatives	nasals	approximant	tap	laterals
labial	p ^h	p'	b				f	v	m	w		
dental	t ^h	t'	d	ts	ts'	dz	s	z	n			
alveolar											r	
post-alveolar (labialized)				tʂ ^(w)	tʂ' ^(w)	dʂ ^(w)	ʂ ^(w)	ʐ ^(w)				
retroflex				tʂ	tʂ'	dʂ	ʂ	ʐ				
alveolo-palatal				tɕ	tɕ'	dʒ	ɕ	ʒ				
lateral												l ɭ
palatal	c ^h	c'	j				ç			j		
plain velar	k ^h	k'	g									
labialized velar	k ^{hw}	k' ^w	g ^w				x ^w					
plain uvular	q ^h	q'					χ	ʁ				
palatalized uvular		q' ^j					χ ^j	ʁ ^j				
labialized uvular	q ^{hw}	q' ^w					χ ^w	ʁ ^w				
plain pharyngeal							ħ	ʕ				
labialized pharyngeal							ħ ^w	ʕ ^w				
glottal		ʔ										

The main difference between Inzhig-Chkun and Gumlokt consonant systems is in post-alveolar consonants. All speakers of Inzhig-Chkun and some minority in Gumlokt use non-labialized post-alveolars (e. g. ʂ, see Figure ??). The majority of speakers in Gumlokt use labialised post-alveolars (e. g. ʂ^w). Everything become even more complicated, since some post-alveolars in Inzhig-Chkun correspond to retroflex segments in Gumlokt. It looks like there is some proto-phonemes that merged together in most Abaza dialects except Gumlokt and Apsua (Ashkharywa dialect, (Lomthathidze 2006: 47, 445–446)): in Apsua in the same position labialized retroflex fricatives are observed (cf. ??–??).

- (1) ʂə (Inzhig-Chkun), ʂə (Gumlokt), ʂ^wə (Apsua) — 'door'

¹In this work I will use two transcription systems. First system is my interpretation of Abaza phonology using IPA. Second is standard Abaza orthography. The IPA transcription used in this work differ from traditional Caucasian transcription, however Northwest Caucasian researchers still can retrieve desired information from orthographic correspondences. Unfortunately IPA alphabet still allows a lot of space for interpretation, so my system is differ from other recent phonological phonetic descriptions illustration of Northwest Caucasian languages (see (Gordon, Applebaum 2006; Andersson, Vaux, Pysipa (Şener) 2021)). I refuse to use symbols like ʃ, ʒ, ɕ or ʐ one can find in the literature for special post-alveolars sounds present in all Northwest Caucasian and continue to use symbols ʂ and ʐ after the following sources (Ladefoged, Maddieson 1996: 161–164; Catford 1997; Testelefs et al. 2009; Applebaum, Gordon 2011; Paschen 2015).

(2) žə (Inzhig-Chkun), zə (Gumlukt), zʷə (Apsua) — 'old'

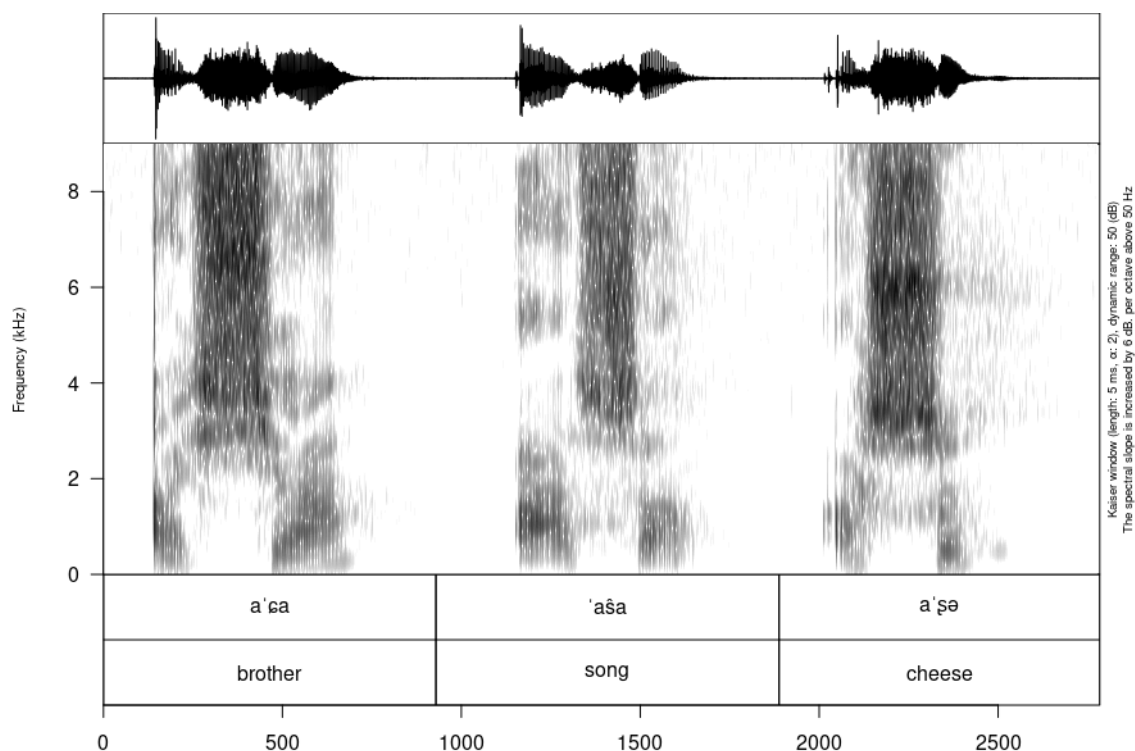


Figure 2: Fricatives by female speaker with non-labialised post-alveolars.

Presented examples show that the post-alveolar correspondences between Inzhig-Chkun and Gumlukt not predictable without Gumlukt or Apsua data (see Table ??), so I decided to collect some lexicon that could be useful for further historical and dialectal investigation (see Appendix 2).

Table 2: Post-alveolar correspondences between Inzhig-Chkun and Gumlukt.

	Inzhig-Chkun	minority in Gumlukt	majority in Gumlukt	orthography
bullock	tʂə	tʂə	tʂʷə	чвы
apple	tʂ'a	tʂ'a	tʂ'w'a	чIва
one person	za'dʒə	za'dʒə	za'dʒʷə	джквы
you (2pl)	ʂa'ra	ʂa'ra	ʂʷa'ra	шварá
cow	žə	žə	žʷə	жвы
hay	tʂa	tʂa	tʂa	чвá
oak	dʒtʂə	dʒtʂə	dʒtʂə	джчIвы
to go out	w'dʒəltʂ'	w'dʒəltʂ'	w'dʒəltʂ'	уджвIлцI
door	ʂə	ʂə	ʂə	швы
old	žə	zə	zə	жвы

It is worth mentioning that in (Chirikba 2020) based on different resources Vyacheslav Chirikba discovered even bigger variation. There are four sibilant subsystems in (ibid.: 27), however our field data support only two types: with labialised post-

alveolars (majority) and with non-labialised post-alveolars (minority). In order to check my hypothesis I performed small experiment asking 31 Gumlokt speakers (15 female and 16 male speakers) for two words: $\hat{z}^{(w)}\text{ə}$ 'cow' and $t\hat{s}^{(w)}a$ 'apple'. As I found indeed there is a variation across speakers I worked with, however only Gumlokt 2 (with labialised post-alveolars, 25 people) and Gumlokt 1 (with non-labialised post-alveolars, 6 people) sibilant subsystems from (ibid.) were attested (see Figure ??). It also visible from the experiment results that non-labialised post-alveolars are tend to appear in speech of older females, but this is just a preliminary result that should be checked with greater number of stimuli and speakers.



Figure 3: Results of experiment. Each dot represents one person colored by result and faceted by gender.

Except of my interpretation of alveolar and retroflex consonants (see the footnote on the page ??) the main difference between my phonological description and older ones is in the palatal area: I treat segments c^h , c' , and j as palatal, however more traditional interpretation is palatalized velars: k^j , k' , and g^j .

Articulation of labialization in T'ap'anta is different for different places of articulation (see (Catford 1972) for the similar observations for Abkhaz):

- /w/-labialisation — this kind of labialization is more or less independent of the main place of articulation. This kind of labialisation is typical for velar and uvular places fricatives and stops;
- /ɥ/-labialisation — this kind of labialization is typical for pharyngeals. It looks like the tongue body is retracted (due to pharyngeal place of articulation) and raised, that results /ɥ/-like sound;
- /y/-labialisation — this kind of labialization is typical only for post-alveolars in Gumlokt. The main place of articulation somehow merged with the additional place of articulation that produces a long hole for /y/-like sound.

There is also so called weaken labialised post-alveolars mentioned in literature (Chirikba 1985, 2020; Lomthathidze 1944), but we didn't noticed such sounds neither in Inzhig-Chkun nor Gumlokt.

2.2 Vowels

The vowel inventory traditionally analyzed as two core vowels a (low) and ə (mid) (see (Bouda 1940; Lomthathidze 1944, 2006; Genko 1955; Allen 1956; Tabulova 1976; Colarusso 1988; O'Herin 1992, 2021; Chirikba 1996; Arkadiev 2019)). There are additional vowel colors that appear in numerous loanwords or due to contraction of vowel and glide (cf. ??-??):

(3) $i < \text{əj}$ or $j\text{ə}$;

(4) $e < aj$;

(5) u < əw or wə;

(6) o < aw.

In order to show vowel space I collected a list of monosyllabic words in Inzhig-Chkun and Gumlokt (see Appendix 3).

3 Stress

T'ap'anta Abaza stress was discussed in my unpublished report from previous expeditions and became a basis for (Arkadiev 2019). Unfortunately I've changed my opinion, so I will try to sum up my current opinion on the topic. Our stress model based on the ideas presented in (Dybo 1977; Spruit 1986).

Stress in Abaza is distinctive (see (??) and other examples in Appendix 4).

(7) sa'ra 'T' vs. 'sara 'lamb'

Each Abaza morpheme (even borrowed) can be represented by combination of open syllables with vowel a or ə. According to some test discussed bellow each syllable assigned to one of the accentual classes: dominant or recessive. The main stress rule is formulated in (Spruit 1986: 37–40): stress falls on the first D element followed by R or word boundary (see () and ...), otherwise stress is on the first syllable (see ...).

Appendix 1: List of consonant examples

Example words for consonants from Table ?. First example before slash is from Inzhig-Chkun and some speakers from Gumlokt, example after slash are common for most speakers from Gumlokt.

	transcription	orthography	translation
p ^h a	па		son
p'aj	пай		dirt
ba	ба		you (2sgf)
fa'ra	фарá		to eat
ma	ма		here you are (giving something)
wa	ya		you (2sgm)
't ^h aba	таба		frying pan
't'at'a	тáтla		soft
da	да		tendon
tsa	ца		barn
ts'a	цla		louse
dza	дза		rib
sa	ca		I
'ŋwaza	гIвáза		twins
na'ŋa	нагIá		slope
ba'ra	барá		you (2sgf)
tša / tš ^w a	чва		skin
tš'a / tš ^w a	чIва		apple
dža'ra / dž ^w a'ra	джварá		vomiting
ša / š ^w a	шва		you (2pl)
a'ža / a'ž ^w a	ажvá		word
'tšaba	тшáба		gelding
tš'a	шIa		mouth
'p ^h adza	пáджа		firstborn
ša'ba	шabá		dried-up
'zac'a	жáкIа		beard
tea'ra	чарá		to eat
'te'ate'a	чIáчIa		kidney
'dzadza	джáджъa		curly
ca	ща		blood
za'ra	жъарá		to deceive
la	ла		dog
l'a'g'an	лaгъан		basin
'mac ^h a	мáкъa		grindstone
'c'ana	кIáна		lump
'jaba	гъáба		(body) side
'çap ^h ad	тлапáд		stocking
ja'ra	йарá		he (3sgm)
k ^h ət ^h	кыт		village
k'a'ra	кIарá		something
'gara	гápa		cradle
k ^h wa	ква		rain
k'wa	кIва		bosom
g ^w a'ban	гвабáн		mattress
'x ^w at ^h a	хвáта		rug
q ^h a	хъa		head

transcription	orthography	translation
q'a'la	къалá	town
χa'ra	харá	to give a present
'vava	гъáгъа	broad, wide
'q'jara	къъарá	to wave
χ ⁱ a'ra	хъарá	to give birth
ʋa'sa	гъъасá	nutwood
q ^h wa	хъва	ashes
q ^w a'ra	къварá	to stay too long
χ ^w a	хва	mountain
tš ^w a'ʋ ^w a	чвагъвá	ploughed up
ħa	хIа	we
a'ʕa	агIá	raw leather
ħ ^w a	хIва	pig
ʕ ^w a	гIва	dry
a'ʔaɕa	аъáща	situation

Appendix 2: Post-alveolar/retroflex correspondences to Inzhig-Chkun's post-alveolars in Gumlokt

	transcription	orthography	translation
za'dz̥wə	заджв́ы		one person
dz̥wədz̥wə	джв́джвы		saliva
hadz̥w	хІаджв		stack
ʂwa'ra	шварá		you
alarʂwa'ra	аларшварá		to turn on
'aʂwa	áшва		song
gʷlaʂw	гвлашв		indifferent
'jaʂwa	гъя́шва		orphaned
k'aʂwa'ra	кІашварá		to fall
kʷrəʂw	кврышв		patch
laʂw	лашв		blind
maratʰa'ʂwarʰa	мараташвар́рта		west
nab'ɪaʂw	набгъя́шв		one year old foal
pʰəʂwʰtʰ amamk'wa	пышвт амáмкІва		without break
wə'dzəʂwa	удзы́шва		green
wə'naʂwa	унáшва		advice
qʰʂwa	хъя́шва		food (cooked)
ts'a'ʂwa	цІашва́		trump card
'ʂwabəz̥	шва́быж		very
'ʂwapɣa	шва́пха		example
'ʂwayɣa	швахъя́		Monday
ʂwocʰ	швуо́къ		gun
ʂwər	швыр		fruit
ʂə	шы		door
a'ʂə	ашы́		cheese
aj'ʂa	айша́		traditional table
'ajʂa	áйша		bitter
bzə'ʂə	бжашы́		not fully painted
ʂk'ə	шкІы		hundred
bəz'ʂa	бызша́		language
gʷaʂ	гваш		gate
la'ʂan	лаша́н		time for weeding
mʂə	мшы		bear
rʂa'ra	ршарá		to scare
nəʂ	ныш		clay
tʰaraʂ	тарáш		gate
qʰwəʂə	хъя́шы		medicine
qʰəʂ	хъя́ш		window
təaʂ	чаш		patty
ʂa'ɣwə	шагІв́ы		fearful
ʂaga'la	шагалá		pack of jackal
ʂp'a	шпІа		thick
ʂʔa	шъя́		document
ʂər	шыр		animal
tʂ'wa	чІва		apple
amts'tʂ'wa'ra	амцІчІварá		to rob
a'qʰatʂwra	ахъя́чІвра		to stitch

	transcription	orthography	translation
ja'ts ^w a	йачІва́	star	
ja'ts ^w a	йачІва́	grey	
k ^w aj'ts ^w a	квайчІва́	black	
mətɕ ^w	мычІв	shy	
p ^h ətɕ ^w	пычІв	initial	
wa'ts ^w ə	уачІвы́	tomorrow	
tɕ ^w ra	чІвра	to turn sour	
tɕ ^w ə	чІвы	bolt	
tɕ ^w ə	чвы	bullock	
'tɕ ^w aʒ ^w ara	чва́жвара	to speak	
an'tɕ ^w az	анчва́жъ	birthmark	
'aɕ ^h atɕ ^w aɕara	áx ^h ačwaɕara	to find respectable	
a'tɕ ^w ədʒra	ачвы́дʒра	to lose something	
bnatɕ ^w	бначв	aurochs	
tɕ ^w a	чва	skin	
tɕ ^w ra	чвра	to cut (wood)	
tɕ ^w a	чва	color	
dzətɕ ^w	дзычва	swan	
ʒ ^w tɕ ^w a	жвчва	overdone (about food)	
'q'ətɕ ^w ga	къы́чвга	hatchet	
ma'tɕ ^w ə	мачвы́	finger	
ma'tɕ ^w əsra	мачвы́сра	glare (about lightning)	
an'tɕ ^w a	анчва́	God	
'nətɕ ^w a	ны́чва	hemp	
p ^h ərtɕ ^w	пы́рчв	mane	
'pɕatɕ ^w ja	пи́а́чвгъа	strong wind	
tɕ ^w a'ra	чварá	dream	
tʃa'tɕ ^w a, tha'tɕ ^w a	тʃIačvá, тxIačvá	family	
q ^h ətɕ ^w	хъы́чв	bird comb	
tɕ ^w a	чва	skin	
tɕ ^w a'ba	чваба́	wax	
tɕ ^w a'h ^w a	чвахІва́	stripe	
tɕ ^w bza	чвбза	lover	
tɕ ^w ja	чвгъа	evil	
tɕ ^w c ^h aɕ	чвкъáщ	shabby	
tɕ ^w ts'a'ra	чви́цIарá	to scatter	
tɕ ^w əɕ	чвыш	pale	
alar'tɕa	алартшA	alloyed	
la'tɕa	латшA	ferment	
ma'tɕa	матшA	dishes	
psla'tɕa	пслатшá	fish	
'ak ^w tɕaga	ákvтшага	watering-pot	
th ^h atɕa'ra	татшарá	to pour	
tɕa	тша	hay	
atɕɕa'ra	ашIшарA	to be afraid of	
'ak ^{hw} tɕ'ara	ákvшIара	to sit down	
a'tɕ'əja	ашIы́йа	what	
bəl'tɕ'ə	былшIы́	fuel	
dzɕ'ə	джышIы́	oak	
nq ^w ga'tɕ'ə	нкъвгашIы́	sick person	

	transcription	orthography	translation
pssŋa'ts'ə	пссŋашЫ		bird
χa'ts'ə	хашЫ		task
ž ^w ə	жвы		cow
a'ž ^w a	ажвá		word
baž ^w	бажв		abundant
'g ^w əž ^w k'ra	гвыжвкŋra		to be angry
ž ^w ba	жвба		nine
ž ^w ŋ ^w a'q ^h a	жвŋIвахъá		shoulder
ž ^w ŋ ^w a	жвŋIва		cow that didn't gave birth
ž ^w ŋ ^w and	жвŋIванд		sky
ž ^w p'a	жвпIа		thick
ž ^w ra	жвра		drink
ž ^w ts'ə	жвцЫ		swallow
ts'əž ^w	цЫжв		tick
χts'əž ^w	хцЫжв		accidental bullet
'tš ^w až ^w ara	чвáжвара		to speak
'caž ^w əŋ ^w	щáжвыŋIв		bloodsucker
p ^h əž ^w 'bana	пыжвбáна		hedgehog
ž ^w ra	жвра		to boil, to drink
ž ^w tš ^w a	жвчва		overdone (about food)
a'zə	ажы		old
'ŋats'zara	ŋIáшIжара		to tear off
za'ba	жабá		ten
'zzaga	жжáга		harrow
t ^h az _ɬ	таж		grandmother
wasə'raz _ɬ	уасарáж		wise
wzə	ужы		now

Appendix 3: List of monosyllabic words for the vowel space research

	transcription	orthography	translation
mʁə	мгъы	thorn	
mza	мза	lamp	
mzə	мзы	moon	
mzətɕ	мзыч	tree pitch	
mɣ ^l æ	мхъа	sterile	
mtsa	мца	fire	
mtsə	мцы	lie	
mtɕɪ	мчы	strong	
mtɕ ^l tɕət	мштшыт	piece of wood	
mʂə	мшы	day	
mʔa	мъа	belt	
p ^h a	па	son	
p ^h ɛɕ	пещ	room	
sbəb	сбыб	blister	
psq ^h a	псхъа	dead body	
psə	псы	soul	
ptɕtɕə	птштшы	broken	
p ^h ud	пуд	cheap	
pɣa	пха	heat	
pɣdzə	пхдзы	sweat	
pɣtə	пхты	scab	
pɣəz	пхыз	sleep	
pʂa	пша	wind	
pʂdza	пшдза	beautiful	
pʂk ^h a	пшка	soft	
pʂəɣ ^l	пшыхъ	breeze	
pɕba	пцба	four	
p ^h ədʒ	пыдръ	buckle	
p ^h əts	пыц	tooth	
sa	са	I	
sk ^{hw} ɕə	сквшы	year	
sk ^{hw} ɕəzɕ ^h	сквшызкъ	thousand years	
ssa	сса	small	
staz	стажъ	let me come down	
sə	сы	snow	
səs	сыс	lamb	
tc ^l i	тк ^l и	strict	
tdzə	тдзы	hous	
t ^h op ^h	топ	ball	
tʂbəɣ	тшбыг	scythe	
tʂzi	тшжы	horse meat	
tʂpsaɣ	тшпсАх	to change (imp)	
tʂpɛæ	тшпцА	to rest (imp)	
tʂpəts	тшпыц	horse tooth	
tʂrədz	тшрыдз	to disappear (imp)	
tʂteə	тштцЫ	to dip into something (imp)	
tʂɣ ^l æ	тшхъа	forage	
tʂə	тшы	horse	

transcription	orthography	translation
tʂət	тшыт	piece
tʂəχ ^w χ	тшыхvx	to wound yourself (imp)
tʂəχʂ	тшыхш	koumiss
tʂəʂʂ	тшыпш	to make up yourself (imp)
tʂəeχ	тшыпцх	to kill yourself (imp)
tʂəeε	тшЫщц	to stroke yourself (imp)
tʰəpʰ	тып	shelter of branches
tʰəχ	тых	shoo! (to a cat)
χ ^w ba	хвба	five
χ ^w it	хвит	free
χzə	хзы	whey
χpa	хпа	three
χʂə	хшы	milk
qʰ ^w da	хъвда	neck
qʰ ^w daʂ	хъвдаш	white neck (bird)
qʰ ^w dzə	хъвдзы	millet
qʰ ^w dzəts	хъвдзыц	grain
qʰpʂʂa	хъппша	get dry
qʰtək ^w psa	хъчквпса	lace pillow cover
qʰtɕi	хъчы	pillow
qʰəχ ^j	хъыхъ	headache
qʰəʂ	хъыш	light
χə	хы	bullet
χ ^j apε	хъапц	gold
χ ^j zə	хъзы	name
χ ^j ta	хъта	frost
ts'ba	цлба	lack of something
ts'ba	цлгъа	cord
ts'da	цлда	cord
ts'χə	цлхы	night
ts'ɕi	цлщы	sole
tʂa	ца	corn bin
tsba	цба	six
tʂæ	цкъа	clean
tsχa	цха	honey
tʂæc	чакъ	doubt
tʂ ^w ɸ ^j i	чвгъьы	bull
tʂ ^w jæ	чвгъа	evil
tʂ ^w cæε	чвкъащ	unfortunate
tʂqa	чхъа	ear
tʂ'ic	чыкъ	shortish
tʂ'tbzə	шлѳбжы	call
ʂ ^w χə	швхы	carrot
ʂ ^j ʔa	шгъа	document
ʂta	шта	motherland
ʂʂa	шша	fat
ɕta	щта	track
ɕχa	щха	bee
ɕqa	щхъа	pasture
ɕa	ща	blood

	transcription	orthography	translation
ега	цѣа	prop	

Appendix 4: List of minimal pairs for the stress research

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