

APPENDIX I

WORDLISTS

Number	Gloss	Phonetic transcription	Phonemic transcription
1	sky	va:n ²¹	waan ²¹
2	sun	ni: ²³	nii ²³
3	moon	t ^h a: ²¹ .pi: ⁴⁴	t ^h aa ²¹ .pii ⁴⁴
4	star	a:r ²³ .si: ²¹	aar ²³ .sii ²¹
5	cloud	k ^h ɔ ⁴⁴ .du:r ²³	k ^h ɔ ⁴⁴ .duur ²³
6	mist	tsum ²¹ .tsi: ²³	tsum ²¹ .tsii ²³
7	rain	rua? ²¹	rua? ²¹
8	rainbow	va:ŋ ⁴⁴ .rəw ²¹	waan ⁴⁴ .raw ²¹
9	lightning	ni:m ²¹ .t ^h a: ⁴⁴	niim ²¹ .t ^h aa ⁴⁴
10	thunder	k ^h ɔ ⁴⁴ .ri: ²¹	k ^h ɔ ⁴⁴ .rij ²¹
11	wind	t ^h ji: ²³	t ^h ji ²³
12	night	za:n ²¹	jaan ²¹
13	day	su:n ²¹	suun ²¹
14	morning	zi:ŋ ²³	jiiŋ ²³
15	noon	su:n ²¹ .nu: ⁴⁴	suun ²¹ .nuu ⁴⁴
16	yesterday	ma ²¹ .ni: ²³	ma ²¹ .nii ²³
17	tomorrow	t ^h aj ⁵² .zi:ŋ ²³	t ^h aa ⁵² .jiiŋ ²³
18	year	kum ²¹	kum ²¹
19	east	ni ⁴⁴ .sua? ⁴⁴ .lam ⁴⁴	ni ⁴⁴ .sua? ⁴⁴ .lam ⁴⁴
20	west	ni ⁴⁴ .t ^h a:k ⁵² .lam ⁴⁴	ni ⁴⁴ .t ^h aa ⁵² .lam ⁴⁴
21	north	sak ²¹ .lam ⁴⁴	sak ²¹ .lam ⁴⁴
22	south	t ^h aj ²¹ .lam ⁴⁴	t ^h aj ²¹ .lam ⁴⁴
23	water	ti: ⁴⁴	tii ⁴⁴
24	river	ti: ⁴⁴ .va: ²³	ti: ⁴⁴ .waa ²³
25	sea	ti: ⁴⁴ .pi: ⁴⁴ .t ^h uan ²¹ .t ^h um ²³	ti: ⁴⁴ .pi: ⁴⁴ .t ^h uan ²¹ .t ^h um ²³
26	earth, soil	lej ⁴⁴ .luŋ ⁴⁴	lej ⁴⁴ .luŋ ⁴⁴
27	mud	tsiar ²¹ .be:k ⁴⁴	tsiar ²¹ .beek ⁴⁴
28	dust	lej ⁴⁴ .vut ²¹	lej ⁴⁴ .wut ²¹
29	stone	luŋ ⁴⁴ .təw ²³	luŋ ⁴⁴ .taw ²³
30	sand	vun ²¹ .ne: ⁴⁴	wun ²¹ .neel ⁴⁴
31	lime(for betel chew)	t ^h uj ⁴⁴	t ^h uj ⁴⁴
32	gold	suj ⁴⁴	suj ⁴⁴

33	silver	ɲu:n ²³	ɲuun ²³
34	iron	tʰi:r ⁴⁴	tʰiir ⁴⁴
35	mountain	tʰa:ŋ ²³	tʰaan ²³
36	cave	pu:k ⁵²	puuk ⁵²
	Plants, Food		
37	forest	tu:21	tuu ²¹
38	tree	tʰiŋ ⁴⁴ .ku:ŋ ⁴⁴	tʰiŋ ⁴⁴ .kuuŋ ⁴⁴
39	branch	tʰiŋ ⁴⁴ .ŋe: ²³	tʰiŋ ⁴⁴ .ŋeε ²³
40	tree bark	tʰiŋ ⁴⁴ .hɔ:ŋ ²³	tʰiŋ ⁴⁴ .hɔɔŋ ²³
41	thorn	li:ŋ ²³	liŋ ²³
42	root	tʰiŋ ⁴⁴ .ɕam ⁴⁴	tʰiŋ ⁴⁴ .ɕam ⁴⁴
43	leaf	tʰiŋ ⁴⁴ .ŋaʔ ²¹	tʰiŋ ⁴⁴ .ŋaʔ ²¹
44	flower	paŋ ⁴⁴ .paʔ ²¹	paŋ ⁴⁴ .paʔ ²¹
45	fruit	tʰiŋ ⁴⁴ .tʰe:ŋ ⁴⁴ .raʔ ²¹	tʰiŋ ⁴⁴ .tʰe:ŋ ⁴⁴ .raʔ ²¹
46	seed	tsi: ⁵² .mu: ⁵²	tsii: ⁵² .muu ⁵²
47	grass	ɕam ²¹	ɕam ²¹
48	bamboo	rua ²³	rua ²³
49	bamboo shoot	ro ⁴⁴ .ku:ŋ ⁴⁴	ro ⁴⁴ .kuuŋ ⁴⁴
50	mushroom	pa: ⁴⁴	paa ⁴⁴
51	cane/rattan	nuan ⁴⁴ /tʰaʔ ²¹	nuan ⁴⁴ /tʰaʔ ²¹
52	kapok	pa:ŋ ²¹ .pat ⁴⁴	paan ²¹ .pat ⁴⁴
53	sugarcane	fu: ²³	fuu ²³
54	betelnut	kuam ²¹	kuam ²¹
55	opium	biŋ ⁴⁴	biŋ ⁴⁴
56	liquor	zu: ²³	juu ²³
57	banana(fruit)	ban ²¹ ja: ⁴⁴	ban ²¹ jaa ⁴⁴
58	papaya(fruit)	nu: ⁴⁴ .nu:n ²¹	nuu ⁴⁴ .nuun ²¹
59	mango(fruit)	ha:j ²³	haaj ²³
60	jackfruit (fruit)	ko:l ²¹ .ta:t ⁵²	ko:l ²¹ .ta:t ⁵²
61	coconut(fruit)	uŋ ⁴⁴ .raʔ ²¹	uŋ ⁴⁴ .raʔ ²¹
62	eggplant(fruit)	bɔk ²¹ .bɔ:n ²¹	bɔk ²¹ .bɔ:n ²¹
63	peanut	mi: ²¹ .pe: ⁴⁴	mii ²¹ .pee ⁴⁴
64	ginger	tʰi:ŋ ²³	tʰiiŋ ²³
65	garlic	la ²¹ .sun ⁴⁴	la ²¹ .sun ⁴⁴
66	corn	vaj ²¹ .nim ⁴⁴	waj ²¹ .niim ⁴⁴
67	red pepper, chili	ŋak ²¹ .pʰek ²¹	ŋak ²¹ .pʰek ²¹
68	paddy rice	fa:ŋ ²³	faan ²³
69	cooked rice	buʔ ²¹	buʔ ²¹
70	rice husk	fa:ŋ ²¹ .hi: ⁴⁴	faan ²¹ .hii ⁴⁴
71	salt	tsi: ²¹	tsii ²¹

	Animals		
72	animal	ram ²¹ sa: ⁵²	ram ²¹ saa ⁵²
73	tiger	po: ²¹ pi: ⁴⁴	Poo ²¹ .pii ⁴⁴
74	bear	sa ²¹ .vom ²³	sa ²¹ .vom ²³
75	deer	zuk ²¹ .neŋ ²³	juk ²¹ .neŋ ²³
76	monkey	zoŋ ²³	Joŋ ²³
77	gibbon	hu: ²¹ həw ⁵²	huu ²¹ haw ⁵²
78	rabbit	sa ²¹ bek ²¹	sa ²¹ bek ²¹
79	procupine	sa ²¹ p ^h u: ⁴⁴	sa ²¹ p ^h uu ⁴⁴
80	rat	ziŋ. ²³ ŋam ²¹	jiŋ. ²³ ŋam ²¹
81	dog	uj ⁴⁴ .tsəw ⁴⁴	uj ⁴⁴ .tsaw ⁴⁴
82	to bark	bəw ⁵²	baw ⁵²
83	to bite	kə:w ⁵²	kəew ⁵²
84	cat	zo ²¹ .tə: ⁴⁴	Jo ²¹ .təe ⁴⁴
85	pig	vok ²¹	wok ²¹
86	cow	tsə: ⁴⁴	tsəw ⁴⁴
87	milk	ŋəj ⁵²	ŋəj ⁵²
88	buffalo	na: ⁴⁴	naa ⁴⁴
89	horn	ki: ⁵²	kii ⁵²
90	tail	məj ⁴⁴	məj ⁴⁴
91	elephant	vu: ²³	wuu ²³
92	elephant tusk	vu: ²³ .həw ²¹	wuu ²³ .haw ²¹
93	bird	va: ²¹ tə: ⁴⁴	waa ²¹ təe ⁴⁴
94	bird's nest	va: ²¹ tə ⁴⁴ .bu: ⁵²	waa ²¹ tə ⁴⁴ .buu ⁵²
95	wing	t ^h a: ²¹	t ^h aa ²¹
96	feather	va: ²¹ tə ⁴⁴ .mul ⁴⁴	waa ²¹ tə ⁴⁴ .mul ⁴⁴
97	to fly	zam ²³ /zuaŋ ²³	jam ²³ /juaŋ ²³
98	egg	ti: ⁴⁴	tii ⁴⁴
99	chicken	a:r ²³	aar ²³
100	duck	ram ²¹ .paj ²¹	ram ²¹ .paj ²¹
101	fish	ŋa: ⁵²	ŋaa ⁵²
102	snake	ru:l ²³	ruul ²³
103	house lizard	t ^h im ⁴⁴ .di: ²¹	t ^h im ⁴⁴ .dii ²¹
104	turtle	tsum ⁴⁴ .k ^h eŋ ²¹	tsum ⁴⁴ .k ^h eŋ ²¹
105	crocodile	ti: ⁴⁴ .sa:r ²¹ .tam ²¹	tii ⁴⁴ .saar ²¹ .tam ²¹
106	frog	bu ⁴⁴ .t ^h ak ⁴⁴	bu ⁴⁴ .t ^h ak ⁴⁴
107	insect	tsu: ²¹ .tsik ⁴⁴ .k ^h a:r ⁴⁴ .bo:k ²¹	tsuu ²¹ .tsik ⁴⁴ .k ^h aar ⁴⁴ .bo:k ²¹
108	spider	maj ²¹ .məm ⁵²	maj ²¹ .məm ⁵²
109	spider web	maj ²¹ .məm ⁵² ra:ŋ ⁴⁴	maj ²¹ .məm ⁵² raŋ ⁴⁴
110	louse (head)	ɽik ²¹	ɽik ²¹

111	termite	sun ²¹ .ɕu:l ⁴⁴	sun ²¹ .ɕuul ⁴⁴
112	cockroach	tsuk ²¹ .tsu: ²³	tsuk ²¹ .tsuu ²³
113	snail	k ^h a:r ⁴⁴ .k ^h em ²¹	k ^h aar ⁴⁴ .k ^h em ²¹
114	mosquito	fik ²¹ .fa: ⁵² /kɔ:ŋ ⁵² .sa:ŋ ²³	fik ²¹ .faa ⁵² /kɔɔŋ ⁵² .sa:ŋ ²³
115	bee	k ^h uaj ²³	k ^h uaj ²³
116	fly	t ^h əw ²¹ .t ^h ɛ: ²³	t ^h aw ²¹ .t ^h ɛɛ ²³
117	butterfly	p ^h i: ²¹ .lip ²¹	p ^h i: ²¹ .lip ²¹
118	scorpion	t ^h a:ŋ ²³ .kaj ²¹ .kuaj ²³	t ^h a:ŋ ²³ .kaj ²¹ .kuaj ²³
	Body		
119	head	lu: ²³	luu ²³
120	face	ɱa:j ⁴⁴	ɱaa:j ⁴⁴
121	brain	t ^h uak ⁵²	t ^h uak ⁵²
122	hair	sam ⁴⁴ /m ^h ul ⁴⁴	sam ⁴⁴ /m ^h ul ⁴⁴
123	forehead	tsal ²¹	tsal ²¹
124	eyebrow	mit ²¹ .ki:l ²³	mit ²¹ .kiil ²³
125	eye	mit ²¹	mit ²¹
126	eyelid	mit ²¹ .vun ⁴⁴	mit ²¹ .wun ⁴⁴
127	nose	ɱa:r ²¹	ɱaar ²¹
128	cheek	biaŋ ²³	biaŋ ²³
129	ear	ɱa: ²³	ɱaa ²³
130	mouth	ka: ²³	kaa ²³
131	tongue	lej ²³	lej ²³
132	saliva	tsi:l ²³	tsiil ²³
133	tooth	ha: ²³	haa ²³
134	gums	ha ⁴⁴ .ni: ⁵²	ha ⁴⁴ .nii ⁵²
135	chin	k ^h a: ²¹ .be: ⁵²	k ^h a: ²¹ .bee ⁵²
136	beard	ɱu:r ²¹ .m ^h ul ⁴⁴	ɱuur ²¹ .m ^h ul ⁴⁴
137	to shave (beard)	me:t ⁵²	meɛt ⁵²
138	back	za:ŋ ²³	za:ŋ ²³
139	abdomen	pum ²¹	pum ²¹
140	navel	la:j ²³	la:j ²³
141	heart	lu:ŋ ²³	lu:ŋ ²³
142	lungs	tsuap ⁵²	tsuap ⁵²
143	liver	t ^h in ²¹	t ^h in ²¹
144	intestines	ri:l ²³	ri:l ²³
145	hand	kut ²¹	kut ²¹
146	elbow	ki:w ²¹	kiiw ²¹
147	armpit	zak ²¹	jak ²¹
148	palm	za ⁴⁴ .p ^h ak ⁴⁴	ja ⁴⁴ .p ^h ak ⁴⁴
149	finger	zuŋ ⁴⁴	juŋ ⁴⁴

150	fingernail	tin ⁴⁴	tin ⁴⁴
151	buttocks	tɔ ⁴⁴ .tsɔɹ ⁵²	tɔ ⁴⁴ .tsɔɹ ⁵²
152	leg	kɛ: ²¹	kɛɛ ²¹
153	thigh	kɔŋ ⁵²	kɔŋ ⁵²
154	knee	k ^h u:k ⁵²	k ^h uuk ⁵²
155	calf	p ^h ɛj ²¹ .u:m ²¹	p ^h ɛj ²¹ .uum ²¹
156	shin	ŋal ²³	ŋal ²³
157	foot	kɛ ²¹ .za ⁴⁴ .p ^h ak ⁴⁴	kɛ ²¹ .ja ⁴⁴ .p ^h ak ⁴⁴
158	heel	kɛ ²¹ .di:l ²³	kɛ ²¹ .diil ²³
159	bone	ru ²¹	ru ²¹
160	rib	ŋa:k ⁵²	ŋaak ⁵²
161	flesh	ti ⁵² .sa: ⁵²	ti ⁵² .saa ⁵²
162	fat	t ^h a:w ²¹	t ^h aaw ²¹
163	skin	vun ⁴⁴	jun ⁴⁴
164	blood	t ^h i: ⁴⁴	t ^h ij ⁴⁴
165	sweat	t ^h an ²¹	t ^h an ²¹
166	pus	m̩a ⁴⁴ .ŋaj ²³	m̩a ⁴⁴ .ŋaaj ²³
167	excrement	ɛ:k ⁵²	ɛɛk ⁵²
168	urine	zun ²¹ /zin ²¹	jun ²¹ /jin ²¹
	People		
169	man	pa ²¹ .tsaŋ ⁴⁴	pa ²¹ .tsaŋ ⁴⁴
170	woman	nu ²¹ .pi ⁴⁴ .nu: ⁵²	nu ²¹ .pi ⁴⁴ .nuu ⁵²
171	person	mi: ⁵²	mii ⁵²
172	father	pa: ⁵²	paa ⁵²
173	mother	nu: ⁵²	nuu ⁵²
174	child	na:w ²¹ ha:k ⁵²	naaw ²¹ haak ⁵²
175	son-in-law	tu ²¹ .pa ²¹	tu ²¹ .pa ²¹
176	husband	pa ²¹ .sal ⁴⁴	pa ²¹ .sal ⁴⁴
177	wife	nu ²¹ .pi: ⁴⁴	nu ²¹ .pii ⁴⁴
178	widow	nu ²¹ .mɛj ²¹	nu ²¹ .mɛj ²¹
179a	brother (elder of f)	u: ²³ (pa:)	uu ²³
179b	borther (elder of m)	u: ²³	uu ²³
179c	sister (elder of f)	u: ²³	uu ²³
179d	sister (elder of m)	u: ²³	uu ²³
180a	brother (yngr of f)	na:w ²³	naaw ²³
180b	brother(yngr of m)	na:w ²³	naaw ²³
180c	sissster (yngr of f)	na:w ²³	naaw ²³
180d	sissster (yngr of m)	na:w ²³	naaw ²³
181	friend	rual ²³	rual ²³
182	name	m̩in ²³	m̩in ²³

	Home		
183	village	k ^h ua ²³	k ^h ua ²³
184	road, path	lam ⁴⁴ .zim ²¹	lam ⁴⁴ .jiin ²¹
185	boat	lɔ:ŋ ²¹	lɔɔŋ ²¹
186	house	in ⁴⁴	in ⁴⁴
187	door	sɑ:ŋ ⁴⁴ .ka: ⁴⁴	saɑŋ ⁴⁴ .kaa ⁴⁴
188	window	tuk ²¹ .vir ²¹	tuk ²¹ .wir ²¹
189	roof	ɕi ⁴⁴ .p ^h un ²¹	ɕi ⁴⁴ .p ^h un ²¹
190	area uner house	in ⁴⁴ .ŋuaj ⁵²	in ⁴⁴ .ŋuaj ⁵²
191	wall of house	p ^h ar ⁵²	p ^h ar ⁵²
192	mat	p ^h er ²³	p ^h er ²³
193	pillow	lu ⁴⁴ .k ^h am ²¹	lu ⁴⁴ .k ^h am ²¹
194	blanket	pua ⁴⁴	pua ⁴⁴
195	clothing	sin ⁵² .fɛn ²¹	sin ⁵² .fɛn ²¹
196	to weave (cloth)	ta ²¹	ta ²¹
197	to dye (cloth)	but ²¹	but ²¹
198	loincloth	biar ²³	biar ²³
199	trousers	bɔ:ŋ ⁴⁴ .bi ²¹ .sa:w ⁴⁴	bɔɔŋ ⁴⁴ .bi ²¹ .saaw ⁴⁴
200	to sew	t ^h i: ²³	t ^h ij ²³
201	needle	t ^h im ²³	t ^h im ²³
202	comb	t ^h aj ²¹ .t ^h iŋ ⁴⁴	t ^h aa ²¹ .t ^h iŋ ⁴⁴
203	ring (finger)	zuŋ ⁴⁴ .fuk ⁵²	juŋ ⁴⁴ .fuuk ⁵²
204	paper, cord	tsa ⁴⁴ .ŋa ²¹	tsa ⁴⁴ .ŋa ²¹
205	pot (cooking)	bɛ:l ²³	bɛɛl ²³
206	coconutshell ladle	uŋ ⁴⁴ .ra ²¹	uŋ ⁴⁴ .ra ²¹
207	mortar	sum ⁴⁴	sum ⁴⁴
208	pestle	suk ²¹ .ju:m ⁴⁴	suk ²¹ .juum ⁴⁴
209	spoon	ha: ²¹	haaj ²¹
210	plate	pa ²¹ .ka:n ⁴⁴	pa ²¹ .kaan ⁴⁴
211	firewood	ti ²¹ .t ^h iŋ ⁴⁴	ti ²¹ .t ^h iŋ ⁴⁴
212	fire	mej ⁴⁴ .sa: ²³	mej ⁴⁴ .saa ²³
213	ashes	vut ²¹ .zam ²³	wut ²¹ .jaam ²³
214	smoke	mej ⁴⁴ .k ^h u: ⁵²	mej ⁴⁴ .k ^h uu ⁵²
215	candle	p ^h a ²¹ .zɔ:ŋ ⁴⁴ dem ²¹	p ^h a ²¹ .jɔɔŋ ⁴⁴ deen ²¹
216	drum	k ^h uaŋ ²³	k ^h uaŋ ²³
217	gong	ɕar ²¹ .k ^h uaŋ ⁴⁴	ɕar ²¹ .k ^h uaŋ ⁴⁴
218	bow, crossbow	t ^h al ⁴⁴ .k ^h u:k ⁵²	t ^h al ⁴⁴ .k ^h uuk ⁵²
219	arrow	t ^h al ⁴⁴ .fuŋ ⁴⁴	t ^h al ⁴⁴ .fuŋ ⁴⁴
220	spear	fej ⁴⁴	fej ⁴⁴
221	knife	na:m ⁴⁴	naam ⁴⁴

	Verbs		
222	to hear	ŋaj ²³	ŋaaj ²³
223	to smell	ŋi:m ²¹	ŋiim ²¹
224	to see	ŋur ⁵²	ŋuu ⁵²
225	to wink	mit ²¹ .sin ⁵²	mit ²¹ .sin ⁵²
226	to weep	tap ²¹	tap ²¹
227	to eat	ej ²³	ej ²³
228	to swallow	ɗɔlʔ ²¹	ɗɔlʔ ²¹
229	to be hungry	ril ²¹ .ɾɔŋ ⁴⁴	ril ²¹ .ɾɔŋ ⁴⁴
230	to be full	pum ²¹ .puar ²³	pum ²¹ .puar ²³
231	to be thirsty	tʰi ⁴⁴ .ha:l ⁴⁴	tʰi ⁴⁴ .haal ⁴⁴
232	to drink	in ²³	in ²³
233	to be drunk	ri: ²¹	rii ²¹
234	to vomit	luak ⁵²	luak ⁵²
235	to spit	p ^h uj ⁵²	p ^h uj ⁵²
236	to cough	k ^h uʔ ²¹	k ^h uʔ ²¹
237	to sneeze	ŋap ²¹ .ɗɔp ²¹	ŋap ²¹ .ɗɔp ²¹
238	to yawn	haʔ ²¹ .ham ²¹	haʔ ²¹ .ham ²¹
239	to breathe	tʰɔ ²¹ .tʰɔ: ²¹	tʰɔ ²¹ .tʰɔɔ ²¹
240	to blow	sɛ:m ²¹ /p ^h ɔ: ²¹	sɛɛm ²¹ /p ^h ɔɔ ²¹
241	to suck	zu:k ²¹ /ɗɔ:p ²³	juuk ²¹ /ɗɔɔp ²³
242	to lick	liak ⁵²	liak ⁵²
243	to smile	ŋi: ²³ /m̩a:j ⁴⁴ .pan ²³	ŋii ²³ /m̩aaj ⁴⁴ .pan ²³
244	to laugh	ŋi: ²³	ŋii ²³
245	to speak	sim ²³ /tɔŋ ⁵²	sim ²³ /tɔŋ ⁵²
246	to tell	sim ²³	sim ²³
247	to shout	a:w ²³	aaw ²³
248	to answer	let ²¹	let ²¹
249	to lie, to fib	bu:m ²³	buum ²³
250	to sing	la ⁴⁴ .sa: ²¹	la ⁴⁴ .saa ²¹
251	to think	ruat ⁵²	ruat ⁵²
252	to know	tʰej ²¹	tʰej ²¹
253	to forget	ŋilʔ ²¹	ŋilʔ ²¹
254	to choose	ɕil ²³	ɕil ²³
255	to love	ɗuʔ ²¹	ɗuʔ ²¹
256	to hate	hua ⁴⁴	hua ⁴⁴
257	to wait	ŋak ⁵²	ŋaak ⁵²
258	to count	sia: ²³	sia: ²³
259	to be afraid	tiʔ ²¹	tiʔ ²¹
260	to be angry	tʰin ²¹ .heŋ ⁵²	tʰin ²¹ .heŋ ⁵²

261	to sleep	it ²¹	it ²¹
262	to snore	ŋɔ:k ⁴⁴	ŋɔɔk ⁴⁴
263	to dream	maŋ ⁴⁴ .man ⁵²	maŋ ⁴⁴ .man ⁵²
264	to hurt	liam ²¹ /tuaŋ ²¹ .mɔŋ ²¹	liam ²¹ /taŋ ²¹ .mɔŋ ²¹
265	medicine	si: ²³	sii ²³
266	to itch	t ^h ak ²¹ (t ^h ak ²¹ .t ^h ak ²¹)	t ^h ak ²¹ (t ^h ak ²¹ .t ^h ak ²¹)
267	to scratch	k ^h ewŋ ²¹ /k ^h ɔŋ ²¹	k ^h ewŋ ²¹ /k ^h ɔŋ ²¹
268	to shiver	k ^h ur ²¹	k ^h ur ²¹
269	to die	thi: ²³	thii ²³
270	ghost	tfa: ³²	tfaa ³²
271	to sit	taw ²³	taw ²³
272	to stand	diŋ ²³	diŋ ²³
273	to kneel	k ^h u:k ⁵² .bil ⁴⁴	k ^h uuk ⁵² .bil ⁴⁴
274	to walk	fɛŋ ²¹	fɛŋ ²¹
275	to crawl	va:k ⁵²	waak ⁵²
276	to come	ra: ²³	raa ²³
277	to enter	lut ⁵²	luut ⁵²
278	to return	ki:r ⁴⁴	kiiir ⁴⁴
279	to push	nam ⁴⁴ /tu:l ⁴⁴	nam ⁴⁴ /tuul ⁴⁴
280	to pull	di:r ²¹	diir ²¹
281	to kick	si:t ⁵²	siit ⁵²
282	to throw	de:ŋ ²³ /lon ⁵²	deen ²³ /lon ⁵²
283	to fall	tfa: ⁵²	tfaa ⁵²
284	to swim	lewŋ ²¹	lewŋ ²¹
285	to float	p ^h uan ²¹	p ^h uan ²¹
286	to sink	pil ²³	pil ²³
287	to flow	luan ²³	luan ²³
288	to give	pe: ⁵²	pee ⁵²
289	to tie	k ^h it ²¹ /te:m ²³ /fe:ŋ ²³	k ^h it ²¹ /teem ²³ /feen ²³
290	to wipe	pu:l ²³	puul ²³
291	to rub, to scrub	p ^h iat ⁵²	p ^h iat ⁵²
292	to wash	k ^h ɔŋ ²¹	k ^h ɔŋ ²¹
293	to launder	sɔ:p ⁵²	sɔɔp ⁵²
294	to bathe	k ^h ɔŋ ²¹ (tak ²¹ .sa ⁵²)	k ^h ɔŋ ²¹ (tak ²¹ .sa ⁵²)
295	to hit	paŋ ²¹ /k ^h ɔ:ŋ ²³	paŋ ²¹ /k ^h ɔɔŋ ²³
296	to split	t ^h en ²³	t ^h en ²³
297	to cut (hair)	me:t ⁵²	meet ⁵²
298	to stab	sun ²¹	sun ²¹
399	to grind	rial ²³	rial ²³
300	to plant	ci:ŋ ²³ /p ^h un ⁴⁴	ciŋ ²³ /p ^h un ⁴⁴

301	to dig	laj ²¹	laj ²¹
302	to bury (a corpse)	p ^h u:um ²³ /vu:ɿ ²³	p ^h u:um ²³ /wu:ɿ ²³
303	to winnow (rice)	se:p ²³	se:ep ²³
304	to dry (sth.)	p ^h əw ²³	p ^h aw ²³
305	to pound (rice)	ɬe:ŋ ²³ /p ^h əm ⁵²	ɬe:ŋ ²³ /p ^h əm ⁵²
306	to cook (rice)	suɑŋ ⁴⁴	suɑŋ ⁴⁴
307	to boil (sth.)	səw ²³	saw ²³
308	to burn	ur ²³ /nɔ:k ⁵²	ur ²³ /nɔ:k ⁵²
309	to extinguish (fire)	mit ²¹ /p ^h alʔ	mit ²¹ /p ^h alʔ
310	to work	tuan ⁴⁴	tuan ⁴⁴
311	to play	lɛk ²¹	lɛk ²¹
312	to dance	lam ²³	laam ²³
313	to shoot	ka:p ⁵²	kaap ⁵²
314	to hunt	pe:l ⁴⁴	peel ⁴⁴
315	to kill	t ^h at ²¹	t ^h at ²¹
316	to fight	ɬəw ²³	ɬaw ²³
317	to buy	lej ⁴⁴	lej ⁴⁴
318	to sell	zuar ²³	juar ²³
319	to exchange	t ^h ɛŋ ⁵²	t ^h ɛŋ ⁵²
320	to pay	pe: ⁵² /ru:l ²¹	pe: ⁵² /ru:l ²¹
321	to steal	fir ⁴⁴ /ru: ⁵²	fir ⁴⁴ /ru: ⁵²
	Numbers		
322	one (person)	(mi) pa ²¹ .k ^h at ²¹	(mi) pa ²¹ .k ^h at ²¹
323	two (persons)	pa ²¹ .pi? ²¹	pa ²¹ .pi? ²¹
324	three (persons)	pa ²¹ .t ^h um ²³	pa ²¹ .t ^h um ²³
325	four (persons)	pa ²¹ .li: ²³	pa ²¹ .li: ²³
326	five (persons)	pa ²¹ .ŋa: ²³	pa ²¹ .ŋaa ²³
327	six (persons)	pa ²¹ .ruk ²¹	pa ²¹ .ruk ²¹
328	seven (persons)	pa ²¹ .sa ²¹ .ri? ²¹	pa ²¹ .sa ²¹ .ri? ²¹
329	eight (persons)	pa ²¹ .riat ⁵²	pa ²¹ .riat ⁵²
330	nine (persons)	pa ²¹ .kua ⁴⁴	pa ²¹ .kua ⁴⁴
331	ten (persons)	pa ²¹ .fa: ²³	pa ²¹ .faa ²³
332	hundred (persons)	za ²¹ .k ^h at ²¹	za ²¹ .k ^h at ²¹
333	thousand (persons)	t ^h ɔ:ŋ ⁴⁴ .k ^h at ²¹	t ^h ɔ:ŋ ⁴⁴ .k ^h at ²¹
334	to be many	tam ⁴⁴	tam ⁴⁴
335	all	za: ²¹ .te: ⁴⁴	jaa ²¹ .te: ⁴⁴
336	some	ʔɛ:k ⁵² .k ^h at ²¹	ʔɛ:k ⁵² .k ^h at ²¹
337	to be few	mal ⁴⁴ .te: ⁴⁴	mal ⁴⁴ .te: ⁴⁴
338	half a unit	ʔɛ:k ⁵²	ʔɛ:k ⁵²
	Dimensions		

339	to be big	tum ²³	tuum ²³
340	to be small	fa ⁴⁴ .tɛ: ⁴⁴	fa ⁴⁴ .tɛɛ ⁴⁴
341	to be long	sa:w ⁴⁴	saaw ⁴⁴
342	to be short (length)	toj ⁴⁴	tooj ⁴⁴
343	to be tall	saŋ ²³	saŋ ²³
344	to be short (height)	niam ⁴⁴	niam ⁴⁴
354	to be thick	sa? ²¹	sa? ²¹
346	to be thin	pa: ⁴⁴	paa ⁴⁴
347	to be fat	t ^h a:w ²³	t ^h aaw ²³
348	to be skinny	to:l ²³	tool ²³
349	to be wide, broad	ka:w ²¹	kaaw ²¹
350	to be narrow	fiak ⁵²	fiak ⁵²
351	to be deep	t ^h u:k ⁵²	t ^h uuk ⁵²
352	to be shallow	puan ²¹	puan ²¹
353	to be round	pum ²³ /ju:m ⁴⁴	pum ²³ /ju:m ⁴⁴
354	to be full	k ^h at ²¹	k ^h at ²¹
355	right side	wor? ²¹ .lam ⁴⁴	wor? ²¹ .lam ⁴⁴
356	left side	ke? ²¹ .lam ⁴⁴	ke? ²¹ .lam ⁴⁴
357	to be straight	diŋ ⁵²	diŋ ⁵²
358	to be far	Ja: ⁴⁴	Jaa ⁴⁴
359	to be near	na:j ⁴⁴	naaj ⁴⁴
360	this	hi: ⁴⁴ (hi ⁴⁴)	hi ⁴⁴ (hi ⁴⁴)
361	that	k ^h i: ⁴⁴ (k ^h i ⁴⁴)	k ^h ii ⁴⁴ (k ^h i ⁴⁴)
	Appearance		
362	black	ɖum ²³	ɖum ²³
363	white	raŋ ²³ /va: ²³	raaŋ ²³ /waar ²³
364	red	sen ²³	sen ²³
365	green	ŋiŋ ²³	ŋiŋ ²³
366	yellow	a:j ²¹ .re: ⁴⁴	aaj ²¹ .reɛ ⁴⁴
367	to be dirty	ba:l ²¹	baal ²¹
368	to be new	t ^h ar ²³	t ^h ar ²³
369	to be old	tar ²³ /lun ²¹	tar ²³ /lun ²¹
370	to be dark	t ^h im ²³	t ^h im ²³
371	to be bright	tle:w ⁵²	tleɛw ⁵²
372	to be the same	baŋ ²¹	baŋ ²¹
373	to be different	ɖaŋ ⁴⁴	ɖaŋ ⁴⁴
	Taste/Feel		
374	to be sweet	t ^h um ²³	t ^h um ²³
375	to be sour	t ^h ur ⁴⁴	t ^h uur ⁴⁴
376	to be bitter	k ^h a: ⁵²	k ^h aa ⁵²

377	to be spicy, hot	t ^h ak ²¹	t ^h ak ²¹
378	to be rotten	tɔ:t ⁵² /t ^h u: ⁵²	tɔɔt ⁵² /t ^h uu ⁵²
379	to be swell	t ^h ij ²³	t ^h ij ²³
380	to be dry	tsa:r ²³ /rəw ²³	tsaar ²³ /raw ²³
381	to be wet	tsiar ⁴⁴ /tsin ⁴⁴	tsiar ⁴⁴ /tsin ⁴⁴
382	to be hot	sa: ²³	saa ²³
383	to be cold	ɗa:j ²¹	ɗaaj ²¹
384	to be sharp	ɕiam ²³	ɕiam ²³
385	to be blunt	bi:l ²¹	biil ²¹
386	to be heavy	rit ²¹	rit ²¹
387	to be hard	hak ²¹	hak ²¹
388	to be smooth	nal ⁴⁴	naal ⁴⁴
	Other qualities		
389	to be fast	raŋ ⁴⁴	raŋ ⁴⁴
390	to be slow	fuŋ ⁴⁴	fuuŋ ⁴⁴
391	to be strong	tsak ²¹	tsak ²¹
392	to be weak	ɗɔr ²¹	ɗɔr ²¹
393	to be tired	baŋ ²¹	baaŋ ²¹
394	to be blind	mit ²¹ .tso: ⁵²	mit ²¹ .tsoɔ ⁵²
395	to be deaf	ŋa ⁴⁴ .se:t ⁵²	ŋa ⁴⁴ .seet ⁵²
396	to be bald	tsal ²¹ .ŋɔl ²¹	tsal ²¹ .ŋɔl ²¹
397	to be naked	tak ²¹ .loŋ ⁵²	tak ²¹ .loŋ ⁵²
398	to be good	t ^h a: ²¹	t ^h aa ²¹
399	to be bad	sia ⁵²	sia ⁵²
400	to be correct	ɗik ²¹	ɗik ²¹
401	to be wrong	sual ⁴⁴	sual ⁴⁴
	Question Words		
402	when	ziaŋ ⁵² .tik ²¹ .aɣ ²¹	jiiaŋ ⁵² .tik ²¹ .aɣ ²¹
403	where	k ^h uj ²¹ .aɣ ⁴⁴	k ^h uj ²¹ .aɣ ⁴⁴
404	who	zəw ⁵²	jaw ⁵²
405	what	ziaŋ ⁵²	jiiaŋ ⁵²
406	how many	ziaŋ ⁵² .zat ²¹	jiiaŋ ⁵² .jat ²¹
407	stream	t ^h i ⁴⁴ .va: ²³	t ^h i ⁴⁴ .waa ²³
408	wet rice field	lej ⁴⁴ .kuaŋ ²³	lej ⁴⁴ .kuaŋ ²³
409	to be ripe	m ^h in ²³	m ^h in ²³
410	rice seedling	faŋ ²¹ .tsi: ⁵²	faaŋ ²¹ .tsii ⁵²
411	pangolin	sa ²¹ .p ^h u: ⁴⁴	sa ²¹ .p ^h uu ⁴⁴
412	crested	suaŋ ²³	suaŋ ²³
413	water leech	ŋit ⁵²	ŋiit ⁵²
414	land leech	tsaŋ ²¹ .vat ²¹	tsaaŋ ²¹ .wat ²¹

415	earthworm	tsaŋ ⁴⁴ .tse:i ²¹	tsaŋ ⁴⁴ .tseɛi ²¹
416	I (1s)	kej ⁴⁴ .maŋ ²¹	kej ⁴⁴ .maŋ ²¹
417	thou (2s)	naŋ ⁴⁴ .maŋ ²¹	naŋ ⁴⁴ .maŋ ²¹
418	he/she/it	a ²¹ .maŋ ⁴⁴	a ²¹ .maŋ ⁴⁴
419	we (1p)	kan ⁴⁴ .maŋ ²¹	kan ⁴⁴ .maŋ ²¹
420	you (2p)	nan ⁴⁴ .maŋ ²¹	nan ⁴⁴ .maŋ ²¹
421	they	an ⁴⁴ .maŋ ²¹	an ⁴⁴ .maŋ ²¹
422	sleeping area	iŋ ²¹ .na:k ⁵² .k ^h an ⁴⁴	iŋ ²¹ .naak ⁵² .k ^h aan ⁴⁴
423	to take	la: ⁵²	laa ⁵²
424	to disappear	ɬəw ²¹	ɬaw ²¹
425	to split w/a knife	p ^h ɛl ²³	p ^h ɛl ²³
426	to bend	kɔj ²¹ /kual ²¹	kɔɔj ²¹ /kual ²¹
427	to lift	k ^h aaj ²³ /tsɔj ²³	k ^h aaɟ ²³ /tsɔɔj ²³
428	to do/make	tuaŋ ²¹	tuaŋ ²¹
429	don't do it	tuaŋ ²¹ .ɬaŋ ²¹	tuaŋ ²¹ .ɬaŋ ²¹
430	half a quantity	ɕɛ:k ⁵²	ɕɛk ⁵²
431	to be disgusting	hua ⁴⁴ /niŋ ⁴⁴	hua ⁴⁴ /niŋ ⁴⁴
432	to be warm	ɬum ²³	ɬum ²³
433	to be cold	ɬaɟ ²¹	ɬaaɟ ²¹
434	to be difficult	har ²³	har ²³
435	to be easy	ɔl ²³	ɔl ²³
436	to loose	ɬɔr ²¹ /kaŋ ⁴⁴	ɬɔr ²¹ /kaaŋ ⁴⁴
	Additional wordlists		
435	onion	piat ⁵² /k ^h a ⁵² .suan ²¹ .sɛn ²³	piat ⁵² /k ^h a ⁵² .suan ²¹ .sɛn ²³
436	ground potato	ba: ⁴⁴	baa ⁴⁴
437	to break (law, regulation)	buar ²³ /paŋ ²¹ .bal ⁵²	buar ²³ /paŋ ²¹ .bal ⁵²
438	to take hard	taŋ ²³	taŋ ²³
439	to get down	tum ⁴⁴	tum ⁴⁴
440	to reduce	t ^h um ⁴⁴	t ^h um ⁴⁴
441	to confront	ɬɔŋ ²¹	ɬɔɔŋ ²¹
442	to punch	t ^h ɔŋ ²¹	t ^h ɔɔŋ ²¹
443	to play (music)	tum ⁴⁴	tum ⁴⁴
445	to seedling	təw ²³	taw ²³
446	bowel	k ^h əw ²³	k ^h aw ²³
447	to call	kəw ²³	kaw ²³
448	to be green (fruit)	kuŋ ²¹	kuŋ ²¹
449	to leak (water)	ɬɔk ²¹	ɬɔk ²¹
450	to point	ɬɔk ²¹	ɬɔk ²¹
451	to be slippery	na:l ⁴⁴	naal ⁴⁴
452	to kiss	ŋam ²¹	ŋam ²¹

453	to trust	ŋat ²¹ .san ⁵² /rin ⁵² .san ⁵²	ŋat ²¹ .san ⁵² /rin ⁵² .san ⁵²
454	torch	far ²³	faar ²³
455	to visit (patient)	veŋ ²¹	weŋ ²¹
456	to fly	zuaj ²³	juaj ²³
457	to be	si: ⁵²	sii ⁵²
458	to receive (portion)	tsəw ²³	tsaw ²³
459	to be late	tʰaj ⁴⁴	tʰaaj ⁴⁴
460	to cause to fall	tʰa: ⁵²	tʰaa ⁵²
461	to take	la: ⁵²	laa ⁵²
462	school	tʰoŋ ²¹	tʰoŋ ²¹
463	heaven	van ²¹ tsuj ⁴⁴	wan ²¹ tsuj ⁴⁴
464	to imitate	tsəŋ ²³	tsəŋ ²³
465	chest	taŋ ²³	taan ²³
466	to be sick	na: ²³	naa ²³
467	to be round	lu:m ⁴⁴	luum ⁴⁴
468	negation marker	ləw ²¹	law ²¹
469	to climb up	kaj ²³	kaaj ²³
470	to scold	ɣəw ²³	ɣaw ²³
471	to sleep at night	riak ⁵²	riak ⁵²
472	to be lost	ləw ²¹	law ²¹
473	to wear	ɣu: ⁵²	ɣuu ⁵²
474	to be roar	ɣu:m ⁴⁴	ɣuum ⁴⁴
475	to overflow	liam ⁴⁴	liam ⁴⁴
476	to grow	tʰaj ²³	tʰaj ²³
477	to last long	reŋ ²³	reŋ ²³
478	to go towards home	tʰuj ⁴⁴	tʰuj ⁴⁴
479	to fight	ɖəw ²³	ɖaw ²³
480	to travel, to visit	tʰoŋ ²³	tʰoŋ ²³
481	scrotum	til ⁴⁴	til ⁴⁴
482	to participate	tɛl ⁴⁴	tɛl ⁴⁴
483	upper throat	ir ²³	ir ²³
484	to make, to mold	ɛr ²³	ɛr ²³
485	to be curled	kir ⁴⁴	kir ⁴⁴
486	to apply (blanket)	sin ⁵²	sin ⁵²
487	to mingle, to mix	tsək ²¹	tsək ²¹
488	to begin	tʰək ²¹	tʰək ²¹
489	key	təŋ ²¹	təŋ ²¹
490	to help	bə:m ²¹	bə:m ²¹
491	to meet	təŋ ²³	təŋ ²³
492	to make stand upright	tuj ²³	tuj ²³

493	to put upside down	k ^h up ²¹	k ^h up ²¹
494	to be enough, to be full of	k ^h ɔp ²¹	k ^h ɔp ²¹
495	to invite	sɔ:m ²³	sɔ:m ²³
496	to be needed	tu:l ⁴⁴	tuul ⁴⁴
497	to invade	si:m ⁴⁴	siim ⁴⁴
598	to cover	si:n ²¹	siin ²¹
599	to distribute	sem ²¹	sem ²¹
500	at the bottom of	ɬeŋ ⁵²	ɬeŋ ⁵²
501	a piece of	be:l ⁴⁴	be:l ⁴⁴
502	to hang	ta:r ²³	taar ²³
503	to run	za:ŋ ⁴⁴	jaaŋ ⁴⁴
504	penis	zaŋ ⁴⁴	jaŋ ⁴⁴
505	to forbid	k ^h am ²³	k ^h am ²³
506	a gorge	k ^h a:m ²¹	k ^h aam ²¹
507	to buckle a belt	k ^h ap ²¹	k ^h ap ²¹
508	a pan	k ^h a:p ⁵²	k ^h aap ⁵²
509	to fail	suŋ ⁴⁴	suŋ ⁴⁴
510	to pour	su:ŋ ⁴⁴	suuŋ ⁴⁴
511	shoes	bust ⁵²	buut ⁵²
512	to hold up	sɔm ⁵²	sɔm ⁵²
513	to be fatty	lɔm ⁵²	lɔm ⁵²
514	to take over	lɔŋ ²³	lɔŋ ²³
515	to praise	lɔ:m ²¹	lɔ:m ²¹
516	winter	t ^h a ²¹ .taŋ ²³	t ^h a ²¹ .taŋ ²³
517	to be stubborn	ŋal ²³	ŋal ²³
518	plural marker	ŋaj ⁴⁴	ŋaj ⁴⁴
519	to flee	tfa:n ⁴⁴	tfaan ⁴⁴
520	to be lost (portion)	tsa:n ⁴⁴	tsaan ⁴⁴

APPENDIX II

SECONDARY VERB STEMS

Number	Gloss	Primary stem	Secondary stem
137	to shave (beard)	meet ⁵²	meʔ ²¹
197	to dye (cloth)	but ²¹	buʔ ²¹
200	to sew	t ^h ii ²³	t ^h it ⁵²
223	to smell	ŋiim ²¹	ŋim ⁵²
224	to see	m̥uu ⁵²	m̥uʔ ²¹
226	to weep	tap ²¹	taʔ ²¹
229	to be hungry	rii ²³ .rɔɔŋ ²³	rii ²³ .rɔɔn ²¹
237	to sneeze	ŋap ²¹ .dɔp ²¹	ŋap ²¹ .dɔʔ ²¹
239	to breathe	t ^h ɔ ²¹ .thɔɔ ²¹	t ^h ɔ ²¹ .thɔɔt ⁵²
240	to blow	seem ²¹ /p ^h ɔɔ ²¹	sem ⁵² /p ^h ɔɔt ⁵²
242	to lick	liak ⁵²	liaʔ ²¹
243	to smile	ŋii ²³	ŋiʔ ²¹
244	to laugh	ŋii ²³	ŋiʔ ²¹
248	to answer	let ²¹	leʔ ²¹
250	to sing	Ja ⁴⁴ .saa ²¹	Ja ⁴⁴ .sak ²¹
251	to think	ruat ⁵²	ruaʔ ²¹
256	to hate	hua ⁴⁴	huat ⁵²
257	to wait	ŋaak ⁵²	ŋaʔ ²¹
261	to sleep	it ²¹	iʔ ²¹
264	to hurt	liam ²¹	lem ⁵²
266	to itch	t ^h ak ²¹ (t ^h ak ²¹ .t ^h ak ²¹)	t ^h aʔ ²¹ (t ^h ak ²¹ .t ^h aʔ ²¹)
268	to shiver	k ^h ur ²¹	k ^h urʔ ²¹
269	to die	thii ²³	thiʔ ²¹
272	to stand	diŋ ²³	din ²¹
275	to crawl	waak ⁵²	waʔ ²¹
276	to come	raa ²³	rat ²¹
277	to enter	luut ⁵²	luʔ ²¹
282	to throw	deɛŋ ²³ /ɬɔn ⁵²	deen ²¹
283	to fall	ttaa ⁵²	ttaak ⁵²
285	to float	p ^h uan ²¹	p ^h ɔn ⁵²
287	to flow	luan ²³	luan ²¹
288	to give	pee ⁵²	pek ⁵²
289	to tie	k ^h it ²¹ /ɬɛɛŋ ²³	k ^h iʔ ²¹ /ɬɛɛn ²¹

291	to rub, to scrub	p ^h iat ⁵²	p ^h iaʔ ²¹
295	to hit	k ^h ɔɔŋ ²³	k ^h ɔɔn ²¹
297	to cut (hair)	mɛet ⁵²	mɛʔ ²¹
300	to plant	tsiinj ²³	tsiin ²¹
301	to dig	laj ²¹	lajʔ ²¹
306	to cook (rice)	suaŋ ⁴⁴	suan ²¹ /sɔn ⁵²
308	to burn	nɔɔk ⁵²	nɔʔ ²¹
309	to extinguish (fire)	mit ²¹	miʔ ²¹
311	to play	lɛk ²¹	lɛʔ ²¹
313	to shoot	kaap ⁵²	kaʔ ²¹
315	to kill	t ^h at ²¹	t ^h aʔ ²¹
320	to pay	pɛɛ ⁵² /ruul ²¹	pɛɛk ⁵² /rulʔ ²¹
321	to steal	fii ^{r44} /ruu ⁵²	fii ^{r21} /ruuk ⁵²
340	to be small	fa ⁴⁴ .tɛɛ ⁴⁴	fa ⁴⁴ .tɛet ⁵²
343	to be tall	saaj ²³	saan ²¹
346	to be thin	pa ⁴⁴	paat ⁵²
349	to be wide, to be broad	kaaw ²¹	kawʔ ²¹
350	to be narrow	fiak ⁵²	fiat ²¹
351	to be deep	t ^h uuk ⁵²	t ^h uʔ ²¹
352	to be shallow	puan ²¹	pɔn ⁵²
354	to be full	k ^h at ²¹	k ^h aʔ ²¹
358	to be far	ʃaa ⁴⁴	ʃaat ⁵²
363	to be white	raaj ²³	ran ²¹
365	to be green	ʃij ²³	ʃin ²¹
367	to be dirty	baal ²¹	balʔ ²¹
373	to be different	ɔaj ⁴⁴	ɔan ²¹
376	to be bitter	k ^h aa ⁵²	k ^h aat ⁵²
377	to be spicy, hot	t ^h ak ²¹	t ^h aʔ ²¹
378	to be rotten	tɔɔt ⁵² /t ^h uu ⁵²	tɔʔ ²¹ /t ^h uut ⁵²
379	to be swell	t ^h ij ²³	t ^h in ²¹
382	to be hot	saa ²³	sat ²¹
385	to be blunt	biil ²¹	bilʔ ²¹
386	to be heavy	rit ²¹	riʔ ²¹
387	to be hard	hak ²¹	haʔ ²¹
389	to be fast	raaj ⁴⁴	ran ²¹
390	to be slow	fuuj ⁴⁴	fuun ²¹
391	to be strong	tsak ²¹	tsaʔ ²¹
392	to be weak	ɔɔr ²¹	ɔɔrʔ ²¹
393	to be tired	baaj ²¹	baʃ ⁵²
394	to be blind	mit ²¹ .tsɔɔ ⁵²	mit ²¹ .tsɔɔt ⁵²

395	to be deaf	ṇa ⁴⁴ .seet ⁵²	ṇa ⁴⁴ .seṇ ²¹
398	to be good	t ^h aa ²¹	t ^h at ²¹
399	to be bad	sia ⁵²	sia ⁵²
423	to take	laa ⁵²	laak ⁵²
424	to disappear	ḷaw ²¹	ḷaw ²¹
426	to bend	kɔj ²¹ /kual ²¹	kɔj ²¹ /kɔl ²¹
431	to disgusting	hua ⁴⁴ /niŋ ⁴⁴	Huat ⁵² /nin ²¹
433	to be cold	ḍaaj ²¹	ḍaj ²¹
436	to be loose	kaaŋ ⁴⁴	kan ²¹
438	to take hard	taŋ ²³	tan ²¹
441	to confront	tɔŋ ²¹	tɔŋ ⁵²
442	to punch	t ^h ɔŋ ²¹	t ^h ɔŋ ⁵²
447	to call	kaw ²³	kɔṇ ²¹
450	to be sick	naa ²³	nat ²¹
456	to fly	juan ²³	juan ²¹
460	cause to fall	t ^h aa ⁵²	t ^h aa ⁵²
464	to imitate	tsɔŋ ²³	tsɔŋ ²¹
471	to sleep at night	riak ⁵²	ria ²¹
472	to be lost	ḷaw ²¹	ḷaw ²¹
473	to wear	ṇuu ⁵²	ṇuuk ⁵²
476	to grow	t ^h aŋ ²³	t ^h an ²¹
478	to go towards home	t ^h uŋ ⁴⁴	t ^h un ²¹
480	to travel, to visit	t ^h ɔŋ ²³	t ^h ɔŋ ²¹
488	to mingle, to mix	tsɔk ²¹	tsɔṇ ²¹
489	to begin	t ^h ɔk ²¹	t ^h ɔṇ ²¹
491	to help	bɔom ²¹	bɔm ⁵²
492	to meet	tɔŋ ²³	tɔŋ ²¹
493	to make stand upright	tun ²³	tun ²¹
494	to put upside down	k ^h up ²¹	k ^h uṇ ²¹
495	to be enough, to be full of	k ^h ɔp ²¹	k ^h ɔṇ ²¹
499	to cover	siin ²¹	sin ⁵²
504	to run	jaaŋ ⁴⁴	jaan ²¹
510	to fail	suj ⁴⁴	sun ²¹
511	to pour	suuŋ ⁴⁴	suun ²¹
516	to take over	lɔŋ ²³	lɔŋ ²¹
513	to run, to leak (water)	ḍɔk ²¹	ḍɔṇ ²¹

APPENDIX III

VERBS THAT ALTERNATE ONLY TONES (NOT SEGMENTS) IN SECONDARY STEMS

Number	Gloss	Primary stem	Secondary stem
222	to hear	ŋaaj ²³	ŋaaj ²¹
227	to eat	ɛj ²³	ɛj ²¹
230	to be full	pum ²¹ .puar ²³	pum ²¹ .puar ²¹
231	to be thirsty	ti ⁴⁴ .haal ⁴⁴	ti ⁴⁴ .haal ²¹
232	to drink	in ²³	in ²¹
247	to shout	aaw ²³	aaw ²¹
249	to lie, to fib	buum ²³	buum ²¹
254	to choose	ɕil ²³	ɕil ²¹
258	to count	sia ²³	sia ²¹
262	to snore	ŋɔk ⁴⁴	ŋɔk ²¹
271	to sit	ɬaw ²³	ɬaw ²¹
273	to kneel	k ^h uuk ⁵² .bil ⁴⁴	k ^h uuk ⁵² .bil ²¹
278	to return	kiir ⁴⁴	kiir ²¹
279	to push	nam ⁴⁴ /tuul ⁴⁴	nam ²¹ /tuul ²¹
290	to wipe	ŋuul ²³	ŋuul ²¹
296	to split	t ^h en ²³	t ^h en ²¹
298	to stab	sun ²¹	sun ⁵²
299	to grind	ria ²³	ria ²¹
302	to bury (a corpse)	p ^h uum ²³ /vuuj ²³	p ^h uum ²¹ /vuuj ²¹
303	to winnow (rice)	seep ²³	seep ²¹
304	to dry (sth.)	p ^h aw ²³	p ^h aw ²¹
307	to boil (sth.)	saw ²³	saw ²¹
310	to work	tuan ⁴⁴	tuan ²¹
312	to dance	laam ²³	laam ²¹
314	to hunt	peɛl ⁴⁴	peɛl ²¹
316	to fight	ɖaw ²³	ɖaw ²¹
317	to buy	lej ⁴⁴	lej ²¹
318	to sell	juar ²³	juar ²¹
334	to be many	tam ⁴⁴	tam ²¹
339	to be big	tuum ²³	tuum ²¹
341	to be long	saaw ⁴⁴	saaw ²¹

342	to be short (length)	tɔɔj ⁴⁴	tɔɔj ²¹
344	to be short (height)	niam ⁴⁴	niam ²¹
347	to be fat	t ^h a:w ²³	t ^h aaw ²¹
348	to be skinny	tɔɔl ²³	tɔɔl ²¹
353	to be round	pum ²³ /luum ⁴⁴	pum ²¹ /lu:m ²¹
359	to be near	naaj ⁴⁴	naaj ²¹
362	to be black	ɖum ²³	ɖum ²¹
364	to be red	sen ²³	sen ²¹
368	to be new	t ^h ar ²³	t ^h ar ²¹
369	to be old	tar ²³ /jun ²¹	tar ²¹ /jun ⁵²
370	to be dark	t ^h im ²³	t ^h im ²¹
372	to be the same	baɲ ²¹	baɲ ⁵²
374	to be sweet	t ^h um ²³	t ^h um ²¹
375	to be sour	t ^h uur ⁴⁴	t ^h uur ²¹
380	to be dry	tsaar ²³ /raw ²³	tsaar ²¹ /raw ²¹
381	to be wet	tsiar ⁴⁴ /tsiin ⁴⁴	tsiar ²¹ /tsiin ²¹
384	to be sharp	ɕiam ²³	ɕiam ²¹
388	to be smooth	naal ⁴⁴	naal ²¹
401	to be wrong	sual ⁴⁴	sual ²¹
409	to be ripe	m̩in ²³	m̩in ²¹
425	to split w/a knife	p ^h ɛl ²³	p ^h ɛl ²¹
427	to lift	k ^h aaj ²³ /tsɔɔj ²³	k ^h aaj ²¹ tsɔɔj ²¹
432	to be warm	lum ²³	lum ²¹
434	to be difficult	har ²³	har ²¹
435	to be easy	ɔl ²³	ɔl ²¹
437	to break (law, regulation)	buar ²³	buar ²¹
439	to get down	tum ⁴⁴	tum ²¹
440	to reduce	t ^h um ⁴⁴	t ^h um ²¹
443	to play (music)	tum ⁴⁴	tum ²¹
445	to seedling	taw ²³	taw ²¹
451	to be slippery	naal ⁴⁴	naal ²¹
452	to kiss	ɲam ²¹	ɲam ⁵²
457	to be	sii ⁵²	sii ²¹
458	to receive (portion)	tsaw ²³	tsaw ²¹
459	to be late	ttaaj ⁴⁴	ttaaj ²¹
467	to be round	luum ⁴⁴	luum ²¹
469	to climb up	kaaj ²³	kaaj ²¹
470	to scold	ɕaw ²³	ɕaw ²¹
474	to be roar	ɕuum ⁴⁴	ɕuum ²¹
475	to overflow	liam ⁴⁴	Liam ²¹

477	to last long	rej ²³	rej ²¹
479	to be warm	jum ²³	jum ²¹
483	to participate	tel ⁴⁴	tel ²¹
485	to make, to mold	er ²³	er ²¹
486	to be curled	kir ⁴⁴	kir ²¹
496	to invite	soom ²³	soom ²¹
497	to be needed	tuul ⁴⁴	tuul ²¹
498	to invade	siim ⁴⁴	Siim ²¹
500	to distribute	jem ²¹	jem ⁵²
503	to hang	taar ²³	taar ²¹
518	to be stubborn	gal ²³	gal ²¹
520	to flee	tlaan ⁴⁴	tlaan ²¹
521	to be lost (portion)	tsaan ⁴⁴	tsaan ²¹

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APPENDIX IV

NON ALTERNATING VERBS

Number	Gloss	Primary stem	Secondary stem
82	to bark	baw ⁵²	baw ⁵²
83	to bite	kεεw ⁵²	kεεw ⁵²
234	to vomit	luak ⁵²	luak ⁵²
235	to spit	p ^h uj ⁵²	p ^h uj ⁵²
241	to suck	juuk ⁵²	juuk ⁵²
255	to love	ɖuʔ ²¹	ɖuʔ ²¹
259	to be afraid	tiʔ ²¹	tiʔ ²¹
260	to be angry	t ^h in ²¹ .hεεŋ ⁵²	t ^h in ²¹ .hεεŋ ⁵²
263	to dream	manj ⁴⁴ .man ⁵²	manj ⁴⁴ .man ⁵²
267	to scratch	k ^h εwʔ ²¹ /k ^h ɔjʔ ²¹	k ^h εwʔ ²¹ /k ^h ɔjʔ ²¹
274	to walk	fεʔ ²¹	fεʔ ²¹
281	to kick	siit ⁵²	siit ⁵²
292	to wash	k ^h ɔʔ ²¹	k ^h ɔʔ ²¹
293	to launder	sɔɔp ⁵²	sɔɔp ⁵²
294	to bathe	k ^h ɔʔ ²¹ (tak ²¹ .sa ⁵²)	k ^h ɔʔ ²¹ (tak ²¹ .sa ⁵²)
319	to exchange	t ^h εŋ ⁵²	t ^h εŋ ⁵²
354	to be thick	saʔ ²¹	saʔ ²¹
357	to be straight	ɖiŋ ⁵²	ɖiŋ ⁵²
371	to be bright	tlεεw ⁵²	tlεεw ⁵²
400	to be correct	ɖik ²¹	ɖik ²¹
428	to do/make	tuaʔ ²¹	tuaʔ ²¹
448	to be green(fruit)	kuʔ ²¹	kuʔ ²¹
449	to be thick	saʔ ²¹	saʔ ²¹
453	to trust	ŋat ²¹ .san ⁵² /rin ⁵² .san ⁵²	ŋat ²¹ .san ⁵² /rin ⁵² .san ⁵²
501	at the bottom of	ɖεŋ ⁵²	ɖεŋ ⁵²
508	to buckle a belt	k ^h ap ²¹	k ^h ap ²¹

APPENDIX V

TERTIARY VERB STEMS

Number	Primary stems	Secondary stems	Tertiary stems	Gloss
1	luaŋ ²³	luaŋ ²³	lɔn ⁵²	'to flow'
4	zuaŋ ²³	juaŋ ²³	joŋ ⁵²	'to fight, to jump'
5	kiaŋ ⁴⁴	kian ²¹	ken ⁵²	'to give way'
6	siaŋ ²³	sian ²¹	sen ⁵²	'to let use'
7	suaj ⁴⁴	suan ²¹	soŋ ⁵²	'to cook'