

Ryuzo Torii's Paran Seediq Glossary (1900): Annotation and observation**Izumi Ochiai**

Abstract. This paper presents the Paran Seediq glossary compiled in 1900 by a well-known anthropologist, Ryuzo Torii. The present author has added English glosses, phonetic reconstructions, and the corresponding forms in modern Paran Seediq. Some observations about the difference between Torii's transcription and modern Paran Seediq have been given.

Keywords: Formosan, Seediq, glossary, phonology, Ryuzo Torii

1. Background

The adventurer and anthropologist Ryuzo Torii (1870–1853) visited Taiwan in the early 20th century and conducted research on the Taiwanese aborigines, also known as Formosans, whose language belong to the Austronesian language family. In 1900, he visited the Hori Basin, in central Taiwan, and came into contact with two aboriginal women, Temi Rulung and Iwan Rabaw, who belonged to the Paran group from the Seediq tribe. Paran was a Seediq village in the mountains east of Hori, which at that time, according to Torii (1900a), was dangerous to enter because the Paran tribes were known to be belligerent. Torii stayed in Hori and studied the Paran dialect of Seediq language from these two women.

He presented the results of his investigations in *Tokyo Jinrui Gakkai Zasshi* (Anthropological Science) in three different articles (Torii 1900b, 1900c, 1901). The first two (1900b, 1900c), listed about 500 Paran Seediq words, and the third article (1901) listed about 100 phrasal examples. These were some of the oldest records of Paran Seediq, with the oldest being Bullock (1874), which reported on about 160 items. Following Bullock, the next examination of the language was done in the early years of the Japanese colonization of Taiwan (1885–1945), which is where Torii's glossary fitted. This glossary provided valuable data as there were many more items than in Bullock's (1874) initial reports.

In the 100-plus years since Torii investigated Paran Seediq, the language has undergone lexical and phonological changes. The aim of this paper is two-fold: One is to present

Torii's Paran Seediq glossary (1900b, 1900c) with English glosses, reconstructed phonetic transcriptions, and the corresponding forms in modern Paran Seediq. Two is to compare Torii's transcription to the present forms and provide some observations regarding the numerical system and some phonological differences.

Torii's third paper (Torii 1901), in which phrasal examples were given, is not dealt with in this paper owing to a lack of space and the syntactic differences observed in the data. Most examples had word-order differences from modern Paran Seediq, and the author is unable to clarify the historical development.

2. Glossary

The items in Torii's list are presented as they were written in the original reports (1900a, 1900b). Torii's Japanese glosses are translated into English. He has further explanations for some cases, which are translated into English and shown in the footnotes within double quotation marks. With regard to his writing system, he explains that *ch* was a sound similar to the German [x], and *sh* was a sound similar to German *sch*, which is transcribed as [ɕ] in this paper. Torii did not give any explanations about his use of diacritics or small characters or superscripts. However, the author inferred his usage by means of comparison to modern Paran Seediq and added phonetic reconstructions for Torii's transcriptions in square brackets. The italicized forms show the modern Paran Seediq equivalents; however, in some cases, the equivalents cannot be found (indicated by ---). Modern Paran Seediq data was collected from the author's fieldwork in Gluban village, Ren'ai Township, Nantou County. The informants were one male and one female, respectively, in their 70s.

The following are some points highlighted about phonetic reconstruction: First, Torii's transcriptions did not differentiate [k] from [q]; Torii wrote *k* for both. The author's phonetic reconstruction differentiates these as per modern Paran Seediq forms. Second, in Torii's transcription, the word-final *ŋ* was written as *n*, the word-medial *ŋ* as *g*, and the word-initial *ŋ* sometimes as ⁿ*g*, other times as *n*. They are corrected to *ŋ* in the author's reconstruction. Third, Torii confused *r* and *l*; sometimes *r* was used for *l* (e.g. *lima* in Torii but reconstructed as [rima] (5)), whereas *l* was sometimes used for *r* (e.g. *tailing* in Torii but reconstructed as [təɾaŋ] (41)). Forth, Torii's transcription sometimes had phonetic noises, which are erased in the author's reconstruction (e.g. *matsu*^{wo} (191), where the superscript *wo* is unnecessary). Fifth, Torii's transcription, in some cases, lacked the required segments which were added in the author's transcription (e.g. *shiogo* (178), where the word-final *t* is missing). Other anomalies in Torii's transcriptions are mentioned in the footnotes.¹ Unknown forms or forms that is uncertain are indicated by question marks.

To briefly introduce modern Paran Seediq phonemic inventory, there are 16 consonants;

¹ Abbreviations used in the footnotes are as follows. AV: actor voice, CAUS: causative, CONNEG: connegative (used after negator), FUT: future, IMP: imperative, GEN: genitive, NEG: negator, NOM: nominative, PERS: present, SG: singular, STAT: stative, UVL: undergoer voice location subject, 1: first person, 2: second person.

/p, b, t, d, ts, k, g, q, s, x, h, l, r (transcribed as r), m, n, ŋ/; two semi-vowels; /j (transcribed as y), w/; and five vowels; /a, e, i, o, u/. The stress falls on the penultimate syllable. Vowels undergo weakening in the pre-stress position (syllables before the penultimate syllable), which is called pre-stress weakening. The weakened vowel becomes a phone more or less in a range from ə to u. The weakened vowel here is transcribed as u, which is heard in deliberately articulated pronunciation. Because of the pre-stress weakening, it is impossible to phonetically reconstruct Torii's transcriptions for the vowels in the pre-stress position on the basis of modern Paran Seediq forms. Also, it is not clear whether the pre-stress weakening had occurred at the time of Torii's investigation. Therefore, in this paper, the pre-stress vowels are tentatively reconstructed as a schwa, the less-marked, neutral vowel.

Table 1. Annotated Paran Seediq glossary by Torii (1900b, 1900c)

Numerals

1. one: **win (kelu)**² [win, kial] *kiŋan*
2. two: **daha** [daha] *daha*
3. three: **tulu** [teru] *teru*
4. four: **shipat** [ʔepat] *sepats*
5. five: **lima** [rima] *rima*
6. six: **teró** [teru(?)] *mumuteru*
7. seven: **pitu** [pitu] *mpitu*
8. eight: **^mshipat** [məʔepat] *mumusepats*
9. nine: **mugari** [məŋari] *muŋari*
10. ten: **mahol** [maxal] *maxan*
11. eleven: **mahol kelu** [maxal kial] *maxan kiŋan*
12. twelve: **mahol daha** [maxal daha] *maxan daha*
13. thirteen: **maholulu** [maxal teru] *maxan teru*
14. fourteen: **mahol shipat** [maxal ʔepat] *maxan sepats*
15. fifteen: **mahol lima** [maxal rima] *maxan rima*
16. sixteen: **mahol teró** [maxal teru(?)] *maxan mumuteru*
17. seventeen: **mahol pitu** [maxal pitu] *maxan pitu*
18. eighteen: **mahol ^mshipat** [maxal məʔepat] *maxan mumusepats*
19. nineteen: **mahol mugari**³ [maxal məŋari] *maxan muŋari*
20. twenty: **pisal** [pusal] *mpusan*
21. twenty one: **pisal kelu** [pusal kial] *mpusan kiŋan*
22. twenty two: **pisal daha** [pusal daha] *mpusan daha*
23. twenty three: **pisalulu** [pusal teru] *mpusan teru*

² “win is used for ‘one,’ whereas kelu is used as a digit for tenth such as eleven.”

³ “A digit from one to nine is added to ‘ten’ when counting from eleven to nineteen.”

24. twenty four: **pisal shipat** [pusal ɛpat] *mpusan sepat*
 25. twenty five: **pisal lima** [pusal rima] *mpusan rima*
 26. twenty six: **pisal teró** [pusal teru(?)] *mpusan mumuteru*
 27. twenty seven: **pisal pitu** [pusal pitu] *mpusan mpitu*
 28. twenty eight: **pisal ^mshipat** [pusal məɛpat] *mpusan mumusepat*
 29. twenty nine: **pisal mugari**⁴ [pusal məŋari] *mpusan muŋari*
 30. thirty: **murimal** [mərimal] *muterun*
 31. forty: **shipatmahol** [ɛpat maxul] *musupatun*
 32. fifty: **limamahol** [rima maxul] *muriman*
 33. sixty: **terómahol** [teru(?) maxul] *mumuteru kumuxalan*
 34. seventy: **pitumahol** [pitu maxul] *mpitu kumuxalan*
 35. eighty: **^mshipatmahol** [məɛpat maxul] *mumusepac kumuxalan*
 36. ninety: **mugarimahol**⁵ [məŋari maxul] *muŋari kumuxalan*
 37. hundred: **kelu bekkui**⁶ [kiyal bekuy] *kiŋan kubekuy*
 38. a hundred twenty five: **kelu bekkui ma daha mahol lima**⁷ [kiyal bekuy ma daha maxul rima] *kiŋan kubekuy mpusan rima*
 39. a thousand⁸ **mahol bekkui**⁹ [maxal bekuy] *maxan kubekuy*
 40. 1236: **mahol bekkui ma daha bekkui tulu mahol ma teró** [maxal bekuy ma daha bekuy teru maxul ma teru(?)] *maxan kubekuy daha kubekuy muterun mumuteru*

Body parts

41. body: **tailan** [tæraŋ] *teeraŋ*
 42. head: **tunuhu** [tunux] *tunux*
 43. head-hair: **shinunuhu** [sənunux] *sununux*
 44. forehead: **duruk**¹⁰ [duruk] *kuduruk*
 45. eye: **doiryuk** [doriq] *doriq*
 46. eyebrow: **vava doryuk** [babaw doriq] *bobo doriq*
 47. pupil: **karink doryuk** [qalux(?) doriq] *qalux doriq*¹¹
 48. ear: **virut** [birat] *birats*
 49. earlobe: **bashio viruk** [waɛaw(?) birat(?)] *waso birats*
 50. face: **takarash** [dəqeraɛ] *duqeras*

⁴ “A digit from one to nine is added to ‘twenty’ when counting from twenty-one to twenty-nine and similarly for the numerals from 30 to 99.”

⁵ “Twenty and thirty are independent words, but others (forty to ninety) are composed of digits followed by *mahol*.”

⁶ “From 200 to 900, *bekkui* is added to the end.”

⁷ “This *ma* means ‘then’. It should be noted that the expression *kelu bekkui pisal lima* is not used here.”

⁸ The original gloss has a typographical error. It was written as 100 but has been corrected to 1000.

⁹ “To express a thousand, *bekkui* ‘a hundred’ is placed before ten (*mahol*).”

¹⁰ The initial segment *ku* in modern Paran Seediq did not appear in Torii’s transcription.

¹¹ There is no expression like this in modern Paran Seediq. *qalux* is “black” in modern Paran Seediq.

51. nose: **muhiñ** [muhiñ] *muhiñ*
52. nostril: **bedu muhiñ** [bediñ muhiñ] *beliñ muhiñ*
53. mouth: **ko^{ho}wak** [quwaq] *quwaq*
54. cheek: **vekedui** [bəkeduy] *bukeluy*.¹²
55. tongue: **hema** [hema] *hema*
56. teeth: **ruppun** [rupun] *rupun*
57. lip: **pudahau**¹³ [pudahun] *pudahun*
58. beard: **gudushi** [ɲuduɕ] *ɲudus*
59. chin: **vedu kedui** [bədəkeduy(?)] *bukeluy*
60. throat: **gedu** [gedu] *gelu*
61. shoulder: **achen** [ahiñ] *ahiñ*
62. spine: **tudu bukkui** [tudu bukuy] *tudu bukuy*
63. elbow: **hekuk vaga** [hiqur(?)] *hiqun бага*
64. upper limb: **kula vaga** [kulaw бага] *kulo бага*
65. hand: **kapal** [qapal] *qapan*
66. finger: **kihil vaga** [kehiñ бага] *kehiñ бага*
67. thumb: **vaki vaga** [baki бага] *bubaki*
68. index finger: **kehil vaga** [kehiñ бага] *kehiñ бага*
69. middle finger: **kehil vaga** [kehiñ бага] *kehiñ бага*
70. ring finger: **kehil vaga** [kehiñ бага] *kehiñ бага*
71. little finger: **kehil vaga**¹⁴ [kehiñ бага] *kehiñ бага*
72. chest: **teyelan** [teerañ] *teerañ*
73. waist: **hoinuk** [həinuk] *huginuk*
74. belly: **rebun**¹⁵ [lebun] *lebun*
75. belly: **vudesú**¹⁶ [buðas] *nbuyas*
76. buttock: **pushu ugu** [puɕu ɲuɲu] *pusu ɲuɲu*
77. knee: **pugu pakajiet** [puɲu papaq(?)] *puɲu papak*
78. thigh: **techerok** [teriɕ(?)] *buteriq*.¹⁷
79. shin: **kuroch** [quruh(?)] *qupuruh*.¹⁸
80. lower limb: **teherok papak** [teriɕ(?) papak] *buteriq papak*
81. foot: **kapāl** [qapal] *qapan*.¹⁹
82. thumb (of toe): **vuki papak** [baki papak] *bubaki papak*.²⁰

¹² This means “chin” in modern Paran Seediq.

¹³ Torii seemed to mistakenly write a word-final u when he intended to write n.

¹⁴ “Only thumb has a distinctive word; the other words are expressed using the same word.”

¹⁵ “This refers to the belly above the navel.”

¹⁶ “This refers to the belly under the navel.”

¹⁷ The initial segment *bu* in modern Paran Seediq did not appear in Torii’s transcription.

¹⁸ This means “calf” in modern Paran Seediq.

¹⁹ This means “instep” in modern Paran Seediq.

²⁰ *bubaki* seen in modern Paran Seediq is derived from *baki* “grandfather” by reduplicating the initial

83. index finger (toe): **kehil papak** [kehiŋ papak] *kehiŋ papak*
 84. middle finger (toe): **kehil papak** [kehiŋ papak] *kehiŋ papak*
 85. ring finger (toe): **kehil papak** [kehiŋ papak] *kehiŋ papak*
 86. little finger (toe): **kehil papak** [kehiŋ papak] *kehiŋ papak*
 87. skin: **ravui** [labuy (?)] ---
 88. navel: **pūga** [puga] *puga*
 89. underarm: **tamak^oduan** [tama kuduwan] *toma kuduwan*.²¹
 90. flesh: **puntudalu** [daruk (?)] *daruk*
 91. bone: **vudu** [buðut] *buut*
 92. blood: **shidala** [æðara] *sudara*.²²
 93. breast: **nunucha** [nunuh] *nunuh*
 94. milk: **vēduch nucha** [beðux nunuh] *beyuq nunuh*

Relationship

95. relative: **hamadan** [həmadan] *hulumadan*.²³
 96. ancestor: **paije vake** [paði baki] *pai baki*
 97. father: **tama** [tama] *tama*
 98. mother: **vuvu** [bubu] *bubu*
 99. elder brother: **vusura** [bəsuran] *qubusuran*.²⁴
 100. younger brother: **suwadio** [səwaði] *suwa(y)i*
 101. elder sister: **vusura** [bəsuran] *qubusuran*
 102. younger sister: **suwadi**.²⁵ [səwaði] *suwa(y)i*
 103. child: **lakke** [laqi] *laqi*
 104. boy: **lakkeshi sena** [laqi senaw(?)] *laqi ruseno*.²⁶
 105. girl: **lakkai makaidel** [laqi məqaidil] *laqi muqedin*
 106. savage: **seleakch daya**.²⁷ [seediq daya] *seediq daya*
 107. man: **seinah^u** [senaw] *seno*
 108. woman: **makaidil** [məqaidil] *muqedin*
 109. husband: **seinah^u yako**.²⁸ [seno yaku] **seno yaku*.²⁹

consonant.

²¹ *toma* means “under” in modern Paran Seediq. The first vowel showed a mismatch with Torii’s transcription.

²² This means “shed blood” in modern Paran Seediq.

²³ The medial segment *lu* in modern Paran Seediq did not appear in Torii’s transcription.

²⁴ The initial segment *qu* in modern Paran Seediq did not appear in Torii’s transcription (see also 111). The final *n* is also missing in Torii’s transcription.

²⁵ “The same word is used for sisters and brothers.”

²⁶ The initial segment *ru* in modern Paran Seediq did not appear in Torii’s transcription.

²⁷ “*seleakch*” means human-being and *daya* means east. Their tribal name then means eastern people. This tribe has words for east (*daya*) and west (*hunatsu* [hunats]) but lacks words for north and south.”

²⁸ “*yaku* is a first-person singular pronoun.”

²⁹ This expression does not mean “my husband” in modern Paran Seediq. Instead, *seno* = *mu* (husband = 1SG.GEN) is used.

110. wife: **makaidil** [məqaidil] *qedin*
 111. chief: **pasulan** [bəsuran] *qubusuran*

Plant and mineral

112. leopard: **dekéletsú** [rəkélits] *rukelic*
 113. bear: **shumai** [ɕumay] *sume*
 114. boar: **bojakka** [boðak] *boyak*
 115. deer: **vakkainuhu** [waqaynux/waqenux] *ruqenux*
 116. a kind of deer: **pada** [pada] *pada*
 117. monkey: **rugai** [ruŋay] *ruŋe*
 118. mouse: **kólit** [qolit] *qolits*
 119. bat: **rapit** [rapit] *rapits*³⁰
 120. horse: **domai** [dəmai] *dumai*
 121. cow: **rappa tanach** [dapa tanah] *dapa tanah*
 122. buffalo: **rappa varai** [dapa balay] *dapa bale*
 123. goat: **mēirit** [mirit] *mirits*
 124. dog: **hulin** [huliŋ] *huliŋ*
 125. cat: **niyau** [ŋiyaw] *ŋiyo*
 126. pig: **vavui** [babuy] *babuy*
 127. bird: **róduchu** [rodux] *rodux*
 128. sparrow: **piripirachu** [piri pirats] *puruc* (?)
 129. chick: **wawa vehene** [wawa bəheni] *wawa qubeheni*
 130. crab: **karan** [karaŋ] *karaŋ*
 131. shrimp: **vuvorun**³¹ [buboluŋ] *boluŋ*
 132. eel: **shiviri'** [ɕəwili] *sugidi/suwili*
 133. fish: **turuhu** [turux] *qutsurux*³²
 134. snake: **kudu** [quðu] *quyu*
 135. worm: **kuyi** [kui] *kui*
 136. earthworm: **vichuru** [bitsur] *bitsun*
 137. centipede: **pi^h1rakka** [pəciðak(?)] *puɕirak*
 138. frog: **patoru** [patur] *qupatun*³³
 139. cicada: **kédiai** [kədiay] *tudie*³⁴
 140. butterfly: **purarai** [pəlalay] *pulale*
 141. dragonfly: **pudausú** [pədaus] *pudaus*

³⁰ This means “flying squirrel” in modern Paran Seediq.

³¹ This form seems to have undergone a reduplication of the initial consonant of the root *boluŋ*.

³² The initial segment *qu* in modern Paran Seediq did not appear in Torii's transcription.

³³ Torii's transcription did not have the segments comparable to the initial *qu* in modern Paran Seediq *qupatun*.

³⁴ The initial segment *ku* in modern Paran Seediq did not appear in Torii's transcription. In addition, the initial consonants did not match.

142. mosquito: **kūyi** [kui] *kui*
 143. fly: **lugedi** [rəŋedi] *ruŋedi*
 144. bee: **vuyehuru** [bəŋihur(?)] *buŋihun*
 145. spider: **purovach** [pərobaw] *purobo*
 146. spider web: **kadi purovach** [kadi pərobaw] *kadi purobo*
 147. ant: **tache** [tahi] *qutahi*.³⁵
 148. horn: **urun** [uruŋ] *uruŋ*
 149. hair: **uvalu** [ubal] *uban*
 150. hoof: **kokwacha** [quwaq] *quwaq*
 151. beak: **kowakarudoch** [quwaq rodux] *quwaq rodux*
 152. wing: **súkeya** [səkiya] *sukiya*
 153. comb: **kailun rudoch**.³⁶ [qeluŋ rodux] *qeluŋ rodux*
 154. nest: **rudoch veheni** [rodux bəheni] *rodux qubeheni*.³⁷
 155. scale: **lechakka** [rehaq] *rehaq*.³⁸
 156. gill: **yelau tsuruhu** [yelu tsurux] *gelu qucurux*
 157. fin: **tsudu** [tsudu(?)] *tsudu(?)*.³⁹
 158. shell: **vukkui kurukku turuhu**.⁴⁰ [bukuy kuluk turux] *bukuy kuluk qutsurux*.⁴¹
 159. tree: **ka^hni** [qəhuni] *quhuni*
 160. root: **urátu ka^hni** [urat qəhuni] *urats quhuni*.⁴²
 161. branch: **róráu** [roraw] *roro*
 162. bark: **rehakoni** [rehaq (qə)huni] *rehaq quhuni*
 163. leaf: **wassa ka^hni** [wasaw qəhuni] *waso quhuni*
 164. flower: **paipach** [pahəpah].⁴³ *pehepah*
 165. bud: **paipach**.⁴⁴ [pahəpah] *pehepah*
 166. pine: **hārun** [haruŋ] *haruŋ*
 167. camphor: **t^{cha}kusú** [tsakus] *tsakus*
 168. bamboo: **vutakan** [bətakan] *butakan*
 169. cane: **kúaruhu** [qəwarux] *quwarux*
 170. banana: **vuvuvurevure** [bubu buləbul].⁴⁵ *bubu bulebun*

³⁵ The initial segment *qu* in modern Paran Seediq does not appear in Torii's form.

³⁶ "rudoch means bird."

³⁷ The initial segment *qu* of *qubeheni* in modern Paran Seediq did not appear in Torii's transcription.

³⁸ This means "bark, seed" in modern Paran Seediq.

³⁹ This means "derris" in modern Paran Seediq.

⁴⁰ "tsuruhi means 'fish.'" This note suggests that there was an alternate pronunciation for "fish" as [tsurux].

⁴¹ This expression can be glossed as "back, turtle, fish" but it is not understandable in modern Paran Seediq.

⁴² *gamin* is "root (of a tree)" in modern Paran Seediq.

⁴³ This is a historical reduplication. The historical root is *pah*, and the base is *pahpah*, to which an epenthetic vowel (a schwa) is inserted between the consonant clusters.

⁴⁴ "The same word is used for flower and bud."

⁴⁵ This expression means "the plant of banana." *bubu* means "mother." The second word is made from historical reduplication. The historical root is *bul*, and the base is *bulbul*, to which an epenthetic vowel (a schwa) is inserted between the consonant clusters.

171. rice plant: **pāzai** (**padai**?) [paðay] *paye*
 172. rice: **verashi padai** [beraɕ paðay] *beras*
 173. ramie: **nókach** [nuqah] *nuqah*
 174. gourd: **kaliyan** [kəriyan] *kuri(y)an*.⁴⁶
 175. pepper: **uchiu**^k [uteik] *uteik*
 176. cider: **takailun** [təqilun] *tuqilun*
 177. peanut: **trabushi** [tərabuɕ] *turabus*
 178. green pea: **shiogo** [ɕuŋut] *suŋuts*
 179. a kind of black pea: ?
 180. azuki bean: **vedoch** [beluh] *beluh*
 181. spring onion: **pi^hrikiri** [pihiŋ(?)] *pihiŋ*
 182. bamboo shoot: **réhi** [lexi] *lexi*
 183. mung bean: **rayen** [layan] *layan*
 184. potato: **sári** [sari] *sari*
 185. apricot: **risach** [ritsah] *ritsah*
 186. peach: **airn**⁴⁷ [ariŋ] *ariŋ*
 187. plum: **vurikaue** [bəɾəqaway] *buruqawe*
 188. ginger: **uchikapru** [uteik qapal] *uteik qapan*
 189. pineapple: **suputu** [səputu] *suputu*
 190. sweet potato: **boga** [buŋa] *buŋa*
 191. chestnut: **matsu**^{wo} [matsu] *matsu*
 192. millet: **vassa**^u [basaw] *baso*
 193. sticky rice: **tubura** [təbula] *tubula*
 194. gold: ?
 195. silver: **pirach** [pila] *pila*
 196. crystal: **karari vatunuhu** [qəɾari bətunux] *qurari butunux*
 197. rock: **vatunuhu paru** [bətunux paru] *butunux paru*
 198. earth: **duheraru** [dəheral] *deheran*
 199. hot spring: **kaidin** [qədiŋ/qaidiŋ] *qehediŋ*
 200. food: **idohu** [ido] *ido*
 201. breakfast: **mekan tsuáman** [mekan tsaman] *mekan tsaman*
 202. lunch: **mekan chikanarai**⁴⁸ [mekan tɛeka na ali] *mekan tɛeka na ali*
 203. supper: **mekan yēman** [mekan eman].⁴⁹ *mekan keeman*
 204. egg: **valun** [balun] *balun*

⁴⁶ This form means “what was dug.” It is derived from *kari* “dig.”

⁴⁷ Torii appears to have mistaken the order for i and r. He probably intended to write “arin.”

⁴⁸ It appears that the r and the following a were mistakenly switched in Torii's transcription.

⁴⁹ The word-initial k (modern Paran Seediq *keeman* “night”) is dropped for unknown reason. See also 220 where there is an initial *k* for the same word.

205. salt: **te^mmu** [timu] *timu*
 206. sugar: **kaⁿchiyā** [kantsiya]⁵⁰ *kunciya*
 207. wine: **shinoch** [ɛino] *ɛino*
 208. porridge: **idomrum**⁵¹ [ido rumu] *ido rumu*
 209. hot water: **shiyam** [ɛiya m(ətilux)] *quɛiya mutilux*
 210. water: **shiya** [ɛiya] *quɛiya*⁵²

Astronomy and geography

211. sky: **kārā^{to}** [karat] *karat̚s*
 212. ground: **doheran** [dəheran] *deheran*
 213. sea: **chilun** [teilun] *guteilun*
 214. sun: **hi'dau** [hidaw] *hido*
 215. moon: **īdasu** [idas] *idas*
 216. star: **pugerach** [pəŋerah] *puŋerah*
 217. morning: **tsuaman** [tsaman] *tsaman*
 218. noon: **chekanazai**⁵³ [tɛka na ali] *tɛka na ali*
 219. evening: **viyenari** [biyan hari] *bubiyan hari*⁵⁴
 220. night: **kayeman** [kæeman] *keeman*
 221. thick: **^{ma}chiruhu** [mətɛilux] *mutilux*
 222. cold: **kusakui** [kəsekuy] *kusekuy*
 223. cloud: **puravu** [pələbu] *pulabu*
 224. wind: **vugihulu** [bəgihur] *bugihun*
 225. rain: **^{ku}muduhu** [qəmuðux] *qumuyux*
 226. snow: **huda** [huda] *huda*
 227. rainbow: **hakawutuhu** [hakaw utux] *hako utux*
 228. lightning: **varuwa** [bəruwa] *buruwa*
 229. frost: **duremushi** [dəremuɛ] *duremus*
 230. dew: **duremushi** [dəremuɛ] *duremus*
 231. hail: **pūguhu shiagato** [ʔ] ---
 232. smoke: **karegulu** [qəregul] *quregun*
 233. mountain: **dimiko^{hu}** [dəmiqu] *lumi-qu*
 234. high mountain: **^{ru}meko paru** [ləmi-qu paru] *lumi-qu paru*
 235. moor: **vureyinuhu** [bəɾənuɪx] *bureenux*

⁵⁰ This is a loan from the Southern-Min “sugarcane.”

⁵¹ The initial m seems to be a typographical error.

⁵² The unstressed syllable (that is, the antepenultimate syllable) is dropped in this form as well as in 209. See also 244 where there is an antepenultimate syllable in Torii’s transcription.

⁵³ It seems that z and the following a were mistakenly switched in Torii’s transcription. See also 202.

⁵⁴ Historically speaking, *bubiyan* “evening” is from *gabi-an* (night-UVL). The initial consonant underwent progressive assimilation to the following consonant.

236. vally: **shiipau** [ɕipaw] *ɕipo*
 237. village: **ālan** [alaŋ] *alaŋ*
 238. field: **kumepach** [kəməpah] *kumeepah*.⁵⁵
 239. dust: **karáoi** [ʔ] ---
 240. sand: **vunakai**⁵⁶ [bənaquy] *bunaquy*
 241. road: **yelu** [elu] *elu*
 242. river: **jajum** [yayum] *yayun*
 243. lake: **jajum** [yayum] *yayun*
 244. pond: **chiirun kashiya** [tɕilun qəɕiya] *gucilun quɕiya*.⁵⁶
 245. well: **vuvulu** [bubul] *bubun*
 246. riverbank: **jayum vatunuhu** [ɖayun bətunux] *yayun butunux*
 247. waterfall: ^{ka}**derai** [kəderay] *kudere*
 248. bridge: **hakkau** [hakaw] *hako*

House and furniture

249. wall: **kanavil** [qənabil] *qunabin*
 250. gate: **rehigan** [rəhegan] *rehegun*.⁵⁷
 251. window: **vaishi** [baie] *bais*
 252. ladder: **hakkau** [hakaw] *hako*
 253. house: **denanuhu**.⁵⁸ [dənamux] *dunamux*
 254. floor: **karapach** [qəlapo] *qulapo*.⁵⁹
 255. door: **réivi** [lebi] *lebi*.⁶⁰
 256. home: **sappach** [sapah] *sapah*
 257. entrance: **rahigon** [rəhegun] *rehegun*
 258. pole: **yeru**^{tu} [erut] *eruts*
 259. warehouse: **réppun** [repun] *repun*
 260. tile: **riwasu**.⁶¹ [liwas] *liwas*.⁶²
 261. granary: **réppun** [repun] *repun*
 262. pigpen: **kanalan vavui** [babuy] *qunalaŋ babuy*.⁶³
 263. birdhouse: **kadu** [kadu] *kadu*

⁵⁵ This means to “work in the field” in modern Paran Seediq.

⁵⁶ *guteilun* itself means “pond” in modern Paran Seediq.

⁵⁷ These forms are derived from the verb root *ruhug* “to lock.” Torii’s transcription for “gate” was given the suffix *-an*; the modern form is suffixed with *-un*. The modern form underwent additional sound change from *g* to *ŋ*.

⁵⁸ The second *n* appears to be a typographical error for *m*.

⁵⁹ This form means “bed” in modern Paran Seediq.

⁶⁰ This form means “close!” in modern Paran Seediq. It is segmentable as *leb-i*, derived from *eleb* “close” by attaching an imperative suffix *-i*.

⁶¹ “Savages have no tiles but they call the tiles of Chinese this.”

⁶² This means “urn” in modern Paran Seediq.

⁶³ The accurate word for “pigpen” in modern Paran Seediq is *tibu*.

264. outdoors: **ⁿgagu^t** [ŋaŋut] *ŋaŋuts*
 265. indoors: **sappach tuzuma** [sapah təruma] *sapah truma*
 266. bedroom: **karapach** [qəlapaw] *qulapo*
 267. chair: **gaka^t** [gakat] *gakats*
 268. box: **rudu** [rudu] *rudu*
 269. basket carried on the back: **bururu** [bəruru] *bururu*
 270. bedclothes: **sappan**⁶⁴ [sapaŋ] *tsapaŋ*
 271. pillow: **sappi tūnux** [sapit(?) tunux] *sapits(?) tunux*⁶⁵
 272. shelf for displaying skulls: **shinu varun** [ɕənəbaluŋ(?)] ---
 273. bowl: **mērach** [merah(?)] *puŋerah*⁶⁶
 274. plate: **mērach** [merah(?)] *puŋerah*
 275. jar: **sarau** [salaw] *salo*
 276. cup: **chokkai** [tsuqi] *tsuqi*
 277. sword: **shirumada^t** [ɕələmadat] *sulumadats*
 278. knife: **yayú** [yayu] *yayu*
 279. cord on knife: **vu^ganun** [ʔ] ---
 280. handle of knife: **riddi** [ridi] *riduy, ridi*
 281. sheath: **rudú** [rudu] *rudu*
 282. tobacco: **tamakko** [tamaku] *tumaku*
 283. tobacco case: **ruvui tamakko** [lubuy tamaku] *lubuy tumaku*
 284. oven: **rakaida** [rəqeda] *ruqeda*
 285. pot: **rivahu** [ribaw] *ribo*
 286. large pot: **rivahu paru** [ribaw paru] *ribo paru*
 287. earthen pot: **kaiyu** [kayu(?)] ---
 288. urn: **tokki** [tuqi] *tuqi*⁶⁷
 289. light: **holun** [haruŋ] *haruŋ*
 290. flint: **kalali** [qərari] *qurari*
 291. mortar: **putun** [putuŋ], **dohon** [duhuŋ] *putuŋ*⁶⁸, *duhuŋ*
 292. pestle: **seiru** [seraw] *sero*
 293. gourd cup: **holun** [hurun] *duhurun*⁶⁹
 294. brazier: **atta punin^k** [atak puniq] *atak puniq*
 295. tub: **kulu** [kulu] *kulu*
 296. bloom: **shiki sappach** [ɕiki sapah] *sukuɕiki sapah*⁷⁰

⁶⁴ “Savages’ bedclothes are hemp-woven and are similar to wrapping clothes.”

⁶⁵ *Sapits* means “shoes made of skin” in modern Parān Seediq.

⁶⁶ Torii’s transcription did not have the initial segments that were comparable to *pu* in the modern Parān Seediq *puŋerah*, as also seen in 274.

⁶⁷ This means “a cup made of bamboo” in modern Parān Seediq.

⁶⁸ This means “match (for lighting)” in modern Parān Seediq.

⁶⁹ Torii’s transcription seems to have been derived from *duhun* (< historically, *duhur*) “scoop.”

297. torch: **halun** [haruŋ] *haruŋ*
 298. match: **puttun** [putuŋ] *putuŋ*
 299. ax: **puru** [puru] *puru*
 300. needle: **toⁿgi** [toŋi?] ---⁷¹
 301. whetstone: **vutunuhu**⁷² [bətunux] *butunux*⁷³
 302. mirror: **wagi**⁷⁴ [wagi] *gagi*
 303. sickle: **kauye** [kawi(?)] ---
 304. rope: **shinuluhu** [ɕənəðux] *sunuyuk*
 305. scissor: **ata^k** [atak] *atak*
 306. razor: **kugushi** [kugus] *kugus*
 307. umbrella: **tara'shi** [təraɕi] *turaɕi*
 308. shade: **tara'shi** [təraɕi] *turaɕi*
 309. spatula: **it'chihu** [itɕux] *itsuk*
 310. gun: **halun** [haluŋ] *haluŋ*
 311. bullet: **vali** [bali] *bubali*⁷⁵
 312. flute: **wawó** [wau] *wau*⁷⁶
 313. lance: **buragan** [bəraŋan] *sunburagan*
 314. handle of lance: **putúshi'** [putuɕ(?)] ---
 315. blade of lance: **shin buragan** [ɕənburaŋan] *sunburagan*
 316. arrow: **vechenukka** [bəheniq] *beheniq*
 317. bow: **pudi** [budi] *budi*
 318. lunchbox: **gepu^{hu}** [gepuɕ] *gepuk*
 319. Jew's harp: **tubul** [tubu] *tubu*
 320. blade of Jew's harp: **wawa tubul** [wawa tubu] *wawa tubu*
 321. charcoal: **vagach** [bagah] *bagah*
 322. firewood: **koni** [qəuni]⁷⁷ *quhuni*
 323. ash: **kapurichi'**⁷⁸ [qəbulit] *qubulit*

Accessory

324. underwear: **tarach** [tawrih] *torih*

⁷⁰ The first word *sukusik-i* (sweep-IMP) is derived from *sukesik* “bloom” in modern Paran Seediq. This expression means “sweep the house!”

⁷¹ “Needle” is *qumi* in modern Paran Seediq.

⁷² “They don’t have a special kind of whetting stone, so any stone can be used for this purpose, which is why “whetstone” is simply called *butunuhu* ‘stone.’”

⁷³ “Whetstone” is *lupax-an* (whet-UVL) in modern Paran Seediq.

⁷⁴ “They have no mirror of their own, but they call the Chinese mirror this.”

⁷⁵ This is likely to have undergone a reduplication of the initial consonant.

⁷⁶ This form alone does not exist in modern Paran Seediq, but it must be the root of *putu-wau* “whistle.”

⁷⁷ See also 159.

⁷⁸ “In the list above, savages do not possess such items such as mirrors and razors; however, there are still words for them, as written here.”

325. ring: takkaitul [teqetul(?)] *puqetsun*(?).⁷⁹
 326. shoe: **sappili** [sapol(?)] *sapits*.⁸⁰
 327. pierce: **tarau** [tərau(?)] ---
 328. button: **ragiraigai** [ragiraygay(?)] ---
 329. necklace: **gidigari**^{t81} [gidi garit(?)] *widi* ---
 330. necklace: **viyu**⁸² [biyu] *biyu*
 331. bag: **kerai**⁸³ [keray] *kere*
 332. bag: **tókal**⁸⁴ [tokan] *token*
 333. clothes: **ratan**⁸⁵ [ratan] *ratan*
 334. clothes with patterns: **ratan akkau**⁸⁶ [ratan akaw(?)] *ratan* ---
 335. hat: **vunuhu** [bunuh] *bunuh*
 336. bracelet: **tamuru** [təmuru(?)] *qumuru*
 337. a kind of ring: **vurikko**^{u87} [bəriku] *buriku*
 338. comb: **shirau** [əəlau] *sulau*
 339. raincoat: **pala takkach**⁸⁸ [pala takah(?)] *pala* ---
 340. string: **negul pala** [negul pala] *negun pala*.⁸⁹
 341. pierce hole: **vilin vilutsu** [beliŋ birats] *beliŋ birats*
 342. tatoo: **patasch** [patae] *patis*.⁹⁰
 343. bead: **vigutehul**⁹¹ [biyu tehur] *biyu qutehun*
 344. bead: **vigu kailen**⁹² ‘small bead’ [biyu qeliŋ] *biyu luqeliŋ*.⁹³

Pronouns

345. I: **yakko** [yaku] *yaku*
 346. we: **yakko** [yaku] *yaku*.⁹⁴
 347. you: **ishio** [ieʉ] *isu*
 348. you (plural): **ishia ishio** [ieʉ ieʉ(?)] *isu isu*(?).⁹⁵

⁷⁹ The initial consonant did not match in Torii’s Seediq and modern Paran Seediq.

⁸⁰ This means “footwear made of animal skin” in modern Paran Seediq.

⁸¹ “This is used by a male.”

⁸² “This is used by a female.”

⁸³ “This refers to a sack.”

⁸⁴ “This is carried on the back. A skull is sometimes put inside this when a savage goes out headhunting.”

⁸⁵ “This is woven using hemp.”

⁸⁶ “This refers to the stripes woven into the clothes.”

⁸⁷ “This is hung on girls’ earlobes. This is made of a horn cut off an animal.”

⁸⁸ “This is a piece of cloth hung on the shoulder similar to wrapping clothes.”

⁸⁹ *negun* is only used to express “string” in modern Paran Seediq.

⁹⁰ Historically speaking, this form was *patas* (as it remains so in Taroko Seediq (Hu ed. 2006:505)), but the final vowel underwent a change into *i* in modern Paran Seediq (see also 471).

⁹¹ “big bead.”

⁹² “small bead.”

⁹³ The initial segment *lu* of *luqeliŋ* in modern Paran Seediq did not appear in Torii’s transcription.

⁹⁴ *yami* (exclusive) or *ita* (inclusive) is used for “we” in modern Paran Seediq.

⁹⁵ This looks like a reduplicated form of *isu*; however, there is no such form in modern Paran Seediq. *yamu*

349. he/she/it: ?⁹⁶

350. they: ?^{97 98}

Adjectives

351. yellow: ?⁹⁹

352. blue: **musama** [məsama] *mugusama*¹⁰⁰

353. black: **mukaluhu** [məqalux] *muqalux*

354. red: **mutaloha** [mətanah] *mutanah*

355. white: **vehagai** [bəhegay] *behege*

356. brown: ?¹⁰¹

357. big: **paru** [paru] *paru*

358. middle: ? ---

359. small: **tikkuch** [tikuh] *tikuh*

360. long: **kanelishi** [qəneliʃ] *qunedis*

361. short: **de^{va}yako** [dəeɣu] *dehequ*

362. thick: **mukudenuhu** [məkunedux] *mukunedux*¹⁰²

363. thin: **mepuhu** [mepux] *epux*¹⁰³

364. high: **vavarau** [babaraw] *bubaro*

365. low: **turuma?** [təruma] *turuma*¹⁰⁴

366. deep: **turuma?** [təruma] *turuma*

367. shallow: **rerevu** [ləlebu] *lulebu*

368. far: **taiya** [taiya] *teheya*¹⁰⁵

369. near: **dalin** [daliŋ] *daliŋ*

370. light: **serukach** [səlukah] *ʂulokah*

371. heavy: **cherissu** [təedis(?)] *təhedin*¹⁰⁶

372. broad: **verahan** [bərahaŋ(?)] *gulahāŋ*¹⁰⁷

373. narrow: **mayeruhu** [məeðux] *meeyux*

instead is used for “you (plural)” in modern Paran Seediq.

⁹⁶ The third-person singular form is *heya* in modern Paran Seediq.

⁹⁷ The third-person plural form is *deheya* in modern Paran Seediq.

⁹⁸ “There are pronouns for first and second person (singular only); there is no pronoun for third-person.”

⁹⁹ “Yellow” is *muguciyas* in modern Paran Seediq.

¹⁰⁰ The second syllable *gu* in modern Paran Seediq does not appear in Torii’s transcription.

¹⁰¹ “Brown” is *mugu-deheran* (similar.to-earth) in modern Paran Seediq.

¹⁰² Compared with Torii’s transcription, the *n* and *d* seemed to be metathesized. See also 396.

¹⁰³ Torii’s transcription indicates that the stative prefix *mə-* was attached to the root *epux*; however, it is not attached in the modern Paran Seediq form.

¹⁰⁴ This means “backside of the horizontal dimension” or “deep (of water)” in modern Paran Seediq. “Low” is *lulebu* or *dehequ* in modern Paran Seediq.

¹⁰⁵ The penultimate vowel does not match. Historically speaking, it seems to have been derived from the root *hiya* “there”; however, the vowel *i* is lowered to *e* in modern Paran Seediq.

¹⁰⁶ The word-final consonant does not match.

¹⁰⁷ The initial consonant does not match.

374. fast: **nagohari** [naguh hari] *naaguh hari*
 375. late: **visiyahari** [bəɕiyaq hari] *busiyaq hari*
 376. go up: **musa varau**¹⁰⁸ *mosa baro*
 377. go down: **hamerrut** [həmerut] *humeruts*
 378. fall behind: **muhi'ti** [məhiti] *muhiti*
 379. go ahead: **mujera** [məəela] *mugeela*
 380. round: **marun** [maruŋ].¹⁰⁹ ---
 381. pointy: ?
 382. straight: **mushidelihu** [məəderux] *musuderux*
 383. curvy: **bikki** [biki] *biki*
 384. new: **vogorach** [bəgurah] *bugurah*
 385. old: **chiumuchin**^t [təəmətəal/təəmətəat].¹¹⁰ *tsumutsats*
 386. strong: **veza**^u [unbeðax] *mbeyax*
 387. weak: **ine veza**¹¹¹ [ini bðax] *ini kubeyax*.¹¹²
 388. comfortable: **marururugan** [malu lulunjan] *malu luŋluŋan*.¹¹³
 389. good smell: ?
 390. it smells bad: **shikenmihu** [ɕəkenux] *sukenux*
 391. resonant: **vehin**^u [unbehiŋ(?)] ---
 392. quiet: **karau** [qaraw] *qaro*
 393. noisy: **sunvirat** [sunbirat] *sunbirats*
 394. hard: **musadach** [məsadux] *saadux*
 395. soft: **muhenuk** [məhenuk] *muhenuk*.¹¹⁴
 396. thick: **teyehul** [təehur(?)] *qutehun*.¹¹⁵
 397. dense: **mukedunuhu** [məkədenux] *mukunedux*
 398. sweet: **ushishibushi** [ɕəɕibue] *sucibus*
 399. spicy: **mugihul**¹¹⁶ [məihur] *muŋihun*
 400. sour: **muyihul** [məihur] *muŋihun*.¹¹⁷
 401. beautiful: **maratan** [malu tan] *malu qutaan*
 402. ugly: **naka^{ch}tan** [naqah tan].¹¹⁸ *naqah qutaan*

¹⁰⁸ “*musa* means ‘go’ and *varau* means ‘high.’”

¹⁰⁹ There is a cognate in Taroko Seediq *maruŋ* “medal” (Hu ed. 2006:456).

¹¹⁰ Taroko Seediq has a cognate *səmulal* (Hu ed. 2006:782), which suggests the final consonant is /l/.

¹¹¹ “*ini* means negation.”

¹¹² In modern Parau Seediq, the form after the negator *ini* has to be *ku-beyax* (STAT.CONNEG-power); *beyax* is unacceptable here.

¹¹³ The first ŋ was dropped in Torii’s transcription. *luŋluŋ-an* (think-UVL) is made up of a historical reduplication of the root *luŋ*.

¹¹⁴ Torii’s transcription indicated that the stative prefix *mə-* was attached to a root *sadux*; however, it is not attached in the modern Parau Seediq form.

¹¹⁵ This form means “thick (of things), fat around belly (of human)” in modern Parau Seediq.

¹¹⁶ “This refers to taste such as a hot pepper.”

¹¹⁷ “Sour” is *mutubasi* in modern Parau Seediq.

¹¹⁸ Torii’s transcription *tan* can be analyzed as *ta-an* (see-UVL) The vowels belongs to different syllables and the

403. good: **maru** [malu] *malu*
 404. bad: **nakach** [naqah] *naqah*
 405. bad: **shiyekkui**¹¹⁹ [ʃekuy] *musekuy*¹²⁰
 406. bad: **kuluhu**¹²¹ [kulux] *a kulux*

Verbs

407. kill: **pa^tkwan** [paqan] *paqan*
 408. watch!: **kumitta** [qəmita] *qumita*¹²²
 409. see: **kumitta** [qəmita] *qumita*
 410. go ahead: **usa hagarihari** [usa həŋali hari] *usa huŋari hari*¹²³
 411. come!: **agohini** [aguh hini] *aguh hini*
 412. come: **yehini** [eyah hini] *eyah hini*¹²⁴
 413. there is: **gagáhe** [gaga hi] *gaga hi*¹²⁵
 414. there is not: **uka** [uka] *uka*
 415. good: **kuhul** [kuhul] *kuxun*
 416. not good: **ok'ai kuhul** [uxay kuhul] *uxe kuhun*
 417. walk: **mukesa** [məkesa] *mukesa*
 418. run: **tamarau**¹²⁶ [təmalan] *tumalan*
 419. go: **mahateirakuch** [maha təəḁaq] *maha teheyaq*¹²⁷
 420. plow: **mepach** [mepah] *meepah*
 421. sew: **shūmaishin** [ʃəmaɪɕ] *sumais*
 422. weave: **teminun** [təminun] *tuminun*
 423. know: **mukela** [məkela] *mukela*
 424. not know: **ini kela**¹²⁸ [ini kela] *ini kela*
 425. carry: **dimidil** [dəmidil] *dumidin*
 426. wash: **shiminoho** [ʃəmino] *sumino*
 427. sit: **teleon** [təleuŋ] *tuleuŋ*
 428. sweep: **mukesh'ik** [məkeɕik] *sukeɕik*
 429. how many: **bija** [piḁa] *piya*
 430. forget: **ini kela**¹²⁹ *ini kela*

first *a* has an accent on it. In Torii's transcription, the sequence of two *a*'s were contracted to one (this is also seen in 403).

¹¹⁹ "This is an utterance when one touches cold water."

¹²⁰ This means "cold (of things, weather)" in modern Paran Seediq.

¹²¹ "This is an utterance when one touches fire."

¹²² This form means "see" in modern Paran Seediq. Its imperative is expressed by *qita* or *qutai*.

¹²³ This expression means "go over there!" in modern Paran Seediq.

¹²⁴ This expression means "come here!" in modern Paran Seediq.

¹²⁵ This means that "(something) is there." *hi* [hi:] means there.

¹²⁶ The word final *u* seems to be a typographical for *n*.

¹²⁷ This expression means "go to play" in modern Paran Seediq.

¹²⁸ "*ini* means negation."

431. exchange goods: **burigun** [bərigun] *burigun*
 432. cry: **dimigishi** [dəmiŋiʃ] *lumiŋis*
 433. listen to: **bahan** [bahaŋ].¹³⁰ *qubahaŋ*
 434. fly: **shikiya** [ʃəkiya] *sukiya*
 435. cut: **pa^hkan** [paqan] *paqan*
 436. cut (woods): **shenipakach**¹³¹ [ʃenipaq] *sunipaq*
 437. shave: **kumugusu**¹³² [kumugus] *kumugus*¹³³
 438. fight: **vevu**¹³⁴ [bebu] *beebu*
 439. love: **kuhul varai**¹³⁵ [kuxul balay] *kuxun bale*
 440. scold: **nakak^hali** [naqah hari] *naqah hari*¹³⁶
 441. bathe: **turima** [tərima] *turima*
 442. lazy: **mutukailal** [mətəqeraŋ] *mutuqeraŋ*¹³⁷
 443. clean: **marru** [malu] *malu*¹³⁸
 444. grip: **kamepu** [qəməpu] *qumepu(?)*¹³⁹
 445. make noise: **makuni** [məkuni] *mukuni*¹⁴⁰
 446. release: **pappa** [papa] *paapa(?)*¹⁴¹
 447. throw: **mukada** [məqada] *muqada*
 448. do you come?: **ohai meja^{ha} ishiu** [uxay meḏah iɕu]¹⁴² **uxe meyah isu*¹⁴³
 449. do you come?: **aga teirakka** [aguh təiḏaq] *aguh teheyaq*¹⁴⁴
 450. bite: **mishekan** [məʃekan] *musekan*¹⁴⁵
 451. enter: **meja hini**¹⁴⁶ [meyah hini] *meyah hini*¹⁴⁷
 452. go home: **wada** [wada] *wada*¹⁴⁸
 453. do you go home?: **maha ishiu**¹⁴⁹ [maha iɕu] ---¹⁵⁰

¹²⁹ “*kela* means “one.” The expression signifies “not know even a thing.” (However, this explanation by Torii is incorrect. *kela* means “know.”)

¹³⁰ The initial segment *qu* in modern Paran Seediq did not appear in Torii’s transcription.

¹³¹ “This refers to ‘cut wood.’”

¹³² “This refers to ‘whittle wood.’”

¹³³ This refers to shaving the face or combing the hair in modern Paran Seediq; *qumilic* is “take off bark” in modern Paran Seediq.

¹³⁴ “beat each other.”

¹³⁵ “*kuhul* is ‘love’ and *varai* is ‘truly’; therefore, it means ‘truly love.’”

¹³⁶ This expression means ‘rather bad’ in modern Paran Seediq.

¹³⁷ This means “sleepy” in modern Paran Seediq.

¹³⁸ This means “good” in modern Paran Seediq.

¹³⁹ This means “to filter” in modern Paran Seediq.

¹⁴⁰ This means “delirious” in modern Paran Seediq.

¹⁴¹ This means to “ask someone to carry another person on the back”

¹⁴² “*iso* is ‘you,’ *meja^{ha}* is ‘come’ and *ohai* is ‘do you not want to?’”

¹⁴³ This cannot be transliterated into modern Paran Seediq because the word order and the form of the pronoun are different. The modern sentence is *uxe = su m-eyah* (NEG = 2SG.NOM AV.PRES-come).

¹⁴⁴ This means “welcome to visit me (Lit.; come and play)” in modern Paran Seediq.

¹⁴⁵ This means “chew” in modern Paran Seediq.

¹⁴⁶ “*hini* means ‘here.’”

¹⁴⁷ This expression means “come here” in modern Paran Seediq.

¹⁴⁸ This means “gone, left” in modern Paran Seediq.

454. rotate: ^{te}**kukun** [təkukun] *tukukun*
 455. waite: **mutara** [mətara] *mutara*
 456. finish: **mahédó** [məhedu] *mehedu*
 457. burn: **mukada** [məhada] *mahada*¹⁵¹
 458. meet: **māruk** [maruk] *maduk*¹⁵²
 459. crazy: **kedihu** [kədihu(?)] ---
 460. fear: **mitsu** [mitsu] *miitsu*
 461. devour: **naka leibun** [naqah læbun] *naqah lehebun*¹⁵³
 462. steal: ^{ku}**meguru** [gəmeguy] *gumeguy*
 463. cheat: **dumein** [dəmeiŋ] *lumeiŋ*¹⁵⁴
 464. deceive: **dumein** [dəmeiŋ] *lumeiŋ*
 465. open: **rohái**¹⁵⁵ [ru(wa)hi] *ruwahi*¹⁵⁶
 466. shoot: **tsumebu** [tsəmebu] *tsumebu*
 467. think: **vahan** [bahəŋ] *qəbahəŋ*¹⁵⁷
 468. close: **revi** [lebi] *lebi*¹⁵⁸
 469. shoot (with an arrow): **tsumebu**¹⁵⁹ [tsumrbu] *tsumebu*
 470. shave (beard): ^{tu}**mugusu** [tə mugus(?)] *kumugus*
 471. write: **patasch**¹⁶⁰ [pataɕ] *patis*
 472. work: **muteiduch** [mətəeðux] *muteeyux*
 473. wish: **kuhul** [kuhul] *kuxun*
 474. go up: **mudakil** [mədakil] *mudakin*
 475. go down: **hakkau** [hakaw] *hako*¹⁶¹
 476. go out: **wada** [wada] *wada*
 477. speak: ⁿ**pregan** [nprenjan] *nprenjan*¹⁶²
 478. give: **vegai** [begay] *bege*
 479. give to me: **pugesá** [pəgesa(?)] ---
 480. happy: **mukarasu** [məqaras] *muqaras*

¹⁴⁹ “One of the meanings of *maha* is ‘do you go home?’”

¹⁵⁰ In modern Paran Seediq, the form of the pronoun is different; the bound pronoun =*su* is used instead of the independent form *isu*. The sentence in modern Paran Seediq is *maha =su* (go. AV.FUT=2SG.NOM).

¹⁵¹ This means “ripe” or “cooked and ready to be eaten” in modern Paran Seediq.

¹⁵² This means “drive out” in modern Paran Seediq. The segment *d* was heard as *r*, as in Torii’s transcription.

¹⁵³ This expression means “stomach is not well” in modern Paran Seediq.

¹⁵⁴ This means “hide” in modern Paran Seediq.

¹⁵⁵ “Sometimes *rumawach* is also used.”

¹⁵⁶ This means “open!” in modern Paran Seediq.

¹⁵⁷ This means “listen to” in modern Paran Seediq.

¹⁵⁸ This means “close (a door)!” in modern Paran Seediq.

¹⁵⁹ “The same word is used for ‘shoot.’”

¹⁶⁰ “This word has a broad meaning; *patasch* is a verb for writing and painting for a tattoo, letter, book, and picture. There is no other particular word for these actions.”

¹⁶¹ This means “bridge” or “to bridge, put a ladder” in modern Paran Seediq.

¹⁶² This means “spoke” in modern Paran Seediq.

481. sad: **na leibun** [naqah læbun] *naqah lehebun*¹⁶³
 482. angry: **maharat** [məharat] *muharat*¹⁶⁴
 483. neglect: ^{mu}**takailal** [mətəqeraŋ(?)] *mutuqeraŋ*¹⁶⁵
 484. build: **maharat** [məharat] *maharat*
 485. touch: **pakarumi** [pəkələŋi(?)] *putuleŋi(?)*¹⁶⁶
 486. obey: **mukairal varai?** [məkela balay] *mukela bale*¹⁶⁷
 487. not obey: **ohaiko** [uxay ku] *uxe =ku*¹⁶⁸
 488. compare: **rugerun** [luŋelun] *luŋelun*¹⁶⁹
 489. pick: **kumemuhu** [kəmemux(?)] ---
 490. carry on back: **mapa** [mapa] *mapa*
 491. carry: **dumidil** [dəmidil] *dumidin*
 492. carry on shoulder?: **mahial** [məheal] *meheyan*
 493. put on: **pach** [paha] *paha*
 494. pinch: **mattak** [matak] *matak*
 495. carry on head: **wahau**¹⁷⁰ [wahu] *wahu*¹⁷¹
 496. get?: **nakkach** [naqah] *naqah*¹⁷²
 497. praise: **varau** [baraw] *baro*¹⁷³
 498. sleep: **mutakkai**¹⁷⁴ [mətaqi] *mutaqi*
 499. sleep: **shililion**¹⁷⁵ [ʃələləun] *sululeun*
 500. wake up: **mutikera** [mətəkela] *mutukela*
 501. add: **umal** [umal] *uman*
 502. increase: **umal** [umal] *uman*
 503. avoid: ^{ka}**duriyakka** [qəduriq] *quduriq*
 504. cook: **pupurai** [pəpuray] *hupure*
 505. fold: **shimekul** [ʃəmekur] *sumekun*
 506. sweep dust: **shiumebu** [ʃumebu] *ʃmebu*¹⁷⁶
 507. spread: **dahedaha**¹⁷⁷ [dahədah] *luhelah*
 508. hit: **vebu** [bebu] *beebe*

¹⁶³ *naqah* means “bad” and *lehebun* means “stomach” in modern Paran Seediq.

¹⁶⁴ This means “pile stones to make a hedge.” The same form is recorded in 484.

¹⁶⁵ This means “sleepy” in modern Paran Seediq.

¹⁶⁶ This form *pu-tuleŋ-i* (CAUS-touch-IMP) means “let someone touch something.”

¹⁶⁷ This expression means “to understand well” in modern Paran Seediq.

¹⁶⁸ This is glossed as NEG=1SG.NOM meaning that “I do not want to (do something).”

¹⁶⁹ This means “to think” in modern Paran Seediq.

¹⁷⁰ “This means to ‘put on head.’”

¹⁷¹ This means a cord attached to a basket which is hung around the forehead when carrying it.

¹⁷² This means “bad” in modern Paran Seediq.

¹⁷³ This means “above” in modern Paran Seediq.

¹⁷⁴ “This refers to ‘sleep’ in an ordinal sense.”

¹⁷⁵ “This refers to ‘doze.’”

¹⁷⁶ This means to “shoot” in modern Paran Seediq.

¹⁷⁷ “This d sounds like l. It is a sound between d and l.”

509. wet: **terebul** (**muhulik**) [tərebu, məhuriq] *turebu*¹⁷⁸, *muhuriq*
 510. dry: **mudegu** [mədeŋu] *mudeŋu*
 511. good weather: **misuwari** [məsuwar(?)] *musuwan*¹⁷⁹
 512. bad weather?: **misunal vakailusu** [musurul ba karat(?)] *musurun* = *ba karats*¹⁸⁰
 513. wrap: **rumabu** [ləmabu] *lumabu*
 514. ride: **papa**¹⁸¹ [papa] *paapa*
 515. be in trouble: **munal** [munal(?)]---
 516. go home: **maha** [maha] *maha*¹⁸²

3. Some observations

3.1 The numerical system

In modern Paran Seediq, numerals six and eight are expressed by a derivation of numerals three and four; that is, six is three times two and eight is four times two. However, in Torii's numerical transcriptions, three and six appeared to be in the same form. They might have been distinguished by accents, as six has an acute accent mark on the final syllable, which is shown in Table 1.

Table 1. Three and four and their derivations

	Modern Paran Seediq	Torii's transcription
Three	<i>teru</i>	<i>tulu</i> [tóru]
Four	<i>sepats</i>	<i>shipat</i> [ɛəpat]
Six	<i>mumu-teru</i>	<i>teró</i> [terú]
Eight	<i>mumu-sepats</i>	^{mu} <i>shipat</i> [məɛəpat]

In addition, the forms for tens are different from those ones for 40 and 50. In modern Paran Seediq, the forms from 20 to 50 are derived from the base of their digits, *pusa* “two” (this is not used in serial counting but is used as a root in “twenty” or “twice”), *teru* “three,” *sepats* “four,” and *rima* “five,” by adding the circumfix *mu-...-n* (which is historically *ma-...l*).¹⁸³ For 40, the epenthetic vowel u is inserted between the consonant clusters at the morpheme boundaries. Incidentally, Torii's transcription for 20 lacked the prefix *mə-*.

Torii's transcription for 30 followed the same derivational pattern as in modern Paran Seediq; however, this form represents 50 not 30. This suggests that Torii's informants were not good at counting higher numerals. Furthermore, the numerals 40 and 50 do not show

¹⁷⁸ This means “soaked” in modern Paran Seediq.

¹⁷⁹ This means “It stopped raining” in modern Paran Seediq.

¹⁸⁰ This is glossed as, cloudy=truly sky, “it is cloudy.”

¹⁸¹ “*papa rapa* means ‘ride on cow’ *rapa* means ‘cow.’”

¹⁸² This means “will go” in modern Paran Seediq.

¹⁸³ Historically speaking, *ma-xa-n* “ten” is also derived from the circumfixation of *ma-...l* to the root *xa* “one.”

the derivation with *ma-...l*; they are expressed using the digits for “four” and “five” followed by *mahol* [maxal] “ten.” This pattern is the same as the tens from 60 to 90 in Torii’s transcription. This compositional pattern is also used in modern Paran Seediq forms of 60 to 90, with a slight difference. The form for “tenth” is not *maxan* (the earlier form is *maxal*) but *ku-muxal-an*, which is derived from the root *maxal* by attaching a circumfix *ku-...an* (see items 33-36), as summarized in Table 2.

Table 2. Twenty to fifty

	Modern Paran Seediq	Torii’s transcription
20	<i>m-pusa-n</i>	<i>pisal</i> [pusa-l]
30	<i>mu-teru-n</i>	<i>murimal</i> [mə-rima-l]
40	<i>mu-supat-un</i>	<i>shipatmaol</i> [ʃepat maxal]
50	<i>mu-rima-n</i>	<i>limamahol</i> [rima maxal]

It is not clear if the numerical system in Torii’s transcription reflected the actual use at that time or the idiosyncratic patterns used by his informants. Nonetheless, modern Paran Seediq has a more organized numerical system in that six and eight have the same derivational pattern with the prefix *mumu-* and that tens are divided into two types: 20 to 50 (historically speaking, 10 is also included in the former group) and 60 to 90. The former is derived from a root of the respective digit with the circumfix *ma-...-n*, while the latter is expressed using a respective digit followed by *kumuxalan* “tenth.”

3.2 Phonological differences

There are various sound differences between Torii’s transcription and modern Paran Seediq, as there have been some phonological changes since then: (i) the word-final diphthong ay > e; (ii) the word-final diphthong aw > o; (iii) the word-final l > n, (iv) the word-final r > n, (v) and the word final t > ts. These changes were not discussed in this paper since they are dealt with in Ochiai (2015), which compared the oldest glossary of Paran Seediq (Bullock 1874) and modern Paran Seediq. Other phonological differences particularly seen in Torii’s glossary are discussed. In the following sections, data from Taroko Seediq, another dialect of Seediq, is referred to for dialectal comparison. Taroko Seediq data are from Taroko Seediq dictionaries (Hu ed. 2006, Pecoraro 1977).

3.2.1 Ambiguity between d and l

Torii noted that there was a sound which sounded like either l or d (See the footnote for 507). This ambiguity between l and d was observed in more items when compared with modern Paran Seediq. Where Torii transcribed d, modern Paran Seediq has an l in some cases, as seen in Table 3. There is also an example where Torii has an l and modern Paran

Seediq has a *d*, as seen in the last example in the table (the number refers to the item in the glossary).

Table 3. Ambiguity between *d* and *l*

	Torii's transcription	Modern Paran Seediq
52	bedu muhin [bediŋ muhiŋ] “nostril”	beliŋ muhiŋ
54	vekedui ¹⁸⁴ [bəkeduy] “cheek”	bukeluy “chin”
60	gedu [gedu] “throat”	gelu
233	dimiko ^{hu} [dəmiqʉ] “mountain”	lumiqu
432	dimigishi [dəmigiɛ] “cry”	lumiŋis
463	dumein ¹⁸⁵ [dəmeiŋ] “cheat”	lumeiŋ “hide”
507	dahedaha [dahedah ¹⁸⁶] “spread”	luhelah
360	kanelishi [qəneliɛ] “long”	qunedis

The actual sound is uncertain. In most cases, this sound settles into either an *l* or *d* in modern Paran Seediq, as ambiguous sounds are not frequently observed; however, the variations are still seen in words such as *dedax/ledax* “light.”

3.2.2 Palatalization of *s*

In modern Paran Seediq, the *s* is palatalized before the high vowel *i*. In Torii's transcription, the palatalization of *s* not only occurs before the *i*, but also occurs unconditionally. Torii transcribed the palatalized *s* as *sh* or *sch*. Table 4 lists the items that have a palatalized *s*, except for the case where it appears before an *i*.

Table 4. Palatalization of *s*

	Torii's transcription	Modern Paran Seediq
A 50	takarash [dəqeræ] “face”	duqeras
58	ⁿ gudushi [ŋudue] “beard”	ŋudus
172	verashi padai [beræ paðay] “rice”	beras
177	trabushi [tərabue] “peanut”	turabus
229	duremushi [dəremue] “frost”	duremus
251	vaishi [baie] “window”	bais
306	kugushi [kugus] “razor”	kugus
342	patasch [pataɛ] “tattoo”	patis
360	kanelishi [qəneliɛ] “long”	qunedis

¹⁸⁴ The same word is also in 59.

¹⁸⁵ The same word is also in 464.

¹⁸⁶ This form is from historical reduplication; the root is *dah/lah*. The reduplicated base is *dahdah* or *lahlah*; however, an epenthetic vowel (a schwa) is inserted between the boundaries.

	398	ushishibushi [ɕəɕibue] “sweet”	susibus
	421	shūmaishin [ɕəmais] “sew”	sumais
	432	dimigishi [dəmigiɕ] “cry”	lumiŋis
B	76	pushu ⁿ ugu [puɕu ŋuŋu] “buttock”	pusu ŋuŋu
	347	ishio [iɕu] “you”	isu
C	4	shipat [ɕepat] “four”	sepats
	113	shumai [ɕumay] “bear”	sume
	178	shiogo [ɕuŋut] “green pea”	suŋuts
	405	shiyekkui [ɕekuy] “cold”	musekuy
	450	mishekan [mæɕkan] “bite”	musekan
D	43	shinunuhu [sənuɕux] “head hair”	sununux
	92	shidala [ɕədara] “blood”	sudara
	132	shiviri ^t [ɕəwili] “eel”	suwili
	304	shinuluhu [ɕənəðux] “rope”	sunuyuk
	338	shirau [ɕəlau] “comb”	sulau
	382	mushidelihu [mæɕəderux] “straight”	musuderux
	390	shikenmihu [ɕəkenux] “it smells bad”	sukenux
	398	ushishibushi [ɕəɕibue] “sweet”	susibus
	421	shūmaishin [ɕəmais] “sew”	sumais
	426	shiminoho [ɕəmino] “wash”	sumino
	434	shikiya [ɕəkiya] “fly”	sukiya
	436	shenipakach [ɕənipaq] “cut (woods)”	sunipaq
	505	shimekul [ɕəmekur] “fold”	sumekun
E	227	shirumada ^t [ɕələmadat] “sword”	sulumadats
	315	shin buragan [ɕənburaŋan] “blade of lance”	sunburaŋan
	499	shililion [ɕələləuŋ] “sleep”	sululeuŋ

Group A shows the palatalized s at the word-final position, group B has it at the onset of the final syllable, group C has it at the onset of the penultimate syllable, group D has it at the onset of the antepenultimate syllable, and group E has it at the word-initial position that coincides with the fourth syllable to the last. As these data show, the palatalized s appears word-initially, medially, and finally, with the vowels after this segment being either u, e, or ə (i, of course, is included, as this triggers palatalization).

It has been assumed so far that palatalized s [ɕ] is an allophone of /s/. Another possibility is that /ɕ/ itself was a phoneme at that time of Torii’s field work but has merged into /s/ since then. However, this is unlikely for two reasons: first, for the words with [ɕ] in Table 4, there are no minimal pairs and second, in Torii’s transcription, there were variations in the spelling for s and palatalized s in three examples shown in Table 5.

Table 5. Torii's ambiguity between *s* and *ɕ*

Torii's <i>s</i>	Torii's <i>ɕ</i>	Modern Paran Seediq
106 seleakch [seliq] "person"	she lekka [ɕeliq]	seediq
152 súkeya [səkiya] "fly"	434 sh ikiya [ɕəkiya]	sukiya
448 iso [isu] "you"	347 ish io [iɕu]	isu

3.2.3 Missing *h* in the stressed syllable

In some items, where modern Paran Seediq has an *h* as the onset for a penultimate syllable, this was not transcribed by Torii, as seen in Table 6. Further, the vowels before and after the *h* were transcribed as one vowel; in some Torii's transcriptions (74, 371, and 322).

Table 6. Missing *h* in the penultimate syllable

	Torii's transcription	Modern Paran Seediq
74	rebun [leɸun] "belly"	le h ebun
461	leibun [læɸun] "stomach"	le h ebun
199	kaidin [qəɸidɪŋ] "hot spring"	q əh edɪŋ
322	koni [quhɪni] "firewood"	qu h uni
361	de ^{ya} ko [dæɸeɸu] "short"	de h equ
368	taiya [tæɸya] "far"	te h eya
371	cherissu [tæɸedis(?)] "heavy"	t əh edin

It is probable that Torii's informants tended to weaken the *h* or tended not to pronounce the *h* in the penultimate syllable. This tendency is evidenced by the variations for the same word with or without *h*. In 322, "wood" was transcribed as *koni* [quni] by Torii; however, the same word was transcribed as *ka^hni* [qəhuni] in 159.

There was also one example that showed a converse pattern. Torii's transcription has the penultimate *h*, whereas modern Paran Seediq does not. Torii has *techerok* [təheriq] "thigh"; however, modern Paran Seediq is *buteriq* (the initial segment *bu* is missing in Torii's transcription).

3.2.4 Single and double vowels

Sometimes, Torii transcribed a single vowel where in modern Paran Seediq there is a sequence of the same vowels that belong to different syllables: one is in the antepenultimate syllable and the other is in the penultimate syllable, as shown in Table 7.

Table 7. Single and double vowels

	Torii's transcription	Modern Paran Seediq
106	seleakch [seliq] “person”	seediq
394	musadach [məsadux] “hard”	saadux
238	kumepach [kəməpah] “work in the field”	kumeepah
420	mepach [mepah] “work in the field”	meepah
374	nağohari [naguh hari] “hurry up”	naaguh hari
514	papa [papa] “let someone ride on”	paapa
462	^{ku} meguru [gəmeguy] “steal”	gumeeguy
508	vebu [bebu] “hit”	beebu

It is not clear whether Torii's informants shortened the double vowels or if these vowels were originally single and subsequently underwent doubling in modern Paran Seediq as a kind of fortition. Most items are suggestive of a shortening of the double vowels. For some verbal roots that begin with a vowel such as *epah* “work,” *aguh* “come in hurry,” and *apa* “carry on a back,” the prefixation of a CV- (*mə-* (actor voice), *nu-* (past), *pə-* (causative), respectively) triggered hiatus, resulting in *məpah* (420), *nəguh* (374), and *pəapa* (514). These hiatuses may have been contracted as a single vowel in Torii's transcription in Table 7. However, modern Paran Seediq assimilates the antepenultimate vowel to the following stressed vowel, resulting in a sequence of identical vowels.

In addition, the items in 462 *beebu* and 508 *g<um>eeguy* are historically reduplicated forms, according to Ochiai (2016a:110). Their roots before reduplication were *guy* and *bu*, with the first consonant being reduplicated and followed by the sequence of two e's in modern Paran Seediq, which historically originated from a schwa; however, doubling of the vowels was not observed in Torii's transcriptions. It is not clear whether there was an actual doubling of vowels in these examples. However, it can be inferred that this historically reduplicated composition was the trigger for the doubling in modern Paran Seediq.

There was one example in which Torii transcribed both the single and double vowels; “night” is *yēman* [eman] (the macron seems to indicate the long vowel) in 203, but it is *kayeman* [kəeman] in 220. This suggests that words in Table 7 originally had hiatus but the informants may have shortened it.

3.2.5 Final *x* and *k*

Some word-final consonant *x* in Torii's transcription correspond to *k* in modern Paran Seediq, as seen in Table 8. This variation between *x* and *k* is also synchronically observed in a few words in modern Paran Seediq such as *daruk/darux* “fat.”

Table 8. Final consonant *x* and *k*

	Torii's transcription	Modern Paran Seediq
304	shinuluhu [ɕənuðux] “cord”	sunuyuk
309	it'chihu [itɕux] “spatula”	itsuk (rarely as itsux)
318	gepu ^{hu} [gepuɕ] “lunchbox”	gepuk

However, there is also a correspondence of *x* to *x*. For example, 127 *róduch* [roduɕ] “chicken” corresponds to *rodux* in modern Paran Seediq. In addition, there is also a correspondence of *k* to *k*; for example 73 *hoinuk* [həinuɕ] “waist” corresponds to *huginuk* in modern Paran Seediq. However, it is also possible that the segment originated in a phoneme that was neither *x* nor *k*. It is difficult to decide as the number of *x* to *k* correspondences is small.

3.2.6 Variation in *s* and *ts*

Torii sometimes transcribed *s* or palatalized *s* where modern Paran Seediq has *ts*, as seen in Table 9.

Table 9. Variation of *s* and *ts*

	Torii's transcription	Modern Paran Seediq
270	sappan [sapaɲ] “cloth”	tsapaɲ
370	serukach [səluɕah] “light (weight)”	tsulokah
506	shiumebu [ɕəmebu] “shoot”	tsumebu

There are correspondences for *ts* to *ts* such as *tsuáman* [tsaman] in Torii's transcription and *tsaman* (but archaic) in modern Paran Seediq. This suggests that these *s* in Torii's transcription represent a phonetic variation of /*ts*/. In fact, one example shows a transcription with *ts* and *s* (palatalized *s*); i.e., “shoot” is *tsumebu* [tsumebu] in 466, but it is *shimebu* [ɕəmebu] in 506. Torii's informants seemed to pronounce /*ts*/ as either *ts* or *s*, as seen in the examples in Table 9.

3.2.7 Weakened *g*

In a few examples, the modern Paran Seediq *g* appears as *w* (302) or zero (73, 379) in Torii's transcription as seen in Table 10. Except for 302, the segment in question was followed by a high vowel *i* or *e*, which could be related to phonetic variants in Torii's transcriptions.

Table. 10 Weakened *g*

	Torii's transcription	Modern Paran Seediq
302	wagi [wagi] “mirror”	gagi ¹⁸⁷
73	hoinuk [həinuk] “waist”	huginuk
379	muijela ¹⁸⁸ [məyela] “go ahead”	mugeela
156	yelau [yelu] “threat”	gelu

3.2.8 Historical *ð*

The modern Paran Seediq *y* shows a messy correspondence in Torii's transcription, with the exception of the *y* in the diphthongs *ay* and *uy*, which also appear as *y* in Torii's transcription. However, it is not a surprise that there is a *y* to *y* correspondence, such as in 330 *viyu* [biyu] “necklace” in Torii's transcription and *biyu* in modern Paran Seediq. There are also other transcriptions for modern Paran Seediq *y*, written as *d*, *j*¹⁸⁹, *r*, *l* and *z*, in examples such as 102 *suwadi* (Torii); *suwayi* “younger sibling,” 282 *jajum* (Torii); *yayun* “river,” and 489 *teirakka* (Torii); and *teheyaq* “play.”

These variations in transcription make it difficult to determine a phonetic realization; however, there is a clue in Asai (1953), who researched Paran Seediq in 1927. For the examples above, Asai transcribed the segment in question with *ð* as *suwaði*, *ðaðun*, and *təheðaq*. Therefore, the correspondences to the modern *y* to Torii's *d*, *j* and *r* were reconstructed as *ð*. In addition, there was one example with a *y* to *l* correspondence, which was because Torii tended to confuse *r* and *l*. There is also one example with a *y* to *z* correspondence, 207 *pazay* (Torii); *paye* “rice plant.” Torii also wrote this as *padai*. To sum up, five letters (*d*, *j*, *r*, *l* and *z*) were used by Torii to transcribe [*ð*], as seen in Table 11. This phoneme /*ð*/ has merged into *y* in modern Paran Seediq. This segment further becomes indistinguishable and lost when the following vowel is an *i* as in (102).

Table 11. The historical *ð*

	Torii's transcription	Modern Paran Seediq
75	vudesú [buðas] “belly”	nbuyas
94	vēduch [beðuq] “juice”	beyuq
91	vuðu [vuðu] “bone”	buuc ¹⁹⁰
102	suwaði [səwaði] “younger sibling”	suwa(y)i

¹⁸⁷ It is possible that the older form is *wagi* and modern Paran Seediq has undergone progressive assimilation of the consonant.

¹⁸⁸ Here, I assumed that *j* represented [y] rather than an obstruent.

¹⁸⁹ This letter *j* is differentiated from *y* [j], as Torii described these as separate phones. He says that “their pronunciation includes sounds such as *a*, *e*, *i*, ...*j*, ...*y*, *z*.” (Torii 1990b:71).

¹⁹⁰ Here, *y* is lost for unknown reason.

134	kud <u>u</u> [quðu] “snake”	quyu
202	padai [paðay] “rice”	paye
472	muteid <u>ux</u> [mətəeðu] “work”	muteeyux ¹⁹¹ ‘force to do’
282	jajum [ðaðum] “river”	yayun
236	jayum [ðayum] “river”	yayun
429	bija [piða] “how many”	piya
448	meja ^{ha} [meðah] “come”	meyah
373	mayeru <u>hu</u> [məeðu] “tight, narrow”	meeyux
489	teirakka [təeða] “play”	teheyaq
304	shinulu <u>hu</u> [ɕənuðu] “cord”	sunuyuk
207	pāzai [paðay] “rice plant”	paye

4. Summary

This paper presented Ryuzo Torii's glossary of Paran Seediq (1900) with English glosses, phonetic reconstruction, and the corresponding modern Paran Seediq forms. By comparing Torii's transcription with the current forms, the author made comments on the numerical system and phonological differences. The numerals in Torii's transcription indicate that his informants were unable to properly count higher numerals. With regard to phonology, it is evident that: (i) some of Torii's d's appear as l's in modern Paran Seediq and vice versa; (ii) s is often palatalized in Torii's transcriptions; (iii) some of the modern Paran Seediq h's belonging to the onset of the penultimate syllable were missing in Torii's transcriptions; (iv) the sequence of the same vowels in modern Paran Seediq was transcribed as a single vowel by Torii; (v) some x's in Torii's transcriptions appear as k's in modern Paran Seediq; (vi) some ts's in modern Paran Seediq were transcribed as s's in Torii's transcriptions; (vii) some g's in modern Paran Seediq showed lenition in Torii's transcriptions; (viii) and ð was reconstructed when Torii's transcriptions for d, j, r (or l), and z corresponded to the modern Paran Seediq y.

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¹⁹¹ This form shares the root *eyux* with *meeyux* in 373.

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鳥居龍藏記錄的賽德克語巴蘭方言和注解

落合泉

摘要：本論文彙編，主要係依據，著名的人類學者鳥居龍藏所記錄的賽德克語巴蘭方言語彙集的內容，由作者對鳥居的日文注釋加以轉換成英文，復對其所轉寫的形式，來嘗試構擬當時的發音。其後，並附加作者個人田調所蒐集的現代賽德克語巴蘭方言的形式，來將二者相互對照比較。另外，基於前述新舊方言的比較，同時也提供個人對數詞語彙和音韻方面特色的觀察和心得。

關鍵詞：台灣南島語，賽德克語，語匯集，音韻學，鳥居龍藏