

# 国立国語研究所学術情報リポジトリ

## Research Report on Miyako Ryukyuan : General Study for Research and Conservation of Endangered Dialects in Japan

メタデータ	言語: eng 出版者: 公開日: 2019-11-29 キーワード (Ja): キーワード (En): 作成者: メールアドレス: 所属:
URL	<a href="https://doi.org/10.15084/00002519">https://doi.org/10.15084/00002519</a>



**General Study for Research and Conservation of  
Endangered Dialects in Japan  
Research Report on Miyako Ryukyuan**

Edited by

KIBE Nobuko

August 2012

## Preface

The ‘General Research for the Study and Conservation of Endangered Dialects in Japan’ project was started in October 2009 as a core collaborative research project of the National Institute for Japanese Language and Linguistics. Since 2010, we have been conducting yearly joint surveys, in which collaborating researchers and young researchers gather in one location to carry out a survey together. We have conducted the following two such surveys thus far.

First joint survey: survey on the Kikaijima dialects  
(Kagoshima Prefecture, September 2010)

Second joint survey: survey on the Miyako dialects (Okinawa Prefecture, September 2011)  
The present volume constitutes the research report resulting from the second joint survey, the survey on the Miyako dialects.

We had the help of many people in conducting this survey. Firstly, we are very grateful to our informants, who were willing to make time and defy the heat to come to the community center to kindly share the language of Miyako with us. It is thanks to them that we have been able to produce this report. From the preparation and execution of the survey to the cultural symposium, we also received much help from the people of the Lifelong Learning Advancement Division of the Lifelong Learning Department of the Miyako City Board of Education, including the director of the Board, Mr. Tetsuya Kawakami. We are particularly indebted to the head of the Cultural Property Section of the Lifelong Learning Advancement Division, Mr. Munefumi Shinjo, who introduced us to participants and helped us with scheduling. I would like to take this opportunity to express our deep gratitude.

When considering the entirety of the language of Miyako, it is clear that the contents of this report represent but a small fragment of it, but we would be delighted if it were found to be a useful resource for the study, documentation, and conservation of this language. The reader is invited to also have a look at the PDF version of this volume, which has been made available on the ‘General Research for the Study and Conservation of Endangered Dialects in Japan’ page of the National Institute for Japanese Language and Linguistics website.

August 1, 2012

Nobuko KIBE

National Institute for Japanese Language and Linguistics

***General Study for Research and Conservation of  
Endangered Dialects in Japan  
Research Report on Miyako Ryukyuan***

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# 1 Project Overview

Nobuko KIBE (National Institute for Japanese Language and Linguistics)

## 1 Purposes of the project

The ‘General Research for the Study and Conservation of Endangered Dialects in Japan’ project was started in 2009 as a core collaborative research project of the National Institute for Japanese Language and Linguistics. The purposes of the project are as follows.

As globalization proceeds, minority languages around the world have become endangered. Among Japanese dialects, almost all of the dialects of Okinawa Prefecture, the Amami dialects of Kagoshima Prefecture, and the dialect of the island of Hachijōjima, part of Tokyo Metropolis, are classified as ‘endangered’ in a UNESCO report published in February 2009. Many of these endangered dialects retain features from Old Japanese that have already been lost in other dialects and have linguistic systems different from theirs. These dialects are therefore not only valuable for the dialectology of a particular area, but also for historical and general linguistics. Moreover, these dialects often differ from village to village, so the question of how this variation arose is also of interest.

In this project, a group of researchers from throughout Japan with a track record in fieldwork was brought together to study these endangered dialects and elucidate their characteristics, as well as to shed light on linguistic diversification processes and general properties of language. In addition, the endangered dialects are recorded, preserved, and promoted by recording and preserving video and audio data of them and making these available to the general public.

(from the National Institute for Japanese Language and Linguistics website)

## 2 Research methods

Endangered dialect research is an urgent matter. It is therefore necessary to organize researchers from both inside and outside Japan with a track record in field research, in order to move their research forward efficiently. Additionally, in order to obtain high-quality data, dialect (or language) survey and description methodologies need to be made consistent, which they have not always been. Furthermore, it is necessary to train young researchers to be able to undertake future dialect (or language) research. In light of the above, this project is being carried out based on the following two kinds of research:

- (1) field research conducted by each of the collaborating researchers at their respective research sites, and
- (2) joint research conducted by the collaborating researchers in concert.

In the case of the former, each of the collaborating researchers conducts field research at their respective research sites and presents the results of this research at the project's collaborative research workshops, which provides them with an opportunity to develop their research further. Additionally, young researchers who are not part of the group of collaborating researchers are sometimes invited to give presentations, in order to support their research.

In the case of the latter, a survey site is decided upon and its dialects described comprehensively in terms of, among other things, their phonetics, accent, grammar, and basic vocabulary, as well as discourse. Not only the group of collaborating researchers, but also young researchers such as postdoctoral fellows, research fellows of the Japan Society for the Promotion of Science, and graduate students participate in this research; the participants carry out the survey, organize the data, and produce a report collaboratively. Two surveys, on the Kikaijima dialects of Kagoshima Prefecture (September 2010) and on the Miyako dialects of Okinawa Prefecture (September 2011), have been conducted thus far.

### **3 Collaborative research workshops**

In addition to field research, collaborative research workshops open to the public are held two or three times per year, at which researchers can exchange views. The following workshops were held in the academic year 2011–2012:

- First session, jointly with the ‘Phonological Characteristics of the Japanese Lexicon’ project

Date and time: Saturday, May 21 and Sunday, May 22, 2011

Location: Kobe University

#### **Saturday, May 21: public symposium**

##### **‘Principles and Emergence of N-Pattern Accent Systems’**

###### 1. Zendo UWANO

(professor emeritus at the University of Tokyo; invited professor at NINJAL)

‘What are N-Pattern Accent Systems?’

###### 2. Nobuko KIBE

(professor at the Department of Language Change and Variation at NINJAL)

‘The Character of Kyushu Two-Pattern Accent Systems’

3. Haruo KUBOZONO

(professor at the Department of Linguistic Theory and Structure at NINJAL)

‘Accent Rules of the Koshikijima Dialect of Kagoshima Prefecture’

4. Akiko MATSUMORI

(professor at Japan Women’s University; invited professor at NINJAL)

‘Reinterpretation of the Three-Pattern Accent System of Okinoshima’

5. Tetsuo NITTA (professor at Kanazawa University; collaborating researcher at NINJAL)

‘The N-Pattern Accent System of the Fukui City Area’

Discussion

Chair: Wayne LAWRENCE

(University of Auckland, New Zealand; collaborating researcher at NINJAL)

**Sunday, May 22: collaborative research workshop**

1. Hirotake MATSUMOTO (‘Endangered Languages’ project collaborating researcher)

‘Outline of the *-Ari/-Ri*-System of the Kikaijima Dialects of Amami’

2. Yasunori TAKAHASHI (research fellow of the Japan Society for the Promotion of Science at the Tokyo University of Foreign Studies)

‘The Pitch Drop Phenomenon in Shanghainese Tone Sandhi’

• Second session, jointly with the ‘Phonological Characteristics of the Japanese Lexicon’ project

Date and time: Saturday, July 16 and Sunday, July 17, 2011

Location: National Institute for Japanese Language and Linguistics

**Saturday, July 16**

1. Hayato AOI (research fellow of the Japan Society for the Promotion of Science at the Tokyo University of Foreign Studies)

‘Phonetic Description of Vowels with Tongue Blade Stricture: A Case Study of the Tarama Dialect of Miyako’

2. Satomi MATAYOSHI (Shigakukan University)

‘Sentence-Final Particles in the Tsukenjima Dialect of Okinawa’

**Sunday, July 17**

3. Yuto NIINAGA (research fellow of the Japan Society for the Promotion of Science at the University of Tokyo), Shinji OGAWA (NINJAL)

‘The Accent System of the Northern Ryukyuan Yuwan Dialect of Amami’

4. Yosuke IGARASHI (Hiroshima University), Yukinori TAKUBO (Kyoto University; invited professor at NINJAL), Yuka HAYASHI (part-time lecturer at Kyoto University), Tomoyuki KUBO (Kyushu University)

‘The Three-Pattern Accent System of the Ikema Dialect of the Ryukyuan Language of Miyako’

- Third session, titled ‘Dialectology and Text—Present and Future’

Date and time: Saturday, February 18 and Sunday, February 19, 2012

Location: National Institute for Japanese Language and Linguistics

**Saturday, February 18**

1. Mizuho HIDAKA (Kansai University)

‘“Narration Patterns” in Fairy Tales and Their Regional Differences’

2. Tetsuo NITTA (Kanazawa University)

‘Dialect Texts as Historical Language Materials of Japanese’

3. Chie TAKAGI (Osaka University)

‘Decline and Retention of -*U*-Conjugation Forms of -*W*-Stem Quintigrade Verbs in Kansai Dialect Natural Discourse’

**Sunday, February 19**

Panel discussion

1. Tomoyo OTSUKI (senior undergraduate student at the University of Tokyo)

‘Usage of the Inferential Form *Byon* in the Tsugaru Dialect’

2. Reiko ASO (research fellow of the Japan Society for the Promotion of Science at the Tokyo University of Foreign Studies)

‘Analyzing Verb Inflection and Derivation in the Hateruma Dialect of Yaeyama through Texts’

3. Rihito SHIRATA (graduate student at Kyoto University)

‘The Dialects of Kikaijima—Problems of Verb Morphology as Seen through Texts’

Plenary discussion

Commentators: Toshihide NAKAYAMA (Tokyo University of Foreign Studies)

Shinjiro KAZAMA (Tokyo University of Foreign Studies)

Nobuko KIBE (NINJAL)



#### **4 Collaborating researchers**

As of April 1, 2012, this project is being carried out by the following collaborating researchers (in alphabetical order):

Chris DAVIS (University of the Ryukyus), Akihiro KANEDA (Chiba University), Shigehisa KARIMATA (University of the Ryukyus; invited professor at NINJAL), Tomoyuki KUBO (Kyushu University), Haruo KUBOZONO (NINJAL), Wayne LAWRENCE (University of Auckland), Daniel LONG (Tokyo Metropolitan University), Hiromitsu MACHI (Hiroshima University), Satomi MATAYOSHI (Okayama University), Akiko MATSUMORI (Japan Women's University; invited professor at NINJAL), Hirotake MATSUMOTO (Beppu University), Harumi MITSUI (NINJAL), Jo NAKAHARA (University of the Ryukyus), Yumi NAKAJIMA (Hitotsubashi University), Satoshi NISHIOKA (Okinawa International University), Tetsuo NITTA (Kanazawa University), Takuichiro ONISHI (NINJAL), Thomas PELLARD (French National Center for Scientific Research), Kayoko SHIMOJI (Okinawa International University), Michinori SHIMOJI (Kyushu University; invited associate professor at NINJAL), Koko TAKEDA (part-time project research fellow at NINJAL), Yukinori TAKUBO (Kyoto University; invited professor at NINJAL), Zendo UWANO (invited professor at NINJAL).

## 2 Survey Overview

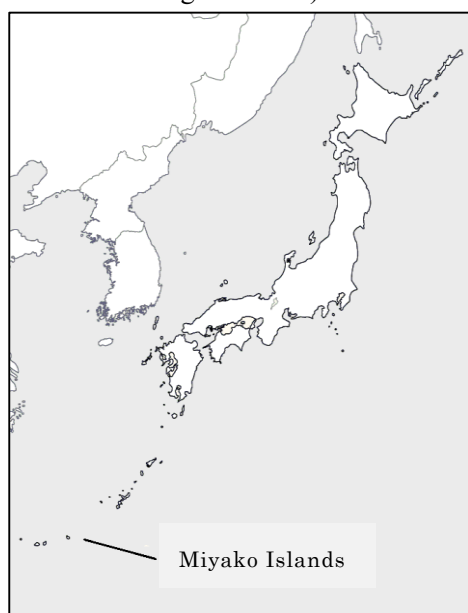
Nobuko KIBE (National Institute for Japanese Language and Linguistics)

### 1 Overview of the Miyako Islands

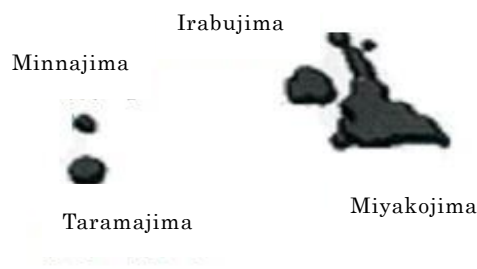
Located 300 km to the south of Okinawa Island, the Miyako Islands consist of the islands of Miyakojima, Ikemajima, Ōgamijima, Irabujima, Shimojijima, Kurimajima, Taramajima, and Minnajima (see Maps 1 and 2). As of October 1, 2005, the five former municipalities of Hirara City, Irabu Town, Ueno Village, Gusukube Town, and Shimoji Town (the latter four formerly constituting Miyako District) have merged, forming Miyakojima City; Miyakojima, Ikemajima, Ōgamijima, Irabujima, Shimojijima, and Kurimajima therefore presently constitute Miyakojima City, while Taramajima and Minnajima together constitute Tarama Village, Miyako District.

Miyakojima City has a surface area of 204.59 km<sup>2</sup> (Miyakojima: 159.26 km<sup>2</sup>; Ikemajima: 2.83 km<sup>2</sup>; Ōgamijima 0.24 km<sup>2</sup>; Irabujima: 29.08 km<sup>2</sup>; Kurimajima: 2.84 km<sup>2</sup>) and a population of 55,036 (as of December 2010—Hirara area: 36,138; Gusukube area: 6,780; Shimoji area: 3,065; Ueno area: 3,128; Irabu area: 5,925), and among its main industries are the cultivation of sugar cane, mango, and the like, tourism, and distilling (figures according to *23-Nendoban Tōkei Miyakojima [2011 Statistics on Miyakojima]* on the Miyakojima City website).

Tarama Village comprises Taramajima, with a surface area 19.75 km<sup>2</sup> and a population of 1,273, and Minnajima, with a surface area of 2.153 km<sup>2</sup> and a population of 6 (as of June 2012, according to the Tarama Village website).



Map 1. Location of the Miyako Islands.



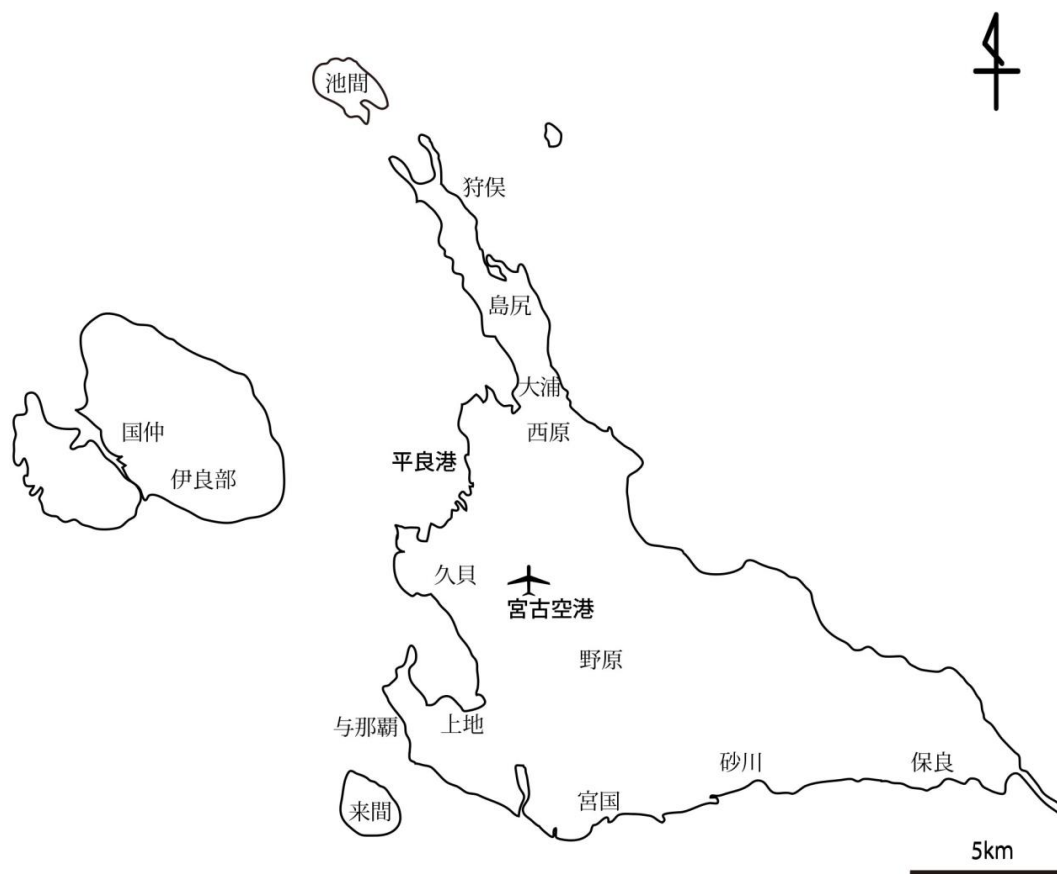
Map 2. The Miyako Islands.

## 2 Survey overview

The September 2011 dialect survey was conducted on Miyakojima, Ikemajima, Irabujima, Shimojijima, and Kurimajima, all part of Miyako City. The following is an overview of the survey.

### 2.1 Survey sites

The fifteen survey sites were Ikema, Karimata, Simajiri, Ōura, Nishihara, Kugai (Hirara area), Yonaha, Uechi, Kurima (Shimoji area), Nobaru, Miyaguni (Ueno area), Uruka, Bora (Gusukube area), Irabu, and Kuninaka (Irabu area) (see Map 3).



Map 3. Miyako dialect survey sites.

### 2.2 Schedule, modules, and researchers

The survey was conducted between September 4 and September 7, 2011. Survey sites, modules, and researchers were as follows.

**Miyako dialect survey sites, modules, and researchers**

Date/time	Site	Module	Researchers	Speakers
September 4 13:00–	Ikema	Basic vocabulary <i>a</i>	Lawrence, Ogino, Hirako, Aoi	Akiko Katsuren
		Basic vocabulary <i>b</i>	Nitta, Hirayama, Matsuura, Kawase	Yoshiko Nakahara
		Grammar (first)	Nohara, Nakahara, Davis, Utsumi	Masako Hamakawa
		Grammar (last)	Matayoshi, Yamada, Shirata, Toyama	Teruko Hamamoto
September 5 14:00–	Karimata	Basic vocabulary <i>a</i>	Lawrence, Nakazawa	Masaaki Nema
		Basic vocabulary <i>b</i>	Nakajima, Takeda	Hide Hanashiro
		Grammar (first)	Nakahara, Matsumoto	Masayuki Uehara
		Grammar (middle)	K. Nakama, Davis, Utsumi	Masaki Karimata
	Ōura	Basic vocabulary <i>a</i>	Hayashi, Takemura	Hatsuko Shimoji
		Basic vocabulary <i>b</i>	Hirako, Kubozono	Masayuki Ozato
	Uechi	Basic vocabulary <i>a</i>	Nitta, Inoue, Kawase	Kiyokatsu Uechi
		Accent	Uwano, Matsuura, Aoi	Shigeo Uechi
		Discourse	Takubo, Ogino, Yamada, Shirata	Tomi Nakahara, Fumi Shimoji
	Nobaru	Basic vocabulary <i>b</i>	Nohara, Tokunaga, Matayoshi, Hirayama	Shige Kugai
	Bora	Grammar (last)	Karimata, Kaneda, Yamada, Morooka	Yoshiko Shimoji
	Nishihara	Accent	Igarashi, H. Nakama, Takubo	Kimie Nakahara
	September 6 14:00–       19:30–	Uruka	Basic vocabulary <i>a</i>	Karimata, Kibe, Hirayama, Takemura
Grammar (first)			K. Nakama, Inoue, Ogino	Hisao Miyazato
Grammar (middle)			Nishioka, Utsumi, Davis	Wataru Sunagawa
Kugai		Basic vocabulary <i>a</i>	Lawrence, Nakahara, Kawase, Kubozono	Kinkichi Yonaha
		Grammar (first)	Nohara, Hayashi, H. Nakama, Matsumoto	Yoshihiko Yonaha
Miyaguni		Grammar (first)	Kaneda, Takeda	Kiku Miyaguni
		Grammar (middle)	Takubo, Nakajima	Hideko Matsuoka
Bora		Basic vocabulary <i>a</i>	Shirata, Tokunaga, Pellard	Harumi Sunagawa
		Basic vocabulary <i>b</i>	Nitta, Hirako, Nakazawa	Meiko Hirara
		Accent	Igarashi, Uwano, Matsuura, Aoi	Hiromori Shimoji
		Grammar (first)	Karimata, Toyama	Tatsuo Sunagawa
		Grammar (middle)	Shimoji, Morooka	Yoshio Hirara

September 7 14:00–	Kurima	Basic vocabulary <i>a</i>	Lawrence, Hirako	Kiku Kawamitsu, Chiyo Tamashiro
		Grammar (first)	Karimata, Utsumi, Davis	Ume Sunagawa
		Grammar (middle)	Kaneda, Inoue, Takeda	Haru Sunagawa
	Kuninaka	Basic vocabulary <i>a</i>	Nitta, Nakazawa	Genshin Nakasone
		Basic vocabulary <i>b</i>	Morooka, Tokunaga	Chiyoko Nakasone
		Grammar (last)	Nakajima	Yoshiko Yoshihama
	Irabu	Basic vocabulary <i>a</i>	Pellard, Takemura	Yoshihiro Kawamitsu
		Basic vocabulary <i>b</i>	Kibe, H. Nakama, Toyama	Katayuki Shimoji, Gensuke Hirara
	Yonaha	Basic vocabulary <i>a</i>	Shirata, Ogawa	Noriyoshi Kochi
		Accent	Igarashi, Uwano, Aoi, Matsuura	Toyosuke Ikemura
		Grammar (first)	Shimoji	Shigeo Yonaha
		Grammar (middle)	Hayashi	Takeichi Kakinohana
19:30–	Shimajiri	Basic vocabulary <i>a</i>	Shirata, Pellard	Toyokazu Hentona
		Basic vocabulary <i>b</i>	Shimoji, Hayashi	Sadao Ikema

### 2.3 Survey content and methods

The survey consisted of four modules: ‘Basic vocabulary *a*’, ‘Basic vocabulary *b*’, ‘Accent’, and ‘Grammar’. ‘Basic vocabulary *a*’ and ‘Basic vocabulary *b*’ comprised basic vocabulary items in frequent daily use, such as items referring to body parts, family members, animals, plants, natural phenomena, time, space, tools, and numbers. The difference between groups *a* and *b* lies in the fact that those in group *a* refer to things common to different languages and dialects, while those in group *b* have specific cultural connotations. ‘Basic vocabulary *a*’ contained 189 items, while ‘Basic vocabulary *b*’ contained 149. The method used was that of translation questions, where the researcher utters a Standard Japanese vocabulary item and the speaker replies by uttering the corresponding vocabulary item of their dialect; for example, the researcher asks, ‘How do you say (...) in your dialect?’ and the speaker replies by translating the vocabulary item to their dialect.

As regards ‘Accent’, a list was made of 71 two-, three-, and four-mora nouns, which were recorded uttered in isolation as well as inserted into carrier sentences of the type ‘There is no (...)’, after which they were analyzed. The accent survey data have not been included in this report in their entirety. For an overview, the reader is referred Yosuke Igarashi’s chapter, ‘The Nominal Accent System of the Yonaha Dialect of the Southern Ryukyuan Language of Miyako: A Preliminary Report’.

Verb conjugation formed the core of the ‘Grammar’ module, which consisted of sentences designed to elicit the assertive (affirmative), negative, past, *shite*-continuative, and *ari*-continuative forms and the like of 38 verbs, such as those corresponding to Standard Japanese *tobu* ‘to fly; to

jump’ and *kogu* ‘to row’. This resulted in a total of 190 items. It is impossible, however, to elicit all 190 items in one two-hour session, so they were divided into three subsets, each group thus being tasked with eliciting about a third (around sixty) of the items. In the table above, ‘Grammar (first)’, ‘Grammar (middle)’, and ‘Grammar (last)’ refer to the first, middle, and last subset of grammar items, respectively. Consequently, researchers and speakers differ for each of the subsets at each site. Although it is desirable, if possible, to have a single speaker utter all of the items when dealing with a systematic phenomenon such as verb conjugation, time constraints forced us to use this method. As with ‘Basic vocabulary’, the elicitation method we used was that of translation questions.

In addition to the above, discourse material was recorded in Uechi. As analysis of this material is still underway, it has not been included in this report.

#### 2.4 Participating researchers

The following 39 researchers participated in the survey. In addition to the leader and two research fellows of this project, the group consisted of fourteen collaborating researchers, nine university or institute staff members who were not collaborating researchers, nine graduate students, and four JSPS PD research fellows.

Nobuko KIBE (NINJAL; project leader), Shinji OGAWA (NINJAL; PD research fellow of this project), Sichao SHENG (NINJAL; research fellow of this project)—continues in alphabetic order; collaborating researchers at the time of the survey are marked with ‘\*’—Hayato AOI (doctoral student at the Tokyo University of Foreign Studies; JSPS research fellow), Chris DAVIS (JSPS PD research fellow at Kyoto University), Yuka HAYASHI (part-time lecturer at Kyoto University), Manami HIRAYAMA (Ritsumeikan University), Tatsuya HIRAKO (doctoral student at Kyoto University; JSPS research fellow), Yosuke IGARASHI (Hiroshima University), Fumiko INOUE (NINJAL), \*Akihiro KANEDA (Chiba University), \*Shigehisa KARIMATA (University of the Ryukyus), Suguru KAWASE (doctoral student at Kyushu University), Ai KUBOZONO (doctoral student at Kyushu University; JSPS research fellow), \*Wayne LAWRENCE (University of Auckland), \*Satomi MATAYOSHI (Shigakuan University), \*Hirotake MATSUMOTO (Beppu University), Toshio MATSUURA (Hokusei Gakuen University), Daigo MOROOKA (MA student at Hitotsubashi University), \*Jo NAKAHARA (part-time lecturer at the University of the Ryukyus), \*Yumi NAKAJIMA (Hitotsubashi University), Hiroyuki NAKAMA (adviser at the Public Relations Office of the Kake Educational Institution; former principal of Miyako High School), Keiko NAKAMA (part-time lecturer at the University of the Ryukyus), Kohei NAKAZAWA (MA student at the University of Tokyo), \*Satoshi NISHIOKA (Okinawa International

University), \*Tetsuo NITTA (Kanazawa University), Yuichi NOHARA (part-time lecturer at the University of the Ryukyus), Chisako OGINO (Oita University), Thomas PELLARD (JSPS PD research fellow at Kyoto University), \*Kayoko SHIMOJI (Okinawa International University), Rihito SHIRATA (MA student at Kyoto University), \*Koko TAKEDA (project research fellow at NINJAL), Akiko TAKEMURA (PD project research fellow at NINJAL), \*Yukinori TAKUBO (Kyoto University), Akiko TOKUNAGA (MA student at Hitotsubashi University), Nana TOYAMA (MA student at the University of the Ryukyus), Atsuko UTSUMI (Meisei University), \*Zendo UWANO (invited professor at NINJAL), Masahiro YAMADA (JSPS PD research fellow at Kyoto University).

## 2.5 Speakers

The details of the speakers are as follows.

Ikema	Ms. Teruko HAMAMOTO (86), Ms. Akiko KATSUREN (83), Ms. Yoshiko NAKAHARA, Ms. Masako HAMAKAWA (90)
Karimata	Mr. Masaki KARIMATA (88), Mr. Masaaki NEMA (78), Ms. Hide HANASHIRO (84), Mr. Masayuki UEHARA (68)
Ōura	Ms. Hatsuko SHIMOJI (87), Mr. Masayuki OZATO (80)
Uechi	Mr. Shigeo UECHI (84), Ms. Tomi NAKAHARA (89), Ms. Fumi SHIMOJI (90), Mr. Kiyokatsu UECHI (79)
Nobaru	Ms. Shige KUGAI (86)
Uruka	Mr. Toshio SUNAGAWA (83), Mr. Wataru SUNAGAWA (75), Mr. Hisao MIYAZATO (84)
Kugai	Mr. Yoshihiko YONAHA (69), Mr. Kinkichi YONAHA (84)
Miyaguni	Ms. Kiku MIYAGUNI, Ms. Hideko MATSUOKA
Bora	Ms. Yoshiko SHIMOJI (82), Mr. Tatsuo SUNAGAWA (55), Mr. Yoshio HIRARA (77), Mr. Hiromori SHIMOJI (61), Ms. Meiko HIRARA (79); Ms. Harumi SUNAGAWA (59) from Aragusuku
Nishihara	Ms. Kimie NAKAHARA (63)
Kurima	Ms. Haru SUNAGAWA (86), Ms. Ume SUNAGAWA (83), Ms. Kiku KAWAMITSU (90), Ms. Chiyo TAMASHIRO (81)
Kuninaka	Ms. Chiyoko NAKASONE (83), Ms. Yoshiko YOSHIHAMA (84), Mr. Genshin NAKASONE (86)
Irabu	Mr. Yoshihiro KAWAMITSU (87), Mr. Katayuki SHIMOJI (69), Mr. Gensuke HIRARA (81)
Yonaha	Mr. Takeichi KAKINOHANA (76), Mr. Noriyoshi KOCHI (75), Mr. Shigeo YONAHA (77), Mr. Toyosuke IKEMURA (75)
Shimajiri	Mr. Toyokazu HENTONA (72), Mr. Sadao IKEMA (73)

I would like to take this opportunity to express our gratitude to the above speakers for taking the time to participate in the survey.

### 3. Overview of Miyako Ryūkyūan



# The Phonology of the Miyako Dialects: Phonological Systems and Comparisons

Thomas PELLARD & Yuka HAYASHI

## 1 Introduction

The Miyako dialects are a group Southern Ryukyuan dialects spoken in Miyakojima City and Tarama Village in Okinawa Prefecture. They are considered to comprise between thirty and forty dialects, differing from hamlet to hamlet, albeit to different degrees. Surveys were conducted in Uechi, Yonaha, Kugai, Irabu, Bora, Kuninaka, Ōura, Shimajiri, Kurima, Ikema, Karimata, Uruka, and Nobaru in September 2011; in this chapter, we will use the data obtained at these thirteen sites to organize and outline the phonology of the Miyako dialects based on historical-linguistic sound correspondences. While it is customary to consider sound correspondences with (Old) Japanese, we will mostly look at correspondences with the Proto-Miyako stage for the purpose of interdialectal comparison, rather than going back all the way to Proto-Japonic (unless noted otherwise, the proto-form marker ‘\*’ indicates a Proto-Miyako form)<sup>1</sup>.

Examples of existing research on the phonology of the Miyako dialects are the works of Hirayama, Oshima & Nakamoto (1967); Nakamoto (1976), Hirayama (ed., 1983), and Nakama (1992), who have described the phonemes and phonological characteristics of each site. More recently, Nakamoto (2000), Nakahara (2001), K. Shimoji (2003), Karimata (2005), M. Shimoji (2008, 2011), Pellard (2009, 2010), and Hayashi (2010), among others, have conducted surveys and research on the phonological systems of individual dialects, as well; the phonologies of each site are thus becoming better understood, but different researchers have interpreted the phonology of the Miyako dialects very differently. In the Miyako dialects, there are a vowel with a free variant involving consonantal noises and syllables in which it is difficult to phonetically and phonologically confirm the existence of a specific vowel, for example; there has been much debate regarding their sound values and phonological interpretation. This debate centers on a phoneme that incorporates consonantal as well as vocal elements, which is called a central or apical vowel by some and analyzed as a syllabic consonant with the sound value [s~z] by others. In addition, sounds such as ‘v’ and ‘r’ ([ɺ]) can become moraic, and in terms of phonetic characteristics, even open vowels can be devoiced; syllable nuclei are thus frequently occupied by (at least phonetically) consonantal elements, which is why the Miyako dialects are considered to be ‘strongly consonantal’ (Sawaki

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<sup>1</sup> Reconstructed Proto-Miyako forms are based on those of Pellard (2009) and reconstructed Proto-Ryukyuan forms on those of Thorpe (1983).

2000). Although this is among the issues regarding phonological interpretation discussed by, for example, Kitamura (1960), Karimata (1986, 1987), Kajiku (1989), and Sawaki (2000), there are still many unresolved questions. Many of these questions can be considered to involve differences in opinion resulting from the use of different frameworks of analysis to deal with the large differences in the respective roles of consonants and vowels between these dialects and Japanese. Although we can discuss only a small subset of these questions, we hope to be able to elucidate part of the phonological characteristics of the Miyako dialects by discussing a number of morphophonological phenomena that have not previously been discussed in much detail.

In this chapter, in addition to discussing the issues mentioned above, we will outline aspects the Miyako dialects all share as well as differences between them by looking at how each of the phonemes posited for Proto-Miyako is realized at each of the sites. We use a simplified phonetic notation, and the data in the tables are presented as they were transcribed by each of the researchers in the survey<sup>2</sup>. As we will only discuss segments in this chapter and not consider pitch accent, we have not included any notation regarding the latter that was present in the data<sup>3</sup>.

## 2 Vowels

### 2.1 Vowel types and properties

In this section, we will give the sound values of each of the vowel phonemes of the Miyako dialects and examples of words containing them, obtained at each of the survey sites. In cases where there has been a local sound change at a single site or where there is an exceptional sound correspondence, we will give additional examples for these.

The six vowel types of the Miyako dialects encountered in the survey data that we will discuss in this chapter are /a, e, i, o, u, ɿ/. A distinction is made between short and long vowels, although, with the exception of their use in loan words, /e, o/ are typically only used as long vowels, as they derive historically from vowel sequences. Although it is not among the dialects considered in this chapter, /ë:, ü:/ are additionally recognized for the Tarama dialect (K. Shimoji 2003)<sup>4</sup>. Among the dialects examined in the survey, there are dialects

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<sup>2</sup> Because they are phonetic transcriptions of utterances mostly obtained from a single speaker in a single survey, the data also include seeming mistranscriptions. As regards their interpretation, we have made corrections where our knowledge allowed us to; we have indicated where this is the case.

<sup>3</sup> There have been recent advances in research on pitch accent, Igarashi et al. (2012) having shown that the Ikema dialect has a three-pattern rather than a two-pattern accent system, for example.

<sup>4</sup> Furthermore, the Ōgami dialect has /ɯ/, which derives from \*ɿ but is not accompanied by a friction sound; its vowel system differs from those of the other dialects, consisting of /a, ε, i, u, ɯ/ (Pellard 2009).

that have the four vowels /a, i, u, ɿ/, dialects that have the five vowels /a, i, o, u, ɿ/, and dialects that have the six vowels /a, e, i, o, u, ɿ/. The phoneme /ɿ/ is a vowel that is accompanied by a friction noise; it can be considered a ‘fricative vowel’ of the kind that is encountered in, for example, Chinese and the Bantu languages (Ladefoged & Maddieson 1996). Although we will treat it as a vowel, there are also researchers who interpret it as a consonant.

### 2.1.1 Open vowel

#### /a/ (unrounded open vowel) [a] ~ [ɑ] < Miyako \*a

This sound corresponds to Proto-Miyako \*a and surfaces as [a] ~ [ɑ] in all of the dialects<sup>5</sup>.

Table 1. The unrounded open vowel.

	A-187 ‘there (distal)’	A-062 ‘mosquito’	A-174 ‘sand’	B-060 ‘feather; wing’	B-002 ‘tooth’
Uechi	kama	gaɕam	ɱnagu		pa:
Yonaha	k <sup>h</sup> ama	gaɕam	nnago:		
Kugai	k <sup>h</sup> ama	gaɕam	m <sup>h</sup> nagu		
Irabu	k <sup>h</sup> ama	gaɕam	mnagu	pani	pa:
Bora	k <sup>h</sup> ama	ga <sup>d</sup> zam	nnago:	p <sup>h</sup> ani	p <sup>h</sup> a:
Kuninaka	kama	kadaɱ	ɱnagu		
Ōura	k <sup>h</sup> ama	ga <sup>d</sup> zaŋ	nnagu	pani	pa:
Shimajiri	kama	gadaŋ	nnagu	p <sup>h</sup> aŋi	p <sup>h</sup> a:
Kurima	kama	gaɕam	m:nagu		
Ikema	kama	kaɕaŋ	nnagu	hani	ha:
Karimata	kama	ga <sup>d</sup> zaŋ	nnagu	pani	pa
Uruka	k <sup>h</sup> a <sub>̣</sub> ma:	gaɕaɱ	ɱnagu		
Nobaru				pani	pa:

<sup>5</sup> As we will discuss later, in some dialects there are cases where /u/ corresponds to this sound, but this is not the result of a systematic sound change.

### 2.1.2 Close vowels

#### /i/ (unrounded close front vowel) [i] ~ [ɪ] < Miyako \*i

This sound corresponds to Proto-Miyako \*i and surfaces as [i] ~ [ɪ] in all of the dialects. In Karimata, there are words in which /ɲ/ corresponds to \*i. In Ikema, \*ɲ has merged with /i/, except after /ts/, /z/, and /s/ (see the section on /ɲ/ for details). In addition, there are words in Irabu in which the sound corresponding to Proto-Miyako \*(C)ja has changed into ‘ii’.

Table 2. The unrounded close front vowel.

	A-170	A-059	A-129	B-093	A-110
	‘sea’	‘woman’	‘wind’	‘spatula’	‘tree’
Uechi	iɱ	midum	kaɖzi		ki:
Yonaha	im	midomu	k <sup>h</sup> adzi		ki:
Kugai	im	midum	k <sup>h</sup> adzi		ki·
Irabu	im	midum	k <sup>h</sup> adzi	pira	k <sup>h</sup> i:
Bora	im	midom	k <sup>h</sup> a <sup>d</sup> zi	p <sup>h</sup> ira	k <sup>h</sup> i:
Kuninaka	iɱ	miduɱ	kaɖzi		ki·
Ōura	iɲ	miduɲ	k <sup>h</sup> adzi	pira	k <sup>h</sup> i:
Shimajiri	iɲ	miduɲ	k <sup>h</sup> adzi	pira	ki:
Kurima	im	midumu	k <sup>h</sup> adzi		ki:
Ikema	iɲ	miduɲ	k <sup>h</sup> adi	hira	ki:
Karimata	iɲ	miduɲ	k <sup>h</sup> adzi	pira	ki:
Uruka		miduɱ	kaɖzi		ki: ~ kɨ:
Nobaru				pira	

Table 3. ‘ɲ’ partly corresponding to ‘i’ in Karimata.

	A-016	A-103
	‘beard; mustache/hair’	‘garlic’
Uechi	p <sup>ɛ</sup> igi	p <sup>h</sup> il
Yonaha	p <sup>z</sup> ɲgi	p <sup>h</sup> i <sup>z</sup> ɲ
Kugai	psgi	p <sup>h</sup> iz
Irabu	p <sup>s</sup> ɲgi / fɯtsɲp <sup>s</sup> ɲgi	p <sup>h</sup> iɲ
Bora	p <sup>s</sup> ɲgi	p <sup>h</sup> i <sup>z</sup> ɲ
Kuninaka	p <sup>h</sup> igi	p <sup>h</sup> il

Ōura	p <sup>s</sup> ŋgi ~ pŋgi	p <sup>h</sup> iŋ
Shimajiri	b <sup>z</sup> ŋgi	p <sup>h</sup> i <sup>z</sup> ŋ
Kurima	psgi	piz
Ikema	higi	hi:
Karimata	bzgu ~ bzgĩ ~ biġĩ	p <sup>s</sup> i:
Uruka	psgi ~ p <sup>s</sup> ŋgi	pi <sup>z</sup> ~ pi <sup>z</sup>
Nobaru		

Table 4. \*(C)ja > ii in Irabu.

	A-165	A-189	B-029
	‘a long time ago’	‘to be absent; to be nonexistent’	‘one (person)’
Uechi	ŋkja:ŋ		
Yonaha	ŋk <sup>j</sup> a:ŋ		tɔuk <sup>j</sup> a:
Kugai	ŋkja:ŋ	n <sup>j</sup> a:ŋ	tɔfke:
Irabu	mki:ŋ	ni:ŋ	tauki:
Bora	ŋk <sup>j</sup> a:ŋ	n <sup>j</sup> a:ŋ	tauk <sup>j</sup> a:
Kuninaka	ŋkja:ŋ		ta <sup>v</sup> k <sup>j</sup> a:
Ōura	ŋk <sup>j</sup> a:ŋ		tavk <sup>j</sup> a:
Shimajiri	ŋkja:ŋ		t <sup>h</sup> afkja:
Kurima	ŋkja:ŋ	n <sup>j</sup> a:ŋ	
Ikema	ŋk <sup>j</sup> a:ŋ	n <sup>j</sup> a:ŋ	tauka:
Karimata	ikja:ŋ	n <sup>j</sup> a:ŋ	taɸk <sup>j</sup> a:
Uruka	ŋkja:ŋ		tavk <sup>j</sup> a:
Nobaru			taukja:

**/u/ (rounded close back (lax) vowel) [u] ~ [ʊ] < Miyako \*u**

This sound corresponds to Proto-Miyako \*u and surfaces as [u] ~ [ʊ] in all of the dialects. Words in which ‘a’ corresponds to this sound are also encountered occasionally at all of the sites, but this is not a regular correspondence.

Table 5. The rounded close back vowel.

	A-028 'bone'	A-030 'heart/liver'	A-060 'person; human being'	A-071 'horse'	B-069 'ear (of a cereal plant)'
Uechi	puni	kçimu ~ kimu	p̄isu	nu:ma	
Yonaha	puni	k̄imu	p̄i <sup>h</sup> u	no:ma	
Kugai	p <sup>h</sup> uni	k <sup>sz</sup> imu	pstu	nu:ma	
Irabu	p <sup>h</sup> uni	ts̄imu	pstu	nu:ma	pu:
Bora	p <sup>h</sup> uni ~ puni	k̄imu	pstu	no:ma	p <sup>h</sup> u:
Kuninaka	puni	tsimu	p̄i <sup>h</sup> tu	ny:ma	
Ōura	p <sup>h</sup> uni	k̄imu	pstu	numa	p <sup>h</sup> u:
Shimajiri	p <sup>h</sup> uni	k̄imu	ttu	nu:ma	pu:
Kurima	p <sup>h</sup> uni	tsimu	pstu	nu:ma	
Ikema	huni	tsimu	p̄i <sup>h</sup> tu ~ çtu ~ çto	nu:ma	hu:
Karimata	p <sup>h</sup> uni	k <sup>s</sup> imu	pstu	nu:ma	pu:
Uruka	p̄uni ~ p <sup>h</sup> uni	k̄smu ~ k̄imu	p̄st̄u ~ p̄st̄u	nu:m̄a	
Nobaru					pu:

Table 6. Examples of 'a' corresponding to 'u'.

	A-132 'cloud'	A-032 'knee'	A-079 'egg'	A-115 'common garcinia (tree)'
Uechi	kumu	tsigusi	tunaka	p̄kukugi
Yonaha	fum	ts̄gus̄	t <sup>h</sup> unaka	p̄ȳkugi:
Kugai	fumu	ts̄gusi	tunak <sup>h</sup> a	p <sup>h</sup> ukadzgi:
Irabu	fumu	ts̄gus̄	(k <sup>h</sup> u:ga)	kuputs̄gi
Bora	fumu	ts̄gus̄	t <sup>h</sup> unaka	f̄ȳkugi:
Kuninaka	fumu	tsigusi	tunuka	p̄kuts̄gi
Ōura	k <sup>h</sup> umu	sugas̄	t <sup>h</sup> unaka	p <sup>h</sup> ukagi
Shimajiri	fuma	tugus̄ ~ tugas̄	t <sup>h</sup> unaka	k <sup>h</sup> ȳpag <sup>z</sup> gi:
Kurima	fumu	ts̄gusi	t <sup>h</sup> unuka	pukuts̄gi:
Ikema	m̄mu	s̄gusi	tunuka	kuts̄gi
Karimata	fumu	ts̄gasi	tunuga	p̄ȳkagagi:
Uruka	̄ȳmu	tsgus̄ ~ ts̄gus̄	t̄unaka	p̄ȳkuki: ~ p̄kukugi
Nobaru				

### 2.1.3 Close-mid vowels and diphthongs

The close-mid vowels of the Miyako dialects mostly derive from sequences of vowels that have fused together. /e/ derives from \*ai and \*Cja, while /o/ derives from \*au and \*ua. There are many exceptions, however; apart from \*au > o:, these sound changes are not observed in all instances of these environments in most of the dialects.

#### /e/ (unrounded close-mid front vowel) [e]

/e/ derives from the following two sequences:

- \*ai : this is observed only in some vocabulary items.
- \*Cja : this is observed most often in the topic forms of words ending in ‘-i.’

/e/ deriving from these sequences through fusion is not encountered in most of the dialects. Also, there was an instance of mistranscription as /i/ [ɪ] in the data given below.

Table 7. /e/ deriving from \*ai in some vocabulary items in Yonaha, Kugai, and Kurima (vocabulary items in which the change \*ai > e has not occurred are included for reference.)

	A-131 ‘earthquake’	A-146 ‘the south’	A-157 ‘night’	A-004 ‘forehead’	‘too; also’ (particle)	allative marker
Uechi	nai	p <sup>h</sup> ai				
Yonaha	nai	pai	junai		mai / me:	ŋkai / ŋke:
Kugai	nai	p <sup>h</sup> ai	jun <sup>h</sup> a:ŋ / june:	ftai	mai	ŋkai
Irabu	nai	p <sup>h</sup> ai	ju <sup>z</sup> ŋna <sup>z</sup>	fɯtai	mai	
Bora	nai	p <sup>h</sup> ai	junai	fɯtai	mai	ŋkai
Kuninaka	nai	paɪbara	jɯnai	fɯtai	mai	ŋkai
Ōura	nai	p <sup>h</sup> ai		fɯtai ~ ftai		
Shimajiri	nai	p <sup>h</sup> ai				
Kurima	nai	p <sup>h</sup> ai	june:	fɛ̄	me:	ŋke:
Ikema	nai	haɪbara		ftai	mai	ŋkai
Karimata	nau	p <sup>h</sup> ai		ftai	mai	ŋgai
Uruka	nai	p <sup>h</sup> ai	junai		mai	ŋkai
Nobaru						ŋkai

Table 8. /e/ deriving from \*Cja only in some vocabulary items in Kugai.

	A-165 'a long time ago'	A-189 'to be absent; to be nonexistent'	B-029 'one (person)'	-i + topic marker
Uechi	ɲkja:ɲ			
Yonaha	ɲk <sup>j</sup> a:ɲ		tɔuk <sup>j</sup> a:	ja:
Kugai	ɲkja:ɲ	n <sup>j</sup> a:ɲ	tɔfke:	e:
Irabu	mki:ɲ	ni:ɲ	tauki:	
Bora	ɲk <sup>j</sup> a:ɲ	n <sup>j</sup> a:ɲ	tauk <sup>j</sup> a:	ja:
Kuninaka	ɲkja:ɲ		ta <sup>v</sup> k <sup>j</sup> a:	ja:
Ōura	ɲk <sup>j</sup> a:ɲ		tavk <sup>j</sup> a:	
Shimajiri	ɲkja:ɲ		t <sup>h</sup> afkja:	
Kurima	ɲkja:ɲ	n <sup>j</sup> a:ɲ		ja:
Ikema	ɲk <sup>j</sup> a:ɲ	n <sup>j</sup> a:ɲ	tauka:	(j)a:
Karimata	ikja:ɲ	n <sup>j</sup> a:ɲ	taɸk <sup>j</sup> a:	ja:
Uruka	ɲkja:ɲ		tavk <sup>j</sup> a:	ja:
Nobaru			taukja:	

**/o/ (rounded close-mid back vowel) [o]**

/o/ derives from the following two sequences.

- \*au : this is observed especially often in the accusative forms of words ending in '-a'.
- \*ua : this can apparently only be observed in the topic forms of words ending in '-u'.

In most of the dialects /o/ is consistently used as the sound corresponding to \*au, but there are also dialects in which there is variation among vocabulary items (Bora, Kurima), as was the case with the examples above. Also, there was an instance of mistranscription as /u/ [ɔ] in the data given below.



Table 9. /o/ deriving from \*au in Uechi, Yonaha, Kugai, Bora, Ōura, Kurima, and Karimata; /o/ deriving from \*ua in Kugai, Kuninaka, Kurima, Karimata, and Uruka.

	A-027	A-093	A-130	A-136	A-183	-a + accusative marker	-u + topic marker
	‘to be itchy’	‘to eat’	‘whirlwind; tornado’	‘to be blue; to be azure’	‘gate’		
Uechi		fo:	amainoũ	o:	ɕoʻ		
Yonaha		fo:	amaino:	o:ɳʊ	ɕo:	o:	a:
Kugai	k <sup>h</sup> o:munu	fo:	ama.ino:	o:	ɕo:	o:	o:
Irabu	k <sup>h</sup> o:munu	fo:	amaino:	o:	ɕo:vʈʂɿ		
Bora	k <sup>h</sup> aʊkau	fau	amaino:	aʊaʊ	ɕo: (Bora) / ɕaʊ (Aragusuku)	au	a:
Kuninaka	kaʊmunu	fau	amainau	aũ	daʊ	ao	u: / o:
Ōura		fo:	amaino:	o:o:	ɕo:fʊʈʂɿ		
Shimajiri		fau	amaino:	aukaŋ	dau		
Kurima	koʔoko:		ama.ino:	au	ɕo:	a: / o: / au	o: / ua
Ikema	kaumunu		amaunau	aumunu	ɕau	au	u:
Karimata	ko:gaŋ		ino:	o:	ɕo:	au / o:	o:
Uruka		fau ~ fau	amainau	au ~ aʊ	ɕau	au	o:
Nobaru							

#### 2.1.4 Special vowel /ɿ/

This sound corresponds to Proto-Miyako \*ɿ, and in addition to its vocal quality as a somewhat fronted close central vowel [i] ~ unrounded close back vowel [ɯ], it is accompanied by an alveolar friction noise; it is a so-called ‘fricative vowel’<sup>6,7</sup>. The friction noise is voiceless [s] when it is preceded by a voiceless onset consonant (e.g. Uechi p<sup>h</sup>iɿgi ‘beard; mustache’) and voiced [z] when it is preceded by a voiced onset consonant or no onset

<sup>6</sup> For many years, there has been debate regarding what kind of vowel the sound corresponding to \*ɿ is on the basis of its articulatory properties (see Karimata 1986 for details). Ever since Nevsky’s survey of Miyako, it had generally been considered a central vowel, but Sakiyama (1963, 1965), Uemura (1997), and Karimata (1996, 2005), among others, have argued that in terms of articulatory phonetics, it is an apical vowel. In recent years, it has been confirmed experimentally through instrumental analysis that in some of the dialects, it has both the characteristics of a central and of an apical vowel: while it has a vocal quality like that of a central vowel (Ono et al. 2000, Aoi 2010), it is articulated in a position close to s ~ z (Aoi 2010). This parallels reports of fricative vowels in other languages having a dual articulatory character consisting of both vocal and consonantal elements.

<sup>7</sup> As was mentioned in Footnote 4, the vowel deriving from \*ɿ in the Ōgami dialect is /ɯ/, which is not devoiced even when preceded by a voiceless onset consonant (e.g. Ōgami [ku:ɯ] ‘character; letter’) (Pellard 2009).

consonant (e.g. Yonaha p<sup>h</sup>ag<sup>z</sup>ɿ ‘leg’). When it is surrounded by voiceless consonants, in particular, the vowel itself is almost always completely devoiced (e.g. Bora pskaɿ ‘light’). Conversely, an allophone with a weakened friction noise, closer to an approximant or vowel, surfaces particularly when it is not preceded by an onset consonant or when it is word-final and preceded by a voiced onset consonant (e.g. Uechi pagɿ ‘leg’). In addition to expected differences in the degree of stricture among the dialects, there is also variation among speakers and fluctuation in the pronunciation of individual words in individual speakers (e.g. Ōura p<sup>h</sup>agɿ ~ p<sup>h</sup>ag<sup>z</sup>ɿ ‘leg’). Depending on the dialect, there are also cases where it sounds like a lateral (e.g. Uechi mak<sup>ʰ</sup>al ‘(wooden) bowl’).

In comparison to other vowels, only a limited number of onset consonants can precede this vowel; which they are depends on the dialect, but the largest set of possible onset consonants consists of /p, b, k, g, ts, s, z, f, m/. They are especially few in number in Ikema, where it has changed into /i/ in all environments except after /ts/, /s/, and /z/. It must also be mentioned that in many of the dialects, it has changed into a diphthong [iɿ] after sounds such as /m/.

As /ɿ/ sometimes surfaces as [z] or [s], there are also researchers who interpret it as a moraic consonant. [pstu] ‘person; human being’ provides an example of the diversity encountered in the phonetic transcriptions of this sound: it is variously transcribed as p̄itu ~ pɿtu ~ p̄ztu<sup>8</sup>. Although there is thus a variety of phonological interpretations, the researchers that consider it a vowel still agree that it is accompanied by a friction noise, and those that consider it a consonant still recognize its vowel-like ability to occupy a syllable nucleus. On either view, it is considered a phoneme that has both a consonantal and a vocal quality<sup>9</sup>.

Table 10. The special vowel.

	A-016	A-025	A-100	A-087	A-081	A-033	B-062
	‘beard; mustache/hair’	‘blood’	‘(wooden) bowl’	‘meat (of sea urchins and the like)’	‘fish’	‘leg’	‘fly (insect)’
Uechi	p <sup>ɕ</sup> igi	aχ <sub>ɕ</sub> atsi ~ ak <sub>ɕ</sub> atsi	mak <sup>ʰ</sup> al	mi:	<sup>i</sup> zzu	pagɿ	
Yonaha	p <sup>z</sup> ɿgi	ak <sup>h</sup> ɕatsɿ	mak <sup>h</sup> a <sup>z</sup> ɿ	m <sup>z</sup> ɿ:	zzu ~ ɿzu	p <sup>h</sup> ag <sup>z</sup> ɿ	
Kugai	psgi	akatsi	mak <sup>h</sup> azi	kadz <sup>a</sup> sanumiz	zzu	p <sup>h</sup> aɕzi	

<sup>8</sup> Karimata (2005) also discusses the possibility of interpreting this sound as an allophone of the onset consonants ‘s’ and ‘z’.

<sup>9</sup> Although we consider this sound a vowel in this chapter, we use the phonetic symbol /ɿ/ rather than /i/ in order to express the fricativity that is an important property of this phoneme.

Irabu	p <sup>s</sup> ɽgi	ax <sup>ʰ</sup> atsɿ ~ ahatsɿ	maxaɿ ~ mahaɿ	miɿ	ɽɿzu	p <sup>h</sup> aɬɿ	paɽ
Bora	p <sup>s</sup> ɽgi	ak <sup>h</sup> ʰatsɿ	maka <sup>z</sup> ɿ	m <sup>z</sup> ɿ:	zzu ~ ɿzu	p <sup>h</sup> a <sup>d</sup> zɿ ~ p <sup>h</sup> ag <sup>z</sup> ɿ	paz ~ paiz
Kuninaka	p <sup>h</sup> iɡi	ak <sup>x</sup> ʰatsi	makaɿ	tsimu (sea urchin)	( <sup>i</sup> )zzu:	pazi	
Ōura	p <sup>s</sup> ɽgi ~ pɿgi	ha:tsɿ	makaɿ	miɿ	ɿzu	p <sup>h</sup> agɿ ~ p <sup>h</sup> ag <sup>z</sup> ɿ	pa <sup>z</sup> ɿ
Shimajiri	b <sup>z</sup> ɽgi	aχatsɿ	maχaɿ ~ maχa <sup>z</sup> ɿ	mi <sup>z</sup> ɿ	zzu	p <sup>h</sup> agɿ ~ p <sup>h</sup> ag <sup>z</sup> ɿ	paz ~ paɿ
Kurima	psgi	A: akatsī / B: a <sup>h</sup> xatsī	A: makaɿ / B: makaz	mi:	zzu	p <sup>h</sup> aɬī	
Ikema	higi	akatsī	makai	mi:	zzu ~ ɬu	haɬī	hai
Karimata	bzɡu ~ bzɡī ~ bīgī	ha:tsī	ma:u	mi:	izu	p <sup>h</sup> agu	pai / pau
Uruka	psgi ~ p <sup>s</sup> ɽgi	ak <sup>ʰ</sup> atsɿ	makaɽ	m <sup>z</sup> ɿ:	zzu	pagɽ	
Nobaru						pagɿ	pa <sup>z</sup> ɿ

There has long been debate on (phonetic) issues related to the articulatory properties of this vowel, but we will not discuss these in detail in this chapter (see, however, Footnote 6). We will instead consider some morphophonological issues highly relevant to a discussion of this vowel and discuss a problem of phonological interpretation in regard to the Miyako dialects.

*Is there a vowel or not?*

In the Miyako dialects, syllables in which it is debatable whether there is a vowel are frequently encountered; they are mostly cases of this special vowel preceded by an onset fricative or affricate. For example, some interpret [usī] ‘cattle (i.e. cow or bull)’ as ‘usī’ or ‘usɿ’, in which ‘s’ is followed by a vowel, while others interpret it as ‘uɽ’, in which ‘s’ is a syllabic consonant. Although the second syllable of this word does not always surface phonetically unvoiced<sup>10</sup>, it appears to be interpreted this way due to a number of morphophonological phenomena.

The questions of whether there is a phoneme or not and whether this phoneme is a consonant or a vowel have to be answered by considering the phonological systems of each of the dialects in their entirety. There is not much research, however, that examines the relevant phonological phenomena comprehensively. Although it is not possible to resolve the issue in its entirety for each of the dialects in this chapter, we will introduce one morphophonological phenomenon that is often cited in discussions on the presence of a vowel and discuss some matters that are essential to the resolution of this issue. Furthermore, as this issue is as yet unresolved, we have in this chapter

<sup>10</sup> As there are also cases in which a vowel is inserted phonetically, this in itself does not prove that there is a vowel phonologically.

chosen the interpretations and transcriptions closest to the Proto-Miyako forms and supplemented forms in which it is unclear if a consonant is moraic with vowels.

### *Nominal morphophonology*

The phenomenon that would seem to be most relevant to the interpretation of the syllables in question is the following nominal-morphophonological phenomenon. In the Miyako dialects, the topic and accusative forms of nouns take different shapes depending on the properties of their stem-final sounds, as shown below; Table 11 gives examples from Karimata.

Table 11. Types of stem-final syllables and their topic and accusative forms<sup>11</sup> (‘--’ indicates forms for which no data is available).

Type of stem-final syllable	Topic form	Accusative form	
C	‘sea’ im	imma	immu
	‘dog’ in	inna	innu
	‘snake’ pav	pavva	pavvu
(C)V[ + fricative]	‘cattle (i.e. cow or bull)’ usɲ	ussa	ussu
	‘wife’ tuzɲ <sup>12</sup>	tuttsa	tuttsu
	‘road; path; way’ ntsɲ	nttsa	nttsu
	‘tofu’ toofu	tooffa	tooffu
	-pɲ	--	--
	‘paper’ kabɲ	kabzza	kabzzu
	‘the moon’ tsɲkɲ <sup>13</sup>	tsɲkssa	tsɲkssu
	‘leg’ pagɲ	pagzza	pagzzu
	‘rice’ maɲ	mazza	mazzu
	CV	‘umbrella; parasol’ sana	sanaa
‘sake; alcoholic beverage (in general)’ saki		sakjaa	sakjuu
‘octopus’ taku		takoo	takuu

<sup>11</sup> In Table 11, data from the NINJAL survey has been supplemented with our own data. We have modified the transcriptions.

<sup>12</sup> It appears to have surfaced as an unvoiced sound here due to restrictions on which sounds can be used as geminates.

<sup>13</sup> In the data from the NINJAL survey, this word is transcribed as ‘tskssu’, but this form is also encountered.

(C)VV	‘tree’ kii	kiija	kiiju
	‘voice’ kui	kuija	kuiju
	‘character; letter’ zɿ	zɿja	zɿju
	‘(to break) wind’ pɿ	--	--
CC	‘sweet potato’ mm	mma	mmu

Table 11 shows that consonant doubling occurs when the stem ends in C or (C)V[+fricative] (‘ɿ’ or a fricativized ‘u’). Before considering how to interpret this synchronically, let us first briefly look at how this phenomenon arose historically.

As is also indicated by, among others, Karimata (1996, 2007), there has been a historical sound change in which the semivowels ‘w’ and ‘j’ and the liquid ‘r’ have changed into the fricatives ‘s’ and ‘z’ when they follow the special vowel ‘ɿ’<sup>14</sup>. The examples in (1) are taken from Karimata (2007); we have modified the transcriptions.

- (1) tsɿkssu < \*tsɿkɿju ‘the moon’ (corresponds to Japanese *tsukuyo* ‘moonlit night’)  
 zzu < \*ɿwu ‘fish’ (corresponds to Japanese *iwo*)  
 ssu < \*sɿru ‘white’ (corresponds to Japanese *shiro*)

\*ja and \*ju are thought to have been the forms of the topic and accusative marker, respectively, in Proto-Miyako, and when they were attached to stems ending in \*ɿ, the same change must have occurred.

- (2) kabɿ + ju > kabɿ = zu [kabzzu] ‘head.hair-ACCUSATIVE’ (from Table 11)

In the case of stems ending in consonants, too, the ‘j’ of the attached marker has assimilated to these consonants, as can be seen in Table 11 (the accusative form of im ‘sea’: im = mu). We will not discuss the process through which this change occurred in detail, but it seems that the case of stems ending in ‘ɿ’ can be understood as similarly involving the assimilation of the ‘j’ following it due to the consonantal aspect of this vowel<sup>15</sup>.

<sup>14</sup> Fricative vowels have also been observed to influence the consonants following them in some of the Bantu languages (Ladefoged & Maddieson 1996).

<sup>15</sup> In addition to Karimata (1996, 2007) discussing the causes of this change from the perspective of aerodynamics, Aoi (2012) uses an autosegmental-phonological analysis to explain the process through which this change occurred as the fricativization of semivowels and liquids due to the extension of the apicality of /ɿ/.

Among the stems in Table 11 ending in (C)V[+fricative], however, there are broadly speaking two possible interpretations regarding those ending in ‘sɿ’, ‘zɿ’, ‘tsɿ’, or ‘fu’<sup>16</sup>. One of these assumes ‘ɿ’ (a fricativized ‘u’ in the case of ‘f’) to be a syllable nucleus, similarly to ‘bɿ’, (‘pɿ’), ‘kɿ’, ‘gɿ’, and ‘mɿ’, and posits a rule according to which this vowel has changed ‘j’ into a fricative<sup>17</sup>; the other considers this vowel to have been elided and ‘j’ to have assimilated directly to the resulting moraic consonants ‘s’, ‘z’, ‘ts’, and ‘f’, similarly to what happened in the case of ‘m’, ‘n’, and ‘v’.

The above also applies to the question of how to analyze the data synchronically<sup>18</sup>. The words in Table 11 that have consonant doubling in their topic and accusative forms, with stems ending in C or (C)V[+fricative], can be divided into two groups: a group with consonants, ‘p’, ‘b’, ‘k’, ‘g’, and ‘m’, that are accompanied by an additional syllable nucleus (‘ɿ’), which we will call ‘group A’, and a group with consonants, ‘m’, ‘n’, and ‘v’, that can be considered moraic, which we will call ‘group B’<sup>19</sup>. The biggest interpretational question is then whether to put the words with ‘s’, ‘z’, ‘ts’, and ‘f’ into group A or into group B. This is because it is directly connected to the question of whether ‘s’, ‘z’, ‘ts’, and ‘f’ have to be recognized as syllabic consonants—a question of phonotactics, syllable structure, and phoneme classification, and thus a major issue regarding the phonological system of the language. Putting ‘s’, ‘z’, ‘ts’, and ‘f’ into the group of syllabic consonants means the example of ‘cattle (i.e. cow or bull)’ given earlier will be interpreted as ‘usɿ’, in which the second

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<sup>16</sup> ‘fu’ derives from Proto-Ryukyuan \*pu and \*ku. According to Karimata (2007:44), who interprets this mora as ‘f’, \*u first changed into ‘v’, after which \*p and \*k fused with ‘v’ to become ‘f’ due to a reciprocal assimilation in which ‘v’ changed the place (labiodental) and manner (fricative) of articulation of the preceding consonants \*p and \*k, and, conversely, \*p and \*k caused the devoicing of the following ‘v’. It is also possible, however, to maintain ‘v’ as an allophone of ‘u’, interpreting this mora as /fu/ [fv], and to view this allophone as a fricative vowel like the special vowel ‘ɿ’ whose labiodental friction caused the assimilation of ‘j’.

There are also many other examples of words in which a consonant has assimilated to a preceding ‘fu’ (or ‘f’), resulting in a geminate.

E.g. ffu < furu ‘black’ (corresponds to Japanese *kuro*)

maffa < mafura ‘pillow’ (corresponds to Japanese *makura*)

<sup>17</sup> When \*ju is attached to C\*ɿ (where C is an affricate), a further assimilation occurs; for example, when \*ju is attached to \*tsɿ, this results in tsɿ + ju > tsɿsu > ttsu. (An example of a historical change: Irabu tsɿkɿju > tsɿtsɿju > tsɿttsu ‘the moon’.)

<sup>18</sup> Although we do not take a specific position below, a synchronic analysis need not assume that the accusative marker is ‘ju’, identical to the proto-form; it would seem possible to analyse it as ‘u’, as well, although it is also possible that it differs depending on the dialect.

<sup>19</sup> In, for example, Kuninaka, /r/ [ɿ] is an additional syllable nucleus.

syllable does not have a vowel. Broadly speaking, the phonological phenomena illustrated in Table 11 can be interpreted most economically in the following two ways<sup>20</sup>.

1. Like the consonants in group A, ‘s’, ‘z’, ‘ts’, and ‘f’ are accompanied by an additional syllable nucleus (‘ɿ’ and the like). (They are not recognized as syllabic consonants.)
2. Like the consonants in group B, ‘s’, ‘z’, ‘ts’, and ‘f’ can be used as syllabic consonants and thus do not require an additional syllable nucleus.

Irrespective of whether this morphophonological issue is considered, interpretations like 1. that maintain the \*ɿ (and ‘u’) of the proto-forms have up to now been the standard. On the other hand, Karimata (2005), M. Shimoji (2008, 2011), and Pellard (2009, 2010), for example, adopt interpretation 2. For each dialect, the question of which is the more appropriate explanation cannot be resolved without looking at the entire phonological system (phoneme system, phonotactics, syllable structure, and morphophonology), but in the following, we will describe a benefit of choosing interpretation 2. as well as a problem with the traditional account.

For the Ōgami dialect, which is unusual even among the Miyako dialects<sup>21</sup>, there is further evidence outside of the nominal morphology illustrated in Table 11 that /m, n, f, s, v/ are used as syllabic consonants, unaccompanied by an additional syllable nucleus (vowel). For example, Ōgami has the contrasting pair of ‘sta’, meaning ‘down; below; under; bottom’, and ‘suta’, meaning ‘tongue’, and there is nothing to necessitate the positing of a fricative vowel like those in the other dialects in addition to ‘u’, which is not accompanied by friction in the Ōgami dialect. The ‘s’ in ‘sta’ can therefore be considered a syllable without a vowel. ‘s’ and ‘f’ can thus be used as syllabic consonants in addition to nasals and approximants, but the liquid ‘r’ can only be used as an onset consonant and does not function as a syllable nucleus. This forms an exception to the theory that liquids can typologically more easily be used syllabically than fricatives (Zec 2007), but this can be seen as showing that the main quality supporting the syllable in this dialect is ‘continuance’ rather than ‘sonority’<sup>22</sup>. It is possible

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<sup>20</sup> According to a third interpretation, it is sufficient to view the phenomena illustrated in Table 11 as a strictly historical change and assume a simple nominal paradigm synchronically. In essence, this interpretation does not regard these phenomena as objects of synchronic explanation; depending on one’s perspective on grammar, this can be a perfectly valid interpretation. If this view is taken, consistency in the phoneme system, phonotactics, and syllable structure, as well as the phonetic reality, must be taken into account in interpreting the sound corresponding to /ɿ/, without considering these morphophonological phenomena.

<sup>21</sup> It has no contrast between voiced and voiceless and no affricates, for example.

<sup>22</sup> The difference between the sounds that can and the sounds that cannot be used as syllable nuclei appears to lie in whether they are sustainable sounds or instantaneous sounds; this approximates the feature ‘continuant/interrupted’ of Jakobson, Fant & Halle (1952).

that this applies to all of the Miyako dialects, in which case interpretation 2. can be seen as more accurately reflecting their linguistic character<sup>23</sup>.

Although they do not show that there is no vowel, M. Shimoji (2008) presents data for the Nagahama dialect showing that ‘s’, ‘z’, ‘ts’, and ‘f’ are different from the consonants of group A (‘p’, ‘b’, ‘k’, ‘g’, and ‘m’), which require an additional syllable nucleus.

- (3) a. Nagahama sīi<sup>24</sup> ‘nest’; accusative form sīi=u  
 (corresponds to ‘sɪɪ’ according to the interpretation/transcription of this chapter)  
 b. Nagahama pžž ‘the sun; sunlight; day’; topic form pžž=ža  
 (corresponds to ‘pɪɪ’ according to the interpretation/transcription of this chapter)  
 (taken from M. Shimoji 2008)

The words in (3ab) have both been interpreted as having a long special vowel, but in their topic forms, a difference arises. Although this suggests that ‘s’, ‘z’, ‘ts’, and ‘f’ cannot be treated in exactly the same way as the consonants of group A, the behavior seen in (3a) also differs from that of the syllabic consonants of group B, which can be lengthened. An example of the lengthening of the syllabic consonants of group B is the consonant doubling that occurs in their topic forms: **mm**=**ma** ‘sweet.potato-TOPIC’. Even if it is possible to treat them identically to either group A or group B depending on to which of these they appears more similar after examining a variety of other phonological phenomena, it also seems possible that rules different both from those of group A and from those group B will have to be posited.

In the above, we have briefly considered the morphophonological reasons for interpreting the word for ‘cattle (i.e. cow or bull)’ as ‘uʃ’, without a vowel in the second syllable, through a discussion of the nominal morphology of the Miyako language. These issues must be investigated for each of the dialects; the situation is very different for a dialect such as that of Ikema, in which the consonants of group A, ‘p’, ‘b’, ‘k’, ‘g’, and ‘m’, are never used as onset consonants in combination with the special vowel.

As we have seen, there has been a historical change in which the semivowels ‘w’ and ‘j’ and the liquid ‘r’ of Proto-Miyako have assimilated to preceding consonants and fricativized close vowels;

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<sup>23</sup> It is possible that there is a connection between the fact that ‘syllable nuclei are (...) frequently occupied by (at least phonetically) consonantal elements’, stated in Section 1, and this quality, as well.

<sup>24</sup> M. Shimoji (2008) also treats the sounds corresponding to ‘s’, ‘z’, ‘ts’, and ‘f’ as syllabic consonants underlyingly; he analyzes this ‘i’ as an inserted vowel.



not only have many consonant sequences resulted from this, it has also given rise to synchronic stem-final consonant doubling in the verbal morphology.

- (4) *ssam* < *sɿram* ‘louse’ (< Proto-Japonic \**sirami*)  
*tsɿf-* ‘to make (stem)’; *tsɿf-fan* ‘to.make-NEGATIVE’ (< Proto-Japonic \**tsukur-*)

Also taking phenomena like these into account, the question of whether or not a vowel is present must be answered for each of the dialects within a system in which the morphology of that dialect can most adequately be explained in its entirety.

In the above, we have briefly discussed the question of whether or not a vowel is present in certain syllables by considering how to explain the nominal morphology of the Miyako dialects. We have not been able to consider all relevant factors in this section; we hope to be able to discuss these in more detail in the future.

## 2.2 Vowel systems

In the above, we have looked at each of the vowel phonemes of the Miyako dialects; the different vowel systems can be summarized as follows.

- Four-vowel system: /a, i, u, ɿ/  
Ikema
- Five-vowel system: /a, i, u, o, ɿ/  
Shimajiri, Irabu, Uruka, Bora, Nobaru
- Six-vowel system: /a, i, e, u, o, ɿ/  
Kurima, Kugai, Karimata, Ōura, Yonaha

### 3 Consonants

#### 3.1 Consonant types and properties

In this section, we will give the sound values of each of the consonant phonemes of the Miyako dialects and examples of words containing them, obtained at each of the survey sites. In cases where there has been a local sound change at a single site or where there is an exceptional sound correspondence, we will give additional examples for these.

The consonant types of the Miyako dialects encountered in the survey data that we will discuss in this chapter are /p, b, t, d, k, g, ts, s, z, f, v, χ, ʁ, h, ʎ, m, n, ŋ, r, j, w/. Among these, /v, m, n, r/ can be used as syllable nuclei; there are also cases in which they form a word by themselves, as long consonants<sup>25</sup>. Generally speaking, there is a contrast between voiced and voiceless consonants<sup>26</sup>.

##### 3.1.1 Plosives

In phonetic terms, a property of the voiceless consonants is that they are aspirated word-initially.

##### /p/ (voiceless bilabial plosive)

This sound corresponds to Proto-Miyako \*p; in some of the dialects, it has undergone the following changes.

- Ikema: p > h/[h~ç~ϕ]
- Karimata, Shimajiri, and Ōura: p > b / #\_1C[+voiced] (only in some vocabulary items)

Table 12. The voiceless bilabial plosive.

	A-146	A-139	A-016	A-148	A-033	B-002	B-007
	‘the south’	‘light’	‘beard; mustache/hair’	‘(the) left (side)’	‘leg’	‘tooth’	‘face’
Uechi	p <sup>h</sup> ai	pçkal	p <sup>ç</sup> igi	p <sup>h</sup> idal ~ pida	pagi	pa:	
Yonaha	pai	p <sup>ç</sup> kaʔ	p <sup>ç</sup> igi	p <sup>ç</sup> daʔ	p <sup>h</sup> agʔ		

<sup>25</sup> Some researchers additionally analyze the voiceless fricatives /s, f/ and affricates /ts, z/ as syllabic consonants. See Section 2.1.4 for details.

<sup>26</sup> As was also indicated in Footnote 21, Ōgami is the only dialect without a contrast between voiced and voiceless consonants.

Kugai	p <sup>h</sup> ai	pskaz	psgi	pzdaz	p <sup>h</sup> aɕi		
Irabu	p <sup>h</sup> ai	p <sup>s</sup> kaɭ	p <sup>s</sup> ɭgi	p <sup>h</sup> idiɭ	p <sup>h</sup> aɕɭ	pa:	mipana ~ miɸana
Bora	p <sup>h</sup> ai	pskaɭ	p <sup>s</sup> ɭgi	p <sup>s</sup> ɭdaɭ ~ p <sup>s</sup> ɭdaʒɭ	p <sup>h</sup> a <sup>d</sup> zɭ ~ p <sup>h</sup> ag <sup>z</sup> ɭ	p <sup>h</sup> a:	mip <sup>h</sup> ana
Kuninaka	paɪbara	pɪkaɭ	p <sup>h</sup> iɭgi	p <sup>s</sup> idaɭ	pazi		
Ōura	p <sup>h</sup> ai	pskaɭ	p <sup>s</sup> ɭgi ~ pɭgi	b <sup>z</sup> ɭdaɭ	p <sup>h</sup> agɭ ~ p <sup>h</sup> ag <sup>z</sup> ɭ	pa:	nipana
Shimajiri	p <sup>h</sup> ai	pskaʒɭ	b <sup>z</sup> ɭgi	b <sup>z</sup> ɭdaʒɭ	p <sup>h</sup> agɭ ~ p <sup>h</sup> ag <sup>z</sup> ɭ	p <sup>h</sup> a:	mipana
Kurima	p <sup>h</sup> ai	pskaɭ	psgi	A: p <sup>h</sup> iɰdaɭ / B: psdaz	p <sup>h</sup> aɕi		
Ikema	haɪbara	ɕɪkai	higi	ɕidai	haɕi	ha:	mihana
Karimata	p <sup>h</sup> ai	pskauw	bzɣw ~ bzɣi ~ biɣi	bɰdaw ~ bzdaw	p <sup>h</sup> agw	pa	mipana
Uruka	p <sup>h</sup> ai	pʂkazɕ	psgi ~ p <sup>s</sup> ɭgi	pʂdaz ~ pʂdaɭ	pagz		
Nobaru					pagɭ	pa:	mipana

**/b/ (voiced bilabial plosive)**

This sound corresponds to Proto-Miyako \*b; it is consistently encountered as /b/ at all of the sites.

Table 13. The voiced bilabial plosive.

	A-007 'lip'	A-051 'husband'	A-055 'child; minor'	A-091 'sugar cane'	A-156 'evening'	A-029 'belly'
Uechi	siba	bikidum ~ bikiɕum	jarabi	bu:ɣi	jusarabi	
Yonaha	s <sup>z</sup> ɭba	bu <sup>h</sup> u		bu:ɣɭ		
Kugai	sɪba	bu <sup>h</sup> u	jarabi [new]	bu:ɣi	jusarabi	bat <sup>h</sup> a
Irabu	sɭba	butu	jarabi	bu:ɕɭ	jusarabi	bata
Bora	sɭba	b <sup>u</sup> ot <sup>h</sup> u	jarabi	bu:ɣɭ ~ bu:ɕɭ	jusarabi	b <sup>u</sup> ata
Kuninaka	sibaya	b <sup>u</sup> tu	jarabi	b <sup>u</sup> :ɕi		bata
Ōura	NR	butu	jarabi	bu:ɣɭ ~ bu:ɣ <sup>z</sup> ɭ		
Shimajiri	s <sup>z</sup> ɭba	butu		bu:ɣɭ ~ bu:ɣ <sup>z</sup> ɭ		
Kurima	sɪba	bikidumu	jarabi	bu:ɕi	jusarabi	bata
Ikema	f <sup>u</sup> tsi	butu	jarabi	bu:ɕi	jusarabi	bata
Karimata	sɪba	budu	jarabi	bu:ɣi	jusarabi	bada
Uruka	s <sup>ɕ</sup> a ~ spa	bu <sup>h</sup> u	jarabi	bu:ɣz		
Nobaru						

**/t/ (voiceless alveolar plosive)**

This sound corresponds to Proto-Miyako \*t; in some of the dialects, it has undergone the following changes.

- Shimajiri and Kuninaka: t > tɕ / \_\_i
- Karimata: t > d / C[+voiced]V\_\_

Table 14. The voiceless alveolar plosive.

	A-077	A-154	A-177	A-018	B-029
	‘bird’	‘morning’	‘earth’	‘strength’	‘one (person)’
Uechi	tou	situmuti	mta ~ mtə	taja	
Yonaha	tʰzɿ	sɿtʰomoti	mt <sup>h</sup> a	t <sup>h</sup> aja	tʌk <sup>j</sup> a:
Kugai	t <sup>h</sup> uz	stumuti	mta	t <sup>h</sup> aja	tɕk <sup>j</sup> e:
Irabu	t <sup>h</sup> uzɿ ~ t <sup>h</sup> uɿ	stumuti	mta	t <sup>h</sup> aja	tavki:
Bora	t <sup>h</sup> uɿ	s <sup>h</sup> tʌmoti	mta	t <sup>h</sup> aja	tavk <sup>j</sup> a:
Kuninaka	tɿɿ	sɿtʌmutɕi	n <sup>h</sup> ta	taja	ta <sup>v</sup> k <sup>j</sup> a:
Ōura	t <sup>h</sup> uɿ	stumuti	nta	t <sup>h</sup> aja	tavk <sup>j</sup> a:
Shimajiri	t <sup>h</sup> uzɿ	stumatɕi	nta	t <sup>h</sup> aja	t <sup>h</sup> afkja:
Kurima	t <sup>h</sup> uz	stumuti	mta	taja	
Ikema	tui	ɕitumuti	nta ~ mta	taja	tauka:
Karimata	tuw	stumuti	nta	taja	taɸk <sup>j</sup> a:
Uruka	tuz	stumutɿ ~ stumuti	mta	taja	tavk <sup>j</sup> a:
Nobaru					tavkja:

Table 15. Examples of t > d / C[+voiced]V\_\_ in Karimata.

	A-029	A-051
	‘belly’	‘husband’
Uechi		bikidum ~ bikidzum
Yonaha		but <sup>h</sup> u
Kugai	bat <sup>h</sup> a	but <sup>h</sup> u / bikir <sup>j</sup> a [old]
Irabu	bata	butu
Bora	ɸata	ɸut <sup>h</sup> u
Kuninaka	bata	bɿtu
Ōura		butu

Shimajiri		butu
Kurima	bata	bikidumu
Ikema	bata	butu
Karimata	bada	budu
Uruka		but <sup>h</sup> u
Nobaru		

**/d/ (voiced alveolar plosive)**

This sound corresponds to Proto-Miyako \*d. In Shimajiri, the change d > dz / \_\_i has occurred.

Table 16. The voiced alveolar plosive.

	A-005	A-037	A-059	A-111	A-182	A-017
	‘tear(drop)’	‘body’	‘woman; female’	‘branch’	‘door’	‘arm’
Uechi			midum ~ mi <sup>d</sup> um	juda		udi
Yonaha			midomu	joda		k <sup>h</sup> aina
Kugai	nada / mi:nada	du:	midum	juda	jadu	udi / k <sup>h</sup> aina (‘shoulder ache’)
Irabu	nada	up <sup>h</sup> udu:	midum	ida	jadu	k <sup>h</sup> aina
Bora	nada	du:	midom	joda	jadu	odi
Kuninaka	nada	du:	midum	juda		udi
Ōura	nada		miduŋ	ida		udi
Shimajiri			miduŋ	juda		uɕi
Kurima	nada	du:	midumu	ida	jadu	ude
Ikema	nada	du:	miduŋ	juda	jadu	ti: / kaina ‘wrist’
Karimata	nada	du:	miduŋ	ida	jadu	kaina
Uruka			midum	juda		kaina
Nobaru						

**/k/ (voiceless velar plosive)**

This sound corresponds to Proto-Miyako \*k; it has undergone a variety of changes at the different sites.

- Karimata:  $k > g / C[+voiced]V\_27$
- Irabu, Kuninaka, Kurima, and Ikema:  $k > ts / \_ \_ \_ \_$
- ‘k’-lenition:  
 Irabu:  $k > h \sim x / a\_ \_ a$   
 Shimajiri:  $k > \chi / a\_ \_ a$   
 Ōura:  $\#aka > \#ha:$   
 Karimata:  $\#aka > \#ha:$ ,  $Caka > Ca:$

Table 17. The voiceless velar plosive.

	A-126 ‘ash’	A-129 ‘wind’	A-139 ‘light’	A-164 ‘last year’	A-110 ‘tree’
Uechi	karap <sup>h</sup> aʎ ~ karap <sup>h</sup> aʒ	kaɖʑi	pɕkal	kuɖʑu	ki:
Yonaha	k <sup>h</sup> arapaʑ	k <sup>h</sup> adʑi	p <sup>s</sup> kaʑ	k <sup>h</sup> uɖʑu	ki:
Kugai	k <sup>h</sup> arap <sup>h</sup> az	k <sup>h</sup> aɖʑi	pskaz	kuɖʑu	kiʻ
Irabu	k <sup>h</sup> ara paʑ	k <sup>h</sup> aɖʑi	p <sup>s</sup> kaʑ	k <sup>h</sup> udu	k <sup>h</sup> i:
Bora	k <sup>h</sup> arapaʑ ~ k <sup>h</sup> arapaʑ	k <sup>h</sup> a <sup>d</sup> ʑi	pskaʑ	k <sup>h</sup> uɖʑu	k <sup>h</sup> i:
Kuninaka	karapaʑ	kaɖʑi	pikaʑ	kuɖʑu	kiʻ
Ōura	k <sup>h</sup> arapaʑ	k <sup>h</sup> adʑi	pskaʑ	k <sup>h</sup> u <sup>d</sup> ʑu	k <sup>h</sup> i:
Shimajiri	karapaʑ	k <sup>h</sup> aɖʑi	pskaʑ	k <sup>h</sup> udu	ki:
Kurima	A: karabaʑ / B: karabaz	k <sup>h</sup> aɖʑi	pskaʑ	k <sup>h</sup> uɖʑu	ki:
Ikema	karahai	k <sup>h</sup> adi	ɕikai	kuɖʑu	ki:
Karimata	karapaw	k <sup>h</sup> aɖʑi	pskaw	kuɖʑu	ki:
Uruka	karapaz	kaɖʑi	pɕkaz	ku <sup>d</sup> ʑu	ki: ~ ki:
Nobaru					

 Table 18. Examples of  $k > g / C[+voiced]V\_$  in Karimata.

	A-072 ‘buck’	A-079 ‘egg’
Uechi		tunaka
Yonaha		t <sup>h</sup> unaka
Kugai	bikip <sup>h</sup> indza	tuna <sup>h</sup> ka
Irabu	bikipindza	k <sup>h</sup> u:ga

<sup>27</sup> Shimajiri t<sup>h</sup>unaka ‘egg’, given in Table 18, seems to have undergone this change, as well, before the occurrence of the change  $k > \chi / a\_ \_ a$  in Shimajiri.

Bora	ɸikipindza	t <sup>h</sup> onaka
Kuninaka	bikipinda	tunuka
Ōura		t <sup>h</sup> unaka
Shimajiri		t <sup>h</sup> unaka
Kurima	bikip <sup>h</sup> indza	t <sup>h</sup> unuka
Ikema	bikihindza	tunuka
Karimata	bigipindza	tunuga
Uruka		tunaka
Nobaru		

Table 19. Examples of k > ts / \_\_ ɲ in Irabu, Kuninaka, Kurima, and Ikema.

	A-121	A-163	A-030	A-142
	‘clothing; kimono’	‘yesterday’	‘heart/liver’	‘the moon/month’
Uechi	kij̥	k <sup>s</sup> inu	kçimu ~ kimu	ts̥ikiju
Yonaha	k <sup>s</sup> ɲ	k <sup>s</sup> ɲu	k <sup>s</sup> ɲmu	ts̥k <sup>s</sup> ɲ / ts̥k <sup>s</sup> ɲuɟu:
Kugai	k <sup>s</sup> ij̥	ks̥inu	k <sup>szi</sup> imu	tskssu
Irabu	t <sup>s</sup> ɲ	ts̥ɲu:	ts̥ɲmu	ttsu ~ ts̥tsu (?)
Bora	k <sup>s</sup> ɲ	k <sup>s</sup> ɲu:	k <sup>s</sup> ɲu	tskɲ
Kuninaka	tsij̥	ts̥inɸ	ts̥imu	ts̥ittɸ
Ōura	k <sup>s</sup> ɲ	k <sup>s</sup> ɲu	k <sup>s</sup> ɲmu	tskɲ
Shimajiri	k <sup>s</sup> ɲ	k <sup>s</sup> ɲu	k <sup>s</sup> ɲmu	tskɲ ~ ts̥k <sup>s</sup> ɲ
Kurima	tsij̥	ts̥ino	ts̥imu	A: ts̥its̥i / B: ts̥its̥inuɟu:
Ikema	tsij̥	nnu	ts̥imu	ts̥its̥i
Karimata	k <sup>s</sup> ij̥	ks̥ɸu	k <sup>s</sup> imu	tskssu
Uruka	kɸn	kɸnu:	ks̥mu ~ k <sup>s</sup> ɲmu	tskɸ
Nobaru				

Table 20. Examples of ‘k’-lenition.

Irabu: k > h ~ x / a\_\_a

Shimajiri: k > χ / a\_\_a

Ōura: #aka > #ha:

Karimata: #aka > #ha:, Caka > Ca:

	A-100 '(wooden) bowl'	A-025 'blood'	A-186 'grave; tomb'	A-066 'ant'	A-178 'yard; garden'
Uechi	mak <sup>χ</sup> al	aχ <sup>ə</sup> tsi ~ ak <sup>ə</sup> tsi	p <sup>ə</sup> ka	ak <sup>χ</sup> ɑ:l	
Yonaha	mak <sup>h</sup> a <sup>z</sup> ɿ	ak <sup>h</sup> ətsɿ	p <sup>h</sup> aka	aka: <sup>z</sup> ɿ	
Kugai	mak <sup>h</sup> azi	akatsi	p <sup>h</sup> əka	akaz:	minaka
Irabu	maxaɿ ~ mahaɿ	ax <sup>ə</sup> tsɿ ~ ahatsɿ	p <sup>h</sup> a: ~ p <sup>h</sup> ə:	aha:	minaha
Bora	maka <sup>z</sup> ɿ	ak <sup>h</sup> ətsɿ	p <sup>h</sup> əka	a <sup>z</sup> ɿgara (Bora) / ak <sup>h</sup> a: (Aragusuku)	minaka
Kuninaka	makaɿ	ak <sup>χ</sup> ətsi	p <sup>ə</sup> ka	aka:	
Ōura	makaɿ	ha:tsɿ	p <sup>h</sup> aka	ha:ɿ ~ xa:ɿ	
Shimajiri	maχaɿ ~ maχa <sup>z</sup> ɿ	aχatsɿ	p <sup>ə</sup> χa	aχa <sup>z</sup> ɿ	
Kurima	A: makaɿ / B: makaz	A: akatsi / B: a <sup>h</sup> xatsi	p <sup>ə</sup> ka	A: akaɿ / B: akaz	minaka
Ikema	makai	akatsi	haka	akai	minaka
Karimata	ma:w	ha:tsi	p <sup>ə</sup> ka	ha:w	a:ra / mina:
Uruka	makaz	ak <sup>ə</sup> tsɿ	p <sup>ə</sup> ka	azgara	
Nobaru					

**/g/ (voiced velar plosive)**

This sound corresponds to Proto-Miyako \*g; it has undergone a variety of changes at the different sites.

- Irabu, Kuninaka, Kurima, and Ikema: g > dz / \_\_ɿ
- Shimajiri: g > ɸ / a\_\_a
- Irabu: g > ʃ / a\_\_a



Table 21. The voiced velar plosive.

	A-016 'beard; mustache/hair'	A-140 'shade'	A-174 'sand'	A-032 'knee'	A-062 'mosquito'
Uechi	p <sup>h</sup> igi	kagi	ɱnagu	tsigusi	gaɟam
Yonaha	p <sup>h</sup> igi	k <sup>h</sup> agi	nnagu:	tsɪgusɪ	gaɟam
Kugai	psgi	k <sup>h</sup> agi	m'nagu	tsigusi	gaɟam
Irabu	p <sup>h</sup> igi / fɯtsɪp <sup>h</sup> igi	k <sup>h</sup> a:gi	mnagu	tsɪgusɪ	gaɟam
Bora	p <sup>h</sup> igi	k <sup>h</sup> ag	nnagu:	tsɪgusɪ	ga <sup>d</sup> zam
Kuninaka	p <sup>h</sup> igi	ka:gi	ɱnagu	tsigusi	kadam
Ōura	p <sup>h</sup> igi ~ pi	k <sup>h</sup> ag	nnagu	sugasɪ	ga <sup>d</sup> zan
Shimajiri	b <sup>h</sup> igi	k <sup>h</sup> agi	nnagu	tugusɪ ~ tugasɪ	gadan
Kurima	psg	kagi	m:nagu	tsigusi	gaɟam
Ikema	higi	kagi	nnagu	sigusɪ	kaɟan
Karimata	bzɣu ~ bzgi ~ bi	kag	nnagu	tsigasɪ	ga <sup>d</sup> zan
Uruka	psg ~ p <sup>h</sup> igi	kaɟi ~ kag	ɱnagu	tsɪgusɪ ~ tsɪgusɪ	gaɟam
Nobaru					

Table 22. Examples of other changes of \*g.

Irabu, Kuninaka, Kurima, and Ikema: g > dz / \_\_ ɪ

Shimajiri: g > ɸ / a\_\_a

Irabu: g > ʃ / a\_\_a

	A-033 'leg'	A-091 'sugar cane'	A-124 'mirror'	A-143 'the east'
Uechi	pagi	bu:gi	kagam	aɣal
Yonaha	p <sup>h</sup> agɪ	bu:gɪ	k <sup>h</sup> agam	aga <sup>z</sup> ɪ
Kugai	p <sup>h</sup> aɟi	bu:g <sup>z</sup> i	k <sup>h</sup> agam	aɟaz
Irabu	p <sup>h</sup> aɟɪ	bu:ɟɪ	k <sup>h</sup> aɟam	aɟaɪ
Bora	p <sup>h</sup> a <sup>d</sup> zɪ ~ p <sup>h</sup> agɪ	bɯ:gɪ ~ bɯ:ɟɪ	k <sup>h</sup> agam	agaɪ
Kuninaka	pazi	bɯ:ɟi	kagam	agaɪ
Ōura	p <sup>h</sup> agɪ ~ p <sup>h</sup> agɪ	bu:gɪ ~ bu:gɪ	k <sup>h</sup> agan	(agaɪ ~) aɪ
Shimajiri	p <sup>h</sup> agɪ ~ p <sup>h</sup> agɪ	bu:gɪ ~ bu:gɪ	k <sup>h</sup> aɟan	aɟaɪ
Kurima	p <sup>h</sup> aɟi	bu:ɟi	kagam	A: agaɪ / B: agaz
Ikema	hadzi	bu:ɟi	kagan	agai
Karimata	p <sup>h</sup> agu	bu:gi	k <sup>h</sup> agan	a:u
Uruka	pagz	bu:gz	kagam	agaz
Nobaru	pagɪ			

### 3.1.2 Affricate

#### /ts/ (voiceless alveolar affricate)

This sound corresponds to Proto-Miyako \*ts; it is almost always followed by /ɺ/. Depending on the dialect, there are words where /t/ is encountered instead before other vowels (e.g. Shimajiri ata ‘tomorrow’).

In addition, Proto-Miyako \*kɺ has changed into /tsɺ/ in Irabu, Kuninaka, Bora, and Ikema.

Table 23. The unvoiced alveolar affricate.

	A-031 ‘mother’s milk; breast’	A-025 ‘blood’	A-142 ‘the moon/month’	A-160 ‘tomorrow’	A-101 ‘tea bowl; rice bowl’
Uechi	tsi	aχ̣atsi ~ aḳatsi	ts̥ikiju	aça / atç	
Yonaha	tsɺ	ak <sup>h</sup> ̣atsɺ	tsɺk <sup>s</sup> ɺ / tsɺk <sup>s</sup> ɺnuju:	atsa	
Kugai	tsī	akatsī	tskssu	attsa	tç <sup>h</sup> abaŋ
Irabu	tsɺ	ax̣atsɺ ~ ahatsɺ	ttsu ~ ttttsu (?)	atsa	tçabaŋ
Bora	tssɺ	ak <sup>h</sup> ̣atsɺ	tskɺ	atsa	tçabaŋ
Kuninaka	tsi	ak <sup>χ</sup> ̣atsi	ts̥ittu	ata	
Ōura	tsɺ	ha:tsɺ	tskɺ	atsa	
Shimajiri	tssɺ	aχ̣atsɺ	tskɺ ~ ts <sup>s</sup> k <sup>s</sup> ɺ	ata	
Kurima	A: ts̥ī / B: tssī	A: akatsī / B: a <sup>k</sup> χ̣atsī	A: ts̥its̥ī / B: ts̥its̥inuju:	atça	tçabaŋ
Ikema	tsī:	akatsī	ts̥its̥ī	atça	tçabaŋ
Karimata	tzī:	ha:tsī	tskssu	atsa	tçabaŋ
Uruka	tsɺ	aḳatsɺ	tsḳ	ats̥̣	
Nobaru					

Table 24. tsɺ < \*kɺ in Irabu, Kuninaka, Bora, and Ikema.

	A-030 ‘heart/liver’	A-121 ‘clothing; kimono’	A-009 ‘breath’
Uechi	kçimu ~ kimu	kiŋ	
Yonaha	k <sup>s</sup> ɺmu	k <sup>s</sup> ɺŋ	
Kugai	k <sup>sz</sup> īmu	k <sup>s</sup> īŋ	ik <sup>s</sup> ī
Irabu	tsɺmu ‘liver’	t <sup>s</sup> ɺŋ	itsɺ
Bora	k <sup>s</sup> ɺmu	k <sup>s</sup> ɺŋ	ik <sup>s</sup> ɺ
Kuninaka	tsimu	tsiŋ	itsi
Ōura	k <sup>s</sup> ɺmu	k <sup>s</sup> ɺŋ	ikɺ

Shimajiri	k <sup>s</sup> ɿmu	k <sup>s</sup> ɿŋ	
Kurima	tsimu	tsiŋ	A: i <sup>t</sup> si / B: itsi
Ikema	tsimu	tsiŋ	iki
Karimata	k <sup>s</sup> i <sup>m</sup> u	k <sup>s</sup> i <sup>n</sup> ŋ	ikuu
Uruka	ksmu ~ k <sup>s</sup> ɿmu	kʂn	
Nobaru			

### 3.1.3 Fricatives

/s/

[s] (voiceless alveolar fricative)

[ç] (voiceless alveopalatal fricative) / \_\_ i

This sound corresponds to Proto-Miyako \*s; when followed by ‘i’, its place of articulation moves closer to the palate.

In Ōura and at other sites, the following changes have occurred.

- Ōura and Shimajiri: \*sɿ > ɿ / \_\_ C[+voiced]
- Yonaha, Bora, and Ōura: \*s > ts / N \_\_

Additionally, in Ōura and Shimajiri, for example, ‘ssV’ deriving from \*fusV is encountered.

Table 25. The voiceless alveolar/alveopalatal fricative.

	A-156	A-173	A-032	A-113	A-098	A-007	A-008
	‘evening’	‘coral reef’	‘knee’	‘grass’	‘miso; fermented soybean paste’	‘lip’	‘tongue’
Uechi	jusarabi	pçi ~ pçi	tsigusi	fusa	msu	siba	sida
Yonaha		çi: / p <sup>h</sup> içi	tsɿgusɿ	fsa	mtsu	s <sup>z</sup> ɿba	s <sup>z</sup> ɿda
Kugai	jusarabi	pççi	tsigusi	fsa	msu	siba	sida
Irabu	jusarabi	pççi	tsɿgusɿ	fusa	msu	sɿba	sta
Bora	jusarabi	pççi ~ piçi	tsɿgusɿ	fusa	mtsu	sɿba	sɿda
Kuninaka		piçi	tsigusi	fsa	nsu	sibaya	sita / sta
Ōura		pççi	sugasɿ	ssa	ntsu	NR	ɿda ~ <sup>z</sup> ɿda
Shimajiri		piçi	tugusɿ ~ tugasɿ	ssa	nsu	sɿba	sɿda
Kurima	jusarabi	pçi	tsigusi	fsa	A: m:su / B: m:so	siba	sida
Ikema	jusarabi	piçi	sigusi	fusa (= [f <sup>w</sup> sa])	nsu	futsi	çta
Karimata	jusarabi	pççi	tsigası	fusa	nsu	siba	sta

Uruka	pi̯çi	tsgus̩ ~ ts̩gus̩	f̩sa	msu ~ msu̯	s̩ba ~ spa	s̩da ~ s̩da / s̩da
Nobaru						

/z/

[z] ~ [dz] (voiced alveolar fricative/affricate)

[ʒ] ~ [dʒ] (voiced alveopalatal fricative/affricate) / \_\_ i

This sound corresponds to Proto-Miyako \*z; when preceded by ‘i’, its place of articulation moves closer to the palate. There is free variation between the fricatives and the affricates.

In addition, it has the following properties in the different dialects.

- Uechi and Kurima: except when followed by ‘ɿ’, it surfaces as [ʒ] ~ [dʒ].
- Ikema: dʒa<sup>28</sup>, di, dʒu, dzɿ
- Shimajiri and Kuninaka: except when followed by ‘i’ or ‘ɿ’, /d/ is used instead.
- In Irabu, Kuninaka, Kurima, and Ikema, \*gɿ has changed into /dzɿ/.

Table 26. The voiced alveolar/alveopalatal fricative/affricate.

	A-023	A-164	A-062	A-183	A-129
	‘elbow’	‘last year’	‘mosquito’	‘gate’	‘wind’
Uechi	pi̯dʒi	ku̯dʒu	ga̯dʒam	dʒo̯	ka̯dʒi
Yonaha	p <sup>h</sup> i̯dʒɿ	k <sup>h</sup> u̯dʒu	ga̯dʒam	dʒo:	k <sup>h</sup> a̯dʒi
Kugai	p <sup>h</sup> i̯dʒi	ku̯dʒu	ga̯dʒam	dʒo:	k <sup>h</sup> a̯dʒi
Irabu	p <sup>h</sup> i̯dʒɿ	k <sup>h</sup> udu	ga̯dʒam	dʒo:vt̩ɿ	k <sup>h</sup> a̯dʒi
Bora	p <sup>h</sup> i̯d <sup>h</sup> zɿ	k <sup>h</sup> u̯dʒu	ga <sup>d</sup> z̩am	dʒo: (Bora) / dʒau (Aragusuku)	k <sup>h</sup> a <sup>d</sup> z̩i
Kuninaka	p <sup>h</sup> i̯dʒi	ku̯dʒu	ka̯da̯m	da̯u	ka̯dʒi
Ōura	p <sup>h</sup> i̯dʒɿ	k <sup>h</sup> u <sup>d</sup> z̩u	ga <sup>d</sup> z̩a̯ŋ	dʒo:fut̩ɿ ‘entrance’	k <sup>h</sup> a̯dʒi
Shimajiri	pi̯dʒɿ	k <sup>h</sup> udu	ga̯da̯ŋ	da̯u	k <sup>h</sup> a̯dʒi
Kurima	pi̯dʒi	k <sup>h</sup> u̯dʒu	ga̯dʒam	dʒo:	k <sup>h</sup> a̯dʒi
Ikema	hi̯dʒi	ku̯dʒu	ka̯dʒa̯ŋ	dʒau	k <sup>h</sup> adi
Karimata	pi̯dʒi	ku̯dʒu	ga <sup>d</sup> z̩a̯ŋ	dʒo:	k <sup>h</sup> a̯dʒi
Uruka	pi̯dʒɿ ~ pi̯dʒɿ	ku̯d <sup>h</sup> z̩u	ga̯dʒa̯m	dʒau	ka̯dʒi
Nobaru					

<sup>28</sup> According to the data in Table 26, the Ikema form for ‘gate’ is ‘dzau’, but in a survey of our own we have recorded ‘dʒau’.

Table 27. g > dz / \_\_ ɲ in Irabu, Kuninaka, Kurima, and Ikema.

	A-033 'leg'	A-091 'sugar cane'	A-118 'nail; spike; peg'
Uechi	paɣi	bu:ɣi	fugɨ
Yonaha	p <sup>h</sup> agʒɲ	bu:gʒɲ	fugʒɲ
Kugai	p <sup>h</sup> aɖi	bu:gʒi	k <sup>h</sup> anifugz / fugz
Irabu	p <sup>h</sup> aɖɲ	bu:ɖɲ	fudɲ
Bora	p <sup>h</sup> a <sup>d</sup> zɲ ~ p <sup>h</sup> agʒɲ	bu:gʒɲ ~ bu:ɖɲ	fugʒɲ
Kuninaka	pazi	bɯ:ɖzi	kanifudzi
Ōura	p <sup>h</sup> agɲ ~ p <sup>h</sup> agʒɲ	bu:gɲ ~ bu:gʒɲ	k <sup>h</sup> anifugɲ
Shimajiri	p <sup>h</sup> agɲ ~ p <sup>h</sup> agʒɲ	bu:gɲ ~ bu:gʒɲ	fugʒɲ
Kurima	p <sup>h</sup> aɖi	bu:ɖi	fudzi / k <sup>h</sup> anfudzi
Ikema	hadzi	bu:ɖi	kanifudzi
Karimata	p <sup>h</sup> agw	bu:gi	fugɨ ~ fugw
Uruka	pagz	bu:gz	fgz
Nobaru	paɲ		

**/f/ (voiceless labiodental fricative)**

This sound corresponds to Proto-Miyako \*f; it generally has the sound value [f], but in rare cases it can also surface as a voiceless bilabial fricative [ɸ]. The 'k' in the word for 'cloud' in the data given below seems to have been used under the influence of Standard Japanese.

In Ōura, for example, \*fusV has changed into 'ssV'.

Table 28. The voiceless labiodental fricative.

	A-094 'food'	A-172 'boat; ship'	A-132 'cloud'	A-004 'forehead'	A-006 'mouth'
Uechi	fa <sup>h</sup> munu	fun <sup>h</sup> i	kumu		fɯtsi
Yonaha	fo:mɔnɔ	fɔni	fɔm		fɯtsɲ
Kugai	fo:munu	fɔni	fumu	ftai	ftsɨ
Irabu	faɲmunu	fɔni	fumu	fɯtai	fɯtsɲ
Bora	faɔmɔnɔ	fɔni	fɔmɔ	fɯtai	fɯtsɲ
Kuninaka	faɲmunu	fɔni	fumu	fɯtai	fɯtsi
Ōura	fo:munu	fɔni	k <sup>h</sup> umu	fɯtai ~ ftai	fɯtsɲ
Shimajiri	faɲmunu	fɔni	fuma		ftsɲ

Kurima	fɔ:munu	funi	fumu	ftɛ̃	fts̃i
Ikema	faimunu	funi	m̥mu	ftai	futs̃i
Karimata	faumunu	funi	fumu	ftai	futs̃i
Uruka	faumunu	ɸun̥'i	ɸumu		f̥ts̃ ~ f̥ts̃ɿ
Nobaru					

Table 29. \*fusV &gt; ssV in Ōura and Shimajiri.

	A-113	A-003
	'grass'	'comb'
Uechi	f̥usa	fu
Yonaha	fsa	f̥ɿɯ
Kugai	fsa	fs̃i
Irabu	f̥usa	f̥s̃ɿ
Bora	f̥usa	f̥s̃ɿ
Kuninaka	f̥sa	fsu
Ōura	ssa	s: ~ sɿ:
Shimajiri	ssa	ssɿ
Kurima	fsa	f̥s̃i
Ikema	f̥usa (= [f <sup>w</sup> sa])	f̥uçi
Karimata	f̥usa	f̥s̃i = f <sup>w</sup> s̃i
Uruka	f̥sa	f̥s̃ ~ f̥s̃ɿ ~ f̥s̃ɿ
Nobaru		

/v/

**[v] (voiced labiodental fricative)**

**[ʋ] (voiced labiodental approximant)**

This sound corresponds to Proto-Miyako \*v; it is used not only as an onset consonant, but also as a syllable nucleus (with the exception of Ikema). In either environment, there is variation between the fricative and the approximant; its degree of stricture is high in some dialects and low in others. There are also dialects in which it assimilates to 'u' when preceded by 'u' (see 'rice porridge' in the table below). Furthermore, variation between /f/ ~ /v/ is observed among dialects for some vocabulary items.

Table 30. The voiced labiodental fricative/approximant.

	A-035 'calf (of the leg)'	A-043 'you'	A-095 'oil'	A-096 'rice porridge'
Uechi		vva		juv
Yonaha	k <sup>h</sup> ʊ:va	vva		jʊ:
Kugai	kuvva	vva	avva	juv
Irabu	k <sup>h</sup> uvva	ja:	avva	ɕu:ɕa
Bora	kuvva	vva ~ vva	avva ~ avva	jʊv ~ jʊv
Kuninaka	kʊvva	vva	avva	jʊ·v
Ōura	NR	vva		juv
Shimajiri	kuvva ~ kuvva	vva		juv
Kurima	kuvva	vva	avva	juv
Ikema	kuvva	vva	avva	ju:
Karimata	kuvva	vva	avva	N/R
Uruka	kʊvva ~ kʊvva	vva		juv
Nobaru				

Table 31. Variation among dialects between /f/ ~ /v/ (examples in which /f/ in Uechi, Kugai, and Shimajiri corresponds to /v/ in the other dialects).

	B-029 'one (person)'	A-184/A-149 'front'
Uechi		maf <sup>h</sup> kja:
Yonaha	tʊk <sup>h</sup> ja:	maf <sup>h</sup> k <sup>h</sup> ja:
Kugai	tʌfke:	maf <sup>h</sup> k <sup>h</sup> ja ~ maf <sup>h</sup> k <sup>h</sup> ja
Irabu	tavki:	maf <sup>h</sup> kja:
Bora	tavk <sup>h</sup> ja:	maf <sup>h</sup> kja:
Kuninaka	ta <sup>v</sup> k <sup>h</sup> ja:	maf <sup>h</sup> kja:
Ōura	tavk <sup>h</sup> ja:	
Shimajiri	t <sup>h</sup> afkja:	maf <sup>h</sup> kja:
Kurima		mo:t <sup>h</sup> u <sup>29</sup>
Ikema	tauka:	maf <sup>h</sup> kja:
Karimata	taf <sup>h</sup> kja:	maf <sup>h</sup> kja: / maf <sup>h</sup> k <sup>h</sup> ja
Uruka	tavk <sup>h</sup> ja:	maf <sup>h</sup> kja: ~ maf <sup>h</sup> kja:
Nobaru	tavkja:	

<sup>29</sup> This word has a derivation different from those given for the other dialects.

**/h/**

**[h]** (voiceless glottal fricative) /\_\_a

**[ç]** (voiceless palatal fricative) /\_\_i

**[ϕ]** (voiceless bilabial fricative) /\_\_u

This sound has the following two derivations.

- From \*p: only in Ikema, /p/ has changed into /h/.
- From \*k: only when adjacent to ‘a’; in Irabu and Karimata, for example.

See Table 12 for examples.

**/χ/** (voiceless uvular fricative) [χ]

This sound is only encountered in Shimajiri; it is the result of \*k in \*aka undergoing a sound change. See Table 20 for examples. This sound occurs nowhere else in the Japanese archipelago.

**/ɣ/** (voiced uvular fricative) [ɣ]

This sound is only encountered in Shimajiri; it is the result of \*g in \*aga undergoing a sound change. See Table 22 for examples. This sound occurs nowhere else in the Japanese archipelago.

**/ʕ/** (voiced pharyngeal fricative) [ʕ]

This sound is only encountered in Irabu; it is the result of \*g in \*aga undergoing a sound change<sup>30</sup>. See Table 22 for examples. This sound occurs nowhere else in the Japanese archipelago.

### 3.1.4 Nasals

**/m/** (voiced bilabial nasal)

This sound corresponds to Proto-Miyako \*m. It is a bilabial nasal when used as a syllable onset, but there are also dialects (Ōura, Shimajiri, Ikema, and Karimata) in which it loses its place of articulation and merges with /n/, becoming the equivalent of the Japanese moraic nasal, when used moraically (as a syllable nucleus or as a coda consonant).

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<sup>30</sup> This sound has previously been described as a glottal stop.



Table 32. The voiced bilabial nasal.

	A-030	A-071	A-127	A-130	A-187
	‘heart/liver’	‘horse’	‘water’	‘whirlwind; tornado’	‘there (distal)’
Uechi	kçimu ~ kimu	nu:ma	midzi	amainoũ	kama
Yonaha	k <sup>s</sup> ɰmu	nu:ma	mi <sup>d</sup> zɰ	amaino:	k <sup>h</sup> ama
Kugai	k <sup>szi</sup> imu	nu:ma	midzi	ama.ino:	k <sup>h</sup> ama
Irabu	tsɰmu	nu:ma	mi <sup>d</sup> zɰ	amaino:	k <sup>h</sup> ama ~ k <sup>h</sup> ama:
Bora	k <sup>s</sup> ɰmu	nu:ma	mi <sup>d</sup> zɰ	amaino:	k <sup>h</sup> ama
Kuninaka	tsimu	nu:ma	midzi	amainau	kama
Ōura	k <sup>s</sup> ɰmu	numa	midzɰ	amaino:	k <sup>h</sup> ama
Shimajiri	k <sup>s</sup> ɰmu	nu:ma	midzɰ	amaino:	kama
Kurima	tsimu	nu:ma	midzi	ama.ino:	kama
Ikema	tsimu	nu:ma	midzi	amaunau	kama
Karimata	k <sup>si</sup> imu	nu:ma	mi <sup>(d)</sup> zi	ino:	kama
Uruka	k <sup>s</sup> mu ~ k <sup>s</sup> ɰmu	nu:m <sub>ɔ</sub>	midzɰ	amainau	k <sup>h</sup> <sub>ɔ</sub> ama:
Nobaru					

Table 33. When it is used moraically (as a syllable nucleus or as a coda consonant).

	A-170	A-062	A-059	A-098	A-177
	‘sea’	‘mosquito’	‘woman; female’	‘miso; fermented soybean paste’	‘earth’
Uechi	im̩	gaɖzam	midum ~ mi <sup>d</sup> ðum	ɱsu	ɱta ~ ɱtɔ
Yonaha	im	gaɖzam	midumu	mtsɯ	mt <sup>h</sup> a
Kugai	im	gaɖzam	midum	msu	ɱta
Irabu	im	gaɖzam	midum	msu	mta
Bora	im	ga <sup>d</sup> zam	midom	mtsɯ	mta
Kuninaka	im̩	kadam̩	midum̩	ɱsɯ	ɱta
Ōura	iŋ	ga <sup>d</sup> zaŋ	miduŋ	ntsɯ	nta
Shimajiri	iŋ	gadaŋ	miduŋ	nsu	nta
Kurima	im	gaɖzam	midumu	A: m:su / B: m:so	mta
Ikema	iŋ	kaɖzaŋ	miduŋ	nsu	nta ~ mta
Karimata	iŋ	ga <sup>d</sup> zaŋ	miduŋ	nsu	nta
Uruka	im̩	gaɖzam̩	midum̩	ɱsu ~ ɱsɯ	ɱta
Nobaru					

/n/

**[n]** (voiced alveolar nasal)

**[ŋ]** (voiced velar nasal) /\_\_#

This sound corresponds to Proto-Miyako \*n. It is an alveolar nasal when used as a syllable onset; when used moraically (as a syllable nucleus or as a coda consonant), its place of articulation assimilates to that of the following phoneme, it becoming the equivalent of the Japanese moraic nasal.

Table 34. The voiced alveolar nasal.

	A-172 'boat; ship'	B-054 'flower'	A-131 'earthquake'	A-079 'egg'	A-028 'bone'
Uechi	funʲi		nai	tunaka	puni
Yonaha	fʊni		nai	tʰʊnaka	puni
Kugai	funi		nai	tunakʰa	pʰuni
Irabu	funi	pana	nai	kʰu:ga	pʰuni
Bora	fʊni	pʰana	nai	tʰʊnaka	pʰʊni ~ puni
Kuninaka	funi		nai	tunuka	puni
Ōura	funi	pana	nai	tʰʊnaka	pʰuni
Shimajiri	funi	pʰana	nai	tʰʊnaka	pʰuni
Kurima	funi		nai	tʰʊnuka	pʰuni
Ikema	funi	hana	nai	tunuka	huni
Karimata	funi	pana	naw	tunuga	pʰuni
Uruka	ɸʊnʲi		nai	tʊnaka	pʊni ~ pʰuni
Nobaru		pana			

Table 35. The voiced velar nasal (word-final).

	A-101 'tea bowl; rice bowl'	A-121 'clothing; kimono'
Uechi		kiŋ
Yonaha		kʰŋ / kʰŋmunʊ
Kugai	tʰabaŋ	kʰiŋ
Irabu	tʰabaŋ	tʰŋ
Bora	tʰabaŋ	kʰŋ
Kuninaka		tsiŋ

Ōura		k <sup>s</sup> ɲ
Shimajiri		k <sup>s</sup> ɲ
Kurima	tɕabaŋ	tsiŋ
Ikema	tɕabaŋ	tsiŋ
Karimata	tɕabaŋ	k <sup>s</sup> iŋ
Uruka		kʂn
Nobaru		

/ŋ̥/

**[ŋ̥]** (voiceless alveolar nasal)

**[m̥]** (voiceless bilabial nasal) / \_\_C [+labial]

This sound is only encountered in Ikema. The two allophones have arisen through the sound changes \*tsɲNV > ŋ̥NV and \*fumV > m̥mV, respectively. This sound occurs nowhere else in the Japanese archipelago. (‘nnu’ given below as the Ikema form for ‘horn (of an animal)’ and ‘yesterday’ appears to be a mistranscription for ‘ŋ̥nu’ in both cases.)

Table 36. The voiceless alveolar/bilabial nasal.

	A-132 ‘cloud’	A-073 ‘horn (of an animal)’	A-163 ‘yesterday’
Uechi	kumu	tsinu	k <sup>s</sup> inu
Yonaha	fum	tsɲno	k <sup>s</sup> ɲno
Kugai	fumu	tsinu	ksinu
Irabu	fumu	tsɲnu ~ tsɲno	tsɲnu:
Bora	fumo	tsɲno	k <sup>s</sup> ɲno:
Kuninaka	fumu	tsinu	tsinu
Ōura	k <sup>h</sup> umu	tsɲnu	k <sup>s</sup> ɲnu
Shimajiri	fuma	tsɲnu	k <sup>s</sup> ɲnu
Kurima	fumu	tsinu	tsino
Ikema	m̥mu	nnu	nnu
Karimata	fumu	tsɲu	ksɲu
Uruka	ɸ̥umu	tsnu ~ tsɲnu	kʂnu:
Nobaru			

### 3.1.5 Liquid

#### /r/ (voiced alveolar tap)

This sound corresponds to Proto-Miyako \*r. It is consistently encountered as [r] at all of the sites when used as a syllable onset. In one dialect, that of Kuninaka, it can be used moraically, in which case it surfaces as an alveolar lateral approximant [l̥]<sup>31</sup>.

Table 37. The voiced alveolar tap.

	A-055 'child; minor'	A-092 'sickle; scythe'	A-156 'evening'
Uechi	jarabi	<sup>i</sup> zzara	jusarabi
Yonaha		zzara	
Kugai	jarabi [new]	zzara	jusarabi
Irabu	jarabi	ɾzara	jusarabi
Bora	jarabi	zzara	jusarabi
Kuninaka	jarabi	<sup>i</sup> zzara	
Ōura	jarabi	<sup>z</sup> ɾzara	
Shimajiri		zzara	
Kurima	jarabi	zzara	jusarabi
Ikema	jarabi	zzara ~ <sup>d</sup> zara	jusarabi
Karimata	jarabi	izara	jusarabi
Uruka	jarabi	zzara	
Nobaru			

Table 38. Moraic /r/ in Kuninaka.

	A-077 'bird'	A-155 'daytime'	A-126 'ash'	A-139 'light'	A-143 'the east'
Uechi	tou	p <sup>s</sup> ima	karap <sup>h</sup> aɺ ~ karap <sup>h</sup> a <sup>z</sup>	pçkal	aɣal
Yonaha	tɔ <sup>z</sup> ɾ	p <sup>s</sup> ɾma	k <sup>h</sup> arapa <sup>z</sup> ɾ	p <sup>s</sup> ɾka <sup>z</sup> ɾ	aga <sup>z</sup> ɾ
Kugai	t <sup>h</sup> uz	psima	k <sup>h</sup> arap <sup>h</sup> az / p <sup>h</sup> az(i)	pskaz	aḡaz
Irabu	t <sup>h</sup> u <sup>z</sup> ɾ ~ t <sup>h</sup> uɾ	p <sup>s</sup> ɾ:ma	k <sup>h</sup> ara paɾ	p <sup>s</sup> kaɾ	aɸaɾ
Bora	t <sup>h</sup> uɾ	p <sup>s</sup> ɾ:ma	k <sup>h</sup> arapaɾ ~ k <sup>h</sup> arapa <sup>z</sup> ɾ	pskaɾ	agaɾ
Kuninaka	tɯɺ	p <sup>h</sup> ɪ:ma	karapaɺ	pɪkaɺ	agaɺ

<sup>31</sup> Moraic /r/ derives from \*rɿ. The Uechi and Kurima forms in Table 10 also contain laterals, but these correspond phonologically to /ɾ/.

Ōura	t <sup>h</sup> uɿ	p <sup>s</sup> ɿma	k <sup>h</sup> arapaɿ	pskaɿ	(agaɿ ~) a:ɿ
Shimajiri	t <sup>h</sup> u <sup>z</sup> ɿ	p <sup>s</sup> ɿnaɰa / p <sup>s</sup> ɿma	karapa <sup>z</sup> ɿ	pska <sup>z</sup> ɿ	aɰaɿ
Kurima	t <sup>h</sup> uz	pssima	A: karabaɿ / B: karabaz	pskaɿ	A: agaɿ / B: agaz
Ikema	tui	hi:ma	karahai	ɰikai	agai
Karimata	tuw	psm̥a	karapaw	pskaw	a:w
Uruka	tuɰ	p <sup>s</sup> ɿ:ma	karapaz	p <sup>s</sup> kaɰ	agaz
Nobaru					

### 3.1.6 Approximants

#### /j/ (voiced palatal approximant)

This sound corresponds to Proto-Miyako \*j.

Table 39. The voiced palatal approximant.

	A-055	A-111	A-165	A-179	A-182
	‘child; minor’	‘branch’	‘a long time ago’	‘house’	‘door’
Uechi	jarabi	juda	ɲkja:ɲ		
Yonaha		juda	ɲk <sup>j</sup> a:ɲ		
Kugai	jarabi [new]	juda	ɲkja:ɲ	ja:	jadu
Irabu	jarabi	ida	mki:ɲ	ja:	jadu
Bora	jarabi	juda	ɲk <sup>j</sup> a:ɲ	ja:	jadu
Kuninaka	jarabi	juda	ɲkja:ɲ		
Ōura	jarabi	ida	ɲk <sup>j</sup> a:ɲ	ja:	
Shimajiri		juda	ɲkja:ɲ		
Kurima	jarabi	ida	ɲkja:ɲ	ja:	jadu
Ikema	jarabi	juda	ɲk <sup>j</sup> a:ɲ	ja:	jadu
Karimata	jarabi	ida	ikja:ɲ	ja:	jadu
Uruka	jarabi	juda	ɲkja:ɲ		
Nobaru					

#### /w/ (voiced labiovelar approximant)

As Proto-Japonic \*w changed into Proto-Miyako \*b, there are only a few examples of this sound; it is only used before the vowel /a/. As it appears in only a limited number of words, such as that for ‘pig’, and is in a complementary distribution with ‘v’, it may be an allophone of ‘v’. In fact, in many dialects (Yonaha, Kugai, Bora, Shimajiri, and Uruka) it surfaces

as the approximant [ʋ], close to [v], rather than as [w]. In the other dialects, it appears to have become ‘v’ when used as a geminate, coda consonant, or syllable nucleus, and ‘w’ when used as a single onset consonant<sup>32</sup>.

Table 40. The voiced labiovelar approximant.

	A-075 ‘pig’
Uechi	wa:
Yonaha	ʋa:
Kugai	va:
Irabu	wa:
Bora	ʋa: ~ wa:
Kuninaka	wa:
Ōura	wa:
Shimajiri	ʋa:
Kurima	wa:
Ikema	wa:
Karimata	wa:
Uruka	ʋa:
Nobaru	

### 3.1.7 On whether there are glottalized sounds

According to, for example, Hirayama (ed., 1983), some of the dialects have the glottalized sounds /tʔ, tsʔ, kʔ/. Sounds that are phonetically close to the glottalized sounds widely encountered in the Northern Ryukyus are indeed observed, but they only appear word-initially, and together with the accompanying vowel, they have a length of two morae (e.g. Shimajiri *ttu* ‘person; human being’)<sup>33</sup>. Their distinctive feature is therefore their length; it seems they should be interpreted phonologically as geminates, laryngeal tension occurring phonetically because they are stops<sup>34</sup>. Furthermore, they differ from the glottalized sounds

<sup>32</sup> For this reason, Pellard (2009:336) reconstructs the proto-form as \*v.

<sup>33</sup> In the Miyako dialects, the minimum word length is two morae.

<sup>34</sup> Nakama (1984) takes his view, as well. Furthermore, differently from the glottalized sounds of Yonaguni and the like, they are the result of lexical rather than regular changes and therefore few in number; they are encountered only in some words in some of the dialects.

of the Northern Ryukyus in that they have all arisen through vowel elision (e.g. Shimajiri ttu < Proto-Miyako \*pɿtu ‘person; human being’). The following sounds are observed.

- [tʰ] ~ [tt]: Ikema ‘(tobacco) pipe’, Shimajiri ‘person; human being’  
 [kʰ] ~ [kk]: Ikema ‘nine (things)’ (although it appears as ‘kukunutsi’ in the reported data, the variant ‘kkunutsi’ is also encountered)  
 [tsʰ] ~ [tts]: Ikema ‘sago palm’, Irabu ‘(tobacco) pipe’

Table 41. Words containing sounds phonetically close to glottalized sounds.

	A-060 ‘person; human being’	B-113 ‘(tobacco) pipe’	B-027 ‘nine (things)’	B-076 ‘sago palm’
Uechi	p̚su			
Yonaha	p̚t̚ʰu			
Kugai	pstu			
Irabu	pstu	tt̚(ɿ)z	kukunutsɿ	sɔ̚ditsɿ
Bora	pstu	kʰi̚çi:l̚z	kukunutsi	çukʰats̚i̚
Kuninaka	p̚t̚ʰu		k̚k̚k̚ɔ̚n̚ɔ̚tsi	s̚ɔ̚tetsi
Ōura	pstu	k̚i̚çiʰz̚	kukunutsɿ	
Shimajiri	ttu	k̚i̚çiɿ	k̚k̚k̚unutsɿ	
Kurima	pstu			
Ikema	p̚t̚ʰu ~ çtu ~ çto	t̚ʰi: tti:ʔ	k̚k̚k̚unutsɿ	tt̚çu:tsɿ
Karimata	pstu	k̚s̚i̚si̚u	k̚k̚k̚unutsu	st̚t̚tsu / s̚t̚s̚uɔ̚ / ssuɔ̚
Uruka	p̚st̚u ~ p̚st̚u			
Nobaru		k̚i̚çiʰz̚	k̚k̚k̚unutsɿ	s̚ɔ̚tetsɿ

### 3.2 Consonant systems

In the above, we have looked at each of the consonant phonemes of the Miyako dialects; the different consonant systems can be summarized as follows.

- The phonemes common to all the dialects:  
/p, b, t, d, k, g, ts, s, z, f, v, h, m, n, r, j, w/
- Phonemes that are encountered only in some of the dialects:
  - /χ/: Shimajiri
  - /ɸ/: Shimajiri
  - /ŋ/: Irabu
  - /ŋ̄/: Ikema

#### 4 Syllables

At present, there has not yet been any research in which the syllable is discussed as a principal unit of articulatory rules in the Miyako dialects. We use the term ‘syllable’ to refer to a descriptive unit of, mainly, morphophonology and phonotactics<sup>35</sup>.

There are many possible interpretations of the syllable structure of the Miyako dialects, depending on to what degree the syllabic consonants discussed in section 2.1.4 are recognized and on whether the glottalized sounds discussed in the previous section are recognized. We take the view that only /v, m, n, r/ can be syllabic consonants, recognizing geminates for other consonants, as was discussed in section 3.1. The syllable structure is then as in (5).

- (5) (i) (C<sub>1</sub>)(C<sub>2</sub>)(j)V(V)(C<sub>3</sub>)  
 (ii) (C<sub>4</sub>)C<sub>5</sub>(C<sub>6</sub>)

Of these, (i) applies to syllables with a vowel as the nucleus, while (ii) applies to those with a consonant as the nucleus.

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<sup>35</sup> As a result, it also has properties that are not wholly compatible with general syllable theory, such as the fact that the first ‘C’ in ‘CCV’ has a length of one mora.



- Cases in which both  $C_1$  and  $C_2$  are occupied involve either a geminate<sup>36</sup>, of a fricative or a resonant /s, z, f, v, m, n, r/, or a partial geminate with /v, m/ as  $C_1$ . Furthermore, in Ikema, Shimajiri, and Irabu, for example, geminates of plosives and affricates such as ‘t’, ‘k’, and ‘ts’ can also occupy  $C_1$  and  $C_2$ .

E.g. ssan ‘louse’, ffa ‘child’, nta ‘earth’, ttu ‘person; human being’

- $C_3$  can be occupied by /v, m, n, r/ (‘r’ only in Kuninaka; also, ‘v’ cannot occupy this position in Ikema).
- VV can be occupied by either a long vowel or a sequence of two different vowels. We have not, however, been able to discuss questions such as what kinds of vowel sequences are (or are not) possible in each of the dialects in this chapter.
- $C_6$  can be occupied by a consonant identical to  $C_5$  (resulting in a long consonant).  $C_5$  can be occupied by /v, m, n, r/ (‘v’ cannot occupy this position in Ikema). Also,  $C_4$  can only be filled before /r/ (in Kuninaka); it can only be occupied by labials (‘p’, ‘b’, and ‘m’).

E.g. vv ‘to sell’, mm ‘sweet potato’, mrrna ([m]:na~mi[:na]) ‘garlic chive’

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<sup>36</sup> We have discussed in section 2.1.4 how the geminates in ‘ssam’ (‘louse’) and ‘ffa’ (‘child’) have arisen as the result of the fricativization of a close vowel and the assimilation of a following liquid or semivowel. Although this fricativized vowel is maintained in the nominal-morphological interpretation that posits the same sound change, we view words like these as containing a geminate without a vowel. This is because they are the result of a sound change that has already been completed and therefore do not require the kind of synchronic analysis that is required in nominal morphology, and because the CCV syllable type that we assume for words such as ‘ssam’ (‘louse’) is independently needed for word-initial stop geminates such as that in Shimajiri ‘ttu’ (‘person; human being’).

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# **The Nominal Accent System of the Yonaha Dialect of the Southern Ryukyuan Language of Miyako: A Preliminary Report**

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## **1 Introduction**

The Ryukyuan language group comprises five languages, namely Amami, Okinawan (together constituting the Northern Ryukyuan group), Miyako, Yaeyama, and Yonaguni (together constituting the Southern Ryukyuan group) (Pellard 2009, 2011; Shimoji 2010). The Yonaha dialect, which will be the subject of analysis in this chapter, is a dialect of Miyako, a language in the Southern Ryukyuan group. It is spoken in the Yonaha district of Shimoji, Miyakojima City, Okinawa Prefecture.

My aim in this chapter is to describe the nominal accent system of the Yonaha dialect by analyzing the data obtained in a one-hour accent survey conducted with one native speaker, focusing especially on the surface realizations of accent patterns and the classification of vocabulary items falling under each pattern.

## **2 Descriptions in the literature**

### **2.1 Overview**

A description of the accent system of the Yonaha dialect may be found in the work of Teruo Hirayama et al. (1967). They state that while pitch is generally level, so that it can easily be mistaken for a one-pattern accent system, there is in fact a contrast between a low level pattern and a high level pattern (Hirayama et al. 1967:27). This description tells us, firstly, that the Yonaha dialect has a two-pattern accent system (see Uwano 1984), and secondly, that no marked pitch movements are observed in utterances of this dialect.

Hirayama et al. indicate that although the Yonaha dialect has a two-pattern accent system, a phenomenon is observed in which the distinction between the accent patterns is becoming unclear in the speech of younger speakers, which they call ‘accent conflation’. In particular, they state, a partial or complete coalescence of the accent patterns has occurred in verbs and adjectives. If the younger generation of the 1960s, when Hirayama et al. conducted their survey, can be defined as ranging from 10 to 25 years of age, the speakers in question must have been between their early sixties and late seventies in 2011, when our survey was conducted. As will be detailed below, the

analysis in this chapter is based on the utterances of a native speaker that was 75 years of age at the time. If, therefore, the description by Hirayama et al. is accurate, the distinction between the Yonaha dialect accent patterns that are the subject of the analysis in this chapter might have become unclear.

## 2.2 Classification of vocabulary items

According to Hirayama et al. (1967), the two-mora nouns of classes 1 through 3 (see Kindaichi 1974) fall under one accent pattern and those of classes 4 and 5 under the other in the Yonaha dialect (II-1,2,3/4,5). As regards three-mora nouns, however, the majority of classes 1 through 4 and part of class 5 fall under one accent pattern, while the majority of class 5 and almost all of classes 6 and 7 fall under the other (III-1,2,3,4,(5)/5,6,7). It has already been demonstrated sufficiently, however, that the classification of vocabulary items under accent patterns in the Ryukyuan languages cannot be explained by positing only the coalescence of classes (Hattori 1958, 1979; Matsumori 1998, 2000a, 2000b, 2008, 2010, 2011). When discussing the classification of vocabulary items under accent patterns in the Ryukyuan languages, it is useful to adopt the concept of classifying vocabulary items into ‘series’, as proposed by Akiko Matsumori.

These ‘series’ are classes of words distinguished by the accent patterns of Proto-Ryukyuan, as reconstructed by comparing the modern Ryukyuan dialects (Matsumori 2000b). Matsumori posits the existence of a distinction in Proto-Ryukyuan between at least two accent patterns for one-mora words and at least three for those with two or more morae, and calls the word classes distinguished by these accent patterns ‘series A’, ‘series B’, and ‘series C’. The order of the uppercase letters in these names is based on the correspondences between these series and the traditional classes. Specifically, the series that comprises almost all of the two-mora nouns of classes 1 and 2 is called ‘series A’, the series that comprises the majority of class 3 and part of classes 4 and 5 is called ‘series B’, and the series that comprises a minority of class 3 and part of classes 4 and 5 is called ‘series C’.

When the description by Hirayama et al. regarding which words fall under which accent pattern in the Yonaha dialect is re-examined using this classification by series, it is observed that series A and series B have coalesced into one accent pattern, series C constituting the other (A,B/C), as is pointed out by Matsumori (2011).

In the following, I will use the term ‘pattern AB’ for the accent pattern of the majority of the vocabulary items of series A and B in the Yonaha dialect and the term ‘pattern C’ for the accent pattern of the majority of the vocabulary items of series C. When referring to the accent patterns of Ryukyuan dialects that have a three-pattern accent system, I will use the terms ‘pattern A’, ‘pattern B’, and ‘pattern C’ for the accent patterns of the majority of the vocabulary items of series A, B, and C, respectively.

### 2.3 Surface realizations

The surface realizations of the accent patterns of the Yonaha dialect according to Hirayama et al. (1967) are given in Table 1. Below, I will follow custom in indicating the position of a pitch rise with '[' and that of a pitch drop with ']'. Judging by the realizations and the vocabulary items falling under the two patterns, the pattern that Hirayama et al. call the 'low level pattern' appears to correspond to our pattern AB, while the pattern they call the 'high level pattern' appears to correspond to our pattern C. Although Hirayama et al. give realizations of two-mora nouns both in isolation and followed by the particle *nudu* (nominative case + focus marker) and a predicate, they only give realizations in isolation for three-mora nouns.

Table 1. The descriptions by Hirayama et al. (1967) of the realizations of each of the accent patterns; the transcription is that of Hirayama et al. (1967).

No. of morae	Accent pattern	Utterance in isolation	Utterance followed by the marker <i>nudu</i> (nominative case + focus marker)
Two morae	Low level pattern (AB pattern)	jama 'mountain'	jama nudu [ʔai. 'There is a mountain.'
	High level pattern (C pattern)	[usi 'mortar; millstone'	[usi nudu ʔai. 'There is a mortar.'
Three morae	Low level pattern (AB pattern)	fɯkuru 'bag; sack; pouch'	
	High level pattern (C pattern)	[fɯsui 'medicine'	

As is clear from Table 1, pattern-AB words are realized entirely at low pitch, while pattern-C words are realized entirely at high pitch. When a two-mora noun is followed by the particle *nudu*, the pitch of the noun is maintained in the particle. In other words, the particle is realized with low pitch in the case of a pattern-AB noun and with high pitch in the case of a pattern-C noun.

## 3 Analysis

### 3.1 Methodology

#### 3.1.1 Survey date and location

The data were obtained on September 7, 2011 in Shimoji, Miyakojima City, Okinawa Prefecture.

### 3.1.2 Informant

The survey was conducted with one male informant, born in 1936 (75 years of age at the time of the survey), who has lived in Yonaha his entire life. His parents and wife are also all from Yonaha.

### 3.1.3 Surveyed vocabulary

When compiling the vocabulary list used in the survey, I referred to the word forms of cognates in the Tarama (Matsumori 2010) and Ikema (Igarashi et al. 2012) dialects, which are also dialects of Miyako, to make sure that roughly the same number of two-mora nouns and three-mora nouns would be included. Vocabulary items were selected with the purpose of examining the correspondences between the traditional classes and the series in mind.

There is as yet no established view on what words constitute each series. I therefore used data from the Tarama dialect (Matsumori 2010) as a substitute for a classification into series in selecting items for the vocabulary list. This dialect has a three-pattern accent system and is among the dialects whose accent patterns display a systematic correspondence with those of other Ryukyuan languages. I made sure that of the items on the vocabulary list, roughly the same number would fall under each of the three Tarama dialect accent patterns (patterns A, B, and C).

As regards the traditional classes, I referred to *Akusento Chōsa Goi (B) (Accent Survey Vocabulary Items (B))*, a private printing by Zendo Uwano (see Uwano 1985 for the included vocabulary items), to make sure that at least one word of each class would be included in my selection of items for the vocabulary list.

Although 71 words had been included on the vocabulary list, the number of words that were actually recorded in the field and whose accent patterns could be identified through analysis is 66 (36 two-mora nouns, 25 three-mora nouns, and 5 four-mora nouns). They are given in Tables 3 and 4. Below, I will use a simplified phonetic transcription for words of the Yonaha dialect. [ɿ] represents an apical vowel; long vowels are transcribed using doubled vowel symbols.

In the survey, the vocabulary was recorded both uttered in isolation and inserted into the carrier sentences given in Table 2. One carrier sentence consisted of the surveyed vocabulary followed by the particle *nudu* (nominative case + focus marker) and a predicate; a second consisted of the surveyed vocabulary followed by the particle *mee* ‘too; also’ and a predicate<sup>1</sup>. The various predicates used are also given in Table 2.

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<sup>1</sup> A carrier sentence in which the demonstrative *kunu* ‘this’ was placed before and the particle *ja* (topic marker) after the surveyed vocabulary was used, as well, but as only a small portion of the surveyed vocabulary was uttered with this carrier sentence, I excluded it from the data for the analysis.

Table 2. Carrier sentences; X indicates the surveyed vocabulary.

Utterance in isolation	X.	‘X.’
Surveyed vocabulary + particle <i>nudu</i> + predicate	X <i>nudu n<sup>j</sup>aaŋ / uraŋ.</i>	‘There is no X.’ ( <i>n<sup>j</sup>aaŋ</i> for inanimate; <i>uraŋ</i> for animate)
	X <i>nudu aa / uu.</i>	‘There is X.’ ( <i>aa</i> for inanimate; <i>uu</i> for animate)
Surveyed vocabulary + particle <i>mee</i> + predicate	X <i>mee n<sup>j</sup>aaŋ / uraŋ.</i>	‘There is no X, either.’ ( <i>n<sup>j</sup>aaŋ</i> for inanimate; <i>uraŋ</i> for animate)
	X <i>mee aa.</i>	‘There is X, too.’ (inanimate)
	X <i>mee aa dussɿ.</i>	‘There is X, too.’ (inanimate)
	X <i>mee arii duu.</i>	‘There is X, too.’ (inanimate)

### 3.1.4 Analysis procedure

The analysis is based on a combination of my own auditory impression of the recorded utterances and a visual inspection of the fundamental frequency (F0) curves extracted from the utterances. As the analysis in this chapter is of a preliminary nature and the quality and quantity of the data are limited, I did not perform a quantitative analysis. I used *Praat* (Boersma & Weenink 2011) to analyze the F0 curves.

## 3.2 Results

### 3.2.1 Overview

The validity of the descriptions in the existing literature was mostly confirmed. The range of pitch movement in the Yonaha dialect seems to be mostly narrow; one gets the impression that there are no marked fluctuations. This can be considered to be consistent with the description by Hirayama et al. (1967), who state that pitch is generally level. Furthermore, there is a distinction between at least two accent patterns in this dialect, again matching the description by Hirayama et al. (1976). Definitive evidence for a three-way distinction was not found (see Section 3.2.4, however). As regards the classification of vocabulary items, series A and series B have mostly merged to fall under one accent pattern, series C falling under the other (A,B/C), which again matches the description in the literature (Matsumori 2011).

Facts contradicting descriptions in the literature were also found, however. Hirayama et al. (1967) stated that a phenomenon was underway in which the distinction between the accent patterns was becoming unclear in the generation of our informant (accent conflation), but the results of our analysis indicate that a clear distinction between the accent patterns has been retained. The surface realizations of the accent patterns according to the analysis results do not completely match the description by Hirayama et al. (1967), which was given in Table 1.



### 3.2.2 Classification of vocabulary items

The accent patterns of the surveyed vocabulary according to the analysis results are given in Tables 3 and 4. In cases where the traditional classification contains a corresponding vocabulary item (a cognate), its class is indicated to the left of the Yonaha dialect word form.

As is clear from the table, all of the vocabulary items falling under pattern A in the Tarama dialect fall under pattern AB in the Yonaha dialect, with the exception of one word (*munuŋ* ‘language; word’). All of the vocabulary items falling under pattern B in the Tarama dialect, too, fall under pattern AB in the Yonaha dialect, again with the exception of one word (*pʉsŋ* ‘star; celestial body’), and all of the vocabulary items falling under pattern C in the Tarama dialect also fall under pattern C in the Yonaha dialect. This result supports Matsumori’s (2011) view that series A and series B have merged in the Yonaha dialect (A,B/C).

Table 3. The correspondences between the accent patterns of the Yonaha dialect and those of the Tarama dialect (first half).

		Accent patterns of the Yonaha dialect				
		Pattern AB		Pattern C		
Accent patterns of the Tarama dialect	Pattern A	1-mora class 1	puu	‘sail; canvas’	— munuŋ	‘language; word’
		1-mora class 2	naa	‘name’		
		2-mora class 1	ika / ikʰa	‘squid’		
		2-mora class 1	usŋ	‘cattle (i.e. cow or bull)’		
		2-mora class 1	zzu	‘fish’		
		2-mora class 1	fʉtsŋ	‘mouth’		
		2-mora class 1	kʉsŋ	‘lower back; waist’		
		2-mora class 1	juda	‘branch’		
		2-mora class 1	musŋ	‘bug; insect’		
		2-mora class 2	kabŋ	‘paper’		
		2-mora class 2	pʰtu	‘person; human being’		
		2-mora class 2	isŋ	‘stone’		
		2-mora class 2	kaa	‘water well’		
		2-mora class X	kami	‘turtle; tortoise’		
		2-mora class X	tuŋ	‘bird’		
		3-mora class 1	butu	‘husband’		
		3-mora class 1	kʰataa	‘shape; form’		
		3-mora class 1	buduŋ	‘dancing; dance’		
		3-mora class 1	judaŋ	‘drool’		
		3-mora class 1	panatsŋŋ	‘nosebleed’		
		3-mora class 4	kagam	‘mirror’		
		3-mora class 4	fʉkuru	‘bag; sack; pouch’		
		3-mora class 4	kujum	‘calendar’		
		—	ffa	‘child; offspring’		
		—	tuzŋ	‘wife’		
		—	bikidumu	‘man; male/husband’		

Table 4. The correspondences between the accent patterns of  
 the Yonaha dialect and those of the Tarama dialect (second half).

		Accent patterns of the Yonaha dialect				
		Pattern AB		Pattern C		
Accent patterns of the Tarama dialect	Pattern B	1-mora class 3	tii	‘hand; arm’	Pattern C	
		2-mora class 3	mm	‘sweet potato’		
		2-mora class 3	pana	‘flower’		
		2-mora class 4	jadu	‘door’		
		2-mora class 4	dziŋ	‘money’		
		2-mora class 5	ami	‘rain’		
		3-mora class 1	kuruma	‘car’		
		3-mora class 4	uza	‘quail’		
		3-mora class 5	maffa	‘pillow’		
		3-mora class 5	avva	‘oil’		
		—	ŋki	‘scale (of an animal)’		
		—	kaina	‘arm’		
		—	kamatsɿ	‘cheek’		
		—	midumu	‘woman; female’		
		—	sajafu	‘carpenter’		
			2-mora class 3	puni		‘bone’
			2-mora class 3	uja		‘grandfather’
			2-mora class 3	maaɿ		‘ball’
			2-mora class 4	usɿ		‘mortar; millstone’
		2-mora class 4	im	‘sea’		
		2-mora class 4	funi	‘boat; ship’		
		2-mora class 5	madu	‘(spare) time’		
		2-mora class 5	nabi	‘pot; pan’		
		3-mora class 4	oogɿ	‘(folding) fan’		
		3-mora class 4	paʒsam	‘scissors; shears’		
		3-mora class 5	pookɿ	‘broom’		
		3-mora class 6	ssam	‘louse’		
		3-mora class 7	fʊsuɿ	‘medicine’		
		—	sʌta	‘sugar’		
		—	tida	‘the sun’		
		—	waa	‘pig’		
		—	aagu	‘song’		
		—	gazam	‘mosquito’		
		—	mmaga	‘grandchild’		
		—	jarabi	‘child; minor’		
		—	miipana	‘face’		
		—	nuzzuu	‘thread; string’		
		—	ʒiibuni	‘spine’		

Below, I will briefly discuss the words with irregular series or class correspondences. I will consider not only correspondences with the Tarama dialect, but also those with the Okinoerabu

dialect of Amami (Matsumori 2000b) and the Kin dialect of Okinawan (Matsumori 2008). Like the Tarama dialect, these dialects have a three-pattern accent system.

As *pʏsʎ* ‘star; celestial body’ is a two-mora class 1 word in the traditional classification, the views given in the literature regarding the correspondences between the traditional classification and the accent patterns of the Ryukyuan languages would lead one to expect it to be a series-A word (Hattori 1958, 1979; Matsumori 1998 et seq.). As it has a pattern-B accent in the Tarama dialect of Miyako and a pattern-C accent in the Yonaha dialect, however, the correspondence is irregular. In the Kin dialect of Okinawan, on the other hand, the correspondence is regular, it having a pattern-A accent (Matsumori 2008).

As *fʏkuru* ‘bag; sack; pouch’ is a three-mora class 4 word in the traditional classification, one would expect it to be either a series-B or a series-C word, but as it has a pattern-A accent in the Tarama dialect of Miyako, the correspondence is irregular. In the Yonaha dialect, on the other hand, it has a pattern-B accent, so the correspondence appears to be regular. It has a pattern-C accent in the Kin dialect of Okinawan, however, so the correspondences among the dialects are nonetheless irregular.

Similarly, *pasam* ‘scissors; shears’ is a three-mora class 4 word in the traditional classification, so one would expect it to be a series-B or a series-C word. This word has a pattern-C accent both in the Tarama dialect of Miyako and in the Yonaha dialect, but as it has a pattern-B accent in the Kin dialect of Okinawan, the correspondences among the dialects are irregular.

As *kagam* ‘mirror’ and *kujum* ‘calendar’, too, are three-mora class 4 words in the traditional classification, one would expect them to be either series-B or series-C words. Although the correspondences appear to be regular in the Kin dialect of Okinawan, where these words have a pattern-B accent, they are irregular in the case of the Tarama dialect of Miyako, where they have a pattern-A accent. In the Yonaha dialect, on the other hand, they have a pattern-AB accent, so it cannot be determined whether the correspondences are regular.

Lastly, although no cognate of the word *munuʎ* ‘language; word’ is included in the traditional classification, it has a pattern-B accent both in the Tarama dialect of Miyako and in the Okinoerabu dialect of Amami. In the Yonaha dialect, however, it has a pattern-C accent, so the correspondence is irregular.

### 3.2.3 Realizations in ‘noun + *nudu* + predicate’

Let us first examine the realizations of nouns followed by the particle *nudu* and a predicate. Two examples of realizations of two-mora nouns are given in Figure 1. The top portion of the figure contains the acoustic waveforms, the middle portion the F0 curves, and the bottom portion

transcriptions of the words and their morae. The vertical lines crossing the acoustic waveforms and F0 curves indicate mora boundaries.

In the pattern-AB example, F0 rises in the second mora of the particle *nudu*; before that, F0 remains low. In the pattern-C example, on the other hand, F0 rises in the second mora of the noun and remains high until the end of the particle *nudu*. The pitch of the first mora of the pattern-C noun appears not to be stable. Although the pitch of this mora is sometimes perceived to be at the same level as that of the second mora (that is, high), it is also sometimes perceived as lower than that of the second mora. This may be connected to the ‘sudden word-initial drop’ discussed below.

Hirayama et al. (1967) give a description of the realization of two-mora nouns followed by the particle *nudu* (Table 1). Let us compare it to the results of our analysis. The description by Hirayama et al. is different from our analysis results in that they state that all morae are realized with low pitch in pattern AB, including those of the particle *nudu*. It is unclear whether this is due to a generational or individual difference or caused by something else. As regards pattern C, on the other hand, Hirayama et al. state that all morae, including those of the particle *nudu*, are realized with high pitch, which mostly matches the results of our analysis (this is limited, however, to realizations in which F0 remains at roughly the same level throughout the first and second morae).

As is clear from the left-hand part of Figure 1, a sudden word-initial drop of F0 is observed in two-mora pattern-AB nouns (it is unclear if this can also be observed in two-mora pattern-C nouns). It is at present unclear whether this drop is an attribute of the beginning of the word (the beginning of the prosodic word) or an attribute of the beginning of a higher-level prosodic unit. In the following, I will call this drop the ‘sudden word-initial drop’.

This sudden word-initial drop is perceptible, but, at least in the case of two- and three-mora nouns, it does not give the same kind of auditory impression as initial-high-pattern nouns in the Tokyo dialect. This sudden word-initial drop gives one the auditory impression of the pitch of the voice tracing a concave curve. Moreover, while this sudden word-initial drop is perceived distinctly in some tokens, it is hardly perceived in others—in the case of two- and three-mora nouns, at least. It is at present unclear whether the sudden word-initial drop is a linguistically significant attribute. I will consider this question again when I will examine four-mora nouns.

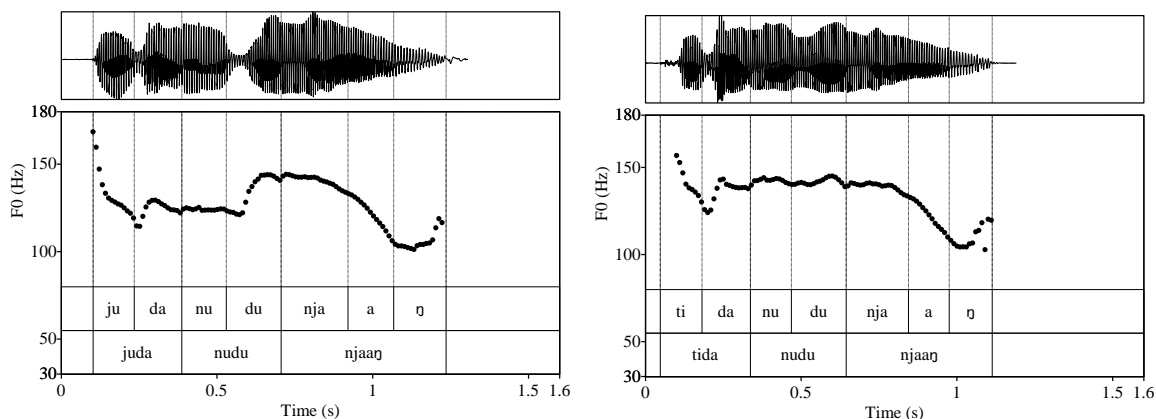


Figure 1. Two-mora noun + *nudu* + predicate;  
 pattern-AB *juda* ‘branch’ (left), pattern-C *tida* ‘the sun’ (right).

Two examples of realizations of three-mora nouns are given in Figure 2. In the pattern-AB example, F0 rises in the second mora of the particle *nudu*, similarly to two-mora pattern-AB nouns. It is also similar to two-mora pattern-AB nouns in that a sudden word-initial drop is observed.

In the pattern-C example, F0 rises in the third mora of the noun and remains high until the end of the particle *nudu*; it remains low before the third mora of the noun. At the beginning of the word, a sudden word-initial drop is observed.

Differently from Figure 1, a drop in F0 is observed from the particle *nudu* into the predicate in Figure 2; this is not due, however, to the accent pattern of the noun, but rather to that of the predicate (*n'aaŋ* vs. *uraŋ*).

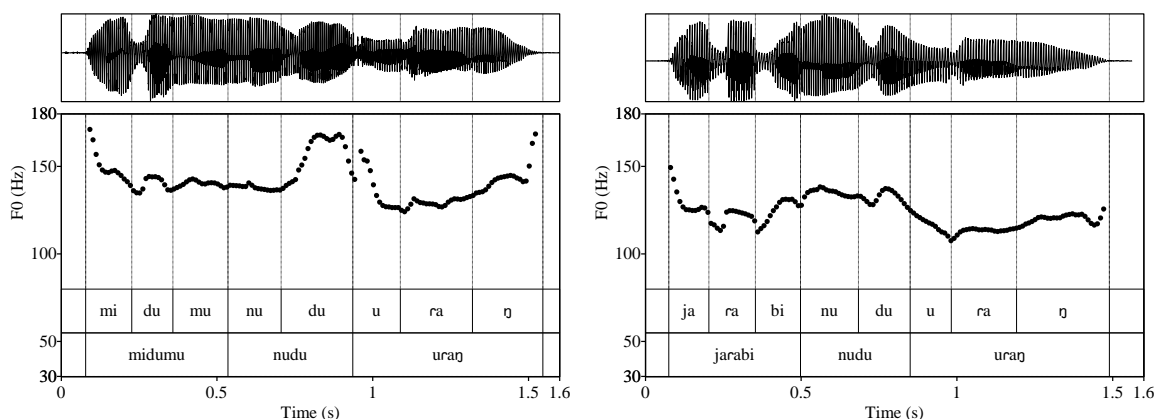


Figure 2. Three-mora noun + *nudu* + predicate;  
 pattern-AB *midumu* ‘woman; female’ (left); pattern-C *jarabi* ‘child; minor’ (right).

Two examples of realizations of four-mora nouns are given in Figure 4. In the pattern-AB example, F0 rises in the second mora of the particle *nudu*, similarly to two- and three-mora pattern-AB nouns. In the pattern-C example, on the other hand, F0 rises in the third mora of the noun and remains high until the end of the particle *nudu*, similarly to three-mora pattern-C nouns.

Both in the pattern-AB example and in the pattern-C example, a drop in F0 is observed from the first mora of the noun into the second mora. This drop is different from the sudden word-initial drop observed in two- and three-mora nouns, both acoustically and in terms of the auditory impression it gives. In two- and three-mora nouns, the F0 drop is completed in a very short time, so F0 has a low value for most of the first mora. In four-mora nouns, on the other hand, F0 has a high value for most of the first mora, the F0 drop occurring from around the end of the first mora into the second mora. Consequently, the beginning of four-mora nouns gives an auditory impression similar to initial-high-pattern nouns in the Tokyo dialect; that is, an impression of a high-pitched first mora and a low-pitched second mora. I will call the phenomenon observed in four-mora nouns ‘word-initial prominence’. It is unclear whether this is an attribute of the beginning of the word or an attribute of the beginning of a higher-level prosodic unit.

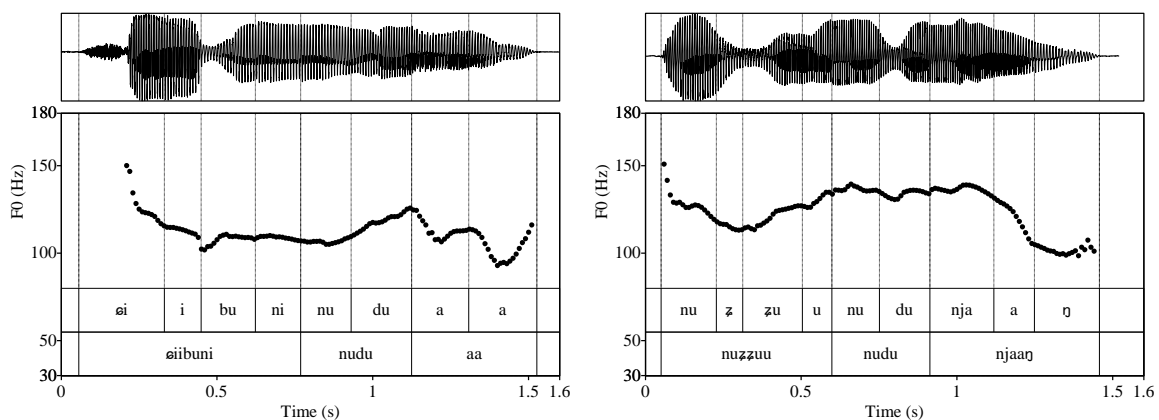


Figure 3. Four-mora noun + *nudu* + predicate;  
 pattern-AB *eiibuni* ‘spine’ (left), pattern-C *nuzzuu* ‘thread; string’ (right).

In the environment of ‘four-mora noun + particle *nudu* + predicate’, the combination of this word-initial prominence with the F0 rise that occurs in the second mora of the particle *nudu* in the case of pattern AB and in the third mora of the noun in the case of pattern C results in high-pitched morae being perceived in two places, surrounding morae perceived as low-pitched. In other words, a realization with what has traditionally been called ‘double-contour pitch’ is observed<sup>2</sup>.

<sup>2</sup> Akiko Matsumori had informed me before the survey that double-contour pitch can be observed in nouns comprising a large number of morae.

Whether there is a connection between this word-initial prominence in four-mora nouns and the sudden word-initial drop in two- and three-mora nouns or they are independent phenomena is a matter that has to be resolved in future research<sup>3</sup>.

### 3.2.4 Realizations in ‘noun + *mee* + predicate’

Next, let us examine the realizations of nouns followed by the particle *mee* and a predicate. As will become clear below, these realizations differ from those of nouns followed by the particle *nudu*. As the difference observed between these two environments is marked, it may be possible to view this phenomenon as an alternation between different accent patterns depending on the adjacent element<sup>4</sup>.

Two examples of realizations of two-mora nouns are given in Figure 4. It appears that in this environment, the distinction between pattern AB and pattern C is neutralized. In both accent patterns, F0 is low in the first mora, rises in the second mora, and remains high until the end of the particle. In addition, a sudden word-initial drop is observed at the beginning of the word.

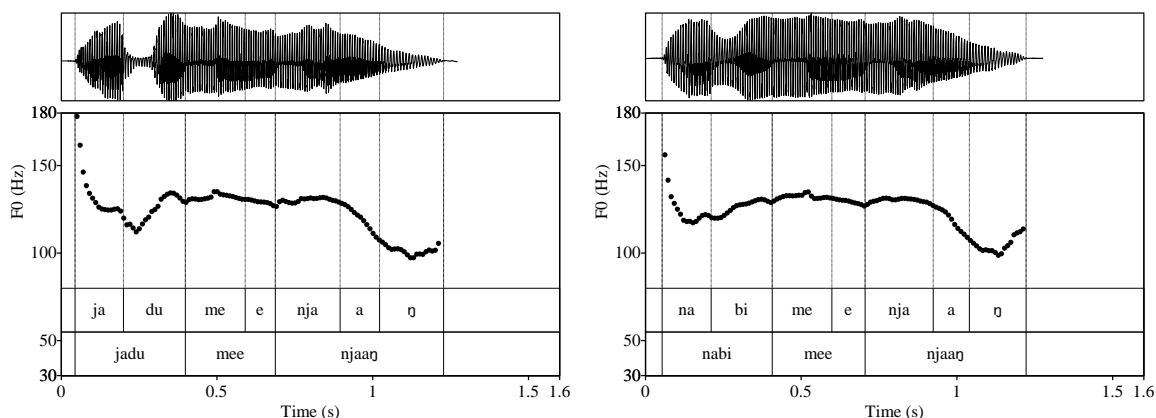


Figure 4. Two-mora noun + *mee* + predicate;  
pattern-AB *jadu* ‘door’ (left), pattern-C *nabi* ‘pot; pan’ (right).

Two examples of realizations of three-mora nouns are given in Figure 5. In the pattern-AB example, F0 rises in the third mora of the noun and remains high until the end of the particle. At

<sup>3</sup> In my subjective observation, sudden word-initial drops also occur in some of the Japanese dialects that, similarly to the Yonaha dialect, have an accent pattern in which pitch starts low word-initially and rises in the middle of the word, such as the Kagoshima dialect and the dialect of Goshogawara in Aomori Prefecture. It is interesting that dialects with what is called ‘double-contour pitch’ are found in the vicinity of the areas where these dialects are spoken (for example, the dialect of Yamada Town in Iwate Prefecture (Onishi 1989) and the dialect of Koshikijima in Kagoshima Prefecture (Kamimura 1941)).

<sup>4</sup> Akiko Matsumori had informed me before the survey that such an alternation between accent patterns can be observed in this dialect.

the beginning of the word, a sudden word-initial drop is observed. In the pattern-C example, on the other hand, the whole noun is realized with a high F0, after which it drops from the end of the noun into the beginning of the particle, rising again in the second mora of the particle. A sudden word-initial drop is observed in this environment, as well.

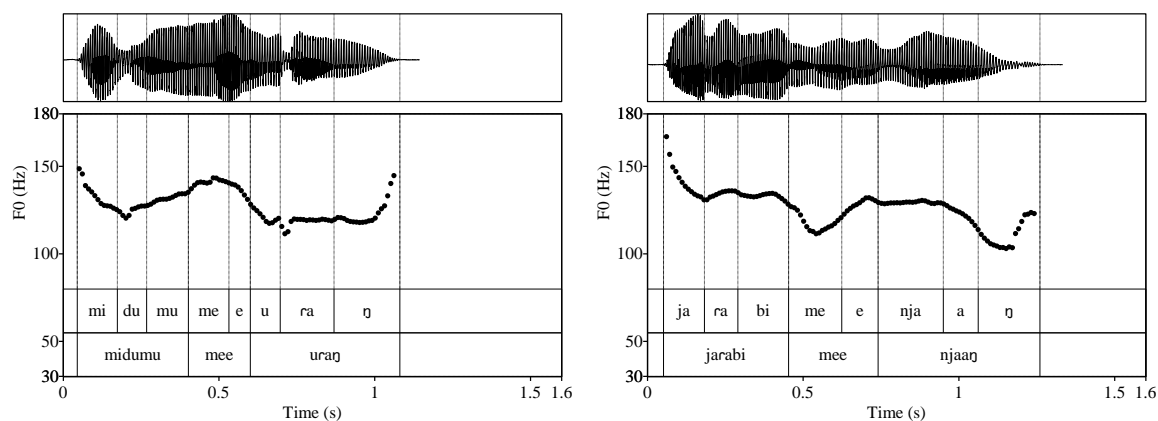


Figure 5. Three-mora noun + *mee* + predicate;  
 pattern-AB *midumu* ‘woman; female’ (left), pattern-C *jarabi* ‘child; minor’ (right).

Two examples of realizations of four-mora nouns are given in Figure 6. In the pattern-AB example, word-initial prominence is observed—in other words, the first mora is high-pitched and the second mora low-pitched—after which F0 rises in the third mora, remaining high until the end of the particle. In the pattern-C example, on the other hand, roughly the whole noun is realized with a high F0, after which a drop in F0 is observed from the end of the noun into the beginning of the particle; F0 rises again in the second mora of the particle.

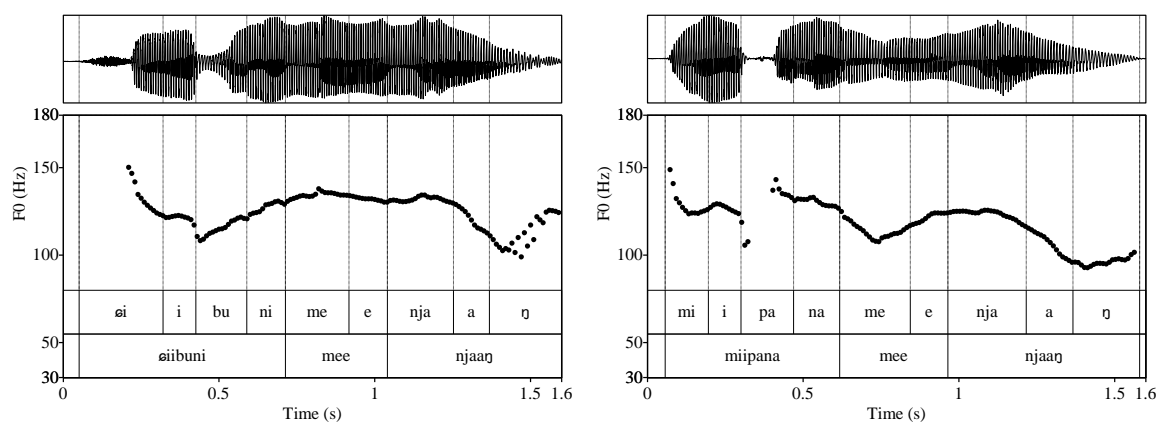


Figure 6. Four-mora noun + *mee* + predicate;  
 pattern-AB *siibuni* ‘spine’ (left), pattern-C *miipana* ‘face’ (right).



### 3.2.5 Realizations in utterances in isolation

Lastly, let us examine the realizations of nouns uttered in isolation. In isolation, the realizations of two-mora nouns that fall under pattern AB as well as those that fall under pattern C fluctuate between a falling pattern and a rising pattern. A ‘falling pattern’ refers here to a realization in which the first mora has high pitch and the second mora low pitch, while a ‘rising pattern’ refers to a realization in which the first mora has low pitch and the second mora high pitch. Consequently, pattern AB and pattern C cannot always be distinguished when these words are uttered in isolation. As is explained below, however, a falling pattern and a rising pattern are not always equally likely to occur.

Pattern-C words are more often realized with the rising pattern. There were eleven two-mora pattern-C nouns, but among them, *uja* ‘parent’, *waa* ‘pig’, and *pusʔ* ‘star; celestial body’ are the only three words that were pronounced with the falling pattern at least once. If we use the term ‘falling pattern ratio’ for the number we get by dividing the number of tokens of a certain word that were realized with the falling pattern in isolation by the total number of tokens of that word and multiplying the result by 100, the falling pattern ratio for pattern-C words was 21.2% (N = 11, SD = 40.2). It therefore seems justified to view the rising pattern as the typical realization of pattern-C words when uttered in isolation.

In pattern-AB words, on the other hand, no marked difference is found between the number of realizations with the falling pattern and the number of realizations with the rising pattern. There were 25 two-mora pattern-AB nouns, among which 16 words were realized with the falling pattern at least once. The falling pattern ratio was 50.3% (N = 25, SD = 44.9). It is therefore difficult to determine whether the falling pattern or the rising pattern is the typical realization of pattern-AB words.

An example of a minimal pair with contrasting accent patterns (pattern-AB *usʔ* ‘cattle (i.e. cow or bull)’ and pattern-C *usʔ* ‘mortar; millstone’), uttered in isolation, is given in Figure 7. At least in the data used for this analysis, pattern-AB *usʔ* ‘cattle (i.e. cow or bull)’ was always realized with a falling pattern and pattern-C *usʔ* ‘mortar; millstone’ always with a rising pattern. That there are pattern-AB words that are realized both with the falling pattern and with the rising pattern is shown in Figure 8. In this case, pattern-AB *ika* ‘squid’ was realized with both patterns.

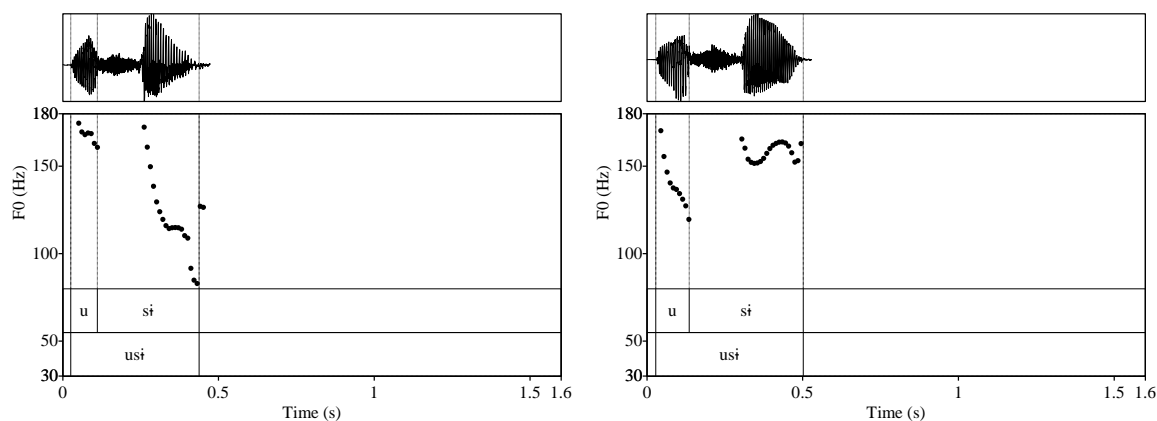


Figure 7. Two-mora nouns uttered in isolation;  
 pattern-AB *usɯ* ‘cattle (i.e. cow or bull)’ (left), pattern-C *usɯ* ‘mortar; millstone’ (right).

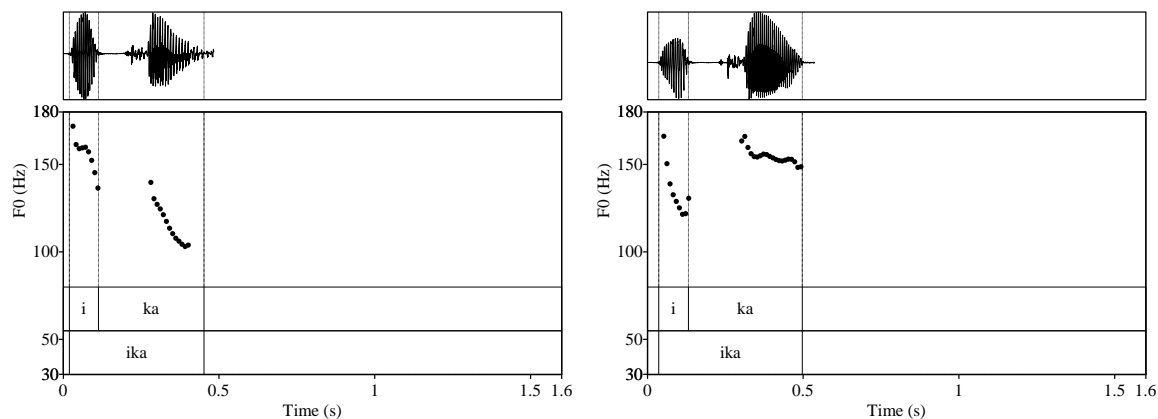


Figure 8. Fluctuation in a two-mora AB-pattern noun uttered in isolation;  
 pattern-AB *ika* ‘squid’ realized with falling pitch (left) and with rising pitch (right).

As Hirayama et al. (1967) give a description of the realization of two-mora nouns uttered in isolation (Table 1), let us compare it to the results of our analysis. According to the description by Hirayama et al., all morae are realized with low pitch in pattern AB; this does not match our analysis results. They state that all morae are realized with high pitch in pattern C; this, too, does not match our analysis results. It is unclear whether this is due to a generational or individual difference or caused by something else.

Let me next point out some interesting tendencies that were observed in the fluctuation in the realizations of two-mora pattern-AB words uttered in isolation, bearing in mind that as the quality and quantity of the data used for this analysis are limited, the likelihood that they are due to chance is very high.

A tendency towards one of the series was observed in the two-mora pattern-AB nouns that were realized with the rising pattern. The seven words among the two-mora pattern-AB nouns that are regarded as belonging to series B were always realized with the rising pattern, with the exception of one word (all except the last word of *ami* ‘rain’, *mm* ‘sweet potato’, *pana* ‘flower’, *tii* ‘hand; arm’, *jadu* ‘door’, *dziŋ* ‘money’, and *uza* ‘quail’). The falling pattern ratio of the series-B words was 14.2% (N = 7, SD = 37.8). This result suggests that the rising pattern is the typical realization of series-B words. Among the eighteen words regarded as belonging to series A, on the other hand, no more than three words were always realized with the rising pattern (only the last three words of *butu* ‘husband’, *ffa* ‘child; offspring’, *fycŋ* ‘mouth’, *ika* ‘squid’, *isŋ* ‘stone’, *kaa* ‘river’, *kami* ‘turtle; tortoise’, *musŋ* ‘bug; insect’, *naa* ‘name’, *pŋtu* ‘person; human being’, *puu* ‘sail; canvas’, *tuŋ* ‘bird’, *tuzŋ* ‘wife’, *usŋ* ‘cattle (i.e. cow or bull)’, *zzu* ‘fish’, *kabŋ* ‘paper’, *kysŋ* ‘lower back; waist’, and *juda* ‘branch’). The falling pattern ratio of the series-A words was 64.4% (N = 18, SD = 40.0). This result suggests that the falling pattern is the typical realization of series-A words.

Provided that these results are not due to chance, they show that in the Yonaha dialect, there is a distinction in accent patterns between series A on the one hand and series B and C on the other in two-mora nouns uttered in isolation (A/B,C). As was discussed in sections 3.2.2 through 3.2.4, in other environments a distinction in accent patterns is made between series A and B on the one hand and series C on the other in two-mora nouns (A,B/C). This means, in other words, that the Yonaha dialect does not have a two-pattern, but a three-pattern accent system—provided that these results are not due to chance. Further research is needed to confirm this.

Next, let us examine three-mora nouns uttered in isolation. Two examples of realizations of three-mora nouns uttered in isolation are given in Figure 9. In the pattern-AB example, F0 is low in the first two morae and rises in the third mora. At the beginning of the word, a sudden word-initial drop is observed. In the pattern-C example, on the other hand, F0 is high in the first two morae and drops in the third mora. At the beginning of the word, a sudden word-initial drop is observed.

As Hirayama et al. (1967) give a description of the realization of three-mora nouns uttered in isolation (Table 1), let us compare it to the results of our analysis. According to the description by Hirayama et al., all morae are realized with low pitch in pattern AB; this does not match our analysis results. They state that all morae are realized with high pitch in pattern C; this, too, does not match our analysis results. It is unclear whether this is due to a generational or individual difference or caused by something else.

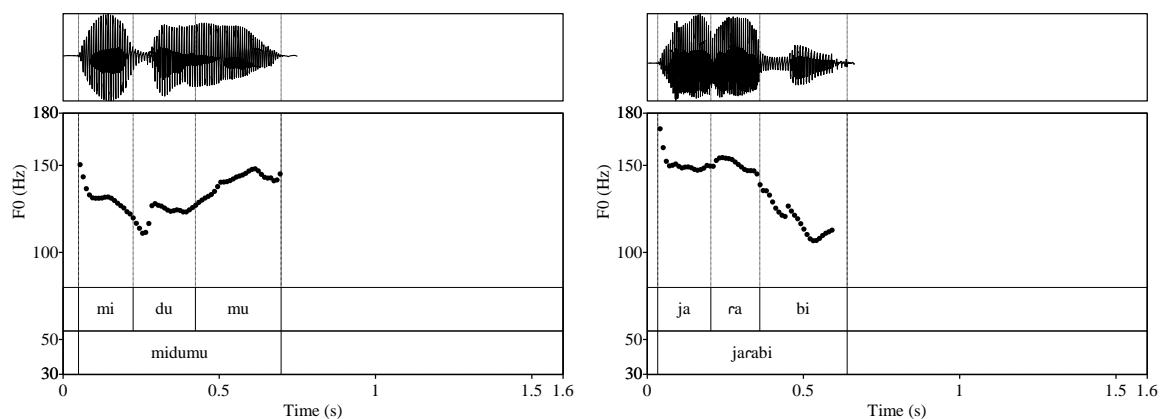


Figure 9. Three-mora nouns uttered in isolation;  
 pattern-AB *midumu* ‘woman; female’ (left), pattern-C *jarabi* ‘child; minor’ (right).

Let us next examine four-mora nouns uttered in isolation. Two examples of realizations of four-mora nouns uttered in isolation are given in Figure 10. In the pattern-AB example, F0 is low in the first three morae and rises in the fourth mora. There appears to be no word-initial prominence, but a sudden word-initial drop is observed. In the pattern-C example, on the other hand, F0 is high in the first three morae and drops in the fourth mora.

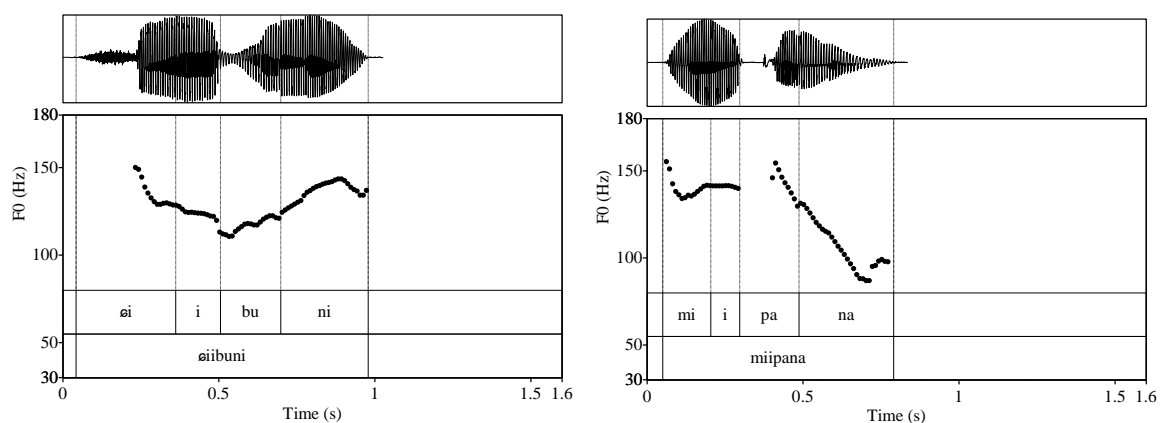


Figure 10. Four-mora nouns uttered in isolation;  
 pattern-AB *eiibuni* ‘spine’ (left), pattern-C *miipana* ‘face’ (right).

### 3.2.6 Summary of accent pattern realizations

In the above, we have examined the realizations of accent patterns in nouns comprising different numbers of morae in three different environments. As is clear from the discussion thus far, the Yonaha dialect presents us with a complicated picture as regards the realizations of its accent patterns. The fact that the realizations of the accent patterns differ markedly depending on the

presence and type of adjacent elements is especially interesting. As was mentioned in section 3.2.4, it may be possible to view this phenomenon as an alternation between different accent patterns.

An overview of the realizations of the accent patterns of the Yonaha dialect is given in Table 5. Although word-initial prominence has been transcribed in this overview, transcriptions of sudden word-initial drops have been omitted.

Table 5. Accent pattern realizations in the Yonaha dialect;  
X indicates the surveyed vocabulary and periods indicate mora boundaries.

Number of morae		X <i>nudu</i>		X <i>mee</i>		X (uttered in isolation)
2	Pattern AB	ju.da nu.[du 'branch'	Pattern AB	ju.[da me.e 'branch'	Pattern AB	[i.]ka ~ i.[ka 'squid'
	Pattern C	ti.[da nu.du ~ [ti.da nu.du 'sun'	Pattern C	na.[bi me.e 'pot; pan'	Pattern C	u.[s] 'mortar; millstone'
3	Pattern AB	mi.du.mu nu.[du 'woman; female'	Pattern AB	mi.du.[mu me.e 'woman; female'	Pattern AB	mi.du.[mu 'woman; female'
	Pattern C	ja.ra.[bi nu.du 'child; minor'	Pattern C	[ja.ra.bi] me.[e 'child; minor'	Pattern C	[ja.ra.]bi 'child; minor'
4	Pattern AB	[çi].i.bu.ni nu.[du 'spine'	Pattern AB	[çi].i.[bu.ni me.e 'spine'	Pattern AB	çi.i.bu.[ni 'spine'
	Pattern C	nu.]z.[zu.u nu.du 'thread; string'	Pattern C	[mi.i.pa.na] me.[e 'face'	Pattern C	[mi.i.pa.]na 'face'

#### 4 Conclusion

In this chapter, I have analyzed the nominal accent system of the Yonaha dialect of Miyako on the basis of the utterances of one native speaker. In doing this, I was able to confirm the validity of the description given by Hirayama et al. (1967), which states that this dialect has a two-pattern accent system. As regards what vocabulary items fall under each accent pattern, I was able to confirm the validity of the description given by Matsumori (2011), which states that series A and series B have merged in this dialect (A,B/C). The surface realizations of the accent patterns, on the other hand, were shown not always to match the description by Hirayama et al. (1967). Furthermore, a phenomenon was observed in which the realizations of the accent patterns of nouns differed markedly depending on the presence and type of adjacent elements, which may be viewed as an alternation between different accent patterns. This fact, too, had not yet been reported in the literature (see Footnote 4, however).

Further research is needed in order to elucidate the accent pattern realization rules of the Yonaha dialect, also in respect to the accent pattern alternation. The results of our analysis suggest that the accent pattern realization rules of this dialect are complex. Depending on the results of further

research, however, it may become possible to propose simple rules for accent pattern realization in this dialect. On the other hand, recent research by myself and others suggests that the accent pattern realization rules of the Ikema dialect, which, like the Yonaha dialect, is a dialect of the Miyako language, are also very complex (Igarashi et al. 2012). It is worth examining the possibility that complex realization rules are a characteristic of the accent systems of the Miyako language.

The analysis results of this chapter were based on data of a limited quality and quantity, obtained in a one-hour survey with one native speaker. What is required next is an analysis of accent pattern realizations in more diverse contexts based on utterance data from a larger number of native speakers.

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# Verb Conjugation in the Miyako Language: Perfective, Negative, Past, and Continuative Forms

Shigehisa KARIMATA

## 1 Survey overview

Over a period of four days between September 4 and September 7, 2011, grammar surveys were conducted at nine sites on Miyakojima as part of the joint survey of the National Institute for Japanese Language and Linguistics. The survey sites were Bora, Uruka, Miyaguni, Yonaha, Kurima, Kugai, Karimata, Ikema, and Kuninaka. The surveyed items comprised the 37 verbal items included in *Ryūkyū Rettō no Gengo no Kenkyū: Zen-Shūroku Chōsahyō* (*Studies on the Languages of the Ryukyu Islands: Survey Sheets for All Villages*; henceforth ‘the *Zen-Shūroku*’), compiled in 1982 by the Okinawa Center for Language Studies. The verbal items included there have been selected with the purpose of getting a grasp of the conjugation classes of the dialects of the Ryukyuan languages in mind; included were Japanese regular verbs, comprising strong as well as weak regular verbs with stems ending in sounds such as \*b, \*m, \*k, \*g, \*s, \*t, \*n, \*r, \*w, and irregular verbs, namely *aru* ‘to be (inanimate); to exist’, *iru* ‘to be (animate)’, *kuru* ‘to come’, *suru* ‘to do’, and *nai* ‘to be absent; to be nonexistent’. In order to be able to identify the conjugation class of each verb, their perfective<sup>1</sup> (e.g. *suru*), negative (e.g. *shinai*), past (e.g. *shita*), and continuative (e.g. *shite*) forms were all included as sub-items.

The perfective forms were included in order to identify perfective aspect verb forms. The negative forms were included in order to identify the base stems of the verbs. Although base stems can also be obtained from imperative and hortative forms, the negative forms were chosen because imperative and hortative forms are not available for non-volitional verbs. The past tense forms were included in order to identify any *onbin* verb stems<sup>2</sup>. In the Northern Ryukyuan languages, *onbin* stems can also be identified in continuative forms. The continuative forms were included in the *Zen-Shūroku* in order to determine whether *onbin* stems are used in forms other than past tense forms in the Southern Ryukyuan languages.

For the joint survey on Miyakojima, we amended the *Zen-Shūroku* to include example sentences. The example sentences were included in the amended survey sheet as part of the research project *The Study of the Linguistic Geography of the Miyako Dialects of Ryukyuan*, JSPS KAKENHI

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<sup>1</sup> *Translator’s note*: throughout, the author uses the term ‘*daihyōkei*’, meaning ‘representative form’, akin to the term ‘dictionary form’.

<sup>2</sup> *Translator’s note*: ‘euphonic stems’; see section 4.1 for an explanation.



Grant-in-Aid for Scientific Research (B), led by Satoshi Nishioka (Okinawa International University), in order to make it easier to obtain the conjugated verb forms. The method used in the survey consisted of asking the informants to translate the example sentences on the survey sheet into their respective dialects.

Taking the considerable number of surveyed items and the number of survey days into account, the items were divided into three subsets and three groups of researchers tasked with eliciting the items of one subset each. Due to problems of informant availability and the number of available researchers, we were unable to form three groups and elicit all of the items at some of the sites. Furthermore, there were cases where a sentence was elicited but the intended word form was not obtained. In this chapter, I will use materials obtained in surveys I conducted in Shimajiri<sup>3</sup> (December 10, 2011), Kugai<sup>4</sup> (March 3, 2012), and Karimata<sup>5</sup> (August 15 and 16, 2011) in addition to the materials obtained in the joint survey on Miyakojima. The Shimajiri grammar survey is a completely new addition. In all, data from ten sites will be examined in this chapter.

Corresponding to the *shite*-type continuative of Japanese, the dialects of the Miyako language (henceforth simply ‘the Miyako language’ or ‘Miyako’) have two types of continuative forms. One type, exemplified by *numi*: ‘to.drink-CONTINUATIVE’ and *kaki*: ‘to.write-CONTINUATIVE’, is formed by suffixing *-i* to the base stem. The other type, exemplified by *numitti* (to.drink-CONTINUATIVE) and *kakitti* (to.write-CONTINUATIVE), ends in *-ti*. On the amended survey sheet the former is called the ‘*ari*-continuative’ and the latter the ‘*shite*-continuative’, so I will also use those terms in this chapter.

The *ari*-continuative is used for non-conclusive predicates in compound sentences and sentences with multiple predicates to express how two actions take place in succession, either in a subordinate or in a non-subordinate manner. The *shite*-continuative is used for non-conclusive predicates in compound sentences and sentences with multiple predicates to express mainly non-subordinate actions. The *ari*-continuative is also used for the first element of a compound predicate. In order to be able to elicit both types of continuative forms, example sentences for both were made for each verb in preparing the survey sheet.

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<sup>3</sup> The informant was S. I., a male speaker born and raised in Shimajiri, date of birth May 6, 1937.

<sup>4</sup> The informant was K. Y., a male speaker born and raised in Kugai, date of birth December 23, 1926.

<sup>5</sup> The informant was Y. N., a female speaker born and raised in Karimata, date of birth December 15, 1926.

## 2 Stems and suffixes

Conjugated verb forms consist of elements such as the stem, suffixes, and particles<sup>6</sup>. The suffixes and particles form the part that is modified according to the intended grammatical meaning; the remaining, unchanging part is the stem. Verbs in the Northern Ryukyuan languages alternate between three stem types: base stems, *onbin* stems, and infinitive stems<sup>7</sup>. Among these three stem types, base stems and *onbin* stems also exist in Japanese, but infinitive stems can be said to be peculiar to the Northern Ryukyuan languages. In this chapter, I will use ‘-’ to indicate boundaries between stems and suffixes, as in *kak-e*:, and ‘=’ to indicate boundaries between stems and particles, as in *nudi=kara*.

Base stems	<i>Onbin</i> stems	Infinitive stems
kak-aN ‘to.write-NEGATIVE’	kate-aN ‘to.write-PAST’	kate-uN ‘to.write-PERFECTIVE’
tur-aN ‘to.take-NEGATIVE’	tut-aN ‘to.take-PAST’	tu-iN ‘to.take-PERFECTIVE’
jum-aN ‘to.read-NEGATIVE’	jud-aN ‘to.read-PAST’	jun-uN ‘to.read-PERFECTIVE’

Table 1. The Shuri dialect of Naha City, Okinawa Island.

Base stems	<i>Onbin</i> stems	Infinitive stems
hak'-aN ‘to.write-NEGATIVE’	hattʒ-aN ‘to.write-PAST’	hattʒ-uN ‘to.write-PERFECTIVE’
tur-aN ‘to.take-NEGATIVE’	tutt-aN ‘to.take-PAST’	tu-N ‘to.take-PERFECTIVE’
jum-aN ‘to.read-NEGATIVE’	jud-aN ‘to.read-PAST’	jum-iN ‘to.read-PERFECTIVE’

Table 2. The Jana dialect of Nakijin Village.

As can be seen in Table 3, and as was also pointed out by Moriyasu Motonaga (1973), it is not necessary to posit *onbin* stems, as in Modern Japanese (henceforth just ‘Japanese’), or infinitive stems, as in the Northern Ryukyuan languages, for the Miyako language; only base stems have to be recognized<sup>8</sup>. The fact that it is not necessary to posit *onbin* stems is a notable characteristic of Miyako verb conjugation. Some verbs in Miyako have a base stem variant with a reduplicated final consonant. Among the items in our survey, *kav* ‘to put on (headwear)’, *niv* ‘to fall asleep’, and *az* ‘to say’ have such variant stems. While the perfective forms *kav*, *niv*, and *az* consist of stems ending in consonants without suffixes, their stem-final consonants are reduplicated in the corresponding imperative, hortative, and negative forms: *kavv-i*

<sup>6</sup> I use the terms ‘stem’ and ‘suffix’ as defined by Shigeyuki Suzuki (1972).

<sup>7</sup> *Translator’s note*: *ren’yō* stems.

<sup>8</sup> I have adopted the terms ‘base stem’, ‘*onbin* stem’, and ‘infinitive stem’ for the three stem types from Yukio Uemura’s (1963) ‘Shuri Hōgen no Bunpō’, *Okinawago Jiten (A Dictionary of Okinawan)*. In addition to these three stems types, Uemura also posits fused stems and contracted stems.

‘to.put.on(headwear)-IMPERATIVE’, *kavv-a* ‘to.put.on(headwear)-HORTATIVE’, *kavv-an* ‘to.put.on(headwear)-NEGATIVE’, *nivv-i* ‘to.fall.asleep-IMPERATIVE’, *nivv-a* ‘to.fall.asleep-HORTATIVE’, *nivv-an* ‘to.fall.asleep-NEGATIVE’, *azz-i* ‘to.say-IMPERATIVE’, *azz-a* ‘to.say-HORTATIVE’, and *azz-an* ‘to.say-NEGATIVE’. The perfective form *v*: ‘to sell’ consists of a single long consonant without a suffix, but the corresponding imperative, hortative, and negative forms have stems that consists of just a reduplicated short consonant: *vv-i* ‘to.sell-IMPERATIVE’, *vv-a* ‘to.sell-HORTATIVE’, and *vv-an* ‘to.sell-NEGATIVE’. Although there are verb types with stem variants different from these, as well, I hope to discuss them as part of a complete description of the conjugated forms and conjugation types of the Miyako dialects at a later time.

Base stems		
kak-an ‘to.write-NEGATIVE’	kak-ŋtaŋ ‘to.write-PAST’	kak-ŋ ‘to.write-PERFECTIVE’
jum-an ‘to.read-NEGATIVE’	jum-taŋ ‘to.read-PAST’	jum ‘to.read.PERFECTIVE’
tur-an ‘to.take-NEGATIVE’	tu-ŋtaŋ ‘to.take-PAST’	tu-ŋ ‘to.take-PERFECTIVE’
kavv-an	kav-taz	kav
‘to.put.on(headwear)-NEGATIVE’	‘to.put.on(headwear)-PAST’	‘to.put.on(headwear).PERFECTIVE’

Table 3. The Shimozato dialect of Hirara.

The verbs elicited in response to the following Japanese verbs have been identified as strong verbs: *tobu* ‘to fly; to jump’, *asobu* ‘to play’, *kogu* ‘to row’, *iku* ‘to go’, *otosu* ‘to drop’, *dasu* ‘to put out’, *motsu* ‘to carry; to hold; to have’, *kiru* ‘to cut’, *shibaru* ‘to tie up’, *horu* ‘to dig’, *furu* ‘to fall (e.g. rain)’, *kaburu* ‘to put on (headwear)’, *tojiru* ‘to close’, *neru* ‘to sleep’, *kau*, ‘to buy’, *uru* ‘to sell’, *nomu* ‘to drink’, *taberu* ‘to eat’, *you* ‘to get drunk’, *arau* ‘to wash’, and *iu* ‘to say’. The verbs elicited in response to the following Japanese verbs have been identified as weak verbs: *suteru* ‘to discard’, *oriru* ‘to get off (e.g. a vehicle)’, *ochiru* ‘to fall’, *kureru* ‘to give’, *morau* ‘to receive’, *okiru* ‘to get up’, *kiru* ‘to put on (e.g. clothing)’, *suwaru* ‘to sit down’, *miru* ‘to see; to look’, and *keru* ‘to kick’. The verbs elicited in response to the following Japanese verbs have been identified as irregular verbs: *kuru* ‘to come’, *suru* ‘to do’, *aru* ‘to be (inanimate); to exist’, *iru* ‘to be (animate)’, *shinu* ‘to die’, and *nai* ‘to be absent; to be nonexistent’.

Although *nai* is classed as an adjective in Japanese, the equivalent in the Ryukyuan languages is classed as an irregular verb. In Miyako, adjectives have conjugated forms consisting of a grammaticized combination of a *-ku*-infinitive and the existential verb *az* or forms containing a reduplicated stem, for example; the Miyako equivalent of *nai* is classed as a verb because it has no such forms. Even though it is classed as a verb, however, it of course does not have the morphological categories of aspect and voice, nor does it have forms for the imperative or hortative moods; in these respects, it has the same grammatical properties as adjectives.

In response to *shibaru*, the use of a verb corresponding to Japanese *kubiru* ‘to tie up’ is expected; in response to *neru*, that of a verb corresponding to *nemuru* ‘to sleep’; in response to *taberu*, that of a verb corresponding to *kurau* ‘to eat’; in response to *tojiru*, that of a verb corresponding to *kuru*; in response to *morau*, that of a verb corresponding to *eru* ‘to get’; in response to *suwaru*, that of a verb corresponding to *wiru* ‘to sit down’; in response to *iru*, that of a verb corresponding to *woru* ‘to be (animate)’.

Among the weak verbs of Japanese, those with one-syllable stems ending in the vowel *-i*, such as *mi-ru* ‘to see; to look’, *ki-ru* ‘to put on (e.g. clothing)’, and *ni-ru* ‘to boil’, were also weak in Central Old Japanese (henceforth just ‘Old Japanese’), but those with two-syllable stems ending in either the vowel *-i* or the vowel *-e* (called ‘upper bigrade verbs’ and ‘lower bigrade verbs’, respectively) had a combination of weak conjugated forms, such as negative *oki-zu* ‘to.get.up-NEGATIVE’ and imperative *oki-yo* ‘to.get.up-IMPERATIVE’, and strong conjugated forms, such as perfective *ok-u* ‘to.get.up-PERFECTIVE’ and adnominal non-past *ok-uru* ‘to.get.up-ADNOMINAL’. Verbs of the latter type can be called verbs with a ‘mixed conjugation’ of strong and weak forms (henceforth ‘mixed verbs’). The verb *shinu* ‘to die’, a strong verb in Japanese, can be seen as having had a type of mixed conjugation combining conjugated forms comprising a strong conjugation stem and a suffix, such as *sin-azu* ‘to.die-NEGATIVE’ and *sin-itari* ‘to.die-ALTERNATIVE’, with conjugated forms comprising a mixed conjugation stem and a suffix, such as *sin-uru* ‘to.die-2<sup>ND</sup>.CONCLUSIVE’ and *sin-ure* ‘to.die-3<sup>RD</sup>.CONCLUSIVE’<sup>9</sup>.

			Negative	Imperative	Past	Non-past	Adnominal
Modern	Strong conjugation	‘to go’	ik-anai	ik-e	iQ-ta	ik-u	ik-u
		‘to die’	ein-anai	ein-e	eiN-da	ein-u	ein-u
	Weak conjugation	‘to get up’	oki-nai	oki-ro	oki-ta	ok-iru	ok-iru
		‘to see’	mi-nai	mi-ro	mi-ta	mi-ru	mi-ru
Old Japanese	Strong conjugation	‘to go’	ik-adzu	ik-e	ik-itari	ik-u	ik-u
	Mixed conjugation <i>a</i>	‘to die’	ein-adzu	ein-e	eiNi-tari	ein-u	ein-uru
	Mixed conjugation <i>b</i>	‘to get up’	oki-dzu	oki-jo	oki-tari	ok-u	ok-uru
	Weak conjugation	‘to see’	mi-dzu	mi-jo	mi-tari	mi-ru	mi-ru

Table 4. Verb conjugation types in Japanese.

<sup>9</sup> The second conclusive form is used for predicates of emphatic sentences, agreeing with the focus particles *zo*, *nan*, *ya*, and *ka*, and is homophonous with the adnominal form. The third conclusive form is used for predicates of emphatic sentences, as well, agreeing with *koso*, and is homophonous with the conditional form.

In the Shimajiri, Karimata, and Kugai dialects, not only the negative of the Old Japanese weak conjugation, but also those of the Old Japanese mixed conjugations correspond to forms in which the negative suffix *-n* is attached to a base stem ending in the vowel *-i*. In other words, the mixed conjugations of Old Japanese have become weak. In the Shimajiri and Karimata dialects *shinu* ‘to die’ has become weak, as well; it has become strong in the Kugai dialect.

- (1) *ki:ju jurugææa:mai n:ta: utin.* (Karimata)  
 tree=ACCUSATIVE to.shake-CONTINUATIVE=too fruit=TOPIC to.fall-NEGATIVE (*ochinai*)  
 ‘No mandarins fall from the tree, even when you shake it.’<sup>10</sup>
- (2) *baja: umanna urin.* (Kugai)  
 I=TOPIC here=LOCATIVE=TOPIC to.get.off-NEGATIVE (*orinai*) (Kugai)  
 ‘I don’t get off here.’

While forms such as the perfective and the imperative of verbs corresponding to Old Japanese weak and mixed verbs also follow the weak conjugation in, among others, the Bora, Miyaguni, and Kurima dialects, comprising a base stem ending in the vowel *-i* or the vowel *-i:* and a suffix such as *-ru*, the negative form instead follows the strong conjugation, comprising a base stem ending in a consonant and a suffix beginning with the vowel *-u* or the vowel *-u:*. In these dialects, the weak conjugation has become mixed.

- (3) *vvaga tuzzuba smari fi:ru.* (Bora)  
 you=NOMINATIVE chicken=ACCUSATIVE to.tie.up-CONTINUATIVE to.give-IMPERATIVE  
 (*kure*)  
 ‘You tie up the chicken.’ (imperative)
- (4) *uty<sup>t</sup>ha sudaŋkaija ka:ssuba fu:ŋ.* (Bora)  
 younger.brother=TOPIC older.brother=DATIVE=TOPIC sweets=ACCUSATIVE  
to.give-NEGATIVE (*kurenai*)  
 ‘The younger brother doesn’t give sweets to the older brother.’
- (5) *kunu fsuzza azumakar<sup>r</sup>ia numi mi:ru.* (Bora)  
 this medicine=TOPIC to.be.sweet=because to.take-CONTINUATIVE to.see-IMPERATIVE  
 (*miro*)  
 ‘This medicine is sweet, so try taking it.’

<sup>10</sup> *Translator’s note:* throughout this chapter, Japanese model sentences have been replaced by glosses and their English translations; the relevant Japanese conjugated verb forms of the model sentences are given underlined in parentheses.

- (6) uja: jakju:juba: mju:ŋ. (Bora)  
 father=TOPIC baseball=TOPIC to.see-NEGATIVE (*minai*)  
 ‘My father doesn’t watch baseball.’
- (7) gumiu umaŋkai s̄tiru. (Miyaguni)  
 garbage=ACCUSATIVE there=LOCATIVE to.discard-IMPERATIVE (*sutero*)  
 ‘Throw away the garbage over there.’
- (8) mma: fz:fznu k̄nnumai s̄ituŋ. (Miyaguni)  
 grandmother=TOPIC to.be.old-ADNONMINAL kimono=too to.discard-NEGATIVE (*sutenai*)  
 ‘My grandmother doesn’t even throw away her old kimonos.’
- (9) unu ma:zzu kumaŋkai kiri fi:ru. (Miyaguni)  
 that ball=ACCUSATIVE here=LOCATIVE to.kick-CONTINUATIVE to.give-IMPERATIVE  
 (*kure*)  
 ‘Kick that ball this way.’
- (10) q̄t̄ūtoo adzaŋ koosuba fu:ŋ. (Miyaguni)  
 younger.brother=TOPIC older.brother=DATIVE sweets=ACCUSATIVE to.give-NEGATIVE  
 (*kurenai*)  
 ‘The younger brother won’t give sweets to the older brother.’
- (11) vvaŋa tuzzuba: smari/s̄maŋi fi:ro. (Kurima)  
 you=NOMINATIVE chicken=ACCUSATIVE to.tie.up-CONTINUATIVE to.give-IMPERATIVE  
 (*kure*)  
 ‘You tie up the chicken.’ (imperative)
- (12) ut̄ūtoa azanna/suzanna ko:suba: fu:ŋ. (Kurima)  
 younger.brother=TOPIC older.brother=DATIVE=TOPIC sweets=ACCUSATIVE  
to.give-NEGATIVE (*kurenai*)  
 ‘The younger brother won’t give sweets to the older brother.’

There are Miyako dialects in which a mixed conjugation is used for verbs that correspond to Old Japanese mixed verbs. They are mixed conjugations of a different kind, however; as will be discussed later, strong conjugation forms are used for the conclusive non-past and adnominal non-past forms of mixed verbs in Old Japanese, while they are used for the negative and hortative forms of mixed verbs in Miyako. The negative suffixes *-uŋ* and *-u:ŋ* are used for mixed verbs, *-iŋ* and *-i:ŋ* for weak verbs, and *-aŋ* and *-a:ŋ* for strong verbs.

			Negative	Imperative	Past	Non-past	Adnominal
Bora	Strong conjugation	‘to go’	ik-aŋ	ik-i	ik-sta:	ik-s	ik-s
		‘to die’	sn-aŋ	sn-i	sn-ta	sn	sn
	Mixed conjugation	‘to get up’	uk-uŋ	uki-ru	uki-ta:	uki	uki-z
		‘to see’	mj-u:ŋ	mi:-ru	mi:-ta:	mi:	mi:-z
Simajiri	Strong conjugation	‘to go’	ik-aŋ	ik-i	ik-staz	ik-s	ik-s
		‘to die’	sni-ŋ	sni-ru	sn-ta	sni-z	sni-z
	Weak conjugation	‘to get up’	uki-ŋ	uki-ru	uki-taz	uki-z	uki-z
		‘to see’	mi:-ŋ	mi:-ru	mi:-taz	mi:-z	mi:-z

Table 5. Verb conjugation types in the Bora and Simajiri dialects.

In this chapter, we examine the conjugated forms and conjugation types by comparing them to those of Old Japanese, and occasionally those of Modern Japanese, as well.

### 3 Negative forms

Whether a Miyako verb follows a strong conjugation, a weak conjugation, or a mixed conjugation can be determined by looking at its negative form.

Miyako negative forms end in either *-an*, *-in*, or *-un*. Forms in which *-dza:n* or *-d'a:n* is substituted for the final *-n* are observed, as well. Forms ending in *-an*, *-in*, or *-un* take a variety of shapes and are used in multiple senses. Forms ending *-adza:n*, *-i-dza:n*, and *-udza:n* express the intention or judgment of the speaker. As the forms ending in *-adza:n*, *-i-dza:n*, and *-udza:n* are also formed with base stems, I will treat them together with *-an* in this chapter.

- (13) uja: tɛiŋkzga bazkaiba imkaija ikazaŋ. (Miyaguni)  
 father=TOPIC weather=NOMINATIVE to.be.bad=because sea=ALLATIVE=TOPIC  
to.go-NEGATIVE (*ikanai*)  
 ‘My father won’t go to the sea, because the weather is bad.’
- (14) ameno tʰo:kʲa:nna pukaŋkai nimottsu idasadza:ŋ. (Miyaguni)  
 rain=GENITIVE time=LOCATIVE=TOPIC outside=LOCATIVE=TOPIC luggage=ACCUSATIVE  
to.put.out-NEGATIVE (*dasanai*)  
 ‘When it’s raining, I don’t put my things outside.’
- (15) ka:ʲa: unaga du:nu wa:juba: vvan/vvadja:n. (Yonaha)  
 he=TOPIC self=GENITIVE pig=TOPIC to.sell-NEGATIVE (*uranai*)  
 ‘He doesn’t sell his pig.’

*-an* is used in verbs that correspond to Old Japanese strong verbs; it is suffixed to base stems ending in a consonant. *-in* is used in verbs that correspond to Old Japanese weak verbs; when their negative forms are compared to other conjugated forms, they can be analyzed as *uki-n*, consisting of a vowel stem of the weak conjugation to which the suffix *-n* has been attached. *-un* is used in verbs that correspond to Old Japanese mixed verbs; while their imperative forms are formed by suffixing *-ru* to a vowel stem, their negative forms can be analyzed as *uk-un*, consisting of a consonant stem of the strong conjugation to which the suffix *-un* has been attached. When their conjugations are considered in their entirety, verbs whose negative forms are formed with the suffix *-un* thus follow a mixed conjugation.

For reference, I will also give imperative forms obtained in the survey. While imperative forms are formed by suffixing *-i* to a base stem that ends in a consonant in the strong conjugation, they are formed by suffixing *-ru* to a base stem that ends in the vowel *-i* or the vowel *-i:* in the weak conjugation.

#### *The Bora dialect*

Negative forms of verbs that derive from Old Japanese mixed verbs follow the mixed conjugation in the Bora dialect, with the suffixes *-uŋ* and *-u:ŋ*. On the other hand, the forms corresponding to *keranai* ‘to.kick-NEGATIVE’, *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’, and *winai* ‘to.sit.down-NEGATIVE’, which derive from Old Japanese weak verbs, as well as *shinantai* ‘to.die-NEGATIVE’, which derives from a strong verb, follow the strong conjugation, while the form corresponding to *minai* ‘to.see-NEGATIVE’, which derives from an Old Japanese weak verb, follows the mixed conjugation. As regards irregular verbs, the form corresponding to *shinai* ‘to.do-NEGATIVE’ follows the mixed conjugation, while the form corresponding to *inai* ‘to.be(animate)-NEGATIVE’ follows the strong conjugation.

#### **Strong conjugation**

- *tubaŋ* ‘to.fly-NEGATIVE’, *asɽpaŋ* ‘to.play-NEGATIVE’, *numaŋ* ‘to.drink-NEGATIVE’, *kugaŋ* ‘to.row-NEGATIVE’, *ikaŋ* ‘to.go-NEGATIVE’, *utusaŋ* ‘to.drop-NEGATIVE’, *idasaŋ* ‘to.put.out-NEGATIVE’, *mutaŋ* ‘to.carry-NEGATIVE’, *puran* ‘to.dig-NEGATIVE’, *ffaŋ* ‘to.fall(e.g. rain)-NEGATIVE’, *kssaŋ* ‘to.cut-NEGATIVE’, *vvaŋ* ‘to.sell-NEGATIVE’, *kavvaŋ* ‘to.put.on(headwear)-NEGATIVE’, *nivvaŋ* ‘to.fall.asleep-NEGATIVE’, *azzaŋ* ‘to.say-NEGATIVE’, *ka:ŋ* ‘to.buy-NEGATIVE’, *fa:ŋ* ‘to.eat-NEGATIVE’, *ara:ŋ* ‘to.wash-NEGATIVE’, *mura:ŋ* ‘to.receive-NEGATIVE’, *bja:ŋ* ‘to.get.drunk-NEGATIVE’
- *kiran* ‘to.kick-NEGATIVE’, *kssaŋ* ‘to.put.on(e.g. clothing)-NEGATIVE’, *bzzaŋ* ‘to.sit.down-NEGATIVE’, *snaŋ* ‘to.die-NEGATIVE’



### Mixed conjugation

- uruŋ ‘to.get.off-NEGATIVE’, utuŋ ‘to.fall-NEGATIVE’, ukuŋ ‘to.get.up-NEGATIVE’, stuŋ ‘to.discard-NEGATIVE’, fu:ŋ ‘to.give-NEGATIVE’
- mju:ŋ ‘to.see-NEGATIVE’, ju:ŋ ‘to.get-NEGATIVE’

### Irregular conjugation

- ku:ŋ ‘to.come-NEGATIVE’, su:ŋ ‘to.do-NEGATIVE’, uraŋ ‘to.be(animate)-NEGATIVE’, nja:ŋ ‘to be absent’

### Imperative forms

- piriŋo ‘to.go-IMPERATIVE=EMPHATIC’, kai ‘to.buy-IMPERATIVE’, fai ‘to.eat-IMPERATIVE’, jukui ‘to.rest-IMPERATIVE’, n’ivvi ‘to.fall.asleep-IMPERATIVE’
- mi:ru ‘to.see-IMPERATIVE’, fi:ru ‘to.give-IMPERATIVE’, zziru / iziru ‘to.put.in-IMPERATIVE’
- ku: ‘to.come-IMPERATIVE’, ŋi:ru / aŋiru ‘to.do-IMPERATIVE’

### *The Uruka dialect*

Negative forms of verbs that derive from Old Japanese mixed verbs follow the mixed conjugation in the Uruka dialect, with the suffix *-uŋ*, except for *ukiŋ* ‘to.get.up-NEGATIVE’, which follows the weak conjugation. The form corresponding to *minai* ‘to.see-NEGATIVE’, which derives from an Old Japanese weak verb, is the weak conjugation form *mi:ŋ*; forms for other verbs that derive from Old Japanese weak verbs were not obtained, however, so further details on the Uruka dialect remain unclear.

### Strong conjugation

- tubaŋ ‘to.fly-NEGATIVE’, asŋpaŋ ‘to.play-NEGATIVE’, numaŋ ‘to.drink-NEGATIVE’, kugaŋ ‘to.row-NEGATIVE’, ffaŋ ‘to.fall(e.g. rain)-NEGATIVE’, utusaŋ ‘to.drop-NEGATIVE’, idasaŋ ‘to.put.out-NEGATIVE’, puraŋ ‘to.dig-NEGATIVE’, vvaŋ ‘to.sell-NEGATIVE’, kŋsaŋ ‘to.cut-NEGATIVE’, ka:ŋ ‘to.buy-NEGATIVE’, fa:ŋ ‘to.eat-NEGATIVE’, ara:ŋ ‘to.wash-NEGATIVE’, mura:ŋ ‘to.receive-NEGATIVE’, bjo:ŋ ‘to.get.drunk-NEGATIVE’

### Mixed conjugation

- urudjaŋ ‘to.get.off-NEGATIVE’, utuŋ ‘to.fall-NEGATIVE’, stuŋ ‘to.discard-NEGATIVE’, ffudzaŋ ‘to.give-NEGATIVE’

### Weak conjugation

- ukiŋ ‘to.get.up-NEGATIVE’
- mi:ŋ ‘to.see-NEGATIVE’

### Irregular conjugation

- ku:ŋ ‘to.come-NEGATIVE’

### Imperative forms

- iki jo: ‘to.go-IMPERATIVE=EMPHATIC’, piri ‘to.go-IMPERATIVE’, kai ‘to.buy-IMPERATIVE’, fai ‘to.eat-IMPERATIVE’, jukui ‘to.eat-IMPERATIVE’, nivvi ‘to.fall.asleep-IMPERATIVE’
- mi:ru ‘to.see-IMPERATIVE’, kākiru ‘to.put.on-IMPERATIVE’, ffiru / fi:ru ‘to.give-IMPERATIVE’, izirujo: / idzirujo: ‘to.put.in-IMPERATIVE=EMPHATIC’
- ku: ‘to.come-IMPERATIVE’,

### *The Miyaguni dialect*

Negative forms of verbs that derive from Old Japanese mixed verbs follow the mixed conjugation in the Miyaguni dialect, with the suffix *-uŋ*, except for *ukiŋ* ‘to.get.up-NEGATIVE’, which follows the weak conjugation. The form corresponding to *keranai* ‘to.kick-NEGATIVE’ is the strong conjugation form *kiraj*; forms for other verbs that derive from Old Japanese weak verbs were not obtained, however, so further details on the Miyaguni dialect remain unclear.

### Strong conjugation

- asɿpaŋ ‘to.play-NEGATIVE’, nomaŋ ‘to.drink-NEGATIVE’, kugaŋ ‘to.row-NEGATIVE’, ikazaŋ ‘to.go-NEGATIVE’, ffaŋ ‘to.fall(e.g. rain)-NEGATIVE’, utusaŋ ‘to.drop-NEGATIVE’, idasadza:ŋ ‘to.put.out-NEGATIVE’, motadza:ŋ ‘to.carry-NEGATIVE’, poraŋ ‘to.dig-NEGATIVE’, kɿsaŋ ‘to.cut-NEGATIVE’, ʷvaŋ ‘to.sell-NEGATIVE’, ɸa:ŋ ‘to.eat-NEGATIVE’, ka:ŋ ‘to.buy-NEGATIVE’, bʲo:ŋ ‘to.get.drunk-NEGATIVE’, ara:ŋ ‘to.wash-NEGATIVE’, mora:ŋ ‘to.receive-NEGATIVE’
- kiraj ‘to.kick-NEGATIVE’

### Mixed conjugation

- uruza:ŋ ‘to.get.off-NEGATIVE’, utuŋ ‘to.fall-NEGATIVE’, sutuŋ ‘to.discard-NEGATIVE’, fuzzaŋ ‘to.tie.up-NEGATIVE’, ɸu:ŋ ‘to.give-NEGATIVE’, ituŋ ‘to.go.out-NEGATIVE’

### Weak conjugation

- ukiŋ ‘to.get.up-NEGATIVE’

### Irregular conjugation

- ku:ŋ ‘to.come-NEGATIVE’

### Imperative forms

- p<sup>h</sup>iri ‘to.go-IMPERATIVE’, kai ‘to.buy-IMPERATIVE’, ɸai ‘to.eat-IMPERATIVE’, jukui ‘to.rest-IMPERATIVE’, nivvi ‘to.fall.asleep-IMPERATIVE’
- miru ‘to.see-IMPERATIVE’, fi:ru ‘to.give-IMPERATIVE’, sɿturu ‘to.discard-IMPERATIVE’, ku: ‘to.come-IMPERATIVE’

*The Yonaha dialect*

The negative forms of some verbs that derive from Old Japanese mixed verbs follow the mixed conjugation in the Yonaha dialect, with the suffix *-uj*, while those of others follow the weak conjugation, with the suffix *-ij*. Negative forms of verbs that derive from Old Japanese weak verbs were not obtained, so further details on the Yonaha dialect remain unclear.

**Strong conjugation**

- tuban ‘to.fly-NEGATIVE’, kugan ‘to.row-NEGATIVE’, ikan ‘to.go-NEGATIVE’, ffan ‘to.fall(e.g. rain)-NEGATIVE’, utusan ‘to.drop-NEGATIVE’, kiran ‘to.kick-NEGATIVE’, kiran ‘to.cut-NEGATIVE’, idasan (to.put.out-NEGATIVE) mutan ‘to.carry-NEGATIVE’, vvān ~ vvadja:n ‘to.sell-NEGATIVE’, ka:n ‘to.buy-NEGATIVE’

**Mixed conjugation**

- urudjan ‘to.get.off-NEGATIVE’, utun ‘to.fall-NEGATIVE’, stun ‘to.discard-NEGATIVE’, fudja:n ‘to.give-NEGATIVE’

**Weak conjugation**

- ukin ‘to.get.up-NEGATIVE’

**Irregular conjugation**

- ku:n ‘to.come-NEGATIVE’

**Imperative forms**

- iki ‘to.go-IMPERATIVE’, kai ‘to.buy-IMPERATIVE’, fe: ‘to.eat-IMPERATIVE’, jukui ‘to.rest-IMPERATIVE’, nivvi ‘to.fall.asleep-IMPERATIVE’
- mi:ru ‘to.see-IMPERATIVE’, kakiru ‘to.put.on-IMPERATIVE’, ffiru / firu ‘to.give-IMPERATIVE’
- ku: ‘to.come-IMPERATIVE’

*The Kurima dialect*

Negative forms of verbs that derive from Old Japanese mixed verbs follow the mixed conjugation in the Kurima dialect, with the suffix *-uj*. The form corresponding to *keranai* ‘to.kick-NEGATIVE’ is the strong conjugation form *kiranj*; forms for other verbs that derive from Old Japanese weak verbs were not obtained, however, so further details on the Kurima dialect remain unclear.

**Strong conjugation**

- tubanj ‘to.fly-NEGATIVE’, aspanj ‘to.play-NEGATIVE’, numanj ‘to.drink-NEGATIVE’, kuganj ‘to.row-NEGATIVE’, ikanj ‘to.go-NEGATIVE’, utusanj ‘to.drop-NEGATIVE’, idasanj ‘to.put.out-NEGATIVE’, muteanj ‘to.carry-NEGATIVE’, pranj ‘to.dig-NEGATIVE’, sɣmaranj

‘to.tie.up-NEGATIVE’, ffaŋ ‘to.fall(e.g. rain)-NEGATIVE’, tssaŋ ‘to.cut-NEGATIVE’, muraŋ ‘to.receive-NEGATIVE’, vvaŋ ‘to.sell-NEGATIVE’, fa:ŋ ‘to.eat-NEGATIVE’, ka:ŋ ‘to.buy-NEGATIVE’, ara:ŋ ‘to.wash-NEGATIVE’, bʲo:ŋ ‘to.get.drunk-NEGATIVE’

- kiraŋ ‘to.kick-NEGATIVE’

#### **Mixed conjugation**

- uruŋ ‘to.get.off-NEGATIVE’, utuŋ ‘to.fall-NEGATIVE’, ukuŋ ‘to.get.up-NEGATIVE’, stuŋ ‘to.discard-NEGATIVE’, fu:ŋ ‘to.give-NEGATIVE’

#### **Irregular conjugation**

- ku:ŋ ‘to.come-NEGATIVE’

#### **Imperative forms**

- iki ‘to.go-IMPERATIVE’, pire ‘to.go-IMPERATIVE’, smare ‘to.tie.up-IMPERATIVE’, idae: ‘to.put.out-IMPERATIVE’, jarae ‘to.give(-CAUSATIVE)-IMPERATIVE’, teje: ‘to.cut-IMPERATIVE’, ke: ‘to.buy-IMPERATIVE’, fe: ‘to.eat-IMPERATIVE’, jukui / juke: ‘to.rest-IMPERATIVE’, nivvi ‘to.fall.asleep-IMPERATIVE’
- mi:ru ‘to.see-IMPERATIVE’, fi:ru ‘to.give-IMPERATIVE’, stiro ‘to.discard-IMPERATIVE’, zziro ‘to.put.in-IMPERATIVE’
- ku: ‘to.come-IMPERATIVE’

#### *The Kugai dialect*

Negative forms of verbs that derive either from Old Japanese weak verbs or from mixed verbs follow the weak conjugation in the Kugai dialect, with the suffixes *-iŋ* and *-i:ŋ*. Furthermore, the form corresponding to *shinai* ‘to.do-NEGATIVE’, which derives from an Old Japanese irregular verb, is the weak conjugation form *ʃi:ŋ*. The forms corresponding to *keranai* ‘to.kick-NEGATIVE’ and *shinanai* ‘to.die-NEGATIVE’ follow the strong conjugation. While the forms corresponding to *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’ and *winai* ‘to.sit.down-NEGATIVE’ follow the strong conjugation in other dialects, the weak conjugation forms *kifiŋ* and *biziŋ* are used in the Kugai dialect.

#### **Strong conjugation**

- tubaŋ ‘to.fly-NEGATIVE’, aspaŋ ‘to.play-NEGATIVE’, numaŋ ‘to.drink-NEGATIVE’, kugaŋ ‘to.row-NEGATIVE’, ikaŋ ‘to.go-NEGATIVE’, utasaŋ ‘to.drop-NEGATIVE’, idasaŋ ‘to.put.out-NEGATIVE’, mutaŋ ‘to.carry-NEGATIVE’, puraŋ ‘to.dig-NEGATIVE’, furaŋ ‘to.fall(e.g. rain)-NEGATIVE’, kʲsaŋ ‘to.cut-NEGATIVE’, sɰmaraŋ ‘to.tie.up-NEGATIVE’, vvaŋ ‘to.sell-NEGATIVE’, kavvaŋ ‘to.put.on(headwear)-NEGATIVE’, ffaŋ ‘to.close-NEGATIVE’,

nivvaŋ ‘to.fall.asleep-NEGATIVE’, ka:ŋ ‘to.buy-NEGATIVE’, fa:ŋ ‘to.eat-NEGATIVE’, bja:ŋ ‘to.get.drunk-NEGATIVE’, ara:ŋ ‘to.wash-NEGATIVE’, andzaŋ ‘to.say-NEGATIVE’

- kiraŋ ‘to.kick-NEGATIVE’, snaŋ ‘to.die-NEGATIVE’

#### **Weak conjugation**

- uriŋ ‘to.get.off-NEGATIVE’, utiŋ ‘to.fall-NEGATIVE’, ukiŋ ‘to.get.up-NEGATIVE’, sɽiŋ ‘to.discard-NEGATIVE’, fi:ŋ ‘to.give-NEGATIVE’

- zziŋ ‘to.get-NEGATIVE’, kiŋiŋ ‘to.put.on(e.g. clothing)-NEGATIVE’, bi:ŋ ‘to.sit.down-NEGATIVE’, mi:ŋ ‘to.see-NEGATIVE/to.be(animate)-NEGATIVE’

#### **Irregular conjugation**

- ku:ŋ ‘to.come-NEGATIVE’, ʃi:ŋ ‘to.do-NEGATIVE’, nja:ŋ ‘to be absent’

#### **Imperative forms**

- iki ‘to.go-IMPERATIVE’, jukui ‘to.rest-IMPERATIVE’, kai ‘to.buy-IMPERATIVE’, idafi ‘to.put.out-IMPERATIVE’, uri ‘to.be(animate)-IMPERATIVE’, kavvi ‘to.put.on(headwear)-IMPERATIVE’, ffijo: ‘to.close-IMPERATIVE’

- mi:ru ‘to.see-IMPERATIVE’, fi:ru ‘to.give-IMPERATIVE’, kaŋiru ‘to.put.on-IMPERATIVE’, kiŋiru ‘to.put.on(e.g. clothing)-IMPERATIVE’

- ku: ‘to.come-IMPERATIVE’, ʃi:ru ‘to.do-IMPERATIVE’

#### *The Shimajiri dialect*

Negative forms of verbs that derive either from Old Japanese weak verbs or from mixed verbs follow the weak conjugation in the Shimajiri dialect, with the suffixes *-iŋ* and *-i:ŋ*. The forms corresponding to *keranai* ‘to.kick-NEGATIVE’ and *winai* ‘to.sit.down-NEGATIVE’, which derive from weak verbs, follow the strong conjugation. As regards irregular verbs, the form corresponding to *shinai* ‘to.do-NEGATIVE’ follows the weak conjugation. *ʃiro* > *sru* > *ssu*.

#### **Strong conjugation**

- tubaŋ ‘to.fly-NEGATIVE’, appaŋ ‘to.play-NEGATIVE’, numaŋ ‘to.drink-NEGATIVE’, kugaŋ ‘to.row-NEGATIVE’, ikaŋ ‘to.go-NEGATIVE’, utusaŋ ‘to.drop-NEGATIVE’, idasaŋ ‘to.put.out-NEGATIVE’, mutaŋ ‘to.carry-NEGATIVE’, puraŋ ‘to.dig-NEGATIVE’, ffaŋ ‘to.fall(e.g. rain)-NEGATIVE’, kssaŋ ‘to.cut-NEGATIVE’, fgzzaŋ ‘to.tie.up-NEGATIVE’, kavvaŋ ‘to.put.on(headwear)-NEGATIVE’, vva:ŋ ‘to.sell-NEGATIVE’, ffaŋ ‘to.close-NEGATIVE’, nivvaŋ ‘to.fall.asleep-NEGATIVE’, azzaŋ ‘to.say-NEGATIVE’, ka:ŋ ‘to.buy-NEGATIVE’, fa:ŋ ‘to.eat-NEGATIVE’, ara:ŋ ‘to.wash-NEGATIVE’, bja:ŋ ‘to.get.drunk-NEGATIVE’

- kiraŋ ‘to.kick-NEGATIVE’, bz:zaŋ ‘to.sit.down-NEGATIVE’

#### **Weak conjugation**

- *uriŋ* ‘to.get.off-NEGATIVE’, *utŋ* ‘to.fall-NEGATIVE’, *stŋ* ‘to.discard-NEGATIVE’, *fi:ŋ* ‘to.give-NEGATIVE’, *ukiŋ* ‘to.get.up-NEGATIVE’, *sniŋ* ‘to.die-NEGATIVE’
- *mi:ŋ* ‘to.see-NEGATIVE/to.be(animate)-NEGATIVE’, *zɜiŋ* ‘to.get-NEGATIVE’, *ʃʃiŋ* ‘to.put.on(e.g. clothing)-NEGATIVE’

#### **Irregular conjugation**

- *ku:ŋ* ‘to.come-NEGATIVE’, *ʃiŋ* ‘to.do-NEGATIVE’, *nja:ŋ* ‘to be absent’

#### **Imperative forms**

- *iki* ‘to.go-IMPERATIVE’, *uki* ‘to.place-IMPERATIVE’, *piri* ‘to.go-IMPERATIVE’, *kai* ‘to.buy-IMPERATIVE’, *fai* ‘to.eat-IMPERATIVE’, *jukai* ‘to.rest-IMPERATIVE’, *nivvi* ‘to.fall.asleep-IMPERATIVE’
- *mi:u* ‘to.see-IMPERATIVE’, *fi:ru* ‘to.give-IMPERATIVE’, *ʃʃiru* ‘to.put.on(e.g. clothing)-IMPERATIVE’, *ku:* ‘to.come-IMPERATIVE’, *ssu* ‘to.do-IMPERATIVE’

#### *The Karimata dialect*

Negative forms of verbs that derive either from Old Japanese weak verbs or from mixed verbs follow the weak conjugation in the Karimata dialect, with the suffixes *-iŋ* and *-i:ŋ*. The forms corresponding to *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’, *winai* ‘to.sit.down-NEGATIVE’, and *shinanai* ‘to.die-NEGATIVE’ also follow the weak conjugation. As regards irregular verbs, the form corresponding to *shinai* ‘to.do-NEGATIVE’ follows the weak conjugation, while the form corresponding to *inai* ‘to.be(animate)-NEGATIVE’ follows to the strong conjugation.

#### **Strong conjugation**

- *tubaŋ* ‘to.fly-NEGATIVE’, *asbaŋ* ‘to.play-NEGATIVE’, *numaŋ* ‘to.drink-NEGATIVE’, *kugaŋ* ‘to.row-NEGATIVE’, *ikaŋ* ‘to.go-NEGATIVE’, *utasaŋ* ‘to.drop-NEGATIVE’, *idasaŋ* ‘to.put.out-NEGATIVE’, *mutaŋ* ‘to.carry-NEGATIVE’, *puraŋ* ‘to.dig-NEGATIVE’, *smaraŋ* ‘to.tie.up-NEGATIVE’, *ffaŋ* ‘to.fall(e.g. rain)-NEGATIVE’, *kssaŋ* ‘to.cut-NEGATIVE’, *kaʋʋaŋ* ‘to.put.on(headwear)-NEGATIVE’, *ffaŋ* ‘to.close-NEGATIVE’, *ʋʋʋaŋ* ‘to.sell-NEGATIVE’, *niʋʋaŋ* ‘to.fall.asleep-NEGATIVE’, *azzaŋ* ‘to.say-NEGATIVE’, *ka:ŋ* ‘to.buy-NEGATIVE’, *ara:ŋ* ‘to.wash-NEGATIVE’, *fa:ŋ* ‘to.eat-NEGATIVE’
- *kiraŋ* ‘to.kick-NEGATIVE’

#### **Weak conjugation**

- *uriŋ* ‘to.get.off-NEGATIVE’, *utiŋ* ‘to.fall-NEGATIVE’, *ukiŋ* ‘to.get.up-NEGATIVE’, *ʃitiŋ* ‘to.discard-NEGATIVE’, *fi:ŋ* ‘to.give-NEGATIVE’, *ʃimiŋ* ‘to.close-NEGATIVE’, *kadzɜiŋ*

‘to.nibble-NEGATIVE/to.dig-NEGATIVE’, sniŋ ‘to.die-NEGATIVE’, bʲu:iŋ  
‘to.get.drunk-NEGATIVE<sup>11</sup>’

- iziŋ ‘to.get-NEGATIVE’, kiʃiŋ ‘to.put.on(e.g. clothing)-NEGATIVE’, biʒiŋ  
‘to.sit.down-NEGATIVE’, mi:iŋ ‘to.see-NEGATIVE/to.be(animate)-NEGATIVE’

### Irregular conjugation

- ku:iŋ ‘to.come-NEGATIVE’, aʃiŋ ‘to.do-NEGATIVE’, uraŋ ‘to.be(animate)-NEGATIVE’, nja:iŋ ‘to  
be absent’

### Imperative forms

- iki ‘to.go-IMPERATIVE’, uki ‘to.place-IMPERATIVE’, idaʃi ‘to.put.out-IMPERATIVE’, kai  
‘to.buy-IMPERATIVE’, ɸai / fai ‘to.eat-IMPERATIVE’, jukui ‘to.rest-IMPERATIVE’, niui  
‘to.fall.asleep-IMPERATIVE’
- mi:ru ‘to.see-IMPERATIVE’, fi:ru / ffiru ‘to.give-IMPERATIVE’, uriru ‘to.get.off-IMPERATIVE’,  
kaʒiru ‘to.put.on-IMPERATIVE’, ɛimiru ‘to.close-IMPERATIVE’, ŋgiru  
‘to.return.home-IMPERATIVE’, iziru ‘to.put.in-IMPERATIVE’
- ku: ‘to.come-IMPERATIVE’, aʃiru ‘to.do-IMPERATIVE’

### *The Ikema dialect*

Negative forms of verbs that derive either from Old Japanese weak verbs or from mixed verbs follow the weak conjugation in the Ikema dialect, with the suffixes *-iŋ* and *-i:iŋ*. The forms corresponding to *keranai* ‘to.kick-NEGATIVE’, *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’, *winai* ‘to.sit.down-NEGATIVE’, and *shinanai* ‘to.die-NEGATIVE’ follow the strong conjugation. As regards irregular verbs, the form corresponding to *shinai* ‘to.do-NEGATIVE’ follows the mixed conjugation.

### Strong conjugation

- tuban ‘to.fly-NEGATIVE’, aeiban ‘to.play-NEGATIVE’, numan ‘to.drink-NEGATIVE’, kugan  
‘to.row-NEGATIVE’, ikan ‘to.go-NEGATIVE’, utuhan ‘to.drop-NEGATIVE’, idanan  
‘to.put.out-NEGATIVE’, mutean ‘to.carry-NEGATIVE’, furadza:n ‘to.dig-NEGATIVE’, kiran  
‘to.cut-NEGATIVE’, ɛimaran ‘to.tie.up-NEGATIVE’, ffan ‘to.fall(e.g. rain)-NEGATIVE’, vvan  
‘to.sell-NEGATIVE’, kavvan ‘to.put.on(headwear)-NEGATIVE’, ttadza:n ‘to.close-NEGATIVE’,  
nʲivvan ‘to.fall.asleep-NEGATIVE’, azzan ‘to.say-NEGATIVE’, ka:n ‘to.buy-NEGATIVE’, ara:n  
‘to.wash-NEGATIVE’, fa:n ‘to.eat-NEGATIVE’

<sup>11</sup> *bʲu:iŋ* may be a negative potential form corresponding to Japanese *yoenai* ‘to.get.drunk-POTENTIAL-NEGATIVE’.

- kiran ‘to.kick-NEGATIVE’, ttean ‘to.put.on(e.g. clothing)-NEGATIVE’, bidzan ‘to.sit.down-NEGATIVE’, einan ‘to.die-NEGATIVE’

### Weak conjugation

- ukiN ‘to.get.up-NEGATIVE’, uridza:N ‘to.get.off-NEGATIVE’, utiN ‘to.fall-NEGATIVE’, sītiN ‘to.discard-NEGATIVE’, fi:N ‘to.give-NEGATIVE’
- zziN / ddiN ‘to.get-NEGATIVE’, b’u:iN ‘to.get.drunk-NEGATIVE<sup>12</sup>’, mi:N ‘to.see-NEGATIVE/to.be(animate)-NEGATIVE’

### Irregular conjugation

- ku:N ‘to.come-NEGATIVE’, φun ‘to.do-NEGATIVE’, n’ja:N ‘to be absent’

### Imperative forms

- iki ‘to.go-IMPERATIVE’, jukui ‘to.rest-IMPERATIVE’, kai ‘to.buy-IMPERATIVE’, n’jivvi / n’jivvi ‘to.fall.asleep-IMPERATIVE’
- mi:ru ‘to.see-IMPERATIVE’, fi:ru ‘to.give-IMPERATIVE’, s’itiru ‘to.discard-IMPERATIVE’
- ku: ‘to.come-IMPERATIVE’, assu ‘to.do-IMPERATIVE’

### The Kuninaka dialect

The form corresponding to *minai* ‘to.see-NEGATIVE’, which derives from an Old Japanese weak verb, is the weak conjugation form *mi:N*; those corresponding to *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’ and *winai* ‘to.sit.down-NEGATIVE’, however, are the strong conjugation forms *ʔtan* and *bʔzan*, respectively. The form corresponding to *okinai* ‘to.get.up-NEGATIVE’, which derives from an Old Japanese mixed verb, follows the weak conjugation. As only a small number of word forms was obtained for the Kuninaka dialect, no more than a brief outline can be given at present.

### Strong conjugation

- kavvan ‘to.put.on(headwear)-NEGATIVE’, nivvan ‘to.fall.asleep-NEGATIVE’, azzan / aʔzan ‘to.say-NEGATIVE’
- sʔnan ‘to.die-NEGATIVE’, ʔtan ‘to.put.on(e.g. clothing)-NEGATIVE’, bʔzan ‘to.sit.down-NEGATIVE’

### Weak conjugation

- okinni: ‘to.get.up-NEGATIVE<sup>13</sup>’
- mi:N ‘to.see-NEGATIVE/to.be(animate)-NEGATIVE’

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<sup>12</sup> *b’u:iŋ* may be a negative potential form corresponding to Japanese *yoenai* ‘to.get.drunk-POTENTIAL-NEGATIVE’; further confirmation is needed.

<sup>13</sup> *ni:* in *okinni:* may be a sentence-final particle.



### Irregular conjugation

- ahon / ason ‘to.do-NEGATIVE’, nja:n ‘to be absent’

### Imperative forms

- mi:ru ‘to.see-IMPERATIVE’, phi:ru ‘to.give-IMPERATIVE’, eimiru ‘to.close-IMPERATIVE’, kɔ: ‘to.come-IMPERATIVE’, asso ‘to.do-IMPERATIVE’

## 3.1 Summary of negative forms

As it was not possible to obtain data for all the survey items at all the sites where the verb conjugation survey was conducted, the number of word forms that were obtained is limited, but when comparing the conjugation types of the Northern Ryukyuan languages (the dialects of Okinawa Island in particular), Old Japanese, and the Miyako language, the following observations can be made.

- (i) Miyako has strong, weak, mixed, and irregular conjugation types.
- (ii) Verbs deriving from Old Japanese strong verbs consistently follow the strong conjugation in Miyako.
- (iii) The verb corresponding to *keru* ‘to kick’, which derives from an Old Japanese weak verb, follows the strong conjugation in Miyako.
- (iv) The verb corresponding to *miru* ‘to see; to look’, which derives from an Old Japanese weak verb, follows the weak conjugation in some dialects and the mixed conjugation in others.
- (v) Verbs deriving from Old Japanese mixed verbs follow the weak conjugation in the Kugai, Karimata, Ikema, and Kuninaka dialects, while they follow the mixed conjugation in the Bora, Uruka, Miyaguni, Yonaha, and Kurima dialects.
- (vi) The verb corresponding to *shinu* ‘to die’, which derives from an Old Japanese mixed verb, follows the weak conjugation in the Karimata and Shimajiri dialects, while it follows the strong conjugation in the Bora, Kugai, and Ikema dialects<sup>14</sup>.

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<sup>14</sup> In the Nishizato dialect of Miyako, according to Moriyasu Motonaga (1973), the form *snan* ‘to.die-NEGATIVE’, among others, follows the strong conjugation, while the forms *sniru* ‘to.die-IMPERATIVE’, *sniriba* ‘to.die-CONDITIONAL’, and others follow the weak conjugation. Furthermore, in a survey on the Nobaru dialect of former Ueno Village I conducted in November 2011 (the informant: Y. N., male, b. 1943), both a strong form, *snatti: u:* ‘to be about to die’, and a weak form, *snitti: u:* ‘to be about to die’ were obtained for expressing an impending boundary point of the event referred to by the verb. Of these, the former expresses the impending inception point of a volitional action, while the latter expresses an impending terminal point of a non-volitional change of state. All kinds of conjugated forms have to be examined in order to determine what the conjugation type of *sn* ‘to die’ is and which of its conjugated forms follow the weak conjugation. It is interesting to note that there are different mixed conjugation variants in different dialects. Together with the question of how these things have arisen, these are matters to be resolved in future research.

- (vii) A phenomenon is observed in the dialects of Okinawa Island in which verbs deriving from Old Japanese weak verbs have changed into strong verbs; similarly, the form corresponding to *keranai* ‘to.kick-NEGATIVE’, which derives from an Old Japanese weak verb, follows the strong conjugation in every Miyako dialect, while the same holds for *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’ in the Bora and Ikema dialects, and for *winai* ‘to.sit.down-NEGATIVE’ in the Bora, Shimajiri, and Ikema dialects. Not enough word forms were obtained draw conclusions regarding the other dialects.
- (viii) Although a phenomenon is observed in the dialects of Okinawa Island in which verbs deriving from Old Japanese mixed verbs have changed into strong verbs (i.e. into verbs with *-r*-stems), such a change is not observed in Miyako.
- (ix) In the Kugai, Shimajiri, and Karimata dialects, the forms corresponding to *kinai* ‘to.put.on(e.g. clothing)-NEGATIVE’, *winai* ‘to.sit.down-NEGATIVE’, and *enai* ‘to.get-NEGATIVE’ also follow the weak conjugation.
- (x) The form corresponding to *shinai* ‘to.do-NEGATIVE’, which derives from an Old Japanese irregular verb, follows the weak conjugation in the Kugai, Karimata, and Shimajiri dialects, while it follows the mixed conjugation in the Bora and Ikema dialects.

An interesting fact regarding the lexical meaning of negative verbs is that there were multiple sites where the negative form of *miz* ‘to see; to look’ was used in addition to *uraŋ* as a present tense negative form of *uz* ‘to be (animate)’.

- (16) *tunazna imma mi:ŋ.* (Shimajiri)  
 next.door=LOCATIVE=TOPIC dog=TOPIC to.be(animate)-NEGATIVE  
 ‘My neighbors don’t have a dog.’
- (17) *tunaznu ja:nna inna mi:ŋ.* (Kugai)  
 next.door=GENITIVE house=LOCATIVE=TOPIC dog=TOPIC to.be(animate)-NEGATIVE  
 ‘My neighbors don’t have a dog.’

#### 4 Past tense forms

Irrespective of whether a verb is strong, weak, mixed, or irregular, the suffixes used for the past tense are *-ta:*, *-ta*, *-tai*, and *-ta<sup>z</sup>ŋ*. Unlike in Japanese and the Northern Ryukyuan languages, voicing of the *-t-* in these suffixes is not observed in strong verbs. As the sound changes *ri > i*, exemplified by *tu<sup>z</sup>ŋ* ‘bird’ and *pa<sup>z</sup>ŋ* ‘needle; pin’, and *ru > z*, exemplified by *piru > pi<sup>z</sup>ŋ* ‘garlic’ and

*saru* > *sa<sup>z</sup>ŋ* ‘monkey’, have occurred in Miyako, *-ta<sup>z</sup>ŋ*, *-tai*, *-ta:*, and *-ta* must derive either from *-tari* or from *-taru*.

#### *The Bora dialect*

Irrespective of whether a verb is strong, weak, mixed, or irregular, the suffix used for the past tense is either *-ta:* or *-ta*, in which the final *-z* has undergone lenition. The sole exception is *ataŋ* ‘to.be(inanimate)-PAST’, in which *-taŋ* is used.

#### **Strong conjugation**

- *tubzta*: ‘to.fly-PAST’, *asŋpŋta* ‘to.play-PAST’, *kugzta*: ‘to.row-PAST’, *iksta*: ‘to.go-PAST’, *utusta*: ‘to.drop-PAST’, *idasuta*: ‘to.put.out-PAST’, *mutsŋta* ‘to.carry-PAST’, *numta* ‘to.drink-PAST’, *fumta*: ‘to.put.on(footwear)-PAST’, *puzŋta*: ‘to.dig-PAST’, *fuzta*: ‘to.fall(e.g. rain)-PAST’, *pizta*: ‘to.go-PAST’, *smazta*: ‘to.tie.up-PAST’, *kssta*: ‘to.cut-PAST’, *kavta*: ‘to.buy-PAST’, *arɔvta* ‘to.wash-PAST’, *fɔvta* ‘to.eat-PAST’, *bju:ta*: ‘to.get.drunk-PAST’, *kavta*: ‘to.put.on(headwear)-PAST’, *nivta*: ‘to.fall.asleep-PAST’, *fu:ta*: ‘to.close-PAST’, *azta*: ‘to.say-PAST’, *vvita*: ‘to.sell-PAST’, *kssta*: ‘to.put.on(e.g. clothing)-PAST’, *kizta*: ‘to.kick-PAST’, *fttsta*: ‘to.tie.up-PAST’, *bz:ta*: ‘to.sit.down-PAST’, *snta*: ‘to.die-PAST’

#### **Mixed conjugation**

- *urita*: ‘to.get.off-PAST’, *uteita*: ‘to.fall-PAST’, *steita*: ‘to.discard-PAST’, *ffita*: ‘to.give-PAST’, *bakita*: ‘to.divide-PAST’, *pingita* ‘to.escape-PAST’, *ukita*: ‘to.get.up-PAST’
- *mi:ta*: ‘to.see-PAST’, *i:ta*: ‘to.get-PAST’

#### **Irregular conjugation**

- *ksta*: ‘to.come-PAST’, *sŋ:ta*: ‘to.do-PAST’, *ataŋ* ‘to.be(inanimate)-PAST’, *uta*: ‘to.be(animate)-PAST’

#### *The Uruka dialect*

Irrespective of whether a verb is strong, weak, mixed, or irregular, the suffix used for the past tense is *-ta<sup>z</sup>ŋ*. Forms in which *-ta:* is used are also observed.

#### **Strong conjugation**

- *tuv<sup>z</sup>ŋta<sup>z</sup>ŋ* ~ *tub<sup>z</sup>ŋta<sup>z</sup>ŋ* ‘to.fly-PAST’, *asŋp<sup>ŋ</sup>ŋta<sup>z</sup>ŋ* ‘to.play-PAST’, *iksŋta<sup>z</sup>ŋ* ~ *iksta*: ‘to.go-PAST’, *kug<sup>z</sup>ŋta<sup>z</sup>ŋ* ‘to.row-PAST’, *utu<sup>ŋ</sup>ta<sup>z</sup>ŋ* ~ *utu<sup>ŋ</sup>ta:* ‘to.drop-PAST’, *idasŋta<sup>z</sup>ŋ* ‘to.put.out-PAST’, *mutsŋta<sup>z</sup>ŋ* ‘to.carry-PAST’, *numta<sup>z</sup>ŋ* ‘to.drink-PAST’, *funta<sup>z</sup>ŋ* ‘to.put.on(footwear)-PAST’, *pu<sup>z</sup>ŋta<sup>z</sup>ŋ* ‘to.dig-PAST’, *muduri pi<sup>z</sup>ŋta<sup>z</sup>ŋ* ‘to.return to.go-PAST’, *f<sup>ŋ</sup>ta<sup>z</sup>ŋ* ~ *f<sup>ŋ</sup>ta:* ‘to.fall(e.g. rain)-PAST’, *kavta<sup>z</sup>ŋ* ‘to.put.on(headwear)-PAST’, *kauta<sup>z</sup>ŋ* ‘to.buy-PAST’, *fo:ta<sup>z</sup>ŋ* ~ *fauta<sup>z</sup>ŋ* ~

fouta<sup>z</sup>ɿ ‘to.eat-PAST’, murauta<sup>z</sup>ɿ ‘to.receive-PAST’, bju:ta<sup>z</sup>ɿ ‘to.get.drunk-PAST’, arauta<sup>z</sup>ɿ ‘to.wash-PAST’, v:ta<sup>z</sup>ɿ ‘to.sell-PAST’, ksta<sup>z</sup>ɿ ~ ksɿ:ta<sup>z</sup>ɿ ‘to.cut-PAST’, sɿma<sup>z</sup>ɿta<sup>z</sup>ɿ ‘to.tie.up-PAST’, k<sup>s</sup>ɿta<sup>z</sup>ɿ ‘to.kick-PAST’

### Mixed conjugation

- urita: ~ urita<sup>z</sup>ɿ ‘to.get.off-PAST’, utita<sup>z</sup>ɿ ~ utita: ‘to.fall-PAST’, piŋgita: ‘to.escape-PAST’, stita<sup>z</sup>ɿ ~ stita: ‘to.discard-PAST’, ffita<sup>z</sup>ɿ ‘to.give-PAST’, bakita<sup>z</sup>ɿ ‘to.divide-PAST’, piŋgita<sup>z</sup>ɿ ‘to.escape-PAST’

### Irregular conjugation

- sɿta<sup>z</sup>ɿ ‘to.do-PAST’, ksɿta<sup>z</sup>ɿ ~ ksɿta: ~ k<sup>s</sup>ɿ:ta<sup>z</sup>ɿ ‘to.come-PAST’, kugi<sup>k</sup>staɿ ~ kug<sup>z</sup>i<sup>k</sup>staɿ ‘to.row-to.come-PAST’

### *The Miyaguni dialect*

Irrespective of whether a verb is strong, weak, mixed, or irregular, the suffix used for the past tense is *-ta:*.

### Strong conjugation

- asɿp<sup>h</sup>ɿta: ‘to.play-PAST’, u:gɿ:ta: ‘to.swim-PAST’, iksta: / ikɿta: ‘to.go-PAST’, utu<sup>ɕ</sup>sta: ‘to.drop-PAST’, ida<sup>æ</sup>ita / idasɿta ‘to.put.out-PAST’, pira<sup>s</sup>i<sup>ɕ</sup>ta: ‘to.go-CAUSATIVE-PAST’, mo<sup>t</sup>e<sup>i</sup>ta: ‘to.carry-PAST’, nu<sup>m</sup>ta: ‘to.drink-PAST’, fu<sup>z</sup>ta: ‘to.fall(e.g. rain)-PAST’, po<sup>z</sup>ta ‘to.dig-PAST’, mu<sup>du</sup>ta: ‘to.return-PAST’, k<sup>i</sup>:ta: ‘to.cut-PAST’, na<sup>k</sup>a<sup>z</sup>ɿta: ‘to.divide-PAST’, fu<sup>z</sup>ta: / fɿ<sup>z</sup>ta: ‘to.tie.up-PAST’, ki<sup>z</sup>ta: ‘to.kick-PAST’, ka<sup>u</sup>ta: ‘to.buy-PAST’, fo<sup>o</sup>ta: ‘to.eat-PAST’, mo<sup>r</sup>au<sup>t</sup>a: / mo<sup>r</sup>oo<sup>t</sup>a: ‘to.receive-PAST’, bjo:ta: ‘to.get.drunk-PAST’, arau<sup>t</sup>a: ‘to.wash-PAST’, u:ta: / uv<sup>t</sup>a: / uv<sup>t</sup>a: ‘to.sell-PAST’

### Mixed conjugation

- urita: ‘to.get.off-PAST’, uc<sup>i</sup>ta: ‘to.fall-PAST’, sɿtita: ‘to.discard-PAST’, fi<sup>i</sup>ta: ‘to.give-PAST’, p<sup>h</sup>iŋgita: / fiŋgita: ‘to.escape-PAST’

### Irregular conjugation

- k<sup>i</sup>:ta: / k<sup>i</sup>ta: ‘to.come-PAST’, kugiksta: ‘to.row-to.come-PAST’, kugi<sup>u</sup>ta ‘to.row-PROGRESSIVE-PAST’

### *The Yonaha dialect*

Irrespective of whether a verb is strong, weak, mixed, or irregular, the suffix used for the past tense is *-ta:*.

### Strong conjugation

- tubɯta: / tubɯtan ‘to.fly-PAST’, appɯta: ‘to.play-PAST’, ikʷɯta: ‘to.go-PAST’, kuɯta: ‘to.row-PAST’, utusɯta: ‘to.drop-PAST’, idasɯta: ‘to.put.out-PAST’, mutsɯta: ‘to.carry-PAST’, numta: ‘to.drink-PAST’, ffɯtta: ‘to.fall(e.g. rain)-PAST’, puzta: ‘to.dig-PAST’, pi:ta: ‘to.go-PAST’, kɯsɯta: ‘to.cut-PAST’, ko:ta: ‘to.buy-PAST’, aro:ta: ‘to.wash-PAST’, fo:ta: ‘to.eat-PAST’, bju:ta: ‘to.get.drunk-PAST’, u:ta: / u:ta: ‘to.sell-PAST’, kizɯta: ‘to.kick-PAST’, sɯmaʷɯta: ‘to.tie.up-PAST’

### Mixed conjugation

- urita: ‘to.get.off-PAST’, utita: ‘to.fall-PAST’, sɯtita: ‘to.discard-PAST’, fi:ta: ‘to.give-PAST’, bakita: ‘to.divide-PAST’

### Weak conjugation

- zzita: ‘to.get-PAST’

### Irregular conjugation

- ksta: / kɯsɯta: ‘to.come-PAST’, kuɯdu sɯta: ‘to.row=FOCUS to.do-PAST’, u:duɯta: ‘to.sell=FOCUS to.do-PAST’ bju:i uta: ‘to.get.drunk-STATIVE-PAST’, tubɯdu sɯta: ‘to.fly=FOCUS to.do-PAST’

### *The Kurima dialect*

Irrespective of whether a verb is strong, mixed, or irregular, the suffix used for the past tense is *-taɯ*. Forms deriving from Old Japanese weak verbs were not obtained. In the strong conjugation, the suffix takes the shapes *-ztaɯ*, *-ɯtaɯ*, and *-taɯ*; in the mixed conjugation, it takes the shape *-taɯ*.

### Strong conjugation

- tubztaɯ / tubztaɯ ‘to.fly-PAST’, aspɯtaɯ ‘to.play-PAST’, numutaɯ<sup>15</sup> ‘to.drink-PAST’, kudztaɯ ‘to.row-PAST’, itstaɯ ‘to.go-PAST’, piɯtaɯ / piʷɯtaɯ ‘to.go-PAST’, utɯstaz / utɯstaɯ ‘to.drop-PAST’, idastaɯ ‘to.put.out-PAST’, puztaɯ ‘to.dig-PAST’, sɯmaɯtaɯ / smaɯtaɯ ‘to.tie.up-PAST’, fɯftaɯ ‘to.fall(e.g. rain)-PAST’, tsɯstaɯ / tsɯstaz ‘to.cut-PAST’, muro:taɯ ‘to.receive-PAST’, u:taɯ ‘to.sell-PAST’, fo:taɯ ‘to.eat-PAST’, ko:taɯ ‘to.buy-PAST’, aro:taɯ ‘to.wash-PAST’, biu:taɯ ‘to.get.drunk-PAST’
- kiztaɯ / kiztaɯ ‘to.kick-PAST’

### Mixed conjugation

- uritaɯ / uritaɯ ‘to.get.off-PAST’, utitaɯ ‘to.fall-PAST’, stitaɯ / stitaɯ ‘to.discard-PAST’, fi:taɯ ‘to.give-PAST’, bakitaɯ ‘to.divide-PAST’, piŋgitaɯ ‘to.escape-PAST’

<sup>15</sup> Although the suffix does not begin with a vowel in strong verbs with a stem ending in *-m* in the other dialects, *-u-* appears here; further confirmation is needed.

### Irregular conjugation

- tsstaŋ / tstaŋ ‘to.come-PAST’, kugitstaŋ ‘to.row-to.come-PAST’, uritstaŋ / tsstaŋ ‘to.get.off-to.come-PAST’, muraitstaŋ ‘to.receive-to.come-PAST’, ikju:taz / ikju:taŋ ‘to.go-STATIVE-PAST’, mmjaŋtaŋ ‘to.come-HONORIFIC-PAST’ u:gi tstaŋ ‘to.swim-to.come-PAST’

#### *The Kugai dialect*

Irrespective of whether a verb is strong, weak, or irregular, the suffix used for the past tense is *-ta:*. In the strong conjugation, the suffix takes the shapes *-sta:*, *-ŋta:*, and *-ta:*; in the weak conjugation, it takes the shape *-ta:*.

### Strong conjugation

- aspsta: ‘to.play-PAST’, kugzta: ‘to.row-PAST’, iksta: ‘to.go-PAST’, utasta: ‘to.drop-PAST’, idasta: ‘to.put.out-PAST’, mutsta: ‘to.carry-PAST’, numta: ‘to.drink-PAST’, fumta: ‘to.put.on(footwear)-PAST’, fuŋta: ‘to.fall(e.g. rain)-PAST’, puzta: ‘to.dig-PAST’, piŋta: ‘to.go-PAST’, ksta: ‘to.cut-PAST’, kiŋta: / kiŋta: ‘to.kick-PAST’, sŋmaŋta: ‘to.tie.up-PAST’, naka:zta: ‘to.divide-PAST’, ko:ta: ‘to.buy-PAST’, aro:ta: ‘to.wash-PAST’, fo:ta: ‘to.eat-PAST’, moro:ta: ‘to.receive-PAST’, bju:ta: ‘to.get.drunk-PAST’, v:ta: ‘to.sell-PAST’, nivta: ‘to.fall.asleep-PAST’, kavta: ‘to.put.on(headwear)-PAST’, ffta: ‘to.close-PAST’, anta: ‘to.say-PAST’, snta: ‘to.die-PAST’

### Weak conjugation

- urita: ‘to.get.off-PAST’, utita: ‘to.fall-PAST’, ukita: ‘to.get.up-PAST’, sŋtita: ‘to.discard-PAST’, kieita: ‘to.sell-PAST’, fi:ta: ‘to.give-PAST’, smita: ‘to.wash-PAST’, piŋgipiŋta: ‘to.escape-PAST’
- mi:ta: ‘to.see-PAST’, zzita: ‘to.get-PAST’, bizita: ‘to.sit.down-PAST’

### Irregular conjugation

- ksta: ‘to.come-PAST’, kugiksta: ‘to.row-to.come-PAST’, sta: ‘to.do-PAST’, uta: ‘to.be(animate)-PAST’, ata: ‘to.be(inanimate)-PAST’, ariuta: ~ arju:ta: ‘to.be(inanimate)-PAST’, bju:iuta: ‘to.get.drunk-STATIVE-PAST’, tatei:uta: ‘to.stand.up-STATIVE-PAST’, niviu:ta: ‘to.fall.asleep-STATIVE-PAST’

#### *The Shimajiri dialect*

*-ta:* is the suffix most often used for the past tense in the Shimajiri dialect, but *-ta* and *-taz* are used, as well. In the strong conjugation, the suffix takes the shapes *-sta:*, *-zta:*, *-uta:*, and *-ta:*; in the weak conjugation, it takes the shape *-taz*.

### Strong conjugation

- tubzta: ‘to.fly-PAST’, appsta: ‘to.play-PAST’, kugzta: ‘to.row-PAST’, iksta: ‘to.go-PAST’, utusta: / utusta ‘to.drop-PAST’, idasta: ‘to.put.out-PAST’, mutsta ‘to.carry-PAST’, nunta: ‘to.drink-PAST’, funta: / fnta: ‘to.put.on(footwear)-PAST’, puzta: ‘to.dig-PAST’, ffta: / ffvta: ‘to.fall(e.g. rain)-PAST’, pizta: ‘to.go-PAST’, kssta: ‘to.cut-PAST’, kauta: ‘to.buy-PAST’, arauta: ‘to.wash-PAST’, fava: ‘to.eat-PAST’, bju:taz ‘to.get.drunk-PAST’, kavta: ‘to.put.on(headwear)-PAST’, n’ivta: ‘to.fall.asleep-PAST’, ffta: / ffvta: ‘to.close-PAST’, azta: ‘to.say-PAST’, v:ta: / v:ta: ‘to.sell-PAST’, fgzta: ‘to.tie.up-PAST’, kizta: ‘to.kick-PAST’, bz:ta: ‘to.sit.down-PAST’, snta: ‘to.die-PAST’

### Weak conjugation

- urita: ‘to.get.off-PAST’, uteita: ‘to.fall-PAST’, steita: ‘to.discard-PAST’, fi:ta: ‘to.give-PAST’, bakitaz ‘to.divide-PAST’, ukitaz / ukita: ‘to.get.up-PAST’
- mi:ta: ‘to.see-PAST’, zzitaz ‘to.get-PAST’, jfitaz ‘to.sell-PAST’

### Irregular conjugation

- ssta: ‘to.come-PAST’, ssta: ‘to.do-PAST’, ata: ‘to.be(inanimate)-PAST’, u:ta: / uta: ‘to.be(animate)-PAST’

### *The Karimata dialect*

In addition to *-taz*, *-daz* is used as a suffix for the past tense in the Karimata dialect. At first glance, *-daz* in *nundaz* ‘to.drink-PAST’ looks like an *onbin* form<sup>16</sup>, but as *-daz* is used in weak verb forms such as *uridaz* ‘to.get.off-PAST’ and *utidaz* ‘to.fall-PAST’ as well as in strong verb forms such as *asvdaz* ‘to.play-PAST’, and as there are verbs such as *sntaz* / *sndaz* ‘to.die-PAST’ and *εimitaz* / *εimidaz* ‘to.close-PAST’ in which the use of *-taz* and *-daz* as variant forms is observed, they seem to be phonetic variants. In the Karimata dialect the suffix thus takes the shapes *-itaz* and *-taz* in the strong conjugation; in the weak conjugation, it takes the shape *-taz*.

### Strong conjugation

- tubitaz / tuvtaz ‘to.fly-PAST’, asvdaz ‘to.play-PAST’, kugitaz / kuvtaz ‘to.row-PAST’, iftaz / ikitaz ‘to.go-PAST’, utastaz ‘to.drop-PAST’, idastaz ‘to.put.out-PAST’, mutstaz ‘to.carry-PAST’, nundaz ‘to.drink-PAST’, puztaz ‘to.dig-PAST’, ffvtaz ‘to.fall(e.g. rain)-PAST’, ksstaz ‘to.cut-PAST’, kaztaz / ko:ta: / ko:taz ‘to.buy-PAST’, aro:daz ‘to.wash-PAST’, fo:taz ‘to.eat-PAST’, b’u:ztaz ‘to.get.drunk-PAST’, kavtaz ‘to.put.on(headwear)-PAST’, n’ivtaz

<sup>16</sup> *Translator’s note*: a ‘euphonic form’; see section 4.1 for an explanation

‘to.fall.asleep-PAST’, ffitaz ‘to.close-PAST’, aztaz ‘to.say-PAST’, v:taz ‘to.sell-PAST’, ks:daz ‘to.kick-PAST’, smaztaz ‘to.tie.up-PAST’, sntaz / sndaz<sup>17</sup> ‘to.die-PAST’

### Weak conjugation

- uridaz ‘to.get.off-PAST’, utidaz ‘to.fall-PAST’, eitidaz ‘to.discard-PAST’, fi:taz ‘to.give-PAST’, ŋgidaz ‘to.return.home-PAST’, taskaritzaz ‘to.be.saved-PAST’, ukitzaz ‘to.get.up-PAST’, eimitaz / eimidaz ‘to.close-PAST’
- mi:daz ‘to.see-PAST’, zzitaz ‘to.get-PAST’, kiitaz ‘to.sell-PAST’, bizitaz ‘to.sit.down-PAST’

### Irregular conjugation

- ksstaz ‘to.come-PAST’, kugiftaz ‘to.row-to.come-PAST’, astaz ‘to.do-PAST’, ataz ‘to.be(inanimate)-PAST’, utaz ‘to.be(animate)-PAST’

### The Ikema dialect

Irrespective of whether a verb is strong, weak, or irregular, the suffix used for the past tense in the Ikema dialect is *-tai*.

### Strong conjugation

- aeibitai ~ aeu:tai ‘to.play-PAST’, kugitai ‘to.row-PAST’, ifutai ~ ikitai ‘to.go-PAST’, utaeitai ‘to.drop-PAST’, idaeitai ‘to.put.out-PAST’, muttai ‘to.carry-PAST’, nuntai ‘to.drink-PAST’, mmitai ‘to.put.on(footwear)-PAST’, fu:tai ‘to.fall(e.g. rain)-PAST’, fuitai ‘to.dig-PAST’, muduitai ‘to.return-PAST’, hatai ‘to.go-PAST’, kiritai ‘to.cut-PAST’, eɽmaritai ‘to.tie.up-PAST’, kautai ~ kavtai ~ kaitai ‘to.buy-PAST’, vvitai ‘to.sell-PAST’, faitai ~ fautai ~ fautai ‘to.eat-PAST’, b’u:itai ‘to.get.drunk-PAST’, araitai ‘to.wash-PAST’, aitai ‘to.say-PAST’, kavvitai ‘to.put.on(headwear)-PAST’, ffitai ‘to.close-PAST’, n’u:tai ‘to.fall.asleep-PAST’, taskaitai ‘to.be.saved-PAST’, ki:tai ‘to.kick-PAST’, tteaddan ‘to.cut-POTENTIAL-NEGATIVE-PAST<sup>18</sup>’

### Weak conjugation

- ukitai ‘to.get.up-PAST’, uritai ‘to.get.off-PAST’, uteita: ‘to.fall-PAST’, bakitai ‘to.divide-PAST’, uɽɽmitai ‘to.bury-PAST’, piŋgita ‘to.escape-PAST’, fi:tai ‘to.give-PAST’
- mi:tai ‘to.see-PAST’, tsɽitai ~ ttitai ‘to.sell-PAST’, bi:tai ‘to.sit.down-PAST’, ddzитай ‘to.get-PAST’

<sup>17</sup> While the past tense forms *sntaz / sndaz* ‘to.die-PAST’ follow the strong conjugation, the negative form *sniŋ* ‘to.die-NEGATIVE’ follows the weak conjugation. This verb thus follows a mixed conjugation, albeit a different one from that of Old Japanese.

<sup>18</sup> This form was elicited in response to Japanese *kirenakatta* ‘to.cut-POTENTIAL-NEGATIVE-PAST’, but as it appears to follow the strong conjugation, it may be a form corresponding to *kiranakatta* ‘to.cut-NEGATIVE-PAST’.



### Irregular conjugation

- ttai ‘to.come-PAST’, asʔtai / aɛtai ‘to.do-PAST’, aru:tai ‘to.be(inanimate)-PAST’, uru:tai ‘to.be(animate)-PAST’

#### *The Kuninaka dialect*

Although only a small number of word forms was obtained, the suffix observed most often is *-taʔ*, irrespective of whether the verb is strong, mixed, weak, or irregular; *-ta:* is used as well.

### Strong conjugation

- Ngitaʔ ‘to.go-PAST’, pjaʔtaʔ ‘to.go-PAST’, kavtaʔ ‘to.put.on(headwear)-PAST’, φumtaʔ ‘to.put.on(footwear)-PAST’, nivtaʔ ‘to.fall.asleep-PAST’, sʔntaʔ ‘to.die-PAST’

### Mixed conjugation

- ɛimɛtaʔ ‘to.close-PAST’, okitaʔ ‘to.get.up-PAST’

### Weak conjugation

- mi:taʔ ‘to.see-PAST’, tsʔ:ta: ‘to.sell-PAST’, bʔ:ta: / bʔzta: ‘to.sit.down-PAST’

### Irregular conjugation

- asta:ʔ ‘to.do-PAST’, ataʔ ‘to.be(inanimate)-PAST’, ɔtaʔ ‘to.be(animate)-PAST’, tateii ɔtaʔ ‘to.stand.up-STATIVE-PAST’

## 4.1 Past tense forms—discussion (1): on the presence of *onbin*

The sound changes undergone by Heian-era Japanese verb stems that are called ‘*onbin*’ are also observed in the *Omoro Sōshi*<sup>19</sup> and the Northern Ryukyuan languages. ‘*Onbin*’ refers to sound changes involving stem-final consonants and suffixes that have resulted in changes in the paradigms of strong verbs, which acquired alternating stems in the process. Alternate stems are used in past tense and *shite*-continuative forms, which includes derived forms containing a *shite*-continuative as an element.

Neither ‘*-i-onbin*’ in *-k*-stem and *-g*-stem verbs, nor ‘nasal *onbin*’ in *-b*-stem verbs, nor ‘geminating *onbin*’ in *-t*-stem or *-r*-stem verbs are observed in the strong conjugation of the Miyako language. The ‘*-i-onbin*’ seen in *-s*-stem verbs in the Northern Ryukyuan languages are not observed, either. Although the suffix-initial vowel *-i-* is elided in the case of *-m*-stem verbs, ‘nasal *onbin*’ is not observed. Furthermore, the ‘elision *onbin*’ seen in the strong conjugation of the Northern Ryukyuan languages is not observed, either. It can thus be concluded that *onbin* stems need not be posited for Miyako.

<sup>19</sup> *Translator’s note*: a Ryukyuan compilation of poems and songs compiled in the sixteenth and seventeenth centuries.

In the *Omoro Sōshi*, the stem-final consonant and the initial vowel *-i-* of the suffix *-ite* are elided in the *shite*-continuatives of *-b*-stem and *-m*-stem verbs, and the *-t-* in the suffix is voiced, resulting in the suffix *-de*: *tsu-de* < *tsuNde* < *tsum-ite* ‘to.pile-CONTINUATIVE’; *era-de* < *eraNde* < *erab-ite* ‘to.choose-CONTINUATIVE’. It is assumed that the syllables *-mi-* and *-bi-* on the boundary between the stem and the suffix collapsed into the moraic nasal *-N-*, which then caused the voicing of the *-t-* in the suffix through assimilation, after which the moraic nasal was elided. The sound changes *-mi-* > *-N-* and *-bi-* > *-N-* occurred before palatalization.

In *-r*-stem verbs, too, the stem-final consonant and the suffix-initial vowel are elided. The stem-final consonant *-r-* and the initial vowel *-i-* of the *shite*-continuative suffix *-ite* are thus elided, but voicing of the *-t-* in the suffix is not observed: *ino-te* < *inoQte* < *inor-ite* ‘to.pray-CONTINUATIVE’. The elision of the suffix-initial vowel *-i-* and the appearance of the geminate element *-Q-* are thought to have occurred before palatalization, after which degemination must have occurred.

In *-w*-stem verbs, the stem-final consonant and the suffix-initial vowel collapsed into the vowel *-u-*, which was then elided. It is thought that Old Japanese intervocalic *-p-* consecutively underwent fricativization, voicing, labial lenition, and *onbin* into *-u-*: *wara-te* < *waraute* < *waraw-ite* ‘to.laugh-CONTINUATIVE’. Both the sound change *-ri-* > *-Q-* and the sound change *-wi-* > *-u-* occurred before palatalization.

In the case of *-k*-stem, *-s*-stem, and *-g*-stem verbs, the stem final consonant and the suffix-initial vowel *-i-* are elided, and the consonant *-t-* in the suffix palatalized into *-tɕ-*: *da-tɕe* < *da-itɕe* < *dak-ite* ‘to.embrace-CONTINUATIVE’; *wata-tɕe* < *wata-itɕe* < *wataɕ-ite* ‘to.transfer-CONTINUATIVE’; *ko-dze* < *ko-idze* < *kog-ite* ‘to.row-CONTINUATIVE’. ‘Elision *onbin*’, in which the stem consonant is elided, is thus observed. Furthermore, the voicing of the suffix-initial consonant into *-dze-* in the case of *-g*-stem verbs is the result of voicing occurring before ‘*-i-onbin*’.

In *-t*-stem verbs, the *-t-* in the suffix is palatalized: *mote-itɕe* < *mote-ite* ‘to.carry-CONTINUATIVE’. Although palatalization and affrication due to the suffix-initial *-i-* are thus observed, any kind of *onbin* is not.

In the weak conjugation, in which stems end in vowels, no *onbin* of any kind has occurred: *ore-te* ‘to.get.off-CONTINUATIVE’; *ake-te* ‘to.open-CONTINUATIVE’. In verbs with stems ending in the vowel *-i-*, however, the *-t-* in the suffix is palatalized under the influence of this *-i-*: *mi-tɕe* < *mi-te* ‘to.see-CONTINUATIVE’; *mitɕi-tɕe* < *mitɕite* ‘to.become.full-CONTINUATIVE’.

The *onbin*-phenomena observed in the *Omoro Sōshi* have been preserved in the Northern Ryukyuan languages:

tudi ‘to.fly-CONTINUATIVE’, iradi ‘to.choose-CONTINUATIVE’, nudi ‘to.drink-CONTINUATIVE’, huti ‘to.fall(e.g. rain)-CONTINUATIVE’, huti ‘to.dig-CONTINUATIVE’, ʔarati ‘to.wash-CONTINUATIVE’, warati ‘to.laugh-CONTINUATIVE’, datʃi ‘to.embrace-CONTINUATIVE’, katʃi ‘to.write-CONTINUATIVE’, kudʒi ‘to.row-CONTINUATIVE’, tudʒi ‘to.sharpen-CONTINUATIVE’, ukutʃi ‘to.raise’, watatʃi ‘to.transfer-CONTINUATIVE’, nitʃi ‘to.boil-CONTINUATIVE’, n:tʃi ‘to.see-CONTINUATIVE’

Conclusions regarding why the Miyako language does not have *onbin* stems and if this is indicative of its age can as yet not be drawn. When we consider, however, that *onbin*-phenomena are not observed in the Southern Ryukyuan languages and *onbin* had thus not yet occurred when the Southern Ryukyuan languages split from Proto-Ryukyuan, while *onbin* had already occurred in the sixteenth century, when the *Omoro Sōshi* was compiled, it can at least be surmised that the Northern Ryukyuan languages and the Southern Ryukyuan languages had split before the writing of the *Omoro Sōshi*, and that *onbin* occurred in the Northern Ryukyuan languages after this split.

#### 4.2 Past tense forms—discussion (2): the *shi*-continuative form observed in stems

Another aspect of past tense forms that warrants attention is that they appear to consist of *shi*-continuatives to which *-ta*, *-ta:*, *-tai*, or *-tazʎ* has been attached, similarly to pre-*onbin* Old Japanese *shitari* ‘to.do-PAST’, *nomitari* ‘to.drink-PAST’, and *uketari* ‘to.receive-PAST’. Of course, a variety of sound changes have occurred in the Miyako language, so it has not preserved the *shi*-continuative forms of Old Japanese in their original shape.

*Shi*-continuatives are almost never observed in their original adverbial usage, but rather exclusively as elements in the formation of forms and words; it is therefore possible to determine the phonetic shapes of *shi*-continuative forms in Miyako by looking at the stem portions of Miyako past tense forms.

As I have discussed before (Karimata 1999), forms deriving from *shi*-continuatives are used as the perfective forms of *-b*-stem, *-k*-stem, and *-g*-stem verbs in the strong conjugation of the dialects of the central and southern regions of Miyakojima, such as those of Hirara and Bora. I concluded from this that the perfective forms of the Miyako language may derive from *shi*-continuative forms. In dialects such as those of Karimata and Ikema, however, forms deriving from *suru*-conclusives or *suru*-adnominals are used as well, as will be discussed below. As past tense forms allow us to identify the shape of *shi*-continuative forms, they also play a key role when investigating the origin of the perfective forms of verbs in Miyako.

As the non-past assertive predicative conclusive (henceforth ‘*su*-conclusive’) and non-past adnominal (henceforth ‘*suru*-adnominal’) forms of the strong conjugation of Old Japanese are

homophonous, it cannot be determined whether the perfective forms of \*-*w*-stem verbs such as Bora dialect *kau* ‘to.buy-PERFECTIVE’ and *arau* ‘to.wash-PERFECTIVE’ and Shimajiri dialect *ko:* ‘to.buy-PERFECTIVE’ and *aro:* ‘to.wash-PERFECTIVE’ derive from *su*-conclusives or from *suru*-adnominals. As regards strong conjugation -*m*-stem, -*s*-stem, -*t*-stem, and -*r*-stem verbs in the Miyako language, it cannot be determined whether their perfective forms derive from Old Japanese *shi*-continuatives, *su*-conclusives, or *suru*-adnominals.

Weak conjugation *shi*-continuative and *su*-conclusive forms differ in shape in Old Japanese as well as in Miyako, but as their *su*-conclusive and *suru*-adnominal forms are homophonous both in Old Japanese and in Miyako, it cannot be determined whether perfective forms derive from *su*-conclusives or from *suru*-adnominals. Mixed conjugation *shi*-continuative, *su*-conclusive, and *suru*-adnominal forms, on the other hand, all differ in shape in Old Japanese, and their reflexes in Miyako are different, as well; it is therefore essential to examine Miyako verbs that correspond to Old Japanese mixed verbs.

In the following, we will examine past tense forms by conjugation, covering each of the strong, weak, and mixed conjugations; as regards the strong conjugation, we will look at the shapes taken by -*b*-stem, -*k*-stem, -*g*-stem, and \*-*w*-stem verbs.

#### 4.2.1 -*b*-stem verbs

The Japanese -*b*-stem verb past tense form that was included on the survey sheet was *tonda* ‘to.fly-PAST’, but the only past tense forms of a -*b*-stem verb that were obtained in Miyaguni, Kugai, and Ikema were those corresponding to *asonda* ‘to.play-PAST’. Forms with stems deriving from one of the *shi*-continuatives *\*tobi* and *\*asobi* were observed at every site; in Karimata and Ikema, respectively, the stems *tuv-* and *æu:-*, which derive from the *su*-conclusive or *suru*-adnominal forms *\*tobu* and *\*asubu*, were observed in addition to those deriving from *shi*-continuatives.

tubzta: (Bora), tuv<sup>z</sup>ɣta<sup>z</sup>ɣ ~ tub<sup>z</sup>ɣta<sup>z</sup>ɣ (Uruka), tubɣta: / tubɣtaŋ (Yonaha), tubzta<sup>z</sup> / tubztaɣ (Kurima), tubzta: (Shimajiri), tubitaz / tuvtaz (Karimata), asɣp<sup>h</sup>ɣta: (Miyaguni), aspsta: (Kugai), æibitai ~ æu:tai (Ikema)

#### 4.2.2 -*g*-stem verbs

The Japanese -*g*-stem verb past tense form that was included on the survey sheet was *koida* ‘to.row-PAST’, but the only past tense form of a -*g*-stem verb that was obtained in Miyaguni was the form corresponding to *oyoida* ‘to.swim-PAST’. Forms with stems deriving from one of the *shi*-continuatives *\*kogi* and *\*ojogi* were observed at every site; in Karimata, the stem *kuv-*, which

derives from the *su*-conclusive or *suru*-adnominal form *\*kogu*, was observed in addition to the stem deriving from the *shi*-continuative.

kugzta: (Bora), kugʒtaʒ (Uruka), kuŋta: (Yonaha), kudztaŋ (Kurima), kugʒta: (Kugai), kugzta: (Shimajiri), kugitaz / kuvtaz (Karimata), kugitai (Ikema), u:gʒ:ta: (Miyaguni)

#### 4.2.3 -*k*-stem verbs

The Japanese *-k*-stem verb past tense form that was included on the survey sheet was *itta* ‘to.go-PAST’. Forms with stems deriving from the *shi*-continuative *\*iki* were observed at every site; in Karimata and Ikema, the stem *if-*, which derives from the *su*-conclusive or *suru*-adnominal form *\*iku*, was observed in addition to the stem deriving from the *shi*-continuative.

iksta: (Bora), iksʒtaʒ ~ iksta: (Uruka), iksta: / ikʒta: (Miyaguni), ikʒta: (Yonaha), istaŋ (Kurima), ikʒta: (Kugai), iksta: (Shimajiri), iftaz / ikitaz (Karimata), ifutai ~ ikitai (Ikema)

#### 4.2.4 \*-*w*-stem verbs

The Japanese *\*-w*-stem verb past tense forms that were included on the survey sheet were *katta* ‘to.buy-PAST’, *kuratta* ‘to.eat-PAST’, *aratta* ‘to.wash-PAST’, *yotta* ‘to.get.drunk-PAST’, and *itta* ‘to.say-PAST’. We will look at word forms corresponding to *katta*. Forms with one of the stems *kau-* and *ko:-*, which derive from the *su*-conclusive or *suru*-adnominal form *\*kawu*, were observed at every site. In Karimata and Ikema, the stem *kai-*, which derives from the *shi*-continuative *\*kawi*, was observed in addition to the stems deriving from the *su*-conclusive or *suru*-adnominal form.

kavta: (Bora), kautaʒ (Uruka), kauta: (Miyaguni), ko:ta: (Yonaha), ko:taŋ (Kurima), ko:ta: (Kugai), kauta: (Shimajiri), kaztaz / ko:ta: / ko:taz (Karimata), kautai ~ kavtai ~ kaitai (Ikema)

#### 4.2.5 The weak conjugation

The Japanese weak verb past tense forms that were included on the survey sheet were *mita* ‘to.see-PAST’, *kita* ‘to.put.on(e.g. clothing)-PAST’, *ketta* ‘to.kick-PAST’, *eta* ‘to.get-PAST’, and *wita* ‘to.sit.down-PAST’. The form corresponding to *ketta* follows the strong conjugation at every site, as does the form corresponding to *kita* at some of them. Below, I give the forms corresponding to *mita*, except for Yonaha, for which I give the form corresponding to *eta*. No weak verb forms were obtained in Uruka, Miyaguni, and Kurima. Past tense forms with stems deriving from *shi*-continuatives were observed, not only for *mita* and *eta*, but for all weak verbs.

mi:ta: (Bora), mi:ta: (Kugai), mi:ta: (Shimajiri), mi:daz (Karimata), mi:tai (Ikema), mi:ta| (Kuninaka), zzita: (Yonaha)

#### 4.2.6 The mixed conjugation

The Japanese mixed verb past tense forms that were included on the survey sheet were *orita* ‘to.get.off-PAST’, *ochita* ‘to.fall-PAST’, *suteta* ‘to.discard-PAST’, *kureta* ‘to.give-PAST’, and *okita* ‘to.get.up-PAST’. We will consider word forms corresponding to *okita*, except for those from Uruka, Miyaguni, Yonaha, and Kurima, where no word forms corresponding to *okita* were obtained; for these dialects, I give the word forms corresponding to *ochita*, instead. Forms with stems deriving from one of the *shi*-continuative forms *\*oke* and *\*ote* were observed at every site. Past tense forms with stems deriving from *shi*-continuatives were observed not only for *okita* and *ochita*, but for all mixed verbs.

Although there are two types of mixed verb in Old Japanese, namely those that have *-i* as the stem-final vowel of the *shi*-continuative (‘upper bigrade verbs’) and those that have *-e* (‘lower bigrade verbs’), only one type of mixed verb is observed in the Ryukyuan languages, which has *-e*.

ukita: (Bora), utita<sup>z1</sup> ~ utita: (Uruka), uc̣ita: (Miyaguni), utita: (Yonaha), uṭita<sup>z</sup> (Kurima), ukita: (Kugai), ukita<sup>z</sup> / ukita: (Shimajiri), ukita<sup>z</sup> (Karimata), ukitai (Ikema), okita| (Kuninaka)

While in all the other dialects forms with stems deriving from *shi*-continuatives are observed for *-b*-stem, *-g*-stem, and *-k*-stem verbs, two kinds of forms coexist in the Karimata and Ikema dialects, namely those with stems deriving from *shi*-continuatives and those with stems deriving from *su*-conclusive (or *suru*-adnominal) forms. Forms with stems deriving from *su*-conclusive (or *suru*-adnominal) forms are observed for *\*-w*-stem verbs. As regards mixed and weak verbs, forms with stems deriving from *shi*-continuatives are observed at every site.

The questions of why forms with stems deriving from *su*-conclusive (or *suru*-adnominal) forms are observed for *-g*-stem and *-k*-stem verbs in the Karimata and Ikema dialects and why forms with stems deriving from *su*-conclusive (or *suru*-adnominal) forms are observed for *\*-w*-stem verbs, instead of the expected forms with stems deriving from *shi*-continuatives, must be considered when we examine the perfective forms.

## 5 Perfective forms

Although the *shi*-continuative and *su*-conclusive forms of the strong and weak conjugation differ in shape in Old Japanese, their *su*-conclusive and *suru*-adnominal forms are homophonous.

Conversely, although the *su*-conclusive forms of the verbs corresponding to *aru* ‘to be (inanimate)’ and *oru* ‘to be (animate)’ differ in shape from their *suru*-adnominal forms in Old Japanese, their *shi*-continuative and *su*-conclusive forms are homophonous. *Shi*-continuative, *su*-conclusive, and *suru*-adnominal forms each take a different shape in the mixed conjugation, as well as in those of the verbs corresponding to *shinu* ‘to die’, *kuru* ‘to come’, and *suru* ‘to do’.

In the case of Miyako, it can be determined whether the perfective forms of *-k*-stem, *-g*-stem, *-b*-stem, and *\*-w*-stem strong verbs derive from *shi*-continuatives or from *su*-conclusive or *suru*-adnominal forms, but not whether they derive from *su*-conclusives on the one hand or from *suru*-adnominals on the other. Furthermore, as sound changes such as *-mi* > *-m*, *-mu* > *-m*, *-si* > *-s*, *-su* > *-s*, *-tsi* > *-ts*, *-tsu* > *-ts*, *-ri* > *-z*, and *-ru* > *-z* have occurred, it cannot be determined whether the perfective forms of *-m*-stem, *-s*-stem, *-ts*-stem, and *-r*-stem strong verbs as well as those of the irregular verbs corresponding to *suru*, *oru*, and *aru* derive from *shi*-continuatives, *su*-conclusives, or *suru*-adnominals. As regards *sn* ‘to die’, which has changed into a strong verb, it is difficult to determine from which form it derives, as the sound changes *-ni* > *-n* and *-nu* > *-n* have also occurred. As regards the verb corresponding to *kuru*, which follows either the weak or an irregular conjugation, it can be determined whether it derives from a *shi*-continuative or from a *su*-conclusive, but not whether it derives from a *su*-conclusive or from a *suru*-adnominal. It can be determined whether a perfective form derives from a *shi*-continuative, from a *su*-conclusive, or from a *suru*-adnominal only in the case of the mixed conjugation.

In emphatic sentences with the focus particle =*du*, emphatic forms homophonous with adnominal forms and different from the perfective forms used in sentences without =*du* are used in the dialects of Okinawa Island, but in the Miyako language, the same forms are used for the predicate irrespective of whether the focus particle =*du* is used<sup>20</sup>. For this reason, I will not take into account whether =*du* is used in reporting the perfective forms in this chapter.

- (18) p̄atume: t̄akame: tubz. (Kurima)  
pigeon=too hawk=too to.fly-PERFECTIVE (*tobu*)  
‘Pigeons and hawks both fly.’
- (19) t̄akanudu tubz. (Kurima)  
hawk=NOMINATIVE to.fly-PERFECTIVE (*tobu*)  
‘A hawk flies away.’
- (20) sarumai ki:kara utei. (Bora)  
monkey=too tree=ABLATIVE to.fall-PERFECTIVE (*ochiru*)

<sup>20</sup> I have pointed out that whether a focus particle is used does not determine which conjugated form is used as a conclusive form in an earlier work, as well (Karimata 2011).

- ‘Even monkeys fall from trees./Even the best sometimes make mistakes.’
- (21) m:na umandu uri. (Bora)  
 everyone there=LOCATIVE to.get.off-PERFECTIVE (*oriru*)  
 ‘Everyone gets off (e.g. the bus) there.’
- (22) maznudu ama:tta ari uz<sup>21</sup>. (Shimajiri)  
 rice=NOMINATIVE much to.be-PROGRESSIVE (*iru*)  
 ‘I have a lot of rice.’
- (23) ssuznu arittei taskari: uz. (Shimajiri)  
 medicine=NOMINATIVE to.be-CONTINUATIVE to.be.saved-PROGRESSIVE (*iru*)  
 ‘I’m lucky to have some medicine.’

### *The Bora dialect*

In the Bora dialect, perfective forms deriving from *shi*-continuatives are observed for strong (e.g. *tubz* ‘to.fly-PERFECTIVE’), mixed (e.g. *uki* ‘to.get.up-PERFECTIVE’), and weak (e.g. *k<sup>s</sup>ɣ:* ‘to.put.on(e.g. clothing)-PERFECTIVE’) verbs, as well as for the irregular verb *k<sup>s</sup>ɣ:* ‘to.come-PERFECTIVE’. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *k<sup>h</sup>av* ‘to.buy-PERFECTIVE’). Either a perfective form deriving from a strong conjugation *shi*-continuative or one deriving from a *suru*-adnominal is used for *sɣŋ* ~ *ʂŋ* ‘to.die-PERFECTIVE’.

### **Strong conjugation**

- *tubz* ‘to.fly-PERFECTIVE’, *asɣp<sup>s</sup>ɣ* ~ *asɣbɣ* ‘to.play-PERFECTIVE’, *kugz* ‘to.row-PERFECTIVE’, *iks* ‘to.go-PERFECTIVE’, *piz* ‘to.go-PERFECTIVE’, *utus* ~ *utusɣ* ‘to.drop-PERFECTIVE’, *idasɣ* ‘to.put-PERFECTIVE’, *mutsɣ* ‘to.carry-PERFECTIVE’, *num* ‘to.drink-PERFECTIVE’, *puzɣ* ‘to.dig-PERFECTIVE’, *fɣz* ‘to.fall(e.g. rain)-PERFECTIVE’, *k<sup>s</sup>ɣ:* ‘to.cut-PERFECTIVE’, *fits* ‘to.tie.up-PERFECTIVE’, *smaz* ‘to.tie.up-PERFECTIVE’, *k<sup>h</sup>av* ‘to.buy-PERFECTIVE’, *fɔv* ‘to.eat-PERFECTIVE’, *arɔv* ‘to.wash-PERFECTIVE’, *bju:* ‘to.get.drunk-PERFECTIVE’, *kav* ~ *kaf* ‘to.put.on(headwear)-PERFECTIVE’, *fɣ:* ‘to.close-PERFECTIVE’, *niɣ* ‘to.fall.asleep-PERFECTIVE’, *az* ‘to.say-PERFECTIVE’, *vvɣ* ‘to.sell-PERFECTIVE’, *sɣŋ* ~ *ʂŋ* ‘to.die-PERFECTIVE’
- *kiz* ‘to.kick-PERFECTIVE’, *k<sup>s</sup>ɣ:* ‘to.put.on(e.g. clothing)-PERFECTIVE’, *b<sup>z</sup>ɣ:* ‘to.sit.down-PERFECTIVE’

<sup>21</sup> *ari uz*, a combination of the *ari*-continuative form of *az* ‘to be (inanimate)’ and the existential verb *uz* corresponding to Japanese *atte iru* ‘to.be-PROGRESSIVE’, is used for the transient, actual existence of inanimate objects. Further confirmation is needed in regard to the details of this form.



### Mixed conjugation

- *stei* ‘to.discard-PERFECTIVE’, *uri* ‘to.get.off-PERFECTIVE’, *utei* ‘to.fall-PERFECTIVE’, *ffi:* ‘to.give-PERFECTIVE’, *uki* ‘to.get.up-PERFECTIVE’
- *mi:* ‘to.see-PERFECTIVE’, *i:* ‘to.get-PERFECTIVE’

### Irregular conjugation

- *k<sup>s</sup>ɿ:* ‘to.come-PERFECTIVE’, *sɿ:* ‘to.do-PERFECTIVE’, *uz ~ u:* ‘to.be(animate)-PERFECTIVE’, *aɿ* ‘to.be(inanimate)-PERFECTIVE’, *nja:ŋ* ‘to be absent’

### The Uruka dialect

In the Uruka dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *asip<sup>s</sup>i* ‘to.play-PERFECTIVE’), as well as for the irregular verb *ksɿ:* / *ks<sup>s</sup>ɿ:* ‘to.come-PERFECTIVE’. Only a small number of examples of mixed verbs were obtained, but *sti* ‘to.discard-PERFECTIVE’ appears to derive from a *shi*-continuative. No examples of weak verbs were obtained. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *kau* ‘to.buy-PERFECTIVE’).

### Strong conjugation

- *asip<sup>s</sup>i* ‘to.play-PERFECTIVE’, *kugu<sup>s</sup>ɿ* / *kugu<sup>s</sup>ɿ* <sup>22</sup> ‘to.row-PERFECTIVE’, *ik<sup>s</sup>ɿ* / *ik<sup>s</sup>ɿ* ‘to.go-PERFECTIVE’, *fu<sup>s</sup>ɿ* ‘to.fall(e.g. rain)-PERFECTIVE’, *utusɿ* ‘to.drop-PERFECTIVE’, *idasɿ* ‘to.put-PERFECTIVE’, *mutsi* ‘to.carry-PERFECTIVE’, *ks<sup>s</sup>ɿ* ‘to.cut-PERFECTIVE’, *sɿmari* ‘to.tie.up-PERFECTIVE <sup>23</sup>’, *pu<sup>s</sup>i* ‘to.dig-PERFECTIVE’, *num* ‘to.drink-PERFECTIVE’, *kau* ‘to.buy-PERFECTIVE’, *fou* / *fau* ‘to.eat-PERFECTIVE’, *arau* ‘to.wash-PERFECTIVE’, *murau* ‘to.receive-PERFECTIVE’, *bju:* ‘to.get.drunk-PERFECTIVE’, *kav* ‘to.put.on(headwear)-PERFECTIVE’, *v:* / *vuv* ‘to.sell-PERFECTIVE’, *ki<sup>s</sup>ɿ* ‘to.kick-PERFECTIVE’

### Mixed conjugation

- *sti* ‘to.discard-PERFECTIVE’, *urittea:* ‘to.get.off-PERFECTIVE-QUOTATIVE (evidential?)’, *utidu* *sɿ:* / *sɿ<sup>s</sup>ɿ* ‘to.fall=FOCUS to.do-PERFECTIVE’

### Weak conjugation

(no data)

### Irregular conjugation

- *ksɿ:* / *ks<sup>s</sup>ɿ:* ‘to.come-PERFECTIVE’, *sɿ:* / *sɿ<sup>s</sup>ɿ* ‘to.do-PERFECTIVE’, *u<sup>s</sup>ɿ* ‘to.be(animate)-PERFECTIVE’

<sup>22</sup> The obtained word forms suggest a derivation from either *\*kogoru* or *\*kogori*.

<sup>23</sup> *sɿmari* may correspond to Japanese *shibare* ‘to.tie.up-IMPERATIVE’.

### *The Miyaguni dialect*

In the Miyaguni dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *ik<sup>s</sup>i* ‘to.go-PERFECTIVE’), as well as for the irregular verb *kī*: ‘to.come-PERFECTIVE’. Only a small number of examples of mixed verbs were obtained, but *uci* ‘to.fall-PERFECTIVE’ appears to derive from a *shi*-continuative. No examples of weak verbs were obtained. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *kau* ‘to.buy-PERFECTIVE’).

#### **Strong conjugation**

- *butuk<sup>i</sup>* ‘to.fly-PERFECTIVE’, *kugi* ‘to.row-PERFECTIVE’, *ik<sup>s</sup>i* ‘to.go-PERFECTIVE’, *fu<sup>ɲ</sup>* ‘to.fall(e.g. rain)-PERFECTIVE’, *ut<sup>u</sup>su* ‘to.drop-PERFECTIVE’, *idaei* ‘to.put-PERFECTIVE’, *k<sup>i</sup>si* ‘to.cut-PERFECTIVE’, *m<sup>o</sup>t<sup>s</sup>ɲ* ‘to.carry-PERFECTIVE’, *kau* ‘to.buy-PERFECTIVE’, *arau* ‘to.wash-PERFECTIVE’, *ɸau* / *ɸoo* ‘to.eat-PERFECTIVE’, *b<sup>u</sup>:* *du<sup>s</sup>ɲ*: ‘to.get.drunk=FOCUS to.do-PERFECTIVE’, *u*: / *uv* ‘to.sell-PERFECTIVE’, *kiz* ‘to.kick-PERFECTIVE’

#### **Mixed conjugation**

- *s<sup>i</sup>ciu* ‘to.discard-PERFECTIVE<sup>24</sup>’, *uriru* ‘to.get.off-PERFECTIVE<sup>25</sup>’, *uci* ‘to.fall-PERFECTIVE’, *ɸi*: ‘to.give-PERFECTIVE’,

#### **Weak conjugation**

(no data)

#### **Irregular conjugation**

- *kī*: ‘to.come-PERFECTIVE’, *u*: ‘to.be(animate)-PERFECTIVE’

### *The Yonaha dialect*

In the Yonaha dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *kug<sup>ɲ</sup>* ‘to.row-PERFECTIVE’), as well as for the irregular verb *k<sup>ɲ</sup>s<sup>ɲ</sup>* ‘to.come-PERFECTIVE’. Only a small number of examples of mixed verbs were obtained, but *uti*: ‘to.fall-PERFECTIVE’ derives from a *shi*-continuative, while *suti<sup>z</sup>ɲ* ‘to.discard-PERFECTIVE’ appears to derive from a *suru*-adnominal. No examples of weak verbs were obtained. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *ko*: ‘to.buy-PERFECTIVE’).

<sup>24</sup> *s<sup>i</sup>ciu* may correspond to Japanese *sutete iru* ‘to.discard-PROGRESSIVE’.

<sup>25</sup> *uriru* may correspond to Japanese *oriro* ‘to.get.off-IMPERATIVE’.

### Strong conjugation

- tubɔdu sɨ ‘to.fly=FOCUS to.do-PERFECTIVE’, kugɨ ‘to.row-PERFECTIVE’, ik\*ɨ ‘to.go-PERFECTIVE’, utusɨ ‘to.drop-PERFECTIVE’, idasɨ ‘to.put-PERFECTIVE’, mutsɨ ‘to.carry-PERFECTIVE’, num ‘to.drink-PERFECTIVE’, puzɨ ‘to.dig-PERFECTIVE’, ffɨ ‘to.fall(e.g. rain)-PERFECTIVE’, kɨsɨ ‘to.cut-PERFECTIVE’, sɨmaɨ ‘to.tie.up-PERFECTIVE’, ko: ‘to.buy-PERFECTIVE’, fo: ‘to.eat-PERFECTIVE’, aro: ‘to.wash-PERFECTIVE’, bju: ‘to.get.drunk-PERFECTIVE’, kɨ:dusu / kizɨ ‘to.kick-PERFECTIVE’

### Mixed conjugation

- sutiʔɨ ‘to.discard-PERFECTIVE’, uriru ‘to.get.off-PERFECTIVE<sup>26</sup>’, uti: ‘to.fall-PERFECTIVE’

### Weak conjugation

(no data)

### Irregular conjugation

- kɨsɨ ‘to.come-PERFECTIVE’, sɨ ‘to.do-PERFECTIVE’, uɨ ‘to.be(animate)-PERFECTIVE’

### *The Kurima dialect*

In the Kurima dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *tubz* ‘to.fly-PERFECTIVE’), as well as for the irregular verb *tsɨ* ‘to.come-PERFECTIVE’. Perfective forms deriving from *suru*-adnominals are used for mixed verbs (e.g. *uriʔɨ* ‘to.get.off-PERFECTIVE’). Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *ko:* ‘to.buy-PERFECTIVE’).

### Strong conjugation

- tubz ‘to.fly-PERFECTIVE’, aspi ‘to.play-PERFECTIVE<sup>27</sup>’, kudzɨ ‘to.row-PERFECTIVE’, its / itsɨ ‘to.go-PERFECTIVE’, utɨsɨ ‘to.drop-PERFECTIVE’, idaɛ: ‘to.put-PERFECTIVE<sup>28</sup>’, mutsu / mutsɨ ‘to.carry-PERFECTIVE’, num ‘to.drink-PERFECTIVE’, puɨ ‘to.dig-PERFECTIVE’, ffɨ ‘to.fall(e.g. rain)-PERFECTIVE’, samaɨ<sup>29</sup> ‘to.tie.up-PERFECTIVE’, tsɨ / tsɨɨ ‘to.cut-PERFECTIVE’, v: ‘to.sell-PERFECTIVE’, ko: ‘to.buy-PERFECTIVE’, fo: ‘to.eat-PERFECTIVE’, muroa ‘to.receive-PERFECTIVE’, aroa ‘to.wash-PERFECTIVE’, bju: ‘to.get.drunk-PERFECTIVE’
- kiz / kiɨ ‘to.kick-PERFECTIVE’

<sup>26</sup> *uriru* may correspond to Japanese *oriro* ‘to.get.off-IMPERATIVE’.

<sup>27</sup> *aspi* may correspond to Japanese *asobe* ‘to.play-IMPERATIVE’.

<sup>28</sup> *idaɛ:* may correspond to Japanese *dase* ‘to.put.out-IMPERATIVE’.

<sup>29</sup> Perhaps *smaɨ*.

### Mixed conjugation

- *stiŋ* / *stiz* ‘to.discard-PERFECTIVE’, *uriʔŋ* ‘to.get.off-PERFECTIVE’, *utidus* / *utidusŋ* ‘to.fall=FOCUS to.do-PERFECTIVE’, *utimdo:* ‘to.fall-PERFECTIVE=FOCUS’, *fi:ŋ* ‘to.give-PERFECTIVE’

### Irregular conjugation

- *tssŋ* ‘to.come-PERFECTIVE’, *nʲa:ŋ* ‘to be absent’

### *The Kugai dialect*

In the Kugai dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *tubʔŋ* ‘to.fly-PERFECTIVE’), as well as for the irregular verb *kʲŋsŋ* / *ks:* ‘to.come-PERFECTIVE’. Perfective forms deriving from *suru*-adnominals are used for mixed (e.g. *ukiz* ‘to.get.up-PERFECTIVE’) and weak (e.g. *mi:z* ‘to.see-PERFECTIVE’) verbs. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *ko:* ‘to.buy-PERFECTIVE’). A perfective form deriving from a strong conjugation *su*-conclusive or *suru*-adnominal form is used for *ʃŋ* ‘to.die-PERFECTIVE’.

### Strong conjugation

- *tubʔŋ* ‘to.fly-PERFECTIVE’, *asps* ‘to.play-PERFECTIVE’, *kugʔŋ* ‘to.row-PERFECTIVE’, *ikʲŋ* ‘to.go-PERFECTIVE’, *utasŋ* ‘to.drop-PERFECTIVE’, *idas* ‘to.put-PERFECTIVE’, *muts* ‘to.carry-PERFECTIVE’, *num* ‘to.drink-PERFECTIVE’, *sŋmaʔŋ* ‘to.tie.up-PERFECTIVE’, *puz* ‘to.dig-PERFECTIVE’, *fuʔŋ* ‘to.fall(e.g. rain)-PERFECTIVE’, *kjɛi* ‘to.cut-PERFECTIVE’, *kiʔŋ* ‘to.kick-PERFECTIVE’, *ko:* ‘to.buy-PERFECTIVE’, *moro:* ‘to.receive-PERFECTIVE’, *fo:* ‘to.eat-PERFECTIVE’, *bʲu:* ‘to.get.drunk-PERFECTIVE’, *aro:* ‘to.wash-PERFECTIVE’, *kav* ‘to.put.on(headwear)-PERFECTIVE’, *ffʊ* ‘to.close-PERFECTIVE’, *niʲ* ‘to.fall.asleep-PERFECTIVE’, *v:* ‘to.sell-PERFECTIVE’, *andz* ‘to.say-PERFECTIVE’, *ʃŋ* ‘to.die-PERFECTIVE’

### Weak conjugation

- *ukiz* ‘to.get.up-PERFECTIVE’, *stiʔŋ* ‘to.discard-PERFECTIVE’, *uriʔŋ* ‘to.get.off-PERFECTIVE’, *utiʔŋ* ‘to.fall-PERFECTIVE’, *fi:z* ‘to.give-PERFECTIVE’, *ukiz* ‘to.get.up-PERFECTIVE’
- *mi:z* ‘to.see-PERFECTIVE’, *biziz* ‘to.sit.down-PERFECTIVE’, *kieiz* ‘to.put.on(e.g. clothing)-PERFECTIVE’

### Irregular conjugation

- *kʲŋsŋ* / *ks:* ‘to.come-PERFECTIVE’, *ss* ‘to.do-PERFECTIVE’, *u:* ‘to.be(animate)-PERFECTIVE’, *az* ‘to.be(inanimate)-PERFECTIVE’, *nʲa:ŋ* ‘to be absent’

*The Shimajiri dialect*

In the Shimajiri dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *tubz* ‘to.fly-PERFECTIVE’, *kugz* ‘to.row-PERFECTIVE’), as well as for the irregular verb *ss* ‘to.come-PERFECTIVE’. Perfective forms deriving from *suru*-adnominals are used for mixed verbs. For *uriz* / *uri* ‘to.get.off-PERFECTIVE’, however, a perfective form deriving from a *suru*-adnominal and one deriving from a *shi*-continuative appear to coexist. As regards weak verbs, *mi:z* ‘to.see-PERFECTIVE’ derives from a *suru*-adnominal, while *bz:* ‘to.sit.down-PERFECTIVE’ derives from a *shi*-continuative. As only a small number of examples was obtained, a definitive conclusion cannot be drawn. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs. A perfective form deriving from a mixed conjugation *suru*-adnominal is used for *sniz* ‘to.die-PERFECTIVE’.

**Strong conjugation**

- *tubz* ‘to.fly-PERFECTIVE’, *kugz* ‘to.row-PERFECTIVE’, *iks* ‘to.go-PERFECTIVE’, *ffu* / *ff* ‘to.fall(e.g. rain)-PERFECTIVE’, *utus* ‘to.drop-PERFECTIVE’, *kizdus* ‘to.kick=FOCUS to.do-PERFECTIVE’, *kss* ‘to.cut-PERFECTIVE’, *fgz* ‘to.tie.up-PERFECTIVE’, *puz* ‘to.dig-PERFECTIVE’, *muts* ‘to.carry-PERFECTIVE’, *kau* ‘to.buy-PERFECTIVE’, *v:* ‘to.sell-PERFECTIVE’, *nun* ‘to.drink-PERFECTIVE’, *fau* / *fao* / *fo:* ‘to.eat-PERFECTIVE’, *apps* ‘to.play-PERFECTIVE’, *bju:* ‘to.get.drunk-PERFECTIVE’, *arau* ‘to.wash-PERFECTIVE’, *kav* ‘to.put.on(headwear)-PERFECTIVE’, *ff* / *ffu* ‘to.close-PERFECTIVE’, *niy* ‘to.fall.asleep-PERFECTIVE’, *az* ‘to.say-PERFECTIVE’, *bz:* ‘to.sit.down-PERFECTIVE’

**Weak conjugation**

- *steiz* ‘to.discard-PERFECTIVE’, *uriz* / *uri* ‘to.get.off-PERFECTIVE’, *uteiz* ‘to.fall-PERFECTIVE’, *ffi:z* ‘to.give-PERFECTIVE’, *zziz* ‘to.get-PERFECTIVE’, *ukiz* ‘to.get.up-PERFECTIVE’, *sniz* ‘to.die-PERFECTIVE’
- *mi:z* ‘to.see-PERFECTIVE’, *ss* ‘to.put.on(e.g. clothing)-PERFECTIVE’

**Irregular conjugation**

- *ss* ‘to.come-PERFECTIVE’, *ss* ‘to.do-PERFECTIVE’, *az* ‘to.be(inanimate)-PERFECTIVE’, *uz* ‘to.be(animate)-PERFECTIVE’, *nja:ŋ* ‘to be absent’

*The Karimata dialect*

In the Karimata dialect, perfective forms deriving from *shi*-continuatives (*tubi* ‘to.fly-PERFECTIVE’) and perfective forms deriving from *su*-conclusive or *suru*-adnominal forms (*tuv* ‘to.fly-PERFECTIVE’) coexist for strong verbs. For mixed verbs (*utei* / *utɔz* ‘to.fall-PERFECTIVE’), too, perfective forms deriving from *shi*-continuatives and perfective forms

deriving from *suru*-adnominals coexist. As regards weak verbs, *mi*: ‘to.see-PERFECTIVE’ derives from a *shi*-continuative, while *bz:z* ‘to.sit.down-PERFECTIVE’ derives from a *suru*-adnominal. It cannot be determined from which form *kss*: ‘to.put.on(e.g. clothing)’ derives. Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *ko*: ‘to.buy-PERFECTIVE’). A perfective form deriving from a mixed conjugation *suru*-adnominal is used for *snɿz* ‘to.die-PERFECTIVE’. The perfective form used for the irregular verb *ffu* / *ff* ‘to.come-PERFECTIVE’ may derive either from a *su*-conclusive or from a *suru*-adnominal; a definitive conclusion cannot be drawn.

### Strong conjugation

- *tubi* / *tuv* ‘to.fly-PERFECTIVE’, *asuvi* / *asv* ‘to.play-PERFECTIVE’, *kugi* / *kuv* ‘to.row-PERFECTIVE’, *ifu* / *if* ‘to.go-PERFECTIVE’, *utasɿ*: / *utaɿ* ‘to.drop-PERFECTIVE’, *idas* ‘to.put-PERFECTIVE’, *mutsɿ* / *muts* ‘to.carry-PERFECTIVE’, *num* ~ *nuɿ* ‘to.drink-PERFECTIVE’, *ffu* / *fv*: ‘to.fall(e.g. rain)-PERFECTIVE’, <sup>ɸ</sup>*ɸɿ* / <sup>ɸ</sup>*ɸ*: / *puz* ‘to.dig-PERFECTIVE’, *kiri* / *kss* ‘to.cut-PERFECTIVE’, *sɿmari* / *smaz* ‘to.tie.up-PERFECTIVE’, *ko*: ‘to.buy-PERFECTIVE’, *aro*: ‘to.wash-PERFECTIVE’, *fo*: / <sup>ɸ</sup>*o*: ‘to.eat-PERFECTIVE’, *bɿu*: / *bɿu:z* ‘to.get.drunk-PERFECTIVE’, *kavvi* / *kav* ‘to.put.on(headwear)-PERFECTIVE’, *ffi* ‘to.close-PERFECTIVE’, *niv* ‘to.fall.asleep-PERFECTIVE’, *az* ‘to.say-PERFECTIVE’, *vɿ*: ‘to.sell-PERFECTIVE’, *ki*: / *ks:dus* ‘to.kick-PERFECTIVE’

### Weak conjugation

- *uriz* ‘to.get.off-PERFECTIVE’, *utei* / *utɿz* ‘to.fall-PERFECTIVE’, *ukɿ* ~ *ukɿz* ‘to.get.up-PERFECTIVE’, *fɿ* / *fɿ* / *fɿ*: ‘to.give-PERFECTIVE’, *siti* / *situdu* / *sɿtɿ* ‘to.discard-PERFECTIVE’, *kadz:z* ‘to.dig-PERFECTIVE/to.nibble-PERFECTIVE’, *snɿz* ‘to.die-PERFECTIVE’
- *mi*: ‘to.see-PERFECTIVE’, *kss*: ‘to.put.on(e.g. clothing)-PERFECTIVE’, *bz:z* ‘to.sit.down-PERFECTIVE’, *izitaɿ* / *zzidaz* ‘to.get-PERFECTIVE’

### Irregular conjugation

- *ffu* / *ff* ‘to.come-PERFECTIVE’, *as* ‘to.do-PERFECTIVE’, *uz* ‘to.be(animate)-PERFECTIVE’, *az* ‘to.be(inanimate)-PERFECTIVE’, *nɿa:ɿ* ‘to be absent’

### The Ikema dialect

In the Ikema dialect, perfective forms deriving from *shi*-continuatives are used for strong verbs (e.g. *tubi* ‘to.fly-PERFECTIVE’). Perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used for \*-*w*-stem strong verbs (e.g. *kau* ‘to.buy-PERFECTIVE’). As only a small number of examples were obtained, a definitive conclusion cannot be drawn, but the perfective forms used

for mixed verbs (e.g. *uki*: ‘to.get.up-PERFECTIVE’) seemingly derive from *shi*-continuatives. The possibility that they derive from *suru*-adnominals can at present not be denied, however.

Weak verb forms such as *bizi* ‘to.sit.down-PERFECTIVE’ also seem to derive from *shi*-continuatives, although the possibility that they derive from *su*-conclusive or *suru*-adnominal forms can at present not be denied, either. More examples of mixed and weak verb forms have to be obtained and the sound changes that have occurred in the Ikema dialect must be examined. The perfective form *ɛini* ‘to.die-PERFECTIVE’ seems to derive from a mixed conjugation *shi*-continuative.

### Strong conjugation

- *tubi* ‘to.fly-PERFECTIVE’, *kugi* ‘to.row-PERFECTIVE’, *ifu* ‘to.go-PERFECTIVE’, *idaei* ‘to.put-PERFECTIVE’, *kiri* ‘to.cut-PERFECTIVE’, *numi* / *nun* ‘to.drink-PERFECTIVE’, *sīmai* ‘to.tie.up-PERFECTIVE’, *fu*: ‘to.fall(e.g. rain)-PERFECTIVE’, *kau* ‘to.buy-PERFECTIVE’, *fau* / *fau* ‘to.eat-PERFECTIVE’, *arau* ‘to.wash-PERFECTIVE’, *bū:i* ‘to.get.drunk-PERFECTIVE’, *kavvi* / *kavvi* ‘to.put.on(headwear)-PERFECTIVE’, *ffi* ‘to.close-PERFECTIVE’, *nīvvi* ‘to.fall.asleep-PERFECTIVE’, *addzi* ‘to.say-PERFECTIVE’

### Weak conjugation

- *fi*: ‘to.give-PERFECTIVE’, *uki*: ‘to.get.up-PERFECTIVE’, *ɛini* ‘to.die-PERFECTIVE’, *uriru* ‘to.get.off-PERFECTIVE<sup>30</sup>’
- *bizi* ‘to.sit.down-PERFECTIVE’, *tsɿ*: / *tsɿ* ‘to.put.on(e.g. clothing)-PERFECTIVE’

### Irregular conjugation

- *fu*: ‘to.come-PERFECTIVE’, *assɿ* / *aɛɛi* ‘to.do-PERFECTIVE’, *urijui* / *uri:ui* <sup>31</sup> ‘to.be(animate)-PERFECTIVE’, *ari:jui* ‘to.be(inanimate)-PERFECTIVE’, *nʼa:N* ‘to be absent’

### *The Kuninaka dialect*

Only a small number of examples of strong verbs were obtained for the Kuninaka dialect; moreover, only examples of which it is difficult to determine whether they derive from *shi*-continuatives or from *su*-conclusives were obtained. The mixed verb example *oki* ‘to.get.up-PERFECTIVE’ seems to derive from a *suru*-adnominal.

### Strong conjugation

- *kaɸ* ‘to.put.on(headwear)-PERFECTIVE’, *aɿ* ‘to.say-PERFECTIVE’, *sɿN* ‘to.die-PERFECTIVE’, *tsɿ*: / *tsɿ:i* ‘to.put.on(e.g. clothing)-PERFECTIVE’, *bɿ*: / *bizi* / *bɿzɿ* ‘to.sit.down-PERFECTIVE’

<sup>30</sup> *uriru* may correspond to Japanese *oriro* ‘to.get.off-IMPERATIVE’.

<sup>31</sup> /ui/ is used as an auxiliary verb in continuous aspect forms, such as *tubiui* ‘to.fly-PROGRESSIVE’.

### Weak conjugation

- okil / okilli ‘to.get.up-PERFECTIVE’, eimidzi ‘to.close-PERFECTIVE’
- mi:dzi ‘to.see-PERFECTIVE’

### Irregular conjugation

- asɿ ‘to.do-PERFECTIVE’, ol ‘to.be(animate)-PERFECTIVE’, al ‘to.be(inanimate)-PERFECTIVE’, nʲa:N ‘to be absent’

## 5.1 Summary of perfective forms

Regarding the origin of the perfective forms of the Miyako language, it has been thought that forms deriving from *shi*-continuatives functioned both as perfective forms and as adnominal forms, on the basis of sound correspondences between these forms in the dialect of the urban area of former Hirara City (Nishizato, Shimozato, Higashi-Nakasone, and Nishi-Nakasone; henceforth just the ‘Hirara dialect’) and the *shi*-continuatives of Japanese. I have taken this view in previous work, as well (Karimata 1990). Until now, however, discussion has been limited to the strong conjugation; moreover, it has only taken into account the south-western dialects of Miyako, spoken for example in former Gusukube Town, former Ueno Village, and former Shimoji Town, centering on the Hirara dialect. In this section, we additionally considered the Karimata and Ikema dialects, and although the number of examples was limited, we examined data regarding the weak and mixed conjugations and looked at the derivations of the assertive forms of Miyako verbs.

- (i) In all of the dialects except for those of Karimata and Ikema, the perfective forms of *-k*-stem, *-g*-stem, and *-b*-stem verbs derive from *shi*-continuatives.
- (ii) In the Karimata and Ikema dialects, perfective forms deriving from *shi*-continuatives and perfective forms deriving from *su*-conclusive or *suru*-adnominal forms coexist for strong verbs.
- (iii) For *\*-w*-stem verbs, perfective forms deriving from *su*-conclusive or *suru*-adnominal forms are used.
- (iv) The Ikema form *einʲi* ‘to.die-PERFECTIVE’ derives from a mixed conjugation *shi*-continuative, while the Karimata form *snʲz* ‘to.die-PERFECTIVE’ derives from a mixed conjugation *suru*-adnominal.
- (v) In the Bora, Kurima, and Ikema dialects, the perfective forms of weak verbs derive from *shi*-continuatives, while in the Kugai dialect, the perfective forms of weak verbs derive from *su*-conclusive or *suru*-adnominal forms.
- (vi) In the Bora, Miyaguni, and Ikema dialects, the perfective forms of mixed verbs derive from *shi*-continuatives, while in the Kurima and Shimajiri dialects, the perfective forms



of mixed verbs derive from *suru*-adnominals. In the Karimata dialect, perfective forms deriving from *shi*-continuatives and perfective forms deriving from *suru*-adnominals coexist for mixed verbs.

- (vii) In the Bora, Uruka, Miyaguni, Yonaha, Kurima, Kugai, and Shimajiri dialects, the perfective form of the irregular verb corresponding to *kuru* ‘to.come-PERFECTIVE’ derives from a *shi*-continuative. In the Karimata and Ikema dialects, the perfective form of the irregular verb corresponding to *kuru* seems to derive from a *su*-conclusive or *suru*-adnominal form.
- (viii) It cannot be determined whether the perfective forms of *-m*-stem, *-s*-stem, *-ts*-stem, and *-r*-stem strong verbs derive from *shi*-continuatives, from *su*-conclusives, or from *suru*-adnominals.

More examples of verb forms from the sites reported on in this chapter have to be obtained, and it must be determined what sound changes have occurred in each of the dialects; moreover, further research at an increased number of survey sites is necessary. Although the extent to which we can draw conclusions is thus limited, it is possible to identify within the whole of the data forms deriving specifically from *shi*-continuatives as well as forms deriving specifically from *suru*-adnominals, while no dialects or verbs are found for which forms deriving specifically from *su*-conclusives can be identified<sup>32</sup>.

## 6 *Ari*-continuative forms

Among the continuative forms of the Miyako language, the one that is most similar in function to the Japanese *shite*-continuative is the *ari*-continuative. *Ari*-continuatives can be used as independent constituents for non-conclusive predicates in compound sentences and sentences with multiple predicates to express how two actions take place in succession, either in a subordinate or in a non-subordinate manner. The *ari*-continuative can also be used for forming compound predicates. In these respects, it corresponds to the Japanese *shite*-continuative.

- (24) ki:nu va:gun nu:ri n:to: utaɛi fi:ru. (Karimata)  
 tree=GENITIVE top=LOCATIVE to.climb-CONTINUATIVE fruit=ACCUSATIVE  
 to.drop-CONTINUATIVE to.give-IMPERATIVE (*nobotte*)

<sup>32</sup> The mixed conjugation form *ukiN* ‘to get up’ and the weak conjugation form *mi:N* ‘to see’ of the Ishigaki dialect of the Yaeyama language seem to be forms deriving from *shi*-continuatives with *-N* suffixed to them, while *ukiruN* ‘to get up’ and *mi:ruN* ‘to see’ seem to be forms deriving from *suru*-adnominals with *-N* suffixed to them.

- ‘Climb the tree and drop some fruit.’
- (25) tuzzu smari kagonkai iziru. (Karimata)  
 chicken=ACCUSATIVE to.tie.up-CONTINUATIVE cage=LOCATIVE to.put.in-IMPERATIVE  
 (*shibatte*)  
 ‘Tie up the chicken and put it into the cage.’
- (26) tavkia:aidu fnju: kuqi ksta:. (Bora)  
 one.person=INSTRUMENTAL boat=ACCUSATIVE to.row-CONTINUATIVE to.come-PAST  
 (*koida*)  
 ‘I rowed the boat by myself.’
- (27) ki:n nu:ri: nazzu utuqi fi:ru. (Bora)  
 tree=LOCATIVE to.climb-CONTINUATIVE fruit=ACCUSATIVE to.drop-CONTINUATIVE  
 to.give-IMPERATIVE (*otoshite*)  
 ‘Climb the tree and drop some fruit.’
- (28) ka:ra: bju:itti cununu kuto: bassii u:. (Kurima)  
 he=TOPIC to.get.drunk-CONTINUATIVE yesterday=GENITIVE thing=TOPIC  
to.forget-STATIVE (*wasurete*)  
 ‘He got drunk, so he has forgotten about yesterday.’

Formally, the Miyako *ari*-continuative does not correspond to the *shite*-continuative. At first glance, it appears to correspond to the *shi*-continuative of Old Japanese. If the Miyako *ari*-continuative corresponded to the Japanese *shi*-continuative, the fact that sound changes such as *-ki* > *-ks*, *-gi* > *-gz*, *-bi* > *-bz*, *-mi* > *-m*, *-si* > *-s*, *-tei* > *-ts*, and *-ri* > *-z* have occurred in many of the dialects of Miyako would lead us to expect the *ari*-continuative forms of strong verbs to be identical to the *shi*-continuative forms contained in their past tense forms that were discussed above, such as *kaks* ‘to.write-CONTINUATIVE’, *kugz* ‘to.row-CONTINUATIVE’, *tubz* ‘to.fly-CONTINUATIVE’, *num* ‘to.drink-CONTINUATIVE’, *utus* ‘to.drop-CONTINUATIVE’, *muts* ‘to.carry-CONTINUATIVE’, and *puz* ‘to.dig-CONTINUATIVE’. Formally, however, the *ari*-continuative does not correspond to the *shi*-continuatives of Japanese and the Northern Ryukyuan languages. The *shi*-continuative forms used in the Miyako language as elements in the formation of words and forms differ formally from *ari*-continuative forms. Let us take a look at the kinds of forms observed for the *ari*-continuative.

*The Bora dialect*

**Strong conjugation**

- tubi ‘to.fly-CONTINUATIVE’, asɣpi: ~ asɣbi: ‘to.play-CONTINUATIVE’, kugi / kugʻi ‘to.row-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, ffi: ‘to.fall(e.g. rain)-CONTINUATIVE’, idaei ‘to.put.out-CONTINUATIVE’, utuei ‘to.drop-CONTINUATIVE’, puri ‘to.dig-CONTINUATIVE’, kiri ‘to.kick-CONTINUATIVE’, kiei ‘to.cut-CONTINUATIVE’, mutei ‘to.carry-CONTINUATIVE’, numi ‘to.drink-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, fai ‘to.eat-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’, bʲu:i ‘to.get.drunk-CONTINUATIVE’, vvi: ‘to.sell-CONTINUATIVE’, kavvi: ‘to.put.on(headwear)-CONTINUATIVE’, ffi ‘to.close-CONTINUATIVE’, nivvi ‘to.fall.asleep-CONTINUATIVE’, ftei ‘to.tie.up-CONTINUATIVE’, azzi: ‘to.say-CONTINUATIVE’
- sɣnʲi ‘to.die-CONTINUATIVE’, kiei ‘to.put.on(e.g. clothing)-CONTINUATIVE’, bizi: ‘to.sit.down-CONTINUATIVE’

**Mixed conjugation**

- fi: ‘to.give-CONTINUATIVE’, utei ‘to.fall-CONTINUATIVE’, sumi: ‘to.wash-CONTINUATIVE’, uki: ‘to.get.up-CONTINUATIVE’, stei ‘to.discard-CONTINUATIVE’, uri ‘to.get.off-CONTINUATIVE’
- mi: ‘to.see-CONTINUATIVE’, i: ‘to.get-CONTINUATIVE’

**Irregular conjugation**

- kiei ‘to.come-CONTINUATIVE’, ei: ‘to.do-CONTINUATIVE’, ari: ‘to.be(inanimate)-CONTINUATIVE’, uri ‘to.be(animate)-CONTINUATIVE’

*The Uruka dialect*

**Strong conjugation**

- tuvi ‘to.fly-CONTINUATIVE’, asɣpi ‘to.play-CONTINUATIVE’, kugi ‘to.row-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, utuei ‘to.drop-CONTINUATIVE’, idafɣi ‘to.put.out-CONTINUATIVE’, muɣɣi ‘to.carry-CONTINUATIVE’, numi ‘to.drink-CONTINUATIVE’, puri ‘to.dig-CONTINUATIVE’, sɣmari ‘to.tie.up-CONTINUATIVE’, kɣei / kiei ‘to.cut-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’, fai ‘to.eat-CONTINUATIVE’, murai ‘to.receive-CONTINUATIVE’, bʲu:i ‘to.get.drunk-CONTINUATIVE’, ffi ‘to.fall(e.g. rain)-CONTINUATIVE’, vvi ‘to.sell-CONTINUATIVE’, kavvi ‘to.put.on(headwear)-CONTINUATIVE’
- kiri ‘to.kick-CONTINUATIVE’

**Mixed conjugation**

- uri ‘to.get.off-CONTINUATIVE’, uti ‘to.fall-CONTINUATIVE’, sɣti ‘to.discard-CONTINUATIVE’, ffi ‘to.give-CONTINUATIVE’

### **Irregular conjugation**

- kɨɛi / kiei ‘to.come-CONTINUATIVE’

#### *The Miyaguni dialect*

### **Strong conjugation**

- tɯbi ‘to.fly-CONTINUATIVE’, kugi ‘to.row-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, ffi ‘to.fall(e.g. rain)-CONTINUATIVE’, utɯsi ‘to.drop-CONTINUATIVE’, kɨsi ‘to.cut-CONTINUATIVE’, sɨmari ‘to.tie.up-CONTINUATIVE’, pɔri ‘to.dig-CONTINUATIVE’, idaɛitei<sup>33</sup> ‘to.put.out-CONTINUATIVE’, motɛi ‘to.carry-CONTINUATIVE’, k<sup>h</sup>ai ‘to.buy-CONTINUATIVE’, uvi ‘to.sell-CONTINUATIVE’, morai ‘to.receive-CONTINUATIVE’, nɔmi ‘to.drink-CONTINUATIVE’, ɸai ‘to.eat-CONTINUATIVE’, asɲpi ‘to.play-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’
- kiri ‘to.kick-CONTINUATIVE’

### **Mixed conjugation**

- ɸii ‘to.give-CONTINUATIVE’, sɨtsi ‘to.discard-CONTINUATIVE’, ucɨ ‘to.fall-CONTINUATIVE’, uri ‘to.get.off-CONTINUATIVE’

### **Irregular conjugation**

- kɨsi ‘to.come-CONTINUATIVE’

#### *The Yonaha dialect*

### **Strong conjugation**

- tubi ‘to.fly-CONTINUATIVE’, appi ‘to.play-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, numi: ‘to.drink-CONTINUATIVE’, utuɛi ‘to.drop-CONTINUATIVE’, mutɛi ‘to.carry-CONTINUATIVE’, sɲmari ‘to.tie.up-CONTINUATIVE’, puri ‘to.dig-CONTINUATIVE’, kɲɛi ‘to.cut-CONTINUATIVE’, vvi ‘to.sell-CONTINUATIVE’, ffi ‘to.fall(e.g. rain)-CONTINUATIVE’, ke: ‘to.buy-CONTINUATIVE’, bju:i ‘to.get.drunk-CONTINUATIVE’, are: ‘to.wash-CONTINUATIVE’
- kiri ‘to.kick-CONTINUATIVE’

### **Mixed conjugation**

- uri ‘to.get.off-CONTINUATIVE’, uti ‘to.fall-CONTINUATIVE’, sɲti ‘to.discard-CONTINUATIVE’, ɲzi ‘to.put.in-CONTINUATIVE’, piŋgi ‘to.flee-CONTINUATIVE’, fi: ‘to.give-CONTINUATIVE’
- zzi ‘to.get-CONTINUATIVE’

### **Irregular conjugation**

- kɲɛi ‘to.come-CONTINUATIVE’

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<sup>33</sup> When compared to other word forms, it appears that this may be a *shite*-continuative form.

*The Kurima dialect*

**Strong conjugation**

- tubi ‘to.fly-CONTINUATIVE’, kugi ‘to.row-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, idasi ‘to.put.out-CONTINUATIVE’, utyēj ‘to.drop-CONTINUATIVE’, mutēj ‘to.carry-CONTINUATIVE’, tējēj ‘to.cut-CONTINUATIVE’, smari ‘to.tie.up-CONTINUATIVE’, puri ‘to.dig-CONTINUATIVE’, ffj ‘to.fall(e.g. rain)-CONTINUATIVE’, nu:ri: ‘to.climb-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, vvi ‘to.sell-CONTINUATIVE’, murai ‘to.receive-CONTINUATIVE’, numi ‘to.drink-CONTINUATIVE’, fai ‘to.eat-CONTINUATIVE’
- kiri ‘to.kick-CONTINUATIVE’

**Mixed conjugation**

- uri ‘to.get.off-CONTINUATIVE’, uti ‘to.fall-CONTINUATIVE’, sti ‘to.discard-CONTINUATIVE’, fi: ‘to.give-CONTINUATIVE’, piŋgi ‘to.flee-CONTINUATIVE’

**Irregular conjugation**

- tējēj ‘to.come-CONTINUATIVE’

*The Kugai dialect*

**Strong conjugation**

- tubi ‘to.fly-CONTINUATIVE’, aspi / aspi: ‘to.play-CONTINUATIVE’, numi ‘to.drink-CONTINUATIVE’, kugi ‘to.row-CONTINUATIVE’, u:gi ‘to.swim-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, ka:raki ‘to.dry.up-CONTINUATIVE’, utaei ‘to.drop-CONTINUATIVE’, idaei ‘to.put.out-CONTINUATIVE’, mutēi ‘to.carry-CONTINUATIVE’, smari ‘to.tie.up-CONTINUATIVE’, puri ‘to.dig-CONTINUATIVE’, javvi: ‘to.tear-CONTINUATIVE’, furi: ‘to.fall(e.g. rain)-CONTINUATIVE’, nu:ri ‘to.climb-CONTINUATIVE’, vvi: ‘to.sell-CONTINUATIVE’, kiei ‘to.cut-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, fai ‘to.eat-CONTINUATIVE’, b’u:i ‘to.get.drunk-CONTINUATIVE’, tskai ‘to.use-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’, kavvi ‘to.put.on(headwear)-CONTINUATIVE’, ffi ‘to.close-CONTINUATIVE’, nivvi ‘to.fall.asleep-CONTINUATIVE’, tatei: ‘to.stand.up-CONTINUATIVE’, andzi ‘to.say-CONTINUATIVE’
- kiri ‘to.kick-CONTINUATIVE’
- sn’i ‘to.die-CONTINUATIVE’

**Weak conjugation**

- uri ‘to.get.off-CONTINUATIVE’, uti ‘to.fall-CONTINUATIVE’, fa:sari ‘to.be.run.over-CONTINUATIVE’, uki: ‘to.get.up-CONTINUATIVE’, ʔzi ‘to.put.in-CONTINUATIVE’, piŋgi ‘to.flee-CONTINUATIVE’, fi: ‘to.give-CONTINUATIVE’, sʔti ‘to.discard-CONTINUATIVE’

- mi: ‘to.see-CONTINUATIVE’, bizi ‘to.sit.down-CONTINUATIVE’, zzi ‘to.get-CONTINUATIVE’,  
kiei ‘to.put.on(e.g. clothing)-CONTINUATIVE’

#### **Irregular conjugation**

- kiei ‘to.come-CONTINUATIVE’, ei: ‘to.do-CONTINUATIVE’, ari:  
‘to.be(inanimate)-CONTINUATIVE’, uri: ‘to.be(animate)-CONTINUATIVE’

#### *The Shimajiri dialect*

##### **Strong conjugation**

- tubi ‘to.fly-CONTINUATIVE’, appi ‘to.play-CONTINUATIVE’, kugi ‘to.row-CONTINUATIVE’,  
ujagi ‘to.swim-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, utuei ‘to.drop-CONTINUATIVE’,  
idaei ‘to.put.out-CONTINUATIVE’, mutei ‘to.carry-CONTINUATIVE’, numi  
‘to.drink-CONTINUATIVE’, piri ‘to.go-CONTINUATIVE’, ffi ‘to.fall(e.g. rain)-CONTINUATIVE’,  
kiei ‘to.cut-CONTINUATIVE’, vvi ‘to.sell-CONTINUATIVE’, fgzzi ‘to.tie.up-CONTINUATIVE’,  
puri ‘to.dig-CONTINUATIVE’, kavvi ‘to.put.on(headwear)-CONTINUATIVE’, ffi  
‘to.close-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, fai ‘to.eat-CONTINUATIVE’, b’u:i  
‘to.get.drunk-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’, nivvi  
‘to.fall.asleep-CONTINUATIVE’, azzi ‘to.say-CONTINUATIVE’
- kiri ‘to.kick-CONTINUATIVE’

##### **Weak conjugation**

- uki ‘to.get.up-CONTINUATIVE’, uri ‘to.get.off-CONTINUATIVE’, st̄ei  
‘to.discard-CONTINUATIVE’, utei ‘to.fall-CONTINUATIVE’, izi: ‘to.put.in-CONTINUATIVE’, sskai  
‘to.be.run.over-CONTINUATIVE’, bāei ‘to.forget-CONTINUATIVE’, fi: ‘to.give-CONTINUATIVE’,  
pīngi ‘to.flee-CONTINUATIVE’
- sn̄i ‘to.die-CONTINUATIVE’
- mi: ‘to.see-CONTINUATIVE’, bizi ‘to.sit.down-CONTINUATIVE’, eei ‘to.put.on(e.g.  
clothing)-CONTINUATIVE’, zzi ‘to.get-CONTINUATIVE’

##### **Irregular conjugation**

- eei ‘to.come-CONTINUATIVE’, ei: ‘to.do-CONTINUATIVE’, uri ‘to.be(animate)-CONTINUATIVE’

#### *The Karimata dialect*

##### **Strong conjugation**

- asbi ‘to.play-CONTINUATIVE’, tubi ‘to.fly-CONTINUATIVE’, numi ‘to.drink-CONTINUATIVE’,  
kugi ‘to.row-CONTINUATIVE’, uigi ‘to.swim-CONTINUATIVE’, iki ‘to.go-CONTINUATIVE’, idaei  
‘to.put.out-CONTINUATIVE’, utaei ‘to.drop-CONTINUATIVE’, mutei ‘to.carry-CONTINUATIVE’,  
ffi ‘to.fall(e.g. rain)-CONTINUATIVE’, kiei ‘to.cut-CONTINUATIVE’, smari

‘to.tie.up-CONTINUATIVE’, puri ‘to.dig-CONTINUATIVE’, kadzi  
 ‘to.dig-CONTINUATIVE/to.nibble-CONTINUATIVE’, v̄v̄vi ‘to.sell-CONTINUATIVE’, kavvi  
 ‘to.put.on(headwear)-CONTINUATIVE’, nivvi ‘to.fall.asleep-CONTINUATIVE’, ffi  
 ‘to.close-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, fai ‘to.eat-CONTINUATIVE’, b̄u:i  
 ‘to.get.drunk-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’, azzi ‘to.say-CONTINUATIVE’

- kiri ‘to.kick-CONTINUATIVE’

#### **Weak conjugation**

- uri ‘to.get.off-CONTINUATIVE’, uti ‘to.fall-CONTINUATIVE’, uki ‘to.get.up-CONTINUATIVE’, eiti  
 ‘to.discard-CONTINUATIVE’, fi: ‘to.give-CONTINUATIVE’, piŋgi ‘to.flee-CONTINUATIVE’, baeei  
 ‘to.forget-CONTINUATIVE’, eikari ‘to.be.run.over-CONTINUATIVE’
- mi: ‘to.see-CONTINUATIVE’, izi ‘to.get-CONTINUATIVE’, bizi ‘to.sit.down-CONTINUATIVE’,  
 kiei ‘to.put.on(e.g. clothing)-CONTINUATIVE’
- sn̄i ‘to.die-CONTINUATIVE’

#### **Irregular conjugation**

- kiei ‘to.come-CONTINUATIVE’, aei ‘to.do-CONTINUATIVE’, ari  
 ‘to.be(inanimate)-CONTINUATIVE’, uri ‘to.be(animate)-CONTINUATIVE’,

#### *The Ikema dialect*

#### **Strong conjugation**

- tubi ‘to.fly-CONTINUATIVE’, aeibi: ‘to.play-CONTINUATIVE’, numi: ‘to.drink-CONTINUATIVE’,  
 kugi ‘to.row-CONTINUATIVE’, u:gi ‘to.swim-CONTINUATIVE’, iki: / ik̄i: ‘to.go-CONTINUATIVE’,  
 ka:ki ‘to.dry.up-CONTINUATIVE’, utaçi / utaçi: ‘to.drop-CONTINUATIVE’, idaçi:  
 ‘to.put.out-CONTINUATIVE’, muti: ‘to.carry-CONTINUATIVE’, nu:ri: ‘to.climb-CONTINUATIVE’,  
 ffi: ‘to.fall(e.g. rain)-CONTINUATIVE’, kiri: ‘to.cut-CONTINUATIVE’, s̄imari:  
 ‘to.tie.up-CONTINUATIVE’, furi: ‘to.dig-CONTINUATIVE’, v̄v̄vi: ‘to.sell-CONTINUATIVE’, kavvi /  
 kavvi: ‘to.put.on(headwear)-CONTINUATIVE’, ffi: ‘to.close-CONTINUATIVE’, sadari:  
 ‘to.precede-CONTINUATIVE’, nivvi / nivvi: ‘to.fall.asleep-CONTINUATIVE’, hari:  
 ‘to.go-CONTINUATIVE’, kai ‘to.buy-CONTINUATIVE’, arai ‘to.wash-CONTINUATIVE’, fai  
 ‘to.eat-CONTINUATIVE’, b̄u:i ‘to.get.drunk-CONTINUATIVE’, ad̄zi: ‘to.say-CONTINUATIVE’,  
 kiri: ‘to.kick-CONTINUATIVE’

#### **Weak conjugation**

- uki: ‘to.get.up-CONTINUATIVE’, uri / uri: ‘to.get.off-CONTINUATIVE’, uti:  
 ‘to.fall-CONTINUATIVE’, s̄iti: ‘to.discard-CONTINUATIVE’, baeei ‘to.forget-CONTINUATIVE’,  
 hikai: ‘to.be.run.over-CONTINUATIVE’, ç̄iŋgi ‘to.flee-CONTINUATIVE’, s̄imi: / s̄umi:  
 ‘to.wash-CONTINUATIVE’, fi: ‘to.give-CONTINUATIVE’, d̄zi ‘to.get-CONTINUATIVE’

- mi: ‘to.see-CONTINUATIVE’, tti: ‘to.put.on(e.g. clothing)-CONTINUATIVE’, bizi: ‘to.sit.down-CONTINUATIVE’, ein’i ‘to.die-CONTINUATIVE’,

### Irregular conjugation

- tti ‘to.come-CONTINUATIVE’, çï: ‘to.do-CONTINUATIVE’, ari: ‘to.be(inanimate)-CONTINUATIVE’, uri ‘to.be(animate)-CONTINUATIVE’

### The Kuninaka dialect

#### Strong conjugation

- kavvi: ‘to.put.on(headwear)-CONTINUATIVE’, ni’vvi: ‘to.fall.asleep-CONTINUATIVE’, a’zi: ‘to.say-CONTINUATIVE’
- s’ni: ‘to.die-CONTINUATIVE’
- tci: ‘to.put.on(e.g. clothing)-CONTINUATIVE’, bizi: ‘to.sit.down-CONTINUATIVE’

#### Weak conjugation

- okii ‘to.get.up-CONTINUATIVE’, p’kaii ‘to.be.run.over-CONTINUATIVE’, eimii / eimi ‘to.close-CONTINUATIVE’, taskari ‘to.be.saved-CONTINUATIVE’
- mi: ‘to.see-CONTINUATIVE’

#### Irregular conjugation

- ei: ‘to.do-CONTINUATIVE’, arii ‘to.be(inanimate)-CONTINUATIVE’, ore: ‘to.be(animate)-CONTINUATIVE’

In the Miyako language, *ari*-continuatives of strong verbs are formed by suffixing *-i* to stems ending in consonants, while those of weak verbs are identical in shape to base stems ending in vowels. Both the suffix used for strong verbs and the final vowel observed in weak verbs derive from *e*.

As will be discussed below, it is thought that the *ari*-continuative arose through the grammaticization of *shi*-continuatives to which the *shi*-continuative form of the existential verb *az* had been suffixed, in which these were fused together, but this can not yet be said to be certain<sup>34</sup>. Further surveys and research into these forms in Miyako and the dialects of the Yaeyama language are needed.

## 6.1 Characteristics of *ari*-continuative forms

Although their origins are different, the grammatical behavior of the Miyako *ari*-continuative is identical to that of the *shite*-continuative of the Northern Ryukyuan languages. Not only are they

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<sup>34</sup> Mitsunari Nakama (1982) views the Miyako forms in question as *shite*-continuatives.



used for non-conclusive predicates in compound sentences and sentences with multiple predicates, they are also used identically as elements in, for example, continuous aspect forms, forms expressing attempts such as *numi mi:ru* ‘to.drink-CONTINUATIVE to.see-IMPERATIVE’ and *tubi mi:ro* ‘to.fly-CONTINUATIVE to.see-IMPERATIVE’, and benefactive forms such as *sti fi:ro* ‘to.discard-CONTINUATIVE to.give-IMPERATIVE’ and *tejei fi:ru* ‘to.cut-CONTINUATIVE to.give-IMPERATIVE’.

Continuous aspect forms such as *aeibi ui* ‘to.play-PROGRESSIVE’ and *ffi uɿ* ‘to.fall(e.g. rain)-PROGRESSIVE’, which are analytical forms combining *ari*-continuatives with the existential verb *uz* or *u:*, coexist with fused, synthetic forms such as *aeibʷu:i* ‘to.play-PROGRESSIVE’ and *fʷu:zɿ* ‘to.fall(e.g. rain)-PROGRESSIVE’. The continuous aspect forms of action verbs in examples (29)–(32) express a continuing action of the subject referent<sup>35</sup>, while those of inchoative verbs in examples (33)–(40) express a continuing state resulting from a change in the subject referent<sup>36</sup>. How the semantics of the continuous aspect are realized is also similar to how they are realized with the *shite*-continuative of the Northern Ryukyuan languages<sup>37</sup>.

*Continuing action of the subject referent*

- (29) *ffaf naikʷata:çi: aran aeibi ui / aeibʷu:i.* (Ikema)  
to.be.dark-INFINITIVE to.become=TERMINATIVE outside=LOCATIVE to.play-PROGRESSIVE  
(*asonde iru*)  
‘I’m playing outside until it gets dark.’
- (30) *mainitei terebʷu: mi: jui.* (Ikema)  
every.day television=ACCUSATIVE to.see-PROGRESSIVE (*mite iru*)  
‘I’m watching television every day.’
- (31) *nama: aminudu ffi uɿ / fʷu:zɿ.* (Uruka)  
now=TOPIC rain=NOMINATIVE to.fall-PROGRESSIVE (*futte iru*)  
‘It’s raining now.’
- (32) *nnama: aminudu fju: / ffju:.* (Karimata)  
now=TOPIC rain=NOMINATIVE to.fall-PROGRESSIVE (*futte iru*)  
‘It’s raining now.’

<sup>35</sup> *Translators note:* in glosses, this usage is represented as ‘progressive’.

<sup>36</sup> *Translators note:* in glosses, this usage is represented as ‘stative’.

<sup>37</sup> There is also a continuous aspect form that combines the *ari*-continuative form of the existential verb *az* with *uz*, which expresses a transient state existing at the time of the utterance.

*maznu ama:tta ari uz.* (Shimajiri)

rice=NOMINATIVE much to.be-PROGRESSIVE ‘I have a lot of rice.’

*kumanna ka:nu arju:ta:.* (Kugai)

here=LOCATIVE=TOPIC well=NOMINATIVE to.be-PROGRESSIVE-PAST ‘There used to be a well here.’

*Continuing state resulting from a change in the subject referent*

- (33) upuaminu ffitteidu pja:rinu tsudzukiu:. (Bora)  
 heavy.rain=NOMINATIVE to.fall-CONTINUATIVE drought=NOMINATIVE  
to.continue-STATIVE (*tsuzuite iru*)  
 ‘After the heavy rain, there has continued to be a drought.’
- (34) ka:ja: bju:ittidu k\*ɲnu:nu kutu:ba baeɛidu uɲ. (Uruka)  
 he=TOPIC to.get.drunk-CONTINUATIVE yesterday=GENITIVE thing=TOPIC  
to.forget-STATIVE (*wasurete iru*)  
 ‘He got drunk, so he has forgotten about yesterday.’
- (35) gaba:aminu ffi: ntanu ka:ki jui. (Karimata)  
 heavy.rain=NOMINATIVE to.fall-CONTINUATIVE earth=NOMINATIVE to.dry.up-STATIVE  
 (*kawaite iru*)  
 ‘After the heavy rain, the soil has dried up.’
- (36) ka:ja: ksnunu kutu:ba: baeɛi uɲ. (Ikema)  
 he=TOPIC yesterday=GENITIVE thing=TOPIC to.forget-STATIVE (*wasurete iru*)  
 ‘He has forgotten about yesterday.’
- (37) bo:ɛu: utueiteidu tuzga ikiu:ta:. (Bora)  
 hat=ACCUSATIVE to.drop-CONTINUATIVE to.get=DATIVE to.go-STATIVE-PAST (*itte ita*)  
 ‘I had dropped my hat and was on my way to get it.’
- (38) bututuzza jamakasa numi:du bju:i uta:. (Kugai)  
 day.before.yesterday=TOPIC much to.drink-CONTINUATIVE to.get.drunk-STATIVE-PAST  
 (*yotte ita*)  
 ‘The day before yesterday, I had drank a lot and was drunk.’
- (39) einei:ja bizieitidu, ffanukja:ja tatei: uta:. (Kugai)  
 teacher=TOPIC to.sit.down-CONTINUATIVE child=PLURAL=TOPIC  
to.stand.up-STATIVE-PAST (*tatte ita*)  
 ‘The teacher was sitting, while the children were standing.’
- (40) ku:mujamai sni:du jumunumai sni u:. (Kugai)  
 cockroach=too to.die-CONTINUATIVE mouse=too to.die-STATIVE (*shinde iru*)  
 ‘The cockroach is dead, as is the mouse.’

Although the phonetic forms are different, the tense and aspect contrasts displayed by Miyako verbs are similar to the binary contrasts of the eastern Japanese languages (Modern Japanese).

	Non-past	Past
Perfective	asps ‘to.play-PERFECTIVE’ sn ‘to.die-PERFECTIVE’	aspsta: ‘to.play-PAST’ snta: ‘to.die-PAST’
Continuous	aspju: ‘to.play-PROGRESSIVE’ snju: ‘to.die-STATIVE’	aspju:ta: ‘to.play-PROGRESSIVE-PAST’ snju:ta: ‘to.die-STATIVE-PAST’

Table 6. Tense and aspect in the Bora dialect.

Miyako *ari*-continuatives can be used as sentence-final predicates to express past events; in this, too, they are similar to the *shite*-continuatives of the Northern Ryukyuan languages. In the case of the dialects of Okinawa Island, the *shite*-continuative is used for past perfective polar questions, while in the dialects of Amami Ōshima, the *shite*-continuative is used for the past indicative. I hope to discuss this matter in more detail at a later time.

- (41) kju:ja tubansuga ksno: tubi. (Karimata)  
today=TOPIC to.fly-NEGATIVE=CONCESSIVE yesterday=TOPIC to.fly-PAST  
Although they won’t fly today, they flew yesterday.
- (42) ksnumaidu iŋgaija iki. (Karimata)  
yesterday=too sea=ALLATIVE=TOPIC to.go-PAST  
‘I went to the sea yesterday, too.’
- (43) ksno aminudu ffi / fftaz. (Karimata)  
yesterday=TOPIC rain=NOMINATIVE to.fall-PAST  
‘Yesterday, it rained.’

## 6.2 The origins of *ari*-continuative forms

*Ari*-continuatives are also observed in the dialects of Okinawa Island. In the dialects of central and southern Okinawa Island, *ari*-continuatives function as non-conclusive predicates in compound sentences, but they are not used to form a variety of grammatical forms as in the Miyako language. In the Shuri dialect, the *ari*-continuative takes the shape of *numa:ni* or *numa:i*; according to the *Okinawago Jiten (A Dictionary of Okinawan*; National Institute for Japanese Language and Linguistics (ed.) 1963), *numa:i* is the older form.

The *ari*-continuatives of the dialects of Iheya and Izena seem to resemble that of Miyako the most. Like in Miyako, *ari*-continuative forms display degree of productivity in the Iheya and Izena dialects, being used not only as predicates in compound sentences, but also as elements in forming words and forms such as continuous aspect forms.

	'to.write -CONTINUATIVE'	'to.play -CONTINUATIVE'	'to.get.up -CONTINUATIVE'	'to.get.off -CONTINUATIVE'	'to.wash -CONTINUATIVE'	'to.resemble -CONTINUATIVE'
Shuri dialect	katʃa:i	ʔaʃba:i	ʔukija:i	ʔurija:i	ʔaraja:i	nija:i
Iheya dialect	katʃe:	ʔaʃine:	ʔukije:	ʔurije:	ʔaraje:	nije:
Hirara dialect	kaki:	aspi:	uki:	uri:	arai:	ni:
Ishigaki dialect	kaki:	asʃbi:	uke:	ure:	araja:	nija:

Table 7. *Ari*-continuative forms in the dialects of Okinawa and the Miyako and Yaeyama languages.

- (44) ʔamaNdʒi ʔaʃine: hwa:.. (Gakiya, Iheya Village)  
 over.there=LOCATIVE to.play-CONTINUATIVE to.come-IMPERATIVE (*asonde*)  
 'Go play over there.'
- (45) ʔutuhe: hu:.. (Jitchaku, Izena Village)  
to.drop-CONTINUATIVE to.come-IMPERATIVE (*otoshite*)  
 'Go drop it.'
- (46) ʔwidʒe: watataN. (Shomi, Izena Village)  
to.swim-CONTINUATIVE to.cross-PAST (*oyoide*)  
 'I swam across.'
- (47) bo:ʃi hauje: ʔattʃuN. (Gakiya)  
 hat to.put.on(headwear)-CONTINUATIVE to.walk-PERFECTIVE (*kabutte*)  
 'I walk with a hat on.'
- (48) ʔnaNma ʔaminu hujo:N. (Shomi)  
 now rain=NOMINATIVE to.fall-PROGRESSIVE (*futte iru*)  
 'It's raining now.'
- (49) ʔnama ʔami hujoN. (Shimajiri)  
 now rain to.fall-PROGRESSIVE (*futte iru*)  
 'It's raining now.'
- (50) hunu ʔiʃi kije: Nri. (Gakiya)  
 this stone to.kick-CONTINUATIVE to.see-IMPERATIVE (*kette miro*)  
 'Try kicking this stone.'

In the dialects of Gakiya in Iheya Village, Noho, and Shimajiri, there are past tense forms such as *ʔafinaN* ‘to.play-PAST’, *sukunaN* ‘to.die-PAST’ (Gakiya and Shimajiri; cf. Shomi *ʔikudaN*), *nunaN* ‘to.drink-PAST’, and *junaN* ‘to.call-PAST’, which are thought to consist of *ari*-continuatives to which *ʔaN* ‘to.be(inanimate)-PAST’ has been attached. This type of past tense form has been displaced, however, by a type of past tense form deriving from *shite*-continuatives, such as *ʔafidaN* ‘to.play-PAST’.

The *ari*-continuatives of the dialects of Okinawa Island originated as *shi*-continuatives such as *numi* ‘to.drink-CONTINUATIVE’ combined with the existential verb *ʔai*, corresponding to Japanese *ari*, and are mostly used to express temporal ordering relations. In the *Omoro Sōshi*, a compilation of poems and songs whose first volume was compiled in 1531, these forms end in the *hiragana* corresponding to *-yari*. According to Toshizo Takahashi (1982), the *-yari* forms in the *Omoro Sōshi* consist of infinitive forms to which *-yari* has been attached, express perfect aspect, and are only used in a continuative usage.

- (51) *Toyomu Ōkimiya momoshima soroheyari mioyase.* (volume 176)  
 to.resound-ADNOMINAL    sovereign=TOPIC    Momoshima    to.gather-CONTINUATIVE  
 to.present-IMPERATIVE  
 ‘Gather the Momoshima Islands and present them to the renowned sovereign.’
- (52) *Ito nukiyari, nawa nukiyari,* (volume 632)  
 thread put.through-CONTINUATIVE rope put.through-CONTINUATIVE  
 Putting through threads, putting through ropes, and...’

The strong conjugation *ari*-continuatives of the Miyako language consist of base stems to which *-i* or *-i:* has been attached. Weak and mixed conjugation *ari*-continuatives, on the other hand, are homophonous with *shi*-continuatives (base stems). Although *shi*- and *ari*-continuatives of the strong conjugation also resemble each other, the final vowel of strong conjugation *shi*-continuatives as used for the stem portions of past tense forms derives from *\*-i*, while that of *ari*-continuatives derives from *\*-e*. The *ari*-continuatives of Miyako appear to derive from forms like the *ari*-continuatives of the Iheya dialect.

#### *Supplementary note*

The tense-aspect system of the dialects of Okinawa Island appears to derive from the ternary contrast system of the western Japanese languages. Continuous aspect forms consist of *shite*-continuatives combined and fused together with the animate existential verb, corresponding formally to western Japanese perfect aspect forms such as *ɛitoru* ‘to.do-STATIVE’. They differ from

western Japanese *ëitoru* in their aspectual meaning, however; they express a continuing action by the subject referent in the case of action verbs, while they express a continuing state resulting from a change in the subject referent in the case of inchoative verbs, similarly to the continuous aspect forms of the eastern Japanese languages and the Miyako language.

In the dialects of Yaeyama, too, there are forms combining the *ari*-continuative with *uN* ‘to be (animate)’, fused together phonetically, such as the Ishigaki dialect forms *numi: uN* > *numiN* ‘to.drink-PROGRESSIVE’, *uke: uN* > *uke:N* ‘to.get.up-STATIVE’, and *kaNgaja: uN* > *kaNgaja:N* ‘to.think-PROGRESSIVE’.

- (53) *utudo: guei numiN*. (continuing action)  
 younger.brother=TOPIC liquor=ACCUSATIVE to.drink-PROGRESSIVE  
 ‘My brother is having a drink.’
- (54) *aQpa:ja me: uke:N*. (continuing resultant state)  
 mother=TOPIC already to.get.up-STATIVE  
 ‘My mother is already up.’

Although the tense-aspect system of the southern dialects of Okinawa Island is similar to that of the western Japanese languages in that it has a ternary contrast of the type *suru-ëijoru-ëitoru*, its continuous aspect is used similarly to that of the eastern Japanese languages; it is thus a unique system. That of the Miyako language is similar to that of the eastern Japanese languages in that it has a binary contrast and its continuous aspect is used similarly, but it is a unique system in that its continuous aspect forms are formed differently from those of the eastern Japanese languages. It can therefore be concluded that the tense-aspect systems of the dialects of southern Okinawa Island, the Miyako language, the western Japanese languages, and the eastern Japanese languages all have similarities as well as differences, each being unique in their own way.

	Non-past	Past
Perfective	<i>ʔafibuN</i> ‘to.play-PERFECTIVE’,	<i>ʔafidaN</i> ‘to.play-PAST’, <i>ʔidzaN</i> ‘to.die-PAST’
	<i>ʔinuN</i> ‘to.die-PERFECTIVE’	<i>ʔafibutaN</i> ‘to.play-PAST’, <i>ʔinutaN</i> ‘to.die-PAST’
Continuous	<i>ʔafido:N</i> ‘to.play-PROGRESSIVE’, <i>ʔidzo:N</i> ‘to.die-STATIVE’	<i>ʔafido:taN</i> ‘to.play-PROGRESSIVE-PAST’, <i>ʔidzo:taN</i> ‘to.die-STATIVE-PAST’

Table 8. Tense and aspect in the Agena dialect of Uruma City, Okinawa Island.

## 7 *Shite-continuative forms*

The *shite*-continuative of the Miyako language is used for predicates in compound sentences, functioning similarly to the *shite*-continuative of Japanese; it is formally similar to it, as well. It has no subordinate usages, however; it is not used in the formation of forms such as continuous aspect forms, forms expressing attempts, and benefactive verbs. In this respect, it is different from the *shite*-continuatives of Japanese and the Northern Ryukyuan languages.

- (55) oto:ja sakju: muteittei, mma: faumunu: muts. (Karimata)  
 father=TOPIC liquor=ACCUSATIVE to.carry-CONTINUATIVE, mother=TOPIC  
 food=ACCUSATIVE to.carry-PERFECTIVE (*motte*)  
 ‘My father carries the liquor; my mother carries the food.’
- (56) mmaduꞑnu tubittei, fa:duꞑmai tubin<sup>j</sup>a:n. (Karimata)  
 parent.bird=NOMINATIVE to.fly-CONTINUATIVE little.bird=too to.fly-PAST (*tonde*)  
 ‘The parent bird flew away, and the little bird flew away, too.’
- (57) fnju: kugitti unu atu jukui. (Kurima)  
 boat=ACCUSATIVE to.row-CONTINUATIVE after.that to.rest-IMPERATIVE (*koide*)  
 ‘Row the boat; then, take a rest.’
- (58) fun<sup>u</sup>: kuqittikara jukui. (Uruka)  
 boat=ACCUSATIVE to.row-CONTINUATIVE=after to.rest-IMPERATIVE (*koide*)  
 ‘Row the boat; then, take a rest.’
- (59) f<sup>u</sup>sizzu numitti pja:pja:ti nivvi. (Uruka)  
 medicine=ACCUSATIVE to.take-CONTINUATIVE to.be.early-INFINITIVE  
 to.sleep-IMPERATIVE (*nonde*)  
 ‘Take some medicine and go to bed early.’

### *The Bora dialect*

Bora dialect *shite*-continuatives consist of *ari*-continuative forms to which *-ttei* has been attached. The sounds corresponding to *ti* in the other dialects have undergone affrication in the Bora dialect, becoming *tei*, as in *tei*: ‘hand’ and *teida* ‘the sun’; *-ttei* thus seems to derive from *-tti*.

### **Strong conjugation**

- tubittei ‘to.fly-CONTINUATIVE’, kugittei ‘to.row-CONTINUATIVE’, ikittei ‘to.go-CONTINUATIVE’, ffittei ‘to.fall(e.g. rain)-CONTINUATIVE’, utueittei ‘to.drop-CONTINUATIVE’, kieittei ‘to.cut-CONTINUATIVE’, fteittei ‘to.tie.up-CONTINUATIVE’,

purittei ‘to.dig-CONTINUATIVE’, idaēitei ‘to.put.out-CONTINUATIVE’, muteittei ‘to.carry-CONTINUATIVE’, kaittei ‘to.buy-CONTINUATIVE’, vvittei ‘to.sell-CONTINUATIVE’, numittei ‘to.drink-CONTINUATIVE’, faittei ‘to.eat-CONTINUATIVE’, asɽpittei ~ asɽbittei ‘to.play-CONTINUATIVE’, numittei ‘to.drink-CONTINUATIVE’, araittei ‘to.wash-CONTINUATIVE’, kavvittei ‘to.put.on(headwear)-CONTINUATIVE’, ffittei ‘to.close-CONTINUATIVE’, nivvttei ‘to.fall.asleep-CONTINUATIVE’, azzittei ‘to.say-CONTINUATIVE’, kirittei ‘to.kick-CONTINUATIVE’, kieittei ‘to.put.on(e.g. clothing)-CONTINUATIVE’, bizzittei ‘to.sit.down-CONTINUATIVE’, sɽn<sup>h</sup>ittei ‘to.die-CONTINUATIVE’

### Mixed conjugation

- ukittei ‘to.get.up-CONTINUATIVE’, urittei ‘to.get.off-CONTINUATIVE’, uteittei ‘to.fall-CONTINUATIVE’, steittei ‘to.discard-CONTINUATIVE’, fi:ttei ‘to.give-CONTINUATIVE’, mi:ttei ‘to.see-CONTINUATIVE’, i:ttei ‘to.get-CONTINUATIVE’

### Irregular conjugation

- kieittei ‘to.come-CONTINUATIVE’, ɛi:ttei ‘to.do-CONTINUATIVE’, arittei ‘to.be(inanimate)-CONTINUATIVE’, urittei ‘to.be(animate)-CONTINUATIVE’

### *The Uruka dialect*

Uruka dialect *shite*-continuatives consist of *ari*-continuative forms to which *-tti* has been attached.

### Strong conjugation

- tuvitti ‘to.fly-CONTINUATIVE’, asɽpitti ‘to.play-CONTINUATIVE’, numitti ‘to.drink-CONTINUATIVE’, kugittikara ‘to.row-CONTINUATIVE=ABLATIVE’, ikitti ‘to.go-CONTINUATIVE’, idaɽɽitti ‘to.put.out-CONTINUATIVE’, muɽfitti ‘to.carry-CONTINUATIVE’, utuɛitti ‘to.drop-CONTINUATIVE’, ffitti ‘to.fall(e.g. rain)-CONTINUATIVE’, puritti ‘to.dig-CONTINUATIVE’, kɽɛɛiti / kieɛiti ‘to.cut-CONTINUATIVE’, ɛimaritti ‘to.tie.up-CONTINUATIVE’, kavvitti ‘to.put.on(headwear)-CONTINUATIVE’, araitti ‘to.wash-CONTINUATIVE’, kaitti ‘to.buy-CONTINUATIVE’, vitti ‘to.sell-CONTINUATIVE’, muraitti ‘to.receive-CONTINUATIVE’, faitti ‘to.eat-CONTINUATIVE’, bju:itti ‘to.get.drunk-CONTINUATIVE’
- kiritti ‘to.kick-CONTINUATIVE’

### Mixed conjugation

- uritteɽ ‘to.get.off-CONTINUATIVE’, utittii ‘to.fall-CONTINUATIVE’, ffitti ‘to.give-CONTINUATIVE’, stitti ‘to.discard-CONTINUATIVE’

### Irregular conjugation



- kieḷtti ‘to.come-CONTINUATIVE’

#### *The Miyaguni dialect*

Miyaguni dialect *shite*-continuatives consist of *ari*-continuative forms to which *-cci* has been attached. The suffix seems to have undergone affrication, as in the Bora dialect.

#### **Strong conjugation**

- kuḡicci ‘to.row-CONTINUATIVE’, ikḷccieḡ ‘to.go-CONTINUATIVE’, ficci ‘to.fall(e.g. rain)-CONTINUATIVE’, utḡṣḷtti ‘to.drop-CONTINUATIVE’, kḷṣḷtteḡ ‘to.cut-CONTINUATIVE’, pḡrittei ‘to.dig-CONTINUATIVE’, idaḡitei ‘to.put.out-CONTINUATIVE’, uvittei ‘to.sell-CONTINUATIVE’, nḡmittei ‘to.drink-CONTINUATIVE’, φaittei ‘to.eat-CONTINUATIVE’, asḡpittei ‘to.play-CONTINUATIVE’, araittei ‘to.wash-CONTINUATIVE’, nu:ricci ‘to.climb-CONTINUATIVE’, moraittei ‘to.receive-CONTINUATIVE’, bjo:ittei ‘to.get.drunk-CONTINUATIVE’

#### **Mixed conjugation**

- ucḷicci ‘to.fall-CONTINUATIVE’, ṣḷḷcḷcḷ ‘to.discard-CONTINUATIVE’, φiittei ‘to.give-CONTINUATIVE’

#### **Irregular conjugation**

- kḷṣicci ‘to.come-CONTINUATIVE’

#### *The Yonaha dialect*

Yonaha dialect *shite*-continuatives consist of *ari*-continuative forms to which *-tti* has been attached.

#### **Strong conjugation**

- tubitti ‘to.fly-CONTINUATIVE’, kuḡitti: ‘to.row-CONTINUATIVE’, v:ḡitti ‘to.swim-CONTINUATIVE’, ikitti ‘to.go-CONTINUATIVE’, ffitti ‘to.fall(e.g. rain)-CONTINUATIVE’, utueitti ‘to.drop-CONTINUATIVE’, kḷeitti ‘to.cut-CONTINUATIVE’, ṣḷmaitti: ‘to.tie.up-CONTINUATIVE’, idasitti ‘to.put.out-CONTINUATIVE’, muteitti ‘to.carry-CONTINUATIVE’, kaitti ‘to.buy-CONTINUATIVE’, vvitti ‘to.sell-CONTINUATIVE’, numitti ‘to.drink-CONTINUATIVE’, fe:ti ‘to.eat-CONTINUATIVE’, appitti ‘to.play-CONTINUATIVE’, bju:itti ‘to.get.drunk-CONTINUATIVE’, are:tti ‘to.wash-CONTINUATIVE’, kiritti ‘to.kick-CONTINUATIVE’

### Mixed conjugation

- *uritti* ‘to.get.off-CONTINUATIVE’, *utεitti* ‘to.fall-CONTINUATIVE’, *sutitti*: ‘to.discard-CONTINUATIVE’, *fitti* ‘to.give-CONTINUATIVE’, *zzitti* ‘to.get-CONTINUATIVE’

### Irregular conjugation

- *kʲε̞jiti* ‘to.come-CONTINUATIVE’

### The Kurima dialect

Kurima dialect *shite*-continuatives consist of *ari*-continuative forms to which *-tti* has been attached.

### Strong conjugation

- *tubitti* ‘to.fly-CONTINUATIVE’, *kugitti* ‘to.row-CONTINUATIVE’, *ikjitti* ‘to.go-CONTINUATIVE’, *utʲε̞jiti* ‘to.drop-CONTINUATIVE’, *ffaε̞jiti* ‘to.cut-CONTINUATIVE’, *te̞jeitti* ‘to.cut-CONTINUATIVE’, *smaritti* ‘to.tie.up-CONTINUATIVE’, *ffjitti* ‘to.fall(e.g. rain)-CONTINUATIVE’, *idasjiti* ‘to.put.out-CONTINUATIVE’, *vvitti* ‘to.sell-CONTINUATIVE’, *numitti* ‘to.drink-CONTINUATIVE’, *faitti* ‘to.eat-CONTINUATIVE’, *aspʲtti*<sup>38</sup> ‘to.play-CONTINUATIVE’, *bju:itti* ‘to.get.drunk-CONTINUATIVE’, *araitti* ‘to.wash-CONTINUATIVE’, *kiritti* ‘to.kick-CONTINUATIVE’

### Mixed conjugation

- *uritti* ‘to.get.off-CONTINUATIVE’, *utjitti* ‘to.fall-CONTINUATIVE’, *stjitti* ‘to.discard-CONTINUATIVE’, *fi:tti* ‘to.give-CONTINUATIVE’

### Irregular conjugation

- *te̞jeitti* ‘to.come-CONTINUATIVE’

### The Kugai dialect

In the Kugai dialect, *shite*-continuatives consisting of *ari*-continuative forms to which *-ε̞jiti* has been attached, such as *aspse̞jiti* ‘to.play-CONTINUATIVE’ and *ukie̞jiti* ‘to.get.up-CONTINUATIVE’, coexist with forms to which *-tti* has been attached, such as *kugitti* ‘to.row-CONTINUATIVE’ and *uritti* ‘to.get.off-CONTINUATIVE’<sup>39</sup>. Further confirmation is necessary regarding whether this is due to individual differences between speakers or due to influence from the surrounding dialects.

<sup>38</sup> Differently from the other *shite*-continuative forms, this form consists of a *shi*-continuative form to which *-tti* has been attached. Further confirmation is necessary.

<sup>39</sup> I obtained forms ending in *-ε̞jiti* such as *purie̞jiti* ‘to.dig-CONTINUATIVE’ and *ei:ε̞jiti* ‘to.do-CONTINUATIVE’ in a survey in December, 2011.

### Strong conjugation

- *aspsej̄ti* ‘to.play-CONTINUATIVE’, *kugitti* ‘to.row-CONTINUATIVE’, *numiēj̄ti* ‘to.drink-CONTINUATIVE’, *idaēj̄ti* ‘to.put.out-CONTINUATIVE’, *utaēj̄ti* ‘to.drop-CONTINUATIVE’, *mutsēj̄ti* ‘to.carry-CONTINUATIVE’, *puriēj̄ti* ‘to.dig-CONTINUATIVE’, *k̄jēitti* ‘to.cut-CONTINUATIVE’, *s̄jmaritti* ‘to.tie.up-CONTINUATIVE’, *v̄viēj̄ti* ‘to.sell-CONTINUATIVE’, *kav̄viēj̄ti* ‘to.put.on(headwear)-CONTINUATIVE’, *ffiēj̄ti* ‘to.close-CONTINUATIVE’, *niv̄viēj̄ti* ‘to.fall.asleep-CONTINUATIVE’, *kaiēj̄ti* ‘to.buy-CONTINUATIVE’, *faiēj̄ti* ‘to.eat-CONTINUATIVE’, *bju:iēj̄ti* ‘to.get.drunk-CONTINUATIVE’, *araiēj̄ti* ‘to.wash-CONTINUATIVE’, *andziēj̄ti* ‘to.say-CONTINUATIVE’, *kiriti* ‘to.kick-CONTINUATIVE’, *sn̄iēj̄ti* ‘to.die-CONTINUATIVE’

### Weak conjugation

- *ukiēj̄ti* ‘to.get.up-CONTINUATIVE’, *uritti* ‘to.get.off-CONTINUATIVE’, *ut̄j̄tti* ‘to.fall-CONTINUATIVE’, *s̄jt̄itti* ‘to.discard-CONTINUATIVE’, *fi:ē̄j̄ti* ‘to.give-CONTINUATIVE’
- *mi:ē̄j̄ti* ‘to.see-CONTINUATIVE’, *zziēj̄ti* ‘to.get-CONTINUATIVE’, *biziēj̄ti* ‘to.sit.down-CONTINUATIVE’, *kiciēj̄ti* ‘to.put.on(e.g. clothing)-CONTINUATIVE’

### Irregular conjugation

- *k̄s̄jēittikara* / *k̄jēittikara* ‘to.come-CONTINUATIVE=ABLATIVE’, *ei:ē̄j̄ti* ‘to.do-CONTINUATIVE’, *ariēj̄ti* ‘to.be(inanimate)-CONTINUATIVE’, *uriēj̄ti* ‘to.be(animate)-CONTINUATIVE’

### *The Shimajiri dialect*

Shimajiri dialect *shite*-continuatives, too, consist of *ari*-continuative forms to which *-cci* has been attached. The suffix seems to have undergone affrication, as in the Bora dialect.

### Strong conjugation

- *tubittei* ‘to.fly-CONTINUATIVE’, *appittei* ‘to.play-CONTINUATIVE’, *numittei* ‘to.drink-CONTINUATIVE’, *kugittei* ‘to.row-CONTINUATIVE’, *idaeitei* ‘to.put.out-CONTINUATIVE’, *utueittei* ‘to.drop-CONTINUATIVE’, *muteitei* ‘to.carry-CONTINUATIVE’, *kieittei* ‘to.cut-CONTINUATIVE’, *purittei* ‘to.dig-CONTINUATIVE’, *ffittei* ‘to.fall(e.g. rain)-CONTINUATIVE’, *v̄vittei* ‘to.sell-CONTINUATIVE’, *kav̄vittei* ‘to.put.on(headwear)-CONTINUATIVE’, *ffittei* ‘to.close-CONTINUATIVE’, *niv̄vttei* ‘to.fall.asleep-CONTINUATIVE’, *kaittei* ‘to.buy-CONTINUATIVE’, *araittei* ‘to.wash-CONTINUATIVE’, *faittei* ‘to.eat-CONTINUATIVE’, *bju:ittei* ‘to.get.drunk-CONTINUATIVE’, *azzittei* ‘to.say-CONTINUATIVE’
- *kirittei* ‘to.kick-CONTINUATIVE’
- *bizittei* ‘to.sit.down-CONTINUATIVE’

### Weak conjugation

- ukittei ‘to.get.up-CONTINUATIVE’, urittei ‘to.get.off-CONTINUATIVE’, uteittei ‘to.fall-CONTINUATIVE’, steittei ‘to.discard-CONTINUATIVE’, fi:ttei ‘to.give-CONTINUATIVE’, sn’itttei ‘to.die-CONTINUATIVE’
- mi:ttei ‘to.see-CONTINUATIVE’, ɛeittei ‘to.put.on(e.g. clothing)-CONTINUATIVE’, zzittei ‘to.get-CONTINUATIVE’

### Irregular conjugation

- ɛeittei ‘to.come-CONTINUATIVE’, aeittei ‘to.do-CONTINUATIVE’, arittei ‘to.be(inanimate)-CONTINUATIVE’, urittei ‘to.be(animate)-CONTINUATIVE’

### The Karimata dialect

Karimata dialect *shite*-continuatives consist of *ari*-continuative forms to which *-ɛ̃iti* has been attached, as in the Kugai dialect.

### Strong conjugation

- tubiẽiti ‘to.fly-CONTINUATIVE’, asbiẽiti ‘to.play-CONTINUATIVE’, kugiẽiti ‘to.row-CONTINUATIVE’, numiẽiti ‘to.drink-CONTINUATIVE’, ikiẽiti ‘to.go-CONTINUATIVE’, utaẽiti ‘to.drop-CONTINUATIVE’, idaẽiẽiti ‘to.put.out-CONTINUATIVE’, mutẽiẽiti ‘to.carry-CONTINUATIVE’, ffiẽei ‘to.fall(e.g. rain)-CONTINUATIVE’, puriẽiti ‘to.dig-CONTINUATIVE’, kiẽiẽiti ‘to.cut-CONTINUATIVE’, ṽṽiẽiti ‘to.sell-CONTINUATIVE’, kavviẽiti ‘to.put.on(headwear)-CONTINUATIVE’, ffiẽiti ‘to.close-CONTINUATIVE’, nĩṽiẽiti ‘to.fall.asleep-CONTINUATIVE’, kaiẽiti ‘to.buy-CONTINUATIVE’, araẽiti ‘to.wash-CONTINUATIVE’, faiẽiti ‘to.eat-CONTINUATIVE’, azziẽiti ‘to.say-CONTINUATIVE’, sn’iẽiti ‘to.die-CONTINUATIVE’

### Weak conjugation

- ukiẽei ‘to.get.up-CONTINUATIVE’, uriẽiti ‘to.get.off-CONTINUATIVE’, utiẽiti ‘to.fall-CONTINUATIVE’, ẽitiẽiti ‘to.discard-CONTINUATIVE’, fi:̃ẽiti ‘to.give-CONTINUATIVE’, ẽimiẽiti ‘to.close-CONTINUATIVE’
- mi:̃ẽiti ‘to.see-CONTINUATIVE’, iziẽiti ‘to.get-CONTINUATIVE’, kiẽiẽiti ‘to.put.on(e.g. clothing)-CONTINUATIVE’, biziẽiti ‘to.sit.down-CONTINUATIVE’

### Irregular conjugation

- kiẽiẽiti ‘to.come-CONTINUATIVE’, aeiẽiti ‘to.do-CONTINUATIVE’, ariẽiti ‘to.be(inanimate)-CONTINUATIVE’, uriẽiti ‘to.be(animate)-CONTINUATIVE’

*The Ikema dialect*

While the three forms given below are *shite*-continuatives, *ari*-continuatives are observed in almost all cases where one would expect a *shite*-continuative. The irregular verb form *titi* ‘to.come-CONTINUATIVE’, too, is homophonous with the *ari*-continuative. Further confirmation seems necessary regarding whether *shite*-continuatives are not used in the Ikema dialect or they could be obtained using a different survey method.

**Strong conjugation**

- *kugitti* ‘to.row-CONTINUATIVE’

**Weak conjugation**

- *sandzari:ti* ‘to.fall-CONTINUATIVE’

**Irregular conjugation**

- *titi* ‘to.come-CONTINUATIVE’

*The Kuninaka dialect*

As only a small number of examples were obtained for the Kuninaka dialect in the survey, not much can be said regarding its *shite*-continuative, but no examples have been obtained that can be said with certainty to be *shite*-continuative forms. In response to sentences intended to elicit *shite*-continuatives, the forms *alzii* ‘to.say-CONTINUATIVE’, *niyvii* ‘to.fall.asleep-CONTINUATIVE’, and *sɲnii* ‘to.die-CONTINUATIVE’ were obtained, while the forms *a<sup>z</sup>zi:* ‘to.say-CONTINUATIVE’, *niyvi:* ‘to.fall.asleep-CONTINUATIVE’, and *sɲni:* ‘to.die-CONTINUATIVE’ were obtained in response to sentences intended to elicit *ari*-continuatives; although they are different, a further survey is necessary to determine whether this is a significant difference.

**Strong conjugation**

- *kavvi:* ‘to.put.on(headwear)-CONTINUATIVE’, *niyvii* ‘to.fall.asleep-CONTINUATIVE’, *alzii* ‘to.say-CONTINUATIVE’
- *sɲnii* ‘to.die-CONTINUATIVE’
- *tei:* ‘to.put.on(e.g. clothing)-CONTINUATIVE’, *bizi:* ‘to.sit.down-CONTINUATIVE’

**Weak conjugation**

- *okii* ‘to.get.up-CONTINUATIVE’, *p<sup>ɣ</sup>kaii* ‘to.be.run.over-CONTINUATIVE’, *simii* ‘to.close-CONTINUATIVE’, *taskari* ‘to.be.saved-CONTINUATIVE’
- *mi:* ‘to.see-CONTINUATIVE’

### Irregular conjugation

- $\epsilon i$ : ‘to.do-CONTINUATIVE’,  $arii$  ‘to.be(inanimate)-CONTINUATIVE’,  $ore$ : ‘to.be(animate)-CONTINUATIVE’

It may seem like geminating *onbin* has occurred in the *shite*-continuatives of the dialects of Miyako, both in those like Uruka *uritti* ‘to.get.off-CONTINUATIVE’ and *utittii* ‘to.fall-CONTINUATIVE’ and in those like Bora *tubittei* ‘to.fly-CONTINUATIVE’ and *kugittei* ‘to.row-CONTINUATIVE’, which have undergone affrication. They are formed in the same way irrespective of verb type, however, in the strong, weak, mixed, and irregular conjugations; it therefore seems that this is not an *onbin* phenomenon.

In strong verb *shite*-continuatives, suffixes such as *-itti* and *-ittei* are attached to consonant stems, while in weak verb *shite*-continuatives, suffixes such as *-tti* and *-ttei* are attached to vowel stems. Both kinds of forms consist of *ari*-continuatives to which suffixes such as *-tti* and *-ttei* are attached.

In forms such as Karimata *tubi $\epsilon$ iti* ‘to.fly-CONTINUATIVE’ and *kugi $\epsilon$ iti* ‘to.row-CONTINUATIVE’ and Kugai *kaie $\epsilon$ iti* ‘to.buy-CONTINUATIVE’ and *fi: $\epsilon$ iti* ‘to.give-CONTINUATIVE’, a form like  *$\epsilon$ iti* (corresponding either to Japanese *shite* ‘to.do-CONTINUATIVE’ or to Japanese *sute* ‘to.discard-CONTINUATIVE’) seems to have been suffixed to *ari*-continuative forms. Further research is needed regarding these forms.

There are *shite*-continuatives in which *-Qte* is suffixed to *ari*-continuative forms in the Ishigaki dialect of the Yaeyama language, too, such as *kakiQte* ‘to.write-CONTINUATIVE’, *uke:Qte* ‘to.get.up-CONTINUATIVE’, *mija:Qte* ‘to.see-CONTINUATIVE’, and  *$\epsilon i$ :Qte* ‘to.do-CONTINUATIVE’.

## 8 Conclusion

As the survey was conducted within a limited period of time, the amount of data that was obtained is limited, as well. Furthermore, the survey was limited to only five verb conjugation forms, namely the perfective (corresponding to Japanese *suru* ‘to.do-PERFECTIVE’), negative (corresponding to Japanese *shinai* ‘to.do-NEGATIVE’), past tense (corresponding to Japanese *shita* ‘to.do-PAST’), *ari*-continuative, and *shite*-continuative forms. On the other hand, the survey was conducted at a balanced selection of sites, spread over Miyako: Bora, Uruka, Miyaguni, Yonaha, Kurimajima, Kugai, Shimajiri, Karimata, Ikemajima, and Kuninaka on Irabujima. Thanks to this, we were able to review the conjugation types and five conjugated forms of the Miyako language.

Further surveys covering a larger number of verbs at each site as well as more conjugation forms are needed. In addition, it is necessary to examine the dialects of Ōgamijima; Sawada and

Nagahama on Irabujima; Irabu and Nakachi on Irabujima; Taramajima; and so on, which we were unable to examine in this survey and which are known to have unique characteristics within the Miyako language.

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## 4. Features of Miyako Ryūkyūan



# Phonetic Realizations in the Miyako Dialects: A Preliminary Investigation

Toshio MATSUURA

## 1 Introduction

### 1.1 Research background and goals

In addition to intervocalic geminates such as those in (1a), the Miyako dialects have word-initial geminates such as those in (1b) and word-initial clusters of different consonants such as those in (1c) (in (1), dialects are indicated in parentheses).

- (1) a. [avva] ‘oil’ (Irabu, Kugai), [mizza] ‘garlic chive’ (Kugai)
- b. [ffa] ‘child’ (Kugai), [ssī] ‘nest’ (Kugai)
- c. [sta] ‘tongue’ (Irabu), [mta] ‘earth’ (Irabu, Kugai)

Pellard (2007) and Shimoji (2008) argue that geminates such as those in (1b) are segmented into two morae, as in (2a), to avoid violating the bimoraic Minimality Constraint in the Miyako dialect. It seems appropriate to assume that consonant clusters such as those in (1c) are likewise segmented as in (2b) to avoid violating this Minimality Constraint.

- (2) Segmentation avoiding Minimality Constraint violation
- a. [f.fa], [s.sī]
- b. [s.ta], [m.ta]

How are these consonants realized acoustically, though?

Firstly, (2) does indeed seem to be an appropriate phonological segmentation for word-initial geminates such as those in (1b). Does this mean, then, that there is a phonetic difference between word-initial geminates and single word-initial consonants? One would expect [ff] in [ffa] to be longer in duration than a single syllable-initial [f] (e.g. [fau]). The phonetic transcription does, of course, represent geminates as pronounced with a longer duration than single consonants, which matches auditory perception, as well. Moreover, it is not unreasonable to assume that the Miyako dialects are similar in this regard to Standard Japanese (the Tokyo dialect), to which they are closely related and for which the proportion of single consonants to geminates has been reported as being

around 1:2–3 (Han 1962, among others)<sup>1</sup>. It would seem worthwhile, however, to confirm that this is in fact the case.

Next, word-initial consonant clusters such as [m.ta] do not exist in mainland Japanese, with the exception of words with devoiced vowels, and there are as yet no data on their acoustic-phonetic realization. Among others, Shimoji (2008) argues that the first vowel in such a cluster by itself constitutes one mora. If this is the case, it seems not unlikely that [m] in [m.ta] differs acoustically from a single syllable-initial [m]. According to Sato (1993), syllable-final [n], [m], and so on (moraic nasals) are longer in duration than syllable-initial [n], [m], and so on in Japanese, while almost no such difference is observed in English and Korean, for example. Sato (1993) attributes this difference to differences in rhythmic structure among languages, Japanese having a moraic rhythm, English a stress rhythm, and Korean a syllabic rhythm; applying this to the Miyako dialects would lead us to expect a result similar to that for Japanese, assuming that the Miyako dialects have a moraic rhythm, as well.

Lastly, voiced obstruent geminates such as those in (1a) are observed only in Western loans such as *beddo* ‘bed’ and *kiddzu* ‘kids’ in Standard Japanese<sup>2</sup>. Moreover, as will be shown in Section 2.2, the acoustic-phonetic realization of this type of geminate in Standard Japanese cannot be described as the mere lengthening of a single consonant. Are voiced obstruent geminates realized just as they are in Standard Japanese, then, in the Miyako dialects?

In this chapter, I will investigate these kinds of issues related to temporal control and vocal fold vibration based on recorded materials from the joint survey. Data from the Irabu<sup>3</sup> and Kugai dialects are used, although I will also touch upon other dialects where necessary.

## 1.2 Method of analysis

I will use materials recorded during the joint survey of the National Institute for Japanese Language and Linguistics. I performed a spectrographic analysis on the recorded materials using *Praat* (Boersma & Weenink 2009), labeling segments by visual inspection and measuring segment durations with a self-written script. The identification of segments was largely based on formants, voice bars, noise components, and the like. There were, however, cases where identification was difficult, such as utterance-final vowels. In these cases, I set the dynamic range of the spectrogram

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<sup>1</sup> It has been reported, however, that in syllabeme dialects such as those of Akita and Kagoshima, geminates are not as long in proportion to single consonants as in Standard Japanese.

<sup>2</sup> When we take Japanese dialects into consideration, they are also observed in Chinese loans and native words in the Hachijōjima (Mase 1961) and Antō (Nitta 2011) dialects, as well as in a significant part of the Kyūshū region (the Kagoshima (Kamimura 1957) and Saga (Fujita 2003) dialects as well as that of Kuchinotsu in Nagasaki Prefecture (Minami 1959)), among others.

<sup>3</sup> Strictly speaking, it is the dialect of the Irabu district of Irabujima, but I will use the term ‘Irabu dialect’ in this chapter.

to 30 dB and designated those parts in which there was a clear energy component in the 2000–3000 Hz range as vowels.

The details of the speakers of the two dialects are given in (3).

(3) Speaker details

- a. Irabu dialect: male, b. 1924
- b. Kugai dialect: male, b. 1926

When measuring consonant durations, and especially when comparing those of geminates and single consonants, it is desirable to also measure the duration of the vowels following them and the proportion between consonant and vowel durations (the normalized duration), but there were cases in the data where the length of these vowels was difficult to determine accurately because they were utterance-final. For this reason, I will consider only absolute consonant duration in this chapter. In addition, when performing an analysis of this kind, it is desirable to use averages of data consisting of a large number of utterances from multiple speakers, but as I only had data of one speaker per dialect, the analysis is in many cases based on a single recording. In this respect, this chapter constitutes a preliminary investigation; further research is therefore necessary, including in regard to reproducibility.

## 2 Geminates

In this section, I will examine the durations of different types of geminate in the Miyako dialects, distinguishing between intervocalic and word-initial geminates and further subcategorizing the former into voiceless and voiced intervocalic geminates. Below, I will first analyze the durations of [t] and [tt], as well as of [ts] and [tts]. Next, I will analyze voiced obstruent geminates such as [vv] and [zz], focusing on their durations, noise components, and voice bars. As regards [vv], I will also take dialects other than those of Irabu and Kugai into consideration.

### 2.1 Voiceless intervocalic geminates

#### 2.1.1 [t] and [tt]

In the Irabu dialect, [bata] ‘belly’ and [batta] ‘armpit’ form a minimal pair for [t] and [tt]. Waveforms and spectrograms of these words are given in Figure 1.

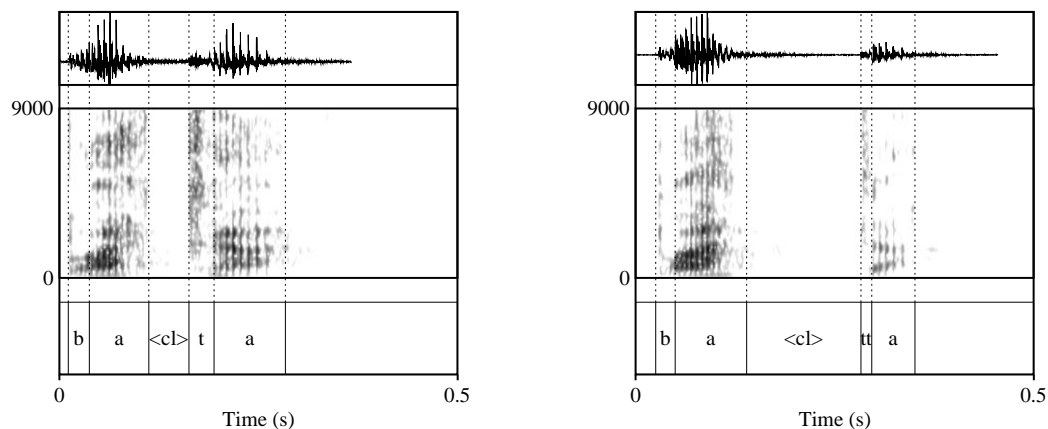


Figure 1. Waveforms and spectrograms of [bata] and [batta] (Irabu).

As is clear from Figure 1, a large difference between [t] and [tt] lies in the durations of the consonant portions. The durations of the closure portions (indicated by <cl> in Figure 1) were 50 ms for [t] and 143 ms for [tt] (a ratio of 1:2.86). Figure 1 also shows a difference in length between the following vowels (89 ms for [bata] and 54 ms for [batta]), but this is not observed in other words. Although they do not form a minimal pair, let us examine the pair of [budzati] ‘uncles’ and [asatti] ‘the day after tomorrow’. Waveforms and spectrograms of these words are given in Figure 2.

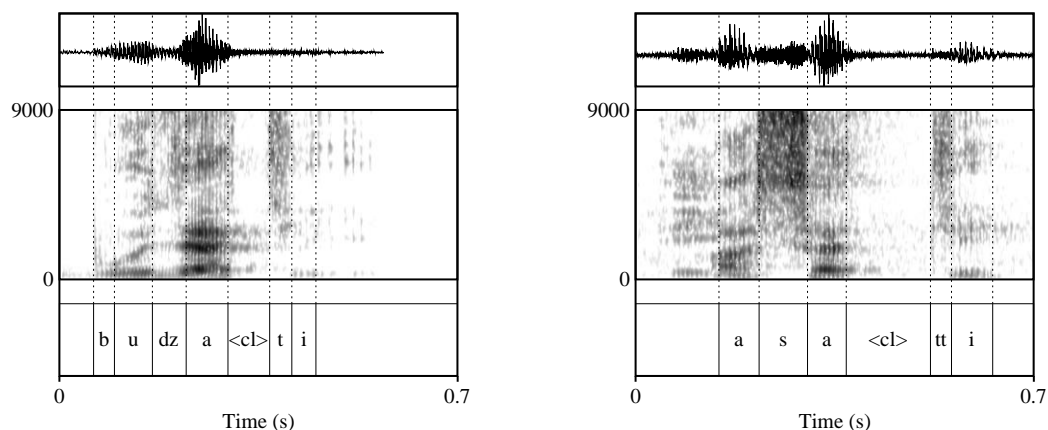


Figure 2. Waveforms and spectrograms of [budzati] and [asatti] (Irabu).

As is clear from Figure 2, the most conspicuous difference between [t] and [tt] is again the difference in duration between their consonant portions, the durations being 73 ms for [t] and 148 ms for [tt] (a ratio of 1:2.02). The duration of the following vowel was 42 ms for [budzati] and 72 ms for [asatti], however, which is the reverse of the pattern we saw for [bata] and [batta]. It therefore seems

best to view the shortening of the vowel following a geminate seen above as exceptional or incidental.

### 2.1.2 [ts] and [tts]

The Kugai dialect has the pair of [itsa] ‘board’ and [attsa] ‘tomorrow’. Waveforms and spectrograms of these words are given in Figure 3.

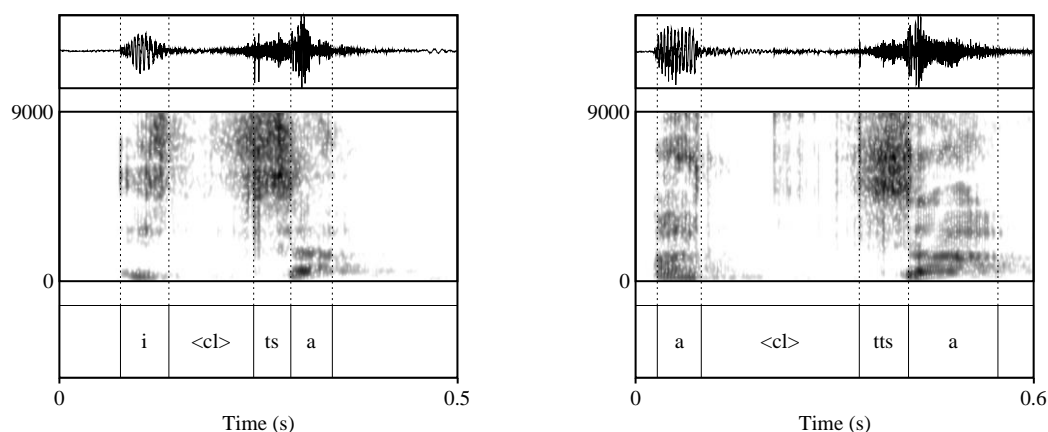


Figure 3. Waveforms and spectrograms of [itsa] and [attsa] (Kugai).

As is clear from Figure 3, the most conspicuous difference between [ts] and [tts] is the difference between their closure durations. The duration of the closure portion was 96 ms (SD = 9; n = 2) for [ts], while it was 238 ms for [tts] (a ratio of 1:2.47).

## 2.2 Voiced intervocalic geminates

In the Miyako dialects, voiced obstruent geminates such as [zz] and [vv] are also observed in what seem to be native words. In Western loans, they are observed in mainland Japanese, as well. Because they have the two properties in (4), however, the voiced obstruent geminates of mainland Japanese cannot strictly be described as the mere lengthening of a single consonant.

- (4) a. There are no voiced fricative geminates. Even if a sound is realized as a fricative when used as a single consonant, it becomes an affricate ([dz]) or a plosive ([b, g]) when used as a geminate.
- b. Vocal fold vibration is observed in the first half of the closure portion only.

Firstly, as regards (4a), while e.g. /z/ is often realized as a fricative when it appears as a single consonant in the Tokyo dialect of Japanese, such as in *kizu* ‘wound’<sup>4</sup>, it is realized as an affricate with a long closure in the case of a geminate, such as in *kiddzu* ‘kids’. Waveforms and spectrograms of these words are given in Figure 4 (the recordings are of a male speaker of the Tokyo dialect in his thirties).

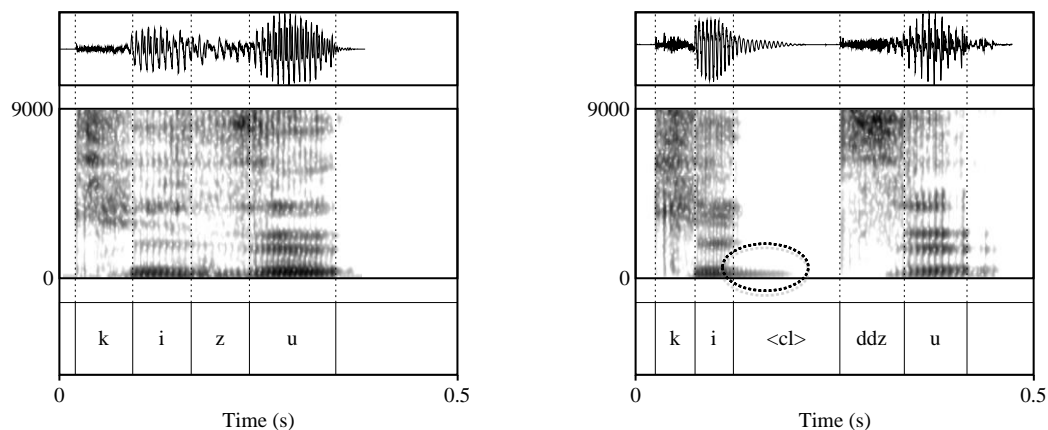


Figure 4. Waveforms and spectrograms of *kizu* ‘wound’ (left) and *kiddzu* ‘kids’ (right).

Next, as regards (4b), vocal fold vibration is often observed not over the whole consonant portion of voiced obstruent geminates in the Tokyo dialect, but only in the first half (Kawahara 2006, among others). In the right-hand part of Figure 4, too, a voice bar (energy in the low frequency region, circled) can be seen in the first half of the closure portion only.

In addition to their durations, I will examine below whether the properties in (4) can also be observed in [zz] and [vv].

### 2.2.1 [z] and [zz]

The Kugai dialect has an example which which intervocalic [z] and [zz] contrast such as [a:za] ‘father’ and [mizza] ‘garlic chive’. Waveforms and spectrograms of these words are given in Figure 5.

<sup>4</sup> While this description cannot strictly be said to be accurate, I have described it in this way in the interest of clarity. The reader is referred to Maekawa 2010a and 2010b for details on the phonetic realization of voiced obstruents in mainland Japanese.

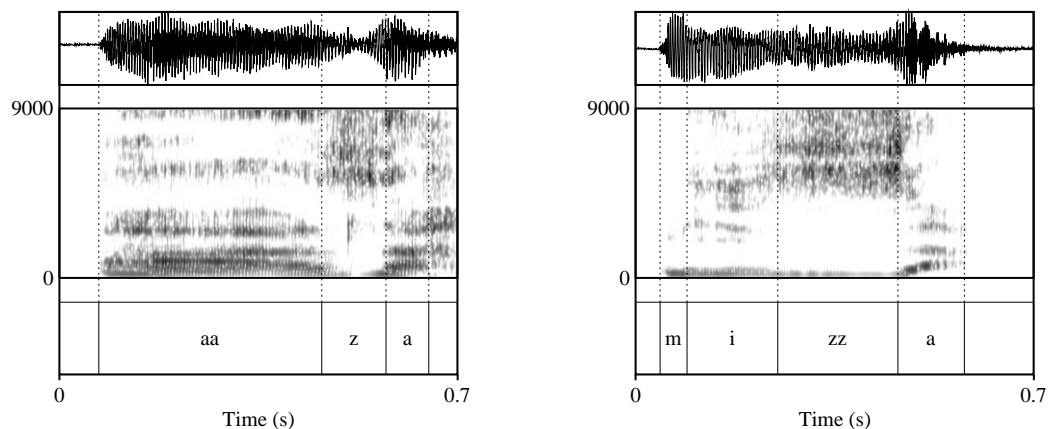


Figure 5. Waveforms and spectrograms of [a:za] and [mizza] (Kugai).

As is clear from Figure 5, the most conspicuous difference between [z] and [zz] is the difference in duration between their consonant portions. This duration was 74 ms for [z], while it was 173 ms (SD = 29; n = 3) for [zz], which gives us a ratio of 1:2.33.

Next, let us consider the noise components and voice bars. High-frequency noise components can be seen even in [zz], indicating that friction continued throughout the geminate. In addition, a voice bar is observed throughout the geminate, indicating that the vocal folds vibrated throughout its pronunciation, unlike how they vibrate only during the first half of the geminate in mainland Japanese.

### 2.2.2 [vv]

The Miyako dialects have the sound [vv], which does not appear in Standard Japanese. Examples of words in which it appears are [avva] ‘oil’ and [kuvva] ‘calf (of the leg)’. In the following discussion, I will consider not only the Irabu and Kugai dialects, but also those of Ikema and Bora. I will not examine duration in this section, as there are no instances of [v] contrasting with [vv] in the survey data.

Firstly, waveforms and spectrograms of [avva] and [kuvva] in the Irabu dialect are given in Figure 6.

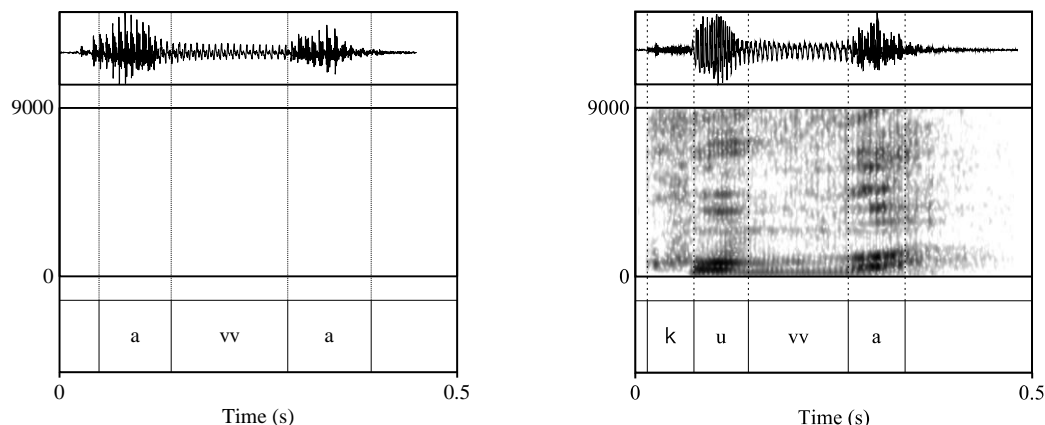


Figure 6. Waveforms and spectrograms of [avva] (left) and [kuvva] (right) in the Irabu dialect.

When looking at the friction noise components in Figure 6, they appear weak in [avva], while they appear stronger in [kuvva], indicating that friction continued. In addition, voice bars are observed throughout the consonant portion in both words, indicating that the vocal folds vibrated throughout its pronunciation.

Waveforms and spectrograms of [avva] and [kuvva] in the Kugai dialect are given in Figure 7.

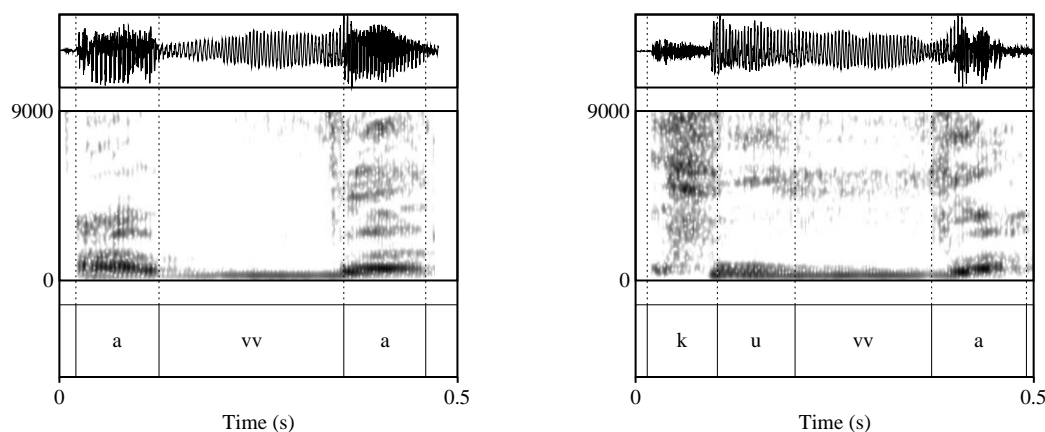


Figure 7. Waveforms and spectrograms of [avva] and [kuvva] in the Kugai dialect.

When looking at the friction noise components in Figure 7, they appear weak in [avva], while they appear stronger in [kuvva], indicating that friction continued. In addition, voice bars are observed throughout the consonant portion in both words, indicating that the vocal folds vibrated throughout its pronunciation.

Waveforms and spectrograms of [avva] and [kuvva] in the Ikema dialect are given in Figure 8.



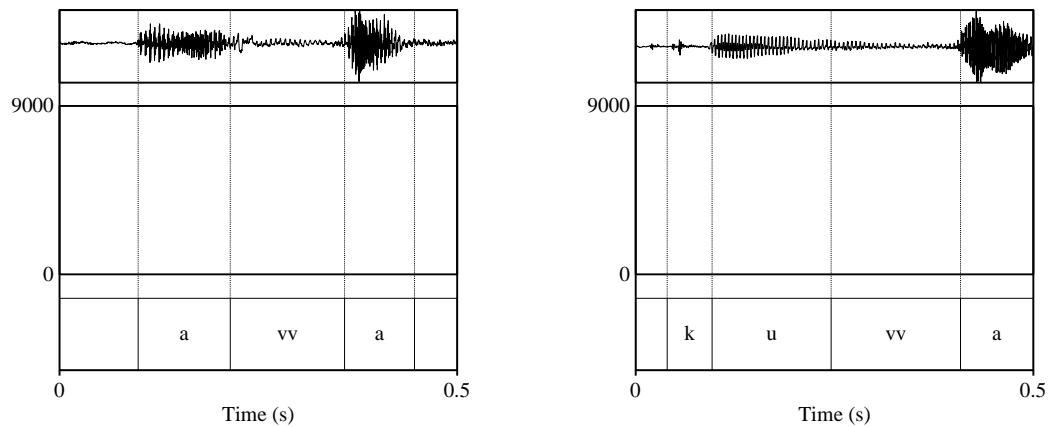


Figure 8. Waveforms and spectrograms of [avva] and [kuvva] in the Ikema dialect.

When looking at the friction noise components in Figure 8, they appear quite weak in both [avva] and [kuvva]. Voice bars, on the other hand, are observed throughout the consonant portion in both words.

Waveforms and spectrograms of [avva] and [kuvva] in the Bora dialect are given in Figure 9.

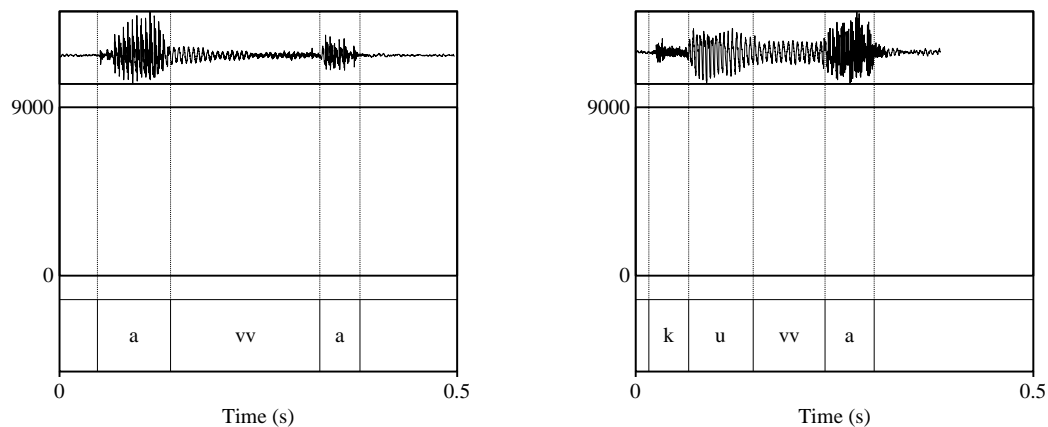


Figure 9. Waveforms and spectrograms of [avva] and [kuvva] in the Bora dialect.

When looking at the friction noise components in Figure 9, they appear strong in both words. As regards voice bars, on the other hand, one is observed throughout the consonant portion in [kuvva], while the one in [avva] weakens in the second half. This can be observed more distinctly in utterances of the word [avvamtsu] ‘grease miso’. There are three instances of [avvamtsu] in the data; the waveforms and spectrograms of all of them are given in Figure 10.

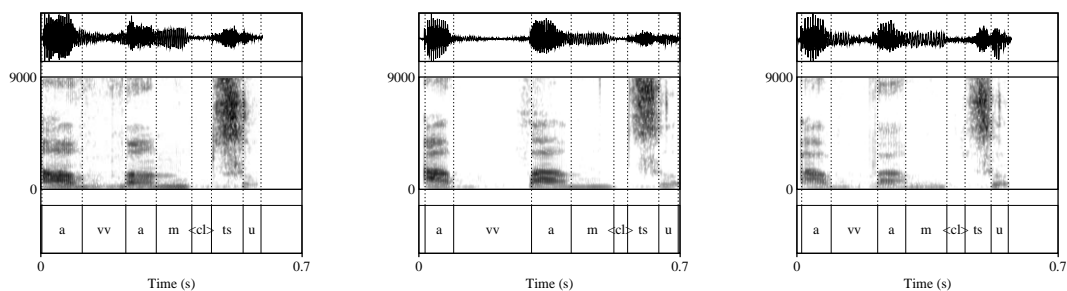


Figure 10. Waveforms and spectrograms of [avvamtsu] in the Bora dialect  
(left: first recording; middle: second recording; right: third recording).

Firstly, when looking at the friction noise components, the friction appears quite weak in all three instances. Next, when looking at the voice bars, one is observed throughout the consonant portion of the first instance, but the ones in the second and third instances disappear in the second half. In auditory perception, too, the geminate in the second instance sounds like [vf]. The duration of the first instance was 116 ms, that of the second one 208 ms, and that of the third one 124 ms, so the second instance also has a longer duration; the disappearance of the voice bar could be connected to this. Further research is needed, however, to determine whether this is an idiosyncrasy of the speaker or a regional characteristic.

The above observations are summarized in (5).

- (5) a. The friction is continuous in all of the dialects; fricatives do not become affricates or plosives.
- b. In the Irabu, Kugai, and Ikema dialects, the vocal folds vibrate throughout the consonant portion.
- c. In the Bora dialect, vocal fold vibration sometimes disappears in the second half of the consonant portion.

Noise components are thus more or less consistently observed, while vocal fold vibration (voice bars) sometimes disappears in the second half of the consonant portion in the Bora dialect.

### 2.3 Word-initial geminates

In the Miyako dialects, there are words with word-initial geminates, such as [ffa] and [vva]. To what degree does the length of these geminates differ from that of single consonants? This question would also seem central to considering the isochrony of syllables or morae; that is, rhythm. Below, I will discuss [nn], [ff], [ss], and [vv].

### 2.3.1 [n] and [nn]

[nada] ‘tear’ and [nnami] ‘now’ are an example of [n] and [nn] contrasting word-initially in the Irabu dialect. Waveforms and spectrograms are given in Figure 11.

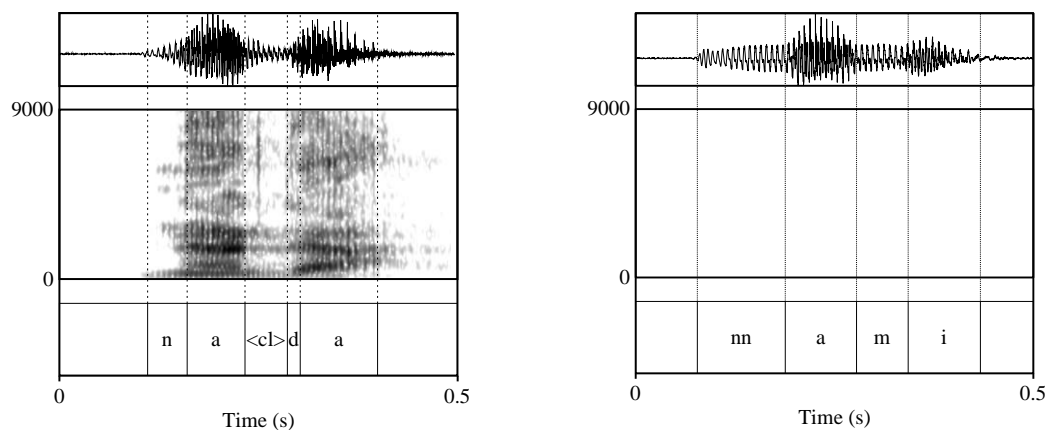


Figure 11. Waveforms and spectrograms of [nada] and [nnami] (Irabu).

As is clear from Figure 11, [nn] was realized with a longer duration than that of [n]. The duration of [n] was 49 ms, while that of [nn] was 110 ms (a ratio of 1:2.24).

### 2.3.2 [f] and [ff]

[funi] ‘ship’ and [ffa] ‘child’ are an example of [f] and [ff] contrasting word-initially. Waveforms and spectrograms are given in Figure 12.

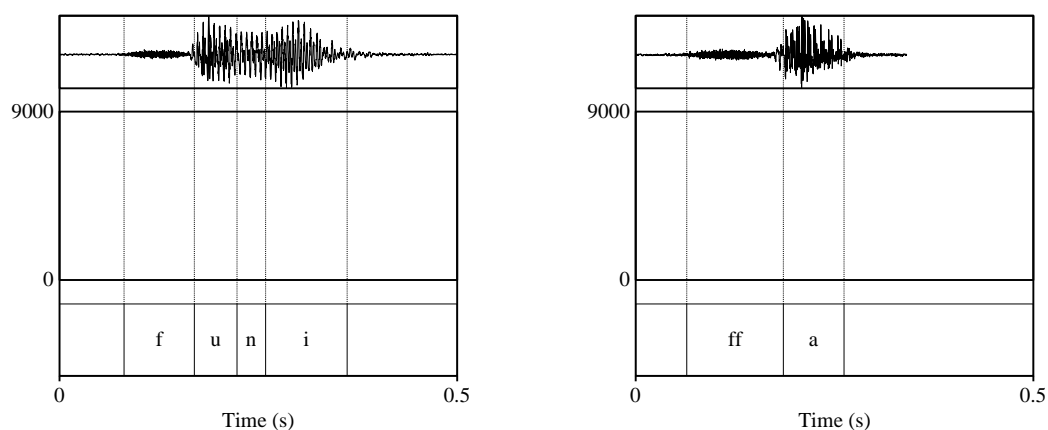


Figure 12. Waveforms and spectrograms of [funi] and [ffa] (Irabu).

As is clear from Figure 12, [ff] was realized with a longer duration than that of [f]. The duration of [f] was 92 ms (SD = 4.5; n = 2; Irabu) or 108 ms (Kugai), while that of [ff] was 135 ms (Irabu) or

143 ms (Kugai), giving us a ratio of 1:1.45 (Irabu) or 1:1.32 (Kugai) between single consonants and geminates. It is worth remarking that this difference in duration is smaller than that between [n] and [nn] and that between single intervocalic consonants and intervocalic geminates.

### 2.3.3 [s] and [ss]

[sība] ‘lip’ and [ssī] ‘nest’ are an example of [s] and [ss] contrasting word-initially in the Kugai dialect. Waveforms and spectrograms are given in Figure 13.

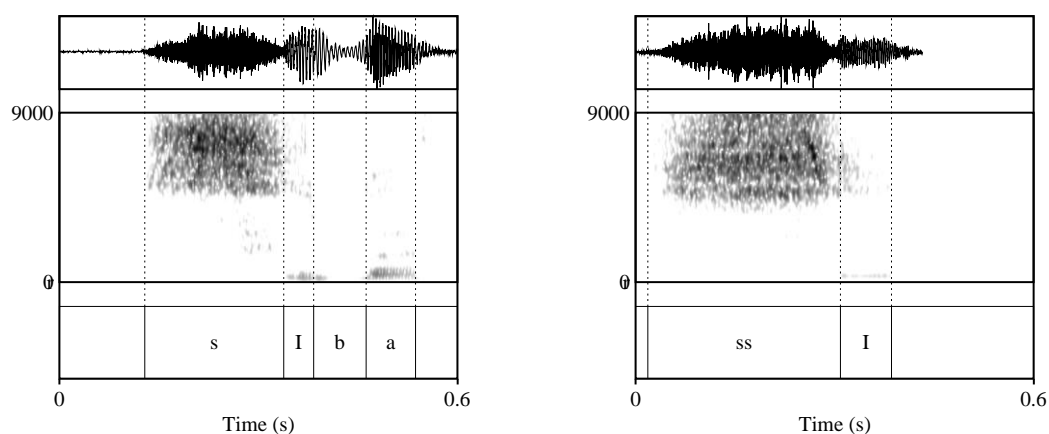


Figure 13. Waveforms and spectrograms of [sība] and [ssī] (Kugai).

As is clear from Figure 13, [ss] was realized with a longer duration than that of [s]. The duration of [s] was 190.3 ms (SD = 16.93; n = 3), while that of [ss] was 289 ms (a ratio of 1:1.51).

### 2.3.4 [v] and [vv]

The Kugai dialect has a pair of examples which contrasts [v] and [vv] such as [vaa] ‘pig’ and [vva] ‘you’. Waveforms and spectrograms are given in Figure 14.

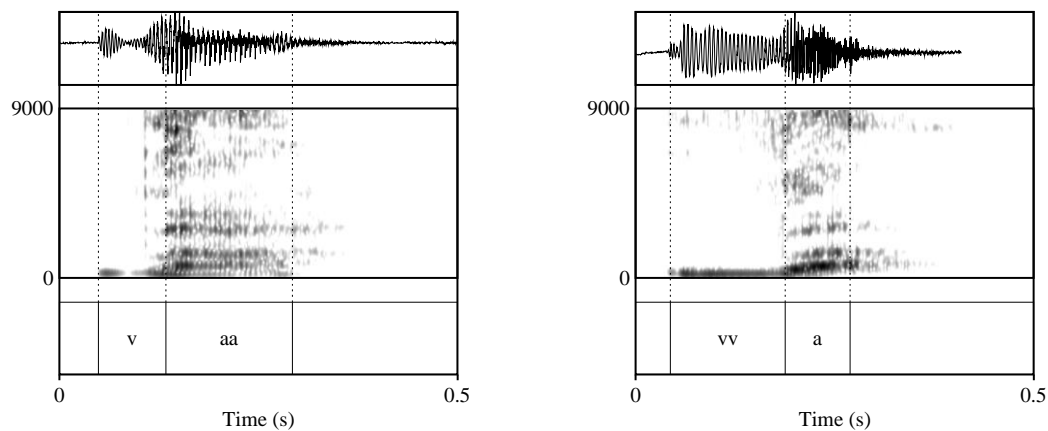


Figure 14. Waveforms and spectrograms of [vaa] and [vva] (Kugai).

As is clear from Figure 14, [vv] was realized with a longer duration than that of [v]. The duration of [v] was 84 ms (SD = 0.00; n = 2), while that of [vv] was 143 ms (a ratio of 1:1.70).

To summarize the above, each of the geminates was realized with a longer duration than the corresponding single consonant, but while the ratio was 1:2.24 for [n] and [nn], the difference in duration was smaller for [ff], [ss], and [vv], with ratios between 1:1.3 and 1:1.7. When the difference in duration between a single consonant and a geminate is small, other aspects, such as the length of the following vowel, may need to be adjusted to avoid perceptual confusion. Further research is needed to determine whether such adjustments in fact occur.

### 3 Consonant clusters

In the Miyako dialects, there are words with initial consonant clusters, such as [mta]. Which syllable position does [m] occupy in this word? Is it an onset like [t], a coda, or a nucleus? In order to determine this, it is necessary to consider (morpho\_)phonological alternations. It seems not unlikely, however, that there are also acoustic-phonetic cues. In this section, I will consider this question by comparing occurrences of [m] in consonant clusters with occurrences as a single onset or coda consonant.

Examples from the survey data of words in which an initial [m] is followed by another consonant are given in (6).

- (6) Word-initial [m]+consonant clusters (Irabu)
- a. Words in which [m] is followed by a voiceless obstruent<sup>5</sup>:  
mkiiN, mta, msu
  - b. Words in which [m] is followed by [n]:  
mmna, mmni, mnii, mni, mnapskaĩ

In words in which [m] is followed by [n], likewise a nasal, double articulation sometimes occurs, making measurement of the duration of [m] difficult. For this reason, I will limit analysis and discussion to words in which [m] is followed by a voiceless obstruent in this section.

Waveforms and spectrograms of [mavkja:] ‘front’ and [mta] ‘earth’ in the Irabu dialect are given in Figure 15.

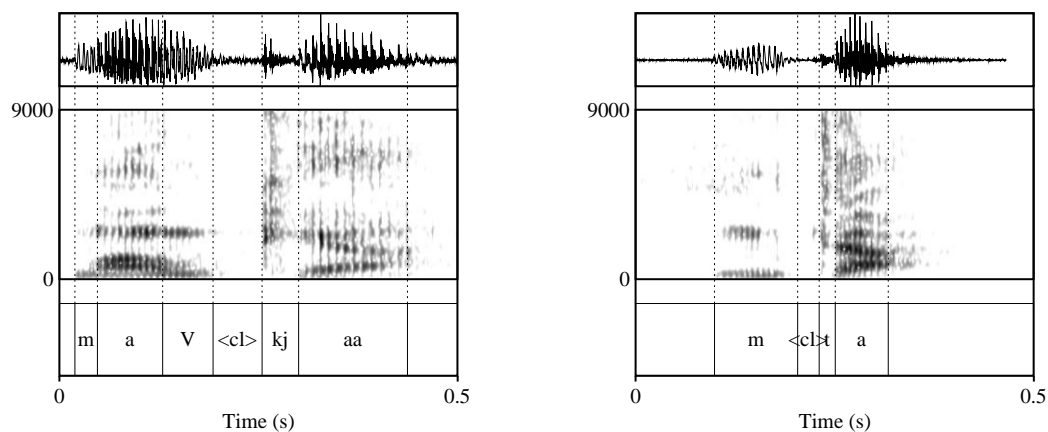


Figure 15. Waveforms and spectrograms of [mavkja:] and [mta] (Irabu).

As is clear from Figure 15, [m] was realized with a longer duration in a consonant cluster than it was as a single consonant. In order to confirm whether this is a systematic difference, let us compare the words containing an [m] that are present in the data of which I have labeled the segments, classified according to its position within the syllable. The words to be considered are given in (7).

- (7) Words from the survey data
- a. Consonant cluster: [msu], [mta], [mkiiN]
  - b. Syllable onset: [amambuni], [maxaĩ], [umatsĩ], [nnami], [nufumunu], [ɕɕanamunu], [mizza], [midzi], [mavkja:]
  - c. Syllable coda: [amambuni], [avvamtsu], [umku]

<sup>5</sup> [mmtsI] is an example of a word in which [m] is used as a geminate and is moreover followed by [ts], but it will not be considered here.

The durations of [m] in these words are given in (8)<sup>6</sup>.

(8) Durations of [m]

Position	Mean (SD)	Max. value	Min. value	Sample size
Consonant cluster	77.8 (4.3)	100.3	73.5	3
Syllable onset	51.4 (15.9)	81.6	28.2	12
Syllable coda	86.7 (18.7)	114.4	57.7	6

According to this table, the duration increases in the order onset < consonant cluster < coda. When comparing the differences, that between consonant clusters and codas is smaller at 8.9 ms than that between consonant clusters and onsets, which is 26.4 ms. As the sample is small and the standard deviations are large, definitive conclusions cannot be drawn, but at this stage, the data suggest that interpreting [m] in consonant clusters as belonging to a different syllable from the following consonant is appropriate.

#### 4 Conclusion

In this chapter, I have examined temporal control in the Miyako dialects. As a result, it has become clear that geminates are longer in duration than single consonants. The duration ratios between geminates and single consonants are summarized in (9).

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<sup>6</sup> There was one instance of [mizza] with a duration of 177 ms, but as this exceeds the mean + 2SD, I have excluded it from consideration.

## (9) Duration ratios between single consonants and geminates

## a. Intervocalic

Consonants	Ratio
[t] and [tt]	1:2.02–2.86 (Irabu)
[ts] and [tts]	1.2.47 (Kugai)
[z] and [zz]	1.2.33 (Kugai)

## b. Word-initial

Consonants	Ratio
[n] and [nn]	1.2.24 (Irabu)
[f] and [ff]	1.1.45 (Irabu) 1.1.32 (Kugai)
[s] and [ss]	1.1.51 (Kugai)
[v] and [vv]	1:1.70 (Kugai)

It can be gleaned from these results that there is a tendency for the difference in duration between single consonants and geminates to be smaller word-initially than intervocalically. Further research is needed to determine how stable this difference is.

Moreover, it has become clear that differently from Standard Japanese, friction continues and vocal fold vibration is maintained throughout intervocalic voiced obstruent geminates such as [zz] and [vv].

Further, consonants were realized with a longer duration in consonant clusters than as single consonants. The duration ratio is given in (10).

## (10) Duration ratio between single consonants and consonants in consonant clusters

Consonant	Ratio
[m]	1:1.42 (Irabu)

Further research based on a larger data set is required to confirm these results, especially considering the fact that as noted in Section 1, the recorded data used in the present analysis consist almost entirely of single utterances, which are furthermore utterances of words in isolation rather than embedded in sentences. Consequently, improvements on these fronts are required in order to further elucidate the details of not only duration, but also articulatory dynamics. In addition, while I have focused on analyzing durations at the segmental level in this chapter, it is necessary to



investigate whether the rhythmic unit in the Miyako dialects is the mora by examining, for example, durations at the word level.

### Acknowledgements

I would like to take this opportunity to thank Michinori Shimoji for the valuable advice he gave me during the writing of this chapter. I was not able to incorporate all of his advice; it goes without saying that I am responsible for any errors and misunderstandings. This research constitutes part of the results of the research project *An Empirical Study on Adaption of Standard Japanese Sound in Two-Pattern Dialects of Kyushu Japanese*, JSPS KAKENHI Grant-in-Aid for Young Scientists (B) Grant Number JP22720164.

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## **The State of Dialect Speech Perception in the Younger Generation of the Miyako Islands**

Yumi NAKAJIMA, Akiko TOKUNAGA & Daigo MOROOKA

### **1. Introduction**

As of this writing, there have been many reports and analyses regarding a number of unusual speech sounds that are heard often on the Miyako Islands. Among them, a vowel, corresponding to *\*i* in the mainland dialects, that is accompanied by a distinct friction noise due to the tip of the tongue approaching the alveolar ridge has especially garnered attention. The questions of how to define this vowel phonetically and how to describe it phonologically have also been raised, and attempts have been made at analyzing it using experimental phonetics. Through the use of a standardized survey sheet, the joint survey conducted as part of the present project (henceforth: ‘the joint survey’) has provided us with new, somewhat comprehensive phonetic data, which has made it easier to perform an analysis that takes all aspects of the Miyako dialects into account, and it is against the background sketched above that we decided to utilize this data in a survey on the linguistic behavior of the younger generation that we had been conducting. Although it is still just an experimental attempt at this stage, and the methodology and the like must be tested, we hope that it will be of use in grasping the state of dialect speech perception in the younger generation in the interest of the preservation and passing on of these endangered dialects.

Yumi Nakajima and her students at the Faculty of Social Sciences of Hitotsubashi University have been conducting a continuous survey on the state of everyday language use on Miyakojima and Irabujima since 2008. Although, for purposes of comparison, it is also partly a survey of the older generation, it mostly focuses on the younger generation, high school students in particular. We have been trying different ways of combining questionnaires and interviews, but while we have always been interested in how the younger generation perceives those phonetic characteristics that are different not only from those of mainland Japanese, but also from those of Okinawa Island, we had not been able to settle on a methodology for investigating this.

With the above in mind, we decided to seek a way forward by including speech recognition items in a small questionnaire conducted in November 2011, which formed the beginning of an experimental attempt at using the data obtained in the joint survey. Based on the results of that questionnaire, we conducted a somewhat larger-scale survey specifically tailored to speech recognition in March 2012. In this chapter, we will report on the results obtained thus far, on the basis of which we plan to determine the direction in which to proceed with this research.

### **2. Survey overview**

- A. Survey 1 on the state of Miyakojima dialect speech recognition in the younger generation
- B. Survey 2 on the state of Miyakojima dialect speech recognition in the younger generation

## 2.1 Survey 1 and Survey 2

Survey 1 was conducted in November 2011 with the cooperation of two of the prefectural high schools in Miyakojima City, as part of a survey on the state of everyday language use by high school students. The survey combined a questionnaire with interviews; for the questionnaire, five items that included unusual speech sounds were selected from among the phonetic data collected in the joint survey and played back for the high school students, who were asked, (1) 'What does it sound like?' (Japanese kana were specified as the means to write down the answer, the choice between katakana and hiragana being up to the student), and (2) 'Do you know what it means?' Additionally, for purposes of comparison, a questionnaire on the same items was conducted in March 2012 with the cooperation of a high school in central Okinawa Island. The two high schools in Miyakojima City will be referred to as 'high school A' and 'high school B', while the third high school, located in Urasoe City, will be referred to as 'high school C'<sup>1</sup>. Combined, 130 students at these schools participated in the survey, 79 male and 51 female.

Survey 2 was conducted in March 2012, again at the high schools in Miyakojima City. A somewhat larger-scale survey specifically tailored to speech recognition based on the results of Survey 1, it contained fifty items, again selected from among the data collected in the joint survey. As the task of transcribing fifty items is quite a lot more demanding of the students than an ordinary questionnaire, we asked the schools to enlist volunteers; we were able to secure the cooperation of seventeen students, two male and fifteen female. We will give an overview of the above two surveys in the following section.

## 2.2 On the survey contents

The items used for Survey 1 were the four words and one sentence given in Table 1. They were selected

**Table 1. Survey 1 speech recognition items**

	Item	Recording site
1	'head'	Irabu
2	'liver'	Kugai
3	'earthworm'	Bora
4	'rice ball'	Irabu
5	'A child is born.'	Yonaha

because they contain unusual speech sounds that deviate markedly from the sounds of Standard Japanese; that is, (1) a central vowel that is accompanied by friction noise, (2) a group of consonants ([m], [l], and the like; henceforth referred to simply as 'syllabic m', 'syllabic l', and so on), and (3) another group of unusual consonants ([f], [v], and the like). Recordings of a high quality with a clear pronunciation were

<sup>1</sup> The three schools that cooperated with these surveys were Okinawa Prefectural Miyako High School and Okinawa Prefectural Irabu High School in Miyakojima City and Okinawa Prefectural Urasoe Industrial High School in Urasoe City. We would like to take this opportunity to thank these three schools for their cooperation. Survey 1 was jointly conducted by fourteen undergraduate and one graduate student studying under Yumi Nakajima at the Faculty of Social Sciences of Hitotsubashi University as well as three undergraduate students at Shigakukan University in Kagoshima. Survey 2 was jointly conducted by Yumi Nakajima and two of her graduate students, the coauthors of this chapter.

Table 2. Survey 2 word items.

Sites	Miyakojima			Kurima- jima	Irabujima		No. of sites
	Kugai	Bora	Miyaguni	Kurima	Irabu	Kuninaka	
'head'	○	—	—	—	○	○	3
'liver'	○	—	—	—	○	○	3
'sugar cane'	○	○	—	—	○	—	3
'breath'	○	—	—	○	—	—	2
'lightning'	○	○	—	—	—	—	2
'you'	○	—	—	—	—	○	2
'sickle'	○	—	—	—	○	—	2
'fog'	○	○	—	—	—	—	2
'fist'	—	○	—	—	○	—	2
'fish'	○	—	—	—	○	—	2
'person'	○	—	—	—	○	—	2
'everyone'	○	—	—	—	○	—	2
'niece'	—	○	—	—	—	○	2
'grease miso'	—	○	—	—	—	—	1
'ant'	—	—	—	—	—	○	1
'sea'	—	○	—	—	—	—	1
'mirror'	—	—	—	—	○	—	1
'mouth'	—	—	—	—	—	○	1
'night-scented lily'	—	○	—	—	—	—	1
'child'	○	—	—	—	—	—	1
'anyone'	—	—	○	—	—	—	1
'the moon'	○	—	—	—	—	—	1
'the east'	○	—	—	—	—	—	1
'daytime'	○	—	—	—	—	—	1
'all together'	—	—	○	—	—	—	1
'elderly person'	○	—	—	—	—	—	1
No. of word items	16	8	2	1	9	6	42

Table 3. Survey 2 sentence items.

	Item	Recording
1	'A child is born.'	Irabu
2	'I went to the sea.'	Kurima
3	'Cockroaches don't die easily.'	Bora
4	'High school students wear uniforms.'	Bora
5	'Yesterday, the principal sat.'	Bora
6	'I just drank tea.'	Uruga
7	'Yesterday, I played with my cousin.'	Uruga
8	'I went to the sea yesterday, too.'	Bora

selected from among the data collected in the vocabulary modules of the joint survey. The single sentence was also obtained in the vocabulary module of the joint survey, as an example sentence. At this stage, we did not give particular consideration to regional differences in speech sounds.

In Survey 2, the number of items was increased to fifty. The selection criteria were generally the same as those used in Survey 1, but in cases where regional differences had been identified in the joint survey, we strove to select a sample for each feature when the quality of the recordings permitted this. For example, even among just the survey sites of the joint survey, what appear to be three variants of the sound corresponding to \*-ri in the mainland dialects were identified: that

of southwestern Miyakojima, including Kugai, which is accompanied by a distinct friction noise; that of Karimata, Ikema, and the like, which is more vowel-like; and that of Irabujima, Kuninaka, and the like, which sounds like a syllabic l. In order to determine how high school students perceived these regional differences, we selected recordings from the three recording sites of Kugai, Kuninaka, and

Irabu for the item 'head', which contains the sound corresponding to \*-ri. For each survey site, however, there were either no recordings of certain items or only recordings that were unusable due to their quality, so it was not possible to make an exhaustive selection of recordings. Including words added in order to examine other seemingly unusual speech sounds and semantic comprehension, 42 word items were selected and arranged to avoid consecutive words that either have the same meaning or were recorded at the same site. Furthermore, eight short sentences from the grammar module of the joint survey were added. This was done in order to find out how dialect perception differs between words and sentences, but the phonetic criteria given above for the word items were also taken into account in their selection.

In the survey, each of the recordings was played back three times in direct succession for the high school

students, who were asked to transcribe them. As in Survey 1, the answers were to be written down using kana, the choice between katakana and hiragana being up to the student. All the different word items and the sites whose recordings were selected for them are given in Table 2 on the previous page, while the sentence items and their recording sites are given in Table 3. Additionally, distribution maps indicating the regional differences are given in Figures 1–8.

### 2.3 On the treatment of the different phonetic characteristics

We focused on regional variants in Survey 2 because we thought that their differences might be reflected to a significant degree in the high school students' perception. We hoped that we would be able to attain a more concrete understanding of speech perception in the younger generation if we compared how they would process each variant—how they would react to different sounds appearing in similar words. Our classification of these variants was geared towards this purpose; it was not based on a comprehensive understanding of geographic distributions among the different areas of Miyakojima. The joint survey was not originally aimed at investigating distributions, nor have the documentation formats of the different researchers been standardized. We therefore decided to classify the variants on the basis of the sound recordings, using the documentation by the researchers as a reference. There were cases where the recording quality and the like made classification difficult; we made the final judgments ourselves<sup>2</sup>.

### 2.4 Regarding the survey participants

#### *Survey 1*

The numbers of students participating in the survey at each of the three schools, broken down by sex, are given in Table 4 on the next page. There were first-year as well as second-year students among them, but as there were no noticeable differences between them in the survey results, grades have not been indicated. While there was no large difference in number between male and female participants at high school A, there were relatively fewer female participants at high schools B and C. A breakdown of the birthplaces and places of residence of the students at the two schools in Miyakojima City (School A, B) is given in Tables 5 and 6 on the next page. Although there were four students born outside Okinawa Prefecture at high school A and five at high school B, for a total of nine, their survey results have not been excluded from the data. The birthplaces and places of residence of the students at high school C are given separately in Tables 7 and 8.

#### *Survey 2*

As was mentioned above, this survey was conducted with the cooperation of a total of seventeen high school students; three first-year students and fourteen second-year students, or fifteen female and two male students. Fourteen of the students were born on Miyakojima (none on Irabujima) and three outside Okinawa Prefecture (Kagoshima, Aichi,

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<sup>2</sup> There were also cases where the informant would pronounce a word with a strong friction sound at first, but then pronounce it slowly with a vowel instead upon the researcher asking them to repeat it. While it is an interesting question what this reveals about the informant's internal phonology, we have used both forms in these cases. Although vowels were realized in various ways, as well, such as more to the front or more to the back, we did not distinguish between these different pronunciations.

and Tokyo). They all currently live on Miyakojima, twelve of them in the Hirara area (including Shimozato, Nishizato, and Higashi-Nakasone, among others), two in Kugai, one in Uruka, and one in Gusukube; the exact place of residence of one of the students is unclear. Among the students who had experience living outside the island, twelve had lived on Miyakojima for sixteen years or more, but among the remaining five, two students had not lived there for more than five years. Because the whole classes who are the objects of our regular surveys do not exclusively consist of students who were born and raised in the areas in question, either, we have chosen not to differentiate between these groups of participants. As regards their parents, both of them are from Miyakojima in the case of eleven students, one of them in the case of four students, and neither in the case of two students.

Table 4. Number of participating high school students by sex

High school	A	B	C	Total
Male	20	21	38	79
Female	27	9	15	51
Total	47	30	53	130

Table 5. Birthplace (high school A & high school B).

High school	A	B	Total
Within the Miyako Islands	41	23	64
Within Okinawa Prefecture	2	2	4
Outside Okinawa Prefecture	4	5	9
Total	47	30	77

Table 6. Place of residence (high school A & high school B).

Highschool	A	B	Total
Hirara	36	1	37
Gusukube	4	0	4
Ueno	3	0	3
Shimoji	2	0	2
Sarahama	0	13	13
Irabu	0	10	10
Unknown	2	6	8
Total	47	30	77

Table 7. Birthplace (high school C).

Urasoe/Ginowan	35
Northern/central Okinawa Island (other)	6
Southern Okinawa Island	7
Outside Okinawa Island; within Okinawa Prefecture;	1
Outside Okinawa Prefecture	3
Unknown	1
Total	53

Table 8. Place of residence (high school C).

Urasoe/Ginowan	39
Northern/central Okinawa Island (other)	5
Southern Okinawa Island	9
Total	53

### 3. Survey results

#### 3.1 Survey 1: speech perception and semantic comprehension

##### 3.1.1 'Head'

For 'head', a recording from Irabu on Irabujima (transcribed as 'k<sup>h</sup>anama' in the joint survey documentation) was used. At the Kuninaka survey site, also on Irabujima, there is a clear syllabic *l* at the end of this word; in Irabu the sound is more vowel-like than that, but it sounds more lateral than in Karimata on Miyakojima, for example. It thus sounds like an intermediate pronunciation.

Among the 121 students who transcribed this item, there were only twelve who used something other than 'カ' (*ka*)<sup>3</sup> for the beginning of this word (see Table 9 on the next page); everyone else used 'カ', and the transcriptions of more than half of them matched the recording up to 'カナマ' (*kanama*). Among the answers that matched it up to 'カ

<sup>3</sup> As was indicated above, both hiragana and katakana were used for the answers, but as no one used a mixture of them to transcribe a single item, we use katakana to represent both here.

Table 9. Answers beginning with something other than 力.

	タ (ta)	ハ (ha)
High school A	1	1
High school B	1	4
High school C	5	—
Total	7	5

Table 10. What followed ‘カナマ’.

	イ (i)	ウ (u)	エ (e)	ズ (zu)	ル (ru)	ア / ー (a)	ヌ (nu)	ン (n)	∅
High school A	6	5	1	3	3	—	2	3	2
High school B	22	3	—	—	—	2	—	—	—
High school C	—	—	1	—	2	1	—	2	1
Total	28	8	2	3	5	3	2	5	3

ナマ’, we looked at how the students transcribed the following sound (see Table 10). Vowels were most numerous; in all, only five student used ‘ル’ (ru), presumably to represent a syllabic *l*. Among the vowels, ‘イ’ (i) was the most numerous, followed by ‘ウ’ (u)<sup>4</sup>. Interestingly, of the students of high school B who live on Irabujima, where one can hear the syllabic *l* being used by the older generation as in Kuninaka, none used ‘ル’. It may be that it is precisely

Table 11. What followed ‘カナ X’ (‘X’ signifying one or two arbitrary kana).

カナ X+	ン (n)	イ (i)	エ (e)	リ (ri)	ア (a)
High school A	6	3	2	2	1
High school B	—	1	—	—	—
High school C	15	—	1	—	1
Total	21	4	3	2	2

Table 12. Examples of answers that matched the recording up to ‘カナ’.

カナムアイ	‘kanamuai’	カナウマン	‘kanauman’
カナムイ	‘kanamui’	かなむあん	‘kanamuan’
かなもい	‘kanamoi’	カナムアン	‘kanamuan’
かなんまい	‘kananmai’	カナムウン	‘kanamuun’
カナゴエ	‘kanagoe’	カナムン	‘kanamun’
カナゴエ	‘kanagoe’	かなむん	‘kanamun’
カナモエ	‘kanamoe’	カナモエン	‘kanamoen’
かなんまり	‘kananmari’	カナワン	‘kanawan’
かなうあん	‘kanauan’	かなわん	‘kanawan’

because they were used to hearing this dialect sound that they did not expressly transcribe it as such, but this is conjecture.

Next, among the answers that matched the recording up to ‘カナ’ (kana), ‘ン’ (n) was used most often to transcribe the final sound (see Table 11). On the whole, when comparing these answers to those that matched it up to ‘カナマ’, these students’ perception of the word-final sounds was less consistent. Furthermore, considering how multiple students transcribed it as ‘かなむん’ (kanamun; five students) at high school A and as ‘かなわん’ (kanawan; six students) at high school C, it may be that some of the students having trouble determining what sounds followed ‘カナ’ reasoned their way towards a straightforward word form.

While we have considered the answers that were close to the dialect form above, there were many considerably different answers, as well, such as ‘カラマル’ (kamaru) and ‘ツナマヨ’ (tsunamayo). Incidentally, while the degree of semantic comprehension was on the whole low, that of ‘head’ was highest among the five items (see Table 13),

Table 13. The meaning of ‘head’

	Students answering ‘head’
High school A	5
High school B	9
High school C	—
Total	14

Table 14. The connection between semantic comprehension and form (how the students who answered the meaning correctly transcribed the form).

‘Head’	カナマイ (kanamai)	カナムアイ (kanamuai)	カナマウ / ウ (kanamaui)	カナマル (kanamaru)	カナム (kanamu)
High school A	2	—	1	1	1
High school B	5	1	3	—	—

4 After pronouncing a word once with a syllabic *l* or a friction noise, one sometimes hears the older generation use an *i* when pronouncing it again slowly; it is unclear if there is a connection.



but there cannot be said to be a correlation between the actual transcription and semantic comprehension (see Table 14).

### 3.1.2 ‘Liver’

For ‘liver’, a recording from Kugai on Miyakojima, where it is pronounced with a strong friction noise (<sup>sz</sup>kʷimu in the joint survey documentation), was used. How did the students perceive such a marked friction noise? Not counting the students who were unable to give an answer, everyone used ‘ク’ (*ku*) for the beginning of the word. We consider either ‘ス’ (*su*) or ‘ツ’ (*tsu*) following this ‘ク’ to be a likely reflection of the friction noise. If this is correct, it turns out that the students of Okinawa Island (School C) were more responsive to this sound. While, similarly to ‘head’ above, the students of Miyakojima (School A, B) only have a marginal familiarity with this word in regard to semantic comprehension, they might be able to recognize the sound it contains as a ‘regional’ or ‘natural’ sound. Incidentally, ‘ス’

Table 15. ‘Liver’: is the word-initial ク followed by ス or ツ?

High school	Yes	No	Total
A	9	38	47
B	—	29	29
C	20	25	45
Total	29	92	121

Table 16. ‘Liver’: transcriptions following ク that are thought to reflect the friction noise.

High school	ス ( <i>su</i> )	セ ( <i>se</i> )	ツ ( <i>tsu</i> )	Total
A	9	—	—	9
B	—	—	—	0
C	18	1	1	20
Total	27	1	1	29

was by far the most commonly used of the transcriptions thought to reflect the friction noise, as can be seen in Table 16.

Next, we will look at how the transcriptions were structured on the whole, both those that did and those that did not include an element thought to reflect the friction noise. Answers consisting of two *kana* in which ‘ク’ is followed by ‘ヌ’ (*nu*), ‘ン’ (*n*), or ‘ム’ (*mu*) were most numerous (75 students), but *kana* representing an M sound<sup>5</sup>, such as ‘ム’, accounted for only six of these; ‘ヌ’ and ‘ン’ were more common choices at all three schools. This could mean that the students’ ability to perceive word-final *-m* is low, or perhaps that that they chose transcriptions representing *n*

Table 17. Answers that did not include an element thought to reflect the friction noise

	Two- <i>kana</i> forms		Other			Total
	Final nasal	Total	KNC	KNN	KvN	
High school A	<i>n</i>	28	5	3	2	38
	<i>m</i>	2	—	—	—	2
High school B	<i>n</i>	24	3	—	0	27
	<i>m</i>	0	—	—	—	0
High school C	<i>n</i>	17	3	—	—	20
	<i>m</i>	4	1	—	—	5
Total		75	12	3	2	92
E.g.		くぬ ( <i>kumu</i> ) くん ( <i>kun</i> ) クム ( <i>kumu</i> ) クム ( <i>kumu</i> )	くぬっ ( <i>kunutsu</i> ) くんっ ( <i>kuntsu</i> ) クモツ ( <i>kumotsu</i> )	クヌン ( <i>kunun</i> )	くうぬ ( <i>kūnu</i> )	

(‘v’ represents vowels; a lowercase ‘v’ is used to distinguish them from consonants).

<sup>5</sup> As regards *kana* used to represent the word-final nasal, we use the term ‘n sound’ for *kana* such as ‘ヌ’ and ‘ン’, and ‘m sound’ for *kana* such as ‘ム’ and ‘ム’.

Table 18. Answers that did include an element thought to reflect the friction noise.

	Three-kana forms	Other	Total				
	Final nasal	Total	KSNC	KSNv	KSNN	NSKN	
High school A	<i>n</i>	6	—	—	—	1	7
	<i>m</i>	—	—	—	—	—	0
High school B	<i>n</i>	—	1	—	—	—	1
	<i>m</i>	0	—	—	—	—	0
High school C	<i>n</i>	10	—	—	—	—	10
	<i>m</i>	8	1	1	1	—	11
Total		24	2	1	1	1	29
E.g.		クスム ( <i>kusumu</i> ) くすん ( <i>kusun</i> ) クセム ( <i>kusemu</i> ) クスミ ( <i>kusumi</i> )	くすむっ ( <i>kusumutsu</i> )	クスモア ( <i>kusumoa</i> )	クスムン ( <i>kusumun</i> )	ンクスヌ ( <i>nkusumu</i> )	

(‘v’ represents vowels; a lowercase ‘v’ is used to distinguish them from consonants).

sounds regardless of an awareness of this sound as a dialect sound. Among the 27 answers including an element thought to reflect the friction noise, on the other hand, answers consisting of three kana were most numerous at 24, sixteen of them representing the word-final nasal as an *n* sound and eight as an *m* sound; answers representing it as an *m* sound were thus relatively slightly more common than among answers consisting of two *kana*. While the sample size is very small, it may be that the students who perceived the friction noise as a peculiar sound were also more responsive to the word-final *-m*. As was the case with ‘head’, these answers were more common at high school C; this could perhaps be said to be reflective of a single tendency.

Incidentally, while we had expected the younger generation to be relatively more familiar with the word for ‘liver’, as it is used in various idioms, only two students gave a meaning for this word, their answers being ‘these two people’ and ‘yesterday’.

### 3.1.3 ‘Earthworm’

A recording obtained in Bora (‘mimɕɿ’ in the documentation) was used. Our intention was to find out how the students would perceive syllabic *m*, which is used often in the Miyako dialects, as in *m*: ‘sweet potato’, for instance. Contrary to our expectations that due to the relatively simple structure, it would be easy to perceive as a dialect sound, the answers were quite rich in variety. Not counting the students who were unable to give an answer (one at high school A and five at high school C), 96 students used ‘ミ’ (*mi*) for the beginning of the word, but there were also 27 students who used ‘ニ’ (*ni*). With the exception of ‘びんず’ (*binzu*), which occurred once, the remainder of the answers all started with a nasal, as well, such as ‘みゆんず’ (*myunzu*) and ‘ネンムズ’ (*nenmuzu*). Furthermore, all answers ended in ‘ズ’ (*zu*), with the exception of two answers ending in ‘ツ’ (*tsu*). The majority of the answers thus took the form ‘ミ/ニ ズ’, so we looked at what kana were used for the syllabic *m* in the middle of the word. Overviews of forms beginning with ‘ニ’ and ‘ミ’ are given in Tables 19 and 20 on the next page, respectively, on the next page. In both cases ‘ン’ (*n*) was by far the most common; occurrences of ‘ム’ (*mu*) thought to represent the syllabic *m* were rare. Moreover, the majority of those who used the latter were Okinawa Island high school students (School C). In comparison to a central vowel accompanied by a friction noise, it would seem that syllabic consonants such as *m* and *l* would not sound too strange to

Table 19. Kana used for the middle of the word in answers beginning with ニ .

High school	ン (n)	ンツ (ntsu)	ンム (nmu)	ム (mu)	Total
A	8	1	1	1	11
B	—	—	—	—	0
C	9	—	5	2	16
Total	17	1	6	3	27
Eg.	ニンズ (ninzu)	にんっず (nintsuzu)	ニンムズ (ninmuzu)	ニムズ (nimuzu)	

Table 20. Kana used for the middle of the word in answers beginning with ‘ミ’ .

High school	ン (n)	ンツ (ntsu)	ンム (nmu)	ウン (un)	ム (mu)	ミ (mi)	ニ (ni)	ンムン (nmun)	∅	Total
A	32	—	2	1	—	1	—	—	—	36
B	28	1	—	—	—	—	—	—	—	29
C	18	—	1	—	3	4	1	1	2	30
Total	78	1	3	1	3	5	1	1	2	95
Eg.	ミンズ (minzu)	ミンツズ (mintsuzu)	ミンムズ (minmuzu)	みうんず (miunzu)	ミムズ (mimuzu)	ミミズ (mimizu)	ミニズ (minizu)	ミエンムンズ (myenmunzu)		

the younger generation of today, accustomed as they are to the sounds of foreign languages, but it nevertheless appears that they are not perceived in particular as dialect sounds. Although these unusual dialect sounds may sound peculiar to the younger generation, the sound system of Standard Japanese having become their frame

Table 21. How students having trouble identifying the sounds transcribed ‘rice ball’.

	マジムン 'majimun'	マヨネーズ 'mayonēzu'	マイブーム 'maibūmu'	マンガフ 'mangufu'	ワームン 'wāmun'	ワンヌ 'wannu'
High school A	3	—	1	1	—	—
High school B	21	—	—	—	—	—
High school C	1	1	—	—	1	1
Total	25	1	1	1	1	1

Table 22. The meaning of ‘rice ball’.

	‘monster’	‘ghost’	‘cooked rice’	‘to taste good’	‘my hobby’
High school A	—	1	—	—	—
High school B	11	3	1	1	1
High school C	—	—	—	—	—

of reference, it appears that they do not particularly stand out to them.

### 3.1.4 ‘Rice ball’

In one of the vocabulary modules of the joint survey, the word for ‘rice ball’ was recorded at a number of research sites as a related vocabulary item for ‘(cooked) rice’. We used a recording from Yonaha (‘ma<sup>2</sup>nu<sup>2</sup>’) in the documentation). How

Table 23. Examples of transcriptions for ‘rice ball’.

マイゲン	‘maigun’
マイブウ	‘maibwu’
まいぶ	‘maibu’
マイブーム	‘maibūmu’
マイフン	‘maifun’
マンガ	‘mangu’
まんぐ	‘mangu’
まうぐー	‘maugū’
マイム	‘maimu’
マンガフ	‘mangufu’
マゲン	‘magun’
マゲーウ	‘magūu’
マイム	‘maimu’
まいむ	‘maimu’
マイヌ	‘mainu’
マイザン	‘maivun’
マジムン	‘majimun’
まぐ	‘magu’
まんず	‘manzu’
まいみ	‘maimi’
マイヌー	‘mainū’
らいぐ	‘raigu’
まじむん	‘majimun’
マイムン	‘maimun’
まる	‘maru’

did the high school students react to these peculiar sounds? Almost all of the answers either were very different from how the recording actually sounded or seemed to have been attempts at somehow connecting the form with a given meaning. As can be seen in Tables 21–23 on the previous page, 25 students transcribed it as ‘マジムン’ (*majimun*, used to mean ‘ghost’ or ‘monster’ in the Miyako area), and there were even answers such as ‘マイブーム’ (*maibūmu* ‘my boom’, used for things one has recently taken a liking to) and ‘マヨネーズ’ (*mayonēzu* ‘mayonnaise’); it appears that, having trouble identifying the sounds used in the word, the students reasoned their way towards these answers. In any case, it is difficult to offer a more detailed analysis than to just state that the degree of comprehension was low for this word.

### 3.1.5 ‘A child is born.’

As above, we used a recording obtained in Yonaha as an example sentence in one of the vocabulary modules of the joint survey ([ffanudu mmari:]; the consonant in the particle *nu* sounds close to *-r-*). We included a sentence item in order to examine whether words and sentences differ in terms of, for example, difficulty in perception and degrees of semantic comprehension.

The answers can be broadly divided into two groups: 44 answers beginning with ‘ファ’ (*fa*) and 47 beginning with ‘パ’ (*pa*). It can be surmised that whichever they chose, the students in the Miyako area (School A, B) are familiar with both ‘ファ’ and ‘パ’ as dialect sounds and naturally chose one of these *kana* when they heard a sound that approximated it. In the two groups of answers beginning with ‘ファ’ and ‘パ’, the first part of the recording, corresponding to ‘a child’, is transcribed in a way that can be represented schematically as ‘FARD’ or ‘PARD’ in more than half of the answers (see Tables 24 and 25). Although the ‘D’ represents several different *kana* used by the students, such as ‘ド’ (*do*), ‘ドン’ (*don*), and ‘ドウ’ (*du*), these all appear to be the result of the accurate perception of the particle in the recording. Taking both groups together, then, it can be concluded that 52 students, or around 40%, perceived the first part of the sentence more or less accurately. It therefore seems reasonable to state that the phonetic perception of sentences is not necessarily more difficult than that of words. This conclusion, however, does not seem to hold for the students of Okinawa Island (School C), who gave many answers such as ‘はなづまり’ (*hana(d)zumari* ‘nasal congestion’), ‘たなのまわり’ (*tana no mawari* ‘around the shelf’), ‘バリどまり’ (*Bari-domari*, the meaning is not

Table 24. ‘A child is born’: answers of which the first part began with ファ (roughly divided into groups represented schematically by uppercase letters).

	FARD	FARN	FARNT	FAID	FAIB	FAIT	FAIND	FANG	FARG/K	FANZ	Total
High school A	11	1	1	—	1	—	—	—	4	1	19
High school B	9	—	—	—	—	—	—	—	—	—	9
High school C	4	—	—	2	—	7	2	1	—	—	16
Total	24	1	1	2	1	7	2	1	4	1	44

Table 25. ‘A child is born’: answers of which the first part began with パ

	PARD	PANG	PAND	PARG	PARK	PART	PAFUN	BARD	HAND	HARB	HANZ	Total
High school A	18	—	—	2	2	—	1	—	—	—	—	23
High school B	1	—	—	—	—	—	—	—	—	2	—	3
High school C	9	3	5	—	—	1	—	1	1	—	1	21
Total	28	3	5	2	2	1	1	1	1	2	1	47

clear), and even ‘ファイトマネー’ (*faito manē* ‘fight money’). This result is the inverse of what we saw above, which seems to suggest a difference in perception between words and sentences.

### 3.1.6 Survey 1 summary

The results discussed above can be summarized as follows:

- 1) Although we cannot easily draw conclusions from a survey on just five items, there clearly cannot be said to be a high level of comprehension ability regarding dialectal speech sounds in the younger generation on the Miyako Islands, even though it is claimed that its dialects have been preserved relatively well among those of the Ryukyu Islands. They appear to be unable to associate forms with meanings even for frequently used vocabulary items.
- 2) The proportion of students who attempted to transcribe sounds such as the friction noise was larger at the Okinawa Island high school than at the Miyakojima City high schools. One possibility to consider is that the fact that they did not understand the meanings of the words at all could be what caused them to try to capture them objectively as sounds. It may be that the stranger the sounds sounded to them, the more they felt the need to proactively distinguish between them in their transcriptions. As dialect use is still relatively prevalent among the middle-aged and elderly generations in Miyakojima City, it may be that the high school students there are at least familiar with the sounds of these dialects, so that they have an awareness of them as a ‘peculiar kind of pronunciation’ even as they are unable to understand them or reproduce them themselves; because of this, they might not perceive them as unusual sounds, reinterpreting them in their own way along the lines of Standard Japanese, instead.
- 3) On the Miyako Islands, there is a special system for transcribing unusual sounds, *Miyako-gana*, which is widely used locally for compiling dictionaries, the lyrics of traditional songs, publicity campaigns using dialect, and so on. The only apparent attempts at using *Miyako-gana*, however, were two occurrences of ‘コ<sup>3</sup>’; it can thus clearly hardly be said to be in general use among the younger generation. The students did, however, devise a variety of their own transcriptions. The use of small kana, not only for vowels and geminates, but also for ‘ス’ (*su*), ‘ン’ (*n*), and the like, seems to be one way in which they tried to reproduce their impressions of the sounds in question.
- 4) Contrary to our expectation that sentences would be more difficult to perceive accurately than words, it appears to be easier to obtain a response to a complete message in the form of a sentence than to an isolated word. It is possible that the sentence was perceived as being easier to understand the gist of and as containing more material on which to base one’s judgment. This can only be said, however, of the students at the Miyakojima City high schools; in contrast to them, the students at the Okinawa Island high school, who did respond to the ‘peculiar sounds’ in the words, had trouble dealing with the sentence. The fact that the students at the Miyakojima City high schools are familiar with the dialect speech of the older generation appears to be a factor here, but it could also suggest a difference in perception between words and sentences.

## 3.2 Survey 2: speech perception and semantic comprehension

With seventeen students participating, the sample size in Survey 2 was small, so a quantitative analysis is not possible; it is possible, on the other hand, to closely examine how each of the students dealt with the data. In the following, we will take this perspective in considering a number of cases.

### 3.2.1 'Head', 'the east', and 'lightning': responses to sounds corresponding to \*ri

Table 26. 'Head': all seventeen students' transcriptions for all sites.

Site	Kugai	Kuninaka	Irabu
Form	k <sup>h</sup> anamazi	kanamaɭ	k <sup>h</sup> anamaɲ
1	カナマズ ( <i>kanamazu</i> )	カナアマル ( <i>kanaamaru</i> )	(no answer)
2	カナマヅ ( <i>kanama(d)zu</i> )	カナマル ( <i>kanamaru</i> )	タナモエ ( <i>tanamoe</i> )
3	カナマズ ( <i>kanamazu</i> )	カナマル ( <i>kanamaru</i> )	カナマル ( <i>kanamaru</i> )
4	カナマズ ( <i>kanamazu</i> )	カナマル ( <i>kanamaru</i> )	カナマル ( <i>kanamaru</i> )
5	カナマズ ( <i>kanamazu</i> )	カナーマル ( <i>kanamaru</i> )	タナマス ( <i>tanamasu</i> )
6	カナマズ ( <i>kanamazu</i> )	カナマル ( <i>kanamaru</i> )	カナムル ( <i>kanamuru</i> )
7	カナマズル ( <i>kanamazuru</i> )	カナアマル ( <i>kanaamaru</i> )	カナンマ ( <i>kananma</i> )
8	カナマズ ( <i>kanamazu</i> )	カナマル ( <i>kanamaru</i> )	カナモエ ( <i>kanamoe</i> )
9	カナマツ ( <i>kanamatsu</i> )	カナーマル ( <i>kanamaru</i> )	カナモア ( <i>kanamoa</i> )
10	カナマズ ( <i>kanamazu</i> )	カナーマル ( <i>kanamaru</i> )	カナム ( <i>kanamu</i> )
11	カナマズ ( <i>kanamazu</i> )	カナマズ ( <i>kanamazu</i> )	タナグエ ( <i>tanagwe</i> )
12	カナンマズイリ ( <i>kananmazuiru</i> )	カナアマル ( <i>kanaamaru</i> )	カナンムウ ( <i>kananmuu</i> )
13	カナマズ ( <i>kanamazu</i> )	カナマル ( <i>kanamaru</i> )	カナム ( <i>kanamu</i> )
14	カナマズ ( <i>kanamazu</i> )	カナマズ ( <i>kanamazu</i> )	カナマズ ( <i>kanamazu</i> )
15	カナマツ ( <i>kanamatsu</i> )	カナマズ ( <i>kanamazu</i> )	(no answer)
16	カナマズ ( <i>kanamazu</i> )	カナマル ( <i>kanamaru</i> )	カナムウ ( <i>kanamuu</i> )
17	カナマアズ ( <i>kanamaazu</i> )	カナーマル ( <i>kanamaru</i> )	タナム ( <i>tanamu</i> )

First, we will consider words containing sounds that correspond to \*ri. All the data that was obtained in response to recordings of words for 'head' (surmised to derive from \*kanamari based on sound correspondences) are given in Table 26. All of the students transcribed the recordings from Kugai and Kuninaka quite accurately, almost all of their transcriptions matching them up to 'カナマ' (*kanama*). In the case of Irabu, on the other hand, there was on the whole quite a lot of variety, including two students who did not give an answer. When focusing on the end of the word, we can clearly distinguish between three groups of answers. As regards the recording from Kugai, the students can be considered to have recognized the friction sound, seeing how they all used either a fricative such as 'ズ' (*zu*) or 'ス' (*su*) or one of the affricates 'ツ' (*tsu*) and 'ヅ' (*(d)zu*). As for Kuninaka, it is clear that the students were aware of the consonant, as many as fourteen students using either a normal-sized or a small 'ル' (*ru*), while only three students used 'ズ'. Answers making distinctions such as 'Kugai: "カナマズル" (*kanamazuru*)/Kuninaka: "カナマル" (*kanamaru*)' can be seen as examples of this. When we look at the correlations between the answers and the three recording sites, it is clear that a majority of the students accurately perceived the contrast between the Kugai and Kuninaka recordings (see Table 27 on the next page). As we had arranged the words to avoid instances of the same word appearing in succession, students could not directly compare these recordings while listening. Compared to the recording from Irabu, also used in Survey 1, those from Kugai and Kuninaka appear to have been relatively easy to perceive accurately for the high school

Table 27. 'Head': how the end of the word was transcribed.

Site	Kugai	Kuninaka	Irabu
Form	k <sup>h</sup> anamaz̥i	kanamaɭ	k <sup>h</sup> anamaɯ
ズ̥ (zu)	10	3	1
ズ̥̄ (zu)	1	—	—
ヅ̥ ((d)zu)	1	—	—
ツ (tsu)	2	—	—
ス (su)	—	—	1
ズル (zuru) / ズイリ (zuirī)	2	—	—
ル (ru)	—	13	2
ル (ru)	—	1	1
エ (e)/ エ (e)	—	—	3
ウ (u)	—	—	2
ア (a)	—	—	1
∅	—	—	4
Total	16	17	15

Table 28. 'Head': the correlations among the three sites

Kugai	Kuninaka	Irabu		
-Z	-L	-I	4	12
-Z	-L	-L	3	
-Z	-L	-Z	1	
-Z	-L	-∅	3	
-Z	-L	(no answer)	1	
-ZL	-L	-I	2	3
-ZL	-L	-∅	1	
-Z	-L	-Z	1	3
-Z	-L	(no answer)	1	
-Z	-L	-I	1	

(roughly divided into groups represented schematic-ally by uppercase letters; 'Z' signifies a friction noise, 'L' a syllabic l, and 'I' a vowel).

students; almost all of them made a distinction between them. As regards that from Irabu, on the other hand, transcription appears to have been difficult for the students. In addition to the two students mentioned above who did not give an answer, there were also students who transcribed it as 'カナマ', stopping after the first three morae; it is likely that they stopped writing halfway through, unable to decide how to transcribe the end of the word.

Let us consider this from the viewpoint of the correlations between the answers and the three recording sites again. Among the twelve students who made a z/l-distinction between the Kugai and Kuninaka recordings, four students used a vowel and three students used 'ル' for the Irabu recording; of the five remaining students, one used 'ズ', while the rest did not transcribe the end of the word. When compared to the recording from Karimata mentioned above ([kanamaɯ ~ k<sup>h</sup>anamaɯ] according to the documentation; additionally, aha is used as a synonym), the pronunciation in Irabu does sound like the tongue approaches the alveolar ridge quite closely. It would seem that high school students who do not know what the word means would have quite a hard time transcribing it. Furthermore, only two students gave an answer regarding the meaning of the word; one of them only gave the correct answer for the recording from Kuninaka, being unable to give an accurate meaning for the other two sites.

All the data for 'lightning' are given in Table 29 on the next page. When focusing on the end of the word, we see that all students used 'ズ' for the recording from Kugai, with the exception of one student that used 'ヅ'. For the recording from Bora, on the other hand, only one student used 'ズ'; among the rest, answers were diverse, eleven students using 'ル', two using 'ドウ' or 'ヅ', and two using 'ウ' (u), for example. There is a marked friction noise in both the Kugai and the Bora sound recordings, but as is also clear from the different transcriptions used by the researchers in the documentation, it appears that it is weaker in that from Bora, and that the tongue does not approach the alveolar ridge as closely and for as long as in that from Kugai. It would seem reasonable to view the fact that the high school students were divided in how they transcribed the sound in the recording from Bora while they uniformly used 'ズ' for the clear friction sound in the Kugai recording as resulting from their reactions to this subtle difference. An overview of the kinds of sounds the students used for the final part of the word is given in Table 30 on the next page. When these

Table 29. ‘Lightning’: all seventeen students’ transcriptions.

Site	Kugai	Bora
Form	m:napskazu	nnapska <sup>ŋ</sup>
1	ンナプカズ ( <i>nnapukazu</i> )	ンナピカル ( <i>nnapikaru</i> )
2	ンナツカズ ( <i>nnatsukazu</i> )	ンナツカル ( <i>nnatsukaru</i> )
3	ンナプスカズ ( <i>nnapusukazu</i> )	ンナピカル ( <i>nnapikaru</i> )
4	ンナプスカズ ( <i>nnapusukazu</i> )	ンナップスカドウ ( <i>nnappusukadu</i> )
5	ンナプスカズ ( <i>nnapusukazu</i> )	ンア ピィカル ( <i>n'a piikaru</i> )
6	ンナプスカズ ( <i>nnapusukazu</i> )	ナプスカル ( <i>napusukaru</i> )
7	ンナプスカズ ( <i>nnapusukazu</i> )	ンナプカル ( <i>nnapukaru</i> )
8	ンナピカズ ( <i>nnapikazu</i> )	ンナピカ ( <i>nnapika</i> )
9	ンナプツカズ ( <i>nnaputsukazu</i> )	ンナピカウ ( <i>nnapikau</i> )
10	ンナプスカズ ( <i>nnapusukazu</i> )	ンナクスカル ( <i>nnakusukaru</i> )
11	ンナプツカズ ( <i>nnaputsukazu</i> )	ンナプカズ ( <i>nnapukazu</i> )
12	ンナプスカズ ( <i>nnapusukazu</i> )	ンナアピカル ( <i>nnaapikaru</i> )
13	ンナプスカズ ( <i>nnapusukazu</i> )	ンプスカウ ( <i>npusukau</i> )
14	ンナツカズ ( <i>nnatsukazu</i> )	ンナプカル ( <i>nnapukaru</i> )
15	ンナピカズ ( <i>nnapika(d)zu</i> )	ンナピカヅ ( <i>nnapika(d)zu</i> )
16	ンナプスカズ ( <i>nnapusukazu</i> )	ナプスカル ( <i>napusukaru</i> )
17	ンナピカズ ( <i>nnapikazu</i> )	ンナムピィカアル ( <i>nnamupiikaaru</i> )

Table 30. ‘Lightning’: the correlations between the end of the word and the recording site

Kugai		Bora	
Z	17	L	11
		Z	2
		D	1
		U	2
		Ø	1

(roughly divided into groups represented schematically by uppercase letters).

Table 31. ‘Lightning’, ‘the east’, and ‘head’: responses to the Kugai sound corresponding to \*ri. Table 32. ‘Liver’: all seventeen students’ transcriptions for all sites.

‘lightning’	‘the east’	‘head’	
Z	Z	Z	10
Z	ZN	Z	2
Z	Z	ZL	2
Z	Z	C	2
Z	SN	Z	1

sounds are classified broadly, we see that only two students used a vowel for the recording from Bora with its weak friction noise, the majority using a consonant.

As there was also an instance of the word for ‘the east’ among the recordings from Kugai, an overview of how each student reacted to different recordings of this sound from Kugai is given in Table 31. When ‘ズ’ and ‘ヅ’ are taken together, it becomes clear that as many as ten students recognized the friction sound in all three words, while there were no students who did not recognize

it in any of them. The friction noise in the recordings from Kugai seems to be perceived quite consistently, and it appears to be recognized as involving an independent consonant [z], which matches the documentation by the researchers.

Furthermore, the *Miyako-gana* ‘ズ’ was used twice, as was ‘ク<sup>o</sup>’, which appears to be modeled on *Miyako-gana*. The sound represented by the latter is usually written as ‘クス’ (*kusu*); this should be viewed as an indication of how there is no general awareness of *Miyako-gana* among the younger generation, as was also argued in the summary of Survey 1.

### 3.2.2 ‘Liver’, ‘fog’, ‘the moon’, and ‘breath’: responses to sounds corresponding to \*ki

We will now consider four words containing sounds corresponding to \*ki, representing cases of voiceless consonants followed by central vowels. In the case of ‘liver’, for which recordings from three sites were chosen, many students used ‘ク’ (*ku*) followed by ‘ス’ or ‘ス’ (*su*) for the recording from Kugai; if we include answers beginning with ‘プ’ (*pu*), ten students can be considered to have perceived a word-initial consonant followed by some kind of friction noise (see Table 32 on the next page). In the documentation of the joint survey, the transcription of the recording from Kugai has a central vowel preceded by both a voiceless and a voiced friction noise, which would seem to be intended



Table 32. 'Liver': all seventeen students' transcriptions for all sites.

Site	Kugai	Kuninaka	Irabu
Form	k <sup>sz</sup> i <sup>u</sup> mu	tsimu	tsɿmu
1	クスム ( <i>kusumu</i> )	ツム ( <i>tsumu</i> )	セム ( <i>semu</i> )
2	ツヌ ( <i>tsunu</i> )	ツム ( <i>tsumu</i> )	スム ( <i>sumu</i> )
3	プスム ( <i>pusumu</i> )	ツム ( <i>tsumu</i> )	スム ( <i>sumu</i> )
4	プスム ( <i>pusumu</i> )	ツン ( <i>tsun</i> )	セム ( <i>semu</i> )
5	クズ ( <i>kuzu</i> )	ツム ( <i>tsumu</i> )	セム ( <i>semu</i> )
6	ツクニ ( <i>tsukuni</i> )	ツン ( <i>tsun</i> )	セム ( <i>semu</i> )
7	クウシニ ( <i>kwushini</i> )	ツウム ( <i>tsuwumu</i> )	スイミ ( <i>simi</i> )
8	ティニ ( <i>tini</i> )	ツムウ ( <i>tsumuu</i> )	シイミ ( <i>shiimi</i> )
9	クスリ ( <i>kusuri</i> )	ツエム ( <i>tsemu</i> )	セム ( <i>semu</i> )
10	クスヌツ ( <i>kusunutsu</i> )	ツム ( <i>tsumu</i> )	セム ( <i>semu</i> )
11	クスヌ ( <i>kusunu</i> )	ツム ( <i>tsumu</i> )	シム ( <i>shimu</i> )
12	クンミ ( <i>kunmi</i> )	ツム ( <i>tsumu</i> )	スイミ ( <i>simi</i> )
13	クスムツ ( <i>kusumutsu</i> )	ツム ( <i>tsumu</i> )	ツイミ ( <i>tsimi</i> )
14	ツニ ( <i>tsuni</i> )	ツム ( <i>tsumu</i> )	セム ( <i>semu</i> )
15	クム ( <i>kumu</i> )	ツム ( <i>tsumu</i> )	シム ( <i>shimu</i> )
16	クスミ ( <i>kusumi</i> )	ツム ( <i>tsumu</i> )	セヌ ( <i>senu</i> )
17	クム ( <i>kumu</i> )	ツム ( <i>tsumu</i> )	セム ( <i>semu</i> )

Table 33. 'Liver': the correlations among the three sites.

Site	Kugai	Kuninaka	Irabu	Total
a	KS	C	S	7
b	KS	C	C	1
c	K	C	S	3
d	C	C	S	2
e	PS	C	S	2
f	CK	C	S	1
g	T	C	S	1
				17

Table 34. 'Fog': all seventeen students' transcriptions.

Site	Kugai	Bora
Form	ksī	k <sup>s</sup> ɿ:
1	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )
2	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )
3	プス ( <i>pusu</i> )	クス ( <i>kusu</i> )
4	プス ( <i>pusu</i> )	クフ ( <i>kufu</i> )
5	プス ( <i>pusu</i> )	クスウ ( <i>kuswu</i> )
6	プス ( <i>pusu</i> )	クス ( <i>kusu</i> )
7	クス ( <i>kusu</i> )	クウス ( <i>kwusu</i> )
8	クウス ( <i>kwusu</i> )	クズツ ( <i>kuzutsu</i> )
9	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )
10	クス ( <i>kusu</i> )	クスウ ( <i>kuswu</i> )
11	クス ( <i>kusu</i> )	グス ( <i>gusu</i> )
12	クスウ ( <i>kuswu</i> )	クスウ ( <i>kuswu</i> )
13	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )
14	クス ( <i>kusu</i> )	クスウ ( <i>kuswu</i> )
15	クス ( <i>kusu</i> )	クウ ( <i>kwu</i> )
16	プス ( <i>pusu</i> )	クス ( <i>kusu</i> )
17	プス ( <i>pusu</i> )	クス ( <i>kusu</i> )

Table 35. 'Fog': the correlations between the two sites (lowercase 'i' indicates an arbitrary vowel).

Sites	Kugai	Bora	Total
a	KS	KS	7
b	KS	Ki	1
c	KS	KiS	1
d	PS	KS	4
e	PS	KZ	2
f	PS	KF	1
g	KiS	KZ	1
			17

to indicate the strength and length of the friction sound; the high school students seem to have responded similarly to this strong friction sound. In their transcriptions of both the Irabu and the Kuninaka recording, too, the researchers give an affricate followed by a central vowel. They were transcribed by different researchers, so the transcriptions differ as well, but when the sound recordings are compared, the affricate appears to be stronger in the recording from Kuninaka, while the plosive portion in that from Irabu seems a little weaker. Moreover, the beginning of the word has high pitch in the recording from Kuninaka ([tsi]mu), while the end of the word has high pitch in the recording from Irabu (tsɿ[mu]). The high school students overwhelmingly used kana including an s-sound, such as 'サ' (*sa*), 'セ' (*se*), and 'シ' (*shi*), for the recording from Irabu, while only one of them used an affricate; it is likely that it is not only because of the weakness of the plosive portion, but also because of the pitch accent that they had difficulty perceiving the first syllable. An overview of these correlations is given in Table 33.

As is the case with 'liver', the word for 'fog' also begins with a sound corresponding to \**ki*<sup>6</sup>; we used recordings from the two sites of Kugai and Bora. The word is pronounced with a marked friction noise in both recordings, but while the researchers of the joint survey have transcribed the recording from Kugai using an independent consonant [s],

6 Although the forms *k<sup>h</sup>iri* and *kç<sup>h</sup>iri* were reported for Irabu and Uechi, respectively, in the joint survey, we have considered the forms reported for the other sites, including Kugai and Bora, as corresponding to a form in which the second half of \**kiri* was lost.

Table 36. 'Breath':  
all seventeen students' transcriptions.

Site	Kugai	Kurima
Form	ik <sup>h</sup> i	i <sup>h</sup> sī
1	イクズ ( <i>ikuzu</i> )	イス ( <i>isu</i> )
2	イツ ( <i>itsu</i> )	イス ( <i>isu</i> )
3	イップウ ( <i>itsupwu</i> )	イス ( <i>isu</i> )
4	イフ ( <i>ifu</i> )	イス ( <i>isu</i> )
5	イク ( <i>iku</i> )	イス ( <i>isu</i> )
6	イプク ( <i>ipuku</i> )	イス ( <i>isu</i> )
7	イク ( <i>iku</i> )	イス ( <i>isu</i> )
8	イクウ ( <i>ikwu</i> )	イス ( <i>isu</i> )
9	イク ( <i>iku</i> )	イス ( <i>isu</i> )
10	イクウ ( <i>ikwu</i> )	イス ( <i>isu</i> )
11	イク ( <i>iku</i> )	イス ( <i>isu</i> )
12	イユク ( <i>iyuku</i> )	インス ( <i>insu</i> )
13	イクズ ( <i>ikuzu</i> )	イス ( <i>isu</i> )
14	イク ( <i>iku</i> )	イス ( <i>isu</i> )
15	ユツウ ( <i>yutswu</i> )	リス ( <i>risu</i> )
16	イプウ ( <i>ipuu</i> )	イス ( <i>isu</i> )
17	イクウン ( <i>ikwun</i> )	イス ( <i>isu</i> )

Table 37. 'The moon':  
all seventeen students' transcriptions.

Site	Kugai
Form	tskssu
1	ツンクス ( <i>tsunkusu</i> )
2	ツクス ( <i>tsukusu</i> )
3	ツクス ( <i>tsukusu</i> )
4	ツクスウ ( <i>tsukuswu</i> )
5	ツチャスウ ( <i>tsutyaswu</i> )
6	ツクス ( <i>tsukusu</i> )
7	ツウクス ( <i>tsuwukusu</i> )
8	ツウクスウ ( <i>tsuwukuswu</i> )
9	ツクス ( <i>tsukusu</i> )
10	ツクツクスウ ( <i>tsukutsukuswu</i> )
11	(no answer)
12	ツクスウ ( <i>tsukuswu</i> )
13	ツクスオ ( <i>tsukuswo</i> )
14	ツクス ( <i>tsukusu</i> )
15	ツウクスウ ( <i>tsuwukuswu</i> )
16	ツツス ( <i>tsutsusu</i> )
17	ツクス ( <i>tsukusu</i> )

Table 38. How each of the seventeen students transcribed the Kugai sounds corresponding to \*ki.

	'liver'	'fog'	'the moon'	'breath'
	Word-initial		Word-final	
1	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	クズ ( <i>kuzu</i> )
2	ツ ( <i>tsu</i> )	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	ツ ( <i>tsu</i> )
3	プス ( <i>pusu</i> )	プス ( <i>pusu</i> )	クス ( <i>kusu</i> )	ツプウ ( <i>tsupwu</i> )
4	プス ( <i>pusu</i> )	プス ( <i>pusu</i> )	クスウ ( <i>kuswu</i> )	フ ( <i>fu</i> )
5	ク <sup>o</sup> ( <i>ku</i> )	プス ( <i>pusu</i> )	スウ ( <i>swu</i> )	ク ( <i>ku</i> )
6	ツク ( <i>tsuku</i> )	プス ( <i>pusu</i> )	クスツ ( <i>kusutsu</i> )	プク ( <i>puku</i> )
7	クウ ( <i>kwu</i> )	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	ク ( <i>ku</i> )
8	ティ ( <i>ti</i> )	クウス ( <i>kwusu</i> )	クスウ ( <i>kuswu</i> )	クウ ( <i>kwu</i> )
9	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	ク ( <i>ku</i> )
10	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	クスウ ( <i>kuswu</i> )	クウ ( <i>kwu</i> )
11	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	(no answer)	ク ( <i>ku</i> )
12	ク ( <i>ku</i> )	クスウ ( <i>kuswu</i> )	クスウ ( <i>kuswu</i> )	ユク ( <i>yuku</i> )
13	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	クスオ ( <i>kuswo</i> )	クズ ( <i>kuzu</i> )
14	ツ ( <i>tsu</i> )	クス ( <i>kusu</i> )	クス ( <i>kusu</i> )	ク ( <i>ku</i> )
15	ク ( <i>ku</i> )	プス ( <i>pusu</i> )	クスウ ( <i>kuswu</i> )	ツウ ( <i>tsuwu</i> )
16	クス ( <i>kusu</i> )	プス ( <i>pusu</i> )	ツス ( <i>tsusu</i> )	プウ ( <i>puu</i> )
17	ク ( <i>ku</i> )	プス ( <i>pusu</i> )	クス ( <i>kusu</i> )	クウン ( <i>kwun</i> )

Table 39. Kugai sounds corresponding to \*ki: whether the friction noise was transcribed

	'liver'	'fog'	'the moon'	'breath'
Yes	13	17	16	6
No	4	0	1	11

(affricates are also regarded as containing fricativity).

a vowel accompanied by a friction noise is used for that from Bora. Interestingly, nearly all of the high school students, too, used 'クス' (*kusu*) or something similar for the recording from Kugai; if we include answers beginning with 'プ' (*pu*), all answers can be considered to be of the same kind. As the students were asked to use kana, it is unclear how they perceived the vowel following the s, but compared to the recording from Bora, it is likely that their attention was aimed mostly at the strength of the friction sound. While there was only one student who expressly wrote a small 'ウ' (*u*) at the end of the word for the Kugai recording, the number of instances of *kana* such as 'ウ' and 'ツ' (*tsu*) is higher for the recording from Bora, and there were also transcriptions such as 'ス<sup>o</sup>ウ'<sup>7</sup>. Possibly, these students, while hearing a friction

7 A small 'ウ' is frequently used in Miyako to indicate rounded vowels in contrast to central vowels (e.g. 'がんずう' (*ganzuu* 'healthy')). In

noise, did get the impression that the word did not simply end after the consonant. This is all the more interesting when considered in the connection with the joint survey documentation.

Next, we will consider the words for ‘the moon’ and ‘breath’, in which the sounds corresponding to *\*ki* appear in the second syllable. Although we have chosen recordings from the two sites of Kugai and Kurima for ‘breath’, we have chosen only a recording from Kugai for ‘the moon’.

There are recordings of two informants from Kurima for ‘breath’; of the two, we have used the one with the weaker plosive (see Table 36 on the previous page). The high school students did not perceive the plosive portion of this pronunciation, all of them using ‘ス’ in their answers.

The reason we have used so many recordings from Kugai in this survey is that we were especially interested in how friction noises would be perceived. An overview of the transcriptions given for the recordings of the four words from Kugai is given in Table 38 on the previous page. The use of ‘ス’, ‘ツ’, and the like seems to be a reflection of the strong friction noises in the recordings from Kugai, which is especially clear for ‘fog’ and ‘the moon’. While the perception of these sounds appears to be influenced by aspects such as their position in the word and the pitch accent, and the sample size is too small to draw any conclusions, it is likely that the high school students perceived them as an independent consonant. We hope to be able to pursue this point further, also in light of the correlation with the documentation by the researchers.

### 3.2.3 ‘Person’, ‘daytime’, ‘lightning’: responses to sounds corresponding to *\*hi*

Next, we will consider sounds that correspond to *\*hi*. For the word for ‘person’, we used recordings from the two sites of Kugai and Irabu (see Table 40). Although the Irabu and Kugai recordings are transcribed the same way in the documentation of the joint survey, the friction noise in that from Kugai sounds much sharper when the sound recordings are compared. When ‘ピ’ (*pi*) and ‘プ’ (*pu*) are taken together, the friction noise that follows *p*- was reflected well in the high school students’ transcriptions of the Kugai recording; there is only a single exception, in which ‘ツ’ (*tsu*) was used. Either ‘トウ’ (*tu*) or ‘ト’ (*to*) was used for the second half of the word in the majority of the answers. For the recording from Irabu, on the other hand, answers were more diverse: seven students used ‘ツ’ for the first half of the word, eight students used ‘ピ’, ‘プ’, and the like, and one student used ‘ト’. Moreover, there was a variety of transcriptions for the second half of the word, as well: in addition to the ten students who used either ‘ト’ or ‘トウ’, some students used *kana* such as ‘テ’ (*te*) or ‘タ’ (*ta*). Incidentally, when looking at the transcriptions of the second half of the word, a small ‘ウ’ (*u*) was added at the case of a central vowel, ‘ス’, ‘ズ’ (*zu*), and the like are used without ‘ウ’.

Table 40. ‘Person’:all seventeen students’ transcriptions.

Site	Kugai	Irabu
Form	pstu	pstu
1	プストウ ( <i>pusutu</i> )	プスト ( <i>pusutu</i> )
2	ピツ ( <i>pitsu</i> )	ピツ ( <i>pitsu</i> )
3	ピストウ ( <i>pisutu</i> )	プスタ ( <i>pusuta</i> )
4	プストウ ( <i>pusutu</i> )	プストウ ( <i>pusutu</i> )
5	ピストウ ( <i>pisutu</i> )	ピトウ ( <i>pitu</i> )
6	プスト ( <i>pusuto</i> )	ツトウ ( <i>tsutu</i> )
7	プストウ ( <i>pusutu</i> )	トウク ( <i>tuku</i> )
8	ピストウ ( <i>pisutu</i> )	ツトウ ( <i>tsutu</i> )
9	プストウ ( <i>pusutu</i> )	ツテ ( <i>tsute</i> )
10	ピストウ ( <i>pisutu</i> )	ピストウ ( <i>pisutu</i> )
11	ピトウ ( <i>pitu</i> )	(no answer)
12	プストウ ( <i>pusutu</i> )	ピュストウ ( <i>pyusutu</i> )
13	プスト ( <i>pusuto</i> )	プスト ( <i>pusuto</i> )
14	プストウ ( <i>pusutu</i> )	ツトウ ( <i>tsutu</i> )
15	ピトウ ( <i>pitu</i> )	(no answer)
16	ピウス ( <i>piusu</i> )	ツタ ( <i>tsuta</i> )
17	ツウトツ ( <i>tsuwutots</i> )	ツトウ ( <i>tsutu</i> )

Table 41. ‘Person’: transcriptions of the beginning of the word.

	ピス ( <i>pisu</i> )	プス ( <i>pusu</i> )	ピツ ( <i>pitsu</i> )	ツ ( <i>tsu</i> )	No answer
Kugai	5	8	1	1	0
Irabu	2	4	1	6	2

Table 43. Whether the friction noises in the Kugai sounds corresponding to \*hi were transcribed.

	‘person’	‘daytime’	‘elderly person’	‘lightning’	No. of answers
a	○	○	○	○	7
b	○	○	○	×	5
c	×	○	×	○	2
d	○	○	×	×	1
e	×	○	○	×	1
f	×	○	×	×	1

Table 42. How each of the seventeen students transcribed the Kugai sounds corresponding to \*hi.

Form	Word-initial		Word-final	
	‘person’	‘daytime’	‘elderly person’	‘lightning’
	pstu	psima	uipstu	m:napskaz
1	プストウ ( <i>pusutu</i> )	プスマ ( <i>pusuma</i> )	ウミプトウス ( <i>umiputusu</i> )	ンナプカズ ( <i>nnapukazu</i> )
2	ピツ ( <i>pitsu</i> )	プスマ ( <i>pusuma</i> )	ウイピトウ ( <i>uipitu</i> )	ンナツカズ ( <i>nnatsukazu</i> )
3	ピストウ ( <i>pisutu</i> )	プスマ ( <i>pusuma</i> )	ウリピスト ( <i>uripisuto</i> )	ンナプスカズ ( <i>nnapuskazu</i> )
4	プストウ ( <i>pusutu</i> )	プスマ ( <i>pusuma</i> )	ウィップストウ ( <i>wippisutu</i> )	ンナプスカズ ( <i>nnapuskazu</i> )
5	ピストウ ( <i>pisutu</i> )	プスマ ( <i>pusuma</i> )	ウイプストウ ( <i>uipusutu</i> )	ンナプウカズ ( <i>nnapwukazu</i> )
6	プスト ( <i>pusuto</i> )	プスマ ( <i>pusuma</i> )	ウィプスト ( <i>wipusuto</i> )	ンナプスカズ ( <i>nnapuskazu</i> )
7	プストウ ( <i>pusutu</i> )	プスマ ( <i>pusuma</i> )	ウミプストウ ( <i>umipusutu</i> )	ンナプスカズ ( <i>nnapuskazu</i> )
8	ピストウ ( <i>pisutu</i> )	ピスマ ( <i>pisima</i> )	ウイピストウ ( <i>wipisutu</i> )	ンナピカズ ( <i>nnapikazu</i> )
9	プストウ ( <i>pusutu</i> )	プスマ ( <i>pusuma</i> )	ウイプスト ( <i>wipusuto</i> )	ンナプツカズ ( <i>nnaputsukazu</i> )
10	ピストウ ( <i>pisutu</i> )	プスマ ( <i>pusuma</i> )	ウイピストウ ( <i>wipisutu</i> )	ンナス プカアズ ( <i>nnapukaazu</i> )
11	ピトウ ( <i>pitu</i> )	プスマ ( <i>pusuma</i> )	ウミピトユ ( <i>umipityu</i> )	ンナプツカア ( <i>nnaputsukaazu</i> )
12	プストウ ( <i>pusutu</i> )	プスマ ( <i>pusuma</i> )	ウイピストウ ( <i>uipisutu</i> )	ンナプウカズ ( <i>nnapwukazu</i> )
13	プスト ( <i>pusuto</i> )	プスマ ( <i>pusuma</i> )	ウミプスト ( <i>umipusuto</i> )	ンナプスカズ ( <i>nnapuskazu</i> )
14	プストウ ( <i>pusutu</i> )	プスマ ( <i>pusuma</i> )	ウイプウト ( <i>uipwuto</i> )	ウンナツカズ ( <i>unnatsukazu</i> )
15	ピトウ ( <i>pitu</i> )	プスマ ( <i>pusuma</i> )	ウイピトウ ( <i>uipitu</i> )	ンナピカヅ ( <i>nnapika(d)zu</i> )
16	ピウス ( <i>piusu</i> )	プスマ ( <i>pusuma</i> )	ウグイクス ( <i>ugwikusu</i> )	ンナプクスカズ ( <i>nnapukusukazu</i> )
17	ツウトツ ( <i>tsuwutotsu</i> )	ピスマ ( <i>pisuma</i> )	ウウィップスト ( <i>uwippusuto</i> )	ンナッピカズ ( <i>nnapikazu</i> )

the end by twelve out of the seventeen students for the recording from Kugai, as well as by eight students for that from Irabu, regardless of the diversity in transcriptions for the latter; it can be surmised from this that the students perceived the rounded vowel u clearly.

Other words containing sounds that correspond to \*hi are the words for ‘daytime’, ‘elderly person’, and ‘lightning’. An overview of the transcriptions given for the recordings from Kugai, in which the friction noises are particularly marked, is given in Table 42. Close to half of the students gave transcriptions containing what appear to be reflections of the friction noises for the recordings of all four words (seven students; see ‘a’ in Table 43). Although the variety in ‘c’ and below seems to be idiosyncratic, the fact that there were five students

among whose transcriptions that of the word for ‘lightning’ was the only one to lack a reflection of the friction noise, as seen in ‘b’, may be due to some kind of difference in its phonetic environment.

### 3.2.4 Consonant perception

In the previous section, the initial syllabic m given in the joint survey documentation for the word for ‘lightning’ was transcribed using ‘ン’ (*n*) by all the students. An overview of the students’ transcriptions of recordings of words for ‘everyone’ (partly ‘all together’) from the three sites we selected are given in Table 44 on the next page. ‘ム’ (*mu*)

Table 44. 'Everyone': all seventeen students' transcriptions.

Site	Kugai	Irabu	Miyaguni
	'everyone'	'everyone'	'all together'
Form	m:na	m:na	m <sup>h</sup> naçi
1	ウムナ ( <i>umunna</i> )	ンナ ( <i>nna</i> )	プンナシ ( <i>punnashi</i> )
2	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ピンナシ ( <i>pinnashi</i> )
3	ンツナ ( <i>ntsuna</i> )	ンナ ( <i>nna</i> )	ピツナシ ( <i>pitsunashi</i> )
4	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	インナシイ ( <i>innashii</i> )
5	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
6	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
7	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ピンナシ ( <i>pinnashi</i> )
8	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
9	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
10	ンナツ ( <i>nnatsu</i> )	ンナア ( <i>nnaa</i> )	ンナシ ( <i>nnashi</i> )
11	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシイ ( <i>nnashii</i> )
12	ンナツ ( <i>nnatsu</i> )	ンナア ( <i>nnaa</i> )	ンナシユ ( <i>nnashu</i> )
13	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
14	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
15	ンナ ( <i>nna</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )
16	ンナア ( <i>nnaa</i> )	ンナ ( <i>nna</i> )	インナシ ( <i>innashi</i> )
17	ンナシ ( <i>nnashi</i> )	ンナ ( <i>nna</i> )	ンナシ ( <i>nnashi</i> )

Table 45. 'Sea': all seventeen students' transcriptions.

Site	Bora
Form	im
1	イン ( <i>in</i> )
2	イン ( <i>in</i> )
3	イン ( <i>in</i> )
4	イヌ ( <i>inu</i> )
5	イム ( <i>imu</i> )
6	イン ( <i>in</i> )
7	イン ( <i>in</i> )
8	イン ( <i>in</i> )
9	イン ( <i>in</i> )
10	イツ ( <i>itsu</i> )
11	イン ( <i>in</i> )
12	ンユ ( <i>n'yu</i> )
13	イム ( <i>imu</i> )
14	イン ( <i>in</i> )
15	ビユ ( <i>byu</i> )
16	イン ( <i>in</i> )
17	イン ( <i>in</i> )

was only used in one transcription of the recording of the word for 'everyone' from Kugai; 'ン' was used in all the other answers for the two sites of Irabu and Kugai. In the case of the recording from Miyaguni, there is an audible interruption in the form of a glottal closure; it is difficult to identify any particular reaction to this, but compared to the transcriptions of the Irabu and Kugai recordings, the students can be seen to have come up with a variety of ways to describe the first part of the word. The fact that four students began their answers with *p*- may indicate that they perceived the bilabial *m* as a voiceless stop due to a reinforced articulation caused by the interruption in the form of the glottal closure following it. Answers such as 'ピツナシ' (*piʔnashi*) could be seen as providing evidence for this. As it is possible that the younger generation in the Miyakojima area is able perceive this *m* accurately but cannot think of a way to transcribe it other than to use 'ン' as in Standard Japanese, it is unclear how they actually perceived the sound. The results for the word for 'sea' (only a recording from Bora was used) were mostly the same in this regard.

In the above, we have reported on the results regarding words containing sounds that appear to correspond to *\*ri*, *\*ki*, or *\*hi*, as well as syllabic *m*. While we have also obtained data regarding the perception of the voiced consonant *g*- followed by a central vowel, as well as of sounds that appear to correspond to *\*i*, the answers were considerably more diverse than those reported here for *\*ki* and *\*hi*, apparently indicating that these sounds were more difficult for the high school students to perceive accurately. For example, the students used a variety of word-initial consonants, the overall shape of the words becoming quite far removed from the recordings, and they inserted 'イ' (*i*) before consonants even in cases where there was a distinct friction noise, as in the recordings from Kugai; there were therefore some striking tendencies that were not observed in the case of voiceless consonants.

The degree of comprehension was on the whole extremely low; the only words for which meanings were given were those for 'head' (two correct answers), 'sugar cane' (two correct answers), 'you' (four correct answers), 'person'

(including ‘elderly person’; five correct answers), and ‘everyone/all together’ (four correct answers). There was only one case in which a student gave the correct meaning of a word for all the recordings from multiple sites: one student gave the correct meaning for the word for ‘head’ for each of the used recordings.

### 3.2.5 Speech perception results for the sentence items

In the discussion regarding Survey 1, we mentioned how the Miyakojima City high school students, at least, performed better than expected in transcribing the sentence items, which we had thought would be more difficult to perceive accurately; in Survey 2, too, the transcriptions of the sentence items matched the sound recordings more closely than expected. Setting aside whether the answers were correct, it especially catches the eye that meanings were given for the sentences more often than was the case with the word items. We thought that we might be able to examine the degree of comprehension regarding the predicates of the sentences if we managed to get the students

to give meanings for more sentences to begin with, by intentionally choosing sentence items containing familiar words that might be easy to understand quickly even for the younger generation, such as words for ‘high school student’, ‘(school) uniform’, ‘principal’, and ‘tea’. Below, we give the answers for two of the items for which particularly many students gave meanings.

Although the students’ transcriptions of the predicates are quite varied, one gets the sense from the above that the students were quite eager to comprehend the semantic content of the sentences, taking the associations ‘uniform—put on’ and ‘tea—drink’ as a starting point, even if their phonetic forms were difficult to perceive accurately. It can be assumed that the younger generation of the Miyakojima area, at least, also does this naturally in their interactions with the older generation, which still actively uses the dialects. If only the parts corresponding to ‘to put on’ and ‘to drink’ had been played back for the students, semantic comprehension would perhaps have been lower, as it was for the other word items. They grasped the gist of the sentences, not only in regard to the predicates, but also including particles and adverbs such as that for ‘now’; the younger generation can be surmised to encounter these kinds of elements in their interactions with the older generation, as well.

Table 46. ‘Sugar cane’: all seventeen students’ transcriptions for all three sites.

Site	Kugai	Bora	Irabu
Form	bu:gʔi	bu:gʔi ~ bu:ɕʔi	bu:ɕʔi
1	ウーズ (uuzu)	プーグ (puugu)	ブーズ (buuzu)
2	ウーヅ (uuzi)	ブーク (buuku)	ブーズ (buuzu)
3	ウオーイズン (woozun)	ドーク (duuku)	プーグ (puugsu)
4	ウージン (uujin)	ドーク (duugu)	ブーブウ (buubwu)
5	ウーズ (uuzu)	ウークヌ (uukunu)	ヴーズウ (vuuzwu)
6	ウィズン (wizun)	ドーク (dopuuku)	プーグズ (puuguzu)
7	ウーイズ (uuzu)	ドーク (duugu)	ブーグ (buugu)
8	ヴーズ (vuuzu)	ドークグウツ (duugwutsu)	プーグズ (puuguzu)
9	ウーイズ (uuzu)	ドーク (duuku)	ブーグズ (buuguzu)
10	ボーイズ (bōizu)	ブーク (buuku)	ブーグズ (buuguzu)
11	ウーイズ (uuzu)	ドーク (duugu)	ブーグ (buugu)
12	ウーズ (wuzu)	プーンクウ (puunkwu)	プーングズウ (puunguzwu)
13	ウーズ (uuzu)	ブーグズ (buuguzu)	ブーグズ (buuguzu)
14	ウーズ (uuzu)	ドーク (duugu)	ブーズ (buuzu)
15	(no answer)	ドウムク (dumuku)	ドーク (duuwa)
16	ウグイズウ (uguzwu)	ドーク (duuugu)	ウーズ (uuzu)
17	ウーイズ (wūzu)	ブーグ (buugu)	ブーグズ (buuguzu)

Table 47. 'High school students wear uniforms'(Bora): all seventeen students' transcriptions.

Form	ko:ko:ʧeija ʧeifku:du kʰ:	Meaning given	Transcription of 'kʰ:'
1	コーコセイヤー セイフクヲド プスー ( <i>kookoseiia seifuku(w)odo pusuu</i> )	'The high school students are wearing	プスー ( <i>pusuu</i> )
2	コウコウセイヤ セイフクヲトオ ツー ( <i>koukouseiya seifuku(w)otoo tsuu</i> )	'The high school students are wearing	ツー ( <i>tsuu</i> )
3	コウコウセイヤ セイフクトウ プスー ( <i>koukouseiya seifukutu pusuu</i> )	(no answer)	プスー ( <i>pusuu</i> )
4	コウコウセイヤ セイフクオトウ クスー ( <i>koukouseiya seifukuotu kusuu</i> )	(no answer)	クスー ( <i>kusuu</i> )
5	コウコウセイヤ セイフクヲドウ キヌウ ( <i>koukouseiya seifuku(w)odu kinuu</i> )	'The high school students are wearing uniforms.	キヌウ ( <i>kinuu</i> )
6	コーコーセイヤ シェイフクウナ ツー ( <i>kookoseiya sheifukuwana tsuu</i> )	'High school students, put on uniforms.'	ツー ( <i>tsuu</i> )
7	コーコーセイ ヤ セーフクヲトウ ツヅ ( <i>kookosei ya seefuku(w)otuu tsu(d)zu</i> )	'High school students wear uniforms.'	ツヅ ( <i>tsu(d)zu</i> )
8	コーコーセイヤー セイフクヲトウ ツユー ( <i>kookoseiyā seifuku(w)otuu tsuyuu</i> )	'High school students wear uniforms.'	ツユー ( <i>tsuyuu</i> )
9	コーコーセイヤー セイフクドゥプスー ( <i>kookoseeya seifukuudupusuu</i> )	(no answer)	プスー ( <i>pusuu</i> )
10	(no answer)	(no answer)	(no answer)
11	コウコウセイヤー セイフクヲドウ、クスー ( <i>koukouseiyā seifuku(w)oduu, kusuu</i> )	'High school students wear uniforms.'	クスー ( <i>kusuu</i> )
12	ホウホウセイヤー シェイフクウツウ クスー ( <i>houhouseiyā sheifukuwutu kusuu</i> )	'High school students wear uniforms.'	クスー ( <i>kusuu</i> )
13	コウコウセイヤ セイフクヲドウ クスー ( <i>koukouseiya seifuku(w)odu kusuu</i> )	(no answer)	クスー ( <i>kusuu</i> )
14	コウコウセイヤ セイフクヲトウ ピスー ( <i>koukouseiya seifuku(w)otu pisuu</i> )	'High school students wear uniforms.'	ピスー ( <i>pisuu</i> )
15	コウコウセイヤセイフクヲトクスー ( <i>koukouseiyaseifuku(w)otokusuu</i> )	'High school students wear uniforms.'	クスー ( <i>kusuu</i> )
16	コーコーセイヤー セイフク トウオ スー ( <i>kookoseiyā seifuku tuo suu</i> )	(no answer)	スー ( <i>suu</i> )
17	コーコーセイヤセイフクトウプスウ ( <i>kookoseiyaseifukutupusuu</i> )	(no answer)	プスウ ( <i>pusuu</i> )

#### 4 Conclusion

Among the dialects of the Ryukyu Islands, those of the Miyakojima area are considered to have been relatively well preserved. The perception of them as unusual among the dialects of Okinawa Prefecture is also well established. It has also become clear in our surveys that the younger generation of Miyakojima themselves, too, have an awareness of the unusual character of their local dialects. Nevertheless, the results of these surveys do seem to indicate that there are many issues to be overcome in passing on their phonological systems. The fact that high school students can get a sense of what a sentence means on the basis of, for example, some of the elements within it and the context, even if their ability to perceive the individual sounds accurately is lacking, would seem to be due their daily experiences in interacting with, for example, their grandparents.

In this way, close interaction between the younger and older generations would seem to be an important factor to consider in regard to the passing on of these dialects. In the 2011 high school survey, we asked the students whether they lived together with their grandparents; the results are given in Table 49 on the next page. Although there is a large regional difference between Miyakojima and Irabujima, an average of more than thirty percent live with their

Form	ŋa:ja nnamadu numta <sup>zi</sup>	Meaning given	Transcription of 'numta <sup>zi</sup> '
1	チャーヤ ンナマズヌンタン ( <i>chaaya nnamazununtan</i> )	(no answer)	ヌンタン ( <i>nuntan</i> )
2	チャーヤ、ンナマド ノンター ( <i>chaaya, nnamado nontaa</i> )	'That person was drinking until now.'	ノンター ( <i>nontaa</i> )
3	チャーヤ ナマズヌンタル ( <i>chaaya namazununtaru</i> )	(no answer)	ヌンタル ( <i>nuntaru</i> )
4	チャーヤンナマドゥ ヌンタ ( <i>chaayannamadu nunta</i> )	(no answer)	ヌンタ ( <i>nunta</i> )
5	チャーヤ イツフトゥ アスピタァ *( <i>chaaya itsufutu asupitaa</i> )	(no answer)	アスピタァ *( <i>asupitaa</i> )
6	キヤーヤ ナマデ ヌンタル ( <i>kyaaya namade nuntaru</i> )	'The tea is lukewarm!'	ヌンタル ( <i>nuntaru</i> )
7	チャーヤ ンナマドゥ ヌンタウ ( <i>chaaya nnamadu nuntau</i> )	(no answer)	ヌンタウ ( <i>nuntau</i> )
8	チャー ヤンナンマドゥ ヌンタウ ( <i>chaa yannnamadu nuntau</i> )	'I was drinking tea until now.'	ヌンタウ ( <i>nuntau</i> )
9	チャーヤ ンナマドゥ ヌントウン ( <i>chaaya nnamadu nuntun</i> )	(no answer)	ヌントウン ( <i>nuntun</i> )
10	(no answer)	'You were drinking liquor until now, or something?'	(no answer)
11	チャーヤ、ンナマドゥ ヌンタウ ( <i>chaaya, nnamadu nuntau</i> )	'Now...'(now)	ヌンタウ ( <i>nuntau</i> )
12	チャーアアヤ ナマド ヌウンタウン ( <i>chaaaya namado nwuntaun</i> )	(no answer)	ヌウンタウン ( <i>nwuntaun</i> )
13	チャーヤ ンナマドゥ ヌンタヴ ( <i>chaaya nnamadu nuntav</i> )	'I was drinking tea until now.'	ヌンタヴ ( <i>nuntav</i> )
14	チャーヤ ンナマドゥー ヌーター ( <i>chaaya nnamaduu nuutaa</i> )	'I was drinking tea until now.'	ヌーター ( <i>nuutaa</i> )
15	チャーヤンナマドゥヌンタ ( <i>chaayannamadununta</i> )	'I was drinking tea until now.'	ヌンタ ( <i>nunta</i> )
16	チャーヤ ナマズ ヌンタン ( <i>chaaya namazu nuntan</i> )	(no answer)	ヌンタン ( <i>nuntan</i> )
17	チャーヤナマドゥヌンタウ ( <i>chaayanamadununtau</i> )	(no answer)	ヌンタウ ( <i>nuntau</i> )

(the answer marked with '\*' appears to have been mixed up with that for another item)

grandparents, which means that there are still plenty of opportunities for contact. According to the high school students, the dialects are still used widely by the generation of their grandparents, but the use of Standard Japanese or what could be called 'intermediate dialects' is more widespread in the generation of their parents. They say that while their parents understand the dialects spoken by their grandparents and are able to use them as well, they hardly use the dialects when speaking to their children. On the Miyako islands, too, core families are becoming increasingly prevalent; especially in urbanized areas such as Hirara, collective housing in the form of apartment buildings and the like has been increasing, as well, causing family configurations to change swiftly. We may still be hopeful in regard to the passing on of the dialects if an interest in their phonological systems can be cultivated while the younger generation is still able to grasp the gist of

High school	Do not live together	Live close by	Live together	Used to live together	No answer etc.
A (Miyako)	71.43%	1.79%	16.07%	3.57%	7.14%
B (Irabu)	46.67%	3.33%	46.67%	3.33%	0.00%
Mean	59.05%	2.56%	31.37%	3.45%	4.65%

(the survey was conducted in November 2011 with 130 participants; no distinction was made between paternal and maternal grandparents).



what is said using them. It is also for this reason that an orthography that is suitable for general use is needed.

In these surveys, we have attempted to utilize the raw sound recordings of the older generation obtained in the joint survey. As a result, the recordings were not of the best possible quality; on the other hand, one could say that they approached the daily environment of the younger generation closely. Against this background, the fact that they could make distinctions between regional variants based on the recordings and tried to come up with their own transcriptions leads us to conclude that their interest in the dialects has itself not waned, and that given the right policies, the passing on of these dialects may still be possible.

### **Bibliography**

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**Additional samples:** distribution maps of some characteristic sounds

(roughly divided into groups represented schematically by uppercase letters)

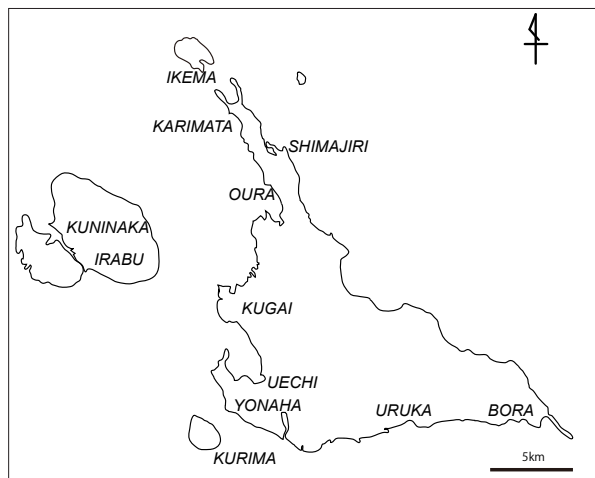


Figure 1. Vocabulary module research sites

Ikema	Uechi	Kuninaka
Karimata	Yonaha	Irabu
Shimajiri	Kurima	
Oura	Uruka	
Kugai	Bora	

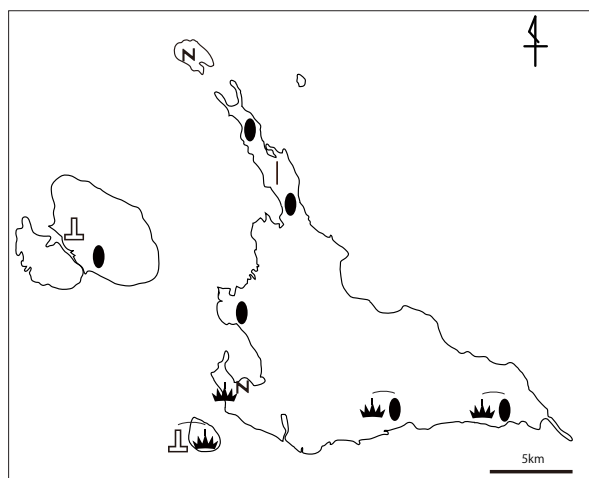


Figure 2. 'Head'

👑	Friction noise	KANAMAZ
●	No friction noise	KANAMAI
⊥	Syllabic consonant	KANAMAL
	Different word form	
Z	No data	

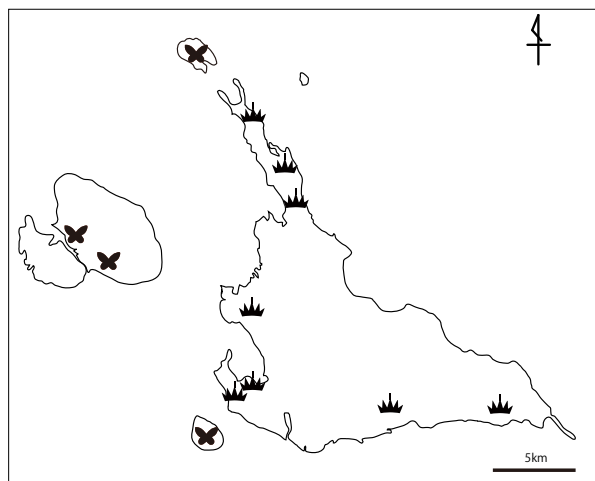


Figure 3. 'Liver (heart)'

👑	Friction noise	KSIMU
🦋	Affricate	CIMU

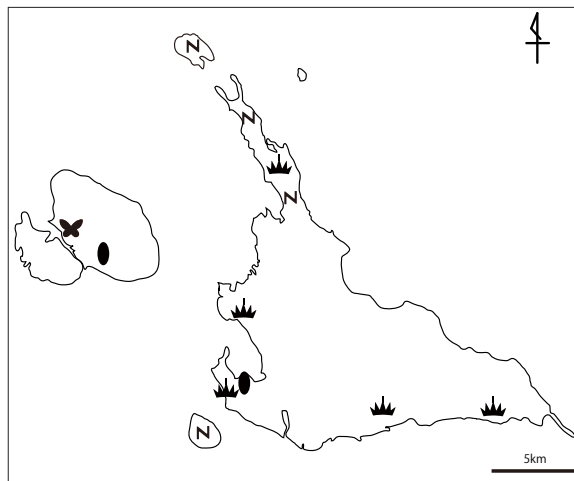


Figure 4. 'Fog'

👑	Friction noise	KSI:
🦋	No friction noise	KIRI
●	Syllabic consonant	CI:
Z	No data	

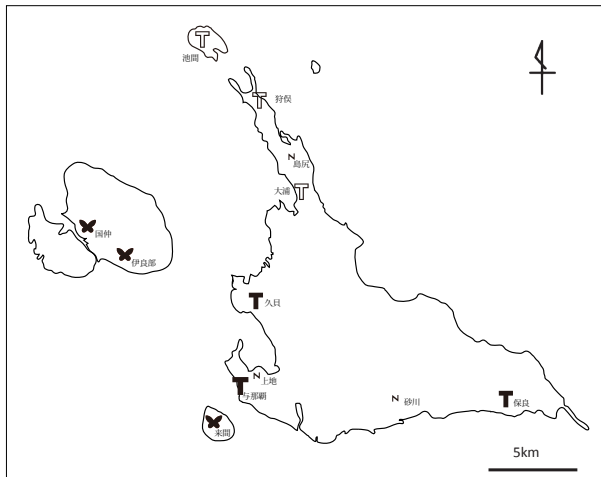


Figure 5. 'Breath'.

<b>T</b>	Frikcion noise	IKSI
<b>T</b>	No friction noise	IKI
<b>🦋</b>	Affricate	ICI
<b>~</b>	No data	

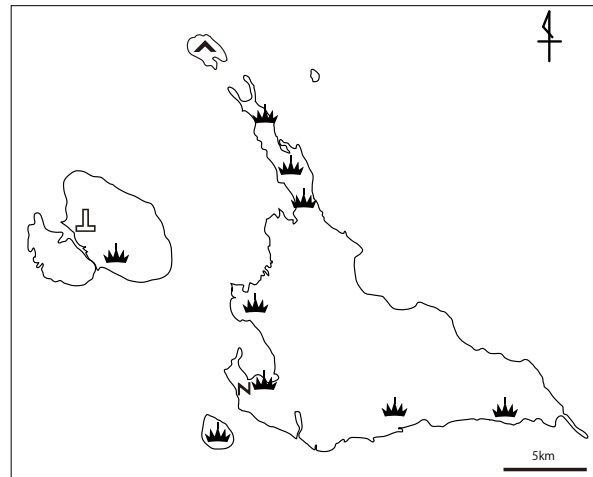


Figure 6. 'Daytime'

<b>👑</b>	Frikcion noise	PSIMA
<b>●</b>	No friction noise	PI:MA
<b>⌋</b>	Syllabic consonants	PILMA
<b>^</b>	HI:MA	
<b>~</b>	No data	

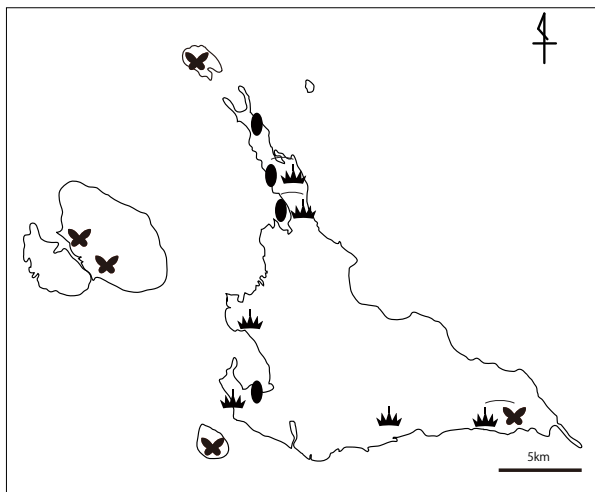


Figure 7. 'Sugar cane'..

<b>👑</b>	Frikcion noise	BU:GZI
<b>●</b>	No friction noise	BU:GI
<b>🦋</b>	Affricate	BU:DZI

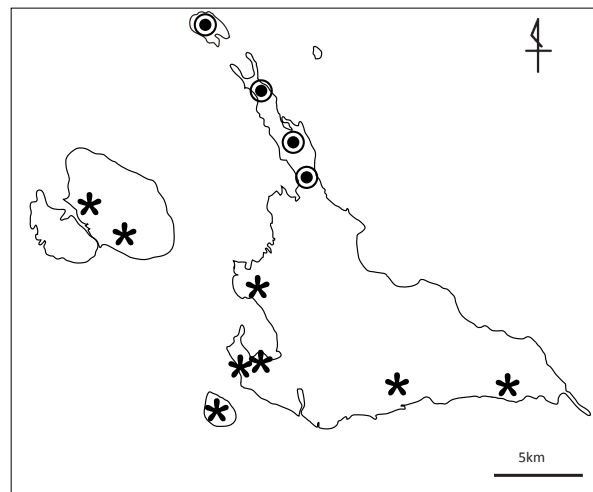


Figure 8. 'Sea'

<b>*</b>	IM
<b>●</b>	IN

## 5. Research Data

## Regarding Notation and Transcription

Nobuko KIBE

### 1 Basic transcription policy

The survey data of the ‘Basic vocabulary *a*’, ‘Basic vocabulary *b*’, and ‘Grammar’ modules of the 2011 Miyako dialect survey are given in this chapter. The reader is referred to Chapter 2, ‘Survey Overview’, for the contents and survey methods of each of these modules. In this section, I will explain the method used for transcribing the survey data. The transcription policy is as follows.

- (1) Word forms are transcribed using the International Phonetic Alphabet. There is, however, a variety of views regarding the interpretation of the sounds of the Miyako dialects. Consequently, there is also a variety of transcription methods. We have chosen not to adopt a single standard in this report, opting instead to present the data using the transcription with which the researchers working at each site have reported them.
- (2) Accent is not transcribed, with the exception of the Karimata area data of the ‘Basic vocabulary *b*’ module, in which accent markings are included as reported by the researchers. In these data, the locus of rising pitch is indicated with ‘[’ and that of falling pitch with ‘]’.
- (3) In cases where a single speaker gave multiple word forms, these are given together separated by ‘/’. In cases where the pronunciation of a single speaker fluctuated, the different pronunciations are given connected with ‘~’. In cases where different speakers gave different word forms, these are given separated by ‘//’, and an uppercase letter indicating the speaker is added after each in brackets ‘[ ]’. For example, [A] and [B] indicate utterances by Ms. Kawamitsu and Ms. Tamashiro, respectively, in the case of data recorded at Kurima. In cases where a speaker reported a regional difference, the names of the regions are given in brackets ‘[ ]’, as well. Examples of this are ‘[Bora]’ and ‘[Aragusuku]’.
- (4) In cases where the pronunciation of a grammar item fluctuated or multiple word forms were given for it, the pronunciations or word forms in question are given enclosed in braces ‘{ }’. For example, ‘N-155B-2: Ikema: kju:ja {teŋkinu / suranu} baikaiiba tubimunumai tuban (today-TOPIC weather-SUBJECT to.be.bad-because plane-TOPIC to.fly-NEGATIVE)’ indicates that the two word forms *teŋkinu* and *suranu* were given for ‘weather-SUBJECT’. In cases where multiple complete sentences were given, these are

given separated by ‘||’. For example, ‘N-155B-2: Kurima: kʲu:ja tintsɯnu baʒkariba ɕiko:kʲa: tubaŋ || kʲu:ja va:tstsɯnu janakariba ɕiko:kʲa: tubaŋ’ indicates that two sentences were given for ‘today-TOPIC weather-SUBJECT to.be.bad-because plane-TOPIC to.fly-NEGATIVE’.

- (5) Other information regarding word forms is given in parentheses ‘( )’, while related forms are introduced by ‘< cf. >’.
- (6) ‘[new]’ and ‘[old]’ indicate new and old word forms, while [elicitated] indicates that the word form in question was elicited after suggestion by a researcher.

## 2 Differences in transcription among researchers

As indicated in (1) above, there is a variety of views regarding the interpretation and transcription of the sounds of the Miyako dialects. We have chosen not to adopt a single standard in this report, opting instead to give the transcription with which the researchers working at each site have reported the data without change. What is known as the ‘central vowel’, too, is transcribed using the symbol with which each group of researchers has reported the data. When the transcription of this ‘central vowel’ differs among survey sites, therefore, this difference does not necessarily imply a regional difference in pronunciation. It may, after all, also be the case that an identical pronunciation is interpreted differently phonologically by different researchers. Furthermore, speakers and researchers differ for the first, middle, and last subsets of the grammar items, as indicated in Chapter 2, ‘Survey Overview’. Consequently, there are cases where the transcription of this ‘central vowel’ differs among the first, middle, and last subsets. In these cases, too, the difference in transcription does not necessarily imply a difference in pronunciation among speakers, as it may also result from a difference in phonological interpretation among researchers. The reader is asked to keep this in mind when using this report. The symbol used for this ‘central vowel’ by each of the groups of researchers is given in Table 1.

Table 1. Different symbols for what is called the ‘central vowel’.

<i>Module</i>	<i>Site</i>	<i>Researchers</i>	<i>Symbol</i>
Basic vocabulary <i>a</i>	Ikema	Lawrence, Ogino, Hirako, Aoi	ï
	Karimata	Lawrence, Nakazawa	ï
	Shimajiri	Shirata, Pellard	ɿ
	Ōura	Hayashi, Takemura	ɿ
	Kugai	Lawrence, Nakahara, Kawase, Kubozono	ï
	Yonaha	Shirata, Ogawa	ɿ
	Uechi	Nitta, Inoue, Kawase	ɿ

	Kurima	Lawrence, Hirako	ï
	Uruka	Karimata, Kibe, Hirayama, Takemura	ɿ
	Bora	Shirata, Tokunaga, Pellard	ɿ
	Irabu	Pellard, Takemura	ɿ
	Kuninaka	Nitta, Nakazawa	ï
Basic vocabulary <i>b</i>	Ikema	Nitta, Hirayama, Matsuura, Kawase	ɿ
	Karimata	Nakajima, Takeda	ï
	Shimajiri	Shimoji, Hayashi	ɿ
	Ōura	Hirako, Kubozono	ɿ
	Nobaru	Nohara, Tokunaga, Matayoshi, Hirayama	ɿ
	Bora	Nitta, Hirako, Nakazawa	ɿ
	Irabu	Kibe, H. Nakama, Toyama	ɿ
	Kuninaka	Morooka, Tokunaga	ï
Grammar (first)	Ikema	Nohara, Nakahara, Davis, Utsumi	ï
Grammar (last)	Ikema	Matayoshi, Yamada, Shirata, Toyama	ɿ
Grammar (first)	Karimata	Nakahara, Matsumoto	ï
(middle)	Karimata	K. Nakama, Davis, Utsumi	ɿ
Grammar (first)	Kugai	Nohara, Hayashi, H. Nakama, Matsumoto	ɿ
Grammar (first)	Yonaha	Shimoji	ɿ
(middle)	Yonaha	Hayashi	ɿ
Grammar (first)	Kurima	Karimata, Utsumi, Davis	ɿ
(middle)	Kurima	Kaneda, Inoue, Takeda	ɿ
Grammar (first)	Miyaguni	Kaneda, Takeda	ï/ɿ/ï
(middle)	Miyaguni	Takubo, Nakajima	ï
Grammar (first)	Uruka	K. Nakama, Inoue, Ogino	ɿ
(middle)	Uruka	Nishioka, Utsumi, Davis	ï
Grammar (first)	Bora	Karimata, Toyama	ɿ
(middle)	Bora	Shimoji, Morooka	ɿ
(last)	Bora	Karimata, Kaneda, Yamada, Morooka	ɿ
Grammar (last)	Kuninaka	Nakajima	ɿ

Representative examples of the above, taken from ‘Basic vocabulary *a*’ and Basic vocabulary *b*’, are given in Table 2. As regards the grammar items, the researchers’ initials have been provided in the rightmost column of the ‘Miyako Dialect Grammar Items: Data’ section. The reader is referred to Table 1 above for the corresponding names.

Table 2. Words containing what is called the ‘central vowel’.

**Basic vocabulary a**

Consonant	p	p,b	p,b	m	m
Number	a155	a169	a016	a087	a104
Site	‘daytime’	‘to be cold (to the touch)’	‘beard; mustache/hair’	‘meat (of sea urchins and the like)’	‘garlic chive’
Ikema	hi:ma	higurumunu	higi	mi:	mi:na
Karimata	psm̥a	bzguw	bzguw ~ bzg̥i ~ big̥i	m̥i:	m̥izza
Shimajiri	p <sup>s</sup> naχa / p <sup>s</sup> ma	b <sup>z</sup> guru	b <sup>z</sup> gi	mi <sup>z</sup> l	mi <sup>z</sup> na
Ōura	p <sup>s</sup> ma	b <sup>z</sup> gurukan̥	p <sup>s</sup> gi ~ p̥gi	mi̥l	mi̥na
Kugai	psima	ps̥igurumunu	psgi	kaɟa <sup>s</sup> sanumiz	mizza
Yonaha	p <sup>s</sup> ma	p <sup>s</sup> guro:nu	p <sup>z</sup> gi	m <sup>z</sup> l:	m <sup>z</sup> l:na
Uechi	p <sup>s</sup> ima	p <sup>s</sup> isa ~ p <sup>e</sup> isa	p <sup>e</sup> gi	mi:	miɟla ~ milna
Kurima	pssima	pzguro:	psgi	m̥i:	m̥i:na
Uruka	p <sup>s</sup> l:ma	ps̥guru:ps̥guru	psgi ~ p <sup>s</sup> gi	mz:	n <sup>j</sup> ira / mizna ~ mi̥na
Bora	p <sup>s</sup> l:ma	p <sup>s</sup> guro:nu	p <sup>s</sup> gi	m <sup>z</sup> l:	s̥una ~ s̥ona
Irabu	p <sup>s</sup> l:ma	p <sup>s</sup> gurumunu	p <sup>s</sup> gi / f̥ts̥p <sup>s</sup> gi	mi̥l	nubi̥l
Kuninaka	p <sup>h</sup> il:ma	p <sup>h</sup> igurumunu	p <sup>h</sup> gi	mi:	mi̥na

Consonant	s	s	s	s	ts,s
Number	a003	a007	a008	a014	a032
Site	‘comb’	‘lip’	‘tongue’	‘gum (of the teeth)’	‘knee’
Ikema	f̥uɟi	f̥uts̥i	ɟta	haɟsi̥	s̥igusi̥
Karimata	f̥usi̥ = f <sup>w</sup> si̥	s̥iba	ʃta	p <sup>h</sup> abasi̥	ts̥igasi̥ / p <sup>h</sup> iɟa
Shimajiri	ss̥l	ʒba	ʒda	p <sup>h</sup> abas̥(ɟ)	tugus̥l ~ tugas̥l
Ōura	s: ~ s̥l:	NR	ɟda ~ ʒda	p <sup>h</sup> a:nuni:	sugas̥l
Kugai	fs̥i̥	s̥iba	s̥ida	p <sup>h</sup> asi̥ ~ p <sup>h</sup> asi̥	ts̥igusi̥
Yonaha	f <sup>s</sup> l̥	s <sup>z</sup> ba	s <sup>z</sup> da	paz̥l̥	ts̥igus̥l
Uechi	fu (or ‘ff’?)	s̥iba	s̥ida	pḁsi:si̥	ts̥igusi̥
Kurima	f̥usi̥	s̥iba	s̥ida	p <sup>h</sup> asi̥:s̥i̥	ts̥igusi̥
Uruka	f̥ʃ ~ f̥s̥l̥ ~ f̥vs̥l̥	s̥b̥a ~ spa	s̥ɟda ~ s̥ɟda	pabas̥l̥ ~ pabas	ts̥igus̥l̥ ~ ts̥igus̥l̥
Bora	f̥us̥l̥	s̥l̥ba	s̥ɟda	p <sup>h</sup> apas̥l̥ ~ p <sup>h</sup> ab̥as̥l̥	ts̥igus̥l̥
Irabu	f̥us̥l̥	s̥l̥ba	sta	p <sup>h</sup> as̥l̥:s̥l̥	ts̥igus̥l̥
Kuninaka	fsu	s̥ibaya	s̥i̥ta (or ‘sta’?)	–	ts̥igusi̥



Consonant	s	s	s	s	ɕ,z
Number	a078	a076	a122	a185	a002
Site	‘bird’s nest’	‘meat (pork and the like)’	‘sash; belt’	‘village’	‘head hair’
Ikema	tuinusī:	sī:sī	sɯku: ~ sɯku:	mmaridɕima	ki:
Karimata	sī:	sī:sī	sip <sup>h</sup> ugw	sima	karadɕi
Shimajiri	ssɿ	ɕi:sɿ	safug <sup>z</sup> ɿ ~ sapug <sup>z</sup> ɿ	sɿma	k <sup>h</sup> aradɕɿ
Ōura	sɿ:	sɿ:sɿ	subagɿ	sɿma	k <sup>h</sup> aradɕɿ
Kugai	ssi	ɕi:sī	sipugz	sima	k <sup>h</sup> ara <sup>d</sup> zi
Yonaha	tu:nossɿ	sɿ:sɿ	s <sup>s</sup> ɿpug <sup>z</sup> ɿ	NR	k <sup>h</sup> ara <sup>d</sup> z
Uechi	tuɿ no si	sī:sī	supugw (or ‘supigi’?)	NR	karadɕi
Kurima	t <sup>h</sup> uɿnussī	sī:sī	sɿpudɕi	bantadɕima	k <sup>h</sup> aradɕi
Uruka	sɿ: ~ sɿ:	ɕi:s ~ ɕi:sɿ	ɕpugz	ɕma ~ ɕma	karadɕɿ ~ k <sup>h</sup> aradɕɿ
Bora	sɿ:	sɿ:sɿ	sp <sup>o</sup> d <sup>z</sup> ɿ	sɿma	k <sup>h</sup> aradɕɿ
Irabu	sɿ:	sɿ:sɿ	sɿkub <sup>z</sup> ɿ	sɿma	k <sup>h</sup> aradɕɿ
Kuninaka	sī:	sī:sī	sɿkub <sup>z</sup> i ~ sɿkubi	mura	karadɕi

Consonant	ɕ	ɕ	ɕ	ɕ	ɕ,g,b
Number	a023	a024	a049	a067	a123
Site	‘elbow’	‘wound’	‘wife’	‘earthworm’	‘collar’
Ikema	hidɕi	ndari	tudɕi	ɕimi:ɕi	tsinnufudɕi
Karimata	pidɕi	NR	tudɕi	mi:miɕi	fugw
Shimajiri	pidɕɿ	k <sup>h</sup> iɕɿ	t <sup>h</sup> udɕɿ	mi:miɕɿ	fug <sup>z</sup> ɿ
Ōura	p <sup>h</sup> iɕɿ	k <sup>h</sup> iɕɿ	t <sup>h</sup> u <sup>d</sup> ɕɿ	mi:ma <sup>d</sup> ɕɿ	fugɿ
Kugai	p <sup>h</sup> iɕi	k <sup>h</sup> iɕi	t <sup>h</sup> uɕi	mi:mi <sup>d</sup> ɕi	k <sup>s</sup> innufugz
Yonaha	p <sup>h</sup> iɕɿ	k <sup>h</sup> iɕɿ	t <sup>h</sup> uɕ <sup>z</sup> ɿ	mi:mi <sup>d</sup> ɕɿ	fug <sup>z</sup> ɿ
Uechi	pidɕi	kiɕi	midum ~ miɕum	mimidɕi	fugw (or ‘fugi’?)
Kurima	pidɕi	NR	midumu	mi:miɕi	fudɕi
Uruka	piɕɿ ~ pidɕɿ	kiɕɿ ~ kiɕɿ	tudɕɿ	mindɕɿ	eri
Bora	p <sup>h</sup> i <sup>d</sup> ɕɿ	k <sup>h</sup> i <sup>d</sup> ɕɿ	t <sup>h</sup> uɕɿ	mimɕɿ	fugɿ ~ fuɕɿ
Irabu	p <sup>h</sup> iɕɿ	k <sup>h</sup> iɕɿ	t <sup>h</sup> uɕɿ	mimidɕɿ	k <sup>h</sup> ub <sup>z</sup> ɿ
Kuninaka	p <sup>h</sup> iɕi	k <sup>h</sup> iɕi	tɕi	ɕimidɕi	fudɕi

Consonant	ɕ	ɕ,g	ɕ,g	ɕ,g	ɕ,g
Number	a127	a091	a118	a116	a033
Site	‘water’	‘sugar cane’	‘nail; spike; peg’	‘saw’	‘leg’
Ikema	miɕi	bu:ɕi	kanifuɕi	nukuɕi	haɕi
Karimata	mi <sup>(d)</sup> zi	bu:gi	fugi ~ fugu	nukagi	p <sup>h</sup> agu
Shimajiri	miɕɿ	bu:gɿ ~ bu:g <sup>z</sup> ɿ	fug <sup>z</sup> ɿ	nukag <sup>z</sup> ɿ	p <sup>h</sup> agɿ ~ p <sup>h</sup> ag <sup>z</sup> ɿ
Ōura	miɕɿ	bu:gɿ ~ bu:g <sup>z</sup> ɿ	k <sup>h</sup> anifugɿ	nukag <sup>z</sup> ɿ	p <sup>h</sup> agɿ ~ p <sup>h</sup> ag <sup>z</sup> ɿ
Kugai	miɕi	bu:g <sup>z</sup> i	k <sup>h</sup> anifugz / fugz	nukugz	p <sup>h</sup> aɕi
Yonaha	mi <sup>d</sup> zɿ	bu:g <sup>z</sup> ɿ	fug <sup>z</sup> ɿ	nokug <sup>z</sup> ɿ	p <sup>h</sup> ag <sup>z</sup> ɿ
Uechi	miɕi	bu:gi	fugi	nukugi ~ nufugi	pagi
Kurima	miɕi	bu:ɕi	fɕi / k <sup>h</sup> anfuɕi	nukuɕi	p <sup>h</sup> aɕi
Uruka	miɕɿ	bu:gɿ	fɿgɿ	nukugɿ	pagɿ
Bora	mi <sup>d</sup> zɿ	bu:g <sup>z</sup> ɿ ~ bu:ɕɿ	fug <sup>z</sup> ɿ	nokug <sup>z</sup> ɿ	p <sup>h</sup> a <sup>d</sup> zɿ ~ p <sup>h</sup> ag <sup>z</sup> ɿ
Irabu	mi <sup>d</sup> zɿ	bu:ɕɿ	fɕɿ	nuk <sup>h</sup> aɕɿ:	p <sup>h</sup> aɕɿ
Kuninaka	miɕi	bu:ɕi	kanifuɕi / fɕi	nukɕi	pazi (or ‘paz’?)

Consonant	ɕ,g,b,ts	ɕ,g,b	ts	ts	ts
Number	a010	a122	a006	a025	a031
Site	‘yawn’	‘sash; belt’	‘mouth’	‘blood’	‘mother’s milk; breast’
Ikema	afɕi	sɿku: ~ sɿku:	fɿtsi	akatsi	tsi:
Karimata	afu	sɿp <sup>h</sup> ugu	fɿtsi	ha:tsi	tzi:
Shimajiri	afk <sup>z</sup> ɿ ~ afk <sup>s</sup> ɿ	safug <sup>z</sup> ɿ ~ sapug <sup>z</sup> ɿ	ftsɿ	aχatsɿ	tssɿ
Ōura	NR	subagɿ	fɿtsɿ	ha:tsɿ	tsɿ
Kugai	afug <sup>z</sup> i	sɿpugz	ftsɿ	akatsi	tsi·
Yonaha	afuk <sup>z</sup> ɿ	s <sup>z</sup> ɿpug <sup>z</sup> ɿ	fɿtsɿ	ak <sup>h</sup> atsɿ	tsɿ:
Uechi	akubi	supugu (or ‘supigi’?)	fɿtsi	aχatsi ~ akatsi	tsi
Kurima	afɕi	sɿpuɕi	ftsɿ	akatsi // a <sup>k</sup> xatsi	tsi // tssi
Uruka	akubi ~ akɿbi	ʃpugz	fɿs ~ ftsɿ	akatsɿ ~ akatsɿ	tsɿ:
Bora	afutsɿ	spu <sup>d</sup> zɿ	fɿtsɿ	ak <sup>h</sup> atsɿ	tssɿ
Irabu	akuo	sɿkub <sup>z</sup> ɿ	fɿtsɿ	aχatsɿ ~ ahatsɿ	tsɿ:
Kuninaka	afɿtsi (or ‘aftsi’?)	sɿkub <sup>z</sup> i ~ sɿkɿbi	fɿtsi (or ‘ftsi’?)	ak <sup>z</sup> atsi	tsi

Consonant	ts,s	ts	ts	ts	ts
Number	a032	a073	a125	a142	a150
Site	‘knee’	‘horn (of an animal)’	‘fire’	‘the moon; month’	‘road; path; way’
Ikema	sīgusi	nnu	umatsi	tsitsi	ntsi
Karimata	tsīgasi / p <sup>h</sup> iɕa	tsŋu	umatsi	tskssu	ntsi
Shimajiri	tugasɿ ~ tugasɿ	tsɿnu	mmatsɿ	tskɿ ~ tsk <sup>s</sup> ɿ	ntsɿ
Ōura	sugasɿ	tsɿnu	mmo:tsɿ	tskɿ	ntsɿ
Kugai	tsīgusi	tsĩnu	umutsi	tskssu	mtsi
Yonaha	tsɿgusɿ	tsɿno	umatsɿ	tsɿk <sup>s</sup> ɿ / tsɿk <sup>s</sup> ɿnoju:	mtsɿ
Uechi	tsigusi	tsĩnu	umatsi	tsikiju’	mtsi
Kurima	tsīgusi	tsĩnu	umatsi	tsitsi // tsitsĩnuju:	mtsi
Uruka	tsgusɿ ~ tsɿgusɿ	tsnu ~ tsɿnu	umats ~ umatsɿ	tskɿ	mts ~ mtsɿ
Bora	tsɿgusɿ	tsɿno	mmatsɿ	tskɿ	mtsɿ
Irabu	tsɿgusɿ	tsɿnu ~ tsɿno	umatsɿ	tsɿtsu ~ tsɿtsu (?)	mtsɿ
Kuninaka	tsigusi	tsĩnu	umatsi	tsittu	ntsi

Consonant	ts	ts	k,ts	k,ts	k,ts
Number	a153	a115	a009	a030	a121
Site	‘dew’	‘common garcinia (tree)’	‘breath’	‘liver’/‘heart’	‘clothing; kimono’
Ikema	tsi:	kutsigi	iki	tsĩmu (‘liver’)	tsĩŋ
Karimata	tsiju	p <sup>h</sup> ukagagi:	iku	k <sup>s</sup> ĩmu	k <sup>s</sup> ĩŋ
Shimajiri	tɕiɒ	k <sup>h</sup> upag <sup>z</sup> igi:	–	k <sup>s</sup> ɿmu	k <sup>s</sup> ɿŋ
Ōura	tsɿv	p <sup>h</sup> ukagi	ikɿ	k <sup>s</sup> ɿmu	k <sup>s</sup> ɿŋ / fuku (‘clothing’)
Kugai	tsiv	p <sup>h</sup> ukadzgi:	ik <sup>s</sup> ĩ	k <sup>s</sup> zĩmu	k <sup>s</sup> ĩŋ
Yonaha	ts <sup>s</sup> ɿv	p <sup>h</sup> ukugi:	–	k <sup>s</sup> ɿmu / basanaɿ	k <sup>s</sup> ɿŋ / k <sup>s</sup> ɿmono
Uechi	NR	pukukugi	–	k <sup>ɕ</sup> ĩmu ~ kimu	kĩŋ
Kurima	tɕuf	pukutsigi:	i <sup>s</sup> ĩ // itsĩ	tsĩmu	tsĩŋ
Uruka	tsɿ ~ tsɿv	pukukuki:~ pukukugi	–	k <sup>s</sup> mu ~ k <sup>s</sup> ɿmu	kɿn
Bora	tsov ~ tsɿv	fukukigi: [new]	ik <sup>s</sup> ɿ	k <sup>s</sup> ɿmu	k <sup>s</sup> ɿŋ
Irabu	tsɿv	kuputsɿgi	itsɿ	tsɿmuɒtsɿ (‘heart’) / tsɿmu (‘liver’)	t <sup>s</sup> ɿŋ
Kuninaka	tɿv	pukutsigi’	itsi	tsĩmu	tsĩŋ

Consonant	k,ts	∅	∅	∅	∅
Number	a163	a081	a092	a001	a012
Site	‘yesterday’	‘fish’	‘sickle; scythe’	‘head’	‘jaw; chin’
Ikema	nnu	zzu ~ dzu	zzara ~ <sup>d</sup> zara	kanamai	utugai
Karimata	ksɲu	izu	izara	kanamaw ~ k <sup>h</sup> anamaï / aha	utugaw ~ tugaï
Shimajiri	k <sup>s</sup> ɲu	zzu	zzara	aɣa	agu
Ōura	k <sup>s</sup> ɲu	ɶzu	ʒzara	k <sup>h</sup> anamaɶ	utuguɶ
Kugai	ksinu	zzu	zzara	k <sup>h</sup> anamaz <sup>i</sup>	staguz
Yonaha	k <sup>s</sup> ɲu	zzu ~ ɶzu	zzara	k <sup>h</sup> anamaʒɶ	st <sup>h</sup> ugaʒɶ
Uechi	k <sup>s</sup> inu	<sup>i</sup> zzu	<sup>i</sup> zzara	kanamaʒe	agu
Kurima	tsino	zzɥ	zzara	k <sup>h</sup> anamaɭ // x <sup>h</sup> anamaz	s <sup>w</sup> tugaɭ
Uruka	kɣnu:	zzu	zzara	k <sup>h</sup> anamaz ~ k <sup>h</sup> anamaɶ	agu
Bora	k <sup>s</sup> ɲu:	zzu ~ ɶzu	zzara	k <sup>h</sup> anamaʒɶ ~ k <sup>h</sup> anamaɶ	agu / utugaɶ ~ utugaɬɶ
Irabu	tsɲnu:	ʒɶzu	ɶzara	k <sup>h</sup> anamaɶ (‘ɶ’ sometimes sounds like ‘l’)	agu / utugaɶ
Kuninaka	tsinɥ	( <sup>i</sup> )zzu:	<sup>i</sup> zzara	kanamaɭ	ɥtugaɶ

Consonant	∅	∅	∅	∅	∅
Number	a057	a066	a077	a082	a099
Site	‘niece’	‘ant’	‘bird’	‘scale (of an animal)’	‘rice’
Ikema	m <sup>j</sup> u:i	akai	tui	tsi:dzi / i:ki	mai
Karimata	m <sup>j</sup> u:i	ha:w	tuw	i:ki	mau
Shimajiri	mju:ʒɶ	aɣaʒɶ	t <sup>h</sup> uʒɶ	–	maɶ ~ maʒɶ
Ōura	m <sup>j</sup> u:ɶ	ha:ɶ ~ xa:ɶ	t <sup>h</sup> uɶ	–	maɶ
Kugai	m <sup>j</sup> u:z	aka:z	t <sup>h</sup> uz	izki	namamaz / maz
Yonaha	m <sup>j</sup> u:ʒɶ (‘nephew’/ ‘niece’)	aka:ʒɶ	tʊʒɶ	–	maʒɶ
Uechi	mjuəʒ / mjuəffa	ak <sup>x</sup> a:l	tou	–	mal
Kurima	m <sup>j</sup> u:i ~ m <sup>j</sup> u:z	akaɭ // akaz	t <sup>h</sup> uz	izki	maz // maɭ
Uruka	m <sup>j</sup> u:z	azgara	tuz	–	maz ~ maɶ
Bora	m <sup>j</sup> u:ɶ ~ m <sup>j</sup> u:ʒɶ	aʒɶgara // ak <sup>h</sup> a:ʒɶ	t <sup>h</sup> uɶ	ɶʒ:ki	maʒɶ
Irabu	m <sup>j</sup> u:ʒɶ	aha:ɶ	t <sup>h</sup> uʒɶ ~ t <sup>h</sup> uɶ	iʒkja	maɶ
Kuninaka	mju:l ~ mju:l <sup>z</sup>	aka:l	tɥɶ	ilki	maɭ

Consonant	∅	∅	∅	∅	∅
Number	a100	a103	a112	a120	a126
Site	‘(wooden) bowl’	‘garlic’	‘fruit; nut’	‘needle; pin’	‘ash’
Ikema	makai	hi:	mi:	hai	karahai
Karimata	ma:w	p <sup>s</sup> i:	n:ta	p <sup>h</sup> au	karapau
Shimajiri	maχa <sup>1</sup> ~ maχa <sup>2</sup>	p <sup>h</sup> i <sup>2</sup>	mi <sup>2</sup> / na <sup>2</sup>	pi <sup>2</sup>	karapa <sup>2</sup>
Ōura	maka <sup>1</sup>	p <sup>h</sup> i <sup>1</sup>	na <sup>1</sup>	pi <sup>1</sup>	k <sup>h</sup> arapa <sup>1</sup>
Kugai	mak <sup>h</sup> az <sup>i</sup>	p <sup>h</sup> iz	naz	piz	k <sup>h</sup> arap <sup>h</sup> az / p <sup>h</sup> az(i)
Yonaha	mak <sup>h</sup> a <sup>2</sup>	p <sup>h</sup> i <sup>2</sup>	ki:nuna <sup>2</sup>	p <sup>h</sup> i <sup>2</sup>	k <sup>h</sup> arapa <sup>2</sup>
Uechi	mak <sup>χ</sup> al	p <sup>h</sup> il / p <sup>h</sup> iltɕikina	na <sup>z</sup> ~ naɕ ~ nau	p <sup>h</sup> i <sup>z</sup> ~ p <sup>h</sup> iɸ ~ p <sup>h</sup> iũ	karap <sup>h</sup> aɸ ~ karap <sup>h</sup> a <sup>z</sup>
Kurima	maka <sup>l</sup> // makaz	piz	(ki:nu) naz	p <sup>h</sup> iz	karaba <sup>l</sup> // karabaz
Uruka	makaz ~ [sic.]	pi <sup>z</sup> ~ pi <sup>z</sup>	naz	p <sup>h</sup> i <sup>z</sup>	karapaz
Bora	maka <sup>2</sup>	p <sup>h</sup> i <sup>2</sup>	na <sup>2</sup>	p <sup>h</sup> ja <sup>2</sup>	k <sup>h</sup> arapa <sup>1</sup> ~ k <sup>h</sup> arapa <sup>2</sup>
Irabu	maxa <sup>1</sup> ~ maha <sup>1</sup>	p <sup>h</sup> i <sup>1</sup>	na <sup>1</sup>	p <sup>h</sup> a <sup>1</sup>	k <sup>h</sup> ara pa <sup>1</sup>
Kuninaka	maka <sup>l</sup>	p <sup>h</sup> i <sup>l</sup>	na <sup>l</sup>	pa <sup>l</sup>	karapa <sup>l</sup>

Consonant	∅	∅	∅	∅	∅
Number	a139	a143	a145	a148	a137
Site	‘light’	‘the east’	‘the west’	‘(the) left (side)’	‘lightning’
Ikema	çikai	agai	i:	çidai	kannai
Karimata	pskaw	a:w	nisi	bīdau ~ bzdau	nnapskaw
Shimajiri	pska <sup>2</sup>	ava <sup>1</sup>	i <sup>2</sup>	b <sup>2</sup> da <sup>2</sup>	nnapska <sup>2</sup>
Ōura	pska <sup>1</sup>	(aga <sup>1</sup> ~) a <sup>1</sup>	i <sup>1</sup> / nis <sup>1</sup>	b <sup>2</sup> da <sup>1</sup>	nnap <sup>s</sup> ka <sup>1</sup> / k <sup>h</sup> anna <sup>1</sup> (‘thunder’)
Kugai	pskaz	aġaz	i <sup>z</sup>	pzdaz	m:napskaz
Yonaha	p <sup>s</sup> ka <sup>2</sup>	aga <sup>2</sup>	i <sup>2</sup>	p <sup>s</sup> da <sup>2</sup>	nnap <sup>s</sup> ka <sup>2</sup>
Uechi	p <sup>s</sup> kal	a <sup>ɣ</sup> al	l: (or ‘ɸ:’?)	pīdal ~ pīda	mnap <sup>s</sup> ɣal (the ‘l’ is dorsal)
Kurima	pska <sup>l</sup>	aga <sup>l</sup> // agaz	il // iz	p <sup>h</sup> īdal // psdaz	nnap <sup>s</sup> ka <sup>l</sup> // nnap <sup>s</sup> ka <sup>l</sup>
Uruka	p <sup>s</sup> ka <sup>z</sup>	agaz	z:	p <sup>s</sup> da <sup>z</sup> ~ p <sup>s</sup> da <sup>1</sup>	nnap <sup>s</sup> ka <sup>z</sup>
Bora	pska <sup>1</sup>	aga <sup>1</sup>	i <sup>2</sup>	p <sup>s</sup> da <sup>1</sup> ~ p <sup>s</sup> da <sup>2</sup>	nnapska <sup>2</sup>
Irabu	p <sup>s</sup> ka <sup>1</sup>	a <sup>s</sup> a <sup>1</sup>	i <sup>2</sup>	p <sup>h</sup> idi <sup>1</sup>	mnapska <sup>1</sup>
Kuninaka	p <sup>s</sup> ka <sup>l</sup>	aga <sup>l</sup>	il	p <sup>s</sup> īdal	mnapika <sup>l</sup>

**Basic vocabulary b**

Consonant	p	p	b	g,z,ɖ
Number	b013	b047	b111	b010
Site	‘tendon’	‘daytime; noon’	‘paper’	‘lower leg’/‘foot’
Ikema	haits	hi:ma (‘noon’)	kabi:	hazɫ (‘part of the leg from the knee down’)
Karimata	p <sup>s</sup> ikibaü	p <sup>s</sup> ima	kabi	pagi
Shimajiri	p <sup>h</sup> açidɖɫ	pssuma ~ pɫsuma	kab <sup>z</sup> ɫ	karasɫni
Ōura	pskipaɫ	p <sup>s</sup> ɫ:ma	kab <sup>z</sup> ɫ	pagɫ
Nobaru	psɫkɫpaɫ (careful pronunciation) ~ psɫkupaɫ (normal pronunciation)	pɫru	kab <sup>z</sup> ɫ	pagɫ (‘foot’)
Bora	p <sup>s</sup> kɫpaɫ ~ p <sup>s</sup> k <sup>z</sup> paɫ ~ p <sup>s</sup> kɫpaɫ <sup>z</sup>	p <sup>s</sup> si:ma	kabl <sup>z</sup>	pagw
Irabu	paz <sup>z</sup> tsɫ:	p <sup>s</sup> ɫ:ma	kabz	paz
Kuninaka	paltsi:	pilma	kabi:	paɖçi

Consonant	g,z	s	s	s	s
Number	b081	b012	b049	b052	b061
Site	‘cereal (specif. wheat, barley, rye & oats)’	‘shoulder’	‘star; celestial body’	‘island’	‘cattle (i.e. cow or bull)’
Ikema	muzɫ	katamuçi:	hoçi	çima	uçi
Karimata	mugi	katamusi	psi	çima / sima	usi / usi
Shimajiri	mugz ~ mugɫ	ibira / k <sup>h</sup> ata	psɫ ~ puɫsɫ	sɫma	usɫ
Ōura	mug <sup>z</sup> ɫ	katamusu	psɫ	sɫma	usɫ
Nobaru	mug <sup>z</sup> ɫ (weak friction)	kata <sup>h</sup> amusɫ ~ kata <sup>h</sup> amusɫ / kata	puɫsɫ	sɫma	usɫ
Bora	mgɫ <sup>z</sup>	k <sup>h</sup> ata	psi ~ psɫ	sima	ussi
Irabu	nuz	kata <sup>h</sup> amurasɫ	puɫ ~ puɫɫ	ɫma	usɫ
Kuninaka	mugi	katamusu	puɫsi	sima	usi

Consonant	s	ts	ts	ts	ts
Number	b136	b076	b021	b022	b024
Site	‘down; below; under; bottom’	‘sago palm’	‘three (things)’	‘four (things)’	‘six (things)’
Ikema	ɕi̯ta / ɕi̯ta:ra	tɕu:tsɿ	mi:tsɿ	ju:tsɿ	m:tsɿ
Karimata	sita:ra	sisuɕw / stitsw / ssuɕw	mi:tsi / mi:tsu	ju:tsi / ju:tsu	n:tsi / n:tsu
Shimajiri	sta	NR	mi:tsɿ	ju:tsɿ	n:tsɿ
Ōura	sta:ra	–	mi:tsɿ	ju:tsɿ	nntsɿ
Nobaru	sɿta / sɿta:ra	sutitsɿ	mi:tsɿ	ju:tsɿ	m:tsɿ
Bora	sɿ̥ta	ʃuk <sup>h</sup> atsɿ̥	mi:tsi	ju:tsi	mmtsɿ
Irabu	ʃta:ra	sditsɿ	mi:tsɿ	ju:tsɿ	m̥:tsɿ
Kuninaka	sita:ra	sɔ̥tetsi	mi:tsi	ju:tsi	m:tsi

Consonant	ts	∅
Number	b033	b101
Site	‘five (people)’	‘medicine’
Ikema	itsunuɕi̯tu	fɿ̥sui
Karimata	its̥inuɕtu / ʔitsinupɕtu	ɕswi / ɕusujw
Shimajiri	itsɿ nu ttu	ssuɿ
Ōura	itsɿnupstu	fsui / ssui
Nobaru	itsɿnupstu	fɿ̥su:ʔɿ
Bora	guni̯ŋ	fsi:z ~ fsi̯z
Irabu	itsɿnu pstu	fɿ̥ʃz
Kuninaka	itsunup <sup>s</sup> itu	ɕusul

Furthermore, the transcription used for *ni* in such words as ‘a162: ja:ni (next year)’, ‘a172: funi (boat; ship)’, ‘b070: ni: (root)’, ‘b074: tani (seed)’, ‘b083: fun<sup>1</sup>u: (mandarin orange)’, and ‘b116: ni: (load; cargo)’ also differs among researchers. The three transcriptions *ni*, *ni*, and *ni* are used for it; rather than implying different pronunciations, this difference appears to reflect a difference in phonological interpretation among the researchers. The transcriptions used by each of the groups of researchers are given in Table 3.

Table 3. Different transcriptions for *ni* in such words as ‘ja:ni (next year)’.

**Basic vocabulary a**

Site	Researchers	Transcription	a162	a172
			‘next year’	‘boat; ship’
Ikema	Lawrence, Ogino, Hirako, Aoi	ni	ja:ni	funi
Karimata	Lawrence, Nakazawa	ni	ja:ni	funi
Shimajiri	Shirata, Pellard	ni	ja:ni	funi
Ōura	Hayashi, Takemura	ni	ja:ni	funi
Kugai	Lawrence, Nakahara, Kawase, Kubozono	ni	ja:ni	funi
Yonaha	Shirata, Ogawa	ni	ja:ni	fɔni
Uechi	Nitta, Inoue, Kawase	nʲi	ja:nʲi	funʲi
Kurima	Lawrence, Hirako	ni	ja:ni	funi
Uruka	Karimata, Kibe, Hirayama, Takemura	nʲi	ja:nʲi	ϕʏnʲi
Bora	Shirata, Tokunaga, Pellard	ni	ja:ni	fɔni
Irabu	Pellard, Takemura	ni	jaini	funi
Kuninaka	Nitta, Nakazawa	ni	ja:ni	funi

**Basic vocabulary b**

Site	Researchers	Transcription	b070	b074	b083	b116
			‘root’	‘seed’	‘mandarin orange’	‘load; cargo’
Ikema	Nitta, Hirayama, Matsuura, Kawase	ni	ni:	tani	funʲu:	ni:
Karimata	Nakajima, Takeda	ni	nibaɭ	tani	ϕniŋ / ϕniɯ / ϕnʲɯ	ni:
Shimajiri	Shimoji, Hayashi	ɲi	ɲi:	taɲi	fɯnŋ	ɲimutsɯ
Ōura	Hirako, Kubozono	ni	ni:	tani	funiʔ	ni:
Nobaru	Nohara, Tokunaga, Matayoshi, Hirayama	ni	ni:	sani	funiŋ	ni:
Bora	Nitta, Hirako, Nakazawa	ni	ni:	tʰani	funiŋ <sup>z</sup>	ni:
Irabu	Kibe, H. Nakama, Toyama	nʲi	nʲi:	tanʲi	f(u)nʲiz	nʲi:
Kuninaka	Morooka, Tokunaga	nʲi/ni	ni:	tani	ϕunʲiu	ni:



## Grammar

<i>Module</i>	<i>Site</i>	<i>Researchers</i>	<i>Transcription</i>
Grammar (first)	Ikema	Nohara, Nakahara, Davis, Utsumi	ɲi
Grammar (last)	Ikema	Matayoshi, Yamada, Shirata, Toyama	nʲi
Grammar (first)	Karimata	Nakahara, Matsumoto	ɲi
(middle)	Karimata	K. Nakama, Davis, Utsumi	ni
Grammar (first)	Kugai	Nohara, Hayashi, H. Nakama, Matsumoto	ni
Grammar (first)	Yonaha	Shimoji	ni
(middle)	Yonaha	Hayashi	nʲi
Grammar (first)	Kurima	Karimata, Utsumi, Davis	nʲi
(middle)	Kurima	Kaneda, Inoue, Takeda	ni
Grammar (first)	Miyaguni	Kaneda, Takeda	ni
(middle)	Miyaguni	Takubo, Nakajima	ni
Grammar (first)	Uruka	K. Nakama, Inoue, Ogino	ni
(middle)	Uruka	Nishioka, Utsumi, Davis	ni
Grammar (first)	Bora	Karimata, Toyama	nʲi
(middle)	Bora	Shimoji, Morooka	nʲi
(last)	Bora	Karimata, Kaneda, Yamada, Morooka	nʲi
Grammar (last)	Kuninaka	Nakajima	ni

# Basic Vocabulary A

No.	Item	Ikema	Karimata	Shimajiri
a001	'head'	kanamai	kanamaʷ ~ k <sup>h</sup> anamaï / aha ('u' is pronounced far towards the back; 'i' is frictionless.)	aɣa
a002	'head hair'	aka ('body hair') / ki:	karadzï	k <sup>h</sup> aradzɿ
a003	'comb'	fʊɕi (not 'fɕi')	fʊɕi = f <sup>w</sup> sï	ssɿ
a004	'forehead'	ftai ('t' unaspirated)	ftai	–
a005	'tear(drop)'	nada	nada	–
a006	'mouth'	fʊɕsï	fʊɕsï	fɕɿ
a007	'lip'	fʊɕsï	sïba (wa:sïba 'upper lip'; sɿtasïba 'lower lip')	ɕɿba
a008	'tongue'	ɕta	sɿta (sta:ra 'down; below; under; bottom')	ɕɿda
a009	'breath'	iki	iku	–
a010	'yawn'	afudzï	afu	afk <sup>ɕ</sup> ɿ ~ afk <sup>h</sup> ɿ
a011	'voice'	kui	k <sup>h</sup> ui	–
a012	'chin'	utugai	utugaw ~ utugaï	agu
a013	'jaw; jawbone'	utugaibuni (kamatsï 'cheek')	kamagida	agubuni (k <sup>h</sup> amatsɿɿ) 'cheek')
a014	'gum (of the teeth)'	haczisï	p <sup>h</sup> abasï (p <sup>h</sup> a: 'tooth')	p <sup>h</sup> abasɿɿ (p <sup>h</sup> a: 'tooth')
a015	'neck'	fudzï / nudu	nubai	nubai
a016	'beard; mustache/hair'	higi	bzgu ~ bzgï ~ biği	bɕɿgi

No.	Ōura	Kugai	Yonaha
a001	k <sup>h</sup> anamaŋ	k <sup>h</sup> anamaz <sup>i</sup>	k <sup>h</sup> anama <sup>ʔ</sup> ŋ
a002	k <sup>h</sup> aradzŋ	k <sup>h</sup> ara <sup>d</sup> zi	k <sup>h</sup> ara <sup>d</sup> z
a003	s: ~ sɔ:	f <sup>s</sup> i ('f is unrounded)	f <sup>h</sup> ɔ
a004	f <sup>u</sup> ɬai ~ ftai	ftai	–
a005	nada	nada / mi:nada	–
a006	f <sup>u</sup> ɬɔ	f <sup>t</sup> si	f <sup>u</sup> ɬɔ
a007	NR	s <sup>i</sup> ba	s <sup>ʔ</sup> ba
a008	ŋda ~ <sup>ʔ</sup> da	s <sup>i</sup> da	s <sup>ʔ</sup> da
a009	ikŋ / ikssu ('breath-ACCUSATIVE')	ik <sup>s</sup> i	–
a010	NR	afug <sup>ʔ</sup> i	af <sup>u</sup> k <sup>ʔ</sup> ŋ
a011	–	kui	–
a012	utugun (k <sup>h</sup> ujun 'gill')	staguz ('t is unaspirated)	st <sup>h</sup> ɔga <sup>ʔ</sup> ŋ
a013	NR (k <sup>h</sup> amatsŋ 'cheek')	agubuni (k <sup>h</sup> amats 'cheek')	k <sup>h</sup> amatsŋ
a014	p <sup>h</sup> a:nuni:	p <sup>h</sup> as <sup>i</sup> ~ p <sup>h</sup> a <sup>ʃ</sup> i	pazŋɔ
a015	nubaŋ (nudu 'throat')	nubui / nudu (nudufugz 'back of the neck')	n <sup>u</sup> bɔi / f <sup>u</sup> ɔg <sup>ʔ</sup> ŋ ('back of the neck')
a016	p <sup>ʔ</sup> ŋgi ~ pŋgi	p <sup>ʃ</sup> gi (also 'body hair')	p <sup>ʔ</sup> ŋgi

No.	Uechi	Kurima	Uruka
a001	kanamałze	k <sup>h</sup> anamał [A] // x <sup>h</sup> anamaz [B]	k <sup>h</sup> anamaz ~ k <sup>h</sup> anamał
a002	karadzı	k <sup>h</sup> aradzı	karadzı ~ k <sup>h</sup> aradzı
a003	fu (or ‘ff?’)	fıŋı	fı ~ fıŋ ~ fıŋı (‘ı’ is a labiodental approximant that functions as a vowel; ‘ı’ signifies that the sound in question begins voiceless.)
a004	–	fte:	–
a005	–	nada	–
a006	fıtsı	fıtsı	fıts ~ fıtsı
a007	sıba (oftsıba ‘large mouth’)	sıba	sba ~ spa
a008	sıda	sıda	sıda ~ sıda (or ‘sda’)
a009	–	i’sı [A] // itsı [B]	–
a010	akubi	afudzı	akubi ~ akıbi
a011	–	kui	–
a012	agu	s <sup>w</sup> tugał (not ‘s <sup>w</sup> tugaz’; k <sup>h</sup> amats ‘cheek’)	agu
a013	kamatsı (‘jaw’) / agubuni (‘jawbone’)	k <sup>h</sup> amagıda(buni)	k <sup>h</sup> amagıta ~ kaımagıta
a014	paşı:sı (pa: ‘tooth’)	p <sup>h</sup> ası:sı	pabası ~ pabas
a015	nubuı	nubui / nudu	nubıui
a016	p <sup>ı</sup> gi	psgi (also ‘body hair’)	psgi ~ p <sup>ı</sup> gi

No.	Bora	Irabu
a001	k <sup>h</sup> anamaŋ ~ k <sup>h</sup> anamaŋ	k <sup>h</sup> anamaŋ (ŋ' sometimes sounds like 'l'; this also holds for the other vocabulary items that include this sound.)
a002	k <sup>h</sup> aradzŋ	k <sup>h</sup> aradzŋ
a003	fʊŋŋ	fʊŋŋ ('u' is not as rounded as 'u'; it also differs from 'ŋ')
a004	fʊŋtai	fʊŋtai
a005	nada	nada
a006	fʊŋŋ	fʊŋŋ
a007	sŋba	sŋba
a008	sŋda	sta
a009	ik <sup>h</sup>	itŋ
a010	afʊŋŋ	akuɯ
a011	k <sup>h</sup> ʊi	k <sup>h</sup> ui
a012	agʊ / ʊtʊŋŋ ~ ʊtʊŋadzŋ	agu / utʊŋŋ
a013	agʊ / k <sup>h</sup> amatsŋ ('cheek')	p <sup>h</sup> agita (t <sup>h</sup> aa <sup>h</sup> kamadŋ 'cheek')
a014	p <sup>h</sup> apasŋ ~ p <sup>h</sup> abʊasŋ	p <sup>h</sup> ʌŋŋ:ŋ
a015	nʊbʊi	nudu / nubui
a016	p <sup>h</sup> ŋgi	p <sup>h</sup> ŋgi / fʊŋŋp <sup>h</sup> ŋgi

No.	Item	Ikema	Karimata	Shimajiri
a017	'arm'	ti: (kaina 'wrist')	kaina	udzi (ibira 'shoulder')
a018	'strength'	taja	taja	tskara ~ tṣkara / t <sup>h</sup> aja
a019	'armpit'	jakata	bagida	baksta
a020	'finger; toe'	ujubi	u̇jbi	uibi
a021	'hand; arm'	ti:	ti:	–
a022	'fist'	NR	NR	tsifurj
a023	'elbow'	hidzi	pidzi	pidẓ
a024	'wound'	ndari	NR	k <sup>h</sup> idẓ
a025	'blood'	akatsi	ha:tsi (ha:munu 'to be red')	aχatṣ
a026	'pus'	ŋ:ku	n:ku	–
a027	'to be itchy'	kaumunu	ko:garj / paş <sup>h</sup> o:munu (in the case of a light itch)	–
a028	'bone'	huni	p <sup>h</sup> uni	p <sup>h</sup> uni
a029	'belly'	bata	bada	–
a030	'liver'/'heart'	tsimu ('liver'; fu: 'one of the internal organs')	k <sup>s</sup> imu	k <sup>s</sup> amu
a031	'mother's milk; breast'	tsi:	tzi:	tṣ
a032	'knee'	sigus̄i	ts̄igas̄i / p <sup>h</sup> idza	tuguṣ ~ tugaṣ
a033	'leg'	hadzi	p <sup>h</sup> agw / karasuni ('lower leg')	p <sup>h</sup> ag̣ ~ p <sup>h</sup> ag̣ <sup>z</sup>
a034	'foot'	stabija ('foot')	pssa	pssab <sup>z</sup> a / pssa ('sole')

No.	Ōura	Kugai	Yonaha
a017	udi	t <sup>h</sup> i: / udi (k <sup>h</sup> aina ‘shoulder ache’)	k <sup>h</sup> aina
a018	t <sup>h</sup> aja	ʦkara / t <sup>h</sup> aja	ʦŋkara / t <sup>h</sup> aja
a019	baksta	bak <sup>s</sup> iɖana	bak <sup>s</sup> ɖa
a020	wi:bi	ujabi	uibi
a021	–	t <sup>h</sup> i:	–
a022	NR	ʦiʃʦim	t <sup>h</sup> iʊʦim
a023	p <sup>h</sup> idʒa	p <sup>h</sup> idʒi	p <sup>h</sup> idʒa
a024	k <sup>h</sup> idʒa	k <sup>h</sup> idʒi	jummai / k <sup>h</sup> idʒa (nibuta ‘swelling; boil’)
a025	ha:ʦa	akatsi	ak <sup>h</sup> aʦa
a026	–	m:ku	–
a027	–	k <sup>h</sup> o:munu	–
a028	p <sup>h</sup> uni	p <sup>h</sup> uni	puni
a029	–	bat <sup>h</sup> a	–
a030	k <sup>s</sup> amu	k <sup>s</sup> ɪmu	k <sup>s</sup> ŋmu/basana
a031	ʦa	ʦi:	ʦa:
a032	sugas	ʦigusi	ʦaŋʊs
a033	p <sup>h</sup> ag ~ p <sup>h</sup> agʒ	p <sup>h</sup> adʒi	p <sup>h</sup> agʒ
a034	pssa	psa	p <sup>s</sup> ŋsa / p <sup>s</sup> ŋsafʊŋʒ (‘ankle’)



No.	Uechi	Kurima	Uruka
a017	udi / kaina ('forearm') / ti : ('hand')	ude / k <sup>h</sup> aina ('forearm')	kaina
a018	ṣikara / taja (tjamunu 'to be strong')	taja	taja
a019	bakiḷḷa (or 'bakiḷḷa?')	bak <sup>h</sup> ida [old] / bitta [new]	baksda
a020	uibi	u.ibi	ujubi ~ ujubḷ
a021	–	t <sup>h</sup> i:	–
a022	ti:sim	tivṣim	ṣadḷafuṃ ~ ṣadḷafuṃ
a023	pidzi	pidzi	piḷḷa ~ pidza
a024	kidzi	NR	kiḷḷa ~ kidza
a025	aḫaṭsi ~ akaṭsi	akatsi [A] // a <sup>h</sup> xatsi [B]	akaṭṣa ~ akaṭṣa
a026	–	m:ku	–
a027	–	koḷoko:	–
a028	puni	p <sup>h</sup> uni	puṇi ~ p <sup>h</sup> uni
a029	–	bata	–
a030	k <sup>h</sup> imu ~ kimu	ṣimu	ksmu ~ k <sup>h</sup> amu
a031	ṣi	ṣi [A] // tsi [B]	ṣa:
a032	ṣigusi	ṣigusi	ṣgusa ~ ṣagusu
a033	pagi	p <sup>h</sup> adzi	pagz
a034	p <sup>h</sup> idza / piṣa	p <sup>h</sup> adziḷḷa	pṣsa ~ pṣsa

No.	Bora	Irabu
a017	ɔdi / k <sup>h</sup> aina ('back of the arm where it connects to the shoulder')	k <sup>h</sup> aina
a018	t <sup>h</sup> aja	t <sup>h</sup> aja (t <sup>h</sup> u:munu 'to be strong')
a019	bak <sup>ɔ</sup> da [Bora] // bitta [Aragusuku]	batta
a020	ɔibi	uibi ~ oibi
a021	ti: / ɔdifɔdzɔ ('wrist')	t <sup>h</sup> i:
a022	t <sup>h</sup> iɔtsɔm ~ t <sup>h</sup> iɔtsɔm	t <sup>h</sup> ivtsɔm
a023	p <sup>h</sup> i <sup>d</sup> zɔ (p <sup>h</sup> itsɔ ~ p <sup>h</sup> i <sup>d</sup> zɔ 'elbow')	p <sup>h</sup> idzɔ
a024	k <sup>h</sup> i <sup>d</sup> zɔ	k <sup>h</sup> idzɔ
a025	ak <sup>h</sup> ɔtsɔ	axɔtsɔ ~ ahatsɔ / ahamunu ('to be red')
a026	m:kɔ (nɔbɔta 'swelling; boil')	umku
a027	k <sup>h</sup> aɔkaɔ	k <sup>h</sup> o:munu
a028	p <sup>h</sup> ɔni ~ pɔni	p <sup>h</sup> uni
a029	bata	bata
a030	k <sup>ɔ</sup> mɔ	tsɔmuɔtsɔ ('heart') / tsɔmu ('liver')
a031	tsɔ / tsɔsɔ ('mother' s.milk/breast-ACCUSATIVE')	tsɔ:
a032	tsɔgɔtsɔ	tsɔgɔtsɔ
a033	p <sup>h</sup> a <sup>d</sup> zɔ ~ p <sup>h</sup> ag <sup>ɔ</sup>	p <sup>h</sup> adzɔ
a034	pssa / k <sup>h</sup> arasɔni ('lower leg')	pssafɔtsɔ

No.	Item	Ikema	Karimata	Shimajiri
a035	'lower leg'	kuvva	kuυυα	kuvva ~ kuυυα
a036	'ankle'	amambuni	amambuni	–
a037	'body'	du:	du:	–
a038	'anus'	tɛi:nuŋ	tɛibiruŋ	tɛiburuŋ
a039	'(break) wind'	hi:	pʰi:	–
a040	'testicle'	tani / fugui	tʰani / fugau (The whole is referred to as 'fugazdani ~ fuguɔdani'; the penis as 'mara')	–
a041	'I; me'	ba:	ban (bano:ba: 'I-TOPIC')	baŋ
a042	'we; us'	banti	banta	bantɛi
a043	'you'	vva	υυα ('v' is weak.)	vva
a044	'you (plural)'	vvadu:	υυata:	vvatɛi
a045	'uncle'	budza ('uncle') / uja ~ uibituuja ('one's senior') (buba ('aunt') / ha:mma ('one's senior'))	budza (buba 'aunt'; ɛu: 'elderly man')	buda / budasa (budaga: 'youngest uncle' / upuzza 'eldest uncle' / buba ~ bubama 'aunt')
a046	'uncle (plural)'	–	budzata	budata
a047	'father'	zza ~ dza	uja / iza (rare)	–
a048	'mother'	mma	anna	–

No.	Ōura	Kugai	Yonaha
a035	NR	kuvva (strong friction)	k <sup>h</sup> ʊ:ʊa
a036	–	amambuni	–
a037	–	du:	–
a038	t̤iburuŋ	t̤ibinum	t̤ibinʊm
a039	–	p <sup>h</sup> i:	–
a040	–	t <sup>h</sup> ani (mara ‘penis’)	–
a041	baŋ / ba: (‘I-GENITIVE’) / baja (‘I-TOPIC’)	baŋ	baŋ
a042	baga: / baga: (‘I-PLURAL- GENITIVE’)	banta	banta:
a043	ʊʊa	vva	ʊʊa
a044	ʊda ~ uda	vvata	ʊʊata:
a045	budza	budza	bʊdza
a046	budza:ta	budzata:	bʊdzat <sup>h</sup> a:
a047	–	a:za	–
a048	–	ani	–

Basic Vocabulary A

No.	Uechi	Kurima	Uruka
a035	–	kuvva	kuṽva ~ kuṽṽa
a036	–	amambuni	–
a037	–	du:	–
a038	ṭibinum	ṭibinum	ṭiḅinum
a039	–	p <sup>h</sup> i:	–
a040	–	t <sup>h</sup> ani / fugu  ~ fuguz	t <sup>h</sup> an <sup>i</sup> ~ taṅ <sup>i</sup> / fuḡu <sup>ṛ</sup> (not frequently used)
a041	du (long vowel?) / ban	baṅ	baṅ
a042	banta: (du:θa: / dzara:ka 'companions; peers')	banta:	ban <sup>h</sup> a
a043	vva	vva	vva (The stricture is such that it almost sounds like 'vba'.)
a044	vvata:	vvata:	vvataja
a045	butagama (also 'budzag ama'?)	budza / budzasa	budza ~ bu <sup>d</sup> za
a046	butagamata: (also 'budza gamata:'?)	budzata: / budzasata:	budzata: ~ bu <sup>d</sup> zata:
a047	–	uja	–
a048	–	anna	–

No.	Bora	Irabu
a035	kövva / mömötaŋ ('thigh')	k <sup>h</sup> uvva
a036	amambuni	amambuni
a037	dɔ:	up <sup>h</sup> udu:
a038	tɕibiɾɔm	tɕibinum
a039	p <sup>h</sup> i:	p <sup>h</sup> i:
a040	t <sup>h</sup> ani (of humans) / fuguɟ	fugu(ʔ)ŋ
a041	bəŋ / bəja ('I-TOPIC')	aŋ
a042	bənta: / bənta:ja ('I- PLURAL-TOPIC') / bəntaga (('I-PLURAL-GENITIVE'))	du:gaɕzi:na / du:ɕzi:na: / du:
a043	vva ~ ɔva	ja:
a044	ɔvata: / ɔvata:ja ('you- PLURAL-TOPIC')	iti
a045	bɔɕɕa / bɔɕɕagama / sɔɕɕa (('elder brother'))	budza
a046	bɔɕɕata	budzati
a047	zza (only used by the elderly)	ɔja
a048	anna (mma 'grandmother')	anna

No.	Item	Ikema	Karimata	Shimajiri
a049	'wife'	tudzi	tudzi	t <sup>h</sup> udzi
a050	'to be beautiful'	aparagi (aparagimiduŋ 'beautiful woman')	ap <sup>h</sup> aragi	–
a051	'husband'	butu	budu	butu
a052	'husband and wife'	tudzibutu	mi:tuŋa	mju:tu / mju:taŋa
a053	'child; offspring'	ffa	ffa	fa: / mmaga ('grandchild')
a055	'child; minor'	jarabi	jarabi	–
a054	'to be born'	mmarigamatado: ('to appear to be about to be born')	ffo: naŋgumuta ('to be likely to give birth to a child')	mmari <sup>z</sup> / mmarigumata ('to ought to be born')
a056	'elderly person'	uibitu	uipstu	–
a057	'niece'	m <sup>h</sup> u:i	m <sup>h</sup> u:i	mju: <sup>z</sup>
a058	'man; male'	bikiduŋ	bigiduŋ	bikiduŋ
a059	'woman; female'	miduŋ	miduŋ	miduŋ
a060	'person; human being'	p <sup>h</sup> i <sup>h</sup> tu ~ ɕtu ~ ɕto	pstu	ttu
a061	'everyone; everything'	m:nanai ('all together')	n:na	n:na
a062	'mosquito'	kaczaŋ	ga <sup>d</sup> zaŋ	gadaŋ

No.	Ōura	Kugai	Yonaha
a049	t <sup>h</sup> u <sup>d</sup> zɪ	t <sup>h</sup> udzi	t <sup>h</sup> ɔdzɪ
a050	–	k <sup>h</sup> agimunu (of flowers) / aparagi (of people)	–
a051	butu	but <sup>h</sup> u / biki <sup>r</sup> a [old]	bɔt <sup>h</sup> ɔ
a052	mju:tu	t <sup>h</sup> udzibutu / m <sup>j</sup> u:t <sup>h</sup> u	m <sup>j</sup> ɔ:t <sup>h</sup> ɔ / m <sup>j</sup> ɔ:tɔra
a053	fa:	ffa	ffa
a055	jarabi	jarabi [new]	–
a054	mmari	mmari	mmari:
a056	–	uipstu	–
a057	m <sup>j</sup> u:ɾ	m <sup>j</sup> u:z	m <sup>j</sup> u:ʒɪ ('nephew/niece') / bikim <sup>j</sup> u:ʒɪ ('nephew') / midɔmɔm <sup>j</sup> u:ʒɪ ('niece')
a058	bikiduɲ	bikidum	bikidɔmɔ
a059	miduɲ	midum	midɔmɔ
a060	pstu	pstu	p <sup>ɕ</sup> ɲt <sup>h</sup> u
a061	n:na	m:na	m:na
a062	ga <sup>d</sup> zaɲ / ga <sup>d</sup> zammu (‘mosquito-ACCUSATIVE’)	gadzam	gadzam



No.	Uechi	Kurima	Uruka
a049	midum ~ miðum (‘woman; wife’; ‘tudzi’ is a word from Okinawa Island.)	midumu (not ‘t <sup>h</sup> udzi’)	tudzi
a050	–	k <sup>h</sup> agi (of flowers) / ap <sup>h</sup> aragi (of women)	–
a051	bikidum ~ bikidzum	bikidumu (not ‘butu’)	but <sup>h</sup> u
a052	mju:tu	m <sup>h</sup> u:tu	mju:t <sup>h</sup> u
a053	ffa	ffa / ffa:ma	ffa
a055	jarabi	jarabi	jarabi
a054	naɕu:	naɕi(-du) / ffo:-du nas (‘to give birth to a child’)	m̩marin
a056	–	uipstu	–
a057	mjuə <sup>z</sup> / mjuəffa (a combination of the words for ‘niece’ and ‘child’ in which ‘z’ is elided)	m <sup>h</sup> u:i ~ m <sup>h</sup> u:z	m <sup>h</sup> u:z
a058	bikidum	bikidumu	bikidum̩ ~ bikidum̩
a059	midum ~ mi <sup>d</sup> ðum	midumu	midum̩
a060	pɿsu	pstu	pstu̩ ~ pstu̩
a061	m̩:na	muztu (‘z’ signifies the sound ‘z’ with creaky voice.) / m:na	m:na
a062	gadzam	gadzam	gadzam̩

No.	Bora	Irabu
a049	t <sup>h</sup> ʊdzɪ	t <sup>h</sup> udzɪ
a050	ap <sup>h</sup> aragi	ap <sup>h</sup> aragimunu
a051	bɔt <sup>h</sup> ʊ	butu
a052	m <sup>h</sup> ʊ:tɔra	m <sup>h</sup> u:tura
a053	ffa	ffa
a055	jarabi	jarabi
a054	mmari	mmari
a056	ʊipstʊ	uipstu ~ oipstu
a057	m <sup>h</sup> ʊ:ɾ ~ m <sup>h</sup> ʊ:ʒ	m <sup>h</sup> u:ʒ
a058	bikidʊm	bikidum
a059	midʊm	midum
a060	pstʊ	pstu
a061	m:na	m:na
a062	ga <sup>d</sup> zam	gadzam

No.	Item	Ikema	Karimata	Shimajiri
a063	'spider'	kumo	ku:	k <sup>h</sup> uma
a064	'spiderweb'	kumonuja:	ku·gasi̇	k <sup>h</sup> umanussɾ
a065	'butterfly'	tso:tso:	tso:tso:	tso:tso:
a066	'ant'	akai	ha:u	aχaʔ
a067	'earthworm'	dzi:mi:dzi	mi:midzi	mi:midzɾ
a068	'snail'	harunna	n:na	nna / p <sup>h</sup> arina (small species)
a069	'cat'	maju	maju	–
a070	'mouse; rat'	jumunu	jamunu	jamunu
a071	'horse'	nu:ma	nu:ma	nu:ma
a072	'billy goat'	bikihindza / hindza (‘goat’) / mi:hindza (‘nanny goat’)	bigipindza / pindza (‘goat’) / mi:bindza (‘nanny goat’)	–
a073	'horn (of an animal)'	nnu	ʔnu (‘n’ signifies that this sound begins voiceless.)	ʔnu
a074	'tail'	dzu:	dzu:	du:
a075	'pig'	wa:	wa:	ua:
a076	'meat (pork and the like)'	si:si	mi: / si:si (‘lean meat’)	si:ɾ
a077	'bird'	tui	tuu	t <sup>h</sup> uʔ
a078	'bird's nest'	tuinusi: / tuinuja:	si:	ssɾ
a079	'egg'	tunuka	tunuga	t <sup>h</sup> unaɕa

No.	Ōura	Kugai	Yonaha
a063	k <sup>h</sup> umu	k <sup>h</sup> uv	k <sup>h</sup> ʊ: ~ k <sup>h</sup> ʊʊ (also ‘kombu; kelp’)
a064	k <sup>h</sup> umunuɾa:	k <sup>h</sup> uvnuk <sup>h</sup> a:paz / k <sup>h</sup> uvnuga dzaparaɕi	k <sup>h</sup> ʊ:nʊssɾa
a065	NR	tɕo:tɕo:	NR
a066	ha:ŋ ~ xa:ŋ	aka:z (‘k’ signifies the sound ‘k’ pronounced towards the back)	aka:zŋ
a067	mi:ma <sup>d</sup> zŋ	mi:mi <sup>d</sup> zi	mi:mi <sup>d</sup> zŋ
a068	nna ~ n:na	m:na	nna / p <sup>h</sup> iŋɕinna (‘turban snail’)
a069	maju	maju	–
a070	jumunu	jumunu	ʝʊmʊnʊ / ʝjadza
a071	numa	nu:ma	nʊ:ma
a072	–	bikip <sup>h</sup> indza / p <sup>h</sup> indza (‘goat’) / mi:p <sup>h</sup> indza (‘nanny goat’)	–
a073	ɕɾnu	ɕɾinu	ɕɾnʊ
a074	dzu:	dzu:	dʒʊ:
a075	wa: (ʊɾa ‘cattle (i.e. cow or bull)’)	va:	ʊa:
a076	ɾa:ɾa (‘lean meat’)	miz (collective) / ɕi:si (for the separate parts)	ɾa:ɾa
a077	t <sup>h</sup> uŋ	t <sup>h</sup> uz	tʊzŋ
a078	ɾa:	ssi	tʊ:nʊssɾa
a079	t <sup>h</sup> unaka	tunak <sup>h</sup> a	t <sup>h</sup> ʊnaka

No.	Uechi	Kurima	Uruka
a063	kumo (Standard Japanese)	ja:barigaŋ	jamakuᵛ ~ jamakuy.
a064	ku:gasi (kaši ‘thread; string’)	ja:bari / ja:barigannussi	NR
a065	ᵛo:ᵛo (Standard Japanese)	ᵛo:ᵛo	ᵛo:ᵛo:
a066	akʰɑ:	aka  [A] // akaz [B]	azgara
a067	mimidzi	mi:midzi	mindza
a068	m:na	m:na	nna
a069	–	maju	–
a070	jumunu	jumuna [A] // jumudza [B]	jumura.
a071	nu:ma	nu:ma	nu:ma.
a072	–	bikip <sup>h</sup> indza / p <sup>h</sup> indza (‘goat’) / mi:p <sup>h</sup> indza (‘nanny goat’)	ᵛnu ~ ᵛnu
a073	ᵛinu	ᵛinu	ᵛnu ~ ᵛnu
a074	dzu:	dzu:	dzu:
a075	wa:	wa:	ʊa:
a076	si:si (‘lean meat’) / avva (‘fatty meat’)	si:si	si:s ~ si:s
a077	tou	t <sup>h</sup> uz	tuz.
a078	si / tu no si (‘bird’s nest’)	t <sup>h</sup> u nussi	su: ~ su:
a079	tunaka	t <sup>h</sup> unuka	tunaka

No.	Bora	Irabu
a063	k <sup>h</sup> ʔv ~ k <sup>h</sup> ʔv / k <sup>h</sup> ʔvv ~ k <sup>h</sup> ʔvv (‘spider- ACCUSATIVE’)	NR
a064	k <sup>h</sup> ʔvnʊs:	NR
a065	p <sup>h</sup> abih (large black species)	ʔo:ʔo:
a066	aʔɣara [Bora] // ak <sup>h</sup> a:ʔ [Aragusuku]	aha:ɾ
a067	mimɕɾ	mimidɕɾ
a068	nna / ma:nna (small species) / paɾinna (rare)	ʔɾnami
a069	majʔ	maju
a070	jʊmʊʔ	jumunu
a071	nʊ:ma	nu:ma
a072	bɿkipindza	bikipindza / p <sup>h</sup> indza (‘goat’)
a073	ʔɾʊʔ	ʔɾnu ~ ʔɾno
a074	ɕʔ:	<sup>d</sup> zu:
a075	ʊa: ~ wa:(?)	wa:
a076	sɾ:sɾ	sɾ:sɾ
a077	t <sup>h</sup> ʊ	t <sup>h</sup> uʔ ~ t <sup>h</sup> u
a078	sɾ:	sɾ:
a079	t <sup>h</sup> ʊnaka	k <sup>h</sup> u:ga

No.	Item	Ikema	Karimata	Shimajiri
a080	'pigeon; dove'	hatu	p <sup>h</sup> atu	–
a081	'fish'	zzu ~ dzu	izu	zzu
a082	'scale (of an animal)'	tsi:dzi / i:ki	i:ki	–
a083	'turtle; tortoise'	kami	kami	–
a084	'crab'	kaŋ (makugaŋ 'coconut crab')	kaŋ	k <sup>h</sup> aŋ
a085	'shellfish'	nna	piŋina ('turban snail'; n:na '(land) snail')	piŋina ('turban snail') / t <sup>h</sup> aŋanna
a086	'sea urchin (Hemicentrotus pulcherrimus)'	uŋ / kadzitsi	ju:uŋ / kadziki / biŋju:uŋ ~ bzŋju:uŋ / kadzikiju:uŋ	uŋ / aŋauŋ
a087	'meat (of sea urchins and the like)'	mi:	mi:	miʔ
a088	'salt'	ma:su	ma:su	–
a089	'to be salty'	sukaramunu	sukuraŋ ('karaŋ' refers to the taste of pepper)	–
a090	'sugar'	sata	sata (a <sup>d</sup> zimaŋ 'to be sweet')	–
a091	'sugar cane'	bu:dzi	bu:gi	bu:ŋ ~ bu:gʔ
a092	'sickle; scythe'	zzafa ~ <sup>d</sup> zafa (ju:tsi 'ax; hatchet')	izafa	zzafa

No.	Ōura	Kugai	Yonaha
a080	–	m:batu (p <sup>h</sup> aṭu ‘swallow’)	–
a081	ɾzu	zzu	zzu ~ ɾzu
a082	–	izki	–
a083	–	k <sup>h</sup> ami	–
a084	k <sup>h</sup> aŋ	k <sup>h</sup> aŋ	k <sup>h</sup> aŋ
a085	butara	kaigara (m:na ‘(land) snail’)	k <sup>h</sup> aʔa
a086	k <sup>h</sup> aṭsa	kacza'sa	uŋ (sea urchins in general) / k <sup>h</sup> adzɪk <sup>s</sup> a (‘Hemicentrotus pulcherrimus’)
a087	miŋ	kacza'sanumiz	mʔa:
a088	–	ma:su	–
a089	–	sukarasukara	–
a090	–	sata (aczimamunu ‘to be sweet’)	–
a091	bu:ɣa ~ bu:gʔa	bu:gʔi	bu:gʔa
a092	ʔazara	zzafa	zzafa



No.	Uechi	Kurima	Uruka
a080	–	p <sup>h</sup> atu / m:batu ('rufous turtle dove') / aubatu ('white-bellied green pigeon')	–
a081	<sup>i</sup> zzu	zzu	zzu
a082	–	izki (also 'dandruff')	–
a083	–	k <sup>h</sup> ame	–
a084	k <sup>x</sup> aŋ (an aspirated 'k?')	kaŋ	kaŋ
a085	m <sub>na</sub> ~ m <sub>na</sub>	asa  ~ asaz ('m:na' refers to a species of shellfish.)	NR
a086	akχo:ŋ	uŋ ('akaŋ', 'ffuŋ', and 'bo:dz̄iŋ' refer to specific species.)	uŋ
a087	m <sub>i</sub> :	m <sub>i</sub> :	mz <sub>i</sub> :
a088	–	ma:su	–
a089	–	sukura	–
a090	–	saŋa (azima: ~ azima 'to be sweet')	–
a091	bu:gi	bu:dz̄i	bu:gz̄
a092	<sup>i</sup> zara	zara	zara

No.	Bora	Irabu
a080	mːbatʊ ~ mːbatʊ	p <sup>h</sup> aʈu
a081	zzʊ ~ ɾzʊ	ʒazu
a082	ɾːki	iʒkja
a083	k <sup>h</sup> ami	k <sup>h</sup> a:mi
a084	k <sup>h</sup> aŋ	k <sup>h</sup> aŋ
a085	NR / pɕɕinna ('turban snail')	pɕɕima / mna / nigo: (‘giant clam’)
a086	k <sup>h</sup> adʒak <sup>s</sup> / ak <sup>h</sup> aʊŋ (inedible species)	ohouŋ / k <sup>h</sup> a <sup>d</sup> ʒaʔ
a087	m <sup>ʒ</sup> :	miŋ
a088	ma:sʊ (ʊpʊʂʊ 'tide')	ma:su
a089	sʊkara(mʊnʊ)	sukaramunu
a090	sata ~ saʈa (adʒama: ‘to be sweet’)	sata
a091	bʊ:ɡʒ ~ bʊ:ɕʒ	bu:ɕʒ
a092	zzafa	ɾzafa

No.	Item	Ikema	Karimata	Shimajiri
a093	'to eat'	faifiiru ('to.eat to.give- IMPERATIVE')	fai ('ŋkegisamadzi' to one' s superiors)	fau
a094	'food'	faimunu	faumunu	faumunu
a095	'oil'	avva	aʊva	–
a096	'rice porridge'	ju:	NR	juv
a097	'cooked rice'	munu ('cooked rice'; i: / maii: 'rice ball')	mišmaʊ	mannuʔa ('rice ball') / n: nuʔa ('potato ball')
a098	'miso; fermented soybean paste'	nsu	nsu	nsu
a099	'rice'	mai	maʊ	maʌ ~ maʔa
a100	'(wooden) bowl'	makai	ma:ʊ	maχaʌ ~ maχaʔa
a101	'tea bowl; rice bowl'	tɛabaŋ	tɛabaŋ	–
a102	'to throw away (tea)/to spill'	augi: / ɛtiru ~ stiru	stiru ('to.throw.away- IMPERATIVE')	aʊgiʔa / itatɛin
a103	'garlic'	hi:	pʔi:	pʰiʔa
a104	'garlic chive'	mi:na	mizza	miʔna
a105	'bud; sprout'	mi:	bakami: / pʰaʔɛiŋki (‘germination’)	–
a106	'oriental melon'	ui ('watermelon') / ŋgʰau (‘cucumber’) / gaur (‘bitter melon’)	uu (go:ra ‘bitter melon’)	–

No.	Ōura	Kugai	Yonaha
a093	fo:	fo·	fo:
a094	fo:munu	fo:munu	fo:mũnũ
a095	–	avva	–
a096	juũ	juv	jũ:
a097	NR	maz (nnaz ‘rice ball’)	NR (maʒnuʒɿ ‘rice ball’)
a098	ntsu	msu	mʑũ
a099	maŋ (ssumaŋ ‘white rice’)	namamaz / maz	maʒɿ
a100	makaŋ	mak <sup>h</sup> az <sup>i</sup>	mak <sup>h</sup> aʒɿ
a101	–	tɛ <sup>h</sup> abaŋ	–
a102	o:giŋ / skja:sŋ (‘to make a mess of?’)	stiru (‘to.throw.away- IMPERATIVE’)	o:gi / it <sup>h</sup> ɛti ~ itɣti
a103	p <sup>h</sup> iŋ	p <sup>h</sup> iz	p <sup>h</sup> iʒɿ (also ‘needle; pin’)
a104	miŋna	mizza	mʒɿ:na
a105	–	mi:	–
a106	–	uzgama (go:ra ‘bitter melon’)	–

No.	Uechi	Kurima	Uruka
a093	fo:	ŋkjaɣisamatɕi ('to.eat- IMPERATIVE'; to one's superiors) / fe: ('to.eat- IMPERATIVE'; to one's inferiors)	fau ~ faʊ
a094	fa'munu	fo:munu	faumunu
a095	–	avva	–
a096	juv / dzu:ɕwi ('rice soup')	juv	juv,
a097	NR / gohaŋ (Standard Japanese)	maz (zz [old], nnari [new] 'rice ball/potato ball')	('maz z:' is not used.)
a098	mɕu	m:su [A] // m:so [B]	mɕu ~ mɕu
a099	mal	maz [A] // maɭ [B]	maz, ~ maŋ
a100	makʰal	makaɭ [A] // makaz [B]	makaz ~ [sic.]
a101	–	ɕabaŋ	–
a102	sitiru / sitiruŋ	stiz	jaz, ~ stiz,
a103	pʰil / pʰiltɕikina	piz (apparently not 'piɭ')	piz, ~ piɕ,
a104	miɕla ~ milna	mī:na	nʰira / mizna ~ mi:na
a105	–	mi:	–
a106	–	uz (go:ra 'bitter melon')	–

No.	Bora	Irabu
a093	faʊ / fa:di ('to.eat-HORTATIVE')	fo: / fai ('to.eat-IMPERATIVE')
a094	faʊmʊnʊ	faɪmunu
a095	avva ~ aʊva	avva
a096	jʊv ~ jʊt	dzu:ɬa
a097	ʒa: / nigʒa ('rice ball')	maɪnuʒ: / um
a098	mtsʊ	msu
a099	maʒa	maɪ
a100	makaʒa	maxaɪ ~ mahaɪ
a101	ɬabaŋ	ɬabaŋ
a102	itaɕi	wa:gɨŋ / itakiŋ
a103	pʰiʒa	pʰiɪ
a104	ʒʊna ~ ʒʊna (maʒna 'spring onion')	nubiɪ (ʒʊma 'spring onion')
a105	mi:	bahabura / mi:
a106	ʊʒa	uʒa

No.	Item	Ikema	Karimata	Shimajiri
a107	'field (cultivated)'	hai	p <sup>h</sup> aṭagi / p <sup>h</sup> ari	p <sup>h</sup> ataki ('p <sup>h</sup> ari' is not frequently used.)
a108	'field (not cultivated)'	nu:	nu:	nu:naxa / nu: / abarinu: (abaribari 'field lying waste')
a109	'night-scented lily; giant upright elephant ear'	bibi:gassa	biugassa ~ b <sup>h</sup> u:gassa	bju:gassa
a110	'tree'	ki:	ki:	ki:
a111	'branch'	juda	ida (not 'juda')	juda
a112	'fruit; nut'	mi:	n:ta	mi <sup>ʔ</sup> / na <sup>ʔ</sup>
a113	'grass'	fuṣa (= 'f <sup>v</sup> sa')	fuṣa / juṣa (for livestock)	ssa
a114	'to plant'	ibi: fi:ru ('to.plant to.give-IMPERATIVE')	ibiru ('to.plant-IMPERATIVE')	–
a115	'common garcinia (tree)'	kutsigi ('k' is unaspirated and non-pharyngeal.)	p <sup>h</sup> uḳagagi:	k <sup>h</sup> uḳag <sup>ʔ</sup> gi:
a116	'saw'	nukudzi	nukagi	nukag <sup>ʔ</sup>
a117	'board; plank; plate; sheet'	tana	ita	ita
a118	'nail; spike; peg'	kanifudzi	fugi ~ fugu	fug <sup>ʔ</sup>
a119	'carpenter'	sajafu	sajafu	sajafu
a120	'needle; pin'	hai	p <sup>h</sup> au	pi <sup>ʔ</sup>
a121	'clothing; kimono'	tsiŋ	k <sup>ʰ</sup> iŋ	k <sup>ʰ</sup> ŋ
a122	'sash; belt'	suku: ~ siḳu:	si <sup>h</sup> uḡu	safug <sup>ʔ</sup> ~ sapug <sup>ʔ</sup>
a123	'collar'	tsinnufudzi	fugu	fug <sup>ʔ</sup>
a124	'mirror'	kagaŋ	k <sup>h</sup> agaŋ	k <sup>h</sup> a <sup>ʰ</sup> aŋ
a125	'fire'	umatsi	u <sup>h</sup> matsi	mmatsa

No.	Ōura	Kugai	Yonaha
a107	p <sup>h</sup> atagi / p <sup>h</sup> ari	p <sup>h</sup> ari	p <sup>h</sup> ari
a108	nu:	nu:	nʊ: ('field lying waste')
a109	biʊ (biʊgasa ~ bju:gasa 'night-scented lily leaf')	bivgasa	biʊgassa
a110	k <sup>h</sup> i:	ki·	ki:
a111	ida	juda	jʊda
a112	naŋ	naz	ki:nunaʒ
a113	ssa	fsa	fsa
a114	–	ibifu ('to.plant-IMPERATIVE')	–
a115	p <sup>h</sup> ukagi	p <sup>h</sup> ukadzgi:	p <sup>h</sup> ʊkʊgi:
a116	nukagʒ	nukugz	nʊkʊgʒ
a117	ita	itsa	NR
a118	k <sup>h</sup> anifugʌ	k <sup>h</sup> anifugz / fugz	fʊgʒ
a119	sajafu	sajafu	sajafʊ
a120	piŋ	piz	p <sup>h</sup> iʒ
a121	k <sup>ʒ</sup> ŋ / fuku ('clothing')	k <sup>ʒ</sup> ŋ	k <sup>ʒ</sup> ŋ / k <sup>ʒ</sup> mʊŋ
a122	subagʌ	sipugz	s <sup>ʒ</sup> ʊgʒ
a123	fugʌ	k <sup>ʒ</sup> innufugz	fʊgʒ
a124	k <sup>h</sup> agaŋ / k <sup>h</sup> agammu (('mirror-ACCUSATIVE'))	k <sup>h</sup> agam	k <sup>h</sup> agam
a125	mmo:ʌ	umutsi	ʊmaʌ



## Basic Vocabulary A

No.	Uechi	Kurima	Uruka
a107	p <sup>h</sup> ari	p <sup>h</sup> ari	paṛi ~ paṛi
a108	nu:	t <sup>h</sup> usari ('land covered in grass') / nu: (used for a kind of grass)	nu:
a109	bivgassa	biv (bivgassa 'night-scented lily leaf')	bivgassa
a110	ki:	ki:	ki: ~ ki:
a111	juda	ida	juda
a112	na <sup>z</sup> ~ naɮ ~ nau	(ki:nu) naz,	naz,
a113	fusa	fsa	fṣa
a114	–	–	–
a115	puḱukugi ('g' is not palatalized.)	pukutsigi: (also 'bunggi:')	puḱukuki: ~ puḱukugi
a116	nukugi ~ nufugi	nukudzi	nukugz
a117	jufa ~ juk <sup>xa</sup> (kabejuk <sup>xa</sup> 'wall board')	itsa	it <sup>h</sup> a ~ itsa
a118	fugi	fudzi / k <sup>h</sup> anfudzi	fgz
a119	sajafu	sajafu	sajafu ~ sajafu
a120	p <sup>h</sup> iz ~ p <sup>h</sup> iλ ~ p <sup>h</sup> iʷ (also 'garlic')	p <sup>h</sup> iz (tsinnubiz 'sewing; needlework')	p <sup>h</sup> iḱ
a121	kij	tsij	ksj
a122	supuɣu (or 'supigi?')	sipudzi	spugz
a123	fugu (or 'fugi?')	fudzi	eri
a124	kagam	kagam	kagam
a125	umatsi	umatsi / p <sup>h</sup> i [old]	umats ~ umats

No.	Bora	Irabu
a107	p <sup>h</sup> ari	p <sup>h</sup> ataki / p <sup>h</sup> aru
a108	nʊ:	nu:
a109	biʊgasa	biʊgassa
a110	k <sup>h</sup> i:	k <sup>h</sup> i:
a111	jʊda	ida
a112	naʔ	naʔ
a113	fʊʂa	fʊʂa
a114	ibi / ibirʊ (imperative form?)	ibih
a115	fʊkʊkʊgi: [new]	kuputʂʊgi
a116	nʊkʊgʔ	nuk <sup>h</sup> adzʔ:
a117	itsa [Bora] // ita [Aragusuku]	itsa
a118	fʊgʔ	fudzʔ
a119	sajafʊ	sajafu
a120	p <sup>h</sup> jaʔ	p <sup>h</sup> aʔ
a121	kʂʊŋ	tʂʊŋ
a122	spʊ <sup>d</sup> ʔ	sʊkubʔ
a123	fʊgʊ ~ fudzʔ	k <sup>h</sup> ubʔ
a124	k <sup>h</sup> agam	k <sup>h</sup> aa <sup>f</sup> m
a125	mmatʂʊ	umatʂʊ

No.	Item	Ikema	Karimata	Shimajiri
a126	'ash'	karahai	karapaʷ	karapaʔ
a127	'water'	midzi	mi <sup>(d)</sup> zi	midʒ
a128	'to become wet'	m <sup>m</sup> i(j)ui ('to.become.wet- STATIVE')	m <sup>m</sup> i-	m:mi
a129	'wind'	k <sup>h</sup> adi	k <sup>h</sup> adzi	k <sup>h</sup> adzi
a130	'whirlwind; tornado'	amaunau	ino:	amaino:
a131	'earthquake'	nai	naʷ	nai
a132	'cloud'	m <sup>m</sup> u (amimmu 'rain cloud')	fumu	fuma (tɕiŋ 'sky')
a133	'rain'	ami	ami	–
a134	'rainbow'	NR	o:natsi (also 'Japanese rat snake')	NR
a135	'color; hue'	iru ~ iro	iru	–
a136	'to be blue'	aumunu	o:	aukaŋ (ffu 'to be black'; aχ a 'to be red')
a137	'lightning'	kannai	nnapskau	nnapskaʔ
a138	'to be dazzling; to be glaring (of light)'	mi <sup>h</sup> u <sup>h</sup> aimunu ~ mi <sup>h</sup> u <sup>h</sup> taimunu	mipada:simunu	mi:putɕikaŋ
a139	'light'	çikai	pskau	pskaʔ
a140	'shade'	kagi	kagi	k <sup>h</sup> agi
a141	'the sun'	tida	tida	tɕida
a142	'the moon; month'	tɕitsi (çitotɕitsi 'one month')	tɕkssu	tɕka ~ tɕkaʔ (ŋgitatɕka 'next month'; k <sup>h</sup> atɕka 'last month')

No.	Ōura	Kugai	Yonaha
a126	k <sup>h</sup> arapaŋ	k <sup>h</sup> arap <sup>h</sup> az / p <sup>h</sup> az(i)	k <sup>h</sup> arapaʔ
a127	midʒŋ / mitʒu ('water-ACCUSATIVE')	midʒi	mi <sup>d</sup> ʒŋ
a128	mmin / mminja:ŋ ('to have become wet')	mmin	mmin:
a129	k <sup>h</sup> adʒi	k <sup>h</sup> adʒi	k <sup>h</sup> adʒi (also 'fire')
a130	amaino:	ama.ino:	amaino:
a131	nai	nai	nai
a132	k <sup>h</sup> umu	fumu	fʊm
a133	–	ami	–
a134	timpau ~ timpau (pau 'snake')	t <sup>h</sup> imbav	timpau ~ timpau
a135	–	iru	–
a136	o:o: / o:munu / o:kaŋ	o:	o:nʊ
a137	nnapskaŋa / k <sup>h</sup> annaŋa ('thunder')	m:napskaz	nnap <sup>h</sup> kaʔ
a138	mipudasamunu	mak <sup>h</sup> i:maks	mip <sup>h</sup> ʊʔaʔnʊ
a139	pskaŋ	pskaz	p <sup>h</sup> kaʔ
a140	k <sup>h</sup> agi	k <sup>h</sup> agi	k <sup>h</sup> agi
a141	t <sup>h</sup> ida	t <sup>h</sup> ida	t <sup>h</sup> ida
a142	ʒkaŋ	ʒkssu	ʒkaʔ / ʒkaʔmʊʒʃ:

No.	Uechi	Kurima	Uruka
a126	karap <sup>h</sup> aʎ ~ karap <sup>h</sup> aʒ	karabaʎ [A] // karabaz [B]	karapaz
a127	midzi	midzi	midʒɪ
a128	m̄midu ~ m̄miðu	m̄mi:(du:)	m̄mi
a129	kadzɪ	k <sup>h</sup> adzɪ	kadzɪ
a130	amainou <sup>˘</sup>	ama.ino:	amainau
a131	nai	nai	nai
a132	kumu / fumu [elicited]	fumu	φūmu
a133	–	ami	–
a134	timbaʊ (paʊ ‘snake’)	niɖzi (‘timbav’ is obsolete.)	timbaʊ ~ timpau
a135	–	iru	–
a136	‘o:’? (o:diŋ ‘blue sky’; o:umi ‘blue sea’)	au / auiru	au ~ aʊ
a137	m̄nap <sup>s</sup> yal (‘l’ is dorsal.)	nnabikaʎ [A] // nnapaskaʎ [B]	nnapškaz
a138	miptu <sup>z</sup> / miptɪ	mi:pɥtiʎ [A] // mi:pɥtiz [B]	mipɥtɪn
a139	p <sup>s</sup> kal	pskaʎ	pškaz
a140	kagi (The final sound is somewhat central.)	kagi	kagi ~ kagi
a141	t̄ida (p <sup>s</sup> imu ‘(in the sunlight’)’)	tida	t̄ida ~ tida
a142	ts̄ikiju	ts̄itsi [A] // ts̄itsinuju: [B]	ts̄kɣ

No.	Bora	Irabu
a126	k <sup>h</sup> arapaŋ ~ k <sup>h</sup> arapaʒŋ	k <sup>h</sup> ara paŋ
a127	mi <sup>d</sup> ʒŋ	mi <sup>d</sup> ʒŋ
a128	mni:	mni: / ni:ŋ ('to have become wet') / mnuddo ('to.become.wet-EMPHATIC')
a129	k <sup>h</sup> a <sup>d</sup> ʒi	k <sup>h</sup> a <sup>d</sup> ʒi
a130	amaino:	amaino:
a131	nai	nai
a132	fʊmʊ	fumu
a133	ami	ami
a134	t <sup>h</sup> imbaʊ ~ t <sup>h</sup> imbaʊ (pav ~ paʊ 'snake')	t <sup>h</sup> imbav (p <sup>h</sup> av 'snake')
a135	iʊ	iru
a136	aʊaʊ / aʊka:	o: / o:iʊo / o:hriʊba / o:ha ŋ
a137	nnapskaʒŋ	mnapskaŋ
a138	mipʊtʊʊ / mipʊtʊʊ:ŋ ~ mipʊtʊʊ	mi:p <sup>h</sup> utiŋ / mi:p <sup>h</sup> utiŋmunu
a139	pskaŋ	p <sup>ʃ</sup> kaŋ
a140	k <sup>h</sup> agi	k <sup>h</sup> a:gi
a141	pssʊma	t <sup>h</sup> ida
a142	tʂka	tʂsu ~ tʂtsu (?) (t <sup>h</sup> atatʂŋ 'next month')

No.	Item	Ikema	Karimata	Shimajiri
a143	'the east'	agai	a:u / a:gaɗzi ('east wind')	aβaɫ
a144	'the north'	niɕi	ui / uigaɗzi ('north wind')	ui
a145	'the west'	i:	nisi / niskaɗzi ('west wind')	iʒ
a146	'the south'	haibara	p <sup>h</sup> ai / p <sup>h</sup> aigaɗzi ('south wind')	p <sup>h</sup> ai
a147	'(the) right (side)'	migi	ŋgu	ŋgʒ
a148	'(the) left (side)'	ɕidai	bidaʷ ~ bzdaʷ	bʒdaʒ
a149	'(in) front (of); forward'	mai (tibi 'behind; backward')	mafka (tɛibi 'behind; backward')	–
a150	'road; path; way'	ntɕi	ntɕi	ntɕa
a151	'peak; ridge'	mmi	mmi	mmi
a152	'fog'	NR	NR	kʒ:
a153	'dew'	tɕi:	tɕiju	tɕiʊ
a154	'morning'	ɕitumuti	stumuti	stumatsi
a155	'daytime'	hi:ma	psma	pʒanaɣa / pʒama
a156	'evening'	jusarabi	jusarabi	–
a157	'night'	junaka	ju:na:	ju:ʒ
a158	'now'	nnama	nnama	nnama
a159	'today'	k'u:	kju:	k <sup>h</sup> ju:

No.	Ōura	Kugai	Yonaha
a143	(agaŋ ~) a:ŋ	ag <sup>-</sup> az ('g <sup>-</sup> ' signifies the sound 'g' pronounced towards the back) / ag <sup>-</sup> azk <sup>h</sup> adzi ('east wind')	agaʔ
a144	t <sup>h</sup> uranpa: / ni:nupa:	nisi ~ nsi / uinagi / nsik <sup>h</sup> adzi ('north wind')	nisi
a145	iŋ / nisi	iʔ / iʔk <sup>h</sup> adzi ('west wind')	iʔ
a146	mmanupa: / p <sup>h</sup> ai	p <sup>h</sup> ai / p <sup>h</sup> aik <sup>h</sup> adzi ('south wind')	pai
a147	n:ŋ	ŋgz	ŋgʔ
a148	bʔdaŋ	pzdaz	pʔdaʔ
a149	–	mai (ʔibi 'behind; backward')	–
a150	ntsŋ	mʔi	mʔŋ
a151	mmi	mmi	mmi
a152	k <sup>h</sup> a:vva	ksi	kʔ:
a153	ʔiv	ʔiv	ʔʔv
a154	stumuti	ʂtumuti	ʂtʔmʔti
a155	p <sup>h</sup> ma	psima	pʔma
a156	–	jusarabi	–
a157	ju:ŋ	jun <sup>h</sup> a:ŋ	jʔv: / jʔnai
a158	nnama	nnama	nnama
a159	k <sup>h</sup> u:	kju·	k <sup>h</sup> ʔv:



No.	Uechi	Kurima	Uruka
a143	aʔal	agaɫ [A] // agaz [B]	agazɿ
a144	ninupa / nisi	nisi	nisiŋ ~ nis
a145	l: (or ‘ɬ:’?)	il [A] // iz [B]	zɿ:
a146	p <sup>h</sup> ai	p <sup>h</sup> ai	p <sup>h</sup> ai
a147	ŋgɨ	ndzi	ŋgzɿ
a148	pɨdal ~ pɨda	p <sup>h</sup> idaɫ [A] // psdaz [B]	pʂdazɿ ~ pʂdaŋ
a149	–	mai	–
a150	mɨsi	mɨsi	mɨs ~ mɨsŋ
a151	mɨmi (↔ ‘suʔku’)	m:ni	mɨmi
a152	k <sup>ʂ</sup> i·uɸi	NR	kʂɿ:
a153	NR	tɕuf	tɕu, ~ tɕuɸ
a154	situmuti (asamunu ‘breakfast’)	stumuti	stumutiɿ ~ stumuti
a155	p <sup>ʂ</sup> ima (aɕi ‘lunch’; sanakaɿ ‘ten o’clock snack’)	pssima	p <sup>ʂ</sup> i:ma
a156	jusarabi (jul ~ juɫ ‘dinner’)	jusarabi	–
a157	junaka	june:	junai
a158	nɸama	nɸama	nɸama
a159	kju:	k <sup>h</sup> u:	kju: ~ kjuɿ:

No.	Bora	Irabu
a143	agaŋ	a <sup>h</sup> aŋ
a144	nis <sup>h</sup> ~ nis <sup>h</sup>	ui
a145	i <sup>h</sup> ŋ	i <sup>h</sup> ŋ
a146	p <sup>h</sup> ai	p <sup>h</sup> ai
a147	ŋg <sup>h</sup> ŋ	mi:tsŋ
a148	p <sup>h</sup> adaŋ ~ p <sup>h</sup> ada <sup>h</sup> ŋ	p <sup>h</sup> idiŋ
a149	mai	mauki: (tsibi ‘behind; backward’)
a150	m <sup>h</sup> tsŋ	m <sup>h</sup> tsŋ
a151	mmi	mni
a152	k <sup>h</sup> ŋ:	k <sup>h</sup> iri
a153	ts <sup>h</sup> ov ~ ts <sup>h</sup> ov	ts <sup>h</sup> ov
a154	s <sup>h</sup> ·t <sup>h</sup> om <sup>h</sup> ti	stumuti
a155	p <sup>h</sup> ŋ:ma	p <sup>h</sup> ŋ:ma
a156	j <sup>h</sup> usarabi	j <sup>h</sup> usarabi
a157	j <sup>h</sup> ŋnai / j <sup>h</sup> ŋ:ŋ ‘dinner’	ju <sup>h</sup> ŋna <sup>h</sup> ŋ
a158	nnama	nnami
a159	k <sup>h</sup> ju:	k <sup>h</sup> ju:

No.	Item	Ikema	Karimata	Shimajiri
a160	'tomorrow'	atɛa	atɕa	ata
a161	'the day after tomorrow'	mm <sup>1</sup> a mi:ka	asadi	astɛi
a162	'next year'	ja:ni	ja:ni	ja:ni
a163	'yesterday'	nnu	ksɲu	k <sup>s</sup> nu
a164	'last year'	kuczɯ	kuczɯ	k <sup>h</sup> udu
a165	'a long time ago'	ŋk'a:ŋ	ikja:ŋ	ŋkja:ŋ
a166	'summer'	–	natsi	–
a167	'to be warm'	nfumunu	fumuraŋ	nufkaŋ
a168	'to be cold (of the weather)'	ɛɛimunu	pɛimunu	piɕikaŋ
a169	'to be cold (to the touch)'	higurumunu	bzguu	b <sup>ɣ</sup> guru
a170	'sea'	iŋ	iŋ	iŋ
a171	'to become muddy; to become cloudy'	mugairi: du:i (‘to.become.muddy- STATIVE’)	mugari	janavvi / mugairi
a172	'boat; ship'	funi	funi	funi
a173	'coral reef'	piɕi	urubuni ('things growing in the sea'; pɛɛi 'shoal')	piɕi
a174	'sand'	nnagu	nnagu	nnagu
a175	'to go; to leave'	haitti ( <i>shite</i> -continuative)	p <sup>h</sup> a:ri	ik <sup>ɣ</sup> / pi <sup>ɣ</sup>
a176	'to be fast'	h <sup>1</sup> a:munu (not 'ç')	p <sup>h</sup> a:munu	pja:munu
a177	'earth; the ground'	nta ~ mta ('m' pronounced as 'm̃')	nta	nta

No.	Ōura	Kugai	Yonaha
a160	at̚sa	at̚sa (also 'geta; Japanese clog')	at̚sa
a161	asatti	asati	asaṭʰi
a162	ja:ni	ja:ni	ja:ni
a163	kʰnu	ksinu	kʰnʊ
a164	kʰu <sup>d</sup> zu	kudzu	kʰu <sup>d</sup> zʊ
a165	ŋkja:ŋ	ŋkja:ŋ	ŋkja:ŋ
a166	–	natsi	–
a167	nufkaŋ / at̚kaŋ	ŋko.ŋku	nʊʔnʊ ('to be lukewarm?')
a168	pɕikaŋ	pɕimunu	pʰiɕi:nʊ
a169	bʰgʊrukaŋ	psigʊrumunu	pʰgʊʊʊ:nʊ
a170	iŋ / immu ('sea-ACCUSATIVE')	im	im
a171	mugja:ri	ŋgʊvju· (of the sea) / mugjaz (of water in a glass)	–
a172	funi	funi	fʊni
a173	pɕei	jamo:ra (pɕei 'shoal')	ɕi: / pʰiɕi
a174	nnagu	m·nagu	nnagʊʊ:
a175	pʰirin'a:ŋ ('to have gone')	pʰiri ('to.go-IMPERATIVE') / pʰizdus ('to.go-EMPHATIC')	pʰiŋʔ
a176	pʰja:kaŋ	pʰja:munu	pʰja:nu
a177	nta	m̥ta	mtʰa

No.	Uechi	Kurima	Uruka
a160	aɕa / ats	atsa	atsa
a161	asaʔi	asate	asaʔi
a162	ja:nʔi	ja:ni	ja:nʔi
a163	kʰinu	tsino	kʰnu:
a164	kudʒu	kʰudʒu	ku <sup>d</sup> ʒu
a165	ŋkja:ŋ	ŋkja:ŋ	ŋkja:ŋ
a166	–	natsi	–
a167	atsisa / nufsa [elicited]	nuffu: / nuffu:u nuffu:	nuφu: ~ nuφu / nuφu:nuφu (reduplicated adjective)
a168	pʰisa	pɕimunu	piɕi:piɕi
a169	pʰisa ~ pʰisa	pʒguro:	pʒguru:pʒguru
a170	im	im	im
a171	mugaiʔ ~ mugaiʔ	mugʰa:ri (‘to.become.muddy- STATIVE’)	nʰiguri / cf. mugairi (of river water and seawater that is mixed together)
a172	funʔi	funi	φunʔi
a173	pɕi ~ pɕi	pɕi	piɕi
a174	mɲagu (ku ‘powder’)	m:nagu	ɲagu
a175	ikʰi / kʰi / paʔ ~ paʔ	pʰiri (‘to.go-IMPERATIVE’)	piɰ ~ piɰʔ
a176	pja:munu	pja:munu	pja:munu
a177	mɲa ~ mɲa (isi ‘stone’)	mta	mɲa

No.	Bora	Irabu
a160	atʂa	atʂa
a161	asatti	asatti
a162	ja:ni	jaini
a163	kʰnu:ʂ:	ʂanu:
a164	kʰuʂʂu	kʰudu
a165	ŋkʰa:ŋ	mki:ŋ
a166	natsʌ	natsʌ
a167	nʊfʊ:nu	nufumunu
a168	pʌʌi:pʌʌi ~ piʂi:piʂi	pʌʌimunu
a169	pʰʌʂʊʂʊ:nu	pʰʌʂʊʂʊmunu
a170	im	im
a171	mʊʂga / mʊʂgari (continuative form)	mugaiŋ
a172	fʊni	funi
a173	pʌʌi ~ piʂi	pʌʌi
a174	nnagu:ʂ:	mnagu
a175	pʰiʰʌ	pʰiŋ / pʰiri ('to.go- IMPERATIVE')
a176	pʰi'a:mʊnuʂ / pʰi'a:pʰja	pʰi'a:munu
a177	mta	mta

## Basic Vocabulary A

No.	Item	Ikema	Karimata	Shimajiri
a178	'yard; garden'	minaka	a:ra / mina:	–
a179	'house'	ja:	ja:	–
a180	'dust'	φu̇ki	p <sup>h</sup> u̇ki	–
a181	'to be dirty'	εiçana	εεanaη	εεana
a182	'door'	jadu	jadu	–
a183	'gate'	muη / dzau	dzo:	dau (pa <sup>z</sup> ηftsa 'entrance')
a184	'front'	mauk <sup>l</sup> a:	taηka: / maukja: ('house in front')	mafkja: (ηka <sup>z</sup> η 'opposite side')
a185	'village'	mmaridzima	sīma	sηma
a186	'grave; tomb'	haka	paqa	paqa
a187	'there (distal)'	kama	kama	kama
a188	'there (medial)'	uma	uma (also 'here')	–
a189	'to be absent; to be nonexistent'	n <sup>l</sup> a:η	n <sup>l</sup> a:η	–

No.	Ōura	Kugai	Yonaha
a178	–	minaka	–
a179	ja:	ja:	–
a180	–	p <sup>h</sup> u <sub>g</sub> ki / ja:buki ('ball of dust')	–
a181	ㇿana / sputa <sub>1</sub>	ㇿana	ㇿana:nu
a182	–	jadu	–
a183	dzo:futs <sub>1</sub> ('entrance')	tsimbu (for the whole structure) / dzo: (for the space between the gateposts)	dzo:
a184	mai (maibara 'house in front'; ㇿibara 'house behind')	maf <sub>1</sub> k'a ~ maf <sub>1</sub> k'a	mau <sup>h</sup> k <sup>h</sup> a:
a185	s <sub>1</sub> ma	buraku ('sima' refers to the whole of Miyakojima.)	NR
a186	p <sup>h</sup> aka	p <sup>h</sup> a <sub>g</sub> ka	p <sup>h</sup> aka
a187	k <sup>h</sup> ama	k <sup>h</sup> ama	k <sup>h</sup> ama
a188	NR (ui 'that (medial)')	uma (kuma 'here')	–
a189	–	n'a:ŋ	–



## Basic Vocabulary A

No.	Uechi	Kurima	Uruka
a178	–	minaka	–
a179	–	ja:	–
a180	–	p <sup>h</sup> u <sub>ki</sub>	–
a181	ɛ:ana / ɛ:anamunu	ɛɛana	jarimunu
a182	–	jadu	–
a183	dʒoː	dʒo:	dʒau
a184	maf <sub>kja</sub> : (ɛi:bara ‘behind; backward’)	mo:t <sup>h</sup> u / mo:t <sup>h</sup> umai / maibara	mav <sub>kja</sub> : ~ mau <sub>kja</sub> :
a185	NR	bantadzima	ʃma ~ ʃma
a186	pa <sub>ka</sub>	pa <sub>ka</sub>	pa <sub>ka</sub>
a187	kama	kama	k <sup>h</sup> a <sub>ma</sub> :
a188	kuma (‘uma’ is not used.) / amakuma (‘here and there’)	uma (kuma ‘here’)	–
a189	–	n <sup>h</sup> a:ŋ	–

No.	Bora	Irabu
a178	minaka	minaha
a179	ja:	ja:
a180	p <sup>h</sup> ɔ̃ki / mtabɔ̃ki ('soil dust')	gumi / p <sup>h</sup> uki
a181	ɛɛana	ɛɛanamunu
a182	jadɔ̃	jadu
a183	dzo: [Bora] // dzaɔ̃ [Aragusuku]	dzo:vtsɾ
a184	mau <sup>k</sup> ja: / maibara ('house in front')	mau <sup>k</sup> ja:
a185	sɾma	sɾma
a186	p <sup>h</sup> aka	p <sup>h</sup> a: ~ p <sup>h</sup> a:
a187	k <sup>h</sup> ama	k <sup>h</sup> ama ~ k <sup>h</sup> ama:
a188	ɔ̃ma (k <sup>h</sup> ɔ̃ma 'here')	umahama ('here and there')
a189	n <sup>h</sup> a:ŋ	no:mai ni:ŋ ('what-too to.be.absent'; 'There is nothing.')

## Basic Vocabulary B

Basic Vocabulary B

No.	Item	Ikema	Karimata	Shimajiri
b001	'eye'	me:	[mi / [mi:	mi:
b002	'tooth'	ha:	[pa	p <sup>h</sup> a:
b003	'nail'	tsume (possibly Standard Japanese)	tsu[me (unaspirated)	tsami
b004	'nose'	hana	pana ('pa[na' when pronounced slowly)	p <sup>h</sup> ana
b005	'navel'	m;busu	[m:bu	m:bu
b006	'chest'	m;miutsu	miφ[tsu (or 'miφu[tsu')	mmi
b007	'face'	mihana	mipa[na	mipana
b008	'ear'	min	[miN	miŋ
b009	'skin'	ka: (also of trees, fruit, and the like)	[ka:	ka:
b010	'lower leg' / 'foot'	hazŋ ('lower leg'; mumu 'thigh')	pa[gi	karasŋri
b011	'hip; buttock'	tsi:nun / tsɔ:nun	tsi[bidaŋ ('tsibida' when pronounced slowly)	tsibitaŋ ~ tsibita <sup>ŋ</sup>
b012	'shoulder'	katamusi:	ka[tamusi ('ka[tamusi' when pronounced slowly)	ibira / k <sup>h</sup> a <sup>ŋ</sup> a (There is awareness that 'k <sup>h</sup> a <sup>ŋ</sup> a' is Standard Japanese.)
b013	'tendon'	hai <sup>s</sup>	p <sup>s</sup> i[kibaü ('pi[kibai' when pronounced slowly)	p <sup>h</sup> a <sup>s</sup> idzɔ
b014	'eyebrow'	maju	[maju (or 'ma[ju')	maju
b015	'sweat'	a <sup>s</sup> i	a[ <sup>s</sup> i	a <sup>s</sup> i
b016	'nosebleed'	hanat <sup>s</sup> i	pa[nats <sup>s</sup> u ([mbana 'mucus')	p <sup>h</sup> anatsŋtsɔ
b017	'drool'	judai	ju[daŋ ('judai' when pronounced slowly)	judaŋ ~ juda <sup>ŋ</sup>

No.	Ōura	Nobaru	Bora
b001	mi:	mi:	mi:
b002	pa:	pa:	p <sup>h</sup> a:
b003	ʦami	ʦami	ʦimi
b004	pana	pana	p <sup>h</sup> ana
b005	m:bu	mbu / mbusu	m:bu
b006	mni	mniʦʦ	mnigu: ('mn' with double articulation?)
b007	nipana	mipana	mip <sup>h</sup> ana
b008	miŋ	mim	mim
b009	ka:	ka: (of hands)	k <sup>h</sup> a
b010	pagŋ	pagŋ ('foot'; karasuni 'lower leg')	pagu / ʦigusi ('knee') / mumu(ni) ('thigh') / psa: bza ('foot') / amaŋgu: buni ('ankle')
b011	ʦibitai	ʦibigu: / also 'ʦibitaŋ'	ʦibiruŋ
b012	katamusu	kaʦamusʉ ~ kaʦamusŋ / kaʦa	k <sup>h</sup> ata
b013	pskipaŋ	psʉkʉpaŋ (careful pronunciation) ~ psʉkupaŋ (normal pronunciation)	p <sup>s</sup> klpaŋ ~ p <sup>s</sup> k <sup>z</sup> paŋ ~ p <sup>s</sup> klpaŋ <sub>z</sub>
b014	maju	maju	maju
b015	aʦi	aʦi	aʦi
b016	panaʦʦ	panaʦʦʉ	pandaŋ <sup>z</sup>
b017	–	judaʦ (strong friction)	judaŋ

## Basic Vocabulary B

No.	Irabu	Kuninaka
b001	mi:	mi:
b002	pa:	pa:
b003	tsami	tsimi
b004	pana ~ paṅa	pana
b005	m:busu	m:bu
b006	mniutṣa	mniutṣi
b007	mipana ~ miḥana	mipana
b008	mimṣ	mim
b009	ka:	k <sup>h</sup> a:
b010	paz / tsarasa ('knee') / kar asun'i ('lower leg')	padzi
b011	tsibitazṣ	tsibital
b012	kaṭamurasṣ	katamusuṣ
b013	paztsṣ:	paltsi:
b014	mi:nu maju	matsigi
b015	aḥi	aḥi
b016	panatsṣ:	panatsi
b017	judazṣ ~ judaṣ	judal

No.	Item	Ikema	Karimata	Shimajiri
b018	'tattoo'	NR	NR ('[iredzumi' in 'grandmother's day')	𐄂𐄃𐄄𐄅 ~ 𐄂𐄃𐄄𐄅 (The response was that it is 'probably' this form.)
b019	'one (thing)'	𐄆𐄇𐄈	p[ti:tsɯ (Or 'pɯ[titsɯ', although the vowel after 'p' is almost inaudible.)	ttu:tsɯ
b020	'two (things)'	fta:tsɯ	φ[ta:tsɯ (The vowel after 'φ' is almost inaudible.)	fta:tsɯ
b021	'three (things)'	mi:tsɯ	[mi:tsɯ (Or '[mi:tsɯ'; there is fluctuation between 'ɯ ~ ɨ'.)	mi:tsɯ
b022	'four (things)'	ju:tsɯ	ju:[tsɯ (or 'ju:tsɯ')	ju:tsɯ
b023	'five (things)'	itsɯtsɯ	[itsɯtsɯ (or '[itsɯtsɯ)	itsɯtsɯ
b024	'six (things)'	m:tsɯ	[n:tsɯ (or 'n:tsɯ')	n:tsɯ
b025	'seven (things)'	nanatsɯ	na[natsɯ (or 'nanatsu')	nanatsɯ
b026	'eight (things)'	ja:tsɯ	[ja:tsɯ (or 'ja:tsɯ')	ja:tsɯ
b027	'nine (things)'	kukunutsɯ (The initial 'k' has a weak release.)	ku[kunu]tsɯ (Or 'kukunutsɯ', although only 'nu' is clearly rounded.)	kukunutsɯ
b028	'ten (things)'	tu:	to:	tu:
b029	'one (person)'	tauka:	[taφk'a:	t <sup>h</sup> afkja:
b030	'two (people)'	huṭa:i	φ[ta:l / φta:ɯ	fta:ɯ
b031	'three (people)'	nṭsa:i	n[tsa:l	mita:ɯ

No.	Ōura	Nobaru	Bora
b018	–	pɪnɔ̃kɔ̃	p <sup>h</sup> i <sup>d</sup> zɪk <sup>h</sup> u
b019	p <sup>h</sup> iti:ɬa	p <sup>h</sup> ɪti:ɬa	psti:ɬi
b020	ɸuɬa:ɬa	futa:ɬa	fta:ɬi
b021	mi:ɬa	mi:ɬɔ̃	mi:ɬi
b022	ju:ɬa	ju:ɬa	ju:ɬi
b023	iɬaɬa	itsɔ̃ɬa	itsɔ̃ɬi
b024	nnta	m:ɬa	mmtɬi
b025	nanata	nanata	nanatɬi
b026	ja:ɬa	ja:ɬa	ja:ɬi
b027	kukunutsa	kukunutsa	kukunutsi
b028	t <sup>h</sup> u:	tu:	t <sup>h</sup> u
b029	tavk <sup>h</sup> a: ('v' has somewhat weak friction.)	taukja:	tauk <sup>h</sup> a:
b030	ɸuta: <sup>ʔ</sup> ('ʔ' has weak friction; it is an apical vowel.)	futa: <sup>ʔ</sup> (strong friction)	fta:l <sup>ʔ</sup>
b031	mits <sup>h</sup> a: <sup>ʔ</sup> ('ʔ' has weak friction.)	mitsa: <sup>ʔ</sup>	mitɬa:l <sup>ʔ</sup>



No.	Irabu	Kuninaka
b018	paztʃʃɾ	paldzumi
b019	pitɪɾ	pititsi
b020	fta:ʃ	ɸuʃa:ʃi
b021	mi:ʃɾ	mi:ʃi
b022	ju:ʃɾ	ju:ʃi
b023	itsɪʃɾ ~ itsutsɾ	itsiʃi
b024	mɪ:ʃɾ	m:ʃi
b025	nanatʃɾ	nanatsi
b026	ja:ʃɾ	ja:ʃi
b027	kukunutsɾ	koʃkoʃotsi
b028	tu:	tʃ:
b029	taʊki:	taʊkja:
b030	fta:ʒ̥	ɸuta:l
b031	mita:ʒ̥	mʰita:l

Basic Vocabulary B

No.	Item	Ikema	Karimata	Shimajiri
b032	'four (people)'	juta:i	ju[ta:ɯ	juta:ɾ
b033	'five (people)'	itsunuçitu	[itsɯnuɸtu (or 'ʔitsɯnuɸtu [tu')	itsɯ nu ttu
b034	'six (people)'	mujunuçitu	mu[inuɸtu ('ɸ' sounds close to 'p'.)	mujɯ nu ttu
b035	'seven (people)'	nananuçitu	na[na]nuɸtu	nana nu ttu
b036	'eight (people)'	ja:nuçitu	[ja:nuɸtu	ja: nu ttu
b037	'nine (people)'	kunununuçitu / kukunununuçitu	ko[konu]nuɸtu	kuɰkunu nu ttu
b038	'ten (people)'	tu:nuçitu	[tu:nuɸtu	tu: nu ttu
b039	'how much'	ikassaga: ('how.much- INTERROGATIVE'; of prices)	[no]np[sa: (Or 'nonnupsa :'; the final particle 'sa:' should have been separated but was not. The form in isolation is probably 'nonpɯ'; question words were apparently difficult to elicit in isolation.)	{nau ~ nou} nu pssa (How much is this?)
b040	'when'	itsɯga: ('when- INTERROGATIVE')	nanɰzi ni / itsɯ nu ('ni' and 'nu' are final particles; they should have been separated but were not. Question words were apparently difficult to elicit in isolation.)	itsɯ
b041	'who'	taruga: / taruga ('who- INTERROGATIVE')	ta[rɯ:	tʰaɾu

No.	Ōura	Nobaru	Bora
b032	juta:ʔ	juta:ʔ	juta:l̥
b033	itsɿnupstu	itsɿnupstu	guniŋ
b034	mɔinupstu	mujunupstu	rukuniŋ
b035	nananupstu	nananupstu	nananiŋ
b036	ja:nupstu	ja:nupstu	hatɿniŋ
b037	kukunupstu	kukunupstu	kuniŋ
b038	tu:nupstu	tu:nupstu	ɕu:niŋ
b039	no:nu psaga	no: nu pusa ga (‘how.much- INTERROGATIVE’) / also ‘iska’ (‘how much’)	isaŋa
b040	itsɿ ga	itsɿ / itsɿ ga kɿŋga (‘When will you come?’)	itsi
b041	taru ga	to:ga ga kɿŋgumatarja: (‘Who will come?’)	tʰaʊ

Basic Vocabulary B

No.	Irabu	Kuninaka
b032	juta:z̥	juta:l
b033	its̥anu pstu	its̥unup <sup>s̥</sup> itu
b034	mujunu pstu	mujunup <sup>s̥</sup> itu
b035	nananu pstu	nananup <sup>s̥</sup> itu
b036	ja:nu pstu	ja:nup <sup>s̥</sup> itu
b037	kukununu pstu	ko̞ko̞no̞nop <sup>s̥</sup> itu
b038	tu:nu pstu	tu:nop <sup>s̥</sup> itu
b039	is̥kiga ('how.much- INTERROGATIVE')	kurja: ikassa ga ('How much is this?')
b040	its̥a	its̥ɰdu ɸu:ga ('When will you come'; 'ts' becomes 's' depending on the phonetic environment.)
b041	taruga ('who- INTERROGATIVE')	ʊʊa taru ga: ('Who are you?')

No.	Item	Ikema	Karimata	Shimajiri
b042	'where'	idzanuçiŋtu ('where- GENITIVE person')	ŋ[ɕzai / ŋ[ɕzan / ŋ[ɕza	nda
b043	'which'	idiga ('which- INTERROGATIVE')	ŋ[ɕzaga du / ŋ[ɕziga du (‘du’ is a final particle; it should have been separated but was not. Question words were apparently difficult to elicit in isolation.)	ndzi
b044	'why'	naujahi:ga ('why- INTERROGATIVE')	no[sun]tɕi du / no:[sun]tɕi [du] ('du' is a final particle; it should have been separated but was not. Question words were apparently difficult to elicit in isolation.)	noui ~ nau
b045	'what'	nauga ('what- INTERROGATIVE')	[no:	nou ~ nau
b046	'how many'	ifutsu (uvaga tussa ifutsug a 'you-GENITIVE age-TOPIC how.many-INTERROGATIVE')	[iɸtɕu	iftɕa
b047	'daytime; noon'	hi:ma ('noon'; junaka 'middle of the night')	p <sup>s</sup> i[ma ('p <sup>s</sup> u[ma' when pronounced slowly)	pssuma ~ pɕsuma
b048	'rice paddy'	ta: (no form corresponding to Standard Japanese 'tanbo')	[ta: / ɸa[ta]gɨ / pa[ta]gɨ	ta:
b049	'star; celestial body'	hoci	p[si ('pu:[si' when pronounced slowly)	pɕa ~ puɕa

No.	Ōura	Nobaru	Bora
b042	n <sup>d</sup> za ga	ndza / ndzaŋ kair'a: (‘where to’) / ndzaŋga (‘at what place’)	n <sup>d</sup> za
b043	n <sup>d</sup> zi ga	ndzi / ndzinuga zo:karja: (‘Which is best?’)	n <sup>d</sup> zi
b044	no: sttiga	{no:tsiga / no:tiga} nakju :rja: (‘Why are you crying?’)	naoŋi:
b045	ure no:ga	no: / no:ju ga puškaŋja: (‘What do you want?’)	naoŋu ~ no:nu
b046	iftsa ga	ifutsa ga ka:tsa: (‘How many will you buy?’)	ifutsi
b047	p <sup>r</sup> :ma	paŋu	p <sup>s</sup> i:ma / stumuti (‘morning’) / junai (‘night’)
b048	ta	ta: (pari ‘field (cultivated)’) )	t <sup>h</sup> a:
b049	psa	puša	psi ~ psi <sup>h</sup>

No.	Irabu	Kuninaka
b042	n <sup>(d)</sup> za	idaŋ kai ga: ('Where will you go?')
b043	ndzi	iɕziŋkai du aɸudzi ga: (('Which will you choose?'))
b044	no:sɕi:ga	naʊtɕi: du namagami ga: (('Why are you late?'))
b045	no:	naʊ judu aɕu: ga ('What are you doing?')
b046	if(u)ɕɾ	iɸutsi du al ga: ('How many are there?')
b047	p <sup>ɾ</sup> :ma	pɪlma
b048	ta:	ta
b049	puɕ <sub>i</sub> ~ puɕ <sub>ɿ</sub>	puɕi

Basic Vocabulary B

No.	Item	Ikema	Karimata	Shimajiri
b050	'road; path; way'	n̄ʦ	n[ʦi / n:[ʦu	nʦ
b051	'mountain'	jama	ja[ma (sa:[ma 'slope')	jama ('place with trees')
b052	'island'	ɕima	ɕi[ma / sɨ[ma (It was pronounced centrally in free conversation.)	sɨma
b053	'shore; beach'	hida	bi[dza / pa[ma	p <sup>h</sup> ama
b054	'flower'	hana	pa[na	p <sup>h</sup> ana
b055	'bubble; foam'	awa	a[wa	awa (Standard Japanese?)
b056	'hole'	ana	a[na	ana
b057	'sky'	sora (Standard Japanese?)	ti[N (dzi: 'ground')	ʦin
b058	'squid'	ika	i[ka	ik <sup>h</sup> a
b059	'shrimp; prawn; lobster'	ibi	e[bi	ɨɨgan ~ ɨɨʒgan (‘Japanese spiny lobster’) / saɨ ~ saʒ (‘small shrimp’)
b060	'feather; wing'	hani	pa[ni	p <sup>h</sup> ɨni
b061	'cattle (i.e. cow or bull)'	uʦ (ussɨka:di ~ ussuka:di 'to raise cattle')	u[si / u[si	usɨ
b062	'fly (insect)'	hai	pai / pau	paz ~ paɨ
b063	'dog'	in	i[n̄ (also transcribable as 'iN')	iŋ
b064	'octopus'	taku	t <sup>h</sup> [ko / ta <sup>h</sup> [ku	t <sup>h</sup> ɨku
b065	'flea'	nun	[nun̄	nun̄
b066	'crow; raven'	garasa	ga[rasu / ga[ra]sa	garasa
b067	'sparrow'	ʃʃadura	[utʦa	maɕa
b068	'leaf'	ha:	ki:nu[pa:	pa:



No.	Ōura	Nobaru	Bora
b050	ntsɿ	mɿtsɿ	mɿtsɿ
b051	mmi	jama	jama
b052	sɿma	sɿma	sima
b053	pama	pama	p <sup>h</sup> ama
b054	pana	pana	p <sup>h</sup> ana
b055	saφuŋ	aʊa ~ awa // abuku	a:tsiʊ ~ a:tsiβ
b056	abu·	a:na	a:na
b057	tiŋ	tin ~ tiŋ	tiŋ
b058	ika	ik <sup>h</sup> a	ik <sup>h</sup> a
b059	sa <sup>ʔ</sup> ɿ	sa <sup>ʔ</sup> ɿ (weak friction)	ɿβz / p <sup>h</sup> aʊ ('snake')
b060	pani	pani	p <sup>h</sup> ani
b061	usɿ	usɿ	ussi
b062	pa <sup>ʔ</sup> ɿ	pa <sup>ʔ</sup> ɿ (weak friction)	paz ~ paiz
b063	iŋ	in ~ iŋ	iŋ
b064	tak <sup>h</sup> u	taŋku	taŋku
b065	nuŋ	num	num
b066	ga:r(r)sa	garasa	karasi ~ garasi / garasa
b067	padwi	maɕa	p <sup>h</sup> aduɕa
b068	ki·nupa: ('tree-GENITIVE leaf')	pa:	ki: nu p <sup>h</sup> a ('tree-GENITIVE leaf') / upu ni nu p <sup>h</sup> a ('daikon.radish-GENITIVE leaf')

## Basic Vocabulary B

No.	Irabu	Kuninaka
b050	mtsɿ	mtsɿ
b051	jama	jama
b052	sɿma	sɿma
b053	pama	pama
b054	pana	pana
b055	abuku	awa
b056	ana	ɸugurɿ
b057	timɿ	sora
b058	ik'a	ika
b059	saz (shrimp/lobsters in general) / ɿbzgarɿ (large species)	ebi
b060	pani	pani
b061	usɿ	usi
b062	pazɿ	pa'ɿ
b063	in (im 'sea')	in
b064	tɿku	t <sup>h</sup> ɿko
b065	numɿ	num
b066	garasa	garasi
b067	f(u)sadur'a matɿa	ffadorja
b068	pa:	pa:

No.	Item	Ikema	Karimata	Shimajiri
b069	'ear (of a cereal plant)'	hu:	[pu: / [maʷnupu: ~ mal nupu: ('rice ear')	pu:
b070	'root'	ni:	niba[l	ɲi:
b071	'bamboo'	taki	ta[ke	tʰa̠ki
b072	'pine'	matsʌ	ma[tsʷ	matʌki:
b073	'straw (of cereal plants)'	NR	ba[ra	bara
b074	'seed'	tani (also 'fruit seed')	ta[ni]	taɲi
b075	'Chinese fan palm'	kuba	ku[ba	kuba
b076	'sago palm'	ttsu:tsʌ	sɨ[su] dzʷ / s[tɨ] tsʷ / s[su]dzʷ	NR
b077	'treetop; sugar cane tip'	nai	su[ra (bu:]gʷanusʷ[ra)	sura
b078	'greens'	na:zu / na:zu:	[pa:dzʷ: ('leaf vegetable'; su: 'vegetable')	NR / (su: 'vegetable')
b079	'sake; alcoholic beverage (in general)'	saki	sa[ki]	sʌki
b080	'bean; pea'	mami	ma[me	mami
b081	'cereal (specif. wheat, barley, rye & oats)'	muzʌ	mu[gɨ	mugz ~ mugʌ
b082	'rice cake'	mutʌi:	mu[tsɨ	mutʌ
b083	'mandarin orange'	funʷu:	ɸni[n / ɸni[ʷ / ɸ[nʷ	fʷʌnʌ

No.	Ōura	Nobaru	Bora
b069	p <sup>h</sup> u:	pu:	a: nu p <sup>h</sup> u: ('foxtail.millet- GENITIVE ear')
b070	ni:	ni:	ni:
b071	taki	tąki	tąki
b072	matsuki	matsɿ	matsigi:
b073	bara	wara / bara	bara
b074	tani	sani (san <sup>h</sup> u: makɿ 'seed- ACCUSATIVE to.sow') / sanimunu	t <sup>h</sup> ani
b075	kuba	kuba	kuba
b076	–	sutitsɿ	fuk <sup>h</sup> atsi
b077	sɿ:ra nu pa / sɿ:ra	surapana	(bu:zɿnu 'sugar.cane- GENITIVE') baram
b078	na:zu:	na:	na:
b079	saki	saki	saki
b080	mami	mami	mami
b081	mug <sup>z</sup>	mug <sup>z</sup> (weak friction)	mgɿ <sup>z</sup>
b082	mutsɿ	mutsɿ	mɿtsi
b083	funi <sup>z</sup> ('zɿ' has weak friction.)	funiɿ (weak friction)	funiɿ <sup>z</sup>

No.	Irabu	Kuninaka
b069	pu:	pu: (accompanied by a slight bilabial trill)
b070	n'i:	ni:
b071	taki	t <sup>h</sup> ake
b072	matsigi	matsigi:
b073	gara	gisitsi
b074	tan'i	tani
b075	kuba	kuba
b076	sditsɔ	sogetsɔ
b077	bu:znu sɔa	ki:nu sɔa ('tree-GENITIVE tip')
b078	na: / su: ('vegetable')	pa:
b079	saki	sake
b080	mami	mami
b081	nuz,	mugi
b082	mutɔ:	mutɔ
b083	f(u)n'iz	ɸun'iu

No.	Item	Ikema	Karimata	Shimajiri
b084	'sponge gourd'	nab'a:ra	na[b'a:ra	nabja:ra
b085	'parent'	uja (uza 'father'; m̄ma 'mother')	oja ('father') / u[ɟzau [ma ('father and mother') / ojafa: ('parent and child')	ujamma:sa
b086	'cousin'	it̄sufu	i[t̄sũɸu	itufu
b087	'older brother'	suza ('eldest son') / uzag ama ('youngest son') / nakasuza ('sons between the eldest and the youngest')	a[ɟza	suda / aɟza
b088	'older sister'	ha:ni ('eldest daughter') / ɔbagama ('youngest daughter') / anigama ( 'next youngest daughter') / ɔbagama ('youngest daughter'; the first sound is a labiodental approximant, not a vowel.)	[aŋ]ga	anga
b089	'sibling'	utuza (male as well as female)	NR / [k'ɔ:]dai (?)	k'ɔ:dai
b090	'relative; kin'	utuza ('it̄umu' on festive occasions)	u[ja]ku	ut <sup>h</sup> ada
b091	'bowl; (flower) pot'	hatsi	NR / ha[t̄si	NR
b092	'jar'	kami	ka[mi / mi[ɟzɯgami	k <sup>h</sup> ami
b093	'spatula'	hira	pi[ra	pira
b094	'umbrella; parasol; bamboo hat'	sana	sa[na / mi[nokaʂa = ku[ba:sa	sana

No.	Ōura	Nobaru	Bora
b084	nab <sup>l</sup> o:ra	nabja:ra	nab <sup>l</sup> a:ra
b085	<sup>nd</sup> za mma (first ‘m’ of ‘mma’ with double articulation of ‘m’ and ‘n’)	uja (uja ‘father’; anna ‘mother’)	zzamma / uja (‘father’) / anna (‘mother’)
b086	iɬaɸu	iɬaɸu	iɬiɸu
b087	azza:	aɬsa	si <sup>(d)</sup> za / atsa
b088	aŋga	aŋga	aŋga
b089	–	kjo:dai	k <sup>l</sup> o:dai (Standard Japanese?)
b090	utɔza	utsuɬsa	ututsa
b091	paɬa (oɬziŋ ‘meal tray’?)	haɬei // paɬa	paɬi
b092	kami	kami	k <sup>h</sup> ami
b093	pira	pira	p <sup>h</sup> ira
b094	sana	sana	sana

Basic Vocabulary B

No.	Irabu	Kuninaka
b084	nab'a:ra	nabja:ra
b085	uja	uja / uja anna
b086	itʃfu	it <sup>h</sup> oꝰko
b087	a <sup>(d)</sup> za	ada
b088	ani	ani
b089	k'o:dai / bikitu ( <sup>d</sup> )zara / mi:tu ( <sup>d</sup> )zara	k'o:dai
b090	ujaku	utuda
b091	paꝰʃ(ɾ)	p <sup>h</sup> aꝰʃi
b092	kami	kami
b093	pira	pira
b094	sana / kuba:sa ('fan palm hat')	sana



No.	Item	Ikema	Karimata	Shimajiri
b095	'thread; string'	itu	[i]ʈsu	itu
b096	'cord (esp. the thong of a geta)'	bu: / attɕa nu bu: ('geta-GENITIVE thong')	[bu: / pa[nabu:	bu:
b097	'handle; grip; haft'	juru	[ʔi]:	i:
b098	'net; mesh'	an	[ʔan	aŋ
b099	'tub; bucket'	taɾu	NR / ta[rɯ	kubadzɾa:
b100	'pillow'	maffa	maɸ[ɸa	maffa
b101	'medicine'	fɯsui (Visually, it does not appear to be labiodental to a high degree; the contact is weak. Perhaps it is 'hɯ sui'.)	ɸ[sɯi / ɸusujɯ	ssɯ / ssɯɾzu ~ ssuzzu (fɯ sui 'medicine-ACCUSATIVE')
b102	'ax; hatchet'	jutsɾ	na[ta (apparently 'ax; hatchet'; confirmed by showing a drawing made on the spot)	juksɾ
b103	'sickle; scythe'	zzara (The first 'z' begins with a low degree of fricativity.)	ɯ[za]ra	zzara
b104	'hoe'	ffatsɾ	[ɸɸatsɯ	ffatsɾ
b105	'colander'	sauki	[so:gi	ba:ki (deep type) / so:ki (shallow type)

Basic Vocabulary B

No.	Ōura	Nobaru	Bora
b095	itu	itu / kaçi ('weaving thread')	nuzzu: ~ nuzju:
b096	bu:	bu:	p <sup>h</sup> anabu: ('geta-GENITIVE thong')
b097	i:	i:	ʔi·
b098	aŋ	am	am
b099	tagu ('g' has somewhat weak closure.)	u:ki / tagu (carried on top of the head to transport water)	t <sup>h</sup> aru
b100	maffa	maffa	maffa
b101	fsui / ssui	fusu:ʔ	fsi:z ~ fsi <sup>z</sup>
b102	jukkʔ	ju:kʔ	juks
b103	zzafa	ʔzafa	zzafa ~ ʔzafa
b104	ffatsʔ	ffatsʔ ('f is weak.)	ffatsi
b105	–	so:ki / ba:ki	sauḱi

No.	Irabu	Kuninaka
b095	itu	ito
b096	bu:	bu: (As the opening between the lips is very narrow, it is sometimes accompanied by a slight trill.)
b097	i:	ji:
b098	am̩	am
b099	u:ki / tarai ('washtub')	NR / 'u:ki' is not used.
b100	maf(u)ra	maφφa
b101	fʂz̩	φusul
b102	bu:nu	ono
b103	zzara	lzara
b104	ffats̩	φφats̩
b105	so:ki / ba:ki	so:ki

No.	Item	Ikema	Karimata	Shimajiri
b106	'spade; shovel'	NR (There were no cattle.)	NR ('su[ki'; a picture was shown but there was no response. The men would know it; it is used with horses.)	ski
b107	'iron pot; kettle'	hagama	pa[gama (o[kama 'cooking stove')	ukama
b108	'rice paddle'	kina	miu[ski[na (miu[swa 'rice paddle'; ki[na 'ladle')	kina
b109	'cane; walking stick; wand'	di:gi:	gu[ean	gu[ean]
b110	(missing)			
b111	'paper'	kabi:	ka[bi (without an 's'-sound)	kabʔa
b112	'(thick) rope'	nna: / nna	tsu[na	tsʔna
b113	'(tobacco) pipe'	t'i: ('ti:?)	kʰi[siu	ki[siu]
b114	'name'	namai	[na:	na:
b115	'sail; canvas'	hu:	[pu:	pu:
b116	'load; cargo'	ni:	[ni:	ɲimutsʔ
b117	'metal'	kani	ka[ni	kaji
b118	'money'	din	dzi[n]	dziŋ
b119	'sound; noise'	NR (The form obtained was '...nu nariju' ('...-NOMINATIVE to.sound'))	u[tu	NR / (oto)
b120	'song'	a:gu	[a:]gu	a:gu
b121	'bridge'	NR (There were no bridges; samba[ei 'pier'.)	ha[si	pʰasa

No.	Ōura	Nobaru	Bora
b106	ma:jama	ma:jama (for digging up slightly) / sŋki	s(ʉ)ki / jama
b107	ukama	paɣama	ʔukama
b108	k <sup>h</sup> ina	miskai	kina
b109	–	ɣuɕaŋ	ɣuɕaŋ
b110			
b111	kabʔa	kabʔa	kabl <sup>z</sup> (kabitul <sup>z</sup> ‘kite’; combination of the words for ‘paper’ and ‘bird’)
b112	ʦna	ʦna	ʦina
b113	kiɕiʔa (‘ʔ’ has weak friction.)	kiɕiʔa	k <sup>h</sup> iɕi:l <sup>z</sup>
b114	na:	na: (‘name’; du:ga na: ‘one’s own name’)	na:
b115	pu:	pu:	(funi nu) pu:
b116	ni:	ni:	ni:
b117	kani	kani	k <sup>h</sup> ani
b118	dziŋ	dziŋ	dziŋ
b119	kannaʔa (‘thunder’)	utu	nal <sup>z</sup>
b120	a:ɣu(:)	a:ɣu	a:ɣu
b121	paʂa	paʂa	NR

## Basic Vocabulary B

No.	Irabu	Kuninaka
b106	sũki	siki
b107	ukama / ukuma	ukama
b108	kina	kina
b109	guɕaŋ	guɕan
b110		
b111	kabz	kabi:
b112	ʦna	ʦina
b113	tʰ(ɾ)z	tʰil
b114	na:	na:
b115	pu:	pu: (accompanied by a slight bilabial trill)
b116	nʰi:	ni:
b117	kani	
b118	dʒiŋ	dʒiŋ
b119	na:z	utu
b120	ajagu ~ ajago	a:gu
b121	pasz ~ pasʰɾ:	pʰaʃi:

No.	Item	Ikema	Karimata	Shimajiri
b122	'stone'	iɕi	i[su ('[issadzari' when there are many)	isɪ
b123	'feces'	ɸuɕu	ɸ[su ('ɸu[su' when pronounced slowly)	ssu
b124	'grain (of something); particle'	NR	dü:[dzu" / dzü:[dzü (ma wududzü 'grain of rice'; sekkendzudzü 'lump of soap')	tsɪbu
b125	'life'	nɪutsɪ	w[nutsu	nnutsɪ
b126	'pig shed; lavatory'	wa:nuɕi	[tu:wa / [tuːwa / wa:nuja	wa: nu ja:
b127	'illness'	jamiju (verb)	ja[mi]u / jamiju (A noun was difficult to elicit.)	jaɪ
b128	'pillar; post; column'	hala ('I' is perhaps pronounced somewhat behind the alveolar ridge; hassa 'mast'.)	pa[ra	para
b129	'imitation'	ma:bi	mːa:[bi	ɲa:bi
b130	'lie; untruth'	bakurau / bakuro: ('I' instead of 'r?')	da[ra]ɸu	daraxa
b131	'smell; scent'	kadzɔ	ka[dzɔ / ka[basuɲkan	kːhada
b132	'(the) front'	a:gi ('(the) front'; ɕita, ɕita:ra '(the) back')	[ma:sima (kaisima '(the) back')	a:ra
b133	'outside'	ara	[a:]ra	a:ra / puka [elicited]

No.	Ōura	Nobaru	Bora
b122	isʌ	isʌ	isi
b123	ssu	fʊʂu	fsu
b124	gumadani	sɔdʒɪ	NR
b125	nnutʂɪ	nnutʂɪ	nnutʂi
b126	wa: nu ja: / ɸuʔɪ ('ʔ' has weak friction)	wa:nu ja: (It is not used for 'lavatory'; 'fuŋ' is used for that.)	NR
b127	jaŋ / bʰoʔza	jam	jam
b128	para	para	para ~ para
b129	na:bi	na:bi	na:bi
b130	daraɸu	janadʒai / damasai (nominalization of 'to.deceive-PASSIVE') / also 'daraka'	daraka
b131	kaddʒa	kadʒa	kʰadʒ(ʔ)a
b132	wa:bi	umuti	ma:sma / kaisma ('(the) back', only of clothes; 'wa:bi' and 'siŋa' for the front and reverse sides of paper)
b133	pʰuka	puŋka // a:ra	ara:



No.	Irabu	Kuninaka
b122	isɪ	isɪ
b123	φuɕu	φuɕi
b124	ɬsubu	ɬibu
b125	nnutsɪ	nnutsi
b126	wa:nu ja: / NR ('lavatory')	φuɕi mal ɬsubu (apparently not what was intended to be elicited)
b127	jam,	jam
b128	para	para
b129	ma:bi	ma:bi
b130	skas / darafu	taraφu
b131	kadza	kusamunu / kbasumunu ('bad smell' / 'good smell')
b132	umuti	mae (ɬibi '(the) back')
b133	ari:	puka

No.	Item	Ikema	Karimata	Shimajiri
b134	'inside'	naka ('middle; inside')	na: ('middle; inside'; [ja: na]: 'inside the house')	naxa ~ naka ('x' in spontaneous utterance)
b135	'up; above; over; top'	a:gi	[wa:gu	wa:gi
b136	'down; below; under; bottom'	ɕiɕa / ɕiɕa:ra	si[ta:ra	sta ('s:ta' when pronounced slowly)
b137	'too; also (particle)'	ha[na]mai ('nose-too') / ha[na]mai ('flower-too')	–	–
b138	'a little'	hi:tɕagama	[pi:ŋ]ka:	pittaga:
b139	'more'	m̄m̄'ahi	–	–
b140	'much; many'	ha:sa	u[po:]sa	–
b141	'small'	imiimi	i[miŋ]ka: / i[miŋ]ga	imikaŋ
b142	'large'	gaba:	u[ɸo:bi / u <sup>p</sup> ɸo:bi	u:gatakaŋ
b143	'low; short (of height)'	ssabana / ssamunu ('munu' adjectival?)	–	–
b144	'the same'	junusui / junuɕɕi ('same age'; ɕɕi 'age')	–	–
b145	'short (of length)'	ma:ku	–	–
b146	'round; spherical'	ma:ku / ma:ra	–	–
b147	'that (medial pronoun)'	ui (scope of usage unclear; ka:ma 'far away')	–	–
b148	'thing'	munu	–	–

No.	Ōura	Nobaru	Bora
b134	naka	naka / ㄋㄤ	(ja:) naka
b135	wa:bi	wa:bi / wa:gu	wa:bi
b136	sta:ra	sɯta / sɯta:ra	sɯta
b137	–	–	–
b138	pittɕa:	ipi:ʔtagama	ipittɕa ~ ipi:tɕa / ipi:tɕag ama
b139	–	–	–
b140	–	–	–
b141	imittɕa (imisɯma / imizɯ ma ‘small island’)	imi:tta	imi:mi / imimunu (imi:mi nu munu ‘small thing’; ‘imi :mi munu’ is not used frequently.)
b142	upujarabi (‘large child’; upo:upu ‘very large’)	upo:upu	upu:pu / upumunu (upu: pu nu munu ‘large thing’)
b143	–	–	–
b144	–	–	–
b145	–	–	–
b146	–	–	–
b147	–	–	–
b148	–	–	–

## Basic Vocabulary B

No.	Irabu	Kuninaka
b134	naka ('middle; inside')	naka
b135	wa:ra	ʊa:ra
b136	ʂa:ra	ʂita:ra
b137	–	
b138	jo: tʰa:i (ffiru)	ipi:ta gama
b139	–	
b140	–	
b141	imi:imi	imimunu gama
b142	upo:up ~ opo:up	opo.opu (The vowel fluctuates between 'u ~ o'.)
b143	–	
b144	–	
b145	–	
b146	–	
b147	–	
b148	–	

No.	Item	Ikema	Karimata	Shimajiri
b149	'to give (honorific)'	fi:sama	φi:samai	fi:samaŋ
b150	'to lend'	karasŋ	—	—

Basic Vocabulary B

No.	Ōura	Nobaru	Bora
b149	fi:(ʔ) ('ʔ' has weak friction.)	fi: ('to give') / fi:samaɪ ('to give (honorific)')	fi:samaɪʔ (honorific) / fi:
b150	–	–	–

No.	Irabu	Kuninaka
b149	ffiz	fi:samatal (‘to.give(honorific)-PAST’)
b150	–	

# Grammar Data



N-155B-1	Standard Japanese	<i>hato-mo taka-mo tobu.</i> pigeon-too hawk-too to.fly 'Pigeons and hawks both fly.'	Researchers
N-155B-1	Ikema	ffjaduramai ('sparrow-too') takamai tubi (/h/ fluctuates between 'h ~ φ ~ f' in this dialect. There were several repeated utterances and hesitations by the speakers, so the researchers' data also vary; in this report, the sound is uniformly transcribed as 'f.')	N,N,D,U
N-155B-1	Karimata	p <sup>h</sup> at̚u mai t <sup>h</sup> akamai tubi	N,M
N-155B-1	Kugai	m:batumai takamai tub <sup>ɾ</sup>	N,H,N,M
N-155B-1	Yonaha	tu <sup>ɾ</sup> ja tubansu <sup>g</sup> a mbata: tub <sup>ɾ</sup> du s <sup>ɾ</sup> ('Birds don't fly, but pigeons do.')	S
N-155B-1	Kurima	pa <sup>ɸ</sup> ume: ta <sup>ɸ</sup> kame: {tub <sub>ɾ</sub> / tub <sub>ɾ</sub> du} s <sup>ɾ</sup> : ta <sup>ɸ</sup> kanudu tub <sub>ɾ</sub>	K,U,D
N-155B-1	Miyaguni	{tuzmai/tu <sup>ɾ</sup> mai} takamai butuki	K,T
N-155B-1	Uruka	m <sup>ɸ</sup> batumai takamai tuvi:du u <sup>ɾ</sup>	N,I,O
N-155B-1	Bora	mbatumai takamai tub <sub>ɾ</sub>	K,T
N-155B-2	Standard Japanese	<i>kyoo-wa tenki-ga warui-kara hikooki-wa toba-nai.</i> today-TOPIC weather-NOMINATIVE to.be.bad-because plane-TOPIC to.fly-NEGATIVE 'Planes won't fly today, because the weather is bad.'	
N-155B-2	Ikema	kju:ja {teŋkinu / su <sup>ɾ</sup> anu} baikai <sup>ɸ</sup> ba tubimunu <sup>ɸ</sup> mai tuba <sup>ɸ</sup> N	N,N,D,U
N-155B-2	Karimata	kju:ja {teŋkinu / u <sup>ɸ</sup> a:ts <sup>ɸ</sup> ikinu} u <sup>ɸ</sup> as <sup>ɸ</sup> ka <sup>ɸ</sup> ri <sup>ɸ</sup> ba c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja tubampa <sup>ɸ</sup> i	N,M
N-155B-2	Kugai	k <sup>ɸ</sup> u:ja <sup>ɸ</sup> a:ts <sup>ɸ</sup> ka <sup>ɸ</sup> nu {baska:ba / bas <sup>ɸ</sup> ka:ba} hiko:k <sup>ɸ</sup> ja: tuba <sup>ɸ</sup> ŋ	N,H,N,M
N-155B-2	Yonaha	k <sup>ɸ</sup> u:ja wa:ts <sup>ɸ</sup> ka <sup>ɸ</sup> nu ba <sup>ɸ</sup> ka <sup>ɸ</sup> ri <sup>ɸ</sup> ba c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja: tuba <sup>ɸ</sup> N	S
N-155B-2	Kurima	k <sup>ɸ</sup> u:ja tints <sup>ɸ</sup> ŋu baz <sup>ɸ</sup> ka <sup>ɸ</sup> ri <sup>ɸ</sup> ba c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja: tuba <sup>ɸ</sup> ŋ   k <sup>ɸ</sup> u:ja <sup>ɸ</sup> a:ts <sup>ɸ</sup> ŋu janaka <sup>ɸ</sup> ri <sup>ɸ</sup> ba c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja: tuba <sup>ɸ</sup> ŋ	K,U,D
N-155B-2	Miyaguni	kju:ja tiŋki {bazkaiba / ba <sup>ɸ</sup> kaiba} hi <sup>ɸ</sup> ko:k <sup>ɸ</sup> ja ituŋ	K,T
N-155B-2	Uruka	k <sup>ɸ</sup> u:ja wa: <sup>ɸ</sup> sk <sup>ɸ</sup> ba <sup>ɸ</sup> ka <sup>ɸ</sup> ri <sup>ɸ</sup> ba c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja: tuba <sup>ɸ</sup> ŋ	N,I,O
N-155B-2	Bora	k <sup>ɸ</sup> u:ja wa:ts <sup>ɸ</sup> ka <sup>ɸ</sup> nu baz <sup>ɸ</sup> ka <sup>ɸ</sup> ri <sup>ɸ</sup> ba c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja: tuba <sup>ɸ</sup> ŋ	K,T
N-155B-3	Standard Japanese	<i>kaze-de booshi-ga ton-da.</i> wind-INSTRUMENTAL hat-NOMINATIVE to.fly-PAST 'My hat was blown away by the wind.'	
N-155B-3	Ikema	kadi <sup>ɸ</sup> i: kavvimunu <sup>ɸ</sup> mai tubaha <sup>ɸ</sup> ri <sup>ɸ</sup> ŋa:N	N,N,D,U
N-155B-3	Karimata	ka <sup>ɸ</sup> ɸi ndu bo:ɸinu {tubi <sup>ɸ</sup> u <sup>ɸ</sup> i / tubju:}	N,M
N-155B-3	Kugai	ka <sup>ɸ</sup> ɸi <sup>ɸ</sup> ɸidu bo:ɸinu tubi <sup>ɸ</sup> ŋa:ŋ (The existence of 'tub <sup>ɸ</sup> ŋta:' was not confirmed.)	N,H,N,M
N-155B-3	Yonaha	ka <sup>ɸ</sup> ŋna: c <sup>ɸ</sup> iko:k <sup>ɸ</sup> ja: {tub <sup>ɸ</sup> ŋdu s <sup>ɸ</sup> ŋta: / tub <sup>ɸ</sup> ŋta:} ('Planes flew yesterday.')	S

N-155B-3	Kurima	kaɕzɪnu ʦu:kariɓadu bo:ɕime: tubi    kaɕzɪnu {ʦu:kariɓadu / ʦu:kariɓadʊ} bo:ɕime: {tubzɰaz / tubzɰaŋ}	K,U,D
N-155B-3	Miyaguni	kazindu bo:sinu {tubipi:/tubasaŋiŋja:}	K,T
N-155B-3	Uruka	kaɕziɕidu bo:ɕinu tuvʔtaʔ	N,I,O
N-155B-3	Bora	kaɕziɕi: bo:ɕinu tubzɰa:	K,T
N-155B-4	Standard Japanese	<i>oyadori-ga tonde, koori-ga ton-da.</i> parent.bird-NOMINATIVE to.fly, little.bird-NOMINATIVE to.fly-PAST 'The parent bird flew away, after which the little bird flew away.'	
N-155B-4	Ikema	mmaduɪnu tubi fɬaduɪnu tubiui	N,N,D,U
N-155B-4	Karimata	mmaduŋinu tubidu ffa:duɪnu du bju:	N,M
N-155B-4	Kugai	mmaduʔnu tubɪɓadu fɬaduʔmai tubʔ ( <i>Shite</i> -continuative 'tubisʔ' was not obtained.)	N,H,N,M
N-155B-4	Yonaha	mmaduʔnu tubitti fɬaduʔmai {tubʔta:/ tubʔtaN} (Perhaps 'tubʔta' instead of 'tubʔtaN'.)	S
N-155B-4	Kurima	mmaduzɰu tubittidu fɬaduzza {tubzɰaz / tubzɰaŋ}	K,U,D
N-155B-4	Miyaguni	mmaduzdu tubi: ibi:nu tuzɰamanu tubipiŋja:	K,T
N-155B-4	Uruka	ujaduʔnu tuvitti(du) fɬaduʔnu tubʔtaʔ	N,I,O
N-155B-4	Bora	mmaduʔnu tubittɕi fɬaduʔnu tubzɰa:	K,T
N-155B-5	Standard Japanese	<i>soko-kara tonde mi-ro.</i> there-ABLATIVE to.jump to.see-IMPERATIVE 'Try jumping from there.'	
N-155B-5	Ikema	umakaɬa tubi mi:ru	N,N,D,U
N-155B-5	Karimata	uma:ra tubi mi:ru	N,M
N-155B-5	Kugai	umakaɬa tubi mi:ru	N,H,N,M
N-155B-5	Yonaha	umakaɬa tubi mi:[ru	S
N-155B-5	Kurima	umakaɬa tubi mi:ɾʊ	K,U,D
N-155B-5	Miyaguni	umakaɬa tuɕimiɾu	K,T
N-155B-5	Uruka	umakaɬa tuvi mi:ru	N,I,O
N-155B-5	Bora	umakaɬa tubi mi:ru	K,T
N-156B-1	Standard Japanese	<i>minna-de fune-o kogu.</i> everyone-INSTRUMENTAL boat-ACCUSATIVE to.row 'We all row the boat together.'	
N-156B-1	Ikema	nnaɕi fuŋu: kuɕi	N,N,D,U
N-156B-1	Karimata	n:naɕi fuŋiu kuɕi	N,M
N-156B-1	Kugai	m:naɕi: funʔu: kuɕʔ	N,H,N,M
N-156B-1	Yonaha	m:naɕi: funʔiu kuɕʔ ('iu' in 'funʔiu' is an ambiguous diphthong.)	S

N-156B-1	Kurima	ha:ri:nu fɲu:ba: muʒtuɕi:du kudʒ / <cf> muʒtuɕi: fɲu: kuge (‘All row the boat together.’ (imperative))	K,U,D
N-156B-1	Miyaguni	m:nasi fɲu kugi	K,T
N-156B-1	Uruka	m:naɕi: {funiju / funʲu:} {kuɕuʁ / kuɕuʁ}	N,I,O
N-156B-1	Bora	m:naɕi fɲu: kugʒ	K,T
N-156B-2	Standard Japanese	<i>daremo fune-o koga-nai.</i> anyone boat-ACCUSATIVE to.row-NEGATIVE ‘No one rows the boat.’	
N-156B-2	Ikema	{tarumai / n:na} {fɲa: kuɕaɴ / fɲu:ba kuɕaɕa:ɴ}	N,N,D,U
N-156B-2	Karimata	taʁumai fɲu(:)ba kuɕaɴ	N,M
N-156B-2	Kugai	ta:mai funʲu:ba: kuɕaŋ	N,H,N,M
N-156B-2	Yonaha	to:mai funʲu:ba: kuɕaɴ	S
N-156B-2	Kurima	to:me: fɲu:ba: kuɕaŋ	K,U,D
N-156B-2	Miyaguni	to:mai fɲu:ba: kuɕaŋ	K,T
N-156B-2	Uruka	taʁu:mai funʲu: kuɕaŋ	N,I,O
N-156B-2	Bora	ta:mai fɲu:ba: kuɕaŋ	K,T
N-156B-3	Standard Japanese	<i>mukashi-wa yoku fune-o koi-da.</i> long.ago-TOPIC often boat-ACCUSATIVE to.row-PAST ‘Back in the day, I often rowed the boat.’	
N-156B-3	Ikema	ɲka:ɲa ju:du fɲu:ba kuɕitai	N,N,D,U
N-156B-3	Karimata	ɲka:ɲa ju:du fɲu:ba ku:daɪ	N,M
N-156B-3	Kugai	ɲka:ɲa ju:du funʲu: kuɕʁta:	N,H,N,M
N-156B-3	Yonaha	ɲka:ɲa ju:du funʲu:ba: kuɕʁta:	S
N-156B-3	Kurima	ɲka:ɲa fɲu:ba: ju:du kudʒtaŋ	K,U,D
N-156B-3	Miyaguni	ɲka:ɲa uʁusʲi ku fɲu:ba: kuɕiuta	K,T
N-156B-3	Uruka	ɲka:ɲa ju:du funʲu: kuɕʁtaʁ	N,I,O
N-156B-3	Bora	ɲka:ɲa jaudu fɲu:ba: kuɕʒta:	K,T
N-156B-4	Standard Japanese	<i>fune-o koide, sonoato yasum-e.</i> boat-ACCUSATIVE to.row, after.that to.rest-IMPERATIVE ‘Row the boat; then, take a rest.’	
N-156B-4	Ikema	fɲa: kuɕittikara jukui	N,N,D,U
N-156B-4	Karimata	fɲu: kuɕidu atuɲi juko:dai	N,M
N-156B-4	Kugai	funʲu: kuɕittikara jukui	N,H,N,M
N-156B-4	Yonaha	funʲa: kuɕitti: uʁiga atuɴ jukui (funʲa: ‘boat-TOPIC’)	S
N-156B-4	Kurima	fɲu: kuɕitti unu atu:ba: jukui	K,U,D
N-156B-4	Miyaguni	fɲia {kuɕicci / kuɕicɕa:} unuato: buɕaʁikaiba jukui	K,T
N-156B-4	Uruka	funʲu: kuɕittikara jukui	N,I,O
N-156B-4	Bora	fɲa: kuɕittɕi unu atuŋ jukui	K,T

N-156B-5	Standard Japanese	<i>hitori-de fune-o koide ki-ta.</i> one.person-INSTRUMENTAL boat-ACCUSATIVE to.row to.come-PAST 'I rowed the boat by myself.'	
N-156B-5	Ikema	{taʊka:çi: / tavka:çi:} fuŋa: {ku gi:fi:ru ('to.row to.give-IMPERATIVE') / kuɡittai ('to.row-PAST')}	N,N,D,U
N-156B-5	Karimata	taʊkja:ʂidu fuŋu: kuɡikiʂi	N,M
N-156B-5	Kugai	taʃkja:ʂidu funʉu: kuɡikʉʃta:	N,H,N,M
N-156B-5	Yonaha	ʊʊkja:ʂi:du funʉa: kuɡadu ʂʉta: (funʉa: 'boat-TOPIC')	S
N-156B-5	Kurima	{taʃkja:ʂi:du / taʃkja:ʂi:dʊ} fɯu: kuɡitʂta	K,U,D
N-156B-5	Miyaguni	taʊkja:ʂidu fɯiu kuɡiksta:	K,T
N-156B-5	Uruka	tavkja:ʂidu {funiju / funʉu:} {kuɡiʂta / kuɡʉiʂta}	N,I,O
N-156B-5	Bora	taʊkja:ʂidu fɯu: kuɡiksta:	K,T
N-157-1	Standard Japanese	<i>mainichi umi-e iku.</i> every.day sea-ALLATIVE to.go 'I go to the sea every day.'	
N-157-1	Ikema	juiçi: iŋkai ifu	N,N,D,U
N-157-1	Karimata	maiŋiʂi iŋgai ifu	N,M
N-157-1	Kugai	mainiʂa imkai ika	N,H,N,M
N-157-1	Yonaha	mainiʂardu imkai ika (Also pronounced 'ma: inʉiʂardu' when emphasized.)	S
N-157-1	Kurima	mai:nʉiʂ imke:du {iʂ / iʂa}	K,U,D
N-157-1	Miyaguni	mai:niçi imkai ikʒgamata	K,T
N-157-1	Uruka	{iʂa:mai / mainiʂa} imkai {ika / ikaʂ}	N,I,O
N-157-1	Bora	mai:nʉiʂ imkai {iks / piz}	K,T
N-157-2	Standard Japanese	<i>chichi-wa tenki-ga warui-kara umi-e-wa ika-nai.</i> father-TOPIC weather-NOMINATIVE to.be.bad-because sea-ALLATIVE-TOPIC to.go-NEGATIVE 'My father won't go to the sea, because the weather is bad.'	
N-157-2	Ikema	(oto:ʉa) kju:ja teŋkinu baikaija ikaN	N,N,D,U
N-157-2	Karimata	uja: ʉa:ʂi kinu baʂkaŋiba iŋgaija ikaN	N,M
N-157-2	Kugai	ʉza: ʉa:ʂaʉ javvi:du imkaija ikaŋ (When asked about how 'a:ɕza' was used for 'father' in the case of N-165-3, the speaker changed 'ʉza:' into 'a:ɕza:'.)	N,H,N,M
N-157-2	Yonaha	ʉjaʃ: wa:ʂaʉanu baʉkaŋibadu imkaija ikaN	S
N-157-2	Kurima	uja: ʉa:ʂaʉnu baʂkaŋiba imke:ja ikaŋ	K,U,D
N-157-2	Miyaguni	uja: {ciŋkzga / ciŋkaŋga} baʂkaiba imkaija ikazjaŋ	K,T
N-157-2	Uruka	uja: wa:'skanu baʉkaŋiba imkaija ikaŋ	N,I,O
N-157-2	Bora	uja: wa:ʂkaʉnu baʂkaŋiba imkaija ikaŋ	K,T

N-157-3	Standard Japanese	<i>kinoo-mo umi-e it-ta.</i> yesterday-too sea-ALLATIVE to.go-PAST 'I went to the sea yesterday, too.'	
N-157-3	Ikema	fũnu: iŋkai ifũtai	N,N,D,U
N-157-3	Karimata	kinumaidu iŋgai {ifũtai / iftai}	N,M
N-157-3	Kugai	kʷnumai imkai pi:ta:	N,H,N,M
N-157-3	Yonaha	kʷnumaidu imkai ikʷta:	S
N-157-3	Kurima	ʦnume: va:ʦʦũnu bazkariba imke: istaɪ   ʦno: va:ʦʦũnu bazkaribadʊ imke: istaɪ	K,U,D
N-157-3	Miyaguni	kĩnu:mai imkai iksta:	K,T
N-157-3	Uruka	<sup>h</sup> ʦnu:mai imkai {ikʷtaʷ / iksta:} (The pronunciation of 'ks' approaches double articulation; this also holds for the rest of the data.)	N,I,O
N-157-3	Bora	ʦnu:mai imkai {ikʂta: / piʂta:}	K,T
N-157-4	Standard Japanese	<i>umi-e itte, oyoide ki-ta.</i> sea-ALLATIVE to.go, to.swim to.come-PAST 'I went to the sea to swim.'	
N-157-4	Ikema	iŋŋi iki: u:gittai	N,N,D,U
N-157-4	Karimata	iŋgai ikidu uigi {fũtai / ftai}	N,M
N-157-4	Kugai	imkai iki:du u:gi kʷta: (The <i>shite</i> -continuative was not obtained.)	N,H,N,M
N-157-4	Yonaha	im ikidu ʊ:gitti kʷʂa ('ikidu' is an <i>ari</i> -continuative. When asked the speaker also accepted 'im ikitti: ʊ:gidu kʷʂa', but this sentence was not uttered by the speaker.)	S
N-157-4	Kurima	imke: {iki:du / ikiʦtidʊ} u:gi ʦtaɪ	K,U,D
N-157-4	Miyaguni	{imkai / immikidu} ikiççie u:giʒ:ta:	K,T
N-157-4	Uruka	imkai ikitti u:gi {ksʷta: / kstaɪ}	N,I,O
N-157-4	Bora	imkai ikiʦtidu u:gi kʂta:	K,T
N-157-5	Standard Japanese	<i>umi-e-wa hitori-de itte ko-i.</i> sea-ALLATIVE-TOPIC one.person-INSTRUMENTAL to.go to.come-IMPERATIVE 'Go to the sea alone.'	
N-157-5	Ikema	iŋkaija {taʊka: / taʊka:} {iki: / iki: ku:} ('ʊ' is a back (centralized) close (towards close-mid) vowel; 'ʊ' is a labiodental approximant.)	N,N,D,U
N-157-5	Karimata	iŋgaija taʊkja:ɛi iki ku:	N,M
N-157-5	Kugai	imkai taʊke:ɛi: iki ku:	N,H,N,M
N-157-5	Yonaha	imkaija taʊkja:ɛi: {ikitti ku: / iki fuɟa:nna} ('ikitti' is a <i>shite</i> -continuative; 'iki' in 'iki fuɟa:nna' ('to.go to.give-NEGATIVE-INTERROGATIVE') is an <i>ari</i> -continuative.)	S

N-157-5	Kurima	imke:ja tafk'a:ɕi: {ikiṭti ku: / ikiku:}	K,U,D
N-157-5	Miyaguni	imkaija taOkja: iki ku:	K,T
N-157-5	Uruka	imkaija tavk'a:ɕi: ikiku:	N,I,O
N-157-5	Bora	imkaija taOk'a:ɕi iki ku:	K,T
N-158-1	Standard Japanese	<i>kyoo-wa chichi-ga uchi-ni kuru.</i> today-TOPIC father-NOMINATIVE house-LOCATIVE to.come 'Today, my father will come to my house.'	
N-158-1	Ikema	kju:ja ʔizaɣadu ja:ŋkai fu:	N,N,D,U
N-158-1	Karimata	kju:ja uja:du ja:ju ffu	N,M
N-158-1	Kugai	k'u:ja ʔzanudu ja:ŋkai {kʔŋŋ / ks:}	N,H,N,M
N-158-1	Yonaha	k'u:ja ʔjaɣadu ja:ŋkai kʔŋŋ	S
N-158-1	Kurima	k'u:ja ujaɣadu ja:ŋke: mm'aŋ / mm'aʔ (Honorific for 'to come'.) <cf> dusnudu ja:ŋke: ʔsŋ ('My friend will come to my house.')	K,U,D
N-158-1	Miyaguni	kju:ja ujaɣadu ja:ŋkai ki:	K,T
N-158-1	Uruka	k'u:ja ujaɣadu ja:ŋkai {ksŋ / ksʔ:} (The honorific for 'to come' is 'mm'aʔ'.)	N,I,O
N-158-1	Bora	k'u:ja ujaɣadu ja:ŋkai kʔ:	K,T
N-158-2	Standard Japanese	<i>kyoo-wa haha-wa ko-nai.</i> today-TOPIC mother-TOPIC to.come-NEGATIVE 'Today, my mother won't come.'	
N-158-2	Ikema	kju:ja mmaɣadu ku:N	N,N,D,U
N-158-2	Karimata	kju:ja anna: {ku:N / fu:N}	N,M
N-158-2	Kugai	k'u:ja ane: ku:ŋ	N,H,N,M
N-158-2	Yonaha	k'u:ja anna: ku:N	S
N-158-2	Kurima	k'u:ja anna: ku:ŋ	K,U,D
N-158-2	Miyaguni	kju:ja anna: ku:ŋ	K,T
N-158-2	Uruka	k'u:ja anna: ku:ŋ	N,I,O
N-158-2	Bora	k'u:ja anna: ku:ŋ	K,T
N-158-3	Standard Japanese	<i>kinoo chichi-ga uchi-ni ki-ta.</i> yesterday father-NOMINATIVE house-LOCATIVE to.come-PAST 'My father came to my house, yesterday.'	
N-158-3	Ikema	{fuŋu:/ŋŋu:} ʔizaɣa ja:ŋkai {ttai / t'ai}	N,N,D,U
N-158-3	Karimata	kinudu uja: jai kiɕi	N,M
N-158-3	Kugai	kʔno: ʔzanudu ja:ŋkai kʔŋa:	N,H,N,M
N-158-3	Yonaha	kʔna: ʔjaɣadu {ja:ŋke: / ja:ŋkai} kʔŋŋa:	S
N-158-3	Kurima	ʔno: ujaɣadu ja:ŋke: mm'aŋtaŋ (Honorific for 'came'.) / {ʔstaŋ / ʔtaŋ} (Non-honorific for 'came'.)	K,U,D
N-158-3	Miyaguni	kinu:du ujaɣa ja:ŋkai ki:ta:	K,T

N-158-3	Uruka	ksʀnu: uja: ja:ŋkai {ksʀta: / ksʀtaʀ}	N,I,O
N-158-3	Bora	ʒʀnu: ujaɣadu ja:ŋkai ksʂta:	K,T
N-158-4	Standard Japanese	<i>kocchi-e kite, uchi-ni modot-ta.</i> this.way-ALLATIVE to.come, house-LOCATIVE to.return-PAST 'I came over here and returned home.'	
N-158-4	Ikema	kumattikafa ja:ŋkai muduitai	N,N,D,U
N-158-4	Karimata	umai {kiʂidu / kiʂiʂidu} jai muduta	N,M
N-158-4	Kugai	kumaŋkai {kʀŋittikara / kiŋittikara} ja:ŋkai piʂta:	N,H,N,M
N-158-4	Yonaha	kumaŋkai kʀŋittidu ja:ŋkai pi:ta:	S
N-158-4	Kurima	kumaŋke: ʒiŋittidu ja:ŋke: {piʀta / piʀtaʀ}	K,U,D
N-158-4	Miyaguni	kumaŋkai kiʂiccidu ja:ŋkai muduʀta:	K,T
N-158-4	Uruka	kumaŋkai kiʂittidu ja:ŋkai muduri piʀtaʀ ('to.return to.go-PAST')	N,I,O
N-158-4	Bora	kumaŋkai kiʂittʒidu ja:ŋkai piʂta:	K,T
N-158-5	Standard Japanese	<i>kocchi-e hayaku ko-i.</i> this.way-ALLATIVE to.be.early to.come-IMPERATIVE 'Quickly come over here.'	
N-158-5	Ikema	kumaŋkai hajamaʀi ku:	N,N,D,U
N-158-5	Karimata	umai ha:ʀi ku:	N,M
N-158-5	Kugai	umaŋkai pe:pe:ti: ku:	N,H,N,M
N-158-5	Yonaha	kumaŋkai pi'a:kai ku:	S
N-158-5	Kurima	kumaŋke: pi'a:kari ku:	K,U,D
N-158-5	Miyaguni	kumaŋkai pi'a:pi'a: ku:	K,T
N-158-5	Uruka	kumaŋkai pi'a:pi'a:ti ku:	N,I,O
N-158-5	Bora	kumaŋkai pi'a:kari ku:	K,T
N-158-5	Standard Japanese	<i>kocchi-e kite mi-ro.</i> this.way-ALLATIVE to.come to.see-IMPERATIVE 'Try coming over here.'	
N-158-5	Ikema	umatti mi:ʀu	N,N,D,U
N-158-5	Karimata	{umai / uma:i} kiʂi mi:ʀu	N,M
N-158-5	Kugai	umaŋkai {kʀŋi / kiŋi} mi:ʀu	N,H,N,M
N-158-5	Yonaha	kumaŋkai kʀŋi mi:ʀu	S
N-158-5	Kurima	kumaŋke: {ʒiʂimi:ʀu / ʒiʂimi:ʀo}	K,U,D
N-158-5	Miyaguni	kumaŋkai kiʂi miʀu	K,T
N-158-5	Uruka	kumaŋkai {kiʂi / kiʂi} mi:ʀu	N,I,O
N-158-5	Bora	kumaŋkai kiʂi mi:ʀu	K,T
N-159-1	Standard Japanese	<i>nigatsu-wa yoku ame-ga furu.</i> February-TOPIC often rain-NOMINATIVE to.fall 'In February, it rains often.'	

N-159-1	Ikema	{fu:dzitsinna / fu:dzitsinda} ju:du {aminu / amja:} fu:	N,N,D,U
N-159-1	Karimata	niɡatʰsunna ju:du aminu {ffu/fu:}	N,M
N-159-1	Kugai	niɡatʰsa ju:du aminu fuʔa	N,H,N,M
N-159-1	Yonaha	niʔɡatʰsa ju:du aminu fʰŋ	S
N-159-1	Kurima	niʔɡatʰʂanna aminudu ju: fʰʊ	K,U,D
N-159-1	Miyaguni	niɡacunna unusiʔku aminu fuʔ	K,T
N-159-1	Uruka	niɡatʰsa ju:du aminu fuʔa	N,I,O
N-159-1	Bora	niʔɡatʰsa: ju:du aminu fʊʔi	K,T
N-159-2	Standard Japanese	<i>kinoo-wa ame-ga fura-nai.</i> tomorrow-TOPIC rain-TOPIC to.fall-NEGATIVE 'It won't rain, tomorrow.'	
N-159-2	Ikema	atʰsa: amja: ffaN	N,N,D,U
N-159-2	Karimata	atʰsa: amja: ffaN	N,M
N-159-2	Kugai	atʰsa: ame: fufaŋ	N,H,N,M
N-159-2	Yonaha	atʰsu: amja: ffaN (Perhaps 'atʰsu:' is the zero-case form for 'tomorrow'.)	S
N-159-2	Kurima	atʰsa: amja: ffaŋ	K,U,D
N-159-2	Miyaguni	acʰa: amja: ffaŋ	K,T
N-159-2	Uruka	atʰsa: amja: ffaŋ	N,I,O
N-159-2	Bora	ata: amja: ffaŋ	K,T
N-159-3	Standard Japanese	<i>kinoo-wa ame-ga fut-ta.</i> yesterday-TOPIC rain-NOMINATIVE to.fall-PAST 'Yesterday, it rained.'	
N-159-3	Ikema	nnu: amja: fu:tai	N,N,D,U
N-159-3	Karimata	kino: aminudu {ffi / fʰfi}	N,M
N-159-3	Kugai	kaŋno: aminudu fuʔta:	N,H,N,M
N-159-3	Yonaha	kaŋna: aminudu fʰʊtta:	S
N-159-3	Kurima	ʰkaŋno: aminudu fʰʰta	K,U,D
N-159-3	Miyaguni	kʰnu:ja aminudu fuzta:	K,T
N-159-3	Uruka	kaŋnu:ja aminudu {ʰʰtaʔ / ʰʰta:}	N,I,O
N-159-3	Bora	ʰkaŋnu:ja aminudu fʰʊʔta:	K,T
N-159-4	Standard Japanese	<i>ooame-ga futte, hidere-ga tuzui-teiru.</i> heavy.rain-NOMINATIVE to.fall, drought-NOMINATIVE to.continue-PROGRESSIVE 'After the heavy rain, there has continued to be a drought.'	
N-159-4	Ikema	ɡaba: aminu ffi: ntanu ('earth-NOMINATIVE') ka:kijui ('to.dry.up-STATIVE')	N,N,D,U
N-159-4	Karimata	upu aminudu fiʰite pja:inu ʰʰdziki:juN	N,M



N-159-4	Kugai	{abʷza'ami / abʷza:mi} furi:du pia:ʷnu ʷaʷaʷa: (The apostrophe signifies a hiatus.)	N,H,N,M
N-159-4	Yonaha	upu aminudu ffitti piaʷnu ʷsuzuki (‘iu’ in ‘ʷsuzuki’ is an ambiguous diphthong; it can also be interpreted as ‘ʷsuzuki:’.)	S
N-159-4	Kurima	upuaminu ffittidʷ pia:rinu ʷu:ka <cf> pia:rinu {ʷaʷaʷa: / ʷaʷaʷa:} (‘the sunshine is strong’)	K,U,D
N-159-4	Miyaguni	up.aminu ficcidu wa:cʷkinu cuzuki	K,T
N-159-4	Uruka	upu: aminu ffitti(du) ato: pia:ʷ ʷaʷaʷa uz (‘there has continued to be a drought’)	N,I,O
N-159-4	Bora	upuaminu ffittʷidu pia:rinu ʷaʷaʷa:	K,T
N-159-5	Standard Japanese	<i>ima ame-ga fut-teiru.</i> now rain-NOMINATIVE to.fall-PROGRESSIVE ‘It’s raining now.’	
N-159-5	Ikema	n:nama aminu ffju:ui	N,N,D,U
N-159-5	Karimata	nnama: aminudu {fju: / ffju:}	N,M
N-159-5	Kugai	nnama: aminudu furju:	N,H,N,M
N-159-5	Yonaha	nnamadu aminu ffju: (‘iu’ in ‘ffju:’ is an ambiguous diphthong; it can also be interpreted as ‘ffju:’.)	S
N-159-5	Kurima	ṅnama: aminudu {ffju:ʷ / ffju:ʷ}	K,U,D
N-159-5	Miyaguni	nnama aminu fju:	K,T
N-159-5	Uruka	nama: aminudu {ffju:ʷ / fju:ʷ}	N,I,O
N-159-5	Bora	ṅnamadu aminu ffju:	K,T
N-159-5	Standard Japanese	<i>ame-ga futte ki-ta.</i> rain-NOMINATIVE to.fall to.come-PAST ‘It has started raining.’	
N-159-5	Ikema	aminu ffi: fu:do:	N,N,D,U
N-159-5	Karimata	aminudu ffi kiʷi	N,M
N-159-5	Kugai	aminudu furi {kʷ: / ks:}	N,H,N,M
N-159-5	Yonaha	aminudu ffi kʷʷ	S
N-159-5	Kurima	aminudu ffi ʷiʷu:ʷ (‘to.fall to.come-STATIVE’)	K,U,D
N-159-5	Miyaguni	aminudu ffi kʷ	K,T
N-159-5	Uruka	aminudu ffi ksʷ:	N,I,O
N-159-5	Bora	aminu ffi: kʷ:	K,T
N-160-1	Standard Japanese	<i>minna koko-de oriru.</i> everyone here-LOCATIVE to.get.off ‘Everyone gets off here.’	
N-160-1	Ikema	n:nanai umakafa urifu	N,N,D,U

N-160-1	Karimata	n:na umandu urui (uripaʔi 'to.get.off-EPISTEMIC'; uraʔi 'to.drop.off-IMPERATIVE')	N,M
N-160-1	Kugai	m:na umaŋ urin	N,H,N,M
N-160-1	Yonaha	m:na kumaN urifu (Perhaps 'uriru' is an imperative.)	S
N-160-1	Kurima	mu:ʔtu kumaŋke: urin   mu:ʔtu kumaŋke: urin	K,U,D
N-160-1	Miyaguni	m:na {kumau / kumaŋkai} urifu	K,T
N-160-1	Uruka	m:na kumaŋ uritʔa: ('to.get.off-EMPHATIC' (intentional); an assertive form was not obtained.)	N,I,O
N-160-1	Bora	m:na umaŋdu uri	K,T
N-160-2	Standard Japanese	<i>watashi-wa koko-de-wa ori-nai.</i> I-TOPIC here-LOCATIVE-TOPIC to.get.off-NEGATIVE 'I don't get off here.'	
N-160-2	Ikema	ba: umanna uridʒa:N	N,N,D,U
N-160-2	Karimata	ba: umanna uridafan (Perhaps 'to.get.off-POTENTIAL-NEGATIVE'.)	N,M
N-160-2	Kugai	baja: umanna urin	N,H,N,M
N-160-2	Yonaha	baja: kumanna {urudʒan / uridʒan}	S
N-160-2	Kurima	aba: kumaŋke: {urun / urun / uridʒa:n}	K,U,D
N-160-2	Miyaguni	baja: kumaŋkaija uruzja:n	K,T
N-160-2	Uruka	baja: kumanpa ʔru {raŋ / dʒaŋ}	N,I,O
N-160-2	Bora	baja: umanpa urun	K,T
N-160-3	Standard Japanese	<i>koko-de basu-o ori-ta.</i> here-LOCATIVE bus-ACCUSATIVE to.get.off-PAST 'I got off the bus here.'	
N-160-3	Ikema	umandu basukafa uritai	N,N,D,U
N-160-3	Karimata	uma uridu bassudu uritai (The nature of 'uri' in 'uridu' is uncertain.)	N,M
N-160-3	Kugai	umandu bas: urita:	N,H,N,M
N-160-3	Yonaha	kumandu {bassu / basukafa} urita: (basukafa 'bus-ABLATIVE')	S
N-160-3	Kurima	kumaŋke:du bassa {uritaʔ / urita}	K,U,D
N-160-3	Miyaguni	kumaŋkaidu {bassu / basukafa} urita:	K,T
N-160-3	Uruka	kumaŋdu bassu: {urita:/uritaʔ}	N,I,O
N-160-3	Bora	umaŋdu bassu urita:	K,T
N-160-4	Standard Japanese	<i>basu-o orite, denwa kake-ro.</i> bus-ACCUSATIVE to.get.off, telephone to.put.on-IMPERATIVE 'Get off the bus and make a call.'	
N-160-4	Ikema	basukafa uri: denʔau ja:ŋkai kakiru	N,N,D,U
N-160-4	Karimata	bassu uridʒi de:ʔau ʔi ku:	N,M
N-160-4	Kugai	bas uritti demʔo: kakiru	N,H,N,M
N-160-4	Yonaha	basupa uritti demʔo: kakiru	S

N-160-4	Kurima	baskara urittidu demɥao kaʔiʔu	K,U,D
N-160-4	Miyaguni	basuʔkafa uritte deũwau kaʔiʔu	K,T
N-160-4	Uruka	bassu uritti demwauba: kaʔiʔu	N,I,O
N-160-4	Bora	basa: urittɛi demɥau kaʔiʔu	K,T
N-160-5	Standard Japanese	<i>imooto-ga basu-kara orite ki-ta.</i> younger.sister-NOMINATIVE bus-ABLATIVE to.get.off to.come-PAST 'My sister came out of the bus.'	
N-160-5	Ikema	uttunu midunnu basukafa urittɛu:i	N,N,D,U
N-160-5	Karimata	utudunudu basukafa uri kiʔi	N,M
N-160-5	Kugai	ututunudu bas: uri ks:	N,H,N,M
N-160-5	Yonaha	bunaɲnudu basuʔkafa uri kɔʔɔ	S
N-160-5	Kurima	utuʔunudu baskafa uri {ʔsta / ʔsta}	K,U,D
N-160-5	Miyaguni	utuʔu basuʔkafa uri kiʔa:	K,T
N-160-5	Uruka	a ŋ, g a g a ( ' older.sister-NOMINATIVE ' ) basuʔkafa {uriksʔaʔ / uriksʔaʔ}	N,I,O
N-160-5	Bora	utuʔunudu baskafa uri kʔa:	K,T
N-161-1	Standard Japanese	<i>saru-mo ki-kara ochiru.</i> monkey-too tree-ABLATIVE to.fall 'Even monkeys fall from trees./Even the best sometimes make mistakes.'	
N-161-1	Ikema	sarumai ki:kafa uti:jui	N,N,D,U
N-161-1	Karimata	sarumai ki:gaʔadu {utidu / utɛi}	N,M
N-161-1	Kugai	sarumai ki:kafa utiʔ	N,H,N,M
N-161-1	Yonaha	iʔu:maidu ki:kafa uti: ( ' They always fall from the trees (because the branches are weak). ' )	S
N-161-1	Kurima	sarume: ki:kafa {utidus / utidusɔ} ( ' to.fall-EMPHATIC to.do ' ) <cf> antɛi: itadzɔaʔka: umakafa utimdo: ( ' Being mischievous like that you'll fall down from there! ' )	K,U,D
N-161-1	Miyaguni	sarumai ki:kafa uci	K,T
N-161-1	Uruka	saru:mai ki:kafa utidu {sɔ / sɔʔ} ( Apparently unnatural with 'utiʔ'. 'sɔ:' is sometimes accompanied by some slight friction. )	N,I,O
N-161-1	Bora	sarumai ki:kafa utɛi	K,T
N-161-2	Standard Japanese	<i>ki-o yurashi-temo mi(mikan)-wa ochi-nai.</i> tree-ACCUSATIVE to.shake-even.when fruit(mandarin.orange)-TOPIC to.fall-NEGATIVE 'No mandarins fall from the tree, even when you shake it.'	
N-161-2	Ikema	ki: juruʔaʔimmai ki:nunaija dzɛ:ŋkaija utiN	N,N,D,U
N-161-2	Karimata	ki:ju juruʔaʔa:mai n:ta: utiN	N,M
N-161-2	Kugai	ki:ju juruʔa:mmai naʔza utiŋ	N,H,N,M
N-161-2	Yonaha	ki:ju juruʔaʔa:mai fun'izza utuN	S
N-161-2	Kurima	ki:ju juruʔaʔa:me: mikanna utuŋ	K,U,D

N-161-2	Miyaguni	ki:u juɾuɣasibam mikanna utuŋ	K,T
N-161-2	Uruka	ki:ju ujukasabaŋ nazʔa utuŋ	N,I,O
N-161-2	Bora	ki:ju jaʔasa:mai nazza utuŋ	K,T
N-161-3	Standard Japanese	<i>ani-ga ki-kara ochi-ta.</i> older.brother-NOMINATIVE tree-ABLATIVE to.fall-PAST 'My brother fell from the tree.'	
N-161-3	Ikema	sudzanu ki:kara sandzari ɲa:N (ka:ranu utitai 'A roof tile fell down.')	N,N,D,U
N-161-3	Karimata	adza: ( ' older.brother-TOPIC ' ) ki: g ara uti    addzandu ( ' older.brother-NOMINATIVE ' ) ki:gara utɕi	N,M
N-161-3	Kugai	sudzanudu ki:kara utita:	N,H,N,M
N-161-3	Yonaha	azagadu ki:kara utita:	S
N-161-3	Kurima	adzanadu ki:kara {uti / uti: / utitaz}	K,U,D
N-161-3	Miyaguni	azaga ki:kara ucita:	K,T
N-161-3	Uruka	azagadu ki:kara {utitaʔ / utita:}	N,I,O
N-161-3	Bora	adzagadu ki:kara utɕita:	K,T
N-161-4	Standard Japanese	<i>ani-wa ki-kara ochite, ima-wa byooin-ni iru.</i> older.brother-TOPIC tree-ABLATIVE to.fall, now-TOPIC hospital-LOCATIVE to.be 'My brother fell from the tree and is now in the hospital.'	
N-161-4	Ikema	sudzaga ki:kara sandzari:ti nnama icanuja:n urui	N,N,D,U
N-161-4	Karimata	adza ki:gara utidu nnama bjo:indu uʔi	N,M
N-161-4	Kugai	sudza: ki:kara utitidu nnama: bjo:iŋ u:	N,H,N,M
N-161-4	Yonaha	aza: ki:kara utɕittidu nnama: bjo:iŋ uŋ (The friction noise of 'ɾ' in 'uŋ' is weak.)	S
N-161-4	Kurima	adzanadu ki:kara utititi paɕtu jamaɕitti bjo:iŋke: piztaŋ	K,U,D
N-161-4	Miyaguni	aza: ki:kara uciccidu nnama: bjo:indu u:	K,T
N-161-4	Uruka	aza: ki:kara utittidu nama: bjo:iŋ uʔ	N,I,O
N-161-4	Bora	adza: ki:kara utɕittidu nnama: bjo:in u:	K,T
N-161-5	Standard Japanese	<i>ame-wa ten-kara ochite kuru.</i> rain-TOPIC sky-ABLATIVE to.fall to.come 'Rain falls from the sky.'	
N-161-5	Ikema	ami tiŋkara uti: fu:	N,N,D,U
N-161-5	Karimata	amja: tiŋgaradu utɕi: ku:	N,M
N-161-5	Kugai	ame: tiŋkaradu uti ks:	N,H,N,M
N-161-5	Yonaha	amʔaa tiŋkaradu uti kɾʃ	S
N-161-5	Kurima	amʔa: {tiŋkaradu / tiŋkaradɕ} {ffitɕs / utitɕs}	K,U,D
N-161-5	Miyaguni	amja: ciŋkara uciku:	K,T

N-161-5	Uruka	amʲa: təŋkaradu utiksʷ	N,I,O
N-161-5	Bora	amʲa: tɛŋkaradu utɛi kʷ:	K,T
N-162-1	Standard Japanese	<i>saru-ga kinomi-o otosu.</i> monkey-NOMINATIVE nut-ACCUSATIVE to.drop 'A monkey drops nuts from the tree.'	
N-162-1	Ikema	safu ki:nunai utaçi:jui	N,N,D,U
N-162-1	Karimata	safunudu ki:nu n:tau {utasĩ: / utas}	N,M
N-162-1	Kugai	safunudu ki:nu nazʷzuba: utasʷ	N,H,N,M
N-162-1	Yonaha	safunudu ki:nu nazzu utusʷ	S
N-162-1	Kurima	safunudu ki:ŋke: nu:ri: iki ('tree-LOCATIVE to.climb to.go') ki:nu {nazzu / nazzʷ} utusʷ	K,U,D
N-162-1	Miyaguni	safuɠa ki:nu nazzu utuʃu	K,T
N-162-1	Uruka	safua ki:nu {nazʷʷ / nazʷu} utusʷ	N,I,O
N-162-1	Bora	safunudu ki:nu nazzu {utuʃ / utusʷ}	K,T
N-162-2	Standard Japanese	<i>kono saru-wa kinomi-o otosa-nai.</i> this monkey-TOPIC nut-ACCUSATIVE to.drop-NEGATIVE 'This monkey doesn't drop nuts.'	
N-162-2	Ikema	kunu safu: ki:nunaiju:ba utahaN	N,N,D,U
N-162-2	Karimata	kunu {saʷo: / saʷo} ki:nu n:tau utasaN	N,M
N-162-2	Kugai	kunu saʷo: ki:nu nazʷzuba: utasaŋ	N,H,N,M
N-162-2	Yonaha	kunu safa: ki:nu nazʷzuba: utasaN	S
N-162-2	Kurima	kufu saʷo: ki:nu nazzuba: utuʃaŋ	K,U,D
N-162-2	Miyaguni	kunu saʷo: ki:nu mi:uba: utuʃaŋ	K,T
N-162-2	Uruka	kunu safua ki:nu nazʷzuba: utusaŋ	N,I,O
N-162-2	Bora	kunu safa: ki:nu nazzuba: utusaŋ	K,T
N-162-3	Standard Japanese	<i>kinoo ido-ni ishi-o otoshi-ta.</i> yesterday well-LOCATIVE stone-ACCUSATIVE to.drop-PAST 'I dropped a stone into the well yesterday.'	
N-162-3	Ikema	nnu ka:ŋkai issĩ utaçitai	N,N,D,U
N-162-3	Karimata	kinu:ndu ka:i issu utaçitai	N,M
N-162-3	Kugai	kʷnu: ka:ŋkai issu utasta:	N,H,N,M
N-162-3	Yonaha	kʷnu:du issu ka:ŋkai utusʷta: ('yesterday stone-ACCUSATIVE well-LOCATIVE to.drop-PAST')	S
N-162-3	Kurima	ʷno: issudu ka:ŋke: {utuʃtaʷ / utuʃta}	K,U,D
N-162-3	Miyaguni	kunu ka:ŋkai issu utuʃta:	K,T
N-162-3	Uruka	kʷnu: ka:ŋkai issu: {utuʃtaʷ / utuʃta}	N,I,O
N-162-3	Bora	ʷnu:du ʷra:ŋka:ŋkai issu utuʃta:	K,T

N-162-4	Standard Japanese	<i>booshi-o otoshite, tori-ni it-ta.</i> hat-ACCUSATIVE to.drop, to.get-DATIVE to.go-PAST 'I dropped my hat and went to get it.'	
N-162-4	Ikema	kavvimunu dzi:ŋkai utai tuiga ikitai	N,N,D,U
N-162-4	Karimata	bo:ɛiu utaɛidu tuiga iki	N,M
N-162-4	Kugai	bo:ɛu: utaɛitidu tuɾga ikɾta:	N,H,N,M
N-162-4	Yonaha	bo:ɛa: utuɛittidu tuɾga ikɾta: (Perhaps 'bo:ɛa:' corresponds to 'hat-TOPIC'.)	S
N-162-4	Kurima	bo:ɛu: utuɛitidɔ tuzga {ikju:taz / ikju:ta}	K,U,D
N-162-4	Miyaguni	bo:sju: utuɛittɪ tuɾga ikɾta:	K,T
N-162-4	Uruka	bo:ɛu: utuɛitti tuɾga iksɾtaɾ	N,I,O
N-162-4	Bora	bo:ɛu: utuɛitɛidu tuzga ikju:ta: ('to.go-STATIVE-PAST')	K,T
N-162-5	Standard Japanese	<i>ki-ni nobotte mi-o otoshite ku-re.</i> tree-LOCATIVE to.climb fruit-ACCUSATIVE to.drop to.give-IMPERATIVE 'Climb the tree and drop some fruit.'	
N-162-5	Ikema	ki:nu hanaŋkai nu:ri: naimunun utai fi:ru	N,N,D,U
N-162-5	Karimata	ki:ŋgai nu:ri n:tau utai {fi:ru / firu}	N,M
N-162-5	Kugai	ki:ŋkai nu:ri iki: naɾzu u taɛi fi:ru	N,H,N,M
N-162-5	Yonaha	ki:ŋkai nu:ri: nazzu utuɛi fɪru	S
N-162-5	Kurima	ki:n naɾju:z mikannu tufi utuɛi fi:ru ('Get the mandarin that has grown on the tree and drop it.')    ki:n nu:ri iki utuɛi fi:ru ('Go climb the tree and drop it.')	K,U,D
N-162-5	Miyaguni	ki:ŋkai nu:ricci nazzu utuɛi fi:ru	K,T
N-162-5	Uruka	ki:ŋkai nu:rɪtti {nazɾ / nazɾŋkai} utuɛi fɪru	N,I,O
N-162-5	Bora	ki:n nu:ri: nazzu utuɛi fi:ru	K,T
N-163-1	Standard Japanese	<i>uma-mo hito-o keru.</i> horse-too person-ACCUSATIVE to.kick 'Horses kick people, too.'	
N-163-1	Ikema	nu:mamai {fiɸtu / phiɸtu} uba ki: tausu	N,N,D,U
N-163-1	Karimata	nu:mamai pɸtuudu ki:	N,M
N-163-1	Kugai	nu:mamai pstu: kiɾ	N,H,N,M
N-163-1	Yonaha	nu:ma:mai pɾtu:ɸu {ka:dusu / kiz}	S
N-163-1	Kurima	nu:mame: pstu:du {kiz / kiɾ}	K,U,D
N-163-1	Miyaguni	nu:mamai {pɪtuba: / pɪtu:} kiz	K,T
N-163-1	Uruka	nu:mamai pstu:ba: {kiɾ / kiɾdu sɾ} (Apparently unnatural with 'utiɾ' [translator's note: 'kiɾ'?). 'sɾ:' [translator's note: 'sɾ'?) is sometimes accompanied by some slight friction.)	N,I,O
N-163-1	Bora	nu:mamai pstu: kiz	K,T

N-163-2	Standard Japanese	<i>otonashii uma-wa hito-o kera-nai.</i> to.be.quiet horse-TOPIC person-ACCUSATIVE to.kick-NEGATIVE 'Gentle horses don't kick people.'	
N-163-2	Ikema	manai nu:ma: fiŋtu uba kiraN	N,N,D,U
N-163-2	Karimata	nu:ma: pʰiŋtuuba kiraN	N,M
N-163-2	Kugai	nuka:nukanu nu:ma: pstu:ba: kiraŋ	N,H,N,M
N-163-2	Yonaha	nuka:nu nu:ma: pŋtu:ba kiraN	S
N-163-2	Kurima	nuka:nu nu:ma: pʂtu:ba: kiŋaŋ	K,U,D
N-163-2	Miyaguni	nuka:nukanu nu:ma: {pŋtu:ba: / piŋtu:ba} kiraŋ	K,T
N-163-2	Uruka	nuka:nukanu nu:ma: pʰiŋtu:ba: {kŋsaŋ / kŋsaŋ}	N,I,O
N-163-2	Bora	manai:manainu nu:ma: pʂtu: kiraŋ	K,T
N-163-3	Standard Japanese	<i>kinoo ano uma-wa hito-o ket-ta.</i> yesterday that horse-TOPIC person-ACCUSATIVE to.kick-PAST 'That horse kicked someone, yesterday.'	
N-163-3	Ikema	nnu: kanu nu:ma: ki:tai	N,N,D,U
N-163-3	Karimata	kino: kanu nu:ma: pʰiŋtuudu kiri (Perhaps 'pstu ~ pʰtu' instead of 'pʰtu'.)	N,M
N-163-3	Kugai	kŋnu: kanu nu:ma: pstu:du {kiŋta: / kiŋta:}	N,H,N,M
N-163-3	Yonaha	kŋna: kanu nu:ma: pŋtu:du kizŋta: (kŋna: 'yesterday-TOPIC')	S
N-163-3	Kurima	ʂnudu kanu nu:ma: pstu: {kizta: / kizta:}	K,U,D
N-163-3	Miyaguni	kiŋnu: kanu nu:ma: piŋtu: kizta:	K,T
N-163-3	Uruka	ksnu: kanu nu:ma: pʂtu: kŋtaŋ	N,I,O
N-163-3	Bora	ʂŋnu:ja kanu nu:ma: pʂtu kizta:	K,T
N-163-4	Standard Japanese	<i>aruji-o kette, nigesat-ta.</i> master-ACCUSATIVE to.kick, to.run.off-PAST 'It kicked its master and ran off.'	
N-163-4	Ikema	nussu kiri: ʧiŋgi: hari:ŋa:N	N,N,D,U
N-163-4	Karimata	nussidu kiriŋiti piŋgita	N,M
N-163-4	Kugai	nussu kirittidu piŋgi piŋta:	N,H,N,M
N-163-4	Yonaha	afuziba kirittidu piŋgi pi:ta:	S
N-163-4	Kurima	nu:manu nussudu kirittidu    nussu kiŋittidʊ piŋgi piŋta: ('The horse kicked its master and ran off.')	K,U,D
N-163-4	Miyaguni	afuzzadu kʒri piŋgasi piraŋta:	K,T
N-163-4	Uruka	nussŋ: kirittidu piŋgita:	N,I,O
N-163-4	Bora	nussu kirittʊ piŋgi piŋta:	K,T
N-163-5	Standard Japanese	<i>sono booru-o koko-ni kette ku-re.</i> that ball-ACCUSATIVE here-LOCATIVE to.kick to.give-IMPERATIVE 'Kick that ball this way.'	
N-163-5	Ikema	unu ma:iju kumaŋkai kiri: fi:ru	N,N,D,U

N-163-5	Karimata	unu bo:ru umai kiri fi:ru	N,M
N-163-5	Kugai	unu {bo:ru: / bo:ru'o} umaŋkai kiri fi:ru ('bo:ru'o' is not dialectal.)	N,H,N,M
N-163-5	Yonaha	unu ma:ʔru kumaŋkai kiri fi:ru	S
N-163-5	Kurima	unu ma:zzʊ ('ball-ACCUSATIVE') kiri fi:ruʊ    kumaŋke kiri jaʔae ('to.kick to.give-IMPERATIVE') <cf> vvaʔa kire ('You kick it.' (imperative))	K,U,D
N-163-5	Miyaguni	unu ma:zzu kumaŋkai kiri fi:ru	K,T
N-163-5	Uruka	unu bo:ru: kumaŋkai kiri jaʔae	N,I,O
N-163-5	Bora	unu bo:ru: kumaŋkai kiri fi:ru	K,T
N-163B-1	Standard Japanese	<i>chichi-ga mainichi gomi-o suteru.</i> father-NOMINATIVE every.day garbage-ACCUSATIVE to.discard 'My father throws away garbage every day.'	
N-163B-1	Ikema	{ʔizaʔa / zzaʔa} mainiʔsi gumiuba: si:ti:	N,N,D,U
N-163B-1	Karimata	uja: mainiʔsi gomiu {si:ti/sitidu} (si:tiui 'to.discard-PROGRESSIVE')	N,M
N-163B-1	Kugai	ʔzanudu mainiʔsa gumiu: stiʔ	N,H,N,M
N-163B-1	Yonaha	ujaga mai:nʔiʔsa gumiu sutiʔ	S
N-163B-1	Kurima	ujanadʊ gumiu:ba: mainiʔsa {stiʔ/stizʔ}	K,U,D
N-163B-1	Miyaguni	ujagadu mai:nici gumiu si:ciu	K,T
N-163B-1	Uruka	ujagadu mainiʔsa gumiu: ŋti	N,I,O
N-163B-1	Bora	ujagadu mainiʔsa gumiu:ba: ŋtʔi	K,T
N-163B-2	Standard Japanese	<i>sobo-wa furui kimono-mo sute-nai.</i> grandmother-TOPIC to.be.old kimono-too to.discard-NEGATIVE 'My grandmother doesn't even throw away her old kimonos.'	
N-163B-2	Ikema	oba:ja jaʔi dʒim (nu?) mai si:tiN	N,N,D,U
N-163B-2	Karimata	oba:ja jaʔi kinnuba si:tiN	N,M
N-163B-2	Kugai	a:ma: fuʔkaʔannumai ŋʔiʔŋ	N,H,N,M
N-163B-2	Yonaha	mma: furu:nu kʔannumai sutuN	S
N-163B-2	Kurima	pa:mma: fuʔumi: ʔnnume: stuŋ	K,U,D
N-163B-2	Miyaguni	mma: fz:fznu kinnumai si:ʔuŋ	K,T
N-163B-2	Uruka	mʔma: fuʔfuʔanu ksnnumai ŋtuŋ	N,I,O
N-163B-2	Bora	mma: fz:fznu ʔnnumai ŋtuŋ	K,T
N-163B-3	Standard Japanese	<i>furui doogu-wa ototoi sute-ta.</i> to.be.old tool-TOPIC day.before.yesterday to.discard-PAST 'I threw away my old tools the day before yesterday.'	
N-163B-3	Ikema	jaʔi daʊgu mi:kanai si:tiN	N,N,D,U
N-163B-3	Karimata	jaʔi dovva bututuʔidu si:ti	N,M
N-163B-3	Kugai	fuʔ do:ʊʊuba: bututuʔidu ŋʔita:	N,H,N,M
N-163B-3	Yonaha	furu:nu do:ʔruba: bututuʔidu ŋʔita:	S



N-163B-3	Kurima	fɪŋrufɪŋnari:nu tʂka:ruŋ do:vva: ('to.be.old to.become-PAST to.use- POTENTIAL-NEGATIVE tool-TOPIC ') {ʂnudu stitaŋ / buttuzdu {stɪtaz / stitaŋ}}	K,U,D
N-163B-3	Miyaguni	{fz:fznu / fɪ:fɪnu} do:guba: butuʂuŋdu sɤtita:	K,T
N-163B-3	Uruka	fɪʂfɪʂnu do:ʊba: bututuʂ {ʂtitaʂ / stita:}	N,I,O
N-163B-3	Bora	fz:fznu da:vvuba: butuʂuz ʂtɪta:	K,T
N-163B-4	Standard Japanese	<i>furui mono-wa sutete, atarashii mono-o ka-e.</i> to.be.old thing-TOPIC to.discard, to.be.new thing-ACCUSATIVE to.buy-IMPERATIVE 'Throw away your old things and buy new ones.'	
N-163B-4	Ikema	jaŋi munuba sɪti: mi: munu kai	N,N,D,U
N-163B-4	Karimata	jaŋi munuba sɪtiʂiti m:mi: munu: kai	N,M
N-163B-4	Kugai	fɪʂmunuba: sɤtiti me:ʂmunu:ba kai	N,H,N,M
N-163B-4	Yonaha	fɪʂnu munu:ba: sutitti: afa:nu munu: kai	S
N-163B-4	Kurima	fɪʂmunu:ba: stɪti afamunu: ke:	K,U,D
N-163B-4	Miyaguni	{fz:fznu / fɪ:fɪnu} munu:ba: sɪʂiʂi kaʂi:nu munu: kai	K,T
N-163B-4	Uruka	fɪʂfɪʂnu munuuba: stitti mʂ:mʂ:nu munu: kai	N,I,O
N-163B-4	Bora	fɪʂmunu:ba: ʂtɪtɪ mja:mja:nu munu: kai	K,T
N-163B-5	Standard Japanese	<i>gomi-o soko-ni sutete ku-re.</i> garbage-ACCUSATIVE there-LOCATIVE to.discard to.give-IMPERATIVE 'Throw away the garbage over there.'	
N-163B-5	Ikema	janamunuba: kumaŋkai sɪti: ku: ('to.discard to.come-IMPERATIVE')    sɪtiŋru ('to.discard-IMPERATIVE')	N,N,D,U
N-163B-5	Karimata	gumju:ba umai sɪti fi:ru	N,M
N-163B-5	Kugai	gumju: umaŋkai sɤti fi:ru	N,H,N,M
N-163B-5	Yonaha	gumiŋ umaŋkai sɤti fi:ru	S
N-163B-5	Kurima	gumju:ba: umaŋke: stifi:fo <cf> stiŋro 'to.discard-IMPERATIVE'	K,U,D
N-163B-5	Miyaguni	gumiŋ umaŋkai {sɪtiŋru / sɪti fi:ru}	K,T
N-163B-5	Uruka	gumiuba: umaŋ sɤti fi:ru	N,I,O
N-163B-5	Bora	gumju: umaŋkai stɪ fi:ru	K,T
N-164-1	Standard Japanese	<i>nagai ki-no eda-o kiru.</i> to.be.long tree-GENITIVE branch-ACCUSATIVE to.cut 'I cut the branches of tall trees.'	
N-164-1	Ikema	ki:nu judau kiri	N,N,D,U
N-164-1	Karimata	naʂa ki:nu idau kiri	N,M
N-164-1	Kugai	naʂa:naganu ki:nu judo: kiʂi	N,H,N,M
N-164-1	Yonaha	naʂa:nu ki:nu judo:du kɤŋ (The zero-case form for 'branch' is 'juda'.)	S

N-164-1	Kurima	naɣa:nu ki:nu ido:ba: ʈɕiɕe ('to.cut-IMPERATIVE')    baŋja ʈsade ('I-NOMINATIVE to.cut-VOLITIONAL')    bamme: ʈsʂtu ʂto ('I-too to.cut-EMPHATIC to.do-EMPHATIC')    kanu pstunudu {ʈsɕ / ʈsɕo} ('that person-NOMINATIVE to.cut')	K,U,D
N-164-1	Miyaguni	naɣa:nu ki:nu itau kiʂi	K,T
N-164-1	Uruka	naɣa:naɣanu ki:nu judau ksʔ	N,I,O
N-164-1	Bora	naɣa:naɣanu ki:nu judau kʔ:	K,T
N-164-2	Standard Japanese	<i>yoru-ni-wa tsume-o kira-nai.</i> night-LOCATIVE-TOPIC nail-ACCUSATIVE to.cut-NEGATIVE 'I don't cut my nails at night.'	
N-164-2	Ikema	junaka: ʈsimjuba kiran	N,N,D,U
N-164-2	Karimata	ju:nanna ʈsimiuba kiʂan	N,M
N-164-2	Kugai	june:nna ʈrami:uba: kʔʂan	N,H,N,M
N-164-2	Yonaha	junainna ʈsumiuba kiran	S
N-164-2	Kurima	june:ja ('night-TOPIC') ʈmju:ba: ʈsʂan	K,U,D
N-164-2	Miyaguni	junainna cumiuba: kiʂan	K,T
N-164-2	Uruka	junaija ʈffunari:karaja ʈramijuba: {kʔʂan / kiran}	N,I,O
N-164-2	Bora	junainna ʈramju:ba: ksʂan	K,T
N-164-3	Standard Japanese	<i>watashi-ga gajimaru-wa kit-ta.</i> I-NOMINATIVE banyan.tree-TOPIC to.cut-PAST 'I did cut down a banyan tree.'	
N-164-3	Ikema	baɣadu ɣadzimarunu ki:ja kiritaido:	N,N,D,U
N-164-3	Karimata	ba:du ɣadzimarudu ki:sita	N,M
N-164-3	Kugai	ba:du ɣadzamagi:juba: kʔʂta:	N,H,N,M
N-164-3	Yonaha	baɣadu ɣazimagi:uba kʔʂta:	S
N-164-3	Kurima	baɣadu ɣadzimaruki:ju {ʈsʂta / ʈsʂtaʂ}	K,U,D
N-164-3	Miyaguni	baɣa ɣazimaruba: ki:ta:	K,T
N-164-3	Uruka	baɣadu ɣadzimaruba: {kʂtaʔ / ksʂ:taʔ}	N,I,O
N-164-3	Bora	baɣadu ɣadzamagi:juba: ksʂta:	K,T
N-164-4	Standard Japanese	<i>sono nagai kami-wa kitte, oiwai-ni i-ke-yo.</i> that to.be.long hair-TOPIC to.cut, celebration-DATIVE to.go-IMPERATIVE-EMPHATIC 'Cut your long hair and go celebrate!'	
N-164-4	Ikema	kunu naɣai karadzɪ: (ba?) kiri: ju:ŋkai ikija:	N,N,D,U
N-164-4	Karimata	unu naɣa karatʂuba kiɕiɕiti jo:ŋgai ikijo	N,M
N-164-4	Kugai	unu naɣaɣaradzɪba kiɕitti jo:ʔfo:ga iki	N,H,N,M
N-164-4	Yonaha	unu naɣa karazzuba kʔɕitti jo:ŋkai iki	S
N-164-4	Kurima	naɣakaradzɪba: {ʈfaɕitti / ʈɕiɕitti} jo:ŋke:ja iki	K,U,D

N-164-4	Miyaguni	unu naɣa:nu kafazziuba: kiŋsitt̩ jo:ŋkaija iki	K,T
N-164-4	Uruka	unu naɣa:naganu karatʂaba: {kiŋsiti / kiŋsiti} jo:ŋkai(ja) iki jo:	N,I,O
N-164-4	Bora	unu naɣakafaddzuba: kiŋsitt̩ ja:zŋkai pirijo	K,T
N-164-5	Standard Japanese	<i>kono himo-o mitsu-ni kitte ku-re-nai-ka.</i> this string-ACCUSATIVE three-DATIVE to.cut to.give-IMPERATIVE-NEGATIVE-INTERROGATIVE 'Could you cut this string into three parts?'	
N-164-5	Ikema	kunu bo: ('stick-ACCUSATIVE') mi:ʂŋkai kiri: fi: samati (The nature of 'ti' in 'samati' is uncertain.)	N,N,D,U
N-164-5	Karimata	unu na:ju ('cord-ACCUSATIVE') mi:ʂŋgai kiŋsi fi:ru	N,M
N-164-5	Kugai	kunu himo: mi:ʂŋkai kiŋsi fi:ɟza:nna	N,H,N,M
N-164-5	Yonaha	kunu ʂuno: mi:ʂunʰkai kŋsi furia:nna (ʂuno: 'rope-ACCUSATIVE')	S
N-164-5	Kurima	unu bu:juba: mi:ʂŋke: ʂŋsi:fi:ru	K,U,D
N-164-5	Miyaguni	kunu cinau mi:cunʰkai kiŋsi fu:zjanna	K,T
N-164-5	Uruka	kunu ʂanauba: mi:ʂŋkai {kiŋsi / kiŋsi} ffiɾaŋna	N,I,O
N-164-5	Bora	unu bu:juba: mi:ʂŋkai kiŋsi fi:ru	K,T
N-165-1	Standard Japanese	<i>tori-ga nige-nai-yoo (ryoo)ashi-o sibaru.</i> chicken-NOMINATIVE to.escape-NEGATIVE-so.that (both)leg(s)-ACCUSATIVE to.tie.up 'I tie up the chicken's legs so it won't escape.'	
N-165-1	Ikema	mja:tuiju ɟiŋɟiŋjo:n simai	N,N,D,U
N-165-1	Karimata	tuinu piŋɟiŋjo:m pagju simari	N,M
N-165-1	Kugai	tuʀnu piŋɟiŋ jo:ŋ fuɟapagʀzu sɾmaʀ	N,H,N,M
N-165-1	Yonaha	tuʀnu piŋɟunʰ jo:N pagru sɾmaɪ	S
N-165-1	Kurima	tuʀnu piŋɟunʰ jo:ndu patʂu sɾmaʀu:ʂ(ŋ)    kariɟadu patʂuba: samaɪ ('he-NOMINATIVE leg-ACCUSATIVE to.tie.up')	K,U,D
N-165-1	Miyaguni	mmaduŋga piŋɟiɾaŋu ftapagʀ fuɟziukiba	K,T
N-165-1	Uruka	tuʀnu piŋɟunʰjo ftapagʀdu sɾmaɪ	N,I,O
N-165-1	Bora	tuznu piŋɟunʰ jo:ŋ padzu: {sɾmaʀ / ftʂ}	K,T
N-165-2	Standard Japanese	<i>ashi-mo hane-mo sibara-nai.</i> leg-too wing-too to.tie.up-NEGATIVE 'I tie up neither its legs nor its wings.'	
N-165-2	Ikema	hazimai haŋimai ʂimaɾaŋ	N,N,D,U
N-165-2	Karimata	pagju:mai panju:mai simaɾaŋ	N,M
N-165-2	Kugai	pagʀmai panʰu:mai sɾmaɾaŋ	N,H,N,M
N-165-2	Yonaha	pagʀumai panʰiumai sɾmaɾaŋ	S
N-165-2	Kurima	patʂume: panʰu:me: {sɾmaɾaŋ / sɾmaɾaŋ}	K,U,D
N-165-2	Miyaguni	pagʀmai paniumai fuzzaŋ	K,T
N-165-2	Uruka	pagʀmai paniumai sɾmaraŋ	N,I,O

N-165-2	Bora	paɕʔmai pan <sup>ɸ</sup> u:mai {sɰmaʔaŋ / fɰtaŋ}	K, T
N-165-3	Standard Japanese	<i>chichi-ga tori-o shibat-ta.</i> father-NOMINATIVE chicken-ACCUSATIVE to.tie.up-PAST 'My father tied up the chicken.'	
N-165-3	Ikema	zzaga mja:tuiju ɕimaritai	N, N, D, U
N-165-3	Karimata	uja:du tu <sup>ɸ</sup> i {sɰmaʔi: / sɰmaida (Perhaps 'sɰmaidai'.)}	N, M
N-165-3	Kugai	a:ɕzagadu tu <sup>ɸ</sup> ʔzu sɰmaʔta:	N, H, N, M
N-165-3	Yonaha	ujagadu tuzzu sɰma <sup>ɸ</sup> ʔta:	S
N-165-3	Kurima	ujan <sup>ɸ</sup> adu tuzzu {sɰmaʔta / smazta}	K, U, D
N-165-3	Miyaguni	ujaga tuzzu {fuzta: / fɰzta:}	K, T
N-165-3	Uruka	ujagadu tu <sup>ɸ</sup> ʔba: sɰma <sup>ɸ</sup> ʔta <sup>ɸ</sup>	N, I, O
N-165-3	Bora	ujagadu tuzzu {smaz <sup>ɸ</sup> ta: / fɰt <sup>ɸ</sup> sta:}	K, T
N-165-4	Standard Japanese	<i>tori-o shibatte, kago-ni ire-te-ne.</i> chicken-ACCUSATIVE to.tie.up, cage-LOCATIVE to.put.in-IMPERATIVE-EMPHATIC 'Tie up the chicken and put it into the cage.'	
N-165-4	Ikema	mja:tui sɰmaʔi: hakunu nakaŋkai iŋŋa:	N, N, D, U
N-165-4	Karimata	tu <sup>ɸ</sup> i sɰmaʔi: p <sup>h</sup> akunŋgai ('box-LOCATIVE') iɕzi uki	N, M
N-165-4	Kugai	tu <sup>ɸ</sup> ʔzu sɰmaʔitti kagun <sup>ɸ</sup> kai ʔzi fi:ru	N, H, N, M
N-165-4	Yonaha	tuzzu sɰmaitti: kagun <sup>ɸ</sup> kai ʔzi fi:ru	S
N-165-4	Kurima	tuzzu {smaʔi kagun <sup>ɸ</sup> ke zzi <sup>ɸ</sup> ta / smaʔitti kagun <sup>ɸ</sup> ke zzi <sup>ɸ</sup> ro}	K, U, D
N-165-4	Miyaguni	tuzzu sɰmaʔi kagun <sup>ɸ</sup> kai zzi fi:ru	K, T
N-165-4	Uruka	tuz <sup>ɸ</sup> ɕimaʔitti kagun <sup>ɸ</sup> kai {izi <sup>ɸ</sup> rujo: / iɕzi <sup>ɸ</sup> rujo:}	N, I, O
N-165-4	Bora	tuzzu {smaʔittei / fɰt <sup>ɸ</sup> ittei} kagun <sup>ɸ</sup> kai {zzi <sup>ɸ</sup> ru / izi <sup>ɸ</sup> ru}	K, T
N-165-5	Standard Japanese	<i>omae-ga tori-o shibatte ku-re.</i> you-NOMINATIVE chicken-ACCUSATIVE to.tie.up to.give-IMPERATIVE 'You tie up the chicken.' (imperative)	
N-165-5	Ikema	vva <sup>ɸ</sup> ga tuijuba sɰmaʔi: fi:ru	N, N, D, U
N-165-5	Karimata	vva tu <sup>ɸ</sup> zi (Perhaps 'tu <sup>ɸ</sup> iuba'.) sɰmaʔi uki	N, M
N-165-5	Kugai	vva <sup>ɸ</sup> ga tu <sup>ɸ</sup> ʔzu sɰmaʔi fi:ru	N, H, N, M
N-165-5	Yonaha	vva <sup>ɸ</sup> ga tuzzu sɰmaʔi fi:ru	S
N-165-5	Kurima	vvaŋa tuzzuba: {smaʔi / sɰmaʔi} fi:ro    vvaŋa smaʔe ('you-NOMINATIVE to.tie.up-IMPERATIVE')	K, U, D
N-165-5	Miyaguni	vva <sup>ɸ</sup> ga tuzzu sɰmaʔi fi:ru	K, T
N-165-5	Uruka	vva <sup>ɸ</sup> ga tu <sup>ɸ</sup> ʔba sɰmaʔi ffi:ru	N, I, O
N-165-5	Bora	vva <sup>ɸ</sup> ga tuzzuba {smaʔi / fɰt <sup>ɸ</sup> ei:} fi:ru	K, T
N-166-1	Standard Japanese	<i>mainichi imo-o horu.</i> every.day sweet.potato-ACCUSATIVE to.dig 'I dig up sweet potatoes every day.'	

N-166-1	Ikema	kju: ('today') ka:ju ('well-ACCUSATIVE') furadi	N,N,D,U
N-166-1	Karimata	abu: {pφa / pφ:}	N,D,U
N-166-1	Yonaha	NR / 'always here-ACCUSATIVE to.dig' itsu:me: kumaudu puzl	H
N-166-1	Kurima	mainɪʁa mmu puɪ ('today') ('ɪ' and 'ɹ' are uniformly transcribed as 'ɪ'.)	K,I,T
N-166-1	Miyaguni	mainiɪʁi mmo {pozka / polka}	T,N
N-166-1	Uruka	mainiɪʁi ka:u ('well-ACCUSATIVE') puʔ    iɪʁi:mai ('always') pufiuʔ ('to.dig-PROGRESSIVE')	N,U,D
N-166-1	Bora	mai:nɪʁa a:bu:du puzl (a:bu 'hole')	S,M
N-166-2	Standard Japanese	<i>hahaoya-wa kyoo-wa imo-o hora-nai.</i> mother-TOPIC today-TOPIC sweet.potato-ACCUSATIVE to.dig-NEGATIVE 'Mother won't dig up sweet potatoes today.'	
N-166-2	Ikema	kju:ja ka:juba furadza:N	N,N,D,U
N-166-2	Karimata	{abuba / abuβa} pφurafɪ	N,D,U
N-166-2	Yonaha	NR / 'here-LOCATIVE-TOPIC hole-TOPIC to.dig-NEGATIVE' kumanna ano:ba puran	H
N-166-2	Kurima	anna kju:ja mmuba pɪrafɪ	K,I,T
N-166-2	Miyaguni	anna kju:ja mmo pofan	T,N
N-166-2	Uruka	anna: kju:ja {ka:u/ka:uba} pufafɪ	N,U,D
N-166-2	Bora	anna: kju:ja mmuba pufan ('puzɪta:' can also be interpreted as 'puzɪta'.)	S,M
N-166-3	Standard Japanese	<i>mukashi ido-o hot-ta.</i> long.ago well-ACCUSATIVE to.dig-PAST 'I dug a well a long time ago.'	
N-166-3	Ikema	ɪkja:ɪ ka:ju fuitai	N,N,D,U
N-166-3	Karimata	abuba puridə (The vowel in 'də' sounds further to the front than [u].)	N,D,U
N-166-3	Yonaha	NR / 'dog-NOMINATIVE hole-ACCUSATIVE to.dig-PAST' innudu ano : puzta:	H
N-166-3	Kurima	ɪka:nna ka:judu puztaɪ	K,I,T
N-166-3	Miyaguni	ɪkja:ɪ ka:ju pozta:	T,N
N-166-3	Uruka	ɪkja:nna ('long.ago-TOPIC') ka:udu puʔtaʔ	N,U,D
N-166-3	Bora	ɪkja:N ka:ju puzɪta:	S,M
N-166-4	Standard Japanese	<i>ana-o hotte yasum-e.</i> hole-ACCUSATIVE to.dig, to.rest-IMPERATIVE 'Dig a hole and take a rest.'	
N-166-4	Ikema	ana: furi: jukui	N,N,D,U
N-166-4	Karimata	abo: puriɕiti jukui	N,D,U

N-166-4	Yonaha	NR / 'hole-ACCUSATIVE to.dig-after to.rest-IMPERATIVE' ana: pufitti jukui	H
N-166-4	Kurima	ana: puri juke:	K,I,T
N-166-4	Miyaguni	anaʉ pofittɕi jukui	T,N
N-166-4	Uruka	anau puritti jukui	N,U,D
N-166-4	Bora	a:nau purittɕi jukui	S,M
N-166-5	Standard Japanese	<i>asoko-no jimen-o hotte ko-i.</i> over.there-GENITIVE ground-ACCUSATIVE to.dig to.come-IMPERATIVE 'Dig up the ground over there.'	
N-166-5	Ikema	kamanu dz̄i: furi: ku	N,N,D,U
N-166-5	Karimata	anu abu puri ( <i>Ari</i> -continuative used as imperative.)	N,D,U
N-166-5	Yonaha	NR / 'over.there-ACCUSATIVE to.dig to.come-IMPERATIVE' kamau puri ku:	H
N-166-5	Kurima	kamanu zz puriku:	K,I,T
N-166-5	Miyaguni	kamano dz̄zoo pofi ko:	T,N
N-166-5	Uruka	kamanu dz̄:u puri ku:	N,U,D
N-166-5	Bora	kama:nu dz̄a:ju {purittɕi ku: / puri fi:ru} ('purittei' is a <i>shite</i> - continuative; 'puri' in 'puri fi:ru' is an <i>ari</i> -continuative.)	S,M
N-167-1	Standard Japanese	<i>niwa-ni nimotsu-o dasu.</i> yard-LOCATIVE luggage-ACCUSATIVE to.put.out 'I put my things in the yard.'	
N-167-1	Ikema	minakarŋkai ja:nu ('house-GENITIVE') dauvu ('tool-ACCUSATIVE') idaɕi	N,N,D,U
N-167-1	Karimata	a:raŋkai {muɕi / mɔɕi} ki	N,D,U
N-167-1	Yonaha	minakanke: nimuttsuba: idasŋ	H
N-167-1	Kurima	minakarŋke: nimuttsu idaɕe: ('k' is pronounced quite towards the back and easily misheard as 'h'.)	K,I,T
N-167-1	Miyaguni	niwarŋkai {nimottsu / nimottsu} idaɕi ('minaka' ('front yard') is also used.)	T,N
N-167-1	Uruka	minakarŋkai ni:ju idasŋ	N,U,D
N-167-1	Bora	ufu:ba utuŋunudu idasŋ ('My (younger) brother will put that out.')	S,M
N-167-2	Standard Japanese	<i>ame-o toki-ni-wa soto-ni-wa nimotsu-o dasa-nai.</i> ra in-GENITIVE time-LOCATIVE-TOPIC outside-LOCATIVE-TOPIC luggage- ACCUSATIVE to.put.out-NEGATIVE 'When it's raining, I don't put my things outside.'	
N-167-2	Ikema	aminu tukjanna minakarŋkai ('yard-LOCATIVE') idanaŋ	N,N,D,U
N-167-2	Karimata	NR / nimuttsba idasŋa ('to.put.out-NEGATIVE.IMPERATIVE'; a simple negative was not obtained.)	N,D,U

N-167-2	Yonaha	amifuunu tukjanna nimuttsuba afa:nke: idasan	H
N-167-2	Kurima	ami fnna puƙaŋkeε {idasan (third person) / idasad'a : ŋ (first person)} ('eε' is an ambiguous diphthong.)	K,I,T
N-167-2	Miyaguni	ameno t <sup>h</sup> oƙ'a:nna puƙaŋkai nimot <sup>ts</sup> u idasadza:ŋ	T,N
N-167-2	Uruka	aminu tukja:nna puƙaŋkaija ni:juba idasan	N,U,D
N-167-2	Bora	aminu tuƙ'a:nna afa:ŋkaija attauban idasan (atta 'geta')	S,M
N-167-3	Standard Japanese	<i>tomodachi-ga nimotsu-o soto-ni dashi-ta.</i> friend-NOMINATIVE luggage-ACCUSATIVE outside-LOCATIVE to.put.out-PAST 'I put my friend's things outside.'	
N-167-3	Ikema	dusŋnu davvu idaɕitai	N,N,D,U
N-167-3	Karimata	*snudu nimut <sup>ts</sup> uba: a:raŋkai idaɕi	N,D,U
N-167-3	Yonaha	dusŋnu nimuttsu afa:nke: idasita:	H
N-167-3	Kurima	dusunudu nimut <sup>ts</sup> u puƙaŋke: idasan	K,I,T
N-167-3	Miyaguni	dosu <sup>n</sup> odo/dosu <sup>n</sup> o nimot <sup>ts</sup> u puƙaŋkai {idaɕita / idasita}	T,N
N-167-3	Uruka	dusŋnudu ni:ju puƙaŋkai idasitaʔ	N,U,D
N-167-3	Bora	dusŋnudu issu afa:ŋkai idasuta: (iss 'chair')	S,M
N-167-4	Standard Japanese	<i>nimotsu-o soto-ni dashite, sore-kara kaer-e.</i> luggage-ACCUSATIVE outside-LOCATIVE to.put.out, that-ABLATIVE to.return.home-IMPERATIVE 'Put your things outside; then, go home.'	
N-167-4	Ikema	minakaŋkai davvu idaɕikara ja : ŋ kai ('house-ALLATIVE') iki ('to.go-IMPERATIVE')	N,N,D,U
N-167-4	Karimata	a : raŋk ' ai idaɕite {jukui ('to.rest-IMPERATIVE') / ŋ,ɡiru ('to.return.home-IMPERATIVE')}	N,D,U
N-167-4	Yonaha	nimuttsu afa:nke: idasitti piri	H
N-167-4	Kurima	nimut <sup>ts</sup> u huƙaŋkeε idasiŋi piri ('eε' is an ambiguous diphthong.)	K,I,T
N-167-4	Miyaguni	nimot <sup>ts</sup> u puƙaŋkai idaɕitei kara p <sup>h</sup> iri	T,N
N-167-4	Uruka	ni:ju puƙaŋkai idaf <sup>h</sup> itti uŋkara piri	N,U,D
N-167-4	Bora	issu afa:ŋkai idaɕitei nnamakara piri (iss 'chair')	S,M
N-167-5	Standard Japanese	<i>hayaku nimotsu-o dashite ko-i.</i> to.be.early luggage-ACCUSATIVE to.put.out to.come-IMPERATIVE 'Quickly go put your things outside.'	
N-167-5	Ikema	hajamariti: nimut <sup>ts</sup> i idaɕi: ku:	N,N,D,U
N-167-5	Karimata	isgi idaɕi ku:	N,D,U
N-167-5	Yonaha	pja:kariti nimuttsu idasitti kuu (A <i>shite</i> -continuative was obtained, but not an <i>ari</i> -continuative.)	H
N-167-5	Kurima	p'a:kafi nimut <sup>ts</sup> u idasi <sup>o</sup> ku: (The first 'k' is pronounced quite towards the back and easily misheard as 'h'.)	K,I,T

N-167-5	Miyaguni	pja:pja:tei nimot <u>tsu</u> ida <u>sei</u> ku:	T,N
N-167-5	Uruka	pja:pja:ti ni:ju {ida <u>fi</u> / ida <u>fitti</u> } ku:	N,U,D
N-167-5	Bora	pja:pja:tei issu ida <u>sei</u> : ku: (iss 'chair')	S,M
N-168-1	Standard Japanese	<i>otooto-wa itsumo nimotsu-o hitori-de motsu.</i> younger.brother-TOPIC always luggage-ACCUSATIVE one.person-INSTRUMENTAL to.carry 'My brother always carries his things by himself.'	
N-168-1	Ikema	utu <u>gama</u> : it <u>simai</u> tavka:ci: muti: fu	N,N,D,U
N-168-1	Karimata	maini <u>ts</u> {tafk'ia: / taf <u>g</u> ia:} <u>ei</u> du nimot <u>suba</u> mut <u>su</u>	N,D,U
N-168-1	Yonaha	ututa: its <u>u</u> :me: nimut <u>tsu</u> tauke:si: mut <u>sa</u>	H
N-168-1	Kurima	utu <u>tu</u> ua it <u>sume</u> : nimut <u>suba</u> tafk'ia:sidu mut <u>su</u> ('ua' is an ambiguous diphthong.)	K,I,T
N-168-1	Miyaguni	ot'hu <u>thoo</u> it <u>sa</u> mai {tavk'ia:ei / tauk'ia:ei} nimot <u>tsu</u> mot <u>si</u>	T,N
N-168-1	Uruka	ut <u>su</u> to: it <u>si</u> :mai ni:ju tavk'ia:fi mut <u>fu</u> :ʔ ('to.carry-STATIVE'; mut <u>si</u> 'to.carry')	N,U,D
N-168-1	Bora	utu <u>u</u> ha: it <u>sa</u> :mai issuba to:k'ia:ei:du mut <u>su</u> (iss 'chair')	S,M
N-168-2	Standard Japanese	<i>sobo-wa nimotsu-o mota-nai.</i> grandmother-TOPIC luggage-ACCUSATIVE to.carry-NEGATIVE 'My grandmother doesn't carry anything.'	
N-168-2	Ikema	ha: mma: ni:juba: mut <u>sa</u> n	N,N,D,U
N-168-2	Karimata	NR / ni:ba mut <u>sa</u> n ('to.carry-NEGATIVE.IMPERATIVE'; a simple negative was not obtained.)	N,D,U
N-168-2	Yonaha	mma: nimut <u>suba</u> : mutan	H
N-168-2	Kurima	pa:mma nimut <u>suba</u> {mut <u>sa</u> n / mut <u>sa</u> ŋ}	K,I,T
N-168-2	Miyaguni	m <u>ma</u> : {nimot <u>tsu</u> / nimot <u>tsu</u> } mot <u>adza</u> :ŋ	T,N
N-168-2	Uruka	mma: {ni:juba / ni:ju} mut <u>adza</u> :ŋ ('mutaŋ' is used in other villages; mutadi 'to.carry-VOLITIONAL'; mutat <u>fa</u> : 'I will carry it.')	N,U,D
N-168-2	Bora	mma: kabannuba muta <u>n</u> (kaban 'bag')	S,M
N-168-3	Standard Japanese	<i>sofu-ga mushiro-o mot-ta.</i> grandfather-NOMINATIVE straw.mat-ACCUSATIVE to.carry-PAST 'My grandfather carried the straw mat.'	
N-168-3	Ikema	uj <u>aga</u> mussuuba muttai	N,N,D,U
N-168-3	Karimata	{ <u>su</u> :g <u>ado</u> / <u>su</u> :g <u>adu</u> } musso:ba:də mut <u>su</u>	N,D,U
N-168-3	Yonaha	sju:ga mussuu mut <u>sa</u> ta:	H
N-168-3	Kurima	<u>su</u> :ga mussu: mut <u>si</u> uŋ	K,I,T
N-168-3	Miyaguni	<u>su</u> :ja mussu: mot <u>si</u> ta:	T,N
N-168-3	Uruka	{ju:ga / ju:g <u>adu</u> } mussu: mut <u>si</u> taʔ	N,U,D
N-168-3	Bora	<u>su</u> :g <u>adu</u> mussu u mut <u>su</u> ja(:)	S,M



N-168-4	Standard Japanese	<i>chichi-ga sake motte, haha-ga tabemono-o motsu.</i> father-NOMINATIVE liquor to.carry, mother-NOMINATIVE food-ACCUSATIVE to.carry 'My father carries the liquor; my mother carries the food.'	
N-168-4	Ikema	uza <sub>ga</sub> saki muti: mma: faimunu muttai	N,N,D,U
N-168-4	Karimata	ㄸ: ǵadu ('grandfather-NOMINATIVE') {ㄸkij̄ba / ㄸakeba} mut̄ɕi: usaijuba: oba:ǵa ('grandmother-NOMINATIVE') mut̄ɕi	N,D,U
N-168-4	Yonaha	ujaga sakju: mut̄ɕitti annaga fo:munu mut̄ɕita:	H
N-168-4	Kurima	ujaga sakju: mut̄ɕi: annaga to:munu: mut̄ɕi	K,I,T
N-168-4	Miyaguni	ojaa sak <sup>heo</sup> mot̄ɕu annaa {foomono / ɸoumono} mot̄ɕu	T,N
N-168-4	Uruka	uja: sakju: {mut̄ɕitti / mut̄ɕi} anna: faumunu: mut̄ɕi	N,U,D
N-168-4	Bora	ujaga sakju mut̄ɕit̄ɕi annaga fau munu[u mut̄ɕi ('fau' can also be interpreted as 'ɸ'.)]	S,M
N-168-5	Standard Japanese	<i>hayaku sake-o motte ko-i.</i> to.be.early liquor-ACCUSATIVE to.carry to.come-IMPERATIVE 'Quickly bring the liquor.'	
N-168-5	Ikema	hajamari: sakju: muti: ku:	N,N,D,U
N-168-5	Karimata	pja:riti ㄸaki mut̄ɕi {k'u: / ǵu:}	N,D,U
N-168-5	Yonaha	pja:kariti sakju: mut̄ɕi ku:	H
N-168-5	Kurima	pja:ŋkari sakju: mut̄ɕi ku:	K,I,T
N-168-5	Miyaguni	pja:pja:ɕi sak <sup>heo</sup> mot̄ɕi ku:	T,N
N-168-5	Uruka	pja:pja:ti sakju: mut̄ɕi ku:	N,U,D
N-168-5	Bora	pja:pja:ɕi sakju mut̄ɕi ku:	S,M
N-169-1	Standard Japanese	<i>Taroo-wa itsumo tabako-o kau.</i> Taro-TOPIC always tobacco-ACCUSATIVE to.buy 'Taro always buys tobacco.'	
N-169-1	Ikema	taro:ja it̄ɕimai tabuku: kau	N,N,D,U
N-169-1	Karimata	ba: ('I-TOPIC') iss̄ɕimai tabakudu ko: ('ɾ' in 'iss̄ɕimai' begins frictionless.)	N,D,U
N-169-1	Yonaha	taro:ja its̄ɕu:me: tabako: ko:	H
N-169-1	Kurima	taro:ja it̄ɕume: tabuku:du ko:	K,I,T
N-169-1	Miyaguni	tarooja it̄ɕi <sup>u</sup> mai tabuk <sup>u</sup> o kau	T,N
N-169-1	Uruka	taro:ja it̄ɕi:mai {tabako: / tabaku:du} {kau / kiau <sup>4</sup> ('to.buy-PROGRESSIVE')}	N,U,D
N-169-1	Bora	taro:ja it̄ɕi:mai tabakoudu k <sup>ha</sup> o	S,M
N-169-2	Standard Japanese	<i>daremo imo-o kawa-nai.</i> anyone sweet.potato-ACCUSATIVE to.buy-NEGATIVE 'No one buys sweet potatoes.'	
N-169-2	Ikema	tafumai n:nuba ka:N	N,N,D,U
N-169-2	Karimata	taɸmai m̄muba ka:ŋ	N,D,U

N-169-2	Yonaha	to:me: m:muba ka:n	H
N-169-2	Kurima	'to:me: mmuba ka:ŋ	K,I,T
N-169-2	Miyaguni	to'omai mmo ka:n	T,N
N-169-2	Uruka	to:mai m:uba ka:ŋ	N,U,D
N-169-2	Bora	taŋmai m:ba k <sup>h</sup> a:N	S,M
N-169-3	Standard Japanese	<i>kinoo sakana-o kat-ta.</i> yesterday fish-ACCUSATIVE to.buy-PAST 'I bought some fish, yesterday.'	
N-169-3	Ikema	nnu zz: kautai	N,N,D,U
N-169-3	Karimata	ksno: ɾzɾnudu kai (The first 'ɾ' in 'ɾzɾ' starts frictionless.)	N,D,U
N-169-3	Yonaha	ksna: zzuu ko:ta:	H
N-169-3	Kurima	ʒɾnu z:ba: ko:taŋ	K,I,T
N-169-3	Miyaguni	kʰnoo zzu: kauta:	T,N
N-169-3	Uruka	kʰnu: ʔzu: kautaʔ	N,U,D
N-169-3	Bora	ʒɾnu: ɾzu[ɸ kaŋta(:) ('ɾzu' is also pronounced 'zzu'.)	S,M
N-169-4	Standard Japanese	<i>watashi-ga sakana-o katte, tomodachi-wa niku-o kat-ta.</i> I-NOMINATIVE fish-ACCUSATIVE to.buy, friend-TOPIC meat-ACCUSATIVE to.buy-PAST 'I bought the fish; my friend bought the meat.'	
N-169-4	Ikema	baɣa ɸi: kai dusija butaniku kaŋtai	N,N,D,U
N-169-4	Karimata	ba: ɾɾ kai dussa {mɾ:du / mɸ:du} kai (The friction of 'mɾ:' is weak; 'mɸ:' is frictionless.)	N,D,U
N-169-4	Yonaha	baɣa zzuu kaitti dussa nikuu ko:ta:	H
N-169-4	Kurima	aba: zzu:kai dussa niku:du ko:taŋ	K,I,T
N-169-4	Miyaguni	{baɣa / baja} zzu: kau doɕsa niku kauta:	T,N
N-169-4	Uruka	baja ʔzuu {kautaʔ / kau / kaittidu} dussa niku: kautaʔ	N,U,D
N-169-4	Bora	baja: ɾzu: kaitʒi(du) dussa ŋa:ju kaŋta(:) (ʒa: 'pig/pork')	S,M
N-169-5	Standard Japanese	<i>abura-o katte ko-i.</i> oil-ACCUSATIVE to.buy to.come-IMPERATIVE 'Go buy some oil.'	
N-169-5	Ikema	avvau kaiku:	N,N,D,U
N-169-5	Karimata	ʒaɰu: ('liquor-ACCUSATIVE') kai k'u:	N,D,U
N-169-5	Yonaha	avvo: ke: ku:	H
N-169-5	Kurima	avva kai ku:	K,I,T
N-169-5	Miyaguni	avvaŋ k <sup>h</sup> ai ku:	T,N
N-169-5	Uruka	aŋŋau kai ku: ('ŋ' is a weak labiodental.)	N,U,D
N-169-5	Bora	avvau kai ku:	S,M
N-170-1	Standard Japanese	<i>mainichi yasai-o uru.</i> every.day vegetable-ACCUSATIVE to.sell 'I sell vegetables every day.'	

N-170-1	Ikema	sĩ:ju vvi:ju:	N,N,D,U
N-170-1	Karimata	mainiᵀ su:nu pa:idu ʊ: ('ʊ' is frictionless.)	N,D,U
N-170-1	Yonaha	mainitsɾ jasaiju {ʊ:ta: / u:ta:} (It appears to be pronounced with 'ʊ:', but 'u:' is also accepted.)	H
N-170-1	Kurima	mainiᵀɾ su:judu v:	K,I,T
N-170-1	Miyaguni	maʔiniᵀᵢ su:ju {u: / uv} ('v' in 'uv' is weak.)	T,N
N-170-1	Uruka	iᵀᵢ:mai su:ju {ʊ: / ʊʊu}	N,U,D
N-170-1	Bora	iᵀɾ:mai su:judu vʋ	S,M
N-170-2	Standard Japanese	<i>kare-wa jibun-no buta-o ura-nai.</i> he-TOPIC self-GENITIVE pig-ACCUSATIVE to.sell-NEGATIVE 'He doesn't sell his pig.'	
N-170-2	Ikema	kafa: nafaɣa ʊja:juba: vvaN	N,N,D,U
N-170-2	Karimata	NR / {kaʔja: / kanu} psto: waiba ʊʋadaɾaŋ (ɬu:do:)	N,D,U
N-170-2	Yonaha	kaʔja: unaɣaduunu wa:juba {vvaN / vvaɟja:n}	H
N-170-2	Kurima	kaʔja: nafa wa:juba vvaŋ	K,I,T
N-170-2	Miyaguni	kaʔja: do:ʔa wa:iba ʊvaŋ	T,N
N-170-2	Uruka	kaʔja: du:nu {ʋa:ju / ʋa:uba} ʋʋaŋ	N,U,D
N-170-2	Bora	kaʔja: du:ga ʋa:juba: vvaN	S,M
N-170-3	Standard Japanese	<i>kyonen yagi-o ut-ta.</i> last.year goat-ACCUSATIVE to.sell-PAST 'I sold a goat, last year.'	
N-170-3	Ikema	kuɟzu ɟinɟzau vvitai	N,N,D,U
N-170-3	Karimata	{ku <sup>dz</sup> ɾdu / k <sup>dz</sup> ɾdu} pinzo: {ʊ:da <sup>dz</sup> ɾ / ʊʋi / ʊ:dan}	N,D,U
N-170-3	Yonaha	kudza: pinzo:ba ʊ:dusɾta:	H
N-170-3	Kurima	kuzu pinɟzau u:taŋ ('au' is an ambiguous diphthong.)	K,I,T
N-170-3	Miyaguni	kuɟzu p <sup>h</sup> inɟzau {u:ta: / u <sup>v</sup> ta: / uʋta:}	T,N
N-170-3	Uruka	kuɟzu pinɟzau ʋ:taʔ	N,U,D
N-170-3	Bora	kududu pindau vvitai(:)	S,M
N-170-4	Standard Japanese	<i>yagi-o utte, buta-o kat-ta.</i> goat-ACCUSATIVE to.sell, pig-ACCUSATIVE to.buy-PAST 'I sold a goat and bought a pig.'	
N-170-4	Ikema	ɟinɟzau vvi: ʊja:ju: kaitai	N,N,D,U
N-170-4	Karimata	pinzo: ʋʋiɟiɟidu waju ko:ta <sup>dz</sup> ɾ (The friction of 'dzɾ' is weak.)	N,D,U
N-170-4	Yonaha	pinza: vvittidu wa:ju ko:ta:	H
N-170-4	Kurima	pinɟzao vvitti wa:ju ko:taŋ ('ao' is an ambiguous diphthong.)	K,I,T
N-170-4	Miyaguni	p <sup>h</sup> inɟzau uvittᵀi wa:ju kauta:	T,N
N-170-4	Uruka	pinɟzau ʋittidu ʋa:ju kautaʔ	N,U,D
N-170-4	Bora	pindau vvittᵀidu ʋa:ja kaʋta:	S,M

N-170-5	Standard Japanese	<i>sono buta-o utte kudasa-i.</i> that pig-ACCUSATIVE to.sell to.give(honorific)-IMPERATIVE 'Please sell that pig to me.'	
N-170-5	Ikema	kunu uja:ju vvi: fi: samati	N,N,D,U
N-170-5	Karimata	kanu ba:ju uUoi fi:ru	N,D,U
N-170-5	Yonaha	unu wa:ju vvi firu	H
N-170-5	Kurima	unu wa:ju vvifi:ru	K,I,T
N-170-5	Miyaguni	unu wa:ju uvi phiiru	T,N
N-170-5	Uruka	unu {Ua:ju / Ua:u} {Uoi fi:ru ('to.sell to.give-IMPERATIVE') / Uuaɕʒa:na ('to.sell to.give-POLITE-NEGATIVE-INTERROGATIVE')}	N,U,D
N-170-5	Bora	unu Ua:ju vvi(:) ffi:ru ('ffi:ru' is also pronounced 'fi:ru'.)	S,M
N-170B-1	Standard Japanese	<i>itsumo watashi-wa otooto-ni okashi-o yaru.</i> always I-TOPIc younger.brother-DATIVE sweets-ACCUSATIVE to.give 'I always give my brother sweets.'	
N-170B-1	Ikema	iʒmai ba: uttuN ka:ssu {fi: / fi: ui / fi: jui}	M,Y,S,T
N-170B-1	Karimata	iʒmai utuduŋgadu ka:s {fi / fi} ('ʒ' has strong aspiration; the voicing of 'fi' is weak.)	N,D,U
N-170B-1	Yonaha	itsʌ:me: banun ututa: ka:sŋ firu (Possibly 'my (younger) brother gives me sweets' instead.)	H
N-170B-1	Kurima	iʒme: aba: utuʒuŋ ko:suba fi:ŋ	K,I,T
N-170B-1	Miyaguni	iʒmai baja: oʒuʒuŋ koosu phi: (The word for 'sweets' is pronounced 'koosu' in isolation.)	T,N
N-170B-1	Uruka	iʒmai baja: {ututuŋkai / uʒuʒuŋkai} ko:sʒ {ffiuʒ / ffjuʒ}	N,U,D
N-170B-1	Bora	iʒmai baja: utuʒuŋkaidu ka:ssu ffi:	S,M
N-170B-2	Standard Japanese	<i>otooto-wa ani-ni okashi-o yara-nai.</i> younger.brother-TOPIc older.brother-DATIVE sweets-ACCUSATIVE to.give-NEGATIVE 'The younger brother doesn't give sweets to the older brother.'	
N-170B-2	Ikema	uttu: suɕʒanna ka:ssuba: fi:N	M,Y,S,T
N-170B-2	Karimata	NR / ba: azanna ka:sba fi:dafaŋ ('to.give-POTENTIAL-NEGATIVE')	N,D,U
N-170B-2	Yonaha	ututa: adzanke: ka:sŋ fudja:n ('to.give-NEGATIVE' is here a negative intentional; a simple negative was not obtained.)	H
N-170B-2	Kurima	utuʒoa {aʒanna / suʒanna} ko:suba: fu:ŋ ('oa' is an ambiguous diphthong.)	K,I,T
N-170B-2	Miyaguni	oʒuʒoo aɕʒan koosuba phi:ŋ	T,N
N-170B-2	Uruka	uʒuʒo: azaŋkai ko:ssu ffuɕʒaŋ	N,U,D
N-170B-2	Bora	utuʒha sudaŋkaija ka:ssuba fu:N ('s' in 'suda' is pronounced somewhat forcefully; also 'ɕuda'.)	S,M

N-170B-3	Standard Japanese	<i>kinoo ootoo-ni ame-o yat-ta.</i> yesterday younger.brother-DATIVE candy-ACCUSATIVE to.give-PAST 'I gave my brother some candy, yesterday.'	
N-170B-3	Ikema	ηnu: uttuN am <sup>u</sup> : fi:taɪ	M,Y,S,T
N-170B-3	Karimata	kɯnudu utuduŋ amɪɟzato: fi:t'aʔ	N,D,U
N-170B-3	Yonaha	ksna: ututun amjo: fi:ta:	H
N-170B-3	Kurima	ʒɾnu: utuʒunna amiu fi:taɪ	K,I,T
N-170B-3	Miyaguni	kʰnu: oʔ <sup>h</sup> utuŋ am <sup>u</sup> : ʔi:ta:	T,N
N-170B-3	Uruka	kʰnu: uʒ <sup>h</sup> utuŋkai amju: ffi:taʔ	N,U,D
N-170B-3	Bora	ʒɾnu: utuʒuŋkai am <sup>u</sup> : ffi:ta:	S,M
N-170B-4	Standard Japanese	<i>uma-ni kusa-o yatte, hatake-ni it-ta.</i> horse-DATIVE grass-ACCUSATIVE to.give, field-LOCATIVE to.go-PAST 'I gave the horse some grass and went to the field.'	
N-170B-4	Ikema	nu:maN fʒa: fi: haiŋkai ikitai	M,Y,S,T
N-170B-4	Karimata	nu:man <sup>u</sup> ifso: fi:ʒiʔi paŋŋkai {iftaɪ / istaɪ} ('r' is frictionless; the friction of 'taɪ' is weak.)	N,D,U
N-170B-4	Yonaha	nu:man fʒa: fitti paŋinke: pi:ta:	H
N-170B-4	Kurima	nu:maŋ fʒa: fi:tti paŋiŋke: piztaɪ	K,I,T
N-170B-4	Miyaguni	nuumaŋ ʔsau ʔi:ʒi paŋiŋkai ikʰta:	T,N
N-170B-4	Uruka	nu:maŋkai fuʒsau ffi:ti paŋiŋkai ikʰtaʔ	N,U,D
N-170B-4	Bora	nu:maŋkai fʒau fi:ʒi:(du) paŋiŋkai ikʰta:(:)' ('ikʰta:' can also be interpreted as 'ikʰta'.)	S,M
N-170B-5	Standard Japanese	<i>ushi-ni kusa-o yatte goran.</i> cow-DATIVE grass-ACCUSATIVE to.give to.see(honorific).IMPERATIVE 'Try giving the cow some grass.'	
N-170B-5	Ikema	{uʒiN / usɾN} fʒau fi: mi:ru	M,Y,S,T
N-170B-5	Karimata	{usŋ / usŋ} {isso / ifʒo} fi: ku: ('to.come-IMPERATIVE')	N,D,U
N-170B-5	Yonaha	usŋ fʒo: fi: mi:ru	H
N-170B-5	Kurima	usüŋ fʒoa fi:mi:ru ('oa' is an ambiguous diphthong.)	K,I,T
N-170B-5	Miyaguni	usŋ ʔsau ʔi: mi:ru	T,N
N-170B-5	Uruka	usŋkai fuʒsau ffi mi:ru	N,U,D
N-170B-5	Bora	usŋkai fʒau fi: mi:ru	S,M
N-171-1	Standard Japanese	<i>ryooshi-kara sakana-o morau.</i> fisherman-ABLATIVE fish-ACCUSATIVE to.receive 'I get some fish from the fisherman.'	
N-171-1	Ikema	iŋʒakafa zzu: dʒzitaɪ	M,Y,S,T
N-171-1	Karimata	im <sup>u</sup> muŋipstuʔʔ:kafadu im <sup>u</sup> muɪ izitaʔ	N,D,U
N-171-1	Yonaha	zzusja:kafa zzuu zzita:	H
N-171-1	Kurima	im <sup>u</sup> ʒa:kafa z: mufoa ('oa' is an ambiguous diphthong.)	K,I,T

N-171-1	Miyaguni	imboo kafa zzu: mo'fauta:	T,N
N-171-1	Uruka	imbo:kafa {izuu / zzu: / zuu} mu'fau <cf> mu'fautaʔ ('to.receive-PAST') / mu'fa:dakanafaŋ ('to.receive-OBLIGATIVE')	N,U,D
N-171-1	Bora	iʔʔ:maidu impʔʔukafa ɾzuu i: (iʔʔ:maidu 'always')	S,M
N-171-2	Standard Japanese	<i>chiisai kani-wa daremo morawa-nai.</i> to.be.small crab-TOPIC anyone to.receive-NEGATIVE 'No one takes the small crab.'	
N-171-2	Ikema	imi:imi kannuba: tafu:mai {zʔiN / dʔziN}	M,Y,S,T
N-171-2	Karimata	imi:n kanu kamɯba taʔumai iʔiŋ (The sonority of the first 'i' in 'iʔiŋ' is low.)	N,D,U
N-171-2	Yonaha	imi:nu kannuba: to:me: zzun	H
N-171-2	Kurima	imi:nu kannuba: to:me: mu'faŋ	K,I,T
N-171-2	Miyaguni	imiʔinu kʰannuba toʔomai mo'fa:ŋ	T,N
N-171-2	Uruka	imi:nu kanju:ba to:mai mu'fa:ŋ	N,U,D
N-171-2	Bora	imi:tʔʔanu kannuba: taʔmai ju:(i)N ('taʔ' can also be interpreted as 'tʔ:'.)	S,M
N-171-3	Standard Japanese	<i>tonari-no ie-kara daikon-o morat-ta.</i> next.door-GENITIVE house-ABLATIVE daikon.radish-ACCUSATIVE to.receive-PAST 'I got a daikon radish from my neighbors.'	
N-171-3	Ikema	tunainu ja:kafa uʔun'au dʔʔitai	M,Y,S,T
N-171-3	Karimata	tananu pstukaʔadu uʔʔun'u: iʔitaʔ (The sonority of the first 'i' in 'iʔitaʔ' is low.)	N,D,U
N-171-3	Yonaha	tunaŋnu pstukaʔa upunju: zʔita:	H
N-171-3	Kurima	tunaŋnu ja:kafa upniu muro:taŋ ('k' is pronounced quite towards the back and easily misheard as 'h'.)	K,I,T
N-171-3	Miyaguni	{tunaʔ / tungal} nu ja:kafa upniu {morauta: / mo'fota:}	T,N
N-171-3	Uruka	tunaʔinu ja:kafa upunju: {mu'fautaʔ / mu'fotaʔ}	N,U,D
N-171-3	Bora	tunaʔunu ja:kafa upniu i:ta	S,M
N-171-4	Standard Japanese	<i>ookina sakana-o moratte, minna-de wake-ta.</i> to.be.large fish-ACCUSATIVE to.receive, everyone-INSTRUMENTAL to.divide-PAST 'We got a large fish and divided it among ourselves.'	
N-171-4	Ikema	gaba:zzu dʔzi: ŋ:naʔi: bakitai	M,Y,S,T
N-171-4	Karimata	uʔʔo:binu iʔidu {m:naʔi / ŋ:naʔi} {baʔə't'aʔ / baʔə'daʔ}	N,D,U
N-171-4	Yonaha	upo:nu zzuu zʔitti m:naʔi: bakita:	H
N-171-4	Kurima	upo:nu z: mu'fai m:naʔi bakitaŋ	K,I,T
N-171-4	Miyaguni	upu'unu zzu: mo'faiʔi m:naʔi naka:ʔta:	T,N
N-171-4	Uruka	upu:nu {zzuu / zzu: / izuu} mu'faiʔidu m:naʔkai bakitaʔ	N,U,D

N-171-4	Bora	upu:upunu ɾzu: i:ttɛidu m:naɕi: bakita(:)	S,M
N-171-5	Standard Japanese	<i>sinseki-kara miso-o moratte ki-ta.</i> relative-ABLATIVE miso-ACCUSATIVE to.receive to.come-PAST 'I got some miso paste from a relative.'	
N-171-5	Ikema	hafauzɪkafa nʂu: dɔzittai	M,Y,S,T
N-171-5	Karimata	ujakigaradu nʂu: iziftaɾ (The friction of 'ɾ' is weak.)	N,D,U
N-171-5	Yonaha	utudzakafa ntsuu zzi ksta:	H
N-171-5	Kurima	utɛudzakafa msu: muraitʂɪɾa (‘k’ is pronounced quite towards the back and easily misheard as ‘h’.)	K,I,T
N-171-5	Miyaguni	utʂudzakafa du mʂu morai {kʰ:ta: / kʰ:ta: / kʰ:ta}	T,N
N-171-5	Uruka	utʂɪdzakafa msu: murai kʰ:taʰ	N,U,D
N-171-5	Bora	utɔdakafa msu[u i: kɾta(:)	S,M
N-172-1	Standard Japanese	<i>nodo-ga kawaita-ra mizu-o nomu.</i> throat-NOMINATIVE to.dry.up-CONDITIONAL water-ACCUSATIVE to.drink 'When I'm thirsty, I drink water.'	
N-172-1	Ikema	nudunu ka:kitiga: middzɔ {numi / nuN}	M,Y,S,T
N-172-1	Karimata	nudunudu kafa:'idu mitɛi {nuɾtaɾ ('to.drink-PAST') / numafi}	N,D,U
N-172-1	Yonaha	ubui nu ka:rakika: middzu num	H
N-172-1	Kurima	nudu ka:kiba:nna mi'tɛudu num	K,I,T
N-172-1	Miyaguni	nubuinu ka:kitsɪka: middzɔ noma: ('middzɪ' in isolation.)	T,N
N-172-1	Uruka	nudunu ka:rakʰtika: {mittɔ / mittʂu} num	N,U,D
N-172-1	Bora	nudunudu {ka:rakʰu:taribadu / ka:raki uribadu} mizuu num	S,M
N-172-2	Standard Japanese	<i>watashi-no otto-wa sake-o noma-nai.</i> I-GENITIVE husband-TOPIC liquor-ACCUSATIVE to.drink-NEGATIVE 'My husband doesn't drink.'	
N-172-2	Ikema	baɟa butu: sɔkju:ba: numaN	M,Y,S,T
N-172-2	Karimata	ba: bigidumma ɛɔkiuba: numaɾ]	N,D,U
N-172-2	Yonaha	baɟa bikiduma: sɔkju:ba: numan	H
N-172-2	Kurima	baɟa bikidumuu sɔkju:ba: numaɾ]	K,I,T
N-172-2	Miyaguni	baɟa bikidumma sakʰjuba nomaɾ]	T,N
N-172-2	Uruka	baɟa buto: sɔkju:ba numaɾ]	N,U,D
N-172-2	Bora	{baɟa / baɟa} bikidumma sɔkiuba numaN	S,M
N-172-3	Standard Japanese	<i>ocha-wa sakki non-da.</i> tea- TOPIC just.now to.drink-PAST 'I just drank tea.'	
N-172-3	Ikema	tɛa:ja kiʂadu nuntai	M,Y,S,T
N-172-3	Karimata	tɛa:juba maindu numi (A form like 'nuntaɾ' was not obtained.)	N,D,U
N-172-3	Yonaha	tɛa:juba: {sadaɾidu/pja:sidu} numta:	H

N-172-3	Kurima	ᵗᵗaiba: nnamaᵗᵗatadu numutaᵗ	K,I,T
N-172-3	Miyaguni	ᵗᵗa:ja kʲsaʲatu noᵗᵗᵗa:	T,N
N-172-3	Uruka	ᵗᵗa:ja nnamadu numᵗᵗaʲ	N,U,D
N-172-3	Bora	ᵗᵗa:juba: kiᵗᵗsa:du numta	S,M
N-172-4	Standard Japanese	<i>kusuri-o nonde, hayaku ne-ro.</i> medicine-ACCUSATIVE to.take, to.be.early to.sleep-IMPERATIVE 'Take some medicine and go to bed early.'	
N-172-4	Ikema	ffᵗᵗija numi: {haimari / hajamari} nʲivvi	M,Y,S,T
N-172-4	Karimata	fᵗᵗᵗᵗdu {numiᵗᵗᵗi / numiᵗᵗᵗi} pʲa:ᵗᵗi niᵗᵗi	N,D,U
N-172-4	Yonaha	fsuʲzuba numitti pja:pja:ti nivvi	H
N-172-4	Kurima	fsuzu numitti pʲa:ᵗᵗkari nivvi	K,I,T
N-172-4	Miyaguni	ᵗᵗsuzu noᵗᵗᵗᵗᵗᵗi pʲa:pʲa:ᵗᵗᵗᵗi nivvi	T,N
N-172-4	Uruka	{fᵗᵗᵗᵗz / fᵗᵗᵗᵗz} numitti pja:pja:ti nivvi	N,U,D
N-172-4	Bora	fsuzzu numittᵗᵗᵗᵗi pʲa:pʲa:ᵗᵗᵗᵗi nʲivvi	S,M
N-172-5	Standard Japanese	<i>kono kusuri-wa amai-kara nonde mi-nasai.</i> this medicine-TOPIC to.be.sweet-because to.take to.see-IMPERATIVE 'This medicine is sweet, so try taking it.'	
N-172-5	Ikema	kunu ffᵗᵗija azᵗᵗmajaiba numi: mi:ru	M,Y,S,T
N-172-5	Karimata	unu aʲmanᵗᵗdiba numi mi:ru	N,D,U
N-172-5	Yonaha	unu fsuʲza adzᵗᵗma:nu jariba numi: mi:ru	H
N-172-5	Kurima	kunu fsuzza azumakariba numimi:ru	K,I,T
N-172-5	Miyaguni	kunu ᵗᵗsuzza aᵗᵗzᵗᵗma:nu jaiba noᵗᵗmimi:ru	T,N
N-172-5	Uruka	kunu {fᵗᵗᵗᵗz / fᵗᵗᵗᵗz} amakariba numi mi:ru	N,U,D
N-172-5	Bora	kunu fsuzza azumakaᵗᵗᵗᵗa numi mi:ru	S,M
N-172B-1-1	Standard Japanese	<i>koko-de-wa hechima-o taberu.</i> here-LOCATIVE-TOPIC sponge.gourd-ACCUSATIVE to.eat 'We eat sponge gourd here.'	
N-172B-1-1	Ikema	kumanna {nabʲa:rau / nabʲa:raʊ} {fau / faʊ} (Both forms with the bilabial fricative 'ɸ' and forms with the labiodental fricative 'f' exist.)	M,Y,S,T
N-172B-1-1	Karimata	fumanʲa nabʲa:radu {fo: / ɸo:}	N,D,U
N-172B-1-1	Yonaha	kumanna nabja:fo: fo:dusᵗᵗ (As an answer to 'What do you eat?': sato:du fo: 'We eat sugar.')	H
N-172B-1-1	Kurima	kumanna nabia:oa fo: ('oa' is an ambiguous diphthong.)	K,I,T
N-172B-1-1	Miyaguni	kumanna nabʲa:raʊba {ɸoodusʲ: / ɸaodʲsʲ:}	T,N
N-172B-1-1	Uruka	kumaᵗᵗ nabja:rau fau	N,U,D
N-172B-1-1	Bora	kumanna nabʲa:raudu ʔʊ	S,M



N-172B-1-2	Standard Japanese	<i>hondo-no hito-wa hechima-o tabe-nai.</i> mainland.Japan-GENITIVE person-TOPIC sponge.gourd-ACCUSATIVE to.eat-NEGATIVE 'Mainland Japanese people don't eat sponge gourd.'	
N-172B-1-2	Ikema	jamatunu çitu: nab'a:rauba: fa:N	M,Y,S,T
N-172B-1-2	Karimata	jamatu psto: nab'arawa {φαη / faη}	N,D,U
N-172B-1-2	Yonaha	jamatunu psta: nabja'o:ba: fa:n	H
N-172B-1-2	Kurima	jamatunu piçoa nabea'oaba fa: η ('oa' and 'ea' are ambiguous diphthongs.)	K,I,T
N-172B-1-2	Miyaguni	naiçei p'ito: nab'a:raoça φα:η	T,N
N-172B-1-2	Uruka	jamatunu p'ito: nabja:rauba fa:η	N,U,D
N-172B-1-2	Bora	jamatu(nu) p'ita: nab'a:rauba fa:N	S,M
N-172B-1-3	Standard Japanese	<i>nigauri-wa kinoo tabe-ta.</i> bitter.melon-TOPIC yesterday to.eat-PAST 'Yesterday, I ate bitter melon.'	
N-172B-1-3	Ikema	gaufau nnu {faitai / fautai / fa'utai}	M,Y,S,T
N-172B-1-3	Karimata	go:fo:ba ksnudu {fo:taʔ / fo:taʔ} (The friction of 'ʔ' is weak.)	N,D,U
N-172B-1-3	Yonaha	go:fo:ba: ksnudu fo:ta:	H
N-172B-1-3	Kurima	go:fo <sup>o</sup> a çanudu fo:ta (°a' is an ambiguous diphthong.)	K,I,T
N-172B-1-3	Miyaguni	gaufaoça k'no:do foota:	T,N
N-172B-1-3	Uruka	gaufa: k'nu:du {fo:taʔ / fautaʔ}	N,U,D
N-172B-1-3	Bora	gʊʊfauba: k'nu:du foʊta	S,M
N-172B-1-4	Standard Japanese	<i>hirugohan-o tabete, ne-ro.</i> lunch-ACCUSATIVE to.eat, to.sleep-IMPERATIVE 'Have lunch and get some sleep.'	
N-172B-1-4	Ikema	jamatunu çitu: nab'a:rauba: fa:N	M,Y,S,T
N-172B-1-4	Karimata	jamatu psto: nab'arawa {φαη / faη}	N,D,U
N-172B-1-4	Yonaha	jamatunu psta: nabja'o:ba: fa:n	H
N-172B-1-4	Kurima	jamatunu piçoa nabea'oaba fa: η ('oa' and 'ea' are ambiguous diphthongs.)	K,I,T
N-172B-1-4	Miyaguni	naiçei p'ito: nab'a:raoça φα:η	T,N
N-172B-1-4	Uruka	jamatunu p'ito: nabja:rauba fa:η	N,U,D
N-172B-1-4	Bora	jamatu(nu) p'ita: nab'a:rauba fa:N	S,M
N-172B-1-5	Standard Japanese	<i>yuugohan-wa tabete ki-ta.</i> dinner-TOPIC to.eat to.come-PAST 'I've eaten dinner.'	
N-172B-1-5	Ikema	juiju faittai	M,Y,S,T
N-172B-1-5	Karimata	ju:ʔba faidu kuçei	N,D,U

N-172B-1-5	Yonaha	ju:ŋba fe:tidu ksta: (Apparently, both 'fe:tti' and 'fe:ti' are possible. The form used in 'fe: mi:ru' is the <i>ari</i> -continuative.)	H
N-172B-1-5	Kurima	ju:zuba faitti ʔɾtaŋ	K,I,T
N-172B-1-5	Miyaguni	juzzuba ɸaido kʰta:	T,N
N-172B-1-5	Uruka	juzza faidu kʰtaʰ	N,U,D
N-172B-1-5	Bora	juzza faitʔaidu kʰta: ('faitʔi' is a <i>shite</i> -continuative.) <cf> ɡʊʊrau fai mi:ru ('Try eating a bitter melon'; 'fai' is an <i>ari</i> -continuative.)	S,M
N-172B-2-1	Standard Japanese	<i>yagi-wa kusa-o kuu.</i> goat-TOPIC grass-ACCUSATIVE to.eat 'Goats eat grass.'	
N-172B-2-1	Ikema	ɕindza: {fsaudu / fsaʊdu} {fau / faʊ}	M,Y,S,T
N-172B-2-1	Karimata	pinza: {isso:ba: / ifso:ba:} {ffo:ʰzuŋ / ffo:ʰzŋŋ}	N,D,U
N-172B-2-1	Yonaha	pindza: fso:du fo:	H
N-172B-2-1	Kurima	pindza: fso:du fo:	K,I,T
N-172B-2-1	Miyaguni	pindza: ɸsaodo ɸau	T,N
N-172B-2-1	Uruka	pindza: fuʂaudu {fou / fau}	N,U,D
N-172B-2-1	Bora	pinda: fsaudu ɸʊ	S,M
N-172B-2-2	Standard Japanese	<i>yagi-wa kami-o kuwa-nai.</i> goat-TOPIC paper-ACCUSATIVE to.eat-NEGATIVE 'Goats don't eat paper.'	
N-172B-2-2	Ikema	ɕindza: kabijuba: {fa:N / ffa:N}	M,Y,S,T
N-172B-2-2	Karimata	Not obtained. Reportedly, the same word is used for eating by animals and eating by humans.	N,D,U
N-172B-2-2	Yonaha	pindza: kabʰzuba fa:n	H
N-172B-2-2	Kurima	pindza: kabzba fa:ŋ	K,I,T
N-172B-2-2	Miyaguni	pindza: kʰabizoba ɸa:ŋ	T,N
N-172B-2-2	Uruka	pindza: kabʰzuba fa:ŋ	N,U,D
N-172B-2-2	Bora	pinda: kabŋu]ba fa:N	S,M
N-172B-2-3	Standard Japanese	<i>neko-ga sakana-o kut-ta.</i> cat-NOMINATIVE fish-ACCUSATIVE to.eat-PAST 'The cat ate the fish.'	
N-172B-2-3	Ikema	majun zzu: {fautai / faʊtai}	M,Y,S,T
N-172B-2-3	Karimata	Not obtained. Reportedly, the same word is used for eating by animals and eating by humans.	N,D,U
N-172B-2-3	Yonaha	majunudu zzu: fo:ta:	H
N-172B-2-3	Kurima	majunudu zz:ba: fo:taŋ	K,I,T

N-172B-2-3	Miyaguni	maju: zzu:ba ɸoodosi:	T,N
N-172B-2-3	Uruka	majunudu {zzu: / ɪzuu} {foutaʔ / fautaʔ}	N,U,D
N-172B-2-3	Bora	maju:nudu ɾzuu ɸɔta ('ɸɔta' can also be interpreted as 'fo:ta'.)	S,M
N-172B-2-4	Standard Japanese	<i>sakana-o kutte, sugu-ni nige-ta.</i> fish-ACCUSATIVE to.eat, right.away-LOCATIVE to.escape-PAST 'It ate the fish and ran off right away.'	
N-172B-2-4	Karimata	Not obtained. Reportedly, the same word is used for eating by animals and eating by humans.	N,D,U
N-172B-2-4	Kurima	zza: fe:ttidu pja:pja:ti pi:ta:	K,I,T
N-172B-2-4	Miyaguni	zz: faitte sugu piŋgitaŋ	T,N
N-172B-2-4	Uruka	zzu: ɸi:du sugu {pʰiŋgita: / ɸiŋgita:}	N,U,D
N-172B-2-4	Bora	ɾza: faitteɪdu nnama piŋgita (Perhaps 'ɾza:' corresponds to 'fish-TOPIC'.)	S,M
N-172B-2-5	Standard Japanese	<i>zenbu kutte shimat-ta.</i> completely to.eat to.finish-PAST 'It ate it all up.'	
N-172B-2-5	Ikema	nʌnai fai nʌ:N	M,Y,S,T
N-172B-2-5	Karimata	Not obtained. Reportedly, the same word is used for eating by animals and eating by humans.	N,D,U
N-172B-2-5	Yonaha	m:nadu fo:ta:	H
N-172B-2-5	Kurima	{mu:stu / mu:ɾdu} fainʌ:ŋ ('n' is not palatalized as much as 'ŋ'.)	K,I,T
N-172B-2-5	Miyaguni	mʌnado ɸaido {pʰi:ta: / ɸiita:}	T,N
N-172B-2-5	Uruka	m:nadu {fai nja:ŋ / foutaʔ ~ fautaʔ ('to.eat-PAST')}	N,U,D
N-172B-2-5	Bora	m:na fai nʌ:N	S,M
N-173-1	Standard Japanese	<i>kuraku naru-made soto-de asobu.</i> to.be.dark to.become-TERMINATIVE outside-LOCATIVE to.play 'I play outside until it gets dark.'	
N-173-1	Ikema	ffaɸ nai {kʌta:ɸi: / kʌta:ɸi:} araŋ {aɸibi ui / aɸibi:u:i}	M,Y,S,T
N-173-1	Karimata	faffu: naskʌ:du ɸɸukaŋgi asuɔi	N,D,U
N-173-1	Yonaha	ffa:ffa naɸkja:gamidu minakan appɾa:	H
N-173-1	Kurima	ffafu naɸkʌ puɸaŋ aspi	K,I,T
N-173-1	Miyaguni	ɸaʌʌɸɸa {naʌkʌ: / nazkʌ:} pʰukaŋ asʌpi:u:	T,N
N-173-1	Uruka	fʌfa:ffa naʌkja:du puɸaŋ asɿpʌ	N,U,D
N-173-1	Bora	ffa:ffa sukʌ:du ara:N asɿpʌ ('asɿpʌ' can also be interpreted as 'asɿbɿ'.)	S,M



N-173-5	Standard Japanese	<i>soto-de asonde ko-i.</i> outside-LOCATIVE to.play to.come-IMPERATIVE 'Go play outside.'	
N-173-5	Ikema	afaN aɕibi: ku:	M, Y, S, T
N-173-5	Karimata	pukaŋgi aʀbi ku:	N, D, U
N-173-5	Yonaha	afa: iki appi ku:	H
N-173-5	Kurima	pukaŋ aspŋ ku:	K, I, T
N-173-5	Miyaguni	p <sup>h</sup> u <sup>h</sup> kaN aʀpi ku:	T, N
N-173-5	Uruka	pukaŋ aʀpi ku:	N, U, D
N-173-5	Bora	afa:ŋki aʀpi: ku: ('aʀpi:' can also be interpreted as 'aʀbi:'.)	S, M
N-174-1	Standard Japanese	<i>kono sake-wa sugu-ni you.</i> this liquor-TOPIC right.away-LOCATIVE to.get.drunk 'This liquor gets you drunk quickly.'	
N-174-1	Ikema	kunu sa <sup>h</sup> ja: su <sup>h</sup> gu b <sup>h</sup> u:i	M, Y, S, T
N-174-1	Karimata	ɕu <sup>h</sup> ja: piŋkanu ma:ɕinai b <sup>h</sup> u:	N, D, U
N-174-1	Yonaha	kunu sakja: nnamantidu bju:	H
N-174-1	Kurima	kunu sa <sup>h</sup> ja: su <sup>h</sup> gudu b <sup>h</sup> u:	K, I, T
N-174-1	Miyaguni	kunu sa <sup>h</sup> ɕa su <sup>h</sup> gu b <sup>h</sup> u: duʃ:	T, N
N-174-1	Uruka	kunu sa <sup>h</sup> ja: s <sup>h</sup> gudu bju:	N, U, D
N-174-1	Bora	kunu sa <sup>h</sup> ja: su <sup>h</sup> gudu b <sup>h</sup> u:	S, M
N-174-2	Standard Japanese	<i>kare-wa donnani nonde-mo yowa-nai.</i> he-TOPIC how.much to.drink-even.when to.get.drunk-NEGATIVE 'No matter how much he drinks, he doesn't get drunk.'	
N-174-2	Ikema	ka <sup>h</sup> a: i <sup>h</sup> ɕi: numammai b <sup>h</sup> u:iN	M, Y, S, T
N-174-2	Karimata	kanu psto: uposa numumai {b <sup>h</sup> u:iŋ / bi <sup>h</sup> ju:iŋ}	N, D, U
N-174-2	Yonaha	kanu psta: no:si numja:me: bja:n	H
N-174-2	Kurima	ka <sup>h</sup> a: no:si numja:me: b <sup>h</sup> o:ŋ	K, I, T
N-174-2	Miyaguni	ka <sup>h</sup> ea no'obaɕi no <sup>h</sup> mibam b <sup>h</sup> o:ŋ	T, N
N-174-2	Uruka	ka <sup>h</sup> ja: isa <sup>h</sup> ki numibaŋ bjo:ŋ	N, U, D
N-174-2	Bora	ka <sup>h</sup> a: nabaɕi: numaɕa:maidu b <sup>h</sup> a:N (numaɕa:maidu 'to.drink-CAUSATIVE-even.when')	S, M
N-174-3	Standard Japanese	<i>ototoi-wa takusan nonde yot-ta.</i> day.before.yesterday-TOPIC much to.drink to.get.drunk-PAST 'The day before yesterday, I drank a lot and got drunk.'	
N-174-3	Ikema	mi:kanainna ippai numi: b <sup>h</sup> u:itai	M, Y, S, T
N-174-3	Karimata	putuduŋza upo:sa numidu b <sup>h</sup> u:taŋ	N, D, U
N-174-3	Yonaha	ututuzza masje: numittidu bju:ta:	H
N-174-3	Kurima	butu <sup>h</sup> tu:za maɕa:ŋ numitti b <sup>h</sup> u:taŋ	K, I, T
N-174-3	Miyaguni	butu <sup>h</sup> tuza ja <sup>h</sup> udake <sup>h</sup> no <sup>h</sup> mittɕido b <sup>h</sup> o:ta:	T, N

N-174-3	Uruka	{buʔʔutuʔza / bututuʔza} jaudaki numittidu bju:taʔ	N,U,D
N-174-3	Bora	bututuŋza upa:ʔi numittʔidu bju:ta: ('ututuŋza' is used for 'day before yesterday' as well, as is 'jamakaʂa' for 'much'.)	S,M
N-174-4	Standard Japanese	<i>kare-wa yotte, kinoo-no koto-o wasure-teiru.</i> he-TOPIC to.get.drunk, yesterday-GENITIVE thing-ACCUSATIVE to.forget-STATIVE 'He got drunk, so he has forgotten about yesterday.'	
N-174-4	Ikema	mi:kanainna ippai numi: bju:itai	M,Y,S,T
N-174-4	Karimata	putuduŋza upo:sa numidu bju:taŋ	N,D,U
N-174-4	Yonaha	ututuʔza masje: numittidu bju:ta:	H
N-174-4	Kurima	butuʔu:za maʂa:ŋ numitti bju:taŋ	K,I,T
N-174-4	Miyaguni	butuʔuʔza jaʔudakeŋ noʔmittʔido bjo:ta:	T,N
N-174-4	Uruka	{buʔʔutuʔza / bututuʔza} jaudaki numittidu bju:taʔ	N,U,D
N-174-4	Bora	bututuŋza upa:ʔi numittʔidu bju:ta:	S,M
N-174-5	Standard Japanese	<i>sake-o nonde yotte shimat-ta.</i> liquor-ACCUSATIVE to.drink to.get.drunk to.finish-PAST 'I had a drink and ended up drunk.'	
N-174-5	Ikema	sakja: numi: bju:i nja:N	M,Y,S,T
N-174-5	Karimata	bju:i nja:ŋ	N,D,U
N-174-5	Yonaha	sakja: numittidu bju:i uta:	H
N-174-5	Kurima	sakja: numitti bju:inja:ŋ	K,I,T
N-174-5	Miyaguni	sak <sup>h</sup> eo nomittʔi (du) bjo:jo:ta:	T,N
N-174-5	Uruka	sakju: numi:du bju:i nja:ŋ	N,U,D
N-174-5	Bora	sakja: numittʔidu bju:i nja:N	S,M
N-175B-1	Standard Japanese	<i>mainichi kami- arau.</i> every.day hair-ACCUSATIVE to.wash 'I wash my hair every day.'	
N-175B-1	Ikema	mainiʔi akau arau	M,Y,S,T
N-175B-1	Karimata	mainiʔtu kafa t ʂba afo:	N,D,U
N-175B-1	Yonaha	mainitsŋ kafaddzu afo:	H
N-175B-1	Kurima	mainiʔŋ karattʔu afoa ('oa' is an ambiguous diphthong.)	K,I,T
N-175B-1	Miyaguni	maʔiniʔi karaddzɔ arau	T,N
N-175B-1	Uruka	mainiʔidu karattʔu arau	N,U,D
N-175B-1	Bora	iʔŋ:maidu kafazuu aʂɔ	S,M
N-175B-2	Standard Japanese	<i>sofu-wa mainichi-wa kami-o arawa-nai.</i> grandfather-TOPIC every.day-TOPIC hair-ACCUSATIVE to.wash-NEGATIVE 'My grandfather doesn't wash his hair every day.'	
N-175B-2	Ikema	uja: mainiʔi akauba: afa:N	M,Y,S,T
N-175B-2	Karimata	obaja gabamɸma: kafaʔŋba mainiʔŋ afa:ŋ	N,D,U

N-175B-2	Yonaha	sju:ja mainitsʌ karaddzuba: afa:n	H
N-175B-2	Kurima	su:ja mainitsʌ karattsuba afa:ŋ	K,I,T
N-175B-2	Miyaguni	su:ja maʔinitʃa karadzuba afa:ŋ	T,N
N-175B-2	Uruka	ʃu:ja mainittʃa karattsuba afa:ŋ	N,U,D
N-175B-2	Bora	su:ja {mainʔittʃa / mainʔittʃa:} karazu:ba afa:N ('mainʔittʃa:' is a newer pronunciation.)	S,M
N-175B-3	Standard Japanese	<i>te-to ashi-o arat-ta.</i> hand-COMITATIVE foot-ACCUSATIVE to.wash-PAST 'I washed my hands and feet.'	
N-175B-3	Ikema	ti:tu haddzu afaɪtai	M,Y,S,T
N-175B-3	Karimata	ti:du pagʀʌdu {afo:dan / afo:daŋ}	N,D,U
N-175B-3	Yonaha	ti:tu pagzzuba: {afo: dusʌta:/afo:ta:}	H
N-175B-3	Kurima	ti:tu pazutu: afo:taŋ	K,I,T
N-175B-3	Miyaguni	tʃi:tu pagʃ:tu afaɪta:	T,N
N-175B-3	Uruka	ti:tu pagʃzu afaɪtaʃ	N,U,D
N-175B-3	Bora	tʃi:tu pazʌdu aʀʊta(:)	S,M
N-175B-4	Standard Japanese	<i>te-o aratte, gohan-o tabe-ro.</i> hand-ACCUSATIVE to.wash, meal-ACCUSATIVE to.eat-IMPERATIVE 'Wash your hands and eat.'	
N-175B-4	Ikema	ti:ju afaɪ: munu: faɪ	M,Y,S,T
N-175B-4	Karimata	ti:ja afaɪʃiti munu: {ʃai / faɪ}	N,D,U
N-175B-4	Yonaha	ti:ba: afe:ttidu munu:ba: fe:	H
N-175B-4	Kurima	ti: afaɪtti munu fe:	K,I,T
N-175B-4	Miyaguni	tʃi:ʊ afaɪttʃi kafa monoba ʃai	T,N
N-175B-4	Uruka	ti:ju {afaɪtti / afaɪttikafa} {mazzu / maʃzu} faɪ	N,U,D
N-175B-4	Bora	tʃi:ju afaɪttʃi munu:ba faɪ	S,M
N-175B-5	Standard Japanese	<i>kao-mo aratte ko-i.</i> face-too to.wash to.come-IMPERATIVE 'Go wash your face, too.'	
N-175B-5	Ikema	mihanaumai {afaɪ / sʀmi: / sʌʀmi:} ku:	M,Y,S,T
N-175B-5	Karimata	mipano: afaɪ ku:	N,D,U
N-175B-5	Yonaha	mipano:me: afe: ku:	H
N-175B-5	Kurima	mipanoa afaɪ ku: ('oa' is an ambiguous diphthong.)	K,I,T
N-175B-5	Miyaguni	mipanaʊ {afaɪttʃi / afaɪ} ko:	T,N
N-175B-5	Uruka	mipanau afaɪ ku:	N,U,D
N-176-1	Standard Japanese	<i>atsuitoki-wa boosi-o kaburu.</i> to.be.hot time-TOPIc hat-ACCUSATIVE to.put.on(headwear) 'When it's hot, I put a hat on.'	
N-176-1	Ikema	aʃukai tukʌanna {bo:ʃu: / bu:ʃu:} {kavvi / kaʊʊi}	M,Y,S,T

N-176-1	Karimata	atʃikai tukinna bo:ʃu kavvi	N,M
N-176-1	Uruka	atʃikaʔi tukja:na bo:ʃu: kaʊ	N,U,D
N-176-1	Bora	atʃa:atʃanu tukja:nna bo:ʃu: {kaʊ / kaf}	K,K,Y,M
N-176-1	Kuninaka	atʃa: tukja:nna bo:ʃoʊ kaʊ (According to the speaker, ‘ʊ’ corresponds to the Standard Japanese <i>kana</i> for ‘u’.)	N
N-176-2	Standard Japanese	<i>daremo kubagasa-o kabura-nai.</i> anyone fan.palm.leaf.hat-ACCUSATIVE to.put.on(headwear)-NEGATIVE ‘No one puts on a fan palm leaf hat.’	
N-176-2	Ikema	taʃumai kubaʒasauba: {kavvan / kaʊʊan}	M,Y,S,T
N-176-2	Karimata	taʃumai kasauba kavvan	N,M
N-176-2	Uruka	to:mai kubaʒasauba kaʊʊaŋ	N,U,D
N-176-2	Bora	ta:mai kubaʒasauba: kavvaŋ	K,K,Y,M
N-176-2	Kuninaka	taʃumai koʒagaʒao kavvan	N
N-176-3	Standard Japanese	<i>wakai koro-wa kubagasa-o kabut-ta.</i> to.be.young.time.period-TOPIC fan.palm.leaf.hat-ACCUSATIVE to.put.on(headwear)-PAST ‘When I was young, I used to put on a fan palm leaf hat.’	
N-176-3	Ikema	bakakaikja: kubaʒasauba: kavvitai	M,Y,S,T
N-176-3	Karimata	baka: siʃkja:ja kasauba kaudai (kavvi utai ‘to.put.on(headwear)-STATIVE-PAST’)	N,M
N-176-3	Uruka	baxakaʔkja:ja kubaʒasauba {kaʊtaʔ / kaʊdu} siʃtaʔ	N,U,D
N-176-3	Bora	baka:bakanu tukja:nna kubaʒasau kavta:	K,K,Y,M
N-176-3	Kuninaka	bakʰamununu ju:ʃiaNna koʒagaʒao kaʊtaʃ (‘kʰ’ is close to ‘x’, somewhat towards back; when ‘l’ is pronounced the tip of the tongue is visible; the distinction between close ‘o’ and ‘u’ is not strict. This also holds for the rest of the data.)	N
N-176-4	Standard Japanese	<i>kubagasa-o kabutte, zoori-o hai-ta.</i> fan.palm.leaf.hat-ACCUSATIVE to.put.on(headwear), sandal-ACCUSATIVE to.put.on(footwear)-PAST ‘I put on a fan palm leaf hat and sandals.’	
N-176-4	Ikema	kubaʒasa: kavvi: sabau mmitai	M,Y,S,T
N-176-4	Karimata	kasau kavvidu sabo: {fundai / hundai} (fummi ‘to.put.on(footwear)-INTERROGATIVE’)	N,M
N-176-4	Uruka	kubaʒasau kaʊʊitti sabau funtaʔ	N,U,D
N-176-4	Bora	kubaʒasau kavvittʃi sabau fʊmʃta:	K,K,Y,M
N-176-4	Kuninaka	kubaʒasao kavvi:du sabao fʊmʃtaʃ	N
N-176-5	Standard Japanese	<i>omae-mo kubagasa-o kabutte mi-ro.</i> you-too fan.palm.leaf.hat-ACCUSATIVE to.put.on(headwear) to.see-IMPERATIVE ‘You try putting on a fan palm leaf hat, too. (imperative)’	
N-176-5	Ikema	vvamai kubaʒasau kavvi mi:ʃu	M,Y,S,T



N-176-5	Karimata	vʋamai kasau kavvi mi:ru	N,M
N-176-5	Uruka	ʋʋamai kubaɣasau kaʋʋi mi:ru	N,U,D
N-176-5	Bora	vɸamai kubaɣasau kavvi: mi:ru	K,K,Y,M
N-176-5	Kuninaka	ʋvamai kubaɣasau kavvi: mi:ru	N
N-176B-1	Standard Japanese	<i>yoru-wa to-o tojiru.</i> night-TOPIC door-ACCUSATIVE to.close 'At night, I close the door.'	
N-176B-1	Ikema	junaka: jadu: ffi	M,Y,S,T
N-176B-1	Karimata	junainna jaduba ɛimiɾu	N,M
N-176B-1	Bora	junainna jadu:du fʋ: (The labiodental approximant functions like a vowel.)	K,K,Y,M
N-176B-1	Kuninaka	{julja / jullja} jaduɔ ɛimidzi	N
N-176B-2	Standard Japanese	<i>kyoo-wa atsui-kara to-o toji-nai.</i> today-TOPIC to.be.hot-because door-ACCUSATIVE to.close-NEGATIVE 'Because it's hot today, I won't close the door.'	
N-176B-2	Ikema	kʉ:ja aʋsukaiba jadu:ba: ffaɕza:N (volitional) <cf> kanu ɕitu: itʋmai jadu:ba: ffaN ('He never closes the door.')	M,Y,S,T
N-176B-2	Karimata	kju:ba aʋsikaiba {jadu:ba / jaduba ɛimiN}	N,M
N-176B-2	Bora	kʉ:ja aʋskaiba jadu:ba: ffaŋ	K,K,Y,M
N-176B-2	Kuninaka	kʉ:ja aʋrakajba jadoɔ ɛimiɾu ('to.close-IMPERATIVE')	N
N-176B-3	Standard Japanese	<i>yuube-wa chichi-ga to-o toji-ta.</i> last.night-TOPIC father-NOMINATIVE door-ACCUSATIVE to.close-PAST 'Last night, my father closed the door.'	
N-176B-3	Ikema	jubja: zzaɣa jadu: ffitai	M,Y,S,T
N-176B-3	Karimata	ju:bja: uja:du jaduba ɛimidai	N,M
N-176B-3	Bora	jubja: ujaɣadu jadu: fʋ:ta:	K,K,Y,M
N-176B-3	Kuninaka	{ju:beiaa / jubja:} ojaɣadu jaduɔ ɛimeɾaɭ	N
N-176B-4	Standard Japanese	<i>sensee-ga to-o tojite, saki-ni it-ta.</i> teacher-NOMINATIVE door-ACCUSATIVE to.close, before-LOCATIVE to.go-PAST 'The teacher closed the door and went first.'	
N-176B-4	Ikema	ɛiŋɛi:ɣa jadu: ffi: sadari: hatai	M,Y,S,T
N-176B-4	Karimata	ɛiŋɛi:ɣadu jadu: ɛimi sakiŋ ŋɣi	N,M
N-176B-4	Bora	ɛinɛi:ɣadu jadu: ffitɛi satsaŋ pizta:	K,K,Y,M
N-176B-4	Kuninaka	ɛiNɛi:ɣa jadoɔ ɛimii sadare: piɭtaɭ	N
N-176B-5	Standard Japanese	<i>omae-ga tojite ko-i.</i> you-NOMINATIVE to.close to.come-IMPERATIVE 'You go close it.' (imperative)	
N-176B-5	Ikema	vvaɣa ffi: ku:	M,Y,S,T
N-176B-5	Bora	vvaɣa ffi ku:	K,K,Y,M

N-176B-5	Kuninaka	ʷvaɡa {ɕimii / ɕimi} ko:	N
N-177-1	Standard Japanese	<i>otooto-wa hitori-de neru.</i> younger.brother-TOPIC one.person-INSTRUMENTAL to.sleep 'My brother sleeps alone.'	
N-177-1	Ikema	uttu: {tauka:çi: / taŮka:çi:} nʲivvi	M, Y, S, T
N-177-1	Bora	utuʧa: taŮkʲa:du nivʲ	K, K, Y, M
N-177-1	Kuninaka	oʧtoo taʲkʲa: do {nivviŮ / nivʲijŮ / nivʲʲŮ} (This was confirmed to be the entire utterance.)	N
N-177-2	Standard Japanese	<i>imooto-wa hitori-de ne-nai.</i> younger.sister-TOPIC one.person-INSTRUMENTAL-TOPIC to.sleep-NEGATIVE 'My sister doesn't sleep alone.'	
N-177-2	Ikema	uttu: {tauka:çi:ja / taŮka:çi:ja} nʲivvan	M, Y, S, T
N-177-2	Bora	utuʧa: taŮkʲa:ja nivʲaŋ	K, K, Y, M
N-177-2	Kuninaka	{ottoo / miduNna} taʲkʲa:do nivvan	N
N-177-3	Standard Japanese	<i>yuube-wa futari-de ne-ta.</i> last.night-TOPIC two.people-INSTRUMENTAL to.sleep-PAST 'Last night, they slept together.'	
N-177-3	Ikema	ju:bʲa: fta:çi: nʲu:ʲtai	M, Y, S, T
N-177-3	Bora	jubʲa: {fta:zdu / ftaŋdu} niŮta:	K, K, Y, M
N-177-3	Kuninaka	jubeʲaa ʧuta:ʲdo nivʲtaʲ	N
N-177-4	Standard Japanese	<i>kujini nete, hachiji-ni oki-ta.</i> nine.o'clock-LOCATIVE to.sleep, eight.o'clock-LOCATIVE to.get.up-PAST 'I went to bed at nine and got up at eight.'	
N-177-3	Ikema	kudʒin nivvi: hatsidʒin ukitai	M, Y, S, T
N-177-3	Bora	kudʒin nivvitʒidu hatsidʒin ukita:	K, K, Y, M
N-177-3	Kuninaka	kudʒin nivʲii hatsidʒin okitaʲ	N
N-177-4	Standard Japanese	<i>kyoo-wa hitori-de nete mi-ro.</i> today-TOPIC one.person-INSTRUMENTAL to.sleep to.see-IMPERATIVE 'Today, try sleeping alone.'	
N-177-4	Ikema	kiu:ja {taukʲa:çi: / taŮkʲa:çi:} nivvi mi:ru	M, Y, S, T
N-177-4	Bora	kiu:ja taŮkʲa: nivvi mi:ru	K, K, Y, M
N-177-4	Kuninaka	kiu:ja taʲkʲa: nivʲi: mi:ru	N
N-178-1	Standard Japanese	<i>sofu-wa mainichi rokuji-ni okiru.</i> grandfather-TOPIC every.day six.o'clock-LOCATIVE to.get.up 'My grandfather gets up at six every day.'	
N-178-1	Ikema	uja: mainitʒi rukudʒin uki:	M, Y, S, T
N-178-1	Bora	ɕu:ja mainitʒʲ rokudʒindu uki	K, K, Y, M
N-178-1	Kuninaka	ɕu:ja mainitʒʲ rokudʒin {okilʲ / okilli}	N

N-178-2	Standard Japanese	<i>otooto-wa mada oki-nai.</i> younger.brother-TOPIC yet to.get.up-NEGATIVE 'My brother won't wake up yet.'	
N-178-2	Ikema	uttu: nna:ɠja: ukiN	M, Y, S, T
N-178-2	Bora	utuʔa: nɲada ukuŋ	K, K, Y, M
N-178-2	Kuninaka	oʔtoo mɲada okiNni:	N
N-178-3	Standard Japanese	<i>chichi-mo rokuji-ni oki-ta.</i> father-too six.o'clock-LOCATIVE to.get.up-PAST 'My father got up at six, too.'	
N-178-3	Ikema	zzamai rukudzɪn ukitai	M, Y, S, T
N-178-3	Bora	ujamai rokudzɪndu ukɪta:	K, K, Y, M
N-178-3	Kuninaka	ojamai rokudzɪn oʔkitaɭ	N
N-178-4	Standard Japanese	<i>hayaku okite, sore-kaa hatake-ni it-ta.</i> to.be.early to.get.up, that-ABLATIVE field-LOCATIVE to.go-PAST 'I got up early; then, I went to the field.'	
N-178-4	Ikema	ça:çi: uki: uikara haiŋkai ikiʔtai	M, Y, S, T
N-178-4	Bora	p'a:ɛi: ukiʔtɛidu uikara paŋkai ikʂta:	K, K, Y, M
N-178-4	Kuninaka	p'a:ɛi: oʔkii uikara painkai p'aɭtaɭ	N
N-178-5	Standard Japanese	<i>omae-mo hayaku okite ko-i.</i> you-too to.be.early to.get.up to.come-IMPERATIVE 'You get up and come early, too.' (imperative)	
N-178-5	Ikema	vvamai ça:çi: uki: ku:	M, Y, S, T
N-178-5	Bora	vyamai p'a:p'a: uki: ku:	K, K, Y, M
N-178-5	Kuninaka	ʷvamai p'a:ɛi: okii ko:	N
N-179-1	Standard Japanese	<i>kookoosē-wa seifuku-o kiru.</i> high.school.student-TOPIC uniform-ACCUSATIVE to.put.on 'High school students wear uniforms.'	
N-179-1	Ikema	ko:ko:ɛeija ɛe:ʔku:du {ʂa: / ʂa:i}	M, Y, S, T
N-179-1	Bora	ko:ko:ɛeija ɛeifku:du kʀa:	K, K, Y, M
N-179-1	Kuninaka	ko:ko:s'eija {s'eifukudu / s'eifukuu} {ʂa: / ʂa:i}	N
N-179-2	Standard Japanese	<i>sono fuku-wa furui-kara daremo ki-nai.</i> that clothes-TOPIC to.be.old-because anyone to.put.on-NEGATIVE 'Because those clothes are old, no one puts them on.'	
N-179-2	Ikema	unu fku: jaŋimunujaiba taŋumai tʂaŋ	M, Y, S, T
N-179-2	Bora	unu ʔka: ɠabakariba ta:mai kʂaŋ	K, K, Y, M
N-179-2	Kuninaka	unu ʔuʔkuu jaŋimunujaiba taŋumai ʔtaŋ	N
N-179-3	Standard Japanese	<i>sore-wa kinoo ki-ta.</i> that-TOPIC yesterday to.put.on-PAST 'I put that on yesterday.'	

N-179-3	Ikema	ufa: nnu ʔaitai	M, Y, S, T
N-179-3	Bora	unu fka: ('that clothes-TOPIc') ʔanu:du kʂʂta:	K, K, Y, M
N-179-3	Kuninaka	ufa: {ʔanu / ʔanu / ʔanudu} ʔa:ta:	N
N-179-4	Standard Japanese	<i>watashi-wa akai fuku-o kite, imooto-wa aoi fuku-o ki-ta.</i> I-TOPIc to.be.red clothes-ACCUSATIVE to.put.on, younger.sister-TOPIc to.be.blue clothes-ACCUSATIVE to.put.on-PAST 'I put on red clothes, while my sister put on blue clothes.'	
N-179-4	Ikema	ba: akafku: tti: uttu: aufku: {ʔaitai / ttitai}	M, Y, S, T
N-179-4	Bora	baja: aka fka: kiʂʂitʂʂidu utuʔa: ao fku:du kʂʂta:	K, K, Y, M
N-179-4	Kuninaka	ba: akaju: ʔukuu ʔi:du ottonna aaju: ʔukuu ʔa:ta:	N
N-179-5	Standard Japanese	<i>omae-mo chotto kite mi-ro.</i> you-too a.little to.put.on to.see-IMPERATIVE 'You try it on, too.' (imperative)	
N-179-5	Ikema	vvamai ʔi:ʔagama tti: mi:ru	M, Y, S, T
N-179-5	Bora	vyamai pi:ttakiʂʂi mi:ru	K, K, Y, M
N-179-5	Kuninaka	vvamai ipi:ʔagama ʔi: mi:ru	N
N-180-1	Standard Japanese	<i>soko-ni-wa sensee-ga suwaru.</i> there-LOCATIVE-TOPIc teacher-NOMINATIVE to.sit.down 'The teacher sits there.'	
N-180-1	Ikema	umaŋŋa ʂʂiʂʂi:nudu biʂi	M, Y, S, T
N-180-1	Bora	umaŋŋa ʂʂiʂʂi:gaɗu bʔa:	K, K, Y, M
N-180-1	Kuninaka	omaŋŋa ʂʂiʂʂi:ga {bʔa: / biʂi / bʔa}	N
N-180-2	Standard Japanese	<i>zashiki-ni-wa daremo suwara-nai.</i> drawing.room-LOCATIVE-TOPIc anyone to.sit.down-NEGATIVE 'No one sits in the drawing room.'	
N-180-2	Ikema	umaŋŋa ʂʂiʂʂi:nudu biʂi	M, Y, S, T
N-180-2	Bora	ʔʂʂaʂʂaŋŋa ta:mai {bizzaŋ / bʔaŋ}	K, K, Y, M
N-180-2	Kuninaka	omaŋŋa ʂʂiʂʂi:ga {bʔa: / biʂi / bʔa}	N
N-180-3	Standard Japanese	<i>kinoo-wa koochoosensee-ga suwat-ta.</i> yesterday-TOPIc principal-NOMINATIVE to.sit.down-PAST 'Yesterday, the principal sat.'	
N-180-3	Ikema	nnu: ko:ʔo:ʂʂiʂʂi:nudu bi:ta:	M, Y, S, T
N-180-3	Bora	ʔanu:ja ko:ʔo:ʂʂiʂʂi:gaɗu {bʔa:ta: / bz:ta:}	K, K, Y, M
N-180-3	Kuninaka	ʔanuu ko:ʔo:ʂʂiʂʂi:ga bʔa:ta:	N
N-180-4	Standard Japanese	<i>sensee-wa suwatte, kodomo-tachi-wa tat-teiru.</i> teacher-TOPIc to.sit.down, child-PLURAL-TOPIc to.stand.up-STATIVE 'The teacher is sitting, while the children are standing.'	
N-180-4	Ikema	ʂʂiʂʂi:ja biʂi: jaʔaimma: tatsu:i	M, Y, S, T

N-180-4	Bora	ɕiŋɕi:ja bizzitɕidu ɕi:ta: taɕu:ta:	K, K, Y, M
N-180-4	Kuninaka	ɕiŋɕi:ja bizi:do {jarabiNm <sub>1</sub> aa / jarabita <sub>1</sub> } {tatsii o <sub>1</sub> ta <sub>1</sub> / tatsio <sub>1</sub> ta <sub>1</sub> } (It appears ‘i’ was only long when uttered slowly.)	N
N-180-5	Standard Japanese	<i>omae-mo suwatte mi-ro.</i> you-too to.sit.down to.see-IMPERATIVE ‘You try sitting, too.’ (imperative)	
N-180-5	Ikema	v <sub>v</sub> vamai bi <sub>z</sub> i: mi:fu	M, Y, S, T
N-180-5	Bora	v <sub>v</sub> vamai bi <sub>z</sub> i: mi:fu	K, K, Y, M
N-180-5	Kuninaka	<sup>m</sup> v <sub>v</sub> vamai bi <sub>z</sub> i: mi:fu	N
N-181-1	Standard Japanese	<i>mainichi terebi-o miru.</i> every.day television-ACCUSATIVE to.see ‘I watch television every day.’	
N-181-1	Ikema	mainitɕi terebi <sub>u</sub> : mi:jui	M, Y, S, T
N-181-1	Bora	mai:nitɕa terebi <sub>u</sub> :du mi:	K, K, Y, M
N-181-1	Kuninaka	{mainitɕa / mainitɕi} terebio / mio <sub>1</sub> <cf> kjuuja terebio mi:ɕzi (‘I won’t watch television today.’)	N
N-181-2	Standard Japanese	<i>chichi-wa yakyuu-wa mi-nai.</i> father-TOPIc baseball-TOPIc to.see-NEGATIVE ‘My father doesn’t watch baseball.’	
N-181-2	Ikema	zza: jak <sub>u</sub> :juba: mi:N	M, Y, S, T
N-181-2	Bora	uja: jak <sub>u</sub> :juba: m <sub>1</sub> u:ŋ	K, K, Y, M
N-181-2	Kuninaka	oja: {jak <sub>u</sub> :jubaa / jak <sub>u</sub> :juba} mi:N	N
N-181-3	Standard Japanese	<i>kinoo ni<sub>1</sub>-o mi-ta.</i> yesterday rainbow-ACCUSATIVE to.see-PAST ‘I saw a rainbow, yesterday.’	
N-181-2	Ikema	ŋ <sub>u</sub> : imbauju mi:ta <sub>i</sub>	M, Y, S, T
N-181-2	Bora	ɕa <sub>u</sub> nu: ɕimbavvu mi:ta:	K, K, Y, M
N-181-2	Kuninaka	ɕa <sub>u</sub> noo {nidzi <sub>o</sub> / nidzo <sub>o</sub> } mi:ta <sub>1</sub>	N
N-181-4	Standard Japanese	<i>eega-o mite, ie-ni kaet-ta.</i> film-ACCUSATIVE to.see, house-LOCATIVE to.return.home-PAST ‘I watched a film and went home.’	
N-181-4	Ikema	eigau mi: ja:ŋkai ikitai	M, Y, S, T
N-181-4	Bora	eigau mi:tɕidu ja:ŋkai k <sub>1</sub> a:ta:	K, K, Y, M
N-181-4	Kuninaka	e:ga: mi:du ja:Nkai ŋgital <sub>1</sub>	N
N-181-5	Standard Japanese	<i>shinpaida-kara fune-o mite ko-i.</i> to.be.worried-because ship-ACCUSATIVE to.see to.come-IMPERATIVE ‘Go take a look at the ship, because I’m worried.’	
N-181-4	Ikema	ɕibajaiba fi <sub>u</sub> : mi: ku:	M, Y, S, T

N-181-4	Bora	ɛa: jaɾiba ɸɸ <sup>u</sup> : mi: ku:	K, K, Y, M
N-181-4	Kuninaka	{ɸuwa: / ɛiwa:} ɛi:duiba ɸun <sup>u</sup> u mi: ku: ɛi	N
N-182-1	Standard Japanese	<i>kare-wa mainichi onaji koto-o iu.</i> he-TOPIC every.day same thing-ACCUSATIVE to.say 'He says the same things every day.'	
N-182-1	Ikema	kafa: mainitei junukutu: addzi	M, Y, S, T
N-182-1	Bora	kaɾia: mainiɿɿ junu munuzzu du az <sub>i</sub>	K, K, Y, M
N-182-1	Kuninaka	kafea: mainiɿɿ joŋoŋo: no k <sup>h</sup> oŋodo al <sub>i</sub>	N
N-182-2	Standard Japanese	<i>sobo-wa uso-wa iwa-nai.</i> grandmother-TOPIC lie-TOPIC to.say-NEGATIVE 'My grandmother doesn't lie.'	
N-182-2	Ikema	ha:mma: daɾakauba: azzaN	M, Y, S, T
N-182-2	Bora	mɸma: daɾaku:ba: azzaŋ	K, K, Y, M
N-182-2	Kuninaka	mɸmaa daɾaɸuba {azzaN / alzaN} ('z' is not dental but approaches the alveolar ridge; it seems to be the result of a weakening of the articulation of 'l'.)	N
N-182-3	Standard Japanese	<i>tomodachi-wa uso-o it-ta.</i> friend-TOPIC lie-ACCUSATIVE to.say-PAST 'My friend lied.'	
N-182-3	Ikema	duɿta: daɾakau aitai	M, Y, S, T
N-182-3	Bora	duɿɿa daɾaku:du azta:	K, K, Y, M
N-182-3	Kuninaka	doɿɿa daɾaɸudu al <sub>i</sub> (This was confirmed to be the entire utterance.)	N
N-182-4	Standard Japanese	<i>'arigatoo'-to itte, kaet-ta.</i> 'thank.you'-QUOTATIVE to.say, to.return.home-PAST 'I said "thank you" and went home.'	
N-182-4	Ikema	sdigaɸu: tti addzi: {ikiɿai / hatai}	M, Y, S, T
N-182-4	Bora	pukaɾassa teidu azzitei pizta:	K, K, Y, M
N-182-4	Kuninaka	pukaɾassa tei alzi <sup>i</sup> ŋgital <sub>i</sub> ('l' in 'alzi <sup>i</sup> ' is weak.)	N
N-182-5	Standard Japanese	<i>chichi-ni 'yuuhan-da-yo'-to itte ko-i.</i> father-DATIVE 'dinner-COPULA-EMPHATIC'-QUOTATIVE to.say to.come-IMPERATIVE 'Go tell your father it's dinner time.'	
N-182-5	Ikema	zzaŋkai juido: ti addzi: ku:	M, Y, S, T
N-182-5	Bora	ujaŋ kai juzzu fai: tei ('dinner-ACCUSATIVE to.eat-IMPERATIVE-QUOTATIVE') azzzi: ku:	K, K, Y, M
N-182-5	Kuninaka	ojaŋkai ju:ɿ tei a <sup>z</sup> zi: ku:	N



N-184-1	Bora	maɳnudu upa:ɕi aɳ	K, K, Y, M
N-184-1	Kuninaka	maɳ nodo opa:sa aɳuɳ	N
N-184-3	Standard Japanese	<i>mukashi koko-ni-wa ido-ga at-ta.</i> long.ago here-LOCATIVE-TOPIc well-NOMINATIVE to.be-PAST 'There was a well here a long time ago.'	
N-184-3	Ikema	ŋkia:ndu umanna ka:nu aɳu:taɳ	M, Y, S, T
N-184-3	Bora	ŋkia:ŋna kumanna ɕa:ɕia:nudu ataɳ	K, K, Y, M
N-184-3	Kuninaka	Nkia:Nna komaNna ka:nodo ataɳ	N
N-184-4	Standard Japanese	<i>higashi-ni gakkoo-ga atte, nishi-ni koominkan-ga aru.</i> east-LOCATIVE school-NOMINATIVE to.be, west-LOCATIVE community.center-NOMINATIVE to.be 'There's a school to the east and a community center to the west.'	
N-184-4	Ikema	aɕaiN ɕakko:nu ari: nʃaŋna ko:miŋkandu ari:jui	M, Y, S, T
N-184-4	Bora	aɕaŋ ɕakko:ja ('school-TOPIc') ari:ɕidu izna bumm'a:nudu ataɳ	K, K, Y, M
N-184-4	Kuninaka	aɕaɳ Nna ɕakko:ɕa arii {iɳiNna / iɳNna} ko:miNkaN nodo aɳ	N
N-184-5	Standard Japanese	<i>kusuri-ga atte, tasukat-ta.</i> medicine-NOMINATIVE to.be, to.be.saved-PAST 'I was lucky to have some medicine.'	
N-184-5	Ikema	ffɕinu ari: taskaitai	M, Y, S, T
N-184-5	Bora	fsuŋnu ari:du taʃka:ta:	K, K, Y, M
N-184-5	Kuninaka	kʉsul {nu / ɕa} ari:ido taska:ioɳ ('ɕa' is more natural.)	N
N-185-1	Standard Japanese	<i>shio-ga nai.</i> salt-NOMINATIVE to.be.absent 'I don't have any salt.'	
N-185-1	Ikema	ma:sunu n'a:N	M, Y, S, T
N-185-1	Bora	ma:sunudu n'a:ŋ	K, K, Y, M
N-185-1	Kuninaka	ma:so ɕa n'a:N	N
N-185-2	Standard Japanese	<i>satoo-mo nakat-ta.</i> sugar-too to.be.absent-PAST 'I didn't have any sugar, either'	
N-185-2	Ikema	saɕamai {n'a:ntaN / n'a:ttaN / n'a:ndaN / n'a:ddaN}	M, Y, S, T
N-185-2	Bora	saɕamai n'a:ttam	K, K, Y, M
N-185-2	Kuninaka	sata mai n'a:N	N
N-185-3	Standard Japanese	<i>hoochoo-ga nakute, ki-re-nakat-ta.</i> kitchen.knife-NOMINATIVE to.not.be, to.cut-POTENTIAL-NEGATIVE-PAST 'I didn't have a kitchen knife, so I couldn't cut it.'	
N-185-3	Ikema	kaɕananu na:da tɕaddaN	M, Y, S, T
N-185-3	Bora	kaɕananu n'a:danaɕidu kidamaɕuttam	K, K, Y, M



N-185-3	Kuninaka	k <sup>h</sup> aṭana no nja:N niba kiratta:N ('k <sup>h</sup> ' is close to 'x', towards back.)	N
N-186-1	Standard Japanese	<i>wagaya-ni-wa inu-ga iru.</i> our.house-LOCATIVE-TOPIC dog-NOMINATIVE to.be 'We have a dog.'	
N-186-1	Ikema	bantiḡa ja:nna innu {urijui / uri:ui}	M, Y, S, T
N-186-1	Bora	banṭaḡa ja:nna inṇudu uz	K, K, Y, M
N-186-1	Kuninaka	banṭsiḡa ja:Nna iN nodo ol	N
N-186-2	Standard Japanese	<i>tonari-no ie-ni-wa inu-wa i-nai.</i> next.door-GENITIVE house-LOCATIVE-TOPIC dog-TOPIC to.be-NEGATIVE 'My neighbors don't have a dog.'	
N-186-2	Ikema	tunainu ja:nna inna mi:N	M, Y, S, T
N-186-2	Bora	tunaṅnu ja:nna inṇa ufaṅ	K, K, Y, M
N-186-2	Kuninaka	satono ja:Nna iNna miiN	N
N-186-3	Standard Japanese	<i>mukashi-wa neko-mo i-ta.</i> long.ago-TOPIC cat-too to.be-PAST 'Back in the day, we had a cat, too.'	
N-186-3	Ikema	ṅkia:nna majumai ufu:tai	M, Y, S, T
N-186-3	Bora	ṅkia:nna majumai uta:	K, K, Y, M
N-186-3	Kuninaka	Nkia:Nna maju mai do oṭal	N
N-186-4	Standard Japanese	<i>kare-wa ootoo-ga ite, watashi-wa ani-ga iru.</i> he-TOPIC younger.brother-NOMINATIVE to.be, I-TOPIC older.brother-NOMINATIVE to.be 'He has a younger brother, while I have an older brother.'	
N-186-4	Ikema	kafa: uttunu uri: ba: suḡzanu {uru:i / urijui}	M, Y, S, T
N-186-4	Bora	kainṇa utuṭa: uritṭsidu banṇa suduanudu uz	K, K, Y, M
N-186-4	Kuninaka	kafa: ottono ore:do ba: {ada / a:da} ḡa ol	N
N-186-5	Standard Japanese	<i>koko-ni ite kudasa-i.</i> here-LOCATIVE to.be to.give(honorific)-IMPERATIVE 'Please stay here.'	
N-186-5	Ikema	umaN uri {fi: / ffi:} samati	M, Y, S, T
N-186-5	Bora	kumaṅ uri fi:ru	K, K, Y, M
N-186-5	Kuninaka	koṃaṅ ore: fi:ru	N
N-187-1	Standard Japanese	<i>kare-wa sake-o nomu-to henna koto-o shimasu.</i> he-TOPIC liquor-ACCUSATIVE to.drink-CONDITIONAL to.be.strange thing-ACCUSATIVE to.do 'When he has had a drink, he acts strangely.'	
N-187-1	Ikema	kafa: saḡju: numutu: ḡinnakutu: {assṷ / aḡḡi}	M, Y, S, T
N-187-1	Bora	kaḡja: saḡju: numṭiḡka: pinṇa kuṭu:du sṷ:	K, K, Y, M
N-187-1	Kuninaka	k <sup>h</sup> area: saḡ <sup>he</sup> oṷ nom, ṭiḡaa pinṇak <sup>h</sup> oṷoṷo do asṷ (The boundary in 'ea' is ambiguous.)	N

N-187-2	Standard Japanese	<i>kare-wa kyoo-wa nanimo shi-nai.</i> he-TOPIC today-TOPIC anything to.do-NEGATIVE 'He won't do anything today.'	
N-187-2	Ikema	kaʃa: kʲu:ja naumai ϕun	M, Y, S, T
N-187-2	Bora	kaʃa: kʲu:ja na:mai su:ŋ	K, K, Y, M
N-187-2	Kuninaka	kaʃea: kʲo:ja naʋja: tom̩ma {ahoN / asoN} (The boundary in 'ea' is ambiguous.)	N
N-187-3	Standard Japanese	<i>kinoo-wa takusan shigoto-o shi-ta.</i> yesterday-TOPIC much work-ACCUSATIVE to.do-PAST 'Yesterday, I did a lot of work.'	
N-187-3	Ikema	unu: ha:sa ŝkamaʋ {aʃtai / aʃtai}	M, Y, S, T
N-187-3	Bora	ʃʋnu:ja upa:ʃidu ʃʋtu: ʃ:ta:	K, K, Y, M
N-187-3	Kuninaka	ʃʋnoo {opa:ʃia / opa:sa} ʃʋtoʋo {aʃia:l / aʃta:l}	N
N-187-4	Standard Japanese	<i>takusan shigoto-o shite, asobi-ni it-ta.</i> much work-ACCUSATIVE to.do, to.play-DATIVE to.go-PAST 'After doing a lot of work, I went and had some fun.'	
N-187-4	Ikema	ha:sa ŝkama: ʃi: aʃu:ga ikitai	M, Y, S, T
N-187-4	Bora	upa:ʃi skuta: ʃi:ʃidu appʃga piʃta:	K, K, Y, M
N-187-4	Kuninaka	opa:sa ʃʋtoʋo ʃi:doʋo aʃuʃga piʃʃa:l	N
N-187-5	Standard Japanese	<i>yasun-de-naide shigoto-o shi-ro.</i> to.rest-PROGRESSIVE-NEGATIVE work-ACCUSATIVE to.do-IMPERATIVE 'Don't rest; work.'	
N-187-5	Ikema	juku:da ŝkamaʋ assu	M, Y, S, T
N-187-5	Bora	juka:danaʃi: skutu: ʃi:ʃu	K, K, Y, M
N-187-5	Kuninaka	jukuu da ʃʋtoʋo asso	N
N-187-6	Standard Japanese	<i>gakkoo-de benkyooshite ko-i.</i> school-LOCATIVE to.study to.come-IMPERATIVE 'Go study at school.'	
N-187-6	Ikema	juku:da ŝkamaʋ assu	M, Y, S, T
N-187-6	Bora	gakko: iki beŋkʲo:ju ʃi: ku:	K, K, Y, M
N-187-6	Kuninaka	jukuu da ʃʋtoʋo asso	N

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NINJAL Collaborative Research Project Reports 12-02

General Research for the Study and Conservation of Endangered Dialects in Japan

Research Report on the Miyako Dialects of Southern Ryukyuan

First Published: August 1, 2012

**English Edition: May 23, 2019**

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ISBN:978-4-906055-21-0

ISSN: 2185-0127