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## A Preliminary Report on Entomological Vocabulary in Sani Yi

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## CHAPTER 4

A Preliminary Report on Entomological Vocabulary  
in Sani Yi

Kazue IWASA

## [要旨/ABSTRACT]

本稿は、筆者が2019年12月に中国雲南省昆明市を中心に実施した言語調査の結果をもとに、彝語東南部方言の下位方言のひとつである撒尼彝語の昆虫に関する語彙をまとめたものである。

撒尼彝語に関する先行研究に現れる昆虫語彙の語彙形式、音価、彝文字と、本調査で得られたデータを比較・分析し、撒尼彝語の昆虫語彙の特徴を提示する。

また、各方言地域の彝文字を地図上に示した彝文字地図をもとに、撒尼彝語と他の彝語方言の文字、語彙形式、音価について検証、その分析結果をまとめた。

## 1. Introduction

This paper aims, first of all, to report on the entomological vocabulary in Sani Yi (ISO 639-3ysn) spoken around Shilin Yi Autonomous County, Yunnan, China. Secondly, it aims to map out by region the dialectal differences of Yi characters related to entomology. The data shown in this paper were mainly collected in December 2019 through face-to-face fieldwork<sup>1</sup> in Kunming and online fieldwork focused on Shilin conducted from a residence located in Kunming of the author's main consultant.

Yiyu (彝語) is the group of languages spoken by the Yi ethnic group dwelling in southwest China and northern Vietnam and Laos. Yiyu belongs to the Lolo-Burmese language group of the Tibeto-Burman language family. According to the official classification in China, it has six dialects, namely Northern, Southern, Western, Eastern, Southeastern and Central. Four of these (Northern, Southern, Eastern and Southeastern) possess their own scripts, and abundant manuscripts are written in them.

Sani Yi belongs to Yiliang (宜良) subdialect of the Southeastern dialect, and has hitherto maintained its script. In this paper, its current entomological vocabulary will be documented and compared to previous studies on Sani Yi and other Yi dialects in respect to their word forms, phonetic values and characters by investigating Yi characters maps.

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Also, I am very much grateful to Professor Hayashi, Norihiko from Kobe City University of Foreign Studies, Program-Specific Associate Professor Huziwaru, Keisuke from Kyoto University, and Dr Kurabe, Keita from Tokyo University of Foreign Studies for their invaluable and profound comments on a draft of this paper.

## 2. Methodology of this work

First, the entomological vocabulary in Sani Yi documented in previous studies will be introduced in 3.1.

Second, details about the fieldwork conducted by the author for this report will be mentioned, and the collected data will be shown in 3.2.

Third, in section 4, features of each entomological word and its character(s) meaning in Sani Yi will be mentioned by examining Yi character maps where the Yi characters and the pronunciations of each lexical item can be observed.

Section 5 concludes the report with final remarks.

### 2.1 Scientific names and common names in the vocabulary list

In the interviews conducted during fieldwork for this report, two following illustrated encyclopaedias were referred to and used to show pictures of the insects to the consultants in each interview:

Koike, Keiichi et al. *Insects*. Encyclopaedia of Shogakukan, NEO POCKET. Shogakukan. Tokyo. 2010. (小池啓一他指導・執筆『昆虫』小学館の図鑑 NEO POCKET 1. 小学館. 東京. 2010.)

Myers, Susan. *Wildlife of Southeast Asia*. Princeton Pocket Guides. Princeton University Press. Princeton and Oxford. 2016.

In cases where the scientific and common names in English are documented in the abovementioned resources, they are cited in this report. However, in *Insects*, neither scientific names nor common names in English are used because this picture book is written entirely in Japanese. Therefore, both scientific and common names in English are cited from the following dictionaries<sup>2</sup>:

*Collins English Dictionary*, The 12<sup>th</sup> edition

*Random House English-Japanese Dictionary*, The 2<sup>nd</sup> edition (ランダムハウス英和大辞典)

*Kenkyusha's English-Japanese Dictionary for the General Reader*. The 3<sup>rd</sup> edition. (リーダーズ英和辞典 第3版)

*An Encyclopedic Supplement To The Dictionary For The General Reader* (リーダーズ・プラス)

*The Wisdom English-Japanese Dictionary*, The 3<sup>rd</sup> edition (ウイズダム英和辞典)

*The Wisdom Japanese-English Dictionary*, The 2<sup>nd</sup> edition (ウイズダム和英辞典)

Normally, the consultants tend not to very strictly distinguish one insect from another if they look very similar. Or, in extreme cases, they often take entomologically distinct objects as the same group just because they share only

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<sup>2</sup> See the references for more details.

minimal common features, such as having wings or a hard shell. In such cases, I always adopt not a specific rank but a superior category in the hierarchy of biological classification, according to their description of a certain insect in question, for example, where they can be found, what they eat or whether they bite animals or human beings. Of course, whenever an object is determined by its entomological species or genus, it is always indicated as such here.

## 2.2 The data on Sani Yi and its characters referred to in this work

In this report, six resources on Sani Yi are referred to. Two of them are notable historical studies on Sani Yi:

1. *Dictionnaire Français-Lolo dialecte Gni* (French-Lolo of Gni Dialect Dictionary) by Vial, Paul. 1909.
2. Sani Yiyu Yanjiu<sup>3</sup> 《撒尼彝語研究》 (*Study on Sani Yi*) by Ma Xueliang (馬學良). 1951.

Regarding the entomological vocabulary and characters of current Sani Yi, the three dictionaries shown below are consulted:

3. Yihan Jianming Cidian<sup>4</sup> 《彝汉简明词典》 (*Yi-Chinese Concise Dictionary*) by Yunnansheng Lunan Yizu Zizhixian Wenshi Yanjiushi (云南省路南彝族自治县文史研究室) (Research Team for Culture and History in Lunan Yizu Autonomous County, Yunnan). 1984.
4. Dianchuanqiangui Yihan Jiben Cihui Duizhao Cidian<sup>5</sup> 《滇川黔桂彝汉基本词汇对照词典》 (*Yi-Chinese Dictionary of Comparison with Basic vocabulary in Yunnan, Sichuan, Guizhou and Guangxi*) by Zhongyang Minyuan Yizu Lishi Wenxian Ban. (中央民院彝族历史文献班) (Team for Historical Manuscripts of Yi ethnic group at Zhongyang Minyuan). 1984.
5. *Hanyi Jianming Cidian*. 《汉彝简明词典》 (*Chinese-Yi Concise Dictionary*) by Wu, Zili, Ji Jiafa (武自立 纪嘉发). 2011.

The sixth and final data resource is the author's fieldwork data:

6. The author's data will be demonstrated in 3.2.2.

## 2.3 The data on other Yi dialects and the maps of Yi characters

The data on other Yi dialects and their characters are referred to from the following resources:

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<sup>3</sup> Unlike the third and fourth dictionaries listed, all the words referenced from this dictionary for the maps are written as they are. In other words, every tone is indicated by a tone letter. See also footnote 5.

<sup>4</sup> In this dictionary, all tones are signified by tone letters. Yet, in the maps, tone numerals are used instead because those make the observation of tones less confusing.

<sup>5</sup> In this dictionary, although all tones are signified not by tone numerals but by tone letters, in the Yi characters maps, tone numerals are used due to their high visual confirmation. However, Ma's transcription of where the tone letters are applied is written on the maps as is because all the lexical items of Ma are cited not only for the maps but also for the body of this report. Consistency is valued more highly in this paper than visual clarity.

1. *Dianchuanqiangui Yihan Jiben Cihui Duizhao Cidian* 《滇川黔桂彝汉基本词汇对照词典》 (*Yi-Chinese Dictionary of Comparison with Basic vocabulary in Yunnan, Sichuan, Guizhou and Guangxi*) by Zhongyang Minyuan Yizu Lishi Wenxian Ban. (中央民院彝族历史文献班) (Team for Historical Manuscripts of Yi ethnic group at Zhongyang Minyuan). 1984.
2. *Hanyi Jianming Cidian*. 《汉彝简明词典》 (*Chinese-Yi Concise Dictionary*) by Wu, Zili, Ji Jiafa (武自立 纪嘉发). 2011.

### 3. Entomological vocabulary in Sani Yi

In this section, we will review all the resources for the entomological vocabulary in Sani Yi consulted for this report.

First, two previous studies will be introduced, and the entomological words found in them will be shown in 3.1.

Second, the entomological terms collected by the author will be displayed in 3.2 with the details of the fieldwork conducted by the author.

Finally, in 3.3, each entomological item of Sani Yi will be examined in comparison with the data shown in 3.1 and 3.2, respectively.

#### 3.1 Entomological vocabulary in the previous studies on Sani Yi

As mentioned above, there exist remarkable previous studies on Sani Yi, the two most important works include well-known *Dictionnaire Français-Lolo dialecte Gni* (French-Lolo of Gni Dialect Dictionary) by Vial and 《撒尼彝語研究》, *Sani Yiyu Yanjiu* (*Study on Sani Yi*) by Ma Xueliang (馬學良). In these works, we have found some entomological words, albeit a fairly limited number. The entomological vocabulary found in them will be shown in this section.

##### 3.1.1 Entomological vocabulary in *Dictionnaire Français-Lolo dialecte Gni*<sup>6</sup>

First, we will observe descriptions by Vial (1909), in *Dictionnaire Français-Lolo dialecte Gni*. There are three entries concerning the most common words signifying ‘insect’ in Sani Yi:

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<sup>6</sup> Based on the description of Vial (1909: (5)-(8)), the phonological system of Sani Yi is summarised by the author as follows, although no reconstruction forms are suggested. This is because the main goal of this paper is not to reconstruct the phonological system of the Sani Yi as documented by Vial, but to observe the current entomological vocabulary of the Sani Yi researched by the author.

Consonants: *b, ch, d, dj, dl, dz, f, g, gh, ghh, gn, j, k, k', l, m, n, p, p', r, a, sh, sh', shl, t, t', tch, tch', tl, ts, ts', v, z*: Apostrophes signify aspiration.

Vowels: *a, e, ee, ai, i, o, eu, iee, iai, ou*

Tones: The first tone is indicated by ‘ˊ’ and pronounced clearly high.

The second tone is unmarked and pronounced in a high pitch.

The third tone is indicated by ‘ˋ’ and pronounced in middle height.

The fourth tone is indicated by ‘ˊˊ’, and pronounced in a low pitch, with a tendency to rise.

The fifth tone is marked by ‘ˋˋ’ and pronounced clearly low.

Vial (1909: 191<sup>7</sup>) Insect. *Boùzà*, 𐌗𐌘 𐌙 or *boùpi* 𐌗𐌘 𐌚.

Note. — The term *boù* is applied to almost all small insects whether they are winged or not, hymenopterous or coleopterous; *pi* indicates more specifically worms that creep and move.

(1909: 274<sup>8</sup>) Aphid. *Boùpimà*, 𐌗𐌘 𐌚 𐌛 (insect that jumps).

*Boùpimà* is the generic term for worm or insect, corresponding to *ver*, *insecte* in French.

(1909: 340<sup>9</sup>) Worm. *Boú*, 𐌗𐌘 ...

For indicating that the worms are born from a decomposing organic matter, it is simply said *shloù*, 𐌗𐌘 ...

Note. — The word *boú* is included in almost all names of insects.

As is clear from the descriptions above, *Boù*, 𐌗𐌘 can be regarded as an umbrella term for ‘insect’ in Sani Yi.

The different tonal sign between *Boù* and *Boú* may be due to a tonal change<sup>10</sup> or to erroneous phototypesetting.

Additional entomological words from this dictionary are listed below:

No.	Common name	Scientific name	Sani Vocab.	Sani characters
1	Butterfly (Collective)	Rhopalocera	<i>Boùlòumà</i>	𐌗𐌘 𐌚 𐌛
2	Caterpillar/Moth larva		<i>Boùt'oumà</i>	𐌗𐌘 𐌚 𐌛
3	Cicada	Cicadoidea	<i>Boùdjimà</i>	𐌗𐌘 𐌚 𐌛
4	Dragonfly	Odonata	Ts'ikēmà	𐌗𐌘 𐌚 𐌛
5	Bee	Anthophila	<i>Dlámà</i>	𐌗𐌘 𐌚

<sup>7</sup> English translation in this paper was all done by the author. Needless to say, any errors and inadequacy are my own. Any examples of Sani expressions found in this dictionary are omitted, unless they are necessary.

Here the original sentences are:

‘Insecte. *Boùzà*, 𐌗𐌘 𐌙, *vl* (this must be ‘vel’ in Latin, meaning ‘or’ in English.) *boùpi* 𐌗𐌘 𐌚... Note. – Le terme *boù* s’applique à presque toutes les petites bêtes ailées ou non, hyménoptères ou coléoptères; *pi* indique plus spécialement les vers qui marchent en rampant.’

<sup>8</sup> ‘Puceron. *Boùpimà*, 𐌗𐌘 𐌚 𐌛 (insecte, sautant).

*Boùpimà* est le nom générique répondant aux mots français: ver, insecte.’

<sup>9</sup> ‘Ver. *Boú*, 𐌗𐌘 ... Pour indiquer que les vers naissent sur une matière organique en décomposition, on dit simplement: *shloù*, 𐌗𐌘 ...

‘Note. – Le mot *boù* entre dans la composition de presque tous les noms d’insectes.’

<sup>10</sup> According to Ma (1951: 15), tonal changes observed in Sani Yi could be a sort of Sandhi from a historical point of view; however, it is a specific change or morphological change from a synchronic point of view.

6	Bumblebee	Apidae	<i>Dlákíáimà neè</i>	𠄎 𠄎 𠄎 𠄎
7	Queen bee		<i>Dláeemà</i>	𠄎 𠄎 𠄎 𠄎
8	Worker bee		<i>dlázá</i>	𠄎 𠄎
9	Wild bee	Hymenoptera	<i>Dlávòuk'ìài</i>	𠄎 𠄎 𠄎 𠄎
10	Beehive		<i>Dlápeú</i>	𠄎 𠄎 𠄎
11	Honey		<i>Dlájè</i>	𠄎 𠄎
12	Beewax		<i>Dláche</i>	𠄎 𠄎
13	Spider	Araneae	<i>Imaimà</i>	𠄎 𠄎 𠄎
14	Cockroach	Blattodea	<i>Bouñàmà</i>	𠄎 𠄎 𠄎
15	Grasshopper/Locust	Caelifera/Catantopinae	<i>Kapoumà</i>	𠄎 𠄎 𠄎
16	Cricket	Gryllidae	<i>Kàshlòuloumà</i>	𠄎 𠄎 𠄎 𠄎
17	Louse	Anoplura	<i>Shimà</i>	𠄎 𠄎
18	Stink bug	Pentatomidae	<i>Màshimà</i>	𠄎 𠄎 𠄎
19	Larva of Gold beetle		<i>Boushlòumà</i>	𠄎 𠄎 𠄎
20	Fly	Miscidae	<i>Jèmoú</i>	𠄎 𠄎
21	Flea	Siphonaptera	<i>Tch'èshimà</i>	𠄎 𠄎 𠄎
22	Mosquito	Culicidae	<i>Boùts'é</i>	𠄎 𠄎
23	Cranefly	Tipulidae	<i>Boùts'eúmà</i>	𠄎 𠄎 𠄎
24	Gadfly, Horsefly	Tabanidae	<i>Meēmà</i>	𠄎 𠄎
25	Ant	Formicidae	<i>Kaoumà</i>	𠄎 𠄎 𠄎

Among the entomological words listed above, two contain an onomatopoeic morpheme: 3 ‘Cicada’ and 22 ‘Mosquito’.

3. ‘Cicada’ *Bouùdjimà*: According to Vial (1909:83), *dji* in *Bouùdjimà* is onomatopoeic.<sup>11</sup>

22. ‘Mosquito’ *Boùts'é*: Vial (1909: 227) states that *ts'é* is onomatopoeic. The basic word order in Sani Yi is head-modifier. In these examples, the onomatopoeic morphemes function as a modifier.

On the contrary, although word 18 ‘stink bug’ *Màshimà*, which consists of *mà* ‘bamboo’ and *shimà* ‘louse’, seems to show an opposite word order, this case should be regarded as a compound word.

Some of the vocabulary described in this dictionary will be written in green on the maps of Yi characters in 4.2.

<sup>11</sup> As for the term for ‘Cicada’ in my data, Professor Hayashi also pointed out the same possibility of onomatopoeia in his comment on a draft of this paper. I appreciate his valuable remark.

### 3.1.2 Entomological vocabulary in *Sani Yiyu Yanjiu (Study on Sani Yi)*

In Ma (1951), the entomological words listed below are documented:

No.	Common name	Scientific name	Sani Vocab. <sup>12</sup>	Chinese
1	Insect		bɿl pɿl	蟲
2	Butterfly	Rhopalocera	bɿl ə-t maɪ	蝴蝶
3	Moth	Lepidoptera	oɪ laɪ	蛾子
4	Pupa		bɿl t'ɿɪ maɪ	蛹
4	Cicada	Cicadoidea	bɿl dziɪ maɪ	蟬
5	Bee	Anthophila	dlaɪ maɪ	蜂
6	Honeybee	Apidae	dlaɪ ʒɪ	蜜蜂
7	Wasp	Vespidae	dlaɪ ɿ tɛæɪ maɪ	馬蜂
8	Scoliid wasp	Scoliidae	dlaɪ neɪ maɪ maɪ	土蜂
9	Honeycomb		dlaɪ pɿɪ	蜜蜂巢
10	Spider	Araneae	jiɪ maɪ	蜘蛛
11	(Cockroach?)	(Blattodea?)	bɿl naɪ	飯蟲 <sup>13</sup>
12	Louse	Anoplura	ɛɪ maɪ	蝨子
13	Stink bug	Pentatomidae	maɪ ɛɪ maɪ	臭蟲
14	Flea	Siphonaptera	ts'ʒɪ ɛɪ maɪ	蚤
15	Mosquito	Culicidae	bɿl ts'ʒɪ	蚊子
16	(Crane fly?)	(Tipulidae?)	bɿl teɪɪ maɪ	大黑蟲 <sup>14</sup>
17	Ant	Formicidae	kaɪ uɪ maɪ	蟻
18	Pharaoh ant	Formicidae	kaɪ uɪ ʒɪɪ	黃蟻
19	Ant's egg		kaɪ uɪ ɪaɪ	蟻卵
20	Ant's nest		kaɪ uɪ ts'ʒɪ dɿɪ	蟻窩
21	Maggot		ɪuɪ	蛆

Some of this vocabulary will be shown in purple on the Yi characters maps in 4.2.

### 3.2 Entomological vocabulary in Sani Yi from the data of the current fieldwork

In this section, the fieldwork for this report and its data will be introduced.

#### 3.2.1 The details of the fieldwork

- The location:** Kunming, Yunnan, China  
**The date:** From 27<sup>th</sup> December 2019 to 1<sup>st</sup> January 2020  
**The consultants:** The main consultant is a woman in her 70's from

<sup>12</sup> All lexical items are written the same as in Ma (1951), except 'z', which is written 'z' with a tiny circle, the voiceless symbol, above it in his work.

<sup>13</sup> It is uncertain what insect in English this lexical item '飯蟲' corresponds to, however, judging from its word form and pronunciation, this insect is very likely a cockroach.

<sup>14</sup> Although it is not clear what insect in English the entomological word '大黑蟲' corresponds to, it might be 'Crane fly', considering both its word form and pronunciation.



Wukeshu village (五棵树村) in Shilin Yi Autonomous County. When she had difficulty in recalling a certain word, we contacted our friends in the same village, all of whom were raised and still live there. Two of these included her nephew in his 40's and her younger brother in his 70's.

**The recording:**

SONY PCM Recorder PCM-A10, the data were recorded in LPCM 44.1kHz/16 bit (STEREO) and formatted in wav.

**The resources for interviews:** As mentioned in 2.1, two encyclopaedic books were used in the fieldwork.

The main consultant just looked at a picture of an insect from those books and pronounced its name in Sani Yi if she knew it. If she did not know or could not recall what to call it, the author contacted the other consultants by video call and asked them the names by showing them the same picture.

### 3.2.2 The entomological vocabulary collected in the fieldwork

First, the list of the entomological vocabulary collected during fieldwork will be shown. All the items are phonetically transcribed throughout the present paper.<sup>15</sup>

In 4.2, several lexical items will be written in red in the Yi characters maps from the list below.

No.	Common name	Scientific name	Sani Vocab.	Chinese
1	Butterfly (Collective)	Rhopalocera	bu <sup>21</sup> lu <sup>33</sup> mɔ <sup>33</sup>	蝴蝶
2	Moth	Lepidoptera	bu <sup>21</sup> lu <sup>33</sup> mɔ <sup>33</sup>	蛾子
3	Caterpillar/Moth larva		bu <sup>21</sup> lu <sup>33</sup> za <sup>21</sup>	蝴蝶/蛾子的幼虫
4	Gipsy moth	Lymantria dispar	bu <sup>21</sup> se(i) <sup>44</sup> mɔ <sup>33</sup>	舞毒蛾
5	Larva of Gipsy moth		bu <sup>21</sup> se(i) <sup>44</sup> za <sup>21</sup>	舞毒蛾的幼虫
6	Winged insects		bu <sup>21</sup> lu <sup>33</sup> mɔ <sup>33</sup>	
7	Cicada	Cicadoidea	bu <sup>21</sup> dzi <sup>44</sup> mɔ <sup>33</sup>	蝉, 知了
8	Dragonfly	Odonata	tehi <sup>21</sup> khu <sup>33</sup> ma <sup>33</sup>	蜻蜓/蜉蝣
9	Nymph of the dragonfly		tehi <sup>21</sup> khu <sup>33</sup> za <sup>21</sup>	水蛭
10	Bee	Anthophila	dɔ <sup>21</sup> mɔ <sup>33</sup>	蜜蜂
11	Sting of bees		dɔ <sup>21</sup> mɛ <sup>55</sup>	蜂刺, 蜂勾子
12	Honeycomb		dɔ <sup>21</sup> pu <sup>33</sup>	蜂窝
13	Honey		dɔ <sup>21</sup> zi <sup>33</sup>	蜂蜜

<sup>15</sup> Whereas there is a correlation between tonemes and vocalic features of constrictiveness in other Yi dialects, namely Nuosu Yi (Northern) and Axi Yi (Southeastern), as analysed in Iwasa (2019), in Sani Yi, any tonal differences have not yet been attributed to have a constrictive and non-constrictive vocalic distinction. However, in Sani Yi as well, there exists a tendency that a syllable with a non-constrictive vowel is pronounced 33 in the mid-level tones, and 21 in the falling tones, while a syllable with a constrictive vowel is 44 in the mid-level tones and 31 in the falling tones. Although this phenomenon is not very stable, and no acoustic analysis has been done yet, in reality, such a tendency is observed in Sani Yi. Hence, in this paper, all the lexical items are phonetically transcribed.

14	Spider	Araneae	ze <sup>55</sup> khu <sup>33</sup> mɔ <sup>33</sup>	蜘蛛
15	Centipede	Chilopoda	xɛ <sup>44</sup> ei <sup>33</sup> mɔ <sup>33</sup> , ʂi <sup>33</sup> ei <sup>33</sup> mɔ <sup>33</sup>	蜈蚣, 百脚
16	Cockroach	Blattodea	bu <sup>21</sup> nɛ <sup>44</sup> mɔ <sup>33</sup>	蟑螂
17	Japanese water beetle	Cybister chinensis	tsa <sup>55</sup> m <sup>55</sup> bu <sup>21</sup> nɛ <sup>44</sup> mɔ <sup>33</sup>	龙虱
18	Stag beetle	Lucanidae	ŋ <sup>21</sup> hi <sup>21</sup> pɣ <sup>55</sup> lɣ <sup>55</sup> mɔ <sup>33</sup>	锹甲
19	Click beetle, Skipjack, Snapping beetle	Elateridae	tehi <sup>33</sup> bu <sup>21</sup>	米虫, 叩头虫
20	Webspinner, footspinner	Embioptera	ka <sup>55</sup> ɣo <sup>33</sup> mɔ <sup>33</sup>	纺足
21	Silverfish, fishmoth, firebrat	Zygentoma	ɛ̃ <sup>33</sup> pa <sup>33</sup> mɔ <sup>33</sup>	衣鱼
22	Grasshopper/Locust	Caelifera/Catantopinae	ka <sup>33</sup> pɣ <sup>33</sup> mɔ <sup>33</sup>	草蜢/蚂蚱
23	Cricket	Gryllidae	tsha <sup>55</sup> la <sup>55</sup> mɔ <sup>33</sup>	蟋蟀
24	Stick insect, walkingstick	Phasmidae	ta <sup>33</sup> la <sup>33</sup> mɔ <sup>33</sup>	竹节虫
25	Louse	Anoplura	tʂhi <sup>21</sup> ei <sup>33</sup> mɔ <sup>33</sup>	虱子
26	Water strider, Pond skater	Gerris paludum	m <sup>55</sup> pe <sup>33</sup> tɣ <sup>33</sup>	水马, 水蜘蛛
27	Stink bug	Pentatomidae	tʂhi <sup>21</sup> bu <sup>21</sup> nɣ <sup>33</sup> mɔ <sup>33</sup>	椿象蝽
28	Larva/Grub/Maggot/Caterpillar		bu <sup>33</sup> za <sup>21</sup>	幼虫
29	Ground beetle, Carabid beetle	Carabinae	bu <sup>33</sup> nɣ <sup>33</sup> mɔ <sup>33</sup>	步行虫
30	Horned beetle/Merohister jekeli	Trypoxylus/Histeroidea	ŋ <sup>21</sup> hi <sup>21</sup> pɣ <sup>55</sup> lɣ <sup>55</sup> mɔ <sup>33</sup>	甲虫类
31	Jewel beetle, Buprestid	Buprestidae	bu <sup>21</sup> zi <sup>33</sup> mɔ <sup>33</sup>	吉丁虫
32	Firefly	Lampyridae	bu <sup>21</sup> zi <sup>33</sup> mɔ <sup>33</sup>	萤火虫
33	Fly	Miscidae	zɛ <sup>33</sup> m <sup>21</sup> mɔ <sup>33</sup>	苍蝇
34	Flea	Siphonaptera	tʂhi <sup>33</sup> ei <sup>33</sup>	跳蚤
35	Mosquito/Gadfly, Horsefly	Culicidae/Tabanidae	bu <sup>21</sup> tʂhi <sup>44</sup> mɔ <sup>33</sup>	蚊子/牛虻
36	Ant	Formicidae	ka <sup>55</sup> ɣo <sup>33</sup> mɔ <sup>33</sup>	蚂蚁
37	Insect egg/Spawn		bu <sup>21</sup> lu <sup>33</sup> la <sup>33</sup> mɔ <sup>33</sup>	虫卵

### 3.3 Analysis of the Sani entomological vocabulary

In this section, each lexical item of entomology in Sani Yi will be investigated on the basis of the current data collected by the author.

First of all, several features found in the Sani entomology will be mentioned in 3.3.1. Then, brief explanatory notes mainly on the current data will follow in 3.3.2.

#### 3.3.1 Features of the Sani entomological vocabulary

There are three characteristic morphemes, [mɔ<sup>33</sup>], [bu<sup>21</sup>] and [za<sup>21</sup>], described in the current data. Unless it is necessary to refer to these three morphemes in particular, they will not be mentioned in the notes in 3.3.2.

#### 1. Morpheme [mɔ<sup>33</sup>] in 3.2.2

The morpheme [mɔ<sup>33</sup>] broadly appears at the final position of faunal and floral nouns in Sani Yi. It seems to function as a noun-formative<sup>16</sup> in Sani Yi. For example,

<sup>16</sup> After receiving valuable comments on a draft of this paper, especially one on this [mɔ<sup>33</sup>], from Professor Hayashi and Dr Huziwaru, I examined whether the lexical item [mɔ<sup>33</sup>] in the author's data and the other *mà* 𠵹, [ma<sup>4</sup>] and [mɛ<sup>33</sup>] mean 'big'. As a result, according to Ma (1951: 308), [ma<sup>4</sup>] has also the meaning of 'big (大)'. In *Yihan Jianming Cidian* 《彝汉简明词典》(1984), we can also find certain cases where the morpheme [mɛ<sup>33</sup>] seems to signify

from my data collected in Wukeshu village so far, there are the words [sɿ<sup>33</sup> pu<sup>33</sup> mɔ<sup>33</sup>] ‘corn’, [a<sup>33</sup> pɔ<sup>55</sup> mɔ<sup>33</sup>] ‘frog’ and so on. In one of the resources for Sani Yi, *Yihan Jianming Cidian* 《彝汉简明词典》 (1984), despite a slight difference in vowel articulation, we can find some examples such as [si<sup>21</sup> mɔ<sup>33</sup> mɛ<sup>33</sup>] ‘walnut’, and [si<sup>33</sup> zi<sup>33</sup> mɛ<sup>33</sup>] ‘lion’.

In the vocabulary of Vial (1909), a morpheme *mà* 𪛗<sup>17</sup> appears not only in many entomological words, but also in other nouns, always at the final position. According to *Yihan Jianming Cidian* 《彝汉简明词典》 (1984), a much newer dictionary of Sani Yi than Vial’s, this Yi character, which is pronounced [mɛ<sup>33</sup>] with a constrictive vowel, means ‘bamboo’ or is used as a classifier for almost any noun. Nonetheless, judging from its function and the circumstances where it occurs, it is certain that this morpheme *mà* 𪛗 functions the same as [mɔ<sup>33</sup>] does in the data shown in 3.2.2.

In Ma’s description (1951: 308), a morpheme [maɿ], which appears at the word-final position, is also found.

As there are important and interesting issues concerning this morpheme, the author will discuss them at another opportunity in the near future.<sup>18</sup>

## 2. Morpheme [bu<sup>21</sup>]

On one hand, the abovementioned morpheme [mɔ<sup>33</sup>] occurs in the final position of many nouns. On the other hand, this morpheme [bu<sup>21</sup>] appears at the beginning of most entomological words of Sani Yi, except [tehi<sup>33</sup> bu<sup>21</sup>] ‘Click beetle, Skipjack, Snapping beetle’ in the data in 3.2.2. Hence, this morpheme [bu<sup>21</sup>] can be categorised as a generic term for insects in Sani Yi.

Vial’s data include the words *Boù* and *Boú* 𪛗. Taking into account their meaning, function and the circumstances where they occur, it is highly plausible that they can be regarded as the same morpheme [bu<sup>21</sup>] in the data 3.2.2.

In Ma’s description, we also find a word bɿɿ in several entomological words. Although the pronunciation is slightly different, considering its position in a word,

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the meaning of ‘big’. However, there are also other two types of cases: one type is the case where [mɛ<sup>33</sup>] signifies ‘female’. For example, [ze<sup>33</sup> mɛ<sup>33</sup>] ‘’ in *Yihan Jianming Cidian* 《彝汉简明词典》 (1984), another one is where [mɛ<sup>33</sup>] seems to function as a ‘noun-formative’ mentioned in Matisoff (1992: 327). Considering the circumstances where [mɛ<sup>33</sup>] or [mɔ<sup>33</sup>] occurs in Sani Yi, with more data collected and analysed, the author will return this issue in the near future.

<sup>17</sup> Vial (1909: (20)-(21)) mentions that there are two kinds of *mà* 𪛗 whose functions differ, despite having the same pronunciation. According to his description, one functions as an indefinite article, another as a classifier. Anyway, it seems that he does not pay any attention to *mà* 𪛗 when it appears at the final position of many nouns.

Another problem is that Vial describes these two kinds of *mà* 𪛗 as having the same pronunciation. In both Ma’s vocabulary (1951) and *Yihan Jianming Cidian* 《彝汉简明词典》 (1984), they are differentiated. For example, one as a classifier is pronounced with a higher tone [maɿ] in Ma (1909: 308) and with a constrictive noun [mɛ<sup>33</sup>] in *Yihan Jianming Cidian* 《彝汉简明词典》 (1984). On the other hand, the other *mà* 𪛗 of Vial, although further study is needed to clarify whether its function is an indefinite article, is, in either case, pronounced [maɿ] in Ma (1951: 308) and [mɛ<sup>33</sup>] in *Yihan Jianming Cidian* 《彝汉简明词典》 (1984).

<sup>18</sup> See footnote 16.

its occurring situation and its meaning, it can be categorised as the same lexical item as [bu<sup>21</sup>] in the data displayed in 3.2.2.

In sum, it is apparent that the morpheme [bu<sup>21</sup>] from the latest data is a generic term for insects, and it is highly probable that this morpheme has been used as such at least since the era of the Vial's description.

### 3. Morpheme [za<sup>21</sup>]

The entomological words of 3, 5, 9, and 28 in the data in 3.2.2 contain the morpheme [za<sup>21</sup>]. As such words all signify an immature state of insects, and this [za<sup>21</sup>] is also used for a human being, where it expresses 'son', 'young (used only for a male)' or 'little (used only for a male)', it undoubtedly indicates 'a child' or 'a state of immaturity'.<sup>19</sup>

In the list of the entomological vocabulary in Vial (1909) shown in 3.1.1, there is a single example for this morpheme, dlázá 𐄂𐄃𐄄 'worker bee', which is a son or child of a Queen bee. His description also includes the word *Boùzà*, 𐄅𐄆𐄇<sup>20</sup> which he identifies as a generic term for insects in Sani Yi. His dictionary also lists the item *Zá* 𐄈 'son'<sup>21</sup>; therefore, the morpheme *Zá* or *zà* in *Boùzà*, albeit with a slight difference in tones, obviously means 'a child of an insect' or 'an immature of an insect'.

In the list of entomological vocabulary from Ma (1951), there is no example for this morpheme. Yet, he identifies<sup>22</sup> the word [zaJ], which means 'son' or 'small'. When its meaning and phonetic value is taken into account, it seems to correspond very well to the morpheme [za<sup>21</sup>] in the author's data shown in 3.2.2.

As a whole, it is certain that the morpheme [za<sup>21</sup>] is used to indicate an immature insect throughout the history of Sani Yi.

#### 3.3.2 Notes on the Sani entomological vocabulary from the current data

##### 1. Butterfly (Collective), 2. Moth, 4. Gipsy moth and 6. Winged insects

Both butterfly and moth are expressed in the same way in Sani Yi. A morpheme [lu<sup>33</sup>] in [bu<sup>21</sup> lu<sup>33</sup> mɔ<sup>33</sup>] seems to be related to PTB \*s-lu(k/ŋ) 'MAGGOT/BUTTERFLY' and PLB \*k-lukɔk-luŋ.<sup>23</sup>

Among moths, there is a distinction between venomous and non-venomous ones as in no.2 and 4, whereas no such distinction exists among spiders, as far as I know. The word [se(i)<sup>44</sup>] in [bu<sup>21</sup> se(i)<sup>44</sup> mɔ<sup>33</sup>] 'Gipsy moth' might be related with [se<sup>33</sup>] in a word [ni<sup>33</sup> se<sup>33</sup>] which generally means 'vicious, malicious'. Judging from the fact that this word consists of [ni<sup>33</sup>] 'heart' and [se<sup>33</sup>], it is highly probable that [se<sup>33</sup>] expresses 'something venomous, evil, cruel', more investigation is needed, though.

A collective noun for winged insects is also expressed with the same word, [bu<sup>21</sup> lu<sup>33</sup> mɔ<sup>33</sup>]. Since the morpheme [bu<sup>21</sup>] is a generic term for insects, and [mɔ<sup>33</sup>] appears

<sup>19</sup> This morpheme seems to correspond well to a morpheme in Akha, -zà described as 'a kind of diminutive suffix' in Matisoff (1992: 324).

<sup>20</sup> See Vial (1909: 191) for more details.

<sup>21</sup> See Vial (1909: 160) for more details.

<sup>22</sup> See Ma (1951: 356).

<sup>23</sup> The data is cited from STEDT (<https://stedt.berkeley.edu/~stedt/cgi/rootcanal.pl/etymon/5432#6.1>), on 3<sup>rd</sup> August 2020.

at the final position of a number of nouns and may function as a noun marker, the rest might have to somehow signify any feature of ‘a winged insect’. Hence, it is reasonable to suppose that the morpheme [lu<sup>33</sup>] might be related to a word [tɿ<sup>33</sup>] ‘to fly’<sup>24</sup> to some extent. Of course, more investigation is still needed on this point.

### 3. Caterpillar/Moth larva and 5. Larva of Gipsy moth

Both of these lexical items contain [za<sup>21</sup>], meaning ‘son’ or ‘immature’ as mentioned above. Therefore, these words [bu<sup>21</sup> lu<sup>33</sup> za<sup>21</sup>] and [bu<sup>21</sup> se(i)<sup>44</sup> za<sup>21</sup>] literally mean ‘butterfly/moth’ or ‘Gipsy moth’ + ‘son/immature’.

### 7. Cicada

According to my consultant, [dzi<sup>44</sup>] in the word [bu<sup>21</sup> dzi<sup>44</sup> mɔ<sup>33</sup>] ‘cicada’ is onomatopoeic. Vial gives the same explanation, as mentioned above in 3.1.1.1.

### 8. Dragonfly and 9. Nymph of the dragonfly

The origin of the morphemes [tehi<sup>21</sup> khu<sup>33</sup>] in the word of ‘dragonfly’ [tehi<sup>21</sup> khu<sup>33</sup> ma<sup>33</sup>] is unclear.

The morpheme [za<sup>21</sup>] in the word of ‘Nymph of the dragonfly’ [tehi<sup>21</sup> khu<sup>33</sup> za<sup>21</sup>] undoubtedly means ‘son’ or ‘immature’.

### 10. Bee and relative words 11, 12, 13

A Sani word for ‘bee’ is [dɿ<sup>21</sup> mɔ<sup>33</sup>], where the morpheme [dɿ<sup>21</sup>]<sup>25</sup> expresses ‘bee’. Then, the word [dɿ<sup>21</sup> mɛ<sup>55</sup>] ‘sting of bee’ literally consists of ‘bee’ plus ‘tail’. In a parallel way, the word-formation of [dɿ<sup>21</sup> pu<sup>33</sup>] ‘honeycombs’ is ‘bee’ plus ‘nest’, and the word [dɿ<sup>21</sup> zi<sup>33</sup>] ‘honey’ also shows the same word formation, ‘honey’ plus ‘water’, translated word for word.

The ‘head-final’ word order of such words as [dɿ<sup>21</sup> mɛ<sup>55</sup>] ‘sting of bee’, [dɿ<sup>21</sup> pu<sup>33</sup>] ‘honeycombs’ and [dɿ<sup>21</sup> zi<sup>33</sup>] ‘honey’, is opposite to the typical ‘head-modifier’ order in Sani Yi. In this case, they can be regarded as compounds.

### 14. Spider

Concerning the word for ‘spider’, there is no distinction between venomous and non-venomous. According to my female consultant, [ze<sup>55</sup> khu<sup>33</sup>] in the word of [ze<sup>55</sup> khu<sup>33</sup> mɔ<sup>33</sup>] means ‘weaving’, while [ze<sup>33</sup> ko<sup>33</sup>] means ‘spinning’ in *Yihan Jianming Cidian* 《彝汉简明词典》. Interestingly enough, both expressions describe the exact way a spider makes a web.

### 15. Centipede

A morpheme [xe<sup>44</sup>] in the word of ‘centipede’ [xe<sup>44</sup> ɛi<sup>33</sup> mɔ<sup>33</sup>] might be related to [xp<sup>33</sup>] ‘a hundred’. What the morpheme [ɛi<sup>33</sup>] means is unclear.<sup>26</sup>

<sup>24</sup> See *Yihan Jianming Cidian* 《彝汉简明词典》 (1984: 173).

<sup>25</sup> According to STEDT (<https://stedt.berkeley.edu/~stedt-cgi/rootcanal.pl/etymon/2187>), accessed on 2<sup>nd</sup> August 2020, the etymon is PTB \*b(y/r)a ‘BIRD/BEE’, PLB \*bya<sup>2</sup> ‘BEE’. There is also a note on the site: ‘The Central Loloish languages Ahi and Sani have interesting reflexes of the palatalized labial-initial cluster, **d-** and **dl-** respectively.’

<sup>26</sup> As Dr Huziwara of Kyoto University pointed out on a draft of this paper, it may be related

**16. Cockroach**

The meaning of the morpheme [nɑ̄<sup>44</sup>] in [bu<sup>21</sup> nɑ̄<sup>44</sup> mɔ̄<sup>33</sup>] ‘cockroach’ is unknown; however, [nɑ̄<sup>44</sup>] seems possibly to be related to ‘black’.

**17. Japanese water beetle**

Although seemingly important morphemes [tsɑ<sup>55</sup> m̄<sup>55</sup>] and [nɑ̄<sup>44</sup>] in this word [tsɑ<sup>55</sup> m̄<sup>55</sup> bu<sup>21</sup> nɑ̄<sup>44</sup> mɔ̄<sup>33</sup>], it may be divided into two parts [tsɑ<sup>55</sup> m̄<sup>55</sup> bu<sup>21</sup>] and [nɑ̄<sup>44</sup> mɔ̄<sup>33</sup>] as follows:

tsɑ <sup>55</sup>	m̄ <sup>55</sup>	bu <sup>21</sup>	nɑ̄ <sup>44</sup>	mɔ̄ <sup>33</sup>	‘black [tsɑ m] insect’?
?	?	insect	black?	noun-formative	

Nevertheless, the meanings of these morphemes are unclear.

**18. Stag beetle and 30. Horned beetle/Merohister jekeli**

The word [ŋ<sup>21</sup> hi<sup>21</sup> pɣ<sup>55</sup> lɣ<sup>55</sup> mɔ̄<sup>33</sup>] for ‘stag beetle’ broadly includes insects belonging to the Polyphaga suborder. The common feature among them is having glittery, hard-looking wings. The morphemes [ŋ<sup>21</sup> hi<sup>21</sup>] signify ‘cowpat’.<sup>27</sup> The next two morphemes [pɣ<sup>55</sup> lɣ<sup>55</sup>] mean ‘to turn slowly in and out’.<sup>28</sup> Probably, some members of this group, such as the scarab beetle, can be found swarming around cowpat. For example, in the list, Stag beetle, Horned beetle and Merohister jekeli are affiliated to this group.

**19. Click beetle, Skipjack, Snapping beetle**

The morpheme [tehi<sup>33</sup>] in [tehi<sup>33</sup> bu<sup>21</sup>] means ‘rice (crop, not cooked)’. Its word formation is ‘rice + ‘insect’. This order is opposite to the ‘head-modifier’ one normally found in Sani Yi.<sup>29</sup>

**20. Webspinner, footspinner and 36. Ant**

In the word [ka<sup>55</sup> ɣo<sup>33</sup> mɔ̄<sup>33</sup>], the meaning of [ka<sup>55</sup> ɣo<sup>33</sup>] is unknown.

**21. Silverfish, fishmoth, firebrat**

In [eã<sup>33</sup> pa<sup>33</sup> mɔ̄<sup>33</sup>], the first syllable [eã<sup>33</sup>] is heard to be fairly nasalised. The meaning of [eã<sup>33</sup> pa<sup>33</sup>] is unknown.

**22. Grasshopper/Locust**

In the word [ka<sup>33</sup> pɣ<sup>33</sup> mɔ̄<sup>33</sup>], the meaning of [ka<sup>33</sup> pɣ<sup>33</sup>] is unclear.<sup>30</sup>

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with [tʂhi<sup>33</sup>] ‘foot’, whose etymon is \*PTB krəy ‘FOOT’ according to STEDT (<https://stedt.berkeley.edu/~stedt-cgi/rootcanal.pl>, accessed on 2<sup>nd</sup> August 2020.).

<sup>27</sup> According to a comment from Dr Kurabe of Tokyo University of Foreign Studies, in Burmese, ‘scarab beetle’ is ‘shit-bug-poke’ when translated word for word.

<sup>28</sup> In Chinese, such an action is what the verb ‘转’ indicates.

<sup>29</sup> An order in a noun-noun compound is ‘head-final’ in Sani Yi; hence, this word should be regarded as a compound. See also the former part of the same section, 10. Bee and relative words 11, 12, 13.

<sup>30</sup> According to STEDT (accessed on 2<sup>nd</sup> August 2020), the PTB form for the word ‘locust’ is \*kaw ‘GRASSHOPPER/LOCUST’. The word in Sani Yi [ka<sup>33</sup> pɣ<sup>33</sup> mɔ̄<sup>33</sup>] might be related to it.

**23. Cricket**

In the word [tsha<sup>55</sup> la<sup>55</sup> mɔ<sup>33</sup>], the meaning of [tsha<sup>55</sup> la<sup>55</sup>] is unknown.

**24. Stick insect, walkingstick**

In the word [ta<sup>33</sup> la<sup>33</sup> mɔ<sup>33</sup>], the meaning of [ta<sup>33</sup> la<sup>33</sup>] is unclear.

**25. Louse**

In the word [tʃhi<sup>21</sup> ei<sup>33</sup> mɔ<sup>33</sup>], [ei<sup>33</sup>]<sup>31</sup> signifies ‘louse’, but the meaning of [tʃhi<sup>21</sup>]<sup>32</sup> is unclear.

**26. Water strider, Pond skater**

In the word [m<sup>55</sup> pɛ<sup>33</sup> tɔ<sup>33</sup>], [m<sup>55</sup>]<sup>33</sup> means ‘horse’, whereas the meanings of [pɛ<sup>33</sup> tɔ<sup>33</sup>] are unknown. This insect is called ‘水马’ in Chinese, literally ‘water-horse’, so this may be the reason why the morpheme [m<sup>55</sup>] appears.

**27. Stink bug**

This word [tʃhi<sup>21</sup> bu<sup>21</sup> nɔ<sup>33</sup> mɔ<sup>33</sup>] seems to be divided into two parts, [tʃhi<sup>21</sup> bu<sup>21</sup>] and [nɔ<sup>33</sup> mɔ<sup>33</sup>]. Their meanings are uncertain, yet [tʃhi<sup>21</sup> bu<sup>21</sup>] may signify ‘dog-insect’,<sup>34</sup> and [nɔ<sup>33</sup>] is highly related to the verb ‘to smell’ pronounced as [nu<sup>21</sup>] in *Yihan Jianming Cidian* 《彝汉简明词典》.

**28. Larva/Grub/Maggot/Caterpillar**

The word-formation of this word [bu<sup>33</sup> za<sup>21</sup>] is simple and easy to understand.

bu <sup>33</sup>	za <sup>21</sup>
insect	immature

**29. Ground beetle, Carabid beetle**

In this word [bu<sup>33</sup> nɔ<sup>33</sup> mɔ<sup>33</sup>], [bu<sup>33</sup>] means ‘insect’ and [mɔ<sup>33</sup>] is a noun-formative.<sup>35</sup> Nonetheless, the meaning of [nɔ<sup>33</sup>] is unknown, although it forms the core of this word.

**31. Jewel beetle, Buprestid and 32. Firefly**

The insects 31 and 32 are called the same as [bu<sup>21</sup> zi<sup>33</sup> mɔ<sup>33</sup>] in the author’s data. According to my chief consultant, [zi<sup>33</sup>] signifies something glittering or shining.

<sup>31</sup> According to STEDT (accessed on 2<sup>nd</sup> August 2020), the PTB form for the word ‘louse’ is \*s(y)ar ‘LOUSE’, and PLB \*san<sup>1/2</sup> ‘LOUSE’. The morpheme [ei<sup>33</sup>] seems to be related to these forms.

<sup>32</sup> The pronunciation of ‘dog’ is [tʃhi<sup>21</sup>] in Sani Yi. Dr Huziwarra mentions in his comments on a draft of this paper, the morpheme [tʃhi<sup>21</sup>] in the word [tʃhi<sup>21</sup> ei<sup>33</sup> mɔ<sup>33</sup>] seems to be related to the word ‘dog’, as the morpheme *kvu* meaning ‘dog’ is also found in the word *kvusi* ‘louse’ in Cak.

<sup>33</sup> This word is either pronounced like [mu<sup>55</sup>] or [m<sup>55</sup>] where a vowel (either [i] or [u]) is omitted and the nasal is syllabic. This phenomenon is one of the phonological features in Sani Yi.

<sup>34</sup> See also footnote 28.

<sup>35</sup> See footnote 16.



**33. Fly**

In the word [zi<sup>33</sup> m<sup>21</sup> mɔ<sup>33</sup>], what [zi<sup>33</sup> m<sup>21</sup>] means is unknown.

**34. Flea**

In the word [tʃhi<sup>33</sup> ei<sup>33</sup>], although the tone of [tʃhi<sup>33</sup>] is different from [tʃhi<sup>21</sup>] ‘dog’, the morpheme [tʃhi<sup>33</sup>] means ‘dog’. The rest [ei<sup>33</sup>] signifies ‘louse’.<sup>36</sup>

**35. Mosquito/Gadfly, Horsefly**

In the word [bu<sup>21</sup> tʃhi<sup>44</sup> mɔ<sup>33</sup>], the meaning of [tʃhi<sup>44</sup>] is unknown.

**37. Insect egg/Spawn**

The word [bu<sup>21</sup> lu<sup>33</sup> ɬa<sup>33</sup> mɔ<sup>33</sup>] is interpreted as follows:

bu <sup>21</sup> lu <sup>33</sup>	ɬa <sup>33</sup> mɔ <sup>33</sup>
insect (esp. winged insect)	egg

The latter part [ɬa<sup>33</sup> mɔ<sup>33</sup>] is a general word for an egg in Sani Yi. This word is broadly used for avian and herpetological eggs. In Sani Yi, there is no such distinction as that between an egg and spawn in English.

**4. Maps of the Yi characters for Entomology in Sani Yi and other dialects**

In this section, we will examine the maps of Yi characters for entomological terminology in Sani Yi and other Yi dialects.

**4.1 Locations of the resources for Yi characters**

The following is a map showing the locations of all resources for Yi characters.



<sup>36</sup> The analysis of this word by STEDT (accessed on 2<sup>nd</sup> August) is the same as the author’s, [tʃhi<sup>33</sup>] is ‘dog’, and [ei<sup>33</sup>] is ‘louse’.



## 4.2 Maps of the Yi characters for Entomology and notes on them

The number of the maps corresponds to that of the word list in 3.2.2.

The number is not consecutive, because several characters for insects are not found in the resources.

The vocabulary from Vial is written in green on the Yi characters maps, whereas terms from Ma are signified in purple. The author's data are in red on the maps.

### 1. Butterfly



Throughout the surveyed areas, the phonetic values of 'Butterfly' are quite similar.

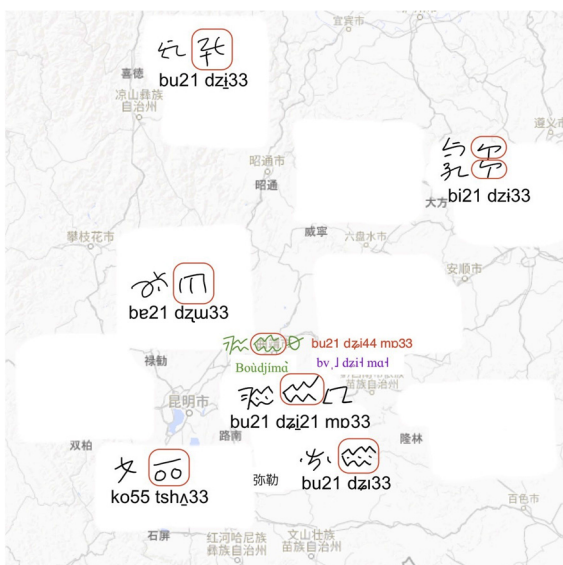
As for the characters, except in Sani Yi, those expressing 'insect' [bu<sup>21</sup>] circled in red bear some resemblance to one another.

A character in Mile of the Southeastern dialect and characters in Xide of the Northern dialect and Weining of the Eastern dialect, all of which are shaded in blue, show similarity despite their dialectal differences.

Although a dialectal difference exists between Mojiang belonging to the

Southern dialect and such Eastern dialectal areas as Weining and Panxian, the shape of the second characters, shaded in orange, are almost the same.

### 7. Cicada



Except for the Mojiang area, the phonetic values are fairly similar in all areas, for they have all voiced alveolar affricates in the second syllable.

However, the Yi characters circled in red, which express these second syllables, show a great diversity. Therefore, this might be a result of a phonetic loan.

As mentioned in 3.1.1 and footnote 11, these second syllables are regarded as onomatopoeic.

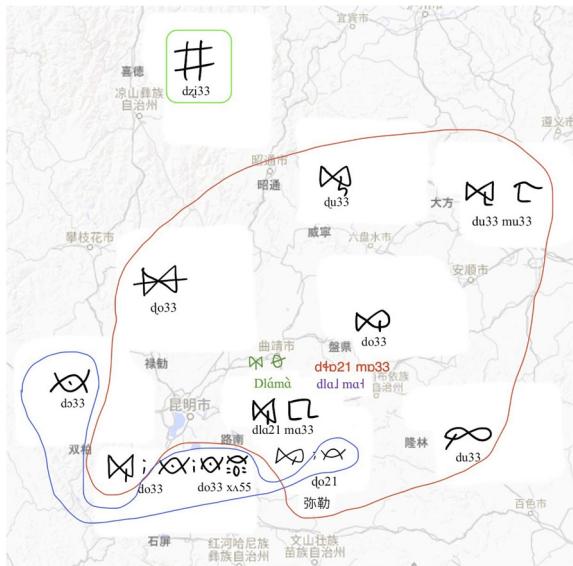
### 8. Dragonfly



In Dafang, the word for ‘Dragonfly’, which is circled in red, is phonetically identical to the one for ‘Cicada’,<sup>37</sup> although the characters are different. This may be due to a distinction in the respective writing of these two words.

This lexical item is very different from region to region as well as the characters. However, in the Sani Yi area circled in light blue, there are common morphemes like [tchi<sup>21</sup>] and [khui<sup>33</sup>], and the characters corresponding to them also resemble one another.

### 10. Bee



All the areas except Liangshan and Shuangbai, which are marked in a red bounding line, show high resemblances in the characters. The character in Liangshan seems to be a phonetic loan.

Although there exists some inequality in the number of data, it is interesting that Mojiang displays both features of Shuangbai and the others as marked in blue.

The characters expressing ‘Bee’ may have the same origin, as they are observed in the vast areas, marked in red, around Guizhou, Yunnan and Guangxi. If these

characters were derived from a pictograph, their small stroke which looks like a short bar may symbolise the sting of a bee.

Within the Sani Yi area, both the characters signifying ‘bee’ and the phonetic values of the words have been very similar to one another throughout the ages.

<sup>37</sup> According to Dr Kurabe, in Burmese, the words for ‘Cicada’ and ‘Dragonfly’ also contain the same morpheme.

### 14. Spider



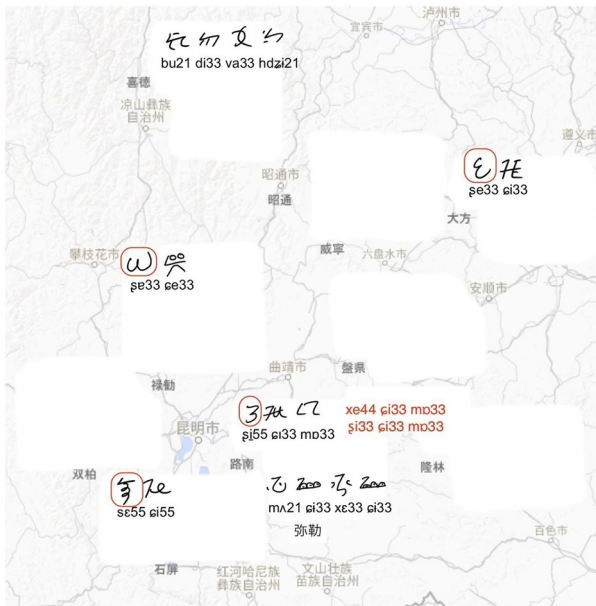
In Liangshan, Dafang and Luquan, a nasal  $[\eta_]$  is commonly found, as three blue arrows point out. In particular, the phonetic values of Liangshan and Dafang are fairly similar, although the characters are very different. The character shaded in red in  $[\eta i^{21}]$ , in the word Liangshan  $[bu^{33} \eta i^{21} mo^{21}]$  is undoubtedly a result of a phonetic loan. The character usually expresses the number ‘two’.

Interestingly enough, the first character in Mojiang shaded in blue looks like a spider, but this is only the author’s

speculation.

The characters of Sani Yi shaded in light green are written differently. This may be due to a local difference or a phonetic loan.

### 15. Centipede



In Dafang, Luquan, Lunan and Mojiang, we can find morphemes signifying ‘snake’, circled in red on the map. They are respectively pronounced  $[se^{33}]$ ,  $[se^{33}]$ ,  $[si^{55}]$  and  $[se^{55}]$ . This may be related to such common features between a centipede and a snake having long and slithery appearances.

## 22. Locust



In Liangshan, Luquan and Shuangbai, their phonetic values show similarity. Especially, between Luquan and Shuangbai the first characters shaded in blue bear resemblance to some extent, although their dialectal affiliation differs, i.e. Luquan belongs to the Eastern dialect, whereas Shuangbai to the Southern dialect.<sup>38</sup>

The characters of the Eastern dialect in the Guizhou area shaded in green also display similarity in their secondary characters.

In the Sani Yi area indicated by a light blue square, we can see that both its phonetic values and characters, with the exception only of Vial's 𠵹, have not changed over the last century at least.

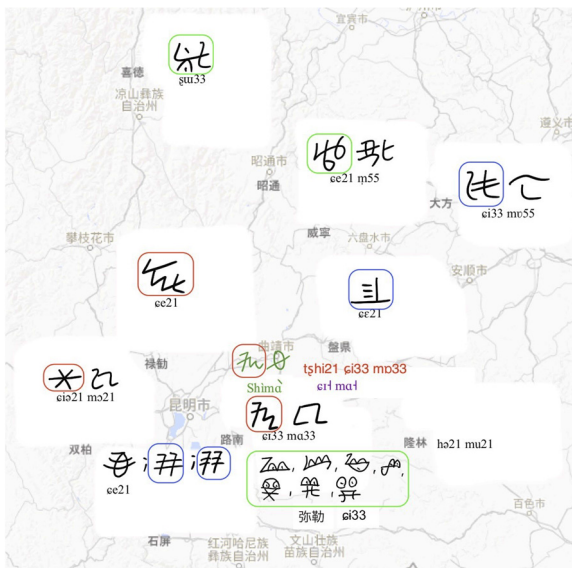
<sup>38</sup> Likewise, a certain similarity is frequently observed beyond dialectal differences. One possible reason is the geographic proximity of certain dialects to one another. Another possibility is if a certain character is found in more than two dialects, it may be a 'common character' whose origin is the same among Yi dialects, and this character might have been used without major changes to its shape.

### 23. Cricket



The words in Lunan and Mojiang circled in red seem to express the chirping of crickets.<sup>39</sup>

### 25. Louse



There are three types of characters.

One is marked in red circles. In this type, the characters found in Luquan, Shuangabai and Lunan show resemblances to one another, whereas the other type indicated by green circles in Liangshan, Weining and Mile display some similarity, but more investigation is needed.

The characters of the final type marked in blue circles may have been derived from the same origin, as they show resemblances beyond their dialectal difference between Mojiang and the rest in Guizhou area.

<sup>39</sup> According to Professor Hayashi, the words of [k<sub>33</sub> i<sub>33</sub> i<sub>33</sub> m<sub>33</sub>] in Lunan and [tsu<sub>33</sub> lu<sub>33</sub> tsi<sub>55</sub> li<sub>55</sub>] in Mojiang seem to be a result of a partial reduplication, where a preceding vowel is reduplicated in the following syllable. In this case, the vowel in the first syllable and maybe its tone as well are reduplicated in the second, and the same phenomenon happens to the third and the fourth syllables. This sort of phenomenon is found in languages like Jinuo, Akha and Sida. This may hold true in this case, although the words in Lunan and Mojiang seem to reflect the chirping of crickets.



### 33. Fly



In Liangshan, Weining and Luquan, it is obvious that the characters marked in red circles are relatively related, as they look similar. The word in Liangshan seems to have just an added morpheme [bu<sup>33</sup>] expressing ‘insect’ to the other two syllables.

As a whole, the phonetic values in most areas are similar, but further study is necessary to clarify the reason behind this.

### 34. Flea



In most of the areas, the morphemes meaning ‘louse’, which are circled in red, are observed. It is possible that ‘flea’ and ‘louse’ are both hematophagous and are similar in their habits.

### 35. Mosquito



In Longlin, the same word [bu<sup>33</sup>], shaded in blue on the map, is used for ‘fly’ and ‘mosquito’, and it seems to be a very basic word indicating ‘insect’ throughout all Yi dialects, at least within China.

Therefore, it is interesting that there is no distinction between a fly and a mosquito, which are undoubtedly very common and must often be distinguished in people’s daily life.

### 36. Ant



Intriguingly, the four characters circled in blue, all of which are from the Eastern dialectal areas except Liangshan from the Northern dialect area, seem to bear strong resemblances to one another: they are respectively pronounced [vu<sup>21</sup>] in Liangshan, [yo<sup>21</sup>] in Longlin, [bi<sup>55</sup>] in Luquan and [bi<sup>33</sup>] in Panxian. Their phonetic values and the places within the words are divided into two groups: one is the Liangshan and Longlin group, another is the Luquan and Panxian group. It is plausible to suppose that both groups are mutually related and that members of each group are

also interrelated. Their phonetic values and role in the words are different, yet their forms are similar. Therefore, these characters must have derived from the same origin, although more research is needed to attest to that matter.

The three characters circled in light blue, which are all observed in the Southeastern areas, might also be related to the two abovementioned groups, judging from their shapes. In particular, the character of Mile looks somewhat similar to the four characters.

## 5. Final remarks

Entomological words are scarce in Sani Yi, as are faunal ones.

This might be related to the lack of necessity for ordinary Sani people to discern between certain creatures with little functional difference, if they are not specialists like hunters, for example. In fact, no matter what command of Sani Yi he or she still maintains, if the speaker is not very interested in the insects, it is all the same difficult to discern differences among insects that look similar. Some insects sharing the same features, such as having wings or a shell or being glittery, are apt to be categorised into one group. For example, the butterfly, moth and other insects with wings are uniformly called [bu<sup>21</sup> lu<sup>33</sup> mɔ<sup>33</sup>]. Odonate and Neuropteran insects are also regarded as the same group.

In any case, it is tremendously regrettable that many Sani people, even the elderly, know a small number of names for the insect. Throughout my fieldwork, I frequently encountered that my consultants tended to have difficulty remembering entomological names. The situation was almost the same for the consultants who use Sani Yi exclusively from morning to night every day and who make only very limited use of the Southwestern dialect of Mandarin (西南官话). This may be due to the expanding usage of Mandarin or to the dispensability of such vocabulary in their ordinary lives.

Very often, the author's consultants could not immediately recall the Sani names for certain insects. Then, a few days later, when I asked them unexpectedly, they were sometimes able to tell me with no difficulty. Even though they use Sani Yi throughout their daily lives, it seems that they are losing their vocabulary, especially less frequently used entomological vocabulary, as they can so easily and therefore tend to use Chinese words instead of them.

Consequently, my next goal is to collect more data not only on entomological words but also faunal ones in Sani Yi.

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