



***Onoma* 51**
Journal of the International Council of Onomastic Sciences

ISSN: 0078-463X; e-ISSN: 1783-1644
Journal homepage: <https://onomajournal.org/>

**Lunar mansion names in South-West China:
An etymological reconstruction of ancestral astronomical
designations in Moso, Pumi, and Yi cultures compared with
Chinese and Tibetan contexts**

DOI: 10.34158/ONOMA.51/2016/6

Xu Duoduo

National University of Singapore (NUS),
Asia Research Institute (ARI), Singapore
arixd@nus.edu.sg

To cite this article: Xu Duoduo. 2016. Lunar mansion names in South-West China: An etymological reconstruction of ancestral astronomical designations in Moso, Pumi, and Yi cultures compared with Chinese and Tibetan contexts. *Onoma* 51, 113–143. DOI: 10.34158/ONOMA.51/2016/6

To link to this article: <https://doi.org/10.34158/ONOMA.51/2016/6>

© *Onoma* and the author.

**Lunar mansion names in South-West China:
An etymological reconstruction of ancestral astronomical designations in Moso,
Pumi, and Yi cultures compared with Chinese and Tibetan contexts**

Abstract: The present study aims at an etymological reconstruction of lunar mansion designations of the Moso, Pumi, and Yi people from South-West China. Those lunar mansions are generally named after animals. A systematic examination on these astronomical names reveals frequent borrowing processes among these cultures, extended to Tibetan and Chinese contexts. Three patterns of direct borrowing of the lunar mansion names can be highlighted in addition to compatible morphological structures in some designation. This comparative research also provides innovative

solutions to several issues still unsolved from the current studies on lunar mansions focused on specific ethnic groups. A detailed Appendix highlights some correspondences among lunar mansion names in diverse cultural contexts, also providing the reconstructions of possible borrowing patterns in their names.

Keywords: Lunar mansion names, Moso, Pumi, Yi, Chinese, Tibetan.

Noms de mansions lunaires en Chine du Sud-Ouest :

Une reconstruction étymologique de désignations astronomiques dans les cultures *moso*, *pumi* et *yi* dans les contextes chinois et tibétain

Résumé : Nous étudions l'étymologie des désignations des stations lunaires des peuples *moso*, *pumi* et *yi* du sud-ouest de la Chine. Ces stations lunaires sont en général appelées par des noms d'animaux. Un examen systématique de ces dénominations astronomiques révèle que ces cultures font de fréquents emprunts, et ce jusque dans les contextes tibétain et chinois. À l'intérieur de certaines dénominations, trois modèles d'emprunt direct de noms de mansions lunaires peuvent être distingués parmi des structures morphologiques compatibles. Cette recherche comparative fournit aussi des solutions novatrices à plusieurs questions demeurées sans réponse jusqu'ici dans les travaux récents consacrés aux mansions lunaires de groupes ethniques spécifiques. Un appendice détaillé fait ressortir un nombre de correspondances parmi les noms de stations lunaires dans des contextes culturels divers et fournit en même temps des reconstructions de modèles d'emprunts possibles dans leurs noms.

Mots-clés : Noms de mansions lunaires, *moso*, *pumi*, *yi*, chinois, tibétain.

Mondhausnamen in Südwestchina:

Eine ethymologische Rekonstruktion astronomischer Ahnennamensgebungen in Moso, Pumi und Yi Kulturen im chinesischen und tibetischen Kontext

Zusammenfassung: Die vorliegende Studie strebt eine Rekonstruktion der Benennung von Mondhäusern der *Moso*, *Pumi* und *Yi* Völker Südwestchinas an. Solche Mondhäuser werden gewöhnlich nach astrologischen und mythischen Tieren benannt. Eine systematische Untersuchung der Mondhausbenennungen dieser Kulturen zeigt häufige Begriffsentlehnungen, die bis in das tibetische und chinesische Umfeld reichen. Neben kompatiblen morphologischen Strukturen in der Namensgebung, kristallisieren sich drei direkte Entlehnungsmuster für Mondhausnamen heraus. Zudem liefert die vergleichende Studie innovative Lösungen für mehrere ungelöste Probleme in aktuellen kulturspezifischen Mondhausstudien. Ein detaillierter Anhang unterlegt Analogien zwischen Mondhausnamen in diversen kulturellen Umfeldern, und darüber hinaus die Rekonstruktionen möglicher Entlehnungsmuster ihrer Namen.

Schlüsselbegriffe: Mondhaus, Mondhausnamen, Moso, Pumi, Yi, chinesisch, tibetisch.

Lunar mansion names in South-West China: An etymological reconstruction of ancestral astronomical designations in Moso, Pumi, and Yi cultures compared with Chinese and Tibetan contexts

XU DUODUO

1. Lunar mansions in South-West China

In South-West China¹, hemerologies are widely attested among the local ethnic cultures. They are calendars used to establish the days for all kinds of rituals or activities, e.g.: wedding, funeral, building new houses, moving into new houses, etc.² Shaba, the priests of the Ersu people, have *Nomashida* ([nɔlmaʃɪltaʃ])³. It explains the location of moon bearing bad luck. *Nomashida* is also known as *Gashibu* ([ga⁵⁵ʃɪ³³pu⁵⁵]). At the same time Sujowu, the priests of the Muya people, have *Gaitsi* (IPA: [ke⁵⁵tsɪ⁵⁵]). *Gaitsi* means ‘day book’ (cf. [Liu Chulong & Huang Tengyu 2013: 12](#)). According to [Xu Lihua \(2015: 64\)](#), these two hemerologies could have derived from the divination literature of Bon Religion called *Gaozi* 皋孜, translated as ‘Maoxiu Xingli 昴宿星历’ (‘Hemerology of the Pleiades’) in Chinese. Moreover, Hangui, the priests of the Pumi people, have *Zedajiji* 泽达吉吉⁴. Pabi, the priests of the Namuzi people, have *Hake* ([χa⁵⁵kʰə⁵⁵]) (cf. [Wang Dehe & Wang Xuan 2013: 149](#)). Shibi, the priests of the Qiang people, have *Shualeri* 刷勒日⁵.

Besides these hemerologies with records of each day of the year, there are some hemerologies in which the days are calculated by means of lunar mansions. For example, Daba and Dongba cultures have a kind of divination calendar based on lunar mansions. Dongba and Daba are the western and

¹ South-West China refers to the area consisting of the Sichuan Basin, Yunnan-Guizhou Plateau, and the south of the Tibetan Plateau. According to the scheme of administrative divisions, South-West China includes Chongqing municipality, Sichuan, Yunnan, and Guizhou provinces, and the Tibet Autonomous Region. Several ethnic groups live in this area. Therefore, South-West China is considered a composite region of ethnic cultures.

² In Chinese tradition, they can be called *day books* (*Jih-shu 日書; [Poo 1993: 225](#)), which record about the fortune and taboo of each day for popular activities, e.g.: the day book preserved in Shui-hu-ti (Shuihudi 睡虎地) scripture (cf. [Loewe 1988](#)).

³ The word [nɔlmaʃ] means ‘day, sun’. The book’s title means ‘Figure of Locations of the Evil Moon’. It is named *Muhu Lishu* 母虎历书 (‘Calendar of Female Tiger’) in Chinese because of the tiger image in the calendar. Cf. [Sun Hongkai \(1982: 46\)](#).

⁴ Cf. [Song Zhaolin \(2010: 34\)](#). The author provided only the Chinese transcription of the name.

⁵ Cf. [Song Zhaolin \(2010: 34\)](#). The author provided only the Chinese transcription of the name.

eastern branches of the Moso people. They are attested in Yunnan and Sichuan Provinces in China, near the border with Tibet. According to my fieldwork research, the basic content of Daba hemerologies of the Moso people are 28 pictograms representing the lunar mansions. These glyphs are used repeatedly to cover the days of the year. Daba hemerologies are called *Gelimu*, *Gemu*, or *Ge'ermu* according to Daba priests from different villages. These words literally mean ‘the book to look at the stars’ in the local language.⁶ Dongba priests have both a divination figure (*Bage*) and scriptures containing records of their lunar mansions (Li Lincan et al. 1972; Zhu Baotian & Chen Juijin 1985; Li Guowen 2006; Zhou Yin 2012). Similarly, *Zhanbo Teyi* 占博特一 of the Yi people also uses lunar mansions to mark the days.⁷ Chen Juijin et al. (1984: 295) has listed the divination meaning of 28 lunar mansions in Bimo (the priests of the Yi people) scripture. Moreover, the Pumi people’s records of lunar mansions are called *Sagen Dawa* (‘The Local Days’)⁸. The original books are lost, while some data from Pumi lunar mansions can be found in Chen Zongxiang (1992).

Different ethnic groups apparently have their own designations of the lunar mansions. However, according to available reports, some of the lunar mansion designations from different ethnic groups in fact refer to the same celestial body. Therefore, it is possible to correlate with each other the various sets of lunar mansions, and further on, to compare the naming strategies among ethnic groups.

The following table presents the correspondences of local constellations of the Moso, Yi, and Pumi people with Chinese, Tibetan, and Sanskrit traditions (Table 1). The lunar mansions named after the same animals are classified as local constellations. The details of the designations of each lunar mansion of different ethnic cultures can be found in Table 2 of the Appendix.

⁶ The first segment *ge* means ‘star’, and the last segment *mu* means ‘book’. In the form *Gelimu*, the second segment *li* means ‘to look’, and in the form *Ge'ermu* the second segment *er* is the grammatical word for plural form. A sample of detailed interpretation of Daba hemerologies can be found in Xu Duoduo (2016).

⁷ The book’s title means ‘origins of everything’ (cf. Chen Juijin et al. 1984: 87). The author provided only the Chinese transcription of the name.

⁸ In Pumi language, *Sagen* means ‘earth’ and can refer to ‘local place’, while *Dawa* means ‘moon’ and can refer to ‘days’ (Chen Zongxiang 1992: 80). The author provided only the Chinese transcription of the name.

Table 1: Correspondences of constellations among different traditions

Moso	Yi	Pumi	Chinese	Tibetan	Sanskrit
Human Being/ Porcupine	'gather (of animals)'	Bird	Ox (Altair)	[gro bzhin]	'no cosmetics'
Horse	—		Girl	'bird's tail'	'sharp hearing'
—	Rhinos		Emptiness	[mon gre]	'greedy for wealth'
—		'goddess of water'	Rooftop	'goddess of water'	"all kinds of poisons"
—			Encampment	—	—
Frog		The quadrangular asterism			'bird's beak'
			Wall		
		Horse	Frog	Legs	'boat of the heaven'
		Rabbit	'the tail-peak'	Bond	'small stick'
		'the tail of time'	'the tail of time'	Stomach	[bra nye]
Six Stars	'herd of rock sheep' ('the head of time')	'the six sisters'	Pleiades	'the six sisters'	'designation'
Red Eye	'wind tunnel'	'to shepherd'	Aldebaran	'sandalwood'	'long-term raise'
—	Parrot	Beam	Turtle Beak	'head'	'the head of the deer'
Three Stars			Orion's Belt; Orion's Broadsword	'hand'	'give birth to'
—			unknown	—	—
—			Well	[nabs so]	'increase of wealth'
Pheasant	Bear	Ghost	—	—	
—			'victory'	'flaming'	
Hawk		Pheasant	Willow	'purple hue'	'no audience with'
—		—	Denebola	—	—
Pig		Hawk	Star	'a vertical stroke; length'	'earth'
—		Pig	Regulus		
			Algieba		
			Right Wall	—	—
Mdzo			Left Wall	—	—
		'the end'	Sheep	Horn	'the black'
	Shadow	Neck		'precious pearl'	'kind element'

	Leopard		Root	[sa ga]	‘skilled in fighting’
			Room	‘heaven’	‘joyful approval’
			Heart	[snron]	‘elders’
			Tail	[snrubs]	‘root’
unknown			unknown	—	—
unknown			unknown	—	—
unknown			Winnowing Basket	‘the head of the water’	‘the fish in the front’
			Porcupine	‘1/6 of Tibetan liter’	Dipper

In Table 1, it is possible to notice that the same designation may refer to different celestial bodies. The Pheasant Constellation of Moso culture refers to the Chinese Ghost Mansion (Beehive Cluster), while the Pheasant Constellation of the Pumi people corresponds to the Chinese Willow Mansion. The Hawk Constellation is *Wudizuo* 五帝座 (Denebola) in Moso tradition, while in Pumi astronomy the Hawk Constellation is the equivalent of the Chinese Star Mansion. The Porcupine Constellation could be a similar case: it corresponds to the Chinese Ox Mansion (Altair) according to the Moso people and refers to the Dipper according to the Yi people. The Chinese mansions Ghost, Willow, Star, and Denebola are close to each other. The Moso, Pumi, and Han people have made specific selections of the stars to mark the days. It is the same in the case of Altair and Dipper.

2. Common onomastic features of lunar mansions

Basing my analysis on Table 2, the lunar mansions of Moso, Pumi, and Yi cultures are often named after animals or animals’ body parts. Among the twelve Moso constellations, seven animals are involved, including the porcupine, horse, frog, pheasant, hawk, pig, and mdzo.

The number of mansions belonging to each constellation differentiates between the eastern and western branch. For the eastern branch, Daba has fifteen lunar mansions related to animals: horse (1), frog (4), pheasant (1), hawk (1), pig (3 or 4), mdzo (5 or 4).⁹ The Porcupine Constellation is called the *Human Being* Constellation, which consists of two mansions. Other nine mansions could also be related to animals: red eye (1), three stars (4), tiger’s mouth (1), carnivore star (1), footprint (2). The Three Stars Constellation is called *Sheep* Constellation by Awo Daba from Wujiao village, Muli county,

⁹ The animals are constellation names, while the number in parentheses are lunar mansions belonging to that constellation.

Sichuan province. The ‘tiger’s mouth’ has not been attested in other ethnic cultures, and its celestial location remains unknown. For the western branch, twenty of Dongba lunar mansions are named after animals: porcupine (1 or 2), horse (1), frog (4 or 3), pheasant (1), hawk (1), pig (3), mdzo (9). Other three are possibly related to animals: red eye (1), footprint (2).

According to [Chen Jiujin et al. \(1984: 90\)](#), twenty-one mansions of the Yi people are named after seven kinds of animals, including rhinoceros (3), horse (1), rabbit (1), parrot (4), bear (4), leopard (7), and porcupine (1). Among the other seven mansions, the one meaning ‘time’s head’ is also named ‘herd of rock sheep’. Several of them are related to animals in general, like ‘gathering of animals’, ‘shadow’, and ‘following shadow’. The one translatable as ‘wind tunnel’ is based on the traditional rule ‘no animals, only wind passes’. The remaining two are ‘time’s tail’ and ‘ending’.

The Pumi people have seventeen lunar mansions related to seven animals: bird (3), frog (2), pheasant (1), hawk (1), pig (3), and rock sheep (7). Other eight mansions are related to daily life, for example, ‘to shepherd’ (1), various parts of ‘beam’ (4), ‘house’ (2), ‘1/6 Tibetan liter’ (1)¹⁰. The remaining three are borrowed from Tibetan.

If analyzed comparatively, Sanskrit and Tibetan lunar mansion names seem more related to Buddhist items than animals. However, Tibetan lunar mansions generally have several other designations, the origins of which are animals. For example, རྩାྱ [nag pa] (Chinese *Horn* Mansion) has another name, ‘little bird’ (ཇྙྙ [bya'u]; [570](#)); གྲ [gre] (Chinese *Zhang* Mansion) is also named ‘little horse’ (ର୍ଥଚୁଙ୍କ [rtha chung]; [342](#)), while མྲྟ [mchu] (Chinese *Star* Mansion) is called ‘big horse’ (ର୍ଥଚେନ୍ [rtha chen]; [342](#)).¹¹

The animals chosen by the Moso, Yi, and Pumi people are common species in their daily lives. The porcupine and the horse appear in both Moso and Yi constellations. The frog, pheasant, hawk, and pig are all shared by Moso and Pumi constellations. These animals may reflect different perceptions and imaginations of asterisms in different cultural contexts, according to the experience of them by local people. For example, mdzo is one of the special livestock of the Moso people, since the species inhabits plateaus. Moreover, the parrot and the bear are two animals chosen in the Yi people’s constellations, while not considered in Moso and Pumi lunar mansions. These two animals are possibly totems of the Yi people ([Bai Xingfa 2006: 17–19](#))¹². The choice of the

¹⁰ A kind of Tibetan measure unit.

¹¹ From here, the numbers in parentheses without further annotations are page numbers of the Tibetan entries in [Gexi Quzha \(1957\)](#). The sources of other words are annotated in [Table 2](#) (see [Appendix](#)).

¹² [Tao Yunkui \(1943\)](#) recorded six animal totems that are used as surnames of the Yi people. One of them is ‘green turtledove’. ‘Green turtledove’ and ‘parrot’ could be different Chinese translations of the same bird in Yi language.

animals involved in lunar mansion designations can also be related to the processes by means of which the names were coined. Several Pumi lunar mansions, with their names, are borrowed from other ethnic groups and their languages, including Tibetan and Moso.

3. Borrowed lunar mansion designations

The comparison of lunar mansions from different ethnic groups can highlight cultural contacts which happened throughout history. It is hard to conclude whether the synonymous lunar mansions are homologous or borrowed among cultures: e.g. the Pheasant and Hawk Constellations of the Moso and Pumi people, or the Porcupine Constellation of the Moso and Yi people. However, it is possible to find the relationships between certain lunar mansions by looking at the pronunciation and meaning of their names.

3.1. Lunar mansions borrowed by the Pumi people

Among the ethnic groups on which this paper is focuses, the Pumi people have lunar mansions that appear to have more borrowed elements: three from Moso and eight from Tibetan (Chen Zongxiang 1992: 80). The author simply annotated that they are borrowed from other ethnic groups, without explanation. Comparing these eleven borrowed lunar mansions with their sources, it is possible to figure out different patterns of borrowing: some have been borrowed both in pronunciation and meaning, some have been borrowed only in pronunciation and explained in the target language, while some have been borrowed in pronunciation and assigned to name other stars. Examples of these types of designation transitions are analyzed in the following paragraphs.

The three lunar mansions annotated as borrowed from the Moso people in Chen Zongxiang (1992) are from the Pig Constellation. To be more specific, from the Pig Constellation of the Dongba branch, since the three lunar mansions named after the pig are slightly different between Daba and Dongba traditions. In Moso lunar mansion designations, the word for ‘mouth’, ‘waist’, and ‘fat’ are read [k’o˧], [t’o˧], and [ma˩], respectively. While these words are kept in Moso lunar mansion designations, they have other transcriptions in other Pumi lunar mansions. According to Pumi data in Table 1, besides these three pig asterisms, the word for ‘mouth’ also appears in ‘rock sheep’s mouth’, in which it is transcribed as [niu]; and the word for ‘waist’ is also in ‘the beam’s waist’, in which it is transcribed as [tɕi]. These two pronunciations are closer to modern Pumi.¹³ Therefore, these three lunar

¹³ For example, in Xinyingpan dialect of the Pumi language, ‘mouth’ is read as [ŋu¹³], and ‘waist’ as [dʒə¹³] (cf. Lu Shaozun 2001: 383–384).

mansions have been borrowed from Moso to Pumi.

The Dipper of the Pumi people is read as [phul], which means ‘Tibetan liter’ (annotated as ‘one sixth of Tibetan liter’; [Chen Zongxiang 1992: 81](#)). Since the Chinese annotations are contradict each other, I have looked for explanations of the Tibetan measurement units. The Tibetan measurement of volume is expressed in relation to barley: 6000 grains of barley is one Tibetan liter; one Tibetan liter equals six Tibetan *he* (藏合; cf. [Dictionary of the Tibetan people: 971](#)). According to the entry *pu* 普 in the [Dictionary of Chinese ethnic groups' history](#) (Gao Wende 1995: 2289), *pu* is the transliteration of Tibetan *he* (unit for the measurement of volume): six *pu* equal one Tibetan liter, twenty Tibetan liters equal one Tibetan dipper. Here, *pu*, the transliteration of Tibetan *he*, corresponds to the transcription of the Pumi designation for the Dipper lunar mansion, [phul]. Therefore, the name of Pumi’s Dipper has been introduced from Tibetan, and its meaning should be translated into Tibetan *he*.

The Chinese mansions Ox, Girl, and Emptiness are called ‘bird’s crown’, ‘bird’s belly’, and ‘bird’s tail’. [Chen Zongxiang \(1992\)](#) annotated that they are borrowed from Tibetan stars. However, in other materials about Tibetan lunar mansions, these three mansions show different morphological structures from the Pumi pattern ‘bird + body part’ (cf. [Huang Mingxin 2002: 51](#); [Jacques 2007: 6](#)).

In order to solve this issue, I have gone through the entries connected with these three lunar mansions and related morphemes in the [Dictionary of Tibetan](#) compiled by [Gexi Quzha](#). The numbers in parentheses after Tibetan characters are the page numbers in this dictionary.

The results show that Pumi’s ‘bird’s tail’ mansion, transcribed as /bya gzhug/, could be borrowed from one of the Tibetan designations of the Chinese Girl Mansion, which is read as [bya gzhug] (བྱା གྲྙྡ; 568). In Tibetan, the word for ‘bird’ is *bya* (བྱା; 566). However, in the Pumi system, the bird’s tail mansion refers to the Chinese Emptiness Mansion. The Pumi mansion ‘bird’s crown’, /bya ze/, could be identical to another Tibetan name of the Chinese Girl Mansion, [bram ze] (བྲାମ རྩ; 577), which means ‘Brahman’. The Pumi mansion ‘bird’s belly’, /bya spos/, could be derived from one of the Tibetan names for the Chinese Ox Mansion: [bya pho] (བྱା ཕྤྱ; 567), which means ‘rooster’. In Tibetan, *pho ba* means ‘stomach’ (କ୍ଷାଣ; 526), while *ba* is a self-referential suffix ([Zhou Jiwen & Xie Houfang 1998: 2–3](#)). In other words, the root *pho* could mean ‘stomach’. This explains the origin of the compound ‘bird’s belly’. In Qinghua 篓花 Pumi dialect, there is still an initial /s/ in the word for ‘belly’: [spi⁵⁵] ([Lu Shaozun 2001: 384](#)). This indicates that /spos/ could be preserved from ancient Pumi.

To sum up, the Pumi lunar mansions ‘bird’s crown’ (/byz ze/), ‘bird’s belly’ (/bya spos/), and ‘bird’s tail’ (/byz gzhug/), referring to the Chinese

mansions Ox, Girl, and Emptiness, could have been borrowed from the Tibetan terms for the Chinese mansions Girl – *bram ze* ('Brahman') and Ox – *bya pho* ('rooster'), and another Tibetan term for the Chinese Girl Mansion, *bya gzhug* ('bird's tail').

Two Pumi lunar mansions named *bya gzhug* and *chu lha mo*, corresponding to the Chinese mansions Emptiness and Rooftop, are reported to be Tibetan terms according to [Chen Zongxiang \(1992: 81\)](#). However, the Tibetan terms for these two Chinese mansions are quite different from the transcriptions in that paper. These two mansions are named in pairs in Tibetan, e.g.: [mon gre] and [mon gru], or [sgrog stod] and [sgrog smad]. The word [sgrog] means 'shackles' in Tibetan (ସ୍ଗ୍ରୋ; 193). Besides the unclear origin of the Pumi designations for these two Chinese mansions, the Moso people do not have lunar mansions correlated to the Chinese mansions Emptiness and Rooftop. The Yi people have lunar mansions related to the Chinese mansions Ox and Emptiness (named after rhinoceros), but not to the Girl and the Rooftop mansions.

The Chinese mansions Encampment and Wall have been attested in several ethnic groups' lunar mansion systems. In modern astronomy, they are called *Great Square of Pegasus*. They are named [khrums stod] ('upper part of bird's beak') and [khrums smad] ('lower part of bird's beak') in Tibetan. The Encampment Mansion can also be called [bya mchu] (ඉංඡු; 567), which means 'bird's beak'. The combination of the two is called 'ox's leg' in Tibetan: [ba lang rkang pa] (ସାଂଙ୍କାଂପା; 553).

These two mansions are also in pairs in Pumi culture. They are named /sui to/ 'the upper part of quadrangular asterism' and /sui mie/ 'the lower part of quadrangular asterism'. According to [Chen Zongxiang \(1992: 83–84\)](#), an old Pumi interviewee told him that these two mansions are from Tibetan, while they are also called 'the asterism of house'. In Chinese tradition, the days when the Encampment and Wall mansions are on duty are suitable to build houses.¹⁴ Due to their semantic connection with 'house', it is possible that the first syllable /sui/ derived from Ancient Chinese /syit/ 'room 室' ([Baxter 1992: 768](#)).

The second syllables could correspond to the word for 'up' ([to⁵⁵]) and 'tail' ([mə¹³ti⁵⁵]) in Pumi ([Lu Shaozun 2001: 366, 378](#)). In a comparative

¹⁴ Besides the Chinese characters 室 and 壁, there are poems connecting these two mansions to the activity of building houses. In *Maoshi Zhengyi* 毛诗正义 ('Annotations on Mao Commentary of the Classic of Poetry', page 232), the poem *Ding zhi Fang Zhong* 定之方中 ('When the Ding Asterism is Square and in the Center') is an example: "when the Ding Asterism is square and in the Center, it is time to build Chu State's Palace (定之方中, 作于楚宫)." Mao Commentary annotated: "Ding, the asterism of building houses." Zheng Xuan annotated: "When Ding Asterism is square and in the center in the evening, it is time for building palaces. That is why it is called 'to build rooms.'"

linguistic perspective, they could be cognates with Chinese ‘head’ (/d^həu/) and ‘tail’ (/mwei/),¹⁵ or Tibetan ‘up’ ([stod]) and ‘down’ ([smad]).

The Pumi name of the Chinese Legs Mansion is /noŋ tsu/, which is translated as ‘frog’s tail’. The pronunciation reminds of the Tibetan term for this mansion, [nam gru] (ནམ་ງྲུ; 464), which means ‘boat of the heaven’. In Pumi, the word for ‘frog’ can be read as [spa⁵⁵] (Qinghua dialect), [fʌ⁵⁵to⁵⁵] (Ludian dialect), or [pə⁵⁵die⁵⁵] (Xinyingpan dialect) (cf. [Lu Shaozun 2001: 374](#)). They are quite different from the two syllables in the lunar mansion designation. In fact, the translation ‘frog’s tail’ is the same as the Moso designation for this lunar mansion. In Dongba hemerology material, there are records of a lunar mansion named [pa˧mæ˧˧] corresponding to the Chinese Legs Mansion ([Zhu Baotian & Chen Juijin 1985: 315](#)). The syllable [pa˧˧] means ‘frog’, and [mæ˧˧] means ‘tail’. Therefore, Pumi’s designation of the Chinese Legs Mansion is a combination of Tibetan pronunciation and Moso meaning.

Pumi ‘star of the tail-peak’ is transcribed as /t'a kar/, similar to the Tibetan designation for the Chinese Bond Mansion, [tha skar] (ທା ଶକ୍ର). The meaning could have been borrowed from Dongba’s interpretation of this term. As it will be mentioned below, Dongba culture has introduced this Tibetan designation to name the Chinese Stomach Mansion. The designation apparently has no morpheme meaning ‘frog’. However, since the asterism with this name belongs to a series of lunar mansions named after ‘frog’, it has been assigned a semantic value as ‘tail-peak’ of the frog.

The Pumi mansion named ‘the tail of time’ is transcribed as /bar ni/, similar to the pronunciation of the Tibetan term for the Chinese Stomach Mansion, [bra nye] (බ୍ରା ନ୍ୟେ). It also refers to the Chinese Stomach Mansion. The Tibetan name derives from the corresponding Sanskrit term ([575](#)).

3.2. Lunar mansions borrowed by the Moso people

The western branch of the Moso people (Dongba community) borrowed the Tibetan designation of the Chinese Legs Mansion, which is transcribed as [na˩ŋgv˧˧] in Moso and translated as ‘star of the tail-peak’. However, the corresponding celestial body is the Chinese Bond Mansion. In this case, we can see a modification of the pronunciation from the target language phonology. The syllabic structure of the Moso language does not have a consonantal coda, but it does have the slot for nasal before the consonantal initial. Therefore, the phonemes of the Tibetan word [nam gru] have been re-associated into /na mgru/, changing the pre-nasal /m/ into the nasal with the same articulation of /g/, i.e. /ŋ/. The glide /r/ weakens into

¹⁵ The reconstructions of Old Chinese are cited from [Karlgren \(1940: 516, 492\)](#).

trill co-articulated with the consonantal initial.¹⁶ The Dongba glyph of ‘the star of the tail-peak’ is written as  , depicting a spear ( [ŋgvl]) poking a black dot ( [nq]). This ligature means ‘a spear poling into a black dot’ (Li Lincan et al. 1972: 114, 122). The meaning ‘tail-peak’ could have derived from the lunar mansion before it, namely ‘frog’s tail’.

Dongba culture has also introduced a Tibetan term for the Chinese Bond Mansion. It is read as [t'alkui] and translated as ‘the star of the time’s tail’. Its celestial body is identical to the Chinese Bond Mansion. In Tibetan, the syllable *ta* is meaningless, while *skar* is the root of ‘star’.¹⁷ Therefore, ‘the star of time’s tail’ of Dongba lunar mansions literally means ‘the star of “ta”’. Its meaning ‘the tail of time’ is a kind of free translation according to its role in marking the end of a year.

The Dongba names for the Chinese mansions Winnowing Basket and Dipper are similar to those in Tibetan. The two mansions are named ‘water’s head’ ([chu stod]) and ‘water’s tail’ ([chu smad]). In Tibetan, *chu* means ‘water’, *stod* means ‘higher place’, and *smad* means ‘lower place’. The Moso designations are ‘higher footprint’ ([ʃwætq^hwʌt]) and ‘lower footprint’ ([mætq^hwʌt]). In Moso, [ʃwæt] means ‘high’, [mæt] means ‘low’, and [q^hwʌt] means ‘footprint’.

The lunar mansion designations of the eastern branch of the Moso people (Daba tradition) are almost all original. The only exceptions are the two named *Pami* and *Nizhi*. In previous studies, they are interpreted as ‘head/upper body’ and ‘penis’ (Song Zhaolin 2003: 86–89), or considered a combination which means ‘vagina’ (Yang Xuezheng 1994: 33). According to my fieldwork notes, Daba priests regard these two designations as syllables without specific meanings. They explain the two lunar mansions as ‘Human Being Constellation’ (i.e. ‘Altair’). I claim the syllable *pa* derives from ‘young people’ in Moso, [p^hætci], while *mi* derives from ‘young woman’, [mi^hzi] (Xu Duoduo 2017: 28). Further on, the Tibetan entry of the Chinese Star Mansion [pha mes] (ພ້າເມສ; 518), which means ‘ancestor’, indicates the possibility that the Daba lunar mansion name *Pami* could be borrowed from Tibetan. According to its meaning, ‘ancestor’, various interpretations of the Tibetan word have been developed, including one depicting it with human

¹⁶ The phenomenon of co-articulated trill with consonant in the Moso language has been described in several linguistic studies, e.g.: He Jiren & Jiang Zhuyi (1985: 7) and Michaud (2008: 176).

The possible counterpart in the eastern branch is ‘the star of water’, [dzur^hkui]. The syllable [dzur^h] means ‘water’, and [kui] means ‘star’. It seems a descriptive designation of the Tibetan depiction of the Legs Mansion, ‘in the shape of a boat with a star’. Since the boat is generally associated with water, the star on the boat is, in a way, the star of water.

¹⁷ For example, the word ‘star’ is written as རྩྷ, the word ‘astrologer’ is རྩྷ རྩྷ རྩྷ, and the word ‘water of lunar mansions’ is རྩྷ རྩྷ. Cf. Gexi Quzha (1957: 40).

head through a pictogram, or another one correlating it to penis.

The word *Nizhi* sounds similar to the word ‘penis’ in Moso context.¹⁸ However, it can be interpreted as ‘big day’ if analyzed morphologically: the syllable [ni˧˥] means ‘day’, and the syllable [di˧˥] means ‘big’. Conversely, considering the possibility of it being a Tibetan loan word as *Pami*, the homophonous candidate could be [nyi zhur] (尼藏; 308), which means ‘sunlight’.

3.3. Lunar mansions borrowed by the Yi people

‘The star of time’s tail’ of the Yi people is read as [tamu]. Chen Jiujin et al. (1984: 91) deduced, according the pronunciation and translation of the word, that the syllable *ta* means ‘time’, and the syllable *mu* means ‘tail’.¹⁹

As opposed to other ethnic groups, the Yi people have a lunar mansion paired with ‘the star of time’s tail’, named ‘the star of the time’s head’. It is possible that, since the syllable *ta* means ‘time’ in Yi, the partner of ‘time’s tail’ was generated. The lunar mansions are used repeatedly to mark days as a cycle and, therefore, the one next to ‘time’s tail’ is the ‘time’s head’.

The Yi people’s lunar mansion ‘time’s head’ refers to the Pleiades. The names for Pleiades in Tibetan, Moso, and Pumi traditions all relate to the number six: ‘star of six sisters’ (Tibetan), ‘six stars’ (Moso), and ‘star of six sisters’ (Pumi). The Yi people’s Pleiades, ‘the star of the time’s head’, does not have a morpheme related to ‘six’. It has two names: *chiku* and *tabo*. The word *chiku* means ‘herd of rock sheep’, while the word *tabo* means ‘time’s head’. The syllable *bo* could be derived from the word ‘forehead’, [na˧˥bo˧˥] (Chen Shilin et al. 1985: 242).

4. Different patterns in borrowing lunar mansion designations

The composition of morphemes and relationships of borrowing among Moso, Yi, and Pumi lunar mansion designations are shown in Table 3²⁰ and in Table 2 of the Appendix (in abbreviated forms).

¹⁸ During our field trip in August 2011, Dr Li Wenshan was talking with Daba Naka Dexi’s sisters about the stars we have learned from Daba hemerology. Daba Dexi was very offended by this word.

¹⁹ In Nanjian 南涧 dialect of the Yi language, the word for ‘time’ is read as [tha˧˥sɿ˧˥] (Chen Shilin et al. 1985: 235). The first syllable could be identical to the syllable *ta* in the lunar mansion designation.

²⁰ Some of the borrowed lunar mansion designations have been re-associated with celestial bodies different from their original meanings. In Table 3, the Chinese mansions referred to by the Tibetan names are annotated, when such transmission of semantics happened. Here and after, the words in parentheses are abbreviations of Chinese mansions.

Table 3: Borrowed morphemes in Moso, Yi, and Pumi lunar mansion designations²¹

Chinese	Daba		Dongba		Yi		Pumi		Tibetan
Ox	<i>Pami</i>	unknown	'porcupine/ porcupine's head, porcupine's tail'	—	'gather'	—	'bird's crown'	Tibetan P. (Girl)	—
	<i>Nizhi</i>	unknown		—		—			—
Girl	'horse'	—	'horse ghost'	—	—	—	'bird's belly'	Tibetan P. (Ox)	—
Emptiness	—	—	—	—	'male rhinos'	—	'bird's tail'	Tibetan P. & S. (Girl)	—
Rooftop	—	—	—	—	—	—	'goddess of water'	Tibetan P. & S.	—
Encamp- ment	—	—	—	—	'female rhinos'	—	—	—	—
	'frog's mouth'	—	'frog's mouth'	—		'big rhinos'	—	'the upper part of the quadran- gular asterism'	Chinese P.
Wall	'frog's urine'	—	'frog's limb'	—			'the lower part of the quadran- gular asterism'	Chinese P.	—
Legs	'star of water'	—	'frog's tail'	—				Tibetan P. & Moso S.	—
Bond	'a white star of the Frog Constel- lation'	—	'tail-peak'	Tibetan P. (Legs) & Chinese S.	'rabbit's mouth'	—	'tail- peak'	Tibetan P. Chinese S.	—
Stomach	—	—	'time's tail'	Tibetan P. (Bond) & Yi S.	'time's tail'	Tibetan P. + Yi P.	'time's tail'	Tibetan P.	San- skrit P.
Pleiades	'six stars' horn'	—	'six stars/ six stars' horn, six stars' body'	—	'herd of rock sheep (time's head)'	—	'six sisters'	—	'six sisters'
unknown	'six stars' body'	—	—	—	—	—	—	—	—
Net	'red eye'	—	'red eye'	—	'wind tunnel'	—	'to shepherd'	—	—
Turtle Beak	—	—	—	—	'parrot's head'	similar S. to Tibetan counter- parts	'beam head'	similar S. to Tibetan counter- parts	'head'
Three Stars	'three stars' head'	—	'three stars'	—	'parrot's wing'		'beam hand'		'hand'

²¹ To keep the table concise, *P.* stands for 'pronunciation', and *S.* for 'semantics'.

	‘three stars, hand’	—	‘three stars, hand’	—	—	—	—	—	
unknown	‘three stars’ <i>chuom</i> ’	—	—	—	—	—	—	—	—
Well	‘a white star of the Three Stars Constellation’	—	‘(the white star of) the water head’	—	—	—	‘beam waist’	—	San-skr P.
	—	—	‘(the white star of) the water tail’	—	‘parrot’s waist’	—	—	—	
	—	—	—	—	‘parrot’s tail’	—	—	—	—
	—	—	—	—	‘bear’s chest’	—	—	—	—
Ghost	‘pheasant’	—	<i>chuko</i>	—	—	—	‘beam tail’	—	—
Willow	—	—	—	—	—	—	‘pheasant’	—	—
Denebola	‘hawk’	—	‘pheasant’ & ‘hawk’	—	—	—	—	—	—
Star	—	—	—	—	—	—	‘hawk’	—	—
Regulus	‘pig’s mouth’	—	‘pig’s mouth’	—	‘bear’s back’	—	‘pig’s mouth’	Moso P. & S.	—
Algieba	‘pig’s urine’	—	‘pig’s waist’	—		—	‘pig’s waist’		
Right Wall	‘pig’s fat’	—	‘pig’s fat’	—	‘male bear’	—	‘pig’s fat’	—	—
Left Wall	‘mdzo’s four sides’	—	‘mdzo’s mouth’	—	‘female bear’	—	—	—	—
Horn	‘mdzo’s horn’	—	—	—	‘the end’	—	‘rock sheep’s horn’	similar to the Moso counterparts	—
Neck	‘mdzo’s ear’	—	‘mdzo’s ear’	—	‘shadow’	—	—	—	—
	‘mdzo’s eye’	—	‘mdzo’s eye’	—	‘the shadow following’	—	‘rock sheep’s eye’	similar to the Moso counterparts	—
Root	—	—	‘mdzo’s neck’	—	‘leopard’s head’	—	‘rock sheep’s mouth’	San-skr P.	—
Room	‘mdzo’s body’	—	‘mdzo’s waist’	—	‘leopard’s eye’	—	‘rock sheep’s neck’		
Heart	—	—	‘mdzo’s stomach’	—	‘leopard’s mouth’	—	‘rock sheep’s belly’	—	—
Tail	—	—	‘mdzo’s vagina’	—	‘leopard’s waist’	—	—	similar to the Moso counterparts	—
	—	—	‘mdzo’s footprint’	—	‘leopard’s heart’	—	—		
	—	—	‘mdzo’s tail’	—	‘leopard’s tail’	—	‘rock sheep’s tail’		

unknown	‘tiger’s mouth’	—	—	—	—	—	—	—	—
unknown	‘the carnivore star’	—	—	—	—	—	—	—	—
Winnowing Basket	‘higher footprint’	similar morphological structure to the Tibetan counterparts	‘higher footprint’	similar morphological structure to the Tibetan counterparts	‘the end of leopard’	—	‘rock sheep’s <i>jiasi</i> ’	—	‘water head’
Dipper	‘lower footprint’		‘lower footprint’		‘porcupine’	—	Tibetan <i>he</i>	Tibetan P. & S.	‘water tail’

In Table 3, we can notice similar naming patterns among lunar mansions. For example, the Pleiades have designations often containing the morpheme ‘six’, the number of the bright stars of this asterism. In another case, the Chinese mansions Winnowing Basket and the Dipper in Moso hemerology are called ‘higher footprint’ and ‘lower footprint’, sharing the same morphological structure of their Tibetan names (‘water head’ and ‘water tail’): they all follow the pattern ‘head word + upper/lower’.

The designations of the Chinese mansions Turtle Beak and Three Stars in Pumi and Yi cultures are similar in semantics to their Tibetan counterparts. The Pumi designations are /dze ku/ (‘the beam head’) and /dze je/ (‘the beam hand’), the Yi designations are /ji wa/ (‘the parrot’s head’) and /ji lo/ (‘the parrot’s wing’), while the Tibetan names are [mgo] (‘head’) and [lag] (‘hand’). The Moso people do not have a lunar mansion corresponding to the Chinese Turtle Beak Mansion. However, they have two lunar mansions correlated to the Chinese Three Stars Mansion (the one after the Chinese mansion Turtle Beak). The meanings of these two designations are ‘three stars’ head’ and ‘three stars’ hand’. In other words, the Tibetan, Pumi, Yi terms for the Chinese mansions Turtle Beak and Three Stars, as well as the two for Moso lunar mansions belonging to the Chinese Three Stars Mansion, share the core semantic elements ‘head’ and ‘hand’.

The seven mansions of the Pumi Rock Sheep Constellation show naming patterns similar to the mansions belonging to the Moso Mdzo Constellation (five in the Daba branch and nine in the Dongba branch). The two animals giving their names to the constellations, rock sheep and mdzo, are both large cloven-hoofed mammals with horns spread in South-West China. In Tibetan tradition, the Chinese Root Mansion has four stars and looks like a sheep’s head (Gexi Quzha 1957: 897).²²

These common naming patterns could be due to the fact that the names describe astronomical figures of the stars. They can also be interpreted as

²² Conversely, the lunar mansions in this area are named after a fierce leopard in Yi tradition, a dragon in Han tradition, and a scorpion in Greek tradition.

traces of cultural contacts.

In some cases, lunar mansion names keep their original meanings and are used to refer to the same asterisms. However, in other cases, this process could lead to the re-association of borrowed lunar mansion designations with celestial bodies.

For example, in Dongba lunar mansions, the designation of the Chinese Ox Mansion is the same as the Yi name for the Dipper, and the names for the Chinese mansions Bond and Stomach are borrowed from the Tibetan terms for the Chinese mansions Legs and Bond, respectively. These designations have been introduced as phonetic symbols, getting their meanings from the locations of local asterisms in the lunar mansion sequence: the Chinese Bond Mansion is situated after ‘the star of the frog’s tail’ and, therefore, is named ‘the star of the tail-peak’. The Chinese Stomach Mansion is the last one in the 28 Dongba lunar mansion sequence; hence it is named ‘the star of the time’s tail’²³.

Moreover, the Yi people’s ‘star of the time’s tail’ is possibly borrowed from the Tibetan term for the Chinese Stomach Mansion, but it has been interpreted according to Yi vocabulary. The Tibetan names of the Chinese mansions Stomach, Well, and Root are local pronunciations of their Sanskrit counterparts.

Further on, as mentioned above, the Pumi name for *phul* mansion is the Tibetan word for ‘Tibetan *he*’. The designations of the mansions ‘bird’s crown’ and ‘bird’s belly’ are homophonous with the Tibetan terms for the Chinese mansions Girl and Ox, respectively. The ‘bird’s tail’ mansion, referring to the Chinese Emptiness Mansion, is homophonous and synonymous with the Tibetan term for the Chinese Girl Mansion. The Pumi name for the Chinese Rooftop Mansion, ‘the goddess of water’, is borrowed from the corresponding Tibetan term. The Pumi name for the Chinese Legs Mansion is the corresponding Tibetan term translated via Moso vocabulary. The Pumi designation for the Chinese Bond Mansion is the Tibetan term translated via Pumi vocabulary. The Pumi name for the Chinese Stomach Mansion is also borrowed from the corresponding Tibetan term, while its meaning was assigned according to the specific chronological moment marked by this mansion: ‘the star of the time’s tail’.²⁴

In some cases, the sources of lunar mansion designations are not clear. As mentioned above, the origin of two Pumi asterisms, /sui to/ (‘the upper part of quadrangular asterism’) and /sui mie/ (‘the lower part of quadrangular

²³ This lunar mansion is not attested in Daba hemerology. The meaning was perhaps borrowed from its name in Yi.

²⁴ It refers to the end of a year. The semantic description of this lunar mansion could have originated from Yi culture. The lunar mansion designation *tamu* in Yi culture literally means ‘the time’s tail’.

asterism'), remain unclear. Chen Zongxiang (1992: 83–84) presented fieldwork notes in which old Pumi people told that these two lunar mansions were borrowed from Tibetan. The author, however, pointed out their possible connection with *Shishen* 実沈 due to the similar pronunciation, /shi diəm/.²⁵ The lunar mansions corresponding to *Shishen* are the Chinese mansions Net and Well. Conversely, Pumi /sui to/ and /sui mie/ correspond to the Chinese mansions Encampment and Wall, respectively, which belong to the lunar mansion group called *Juzi* 嫩訾. Considering the pronunciations and meanings of these two names, I believe that their possible origin derives from the word for 'room' in Ancient Chinese, which is reconstructed as /syit/ (室). In this scenario, these two Pumi names should be written as 室头 and 室尾 in Chinese characters. This hypothesis is based on three aspects: 1) the similar pronunciation of the reconstructed Ancient Chinese form for *Shi* 室 compared to the first syllable in Pumi words (/sui/), since both syllables contain a rounded glide; 2) the Chinese Encampment Mansion is connected with the issues of building houses, which is consistent with its translation as 'star of house' by the Pumi people; 3) these two lunar mansions, being the upper and lower parts of a quadrangular asterism, refer to the Chinese mansions Encampment and Wall, which correspond to the Chinese lunar mansion group *Juzi* instead of *Shishen*.

Basing my analysis on the discussions above, it is possible to highlight three main patterns in the process of borrowing lunar mansion designations among local ethnic groups:

- 1) The pronunciation and meaning of a lunar mansion designation are borrowed from the same ethnic group. Examples of this category include the Pumi names for the mansions *phul* (Dipper), 'bird's crown' (Ox), 'bird's belly' (Girl), 'bird's tail' (Emptiness), 'goddess of water' (Rooftop), which are borrowed from Tibetan terms for the Chinese mansions annotated in parentheses; the Pumi names for the mansions 'the mouth of the pig', 'the waist of the pig', and 'the fat of the pig' are borrowed from Moso (Dongba branch); the Pumi names for the mansions 'the upper part of quadrangular asterism' (Encampment) and 'the lower part of quadrangular asterism' (Wall) are possibly borrowed from Chinese; Tibetan designations for the Chinese mansions Stomach, Well, and Root derive from Sanskrit; the two Daba lunar mansions, *Pami* and *Nizhi*, are possibly borrowed from Tibetan.
- 2) The pronunciation and meaning of a lunar mansion designation are borrowed separately from two ethnic groups. Examples of this

²⁵ *Shishen* is one of the twelve lunar mansion groups in ancient Chinese astronomy. The term referring to these lunar mansion groups is *Xingci* 星次.

category include Dongba ‘the star of the tail-peak’ (Tibetan pronunciation + Chinese translation) and ‘the star of the time’s tail’ (Tibetan pronunciation + Yi translation), Pumi ‘the star of the frog’s tail’ (Tibetan pronunciation + Moso translation) and ‘the star of the tail-peak’ (Tibetan pronunciation + Chinese translation).

- 3) The pronunciation of a lunar mansion designation is borrowed from another ethnic group, while the meaning is a translation according to the target language vocabulary. Examples of this category include ‘the star of the times’ tail’ in Yi culture (Tibetan pronunciation).

In addition to the three types of direct borrowing, the different ethnic groups sometimes use similar strategies in order to name lunar mansions. Examples like the use of the morpheme ‘six’ in Moso, Pumi, and Tibetan terms for the Pleiades, Moso and Tibetan terms for the Chinese mansions Winnowing Basket and Dipper, the mansions belonging to Moso Mdzo Constellation and Pumi Rock Sheep Constellation, and the Pumi and Tibetan names for the Chinese mansions Turtle Beak and Three Stars, all show similar naming processes.

Borrowed designations for lunar mansions may be re-associated with heavenly bodies according to local interpretations. For example, in Dongba hemerology, the Tibetan terms for the Chinese mansions Legs and Bond are used to refer to the Chinese mansions Bond and Stomach, respectively. Similarly, the Tibetan terms for the Chinese mansions Girl and Ox correspond to the Chinese mansions Ox and Girl in Pumi context.

5. Conclusion

This paper is aimed at providing an etymological reconstruction and interpretation of the 28 lunar mansion designations among some ethnic groups from South-West China, including the Moso, Yi, and Pumi people. The material on Daba lunar mansions was collected during my fieldwork trips. Dongba (the priests of the western branch of the Moso people), Bimo (the priests of the Yi people), and Hangui (the priests of the Pumi people) data are quoted from available fieldwork reports and related studies.

The 28 lunar mansion systems exist in Chinese (*Hsiu*, ‘mansion’), Sanskrit (*Nakṣatra*, ‘asterism’), and Arabic traditions (*Manāzil al-kamar*, ‘mansions of the moon’) (cf. [Yampolsky 1950: 62](#)). In this study, I have extended the comparison to Chinese and Tibetan contexts. I have also highlighted the possible connections between Tibetan lunar mansion terms and their Sanskrit counterparts.

This comparison reveals common naming patterns shared among ethnic groups in South-West China. Lunar mansion designations reflect people’s

interpretation of the universe. To imagine asterisms as various animals is a common pattern among diverse cultures.

This comparative study also highlights complex cultural contacts in the region. Tibetan and Chinese names are attested in the lunar mansion designations of the Pumi, Moso, and Yi people. The borrowing of lunar mansion terms is also spotted among the Pumi, Moso, and Yi. Three main patterns in giving names to stars after other ethnic groups' designations have here been reconstructed: 1) the borrowing of both pronunciation and meaning of a designation from an ethnic group; 2) the borrowing of pronunciation and meaning of a designation from different ethnic groups; 3) the borrowing of the pronunciation of a designation and the translation of its meaning via a local language. Moreover, there are indirect ways of introducing lunar mansions names, applying, for example, similar naming strategies or using compatible morphological structures to new designations. This procedure seems more flexible in the addition of local elements.

Cultural contacts among ethnic groups make more complex the onomastic stratigraphy of their traditions, add common features to local elements, and generate divergences, while diachronic differences among communities provide evidence useful in reconstructing their developmental paths. For example, the Moso and Han peoples are descendants of the ancient Qiang people (*A brief history of the Qiang people*: 2–4). From the perspective of related cultures, the three lunar mansions of the Pig Constellation in Moso hemerology, corresponding to *Xuanyuan Shisi* 轩辕十四 (Regulus), *Xuanyuan shi'er* 轩辕十二 (Algieba), and *Taiwei Youyuan* 太微右垣 (Right Wall)²⁶, reveal the ancient Chinese pattern of dividing the sky into five regions: east, south, west, north, and middle (Chen Zungui 1982: 290).

Etymological analysis can help in figuring out viable solutions to issues in the study of lunar mansions. For example, there are different points of views on the identity of the last lunar mansion in Dongba hemerology, 'the star of the time's tail', or 'the star of the tail-peak' and 'the star of the time's tail'. Zhou Yin (2012: 55) mention that in E'ya area many Dongba priests claim that [na²¹ŋgv³³] ('the star of the tail-peak') and [tha³³gə²¹] ('the star of the time's tail') are lunar mansions appearing on the same day. According to the discussion in section 3.2, 'the star of the tail-peak' is the Tibetan term for the Chinese Legs Mansion. However, it has been associated with the Chinese Bond Mansion in Dongba context. Conversely, 'the star of the time's tail' is the Tibetan term for the Chinese Bond Mansion.²⁷ Both terms

²⁶ For detailed explanations on the correspondences between Moso and Han lunar mansions, see Xu Duoduo (2015: 76–77).

²⁷ In some dialects, the second syllable of 'the star of the time's tail' starts with the non-aspirated voiceless velar consonant /k/, e.g.: [t'alkuŋ] (Ludian dialect; Li Liancan et al. 1972: 9).

correspond to the same heavenly body and, therefore, explain the origin of the idea according to which these two lunar mansions appear on the same day.

The re-association of designations with celestial bodies could be due to the fact that the changes of the asterisms' positions happened over time. Alternatively, the priests could have lost their astronomical knowledge. The incoherence of the designations with respect to their possibly original celestial bodies could have generated conventional hemerologies (Liu Lexian 2012: 54).

An etymological study and reconstruction of those names can increase our knowledge of the astronomical wisdom of the local ethnic groups. The onomastic analysis of those lunar mansions is relevant in interpreting the mutual cultural and linguistic influences among these communities, providing also a broader perspective of cultural continuity in South-West China.

Acknowledgement

I would like to express my sincere gratitude to Professor Edgard Sienraert (Centre for Africa Studies, University of the Free State, South Africa) and Ms Patricia Lorenz (Centre for Modern Languages, Nanyang Technological University, Singapore), for translating for me the French and the German abstracts of this paper.

References

- Bai Xingfa. 2006. *Yizu Chuantong Jinji Wenhua Yanjiu* [A study of traditional taboos of the Yi people]. Kunming: Yunnan University Press.
- Baxter, William. 1992. *A handbook of Old Chinese phonology*. Berlin: Walter de Gruyter.
- Chen Jiujin & Lu Yang & Liu Yaohan. 1984. *Yizu Tianwenxue Shi* [History of the astronomy of the Yi people]. Kunming: Yunnan Renmin Chubanshe.
- Chen Shilin & Bian Shiming & Li Xiuqing. 1985. *Yiyu Jianzhi* [A brief description of the Yi language]. Beijing: Minzu Chubanshe.
- Chen Zongxiang. 1992. Pumizu Ershiba Xiu Chutan [A preliminary study of the Pumi people's 28 lunar mansions]. *Xi'nan Minzu Xueyuan Xuebao* 6, 80–89.
- Chen Zungui. 1982. *Zhongguo Tianwenxue Shi* [History of Chinese astronomy], vol. 2. Shanghai: Shanghai Renmin Chubanshe.
- Danzhu Angben & Zhou Runnian & Mo Fushan et al. (eds.). 2003. *Zangzu Dacidian* [Dictionary of the Tibetan people]. Lanzhou: Gansu Renmin Chubanshe.
- Gao Wende (ed). 1995. *Zhongguo Shaoshu Minzushi Da Cidian* [Dictionary of Chinese ethnic groups' history]. Changchun: Jilin Jiaoyu Chubanshe.

- Gexi Quzha. 1957. *Zangwen Cidian* [Dictionary of Tibetan]. Beijing: Minzu Chubanshe.
- He Jiren & Jiang Zhuyi. 1985. *Naxiyu Jianzhi* [A brief description of the Naxi language]. Beijing: Minzu Chubanshe.
- Huang Mingxin. 2002. *Xizang de Tianwen Lisuan* [Tibetan astronomy]. Xi'ning: Qinghai Renmin Chubanshe.
- Jacques, Guillaume. 2007. Le nom des nakṣatrāṇi en tibétain. *Revue d'études tibétaines* 12, 4–10.
- Karlgren, Bernhard. 1940. *Zhongguo Yinyunxue Yanjiu* [A study of Chinese phonology]. Translated by Yuen-ren Chao & Luo Changpei & Li Fang-Kuei. Taipei: Commercial Press.
- Li Guowen. 2006. A study of the pictographic 28-star divination of the Naxi nationality. *Journal of Yunnan Nationalities University* 5, 108–113.
- Li Lincan & Zhang Kun & He Cai. 1972. *A dictionary of Mo-So hieroglyphics*. Taipei: Wenshizhe Publishing House.
- Liu Chulong & Huang Tengyu. 2013. *Zangzu Zhixi Muyaren Lishu Jiedu* [A preliminary interpretation and research on Muya Tibetan's Almanacs]. *Yuyanxue Yanjiu* 1, 12–24.
- Liu Lexian. 2012. *Jianbo Shushu Wenxian Tanlun* [Survey on bamboo and silk documents of alchemy and divination]. Beijing: China Renmin University Press.
- Loewe, Michael. 1988. The almanacs (*jih-shu*) from Shui-hu-ti. *Asia Major* 1 (2), 1–27.
- Lu Shaozun. 2001. *A study of Pumi dialects*. Beijing: Minzu Chubanshe.
- [Han Dynasty] Mao Heng, [Han Dynasty] Zheng Xuan (annotated), [Tang Dynasty] Kong Yingda (compiled). 1999. *Maoshi Zhengyi* [Annotations of Mao commentary on the classic of poetry]. Beijing: Beijing University Press.
- Michaud, Alexis. 2008. Phonemic and tonal analysis of Yongning Na. *Cahiers de linguistique – Asie Orientale* 37(2), 159–196.
- Niu Weixing. 2004. *Xiwang Fantian: Hanyi Fojing zhong de Tianwenxue Yuanliu* [Looking westwards at Brahmā: The evolution of astronomy in Chinese Buddhist Sutras]. Shanghai: Shanghai Jiao Tong University Press.
- Poo, Mu-Chou. 1993. Popular religion in pre-imperial China: Observations on the almanacs of Shui-hu-ti. *T'oung Pao* 4/5, 225–248.
- Song Zhaolin. 2003. Mosuoren de Xiangxing Wenzi [The hieroglyphic writing of the Mosuo people]. *Southeast Culture* 4, 86–93.
- Sun Hongkai. 1982. Ersu Shaba Tuhua Wenzi [Pictographic writing of Ersu Shaba]. *Minzu Yuwen* 6, 44–49.
- Tao Yunkui. 1943/2014. Dazhai Heiyi zhi Zongzu yu Tuteng Zhi [The clans and totems of Black ethnic group in Dazhai camp]. In Li Wenhui & Xia Mingfang & Huang Xingtao (eds.), *Minguo Shiqi Shehui Diaocha*

- Congbian* [Collection of social surveys during the Republic of China], 793–802. Fuzhou: Fujian Jiaoyu Chubanshe.
- Wang Dehe & Wang Xuan. 2013. Ersu Shabawen Lishu zhong ‘Hu Tui Diqu Tu’ [The figure of the tiger pushing the earth in the Ersu people’s hemerology written in Shaba script]. *Zhongguo Zangxue* [Chinese tibetology] 4, 148–155.
- Writing Group of Qiangzu Jianshi. 2008. *Qiangzu Jianshi* [A brief history of the Qiang people]. Beijing: Minzu Chubanshe.
- Xu Duoduo. 2015. A comparison of the twenty-eight lunar mansions between Dabaism and Dongbaism. *Archaeoastronomy and Ancient Technologies* 3(2), 61–81.
- Xu Duoduo. 2016. Interpretation of Daba script: Gemu from Wujiao Village. *Acta Linguistica Asiatica* 6(2), 53–67.
- Xu Duoduo. 2017. From Daba script to Dongba script: A diachronic exploration of the history of Moso pictographic writings. *Libellarium: Journal for the Research of Writing, Books, and Cultural Heritage Institutions* 10(1), 1–47.
- Xu Lihua. 2015. Ersu Zangzu Rili Yanjiu [A study of Ersu Tibetan calendar]. *Xizang Yanjiu* [Tibetan studies] 6, 63–68.
- Yampolsky, Philip. 1950. The origin of the twenty-eight lunar mansions. *Osiris* 9, 62–83.
- Yang Xuezheng. 1994. *Zangzu, Naxizu, Pumizu de Zangchuan Fojiao: Diyu Minzu Zongjiao Yanjiu* [The Tibetan Buddhism of the Tibetan, Naxi, and Pumi peoples: A study of regional ethnic religion]. Kunming: Yunnan Renmin Chubanshe.
- Zhou Jiwen & Xie Houfang. 1998. *Zangwen Yuedu Rumen* [An introduction to the reading of Tibetan]. Kunming: Minzu Chubanshe.
- Zhou Yin. 2012. *Naxizu Gudai Tianwen Lifa Yanjiu* [A study of the astronomy and calendar of Naxi]. Chongqing: Southwest University. (Master’s thesis.)
- Zhu Baotian & Chen Jiujin. 1985. Naxizu de Ershiba Xiu yu Zhanxingshu [The twenty-eight lunar mansions and the astrology of the Naxi people]. In Guo Dalie & Yang Shiguang (eds.), *Dongba Wenhua Lunji* [A collection of studies on Dongba culture], 311–332. Kunming: Yunnan Renmin Chubanshe.

Appendix

Table 2: Correspondences of lunar mansions among different traditions^{a)}

Daba	Dongba	Moso Constellation	Yi	Pumi	Chinese	Tibetan	Sanskrit	English	Greek Constellation
[pʰælmiː] <i>Pami</i>	[pyɿboː]/ [pyɿbylkyː] & [pyɿbylmæː] ‘the star of the porcupine’/ ‘the head of the porcupine’, ‘the tail of the porcupine’	Human Being/ Porcupine ^{b)}	𢃥𢃥 /lang ga/ ‘gather (of animals)’	/bya-ze/	牛 /ngjuw/ ← /*ŋwi/	ସ୍ରାଵନାତ୍ୟକ୍ରମ [gro bzhin] (135)	śravānā Wurong 无容 (‘no cosmetics’)	Ox (Altair)	Aquila
[nɿdɿH] <i>Nizhi</i>									
[zwaɿkuː] ‘the Horse	[zuaɿmoɿtseɿkuː]/ [zuaɿdzeɿ]	Horse ^{c)}	——	/bya-spos/	女 /nrjoX/ ←	ସ୍ରାଵନାତ୍ୟକ୍ରମ [byi bzhin]	abhijit ‘Ercong 耳聰	Girl	Delphinus

^{a)} In Table 2, the data of Daba is from my own fieldwork notes. The Dongba column is filled according to Li Lincan et al. (1972), Zhu Baotian & Chen Jiujin (1985), and Li Guowen (2006). The correspondences between Daba and Dongba lunar mansions, and the names of Moso constellations are explained in Xu Duoduo (2015). The data of Yi lunar mansions are quoted from Chen Jiujin et al. (1984: 90, 94–97). The Pumi lunar mansion names are quoted from Chen Zongxiang (1992: 81). The reconstructions of ancient Chinese are quoted from Baxter (1992) and Jacques (2007). The Tibetan terms are quoted from Gexi Quzha (1957), and the translations after page numbers in parentheses are cited from Chen Zongxiang (1992: 81). The Sanskrit terms and translations are quoted from Chen Zungui (1982: 396) and Niu Weixing (2004: 56). The last two columns provide English translations of these lunar mansions and the corresponding European constellations (cf. Chen Zungui 1982: 308–309). The grey grids mark the starting lunar mansion of each ethnic group.

^{b)} This lunar mansion of Moso corresponds to the asterism 河鼓二 (ha←-*gaj; kuX←-*ka?), which belongs to the Chinese Ox Mansion. The asterism referred by the Yi lunar mansion name is β Aql, α Aql, and γ Aql, which also belong to the Chinese Ox Mansion (Chen Zongxiang 1992: 95).

^{c)} This lunar mansion of the Moso corresponds to the asterism 鮑瓜 (bæw←-*bru; kwæ←-*kʷra), which belongs to the Chinese Girl Mansion. It is transcribed as *Hugua* in English.

Constellation'	'the star of the horse'			'the belly of the bird'	/*nra?/	(571) ဗျာဂျုံ [bya gzhug] (568) 'the tail of the bird'	(sharp hearing)'		
—	—	—	ဗျာဂျုံ /se ba/ 'the male rhinos'	/bya gzhug/ 'the tail of the bird'	虚 /xjo/← /*nra?/	မြန်ရှု [mon gre] (650)	śravīṣṭhā Tancai 贪财 ('greedy for wealth')	Emptiness	Aquarius/ Equuleus
—	—	—	—	/chu lha mo/ 'the goddess of water'	危 /ngjwe/← /*ŋoj/	မြန်ရှု [mon gru] (650) ဗျာလာမှု [chu lha mo] (266) 'goddess of water'	śatābhi ṣaj Baidu 百毒 ('all kinds of poisons')	Rooftop	Aquarius/ Pegasus
—	—	—	ဗျာစာ /se ma/ 'the female rhinos' ^{d)}	—	室 /syit/← /*stjít/	—	—	Encampment	Pegasus
[pʌt̪kʰwʌt̪] 'the mouth of the frog'	[pɑt̪kʰoɪ] 'the mouth of the frog'	Frog	ဗျာပြု /se tie/ 'the big rhinos'	/sui to/ 'the upper part of the quadrangular asterism'	ဗြာဗြာစုတ် [khrums stod] 'the upper part of the bird's beak'	pūrva-prosthapadās (pūrva-bhādrapadās) Qian Xianji 前贤迹 ('the	Markab, Scheat (α Peg, β Peg)		

^{d)} According to Chen Jiujin et al. (1984: 95), this lunar mansion of the Yi people consists of Fomalhaut and Piscis Austrinus Ε, which belong to the Chinese Encampment Mansion.

					(94)	trace of sage in the front ^{c)}		
[pʌdzuŋt] 'the urine of the frog'	[paɿbyt] 'the limb of the frog'		/sui mie/ 'the lower part of the quadrangular asterism'	壁 /pjiek/← /*pjek/	ຂ្លែម្បាសំ [khrums smad] 'the lower part of the bird's beak' (94)	uttara-prosthapadās (uttara-bhādrapadās) Bei Xianji 北 贤迹 ('the trace of sage in the north')	Wall (Algenib, Sirrah; γ Peg, α And)	Pegasus and Andromeda
[dzurɪkwt] 'the star of water'	([paɿmæt]) 'the tail of the frog'		馬 /mu ye/ 'the horse'	/noŋ tsu/ 'the tail of the frog'	奎 /kwej/← *khhwe/	流灌 [nam gru] (464) 'boat of the heaven'	revatī Liu guan 流灌 ('irrigation')	Legs Andromeda and Pisces
[pʌtkuŋpʰwt] 'a white star of the Frog Constellation'	[naɿŋgvt] phonetic		兔 /le ke/ 'the mouth of the rabbit'	/t'a kar/ 'the tail-peak'	娄 /luw/← /*C-ro/	馬師 [tha skar] (363) 'small stick'	aśvayujau Mashi 马师 ('horse trainer')	Bond (α Ari, β Ari, γ Ari) Aries
—	[t'ɑɿkuŋt] 'ta star'		◎ 𩫑 /ta mu/ 'the tail of time'	/bar ni/ 'the tail of time'	胃 /hjwɪjH/← /*gwits/	长息 [bra nye] 'Sanskrit word' (575)	bharanī Changxi 长息 ('long breath')	Stomach (35 Ari, 39 Ari, 41 Ari) Aries
[qʰɿtʂəlqʰtʃ] 'the horn of the six stars'	[tʂ'waɿts'ʌʃ]/ [tʂ'uaɿts'ʌlk'ɑʃ], [tʂ'uaɿts'ʌʃgoɿmoʃ] 'the six stars'/'the horn of the six stars',	Six Stars	羣 /chi ku/ (/ta bo/) 'herd of rock sheep'	/tsu ts/ 'the six sisters'	昴 /mæwX/← /*mmru?/	星宿 [smin drug] 'the six sisters' (464)	kṛtikāś Mingcheng 名称 ('denomination')	Pleiades Taurus

^{c)} According to Chen Jijin et al. (1984: 95), this lunar mansion of Yi People consists of Menkar (α Cet) and Kaffaljidhmah (γ Cet), which belong to the Chinese Stomach Mansion.

	‘the body of the six stars’		(‘the head of time’)						
[qʰɿtsælgymi˧]	‘the body of the six stars’		—	—	unknown ^{f)}				
[njaɿlhj˧]	‘the Red Eye Constellation’	[miɿhj˧]	Red Eye	赤 /he ju/ ‘the wind tunnel’	/ts'i le/ ‘to shepherd’	毕 /pjit/← /*pit/	娑訥 [snar ma] ‘sandalwood’ (490)	robipi (brāhmi) Changyu 長育 (‘long-term raise’)	Aldebaran
—	—	—	—	枭 /ji wa/ ‘the head of the parrot’	/dze ku/ ‘the head of the beam’	觜 /tsje/← /*tsej/	羣 [mgo] ‘head’ (155)	mygáiras Lushou 鹿首 (‘the head of the deer’)	Turtle Beak
[soɿtʰalkol]	‘the head of the three stars’	[surl̩oɿ]	Three Stars	翼 /ji lo/ ‘the wing of the parrot’	/dze je/ ‘the hand of the beam’	參 /srrim/← /*s-r-lim/	𢵤 [lag] ‘hand’ (850)	ādrā (bāhū) Shengyang 生养 (‘give birth to’)	Orion’s Belt
[soɿtʰalloɿ]	‘the hand of the three stars’ ^{g)}	[surl̩oɿlaɿ]		—	—				Orion’s Broadsword

f) Daba [qʰɿtsælgymi˧] corresponds to Dongba [ts'uaɿts'ʌlgoɿmo˧]. According to Zhu Baotian & Chen Jiujin (1985: 322), this Moso lunar mansion could refer to the Chinese Net Mansion (毕 /pjit/←/*pit/).

g) This Moso lunar mansion corresponds to the asterism called *Punishmet* (伐: /bjot/←/*bjat/), which belongs to the Chinese Three Stars Mansion.

[sol ^h a.lt ^h wa.lmi ^h] 'the <i>chuomi</i> of the three stars'	—		—	—	unknown	—	—	—	—
[so ^h a.lkjw ^h p ^h u ^h] 'a white star of the Three Stars Constellation'	[(ku ^h lp ^h ur ^h)dza ^h ky ^h] '(the white star of) the head of the water' ^{h)}		—	/dze tei/ 'the waist of the beam'	井 /tsjengX/← /*s-kemŋ?/	नवासु [nabs so] 'a Sanskrit word' (462)	<i>punarvasū</i> (<i>yamakau</i>) <i>Zengcai</i> 增财 ('increase of wealth')	Sirius	Canis Major
—	[(ku ^h lp ^h ur ^h)dza ^h lma ^h] '(the white star of) the tail of the water'		𦇂𦇃 /ji jue/ 'the waist of the parrot'	—		—	—	Procyon	Canis Minor
—	—		𦇂𦇃 /ji mu/ 'the tail of the parrot'	—		—	—	ε CMi and β CMi	—
—	—		𦇂𦇃 /wu nao/ 'the chest of the bear'	—		—	—	Pollux	Gemini
[ho ^h kuu ^h] 'the Pheasant Constellation'	[t ^h v ^h lk ^h o ^h] phonetic	Pheasant	—	/dze mie/ 'the tail of the beam'	鬼 /kjw ^h jX/← /*kwij? ^h /	𢃥 [rgyal] 'victory' (175)	<i>tisya</i> (<i>pusya</i> , <i>sidhya</i>) <i>Chisheng</i> 烛盛 ('flaming')	Ghost (Beehive Cluster)	Cancer
—	—		—	/xoŋ ke/ 'the pheasant'	柳 /juw/← /*mə-ru?/	𢃥 [skag] 'purple hue' (37)	āśleśās <i>Bujin</i> 不覲 ('no audience with')	Willow	—

^{h)} In Moso hemerology, 'the head of the water' corresponds to Sirius, 'the tail of the water' corresponds to Procyon (the brightest of the Chinese constellation *Nanhe* 南河 (/nom/←/*nim/; /ha/←/*gaj/). In Yi context, 'the tail of the parrot' corresponds to ε CMi and β CMi, 'the chest of the bear' corresponds to Pollux (Chen Jiujin et al. 1984: 95). These asterisms all belong to the Chinese Well Mansion.

[kʌlkwʌl] 'the Hawk Constellation'	[fvɿlkʌlkwʌl] 'the star of the pheasant and the hawk'	Hawk	—	—	五帝座 /nguX/← /*ngə?/; /tejH/←/*teks	—	—	Denebola	Ursa Major
—	—	—	—	/ko ke/ 'hawk'	星 /səŋ/← /*səŋ/	𠂊 [mchu] 'a vertical stroke; length' (277)	magħas <i>Tudi</i> 土地 ('earth')	Star	—
[bołkʰwʌl] 'the mouth of the pig'	[bołk'ɔl] 'the mouth of the pig'	Pig	𢂔 𢂔 /wu hei/ 'the back of the bear'	/bo k'u/ 'the mouth of the pig'	轩辕十四 /xjɔn/← /*xjan/; /hjwon/← /*wjan/	—	—	Regulus	Leonis
[bołdzurł] 'the urine of the pig'	[bołt'ɔl] 'the waist of the pig'			/bo to/ 'the waist of the pig'	轩辕十二	—	—	Algieba (γ Leo)	
[bołmał] 'the tail of the pig'	[bołmał] 'the fat of the pig'		𢂔 𢂔 𢂔 /wu si du/ 'the male bear'	/bo ma/ 'the fat of the pig'	太微右垣 /thajH/← /*hlats/; /Mjij/← /*mjii/	—	—	Right Wall	
[ziłzył] 'four sides of the mdzo (WJ)/the horns on the four sides of the mdzo (QS)'	[zyłnvł] 'the mouth of the mdzo'	Mdzo ⁱ⁾	𢂔 𢂔 𢂔 /wu si ma/ 'the female bear'	—	太微左垣	—	—	Left Wall	Virgo/ Coma Berenices
[ziłqʰł] 'the horn of the	—		𢂔 𢂔	/tie ts'o/ 'the horn'	角 /kæwk/←	𩶓𩶓 [nag pa]	citrā <i>Caihua</i> 彩画	Horn	Virgo

ⁱ⁾ According to the available materials, we do not know the correspondences of lunar mansions of the Mdzo Constellation with celestial bodies. However, Pumi hemerology has a lunar mansion group located in the same region and with similar designations. Therefore, it is possible to find out the Moso and Pumi counterparts in this series of lunar mansions according to their names. Moreover, since the asterisms corresponding to Pumi lunar mansions have been documented, this comparative analysis provides references useful in figuring out the locations of Moso lunar mansions named after mdzo.

mdzo'			/mu se/ 'the end'	of the rock sheep ^{j)}	/*krok/	'the black' (459)	('colorful painting')		
[ziɿli] 'the ear of the mdzo'	[zyɿheɪ] 'the ear of the mdzo'		𦵃 𦵃 /zhe chu/ 'shadow'	——	亢 /KhangH/← /*kkhəŋ-s/	𩫑 [sa ri] 'precious pearl' (902)	svāti (pūrvāśāḍhāś) Shanyuan 善 元 ('kind element')	Neck	Virgo
[ziɿŋjɪ] 'the eye of the mdzo'	[zyɿmɪaɪ] 'the eye of the mdzo'		𦵃 𩫑 /zhe bo/ 'the following shadow'	/tie nie/ 'the eye of the rock sheep'		——	——	Left Conductor	Boötes
——	[zyɿtɛ'iɪ] 'the neck of the mdzo'		𩫑 𩫑 /ri huo/ 'the head of the leopard'	/tie niu/ 'the mouth of the rock sheep'	氐 /tej/← /*t̪iŋ/	𩫑 [sa ga] 'Sanskrit word' (897)	viśākhe (rādhā) Shange 善格 ('skilled in fighting')	Root	Lyra
[ziɿgɪ] 'the body of the mdzo'	[zyɿt[‘uɪ]] 'the waist of the mdzo'		𩫑 𩫑 /ri niu/ 'the eye of the leopard'	/tie ka/ 'the neck of the rock sheep' ^{k)}	房 /bjang/← /*baŋ/	𩫑 𩫑 [lha mtshams] 'heaven' (955)	anurādhāś Yueke 悅可 ('joyful approval')	Room	Scorpius
——	[zyɿdvɪ] 'the stomach of the mdzo'		𩫑 𩫑 /ri ke/ 'the mouth of the leopard'	/tie tiu/ 'the belly of the rock sheep'	心 /sim/← /*sim/	𩫑 [snron] (492)	jyeṣṭhā Zunzhang 尊 长 ('elders')	Heart	Scorpius
——	[zyɿbaɪ] 'the vagina of the		𩫑 𩫑 /ri jue/	——	尾(1,2) /mjiiX/←	𩫑 [snrubs]	mūlabarhanī Genyuan 根	Tail	Scorpius

j) In Pumi, 'rock sheep' has two variants: /tie/ and /se/ (Chen Zongxiang 1992: 82). The second pronunciation is similar to the word for 'rock sheep' in Moso, [seɪ].

k) In the Pumi dialect alongside Kala River, it is read as /se r/, which means 'the four limbs of the rock sheep' (Chen Zongxiang 1992: 81).

	mdzo'		‘the waist of the leopard’		/*mil?/	(491–492)	元 (‘root’)		
—	[zylbʌt̪] ‘the foot sole of the mdzo’		 /ri han/ ‘the heart of the leopard’	—	尾(3,4,5)				
—	[zylmæt̪] ‘the tail sole of the mdzo’		 /ri mu/ ‘the tail of the rock sheep’	/tie mie/ ‘the tail of the rock sheep’	尾(8,9)				
[laθh̪ylkʰwʌt̪] ‘the mouth of the tiger’	—	unknown	—	—	unknown	—	—	—	—
[sildzildyt̪] ‘the star of the carnivore’	—	unknown	—	—	unknown	—	—	—	—
[swælqʰwʌt̪] ‘the higher foot-print’	[sualk'uaʌ] phonetic	unknown	 /sha ba/ ‘the end of the leopard’	/tie ke jasi/ ‘the <i>jiasi</i> of rock sheep ¹⁾	箕 /ki/← /*ki/	𠂔 /chu stod/ ‘the head of the water’ (259)	<i>pūrvāśādhaś</i> 前鱼 (‘the fish in the front’)	Winnowing Basket	Sagittarius
[mælqʰwʌt̪] ‘the lower foot-print’	[hylk'uaʌ] phonetic		 /bo bu/ ‘porcupine’	/phul/ ‘one sixth of Tibetan liter’	斗 /tuwX/← /*to?/	𠂔 /chu smad/ ‘the tail of the water’ (262)	<i>uttarāśādhaś</i> 北鱼 (‘the fish in the north’)	Dipper	Sagittarius

¹⁾ It is still unknown which part of the rock sheep *jiasi* refers to. In the Pumi dialect alongside Kala River, it is read as /se-r nag po/ (cf. Chen Zongxiang 1992: 83). The segment /nag po/ could be a Tibetan word which means ‘black’ (Gexi Quzha 1957: 459). Therefore, the compound /se-r nag po/ could be translated as ‘the four black limbs of the rock sheep’.