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## CHAPTER 1 Comparative and Historical Glimpses of the Lacertilia (Lizards) in Tai: A Reconstructive Problematic

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## CHAPTER 1

# Comparative and Historical Glimpses of the Lacertilia (Lizards) in Tai: A Reconstructive Problematic

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## [Abstract]

This paper outlines the general characteristics of saurian nomenclature in the Tai sub-family of languages in Southern China and Southeast Asia. In so doing it undertakes to provide a family-wide historical approach to identify commonalities and differences that occur in all Tai localities. As with much of the linguistic and ethnozoological work in this area, availability of data is a constant limitation, as the majority of linguists carrying out fieldwork have not been prepared, either for the diversity or for the complexities that are associated with fauna in the various zoogeographical realms in which they are specializing, and the importance of the animals that coexist with the people and which inhabit their cosmos. Gaps in the data remain, but an attempt has been made to provide a basis for more detailed analyses in the future. Covered are the essential roles played by zoogeography of the main lizard categories; problems associated with historical reconstruction; and the essential folkloristic meanings attached to lizards by speakers of Tai languages and other languages that may be associated.

Keywords: Tai linguistics, Tai lizard names, Tai folklore, Tai ethnozoology, comparative and historical Tai, ecological linguistics.

## 1. Introduction

The study of lizard names in Tai languages provides unique insights into not only the proto-history of the family and the use of zoogeography in tracing directions of movements of Tai peoples over the past 2,500 years or so, and the problems associated with reconstruction of bisyllabic taxa, but also to the use of female gender designations in naming. As with many other animal categories, data is sparse for many areas because investigators fail to differentiate even the main biological families. Most data for this paper were assembled some 45 years ago and only a few additions have been made to this assemblage in the intervening years. Names of lizards in the related Kra-Dai families of Kra, Hlai, and Kam-Sui remain largely unavailable.

## 2. Classification

Lacertilia (also called Sauria) is the suborder of Squamata commonly referred to as lizards. In fact, 'lizard' and 'lacerta' both descend from the same Latin root. The order Squamata includes both lizards and snakes.

Moving from north to south in East and Southeast Asia, the distribution of lizard species increases. In the zoogeographical area defined by Mell (1929) as North China there are only a few species, but in the first comprehensive study of lizards in Thailand by Taylor (1926) 116 species were described, and since that time many others have been added.

The distribution of lizards (as well as many other organisms) is extremely localized, such that in any given area the actual number of species may not be very great. Or, it may also be the case that a given species is widespread, but so sparse in occurrence that rare individuals have not been named by human inhabitants. It will be seen, however, that most localities have representatives of the most important saurian families, and that these representatives are always named, at least at the generic level, and are classified in Tai languages. Furthermore, four of the most important lizard families are found in the northernmost Kra-Dai areas, as well as in the south: Gekkonidae, Agamidae, Lacertidae, and Scincidae. Since data for Kra and Hlai languages is so sparse, this paper focuses mainly on the Tai sub-family of Kam-Tai. (See Chamberlain (2016) for the main branches and historical movements within Kra-Dai.)

Three other genera of lizards are of interest because of their distinctively southerly range, these are flying lizards *Draco* [Agamidae], Butterfly lizards *Leiolepis* [Agamidae], and monitor lizards *Varanus* [Varanidae]. None of these is known to range north of the Tropic. *Draco* is very localized in occurrence, very well known in some areas, but totally unheard of in others. Because of this it is unsatisfactory as a lexical item on comparative word lists. The other two genera have the distinction of possessing monosyllabic names in Tai languages, whereas virtually all other lizard taxa are bisyllabic. This peculiarity of *Varanus* and *Leiolepis* implies they are recent additions to Tai lexicons, subsequent to a southward migration.

Historically, crocodylian terms are phonologically regular, although PT \*da: A has shifted meaning to 'Belostome' (the giant water beetle). The taxa for *Leiolepis* while not regular, are unquestionably cognate. Those for *Varanus* exhibit a great deal of phonological variation, but again, must also be considered cognate.

For the most far ranging and evenly distributed lizard genera, *Calotes* (*etc*), *Gekko*, *Hemidactylus* and the Scincidae, the situation is not so simple. The taxa are phonologically irregular, not always cognate within their respective genera, and occasionally cognate outside the lizard category altogether. In several instances taxa for these genera appear to be contact words with other language families, in particular Chinese and Austroasiatic. (See for example the work of Nathan Badenoch in this volume.)

The propensity for bisyllabicity in lizard nomenclature is shared by only a few other organisms, among them the toad, the spider and the centipede. The two syllables are not reducible, so far as can be known, to a combination of generic plus specific, or life form plus generic, although in the case of *Hemidactylus*, the expression in many languages seems to be traceable to ('guard')<sup>1</sup> + 'house', probably a reference to the organism's ritual function described below.

Generally speaking, cognate lizard names are difficult to find and when they do occur in discontinuous dialects the phonology is often irregular and the meanings are not alike. All extant lizard names which have to date been recorded for Tai languages have been examined but there appears to be little evidence of patterning.

It must be concluded that as a group, lizards (and some amphibians, especially toads – cf. Chamberlain 2020), were subject to unique phonological and semantic constraints not occurring elsewhere in the Tai lexicon, at least for the chordates.

But why should lizards exhibit this deviant behavior? It will be remembered that, like mammals, lizards have not developed stable G level taxa. There is evidence that a few languages have attempted to develop LF taxa for lizards, usually without success. The most persistent has been Vientiane Lao, where the following occur:

tɕi: B2 tɕiam C2	(Hemidaotylus)
tɕi: B2 koʔ DS2	(Scincidae)
tɕi: B2 pɔ:m A2	(Calotes)
tɕi: B2 khe: C1	'crocodile'

But the other lizards, *Leiolepis*, *Varanus* and *Gekko* do not take this form. Furthermore, tɕi: B2 is applied in the nomenclature of the other organisms as well, for example:

tɕi: B2 na:y A4	'a kind of cricket'
tɕi: B2 po:m B2	'another kind of cricket'
tɕi: B2 lo: B4	'yet another kind of cricket'
tɕi: B2 khep DS1	'a large centipede that stings'
tɕi: B2 so:n A4	'a kind of beetle'
tɕi: B2 nun A4	'another kind of beetle'
tɕi: B2 tɕu: C2	'a kind of bird (said to be onomatopoeic)'

This use of tɕi: B2 so extensively is an idiosyncratic expansion in that language alone.<sup>2</sup>

### 3. Human-Lizard Relations

Before proceeding with presentation of the data it will be useful to examine briefly some generalities about lizard-human relationships in South China and Southeast Asia. It is worthwhile noting that when speaking of southern China that ethnic Chinese from various parts of northern China who invaded the south beginning in the Qin-Han periods (3<sup>rd</sup> c. BCE) interacted with multi-ethnic non-Sinitic populations, and that resultant folklore and cultural practices cannot be accurately referred to as “Chinese.” This is a complex topic not yet adequately addressed in existing academic research. The works of Wolfram Von Eberhard and Edward Schafer have laid some of the groundwork, but little has been done since.

One of the common features shared by organisms whose G taxa are bisyllabic is their purported use in *ku* magic<sup>3</sup> or poison (cf. Feng and Shyrock 1935; Shafer 1967:102-3; Eberhard 1968:150, 159-60). Lizards, toads, spiders, and centipedes were all used. However, in addition to these, snakes and scorpions (the names of which are usually monosyllabic in Tai languages) were also included.<sup>4</sup> According to Eberhard (1968: 159-60) these were placed together in a container, the animals would fight and devour one another until only one was left which would

possess the most powerful magic for that year. Although the lizard used was usually not specified in the sources available to me, Eberhard (1968: 150) mentions gecko in this connection at least once. The possessor of *ku* magic could cause animals that are eaten to come alive in the stomach thus killing whom he pleased, a common motif in Southeast Asian magic). Also, *ku* magic was linked with ‘demoniac sexual appetite’ (Schafer 1967:103), relating it to other forms of love potions common to the area.

Lizards have traditionally been considered as transformations of dragons in East and Southeast Asia. As such they are associated with water and with the female principle. There is good reason for the water affinities when one considers the alligators of the Yangtze, the crocodiles of the Fukien-Kwangtung coast, and the large water monitors (*Varanus salvator*) inhabiting inland bodies of fresh water. The mythological associations of women and dragons are too many and too varied to be dealt with here, but Schafer (1973: 28-9) sums up the situation eloquently:

In China, dragon essence is woman essence. The connection is through the mysterious powers of fertilizing rain, and its extensions in running streams, lakes, and marshes. In common belief as in literature, the dark, wet side of nature showed itself alternately in women and in dragons. The great water deities of Chinese antiquity were therefore snake queens and dragon ladies: they were avatars of dragons precisely because they were equally spirits of the meres and mists and nimbus clouds. Despite their natural affinity to women, in many tales they appear as fertilizing males and sometimes as powerful dragon kings. But these too were part of the rain cycle. The women (goddesses, human lasses, shamankas) were the repositories of moisture - the cool, receptive loam, or the lake or marsh; the virile dragons were the active falling rain. Both were manifestations of the infinite transmutations of the water principle. The masculinity of some medieval dragons is probably due to Indian influence. Doubtless in early antiquity the sex of dragons was ambiguous and variable, with the *yin* and feminine attributes dominant. In medieval literature, the *yang* and masculine attributes come somewhat to the fore, although they never quite submerge the ancient core of *yin*.

Because of the water connection it is not surprising to find some lizards are classified as fish, even though, as in the case of WN, they may be land dwelling forms.<sup>5</sup> Table 1 lists examples of these.

Table 1: Lizards and crocodylians classified as fish

EFE0 VIII.7 (Nung, Lao Kay)	pa lép pô	'lézard'
EFE0 VIII.8 (Nung, Lao Kay)	pa' lét pô	'lézard'

EFE0 VIII.9 (Nung, Lao Kay)	pã lắk p̃	'lézard'
EFE0 V.5 (Thai, Hoa Binh)	pa g̃ioc	'crocodile'
EFE0 V.6 (Thai, Hoa Binh)	pa' hái	'crocodile'
WN	pa: A2 lat DS1 po: A2	( <i>Lioolepis belliana</i> )

Likewise, a certain number of lizards have female affixes in some languages<sup>6</sup> (Table 2).

Table 2 - Lizards classified as feminine

WN	me: B4 kap DS2 kem C2 me: B4 ʔak DS3 ʔε: C3 me: B4 tɛu: A2. ðɣ:n A4 [me: B4 'mother']	( <i>Calotes</i> ) ( <i>Gekko</i> ) ( <i>Hemidactylus</i> )
Yay	me: B4 ða:n A4 [me: B4 'mother']	( <i>Hemidactylus</i> )
SC	söng 5o hön 4o [söng 5o 'lady in waiting upon a princess']	( <i>Hemidactylus</i> )
EFE0 VIII.4 (Nhang, Lao Kay)	me tsi - kem	'Lézard'
EFE0 VIII.6 (Nung, Lao Kay)	mè chiú ráñ	'lézard'

On the island of Hainan Swinhoe (1870) notes that dried specimens of flying lizards of the genus *Draco* are placed on the foreheads of women in childbirth. Bone marrow from another 'dragon' was used on the face for good complexion and to facilitate childbirth (Schafer 1973: 21). In BT the 'soul' of a *Calotes* agamid is used in the birth ceremony. As Schafer puts it: "It is understandable that the innermost substance of a variety of dragon, ultimately a promoter of fertility, would be useful both in attracting love and easing the production of its fruit." (ibid: 21)

Another lizard (*Hemidactylus*) was used to mark the virginity of young girl. If the virginity was lost the mark would disappear (Eberhard 1968: 148; Read 1934: 324).

#### 4. Data

Data is arranged according to scientific species, genera, or even family, depending on what level is specified in the taxonomy of the Tai languages. Pertinent information concerning form, habits, habitat, coloration, zoogeography, and folklore are included as available or relevant. These names and images are provided to serve as representatives of the folk-taxonomic category, that is, they are similar in appearance to the majority of genera and species in the category. The arrangement is as follows: (Images are courtesy of Wiki Commons.)

##### ***Varanus salvator* ‘water monitor’**



##### ***Varanus bengalensis*. ‘Bengal monitor’**



***Draco* (Agamidae) ‘flying lizard’**



***Calotes* (Agamadae) – and other related genera. ‘garden lizard’**



***Physignathus* (Agamidae). ‘water agamid’**



***Leiolepis belliana* (Agamidae) ‘butterfly lizard’**



***Gekko* (Gekkonidae). ‘Tokay gecko’**



***Hemidactylus* (Gekkonidae) ‘House lizard’**



**Scincidae (numerous species) ‘skinks’ (Pictured:*Eutropis mulifasciatus*)**



**5. Varanidae**

*Varanus salvator*. The water monitor<sup>7</sup> is a large lizard inhabiting all of mainland Southeast Asia as far north as Tsingyun in southern Guangdong and Guangxi Provinces (Mertens 1941-2: 253). This is the most widely distributed lizard of the genus, ranging through India and Ceylon south and east through the Indo-Australian Archipelago, to the Philippines, Celebes, and northern Australia (Taylor 1963: 923). In size it is the second largest lizard in the world, attaining a length of ten feet (anon. n.d.).<sup>8</sup> It is primarily aquatic in habitat, but is known to roam about on land close to the water and it is an excellent climber. The claws and tail are powerful, the tail being its main means of defence.

In Thailand and Cambodia *salvator* is much feared and the subject of a number of superstitions. A possible reason for this is suggested by Taylor (1963: 923) in a note on the lizard in the Philippines: “This species is at least chiefly carnivorous and often feeds on meat in a rather advanced state of decay. Occasionally (in the southern Philippines) they disinter corpses buried in shallow graves.”

Its name in Siamese *hia C1* is an abusive term of the strongest order. According to a Thai source (Anon. n.d.) some people will not even voice the name, referring to it euphemistically as *tua A2 ηxn A4 tua A2 thɔ:η A4* (lit. 'animal silver animal gold'). If the *hia C1* swims in front of a boat it is considered an evil omen and the bow of the boat is immediately washed off. In the Northern Khmer speaking area it is considered a beast with sacred power; if captured it is released, sometimes in the spirit house. If encountered it is appeased and pleaded with not to devour the children. Its name in the Khu Khan district of Srisaket is *ɔa:rak*, from the Sanskrit *rākshasa*

or Pali *rakkhasa* 'evil demon, ogre (usually making the water its haunt and devouring men)' (Kitiyakara 1969).<sup>9</sup> Its image may also be seen on lintels over doorways of Khmer temples. In the 5<sup>th</sup> century temple of Vat Phu in Campasak, Laos, a large stone slab said to be an altar for human sacrifice, is deeply imprinted with a human-size image of *salvator*. In most Tai languages other than Siamese, however, these beliefs do not exist and the animal may be considered edible.<sup>10</sup>

The linguistic forms are phonologically irregular, but obviously cognate. The SW languages all show initial h- except for KhamtiC which is kw-. The C languages have the most variation: h- ~ kh- ~ tɛh- (the EFEO notebooks have in addition s- ~ ts- but what sounds are represented is not clear). The only N forms recorded are Yay and EFEO (20), k- ~ ch- (= tɛ in Viet.).

Semantically, there is confusion with the word for 'freshwater crocodile', no species of which currently inhabits the inland Tai speaking areas of northern Vietnam or southern China, although they may have in the past. This is not clear. Some languages such as BT use both *hia* C1 '*V. salvator*' and *khe*: C1 '*C. siamensis*'. That the two forms in Lao (and in other SW languages) derive from a common phonological source is a distinct possibility, though it must predate PSWT.

Table 3: *Varanus salvator*

BT	to: A2	hia C1
TV	to: A2	hia C1
Lao	to: A2	hia C1
Si	tua A2	hia C1
KhamtiC		k-wi 3c - kai 3o <sup>11</sup>
WT (Minot)	tô	hế
WN	ti: A2	tɛhi: C1
TayS	tu	khía / khe <sup>?</sup>
LM	tuu A2	hii C1
Yay	tua	kia C1

Table 4: EFEO taxa for 'crocodile'

EFEO (2)	tô	hế	nặm	bế
(20)	tua	chiạ		
(22)	tu	khe <sup>?</sup>		
(26)	tô	hia <sup>?</sup>		
(27)	tô	hế		
(28)	pa	chí	khế <sup>12</sup>	
(38)	ti	tsy		
(39)	tũ	sy		
(41)	tô	khế		
(47)	tô	hia <sup>?</sup>		
(48)	tô	hia <sup>?</sup>		
(55)	tua	khía		

Table 5: Taxa for the freshwater crocodile *C. siamensis*

Lao	to: A2	khe: C1	' <i>C.siamensis</i> '
Si	tua A1	tɔ: A2 rǎ khe: C1	"
MM		tɕak DS2 khe: C1	"
YS		tɕa DS2 khe: C1	"
SekC		khě	'crocodile' <sup>13</sup>

*Varanus bengalensis*.<sup>14</sup> This monitor is more limited in distribution. It has not been reported from southern China, although it is common in central Vietnam, Luang Prabang, and northern Thailand. It is primarily a southern reptile inhabiting southern Vietnam, Cambodia, Malaya and Burma. There is, however, a BT taxon for this lizard, so its range must also include northwestern Vietnam.

From TV westward, the most frequently encountered linguistic form is *len* or *leen* A4. This also happens to be the KhumD from (*lèen*) as well, from which the Tai may have been borrowed. But it should be noted that in Khmu the LF taxon for lizards, *daang*, is not used with this lizard. Si has borrowed the Khmer *tkuat* (Srisaket) as *teăkuat* DL2, *teaj* A2 *kuat* DL2, *tăkuat* DL2 (cf. also MonS *həkot*, *thakot*, *dakot*, *phakot*). Its distribution northern Vietnam is unknown as no taxa have been recorded with positive identification.

*V. bengalensis* is found in trees or on the ground. It is highly prized as food in Laos and in TV, but not in BT.

Table 6: *Varanus bengalensis*

BT	to: A2	ʔyuaŋ C4 - ta:ŋ C4
TV	to: A2	lɛn A4
Lao	to: A2	lɛ:n A4
MM		lɛ:n A4
SC		len 4o
Si	tua A2	lɛ:n A4
KhmuD		lèen
TayS	tu	gìung tạng lùm 'petite reptile ressemblant au Jecko'

## 6. Agamidae

Agamid lizards are well represented in Southeast Asia.<sup>15</sup> They can be divided into three groups of genera which Tai Languages differentiate.

The first is *Draco*, the flying lizards, so called because of the “five or six elongate ribs passing through the body wall, supporting a wide membrane continuous with body skin, that may be folded parallel to the body or expanded like a fan by rib movements,” (Taylor 1963: 819) enabling the lizards to glide long distances through the trees and thus 'fly'. A second group consists of the genera *Calotes*, *Acanthosaura*, *Diploderma*, *Gonocephalus*, and *Pseudocalotes*, all quite similar in appearance and habitat, all possessing a dorsal crest, and mostly living in

trees. In English they are often referred to as tree lizards or garden lizards. A third group, consisting of the genus *Leiolepis*, is quite different in appearance, and lives in holes in the ground. Another genus, *Physignathus*, water agamids, should also be mentioned. It occurs throughout Indochina, Eastern Thailand, and southern China, but is common only in wetland areas. In Lao, Siamese and some related Tai languages, it is called /kǎthaŋ B4/ which may be related to *daaŋ* ~ *taaŋ* lizard names in AA and other Tai languages.

*Draco* sp. *Draco* lizards are true representatives of the dragon, associated medicinally with women in childbirth as well as with the issuance of prophetic warning. Swinhoe (1870: 240) gives the following report from Hainan:

The little flying lizard appears only to be found in the jungly district of Nychow (South Hainan), where it is an article of trade. The natives say that it is usually met with during spring in the forests in pairs flying from tree to tree. They are caught with a net; and when one is taken the other falls to the ground and allows itself to be captured without difficulty. They are pinned out like butterflies and dried for the market. Their chief use is to hasten childbirth, the dried reptile being placed on the forehead of the women in labor. They are called Fei-shay, or 'flying snake' and sell for a shilling apiece.

Animals that go in pairs and mates that allow themselves to be captured display the important attribute of matrimonial fidelity so important in Southeast Asian folklore. The association with women in childbirth, in addition to supporting the female-dragon relationship, is reminiscent of the BT birth rite's use of *Calotes*. In fact, the terms for *Draco* in many languages of Southeast Asia mean literally 'flying *Calotes*.'

In the BT area, *Draco* is said to make a noise at night during the dry season when the leaves are falling. The male goes ka:p ka:p and the female goes kɔn kɔn. Should these noises be heard during the day, they foretell of pending war. According to my teacher Mr. Baccam Done, this occurred just prior to the battle of Dien Bien Phu.

A paucity of data makes this item difficult to work with linguistically. The available taxa reflect the rather scattered distribution of the organism itself.

Table 7: *Draco* sp.

BT	to: A2 kha:m C1 – khǎ DS1	
SC	āk 2o - khāng 1o mīn 1c <sup>16</sup>	
Si (Chote 1957)	tua A2 ba:ŋ B3 lek DS4 tua A2 buŋ B3 - kapi:k DL2	(small flying squirrel) (or kapu:k, not clear)
Si	ginka bin.	(Taylor 1963:819)
EFEO (40)	tô chǎ - chá Tu chǎm chá	'lizard' 'lizard'

*Calotes*. The genus *Calotes* has a wide distribution "... throughout southern and southeastern Asia, from Afghanistan and the Tibetan border through India to Ceylon; east to southern China, Indo-China, Malaya; through the Malayan Archipelago to the Philippines but not reaching New Guinea." (Taylor 1963: 883)

*Calotes versicolor* (Daudin) (the Common Tree Lizard)<sup>17</sup> is the most far-ranging representative of the genus. It is found in Afghanistan, India and Ceylon, east to Hongkong, Indo-China, Malaya, and Sumatra (ibid: 883). A similar appearing lizard of the same family *Gonocephalus lepidogaster* ranges as far north as Yenping and Chungan Hsien in Fukien (Pope 1935: 466).

The Chinese medical practices associated with *Calotes* are curious in that they display a complete lack of knowledge of the organism, perhaps an indication that it is a relatively recent addition to Chinese zoology.<sup>18</sup> Read (1934: 324-5) writes of it as "certainly not an ordinary lizard for its bite is fatal; although the Lingman Yi-Wu-Chih." Read (1934) also states that, "it is very lucky to see one." Swinhoe (1870) writes that "the Chinese are very loath to touch it, declaring it to be venomous." How this reputation was acquired is a mystery as the lizard is virtually harmless. It was also especially noted by the Chinese for its ability to change color (yellow, brown, dark green, vermilion) with the time of day (Swinhoe 1870). The color changes are induced by excitement, sexual arousal, or from fear as when faced with a snake (Taylor 1963: 885). A quotation from Malcolm Smith in Taylor (1963) describes the courtship behavior of *Calotes mystaceus*:

The pair faced each other, arching their backs and puffing out their throats to the full extent. The vivid hues assumed by the male (and slightly by the female) during this performance transformed him into a truly gorgeous creature. The head and forepart of the body became of a light electric blue, sometimes green color, the upper lip and passes on to the shoulder turned almost white and stood out in contrast to the other colors.

For the BT, a *Calotes* lizard must be present at the *sen A1 soj B1 kuat DL2* or birth rite ceremony. It is believed that in a former life, the child belonged to other parents, human or animal, and that they will call out for the soul of the newborn child to come back. At the ceremony the *Calotes* is tied down by one leg and its soul sent back in place of the newborn child's, thus deceiving the original parents. Afterwards the *Calotes* is released (minus its soul). For the BT and the WN it is considered inedible. But for the Thay of Meuang Vat and throughout Laos and Thailand, *Calotes* may be eaten.

The linguistic forms for *Calotes* are many and varied. The taxa given here are mostly positive identifications. However, at the end of the paper, lists of probable cognates for some of the elements will be given.

Table 8 - *Calotes etc.*

TV	to: A2	pəm B2 sə - kɛ: B2	
Lao	to: A2	tei: B2	pə:m A2
MM		teak DS2	ka: B2 <sup>19</sup>
BT	to: A2	pəm A2 sə - kɛ: A2 <sup>20</sup>	

YS		tea <sup>?</sup> DS2	ka: B2	
Si		kiŋ C2	ka: B2 <sup>21</sup>	
SC		āk 2o	khāng 1o <sup>22</sup>	
KhamtiC		ai 3o	khāng 4o	
C.S.C.		ai 3o	khāng 1o	
WTD	to: A2	pəm A2tsang A1		
WN		me: B4	kap DS2	kem C2 <sup>23</sup>
NungS	tu	ng̃u	xlí kha	
'chaméléon' <sup>24</sup>				
EFEO (31)	tu	pòm	xang	'lézard' <sup>25</sup>
TayS	tu	pòm é		'rainette mugissant' ?

*Leiolepis belliana* (Cuvier). The genus *Leiolepis* is most commonly represented by the species *belliana*. It is found only on the ground where it digs burrows in sandy soil; it is at least partially vegetarian. This is a southerly reptile, inhabiting Sumatra, the Malay Peninsula, Burma, Laos, Thailand, Vietnam, Hainan, and Guangdong recorded only in Wuyung, about 45 miles west of Canton. (Evidence of a wider distribution in southern China may exist, though only in the far south.)

*Leiolepis* is apparently never mentioned in the Chinese records, but Swinhoe (1870) writes: “They have a peculiar smell about them which affects the taste of their flesh; and they are in consequence not eaten by the Chinese.”

They are not known from the BT *chou* of Muang Muoi, but they are found in the TV area and are eaten there as well. In WN they are classed as a fish, but they are not eaten. They are considered edible in Laos and Thailand, but not universally. In Thailand they are farmed for use in “jungle” restaurants.

The SW forms are cognate, but TV is aberrant; with the wrong tone and the wrong initial. EFEO (19, 21, 37, 38, 39) from the vicinity of Lao Kay and Ha Giang agree somewhat with WN, but are glossed only as 'lézard.' EFEO (24) is glossed 'crocodile'.

Table 9 - Southwestern Tai cognates for *Leiolepis belliana*

TV	to: A2	ŋɛ: C1
Lao	to: A2	ɲɛ: C4
Si	tua A2	yɛ: C4
MM		ɲɛ: C4
SC		yè 5o (C4)

Table 10 - Cognates for WN *Leiolepis belliana*<sup>26</sup>

WN	pa: A2	lat DS1	po: A2 <sup>27</sup>	
EFEO (19)	pǎ	léc	pǒ	'lézard' <sup>28</sup>
EFEO (21)	pǎ	lǎ	pǔ	"
EFEO (37)	pa	lép	pô	"
EFEO (38)	pǎ	lét	pô	"

EFEO (39)	pã	lǎk	põ	"
EFEO (24)	pa	lat	mēo	
'crocodile'				

## 7. Gekkonidae

The distribution of the genus *Gekko* in southern China has been complicated by unintentional artificial transport of the northern species *japonicus* and *swinhonis* into the coastal areas of the south (Pope 1935:464). In the area of China south of the Yangtze and mainland Southeast Asia contains some 30+ species too numerous to mention here. Their names are thought by many to be onomatopoeic, mimicking its loud bark. This assumption may be questioned however, as the syllable type k-p occurs in many names and may instead refer to the frog or toad-like shape of its head.

The range of *Gekko gekko* (the Tokay gecko) is northeastern India, through southern China, Thailand, Indochina, Malaya, to the Malayan Archipelago to the Philippines (Taylor 1963).

Read (1934:326) wrongly identifies a Gekkonid lizard as *Phrynocephalus*, an agamid inhabiting the deserts of North China and Mongolia. His form Ke Chieh is the Mandarin form of Cantonese *kop<sup>4</sup> kái<sup>3</sup>* 'gecko' (NungS), a contact word in Tai languages, not to mention Mon.<sup>29</sup> The description he gives leaves no doubt as to its identity:

“ . . . head like a toad, green backed with yellow spots like old embroidery, about a foot long, and short tailed.”

As a medicine it is considered saline, bland and slightly poisonous. Among other things it was used to dispel evil influences of supernatural origin and as an aphrodisiac (Read 1934).

There were no geckos until recently in the area of Muong Muoi; these, inhabitants say, were imported from Laos. For TV they are not eaten, but are used as medicine. In WN it is eaten only by some people, but is preserved in alcohol and used as back medicine. Geckos are sometimes eaten by the Yay with boiled rice.

The linguistic forms are not regular, but are quite obviously related. I can find no evidence that these taxa were attempts to imitate the sound made by this organism, although this may be at least partially true. It is also likely that the shape of the head like that of a frog or toad plays more of a role here. Some groupings of the forms are possible as shown on Table 11, mainly on the basis of the first syllable of the G taxa. Except for group three, the divisions seem to be along geographical lines.

Table 11: Gekkonidae

Group 1

BT

kak DS2 kε: A2 or B4

TV		kak DS2	kɛ: B2	
NungS		cǎc	ké (B4)	
		cǎc	cai	
LC		kak <sup>l</sup>	ke <sup>l</sup>	
Yay		kak DS2	kɛ: B4	
Viet.		các	kè	
EFEO (15)	tu	các	kê	
Group 2				
TayS		ác	è <sup>30</sup>	
	tu	è <sup>31</sup>		
WN		me: B4	ʔak DS3	ʔɛ: C3
Group 3				
Lao		kap DS2	kɛ: C2 <sup>32</sup>	
SekC		tāb / kǎp	kě	
CantS		kop <sup>4</sup>	kai <sup>3</sup>	
MonS		kap	ke / kai	
		kāp	kew / kāy	
Note also:				
Yao (Wong 1939)		gup	gai	'frog'
Hmong Njua		ŋgâu	qài	'gecko'
(Lyman)		pláŋ	qàu	'gecko'
Group 4				
Si		tuk	kɛ: A2	
SC		tawk 5c	kè 5o	
		tawk 5c	tè 5o	
MM, YS		tok DS4	to: A2	
MS		tak DS4	sto A2	
Ahom		tok	- to	
KhmerJ		tɔk	kae	

*Hemidactylus*. Whether it is represented by the species *frenatus* (Thailand, Burma, Indochina, and Kwangtung) or *bowringii* (Fukien, Formosa, Guangdong), these lizards are perhaps the most common in the Tai speaking area. In modern times *frenatus* has been transported to many new locations: Africa, Madagascar, a number of Pacific islands and even the New World. Taylor (1963: 757) reports that it is common along the highways near Acapulco, Mexico. A species very similar in appearance, *garnotti*, is a forest-dwelling type, whereas *frenatus* is found chiefly in and around human habitations.

There is some doubt as to the identity of the Shou Kung of the Pen-T'sao Kang-Mu pharmacology mentioned by Read (1934: 324). He suggests *Gekko japonicas*, but the description and name seem more likely to apply to *Hemidactylus*. It could be that different species were used in different localities. The description of its use runs as follows:

“It loves to crawl on fences and walls. It is fed cinnabar until 3 catties have been consumed, when it is killed, dried and powdered, then it is used for painting on the legs of young virgins (some books say it is tattooed), defloration removes the color. Otherwise, it goes by T'ao Hung-Ching for the name Shou-Kung, meaning guardian of the chamber.” (Read 1934: 324)

In Tai languages, many of the names for *Hemidactylus* refer precisely to 'guardian of the house'. The Chinese word translated as 'chamber' above can also mean 'palace' or even 'ladies' apartment' Cant. kung < Ar.Ch. kiung (tone not given) (Karlgren #586). Shou, Cant. sau < Ar.Ch. 'sjəu' (B) (Karlgren #896) is always 'guard' or 'protect'. The expression was apparently a euphemism meaning 'protector of virginity' lent support by the occurrence of *Hemidactylus* on the walls of houses.

In most areas there is no particular utilitarian function associated with this lizard. In northern Cambodia it is mashed up and used as medicine to put on boils and carbuncles. In India there is apparently a work known as the Gowli Śāstra which deals with wall lizards, their movements and noises, which are considered prophetic (Bussabarger and Robins 1968: 92).

The Tai taxa can be divided into three groups. The first all have at least one element 'house' with feminine taxa occurring in several of the languages: SC, WN, Yay, and SekC. These terms are never found in cognate form applied to other lizards. The second group have contact relations with Mon-Khmer languages, and apparent cognates in other Tai languages applied to other species of lizards. The third group are probably borrowings from Mon-Khmer, but there are fewer examples.

Table 12: *Hemidactylus*

Group 1

BT	mɛŋ A4	ʔya: A3	huan A4
TV	to: A2	ɲa: B4	huan A4
SC	söŋ 5o hön 4o		
WN	mɛ: B4	teyu; A2	ðɲn A4
TayS	tu	chʔu	luon
LC	k'an	lə:n A4	
Yay	mɛ: B4	ða:n A4	
SekC	mě	nhà ran	
EFEO (18)	tuo	ɲa	ruon
		(vit dans le maison)	
EFEO (28)	tô	gia	hon
EFEO (36)	mě	chiú	rāñ
EFEO (42)	tu	dua	luon
EFEO (11)		chua	ruon
EFEO (12)		dũa	ruon
EFEO (14)	tua	giũa	ruon

Group 2

Lao	to: A2	tei: B2	teiam C2
MM		teak DS2	kim C2
YS		teaʔ DS2	kim C2

C.S.C.	tawm 1c	tem 2o
KhmuD	daaq	trkلياam
SoueiF	catæem	
Group 3		
Si	teij C2	teok DS2
SC	ʔi 2c	sawk 4c
KhmerS	teij	teok
MonS	hæcək / khacək / gacək	

## 8. Scincidae.

Skinks in southern China and Southeast Asia are represented by a large number number of genera. The taxonomy is at present quite confusing, especially for non-specialists. Many genera are simply placed in the catch-all genus *Sphenomorphus* and labeled “common skinks” and currently there are some 125+ species placed here (<https://animaldiversity.org/accounts/Sphenomorphus/classification/>). This paper will not attempt to separate the various species found in the areas of focus.

Certain physical characteristics are common to all skinks in the region, so it is not surprising to find that most Tai languages have but one taxon for 'skink', even in locations where more than one species may occur. All species are ground dwellers, most have smooth glossy scales, elongate bodies and short legs, not adapted for climbing.

At first glance skinks do not seem to play a large role in folklore and mythology. They are mentioned in the Pen-tsaio Kang-mu as Shan Lung or Shuan Lung (Rocky dragons), because they are found in the rocky hills. No medicine is listed specifically for skinks, but the liver of this and other lizards (which to the Chinese were related) was mixed with cicada skin and alcohol and rubbed on the navel to produce abortion.

If the taxa of BT, TV and the EFEO forms are contact forms, Ar.Ch. \*t'šjäm (A) < t' - > Cant. šim, Mand. ts'an (Karlgren #1166) with the gloss ‘striped toad said to live in the moon’, it is possible that a striped toad may refer to a skink, as most species possess longitudinal stripes of some kind.

Skinks are eaten by the BT and TV, but not by the Yay. They were unknown to my WN informant. In most rural areas of Laos, Thailand and Cambodia, they may be eaten and perhaps used as medicine.

The linguistic forms are varied and erratic in distribution. Note that in Nung S, Yay, and DioiE they are classed as snakes, due undoubtedly to the long glossy appearance. This is the only lizard classed as such. (cf. Chamberlain 2019)

Table 13: Scincidae

BT	to: A2	siam A1	ka: B2	
TV	to: A2	sem C1	ka: B2 <sup>33</sup>	
NungS	tu	ngù	xlong	hu
	tu	ngù	quẻng	qui

Yay	tua	ηua A4	si: A1	ke:m A1/2
DioiE	gueue A4	cha <sup>1</sup>	kouem <sup>1</sup>	
Si	tɕi: η B2	le:n A1		
KhmerS	khlɤn			
SC	ʔāk 2o	lɔn 4o		
	ʔāk 2o	ʔək 3m		
KhmuD	daaq	trpaak		
Vte	tɕi: B2	ko <sup>2</sup> DS2		
Viet.	thàn	làn		
EFEO (44)	lèo	làn		
EFEO (45)	tú	lèo	làn	
MonS	kron			
MM	tɕa <sup>2</sup> DS2	lɤ: C4		
	tɕa <sup>2</sup> DS2	ka: B2	lɤ: C4	
YS	ka <sup>2</sup> DS2	lɤ: C4		
EFEO (20)	tua	sī	chuem	
(34) me	tsī	keṁ		
(2)		xiêm	- cá	
(24) tô		siêm	kā	
(25) tô		siêm	kā	
(26) tô		siêm	cá	
(27) tô		sêm	cá	
(47) tô		siêm	cá	
(48) to		siêm	cá	
(52) tu		siêm	cá	
(54) tô		xiêm	cá	

## 9. Unidentified Taxa

There are a number of residual lizard taxa that remain unidentified. They are given here in order that eventually their identity will become known. Some will no doubt refer to *Tachydromus sexlinistus* [Lacertidae], a relatively common lizard with a tail more than three times the length of the body.<sup>34</sup> Others may refer to the water agamid *Physignathus*, a large nut not evenly distributed aquatic lizard. Still others may refer to localized populations of lizards which do not occur over a large area, and may be the result of recent borrowings or coinings.

Table 14: Unidentified lizards

TayS	tu	chi / chí chôn	'lézard'
	tu	pì mò	'lézard (lacertides)'
	tu	pì pèàn	'lézard'
	tu	khĩ (?) lác	'lézard'

Ahom		cung		'a kind of Iguana'
		in -	khriŋ <sup>35</sup>	ss'a lizard'
EFEO	(3)	tua	háŋ - thói	'lézard'
	(4)	tua	thang phōi	"
	(5)	tou	m'o p'ī	"
	(6)	tua	táp chấu	"
	(7)		mò pì	"
	(8)	tua	mò pì	"
	(9)	tua	mō pī	"
	(10)	tua	mō pī	"
	(13)	tu	ču pây	"
	(16)	tua	mò pī	"
	(17)	tuo	mò bì	"
	(21)	ti	cấp kiêng	"
	(23)	tô	hiá lèn <sup>36</sup>	"
	(29)	tu	hang p'íoi	"
	(30)	tu	mò pì	"
	(33)	tua	chạ suon <sup>37</sup>	"
	(35)	tuá	chủŋ chạ <sup>38</sup>	"
	(41)		chí chún	"
	(43)	tu	ca'n nōm (?)	(illegible in original)
	(44)		lèo làn	'lézard'
	(45)	tú	lèo làn	"
	(46)	tu	chí chān	"
	(49)	tu	kh (?) piǎn	"
EFEO	(50)	tu	chǎng bōk	'lézard'
		tú	chí chẹn	"
	(53)	tô	chí chón	"
	(55)		chí chuôn	"

## 10. Conclusions

Lizard names in Tai languages can be divided into two distinct categories, monosyllabic and bisyllabic (or less frequently trisyllabic). Notably, those lizards with bisyllabic taxa have the greatest north to south range. Those with monosyllabic taxa are found only south of the Tropic of Cancer. From this it can be inferred that the bisyllabic names are older and that Tai peoples moved from north to south. In addition, bisyllabic names are not segmentally cognate over this north to south expanse, rather what is cognate is their bisyllabicity, the only comparative aspect of lizard names that is reconstructable for lizard names in this category.

It is also noted that the female-dragon-lizard association is ancient and is still manifest in lizard names today, especially for the species with bisyllabic taxa. This aspect of lizard lore, is described by scholars such as Eberhard and Schafer in some detail throughout southern China, though it would be erroneous so assume that the female association originates in ethnic Chinese culture. Rather, at least south of

the Yangtze, the reverse is probably true despite the Chinese linguistic colonization beginning with the Qin-Han invasions in the third century BCE. Such influences are not restricted to Tai but can be seen in other language families and in the multiethnic and multilingual interactions that are complex but nevertheless identifiable as shown in the papers of Badenoch and Hayashi in this volume. Taken together such studies inform such notions as typological convergence often used too loosely as an explanatory principle.

Although conceived as a comprehensive treatise on the small dragons inhabiting the Tai-speaking world, the last table above attests to the incompleteness of the undertaking. The identification of animals and plants by relating them to their Linnean counterparts is really only just one possible first step in determining and understanding the place held by these seemingly insignificant creatures in the thoughts and lives of the speakers. The meager occurrence of lizard names in most of the monodisciplinary linguistic literature is not commensurate with the role they play in art, dreams and religion. To approach such matters in a single language is already a daunting task, but to make the attempt in a comparative and historical frame might be regarded as beyond the pale. Yet surprisingly, in natural domains, it is the comparative method that sheds the most light, as we have sought to show here.

## Endnotes

<sup>1</sup> ‘Guard’ is not always the translation of the first syllable; every language has its own folk etymology. It is ‘guard’ in Black Tai (Gedney 1964) and Chinese. For further discussion see *Hemidactylus*.

<sup>2</sup> In other languages the following usages have been recorded:

BT	tei: A4	hit DS4	‘cricket, small with black wings’
	tei: A4	na:y A4	‘a similar cricket, but with smaller wings’
	tei: A4	kuŋ B2	‘a large cricket’
TV	tei: B2	kit DL4	‘small cricket’
	tei: B2	kuŋ B2	‘large cricket’
	tei: B2	søn A4	‘mole cricket’
MM	tei DS2	kun B2	‘big cricket’
	tei DS2	hi:t DL	‘cricket’
TayS	chi	l̥it	‘grillon’
	chi	r̥it	‘grillon’
LM	cii <sup>2</sup>	liŋ <sup>3</sup>	‘cricket’
Bê		hit	‘sauterelle’

Also:

LM	tuu <sup>1</sup>	cii <sup>2</sup>	laaw <sup>1</sup>	‘spider’
		tuu <sup>1</sup>	cii <sup>1</sup>	‘spider’
		tuu <sup>1</sup>	cii <sup>3</sup>	lyap <sup>3</sup>

[Karlsgren #1210, 1213 \* , t' s' i (A) 'worms; ugly, vile dispise']

Perhaps Vietnamese

kỳ	đà	' <i>Varanus salvator</i> '
kỳ	nhung	' <i>Calotes</i> or Scincidae'

In EFEO questionnaires (41,46,50,53,55) chí is used in the taxa for 'lézard'; TayS has tu chí chôn 'lézard'. Also, in EFEO a form of chí occurs some fourteen times in taxa for 'grillon'. Here we are faced with a taxon used with the unlikely combination of lizards and crickets. It is possible that this is of the khi:C1 and ?i:B2 type, concerned with cultural values rather than systematics. If so, the original connotation is still undiscovered. (cf. Chamberlain 2021)

<sup>3</sup>Several possibilities suggest themselves as the Tai word for *ku* magic, but none of them are positive identifications. Si, Lao, and BT have kuu:A2 in the taxon for 'millipede', but the Lao(MoE) dictionary also gives this word as an old word for 'billion', so it may simply refer to the number of legs. In BT and TV the form ku:B2 is given for the large hairy jungle spiders. Ahom *ku* 'worm' would also be a possibility. I have not seen the reconstructed Chinese form.

<sup>4</sup>The banded krait (*Bungarus fasciatus*), sometimes confused with the small pit viper, genus *Agkistrodon*, may have been the snake used in *ku* magic. Its generic taxa are bisyllabic in the following:

BT	ɲu: A4	tam A2	ta:n A4	( <i>Agkistrodon</i> )
Lao (Deuve 1970)	ɲu: A4	tham A4	tha:n A4	( <i>Bungarus fasciatus</i> )
TV	ɲu: A4	tham A4	tha:n A4	'a small krait'
WN	ɲu: A4	tha:A1	tean B4	( <i>Bungarus fasciatus</i> )
Yay	ɲu: A4	teək	ða:w B1	( <i>Bungarus fasciatus</i> )

For BT and TV, if this snake is seen in the daytime, it is an evil omen and will cause illness in the family (*Bungarus* is nocturnal). It is not eaten by speakers of any of the above languages.

<sup>5</sup>A similar situation occurs in some SW languages where species of the soft shell turtles (Trionycidae) are classed as fish:

Lao	pa: A2	fa:A1	'soft shell turtle'
SC	pa 1c	hap 1c	'a kind of soft tortoise'
MM	pa: A2	fa: A1	'soft shell turtle'
	pa: A2	bian A3 (?)	

In T'en another peculiar classing takes place. The form

ne	kau 13	fjaa 35	'a kind of turtle'
----	--------	---------	--------------------

means literally 'owl' turtle (soft shell). This may have to do with the owl-like facial characteristics of the turtle, but may also be related to the mythical associations of the owl, another organism of unstable LF classification. (cf. Chamberlain 2020)



And perhaps SW

TV                    kǎtu: A2  
 YS                    kop DS2    kǎtu: B2.

(cf. Chamberlain 2020)

<sup>20</sup> For cognates with BT and TV kɛ: cf. Gekko. The tones are irregular.

<sup>21</sup> There are no cognates in other languages for Si kiŋ C2, but this form appears again in Si kiŋ C2 ku: A2 ‘millipede’.

<sup>22</sup> The proto-SW form seems reconstructable due to tonal regularity. The WT reflex is to be expected from PSW \*khr-. We may include Ahom khrang in the taxon khrang – khroi ‘alligator’. Note also the Hmong NjuaL forms:

náŋ	qaŋ		( <i>Varanus salvator</i> )
náŋ	qaŋ	klě	( <i>Calotes</i> )
náŋ	qaŋ	klê	‘crocodile’

<sup>23</sup> For probable cognates with WN kem C2 cf. Lao, MM, YS, (C.S.C.?) ‘*Hemidactylus*’, and Yay, DioiE ‘skink’. For WN kap DS2 cf. Gekko.

<sup>24</sup> This item was included because of Savina’s gloss ‘chaméléon’. Ordinarily it occurs elsewhere only in Scincidae (cf. Chamberlain 2019). The literal translation of the taxon here is ‘snake four legs’.

<sup>25</sup> In the SW languages the meaning for pəm A2 (TV B2 irregular) is clearly ‘*Calotes*’. The TayS form is strangely an amphibian, and the EFEO (31) item is not specified as to type of lizard.

<sup>26</sup> In KhmerS the word is *teiah*.

<sup>27</sup> The WN taxon pa: A2 lat DS7 refers to eels of the genus *Mastecembalus*, but this portion of the form in other dialects is not regular. Why this particular fish was chosen is a mystery. Perhaps it was for coloration; yellowish brown (Davidson 1975:88). Because of the spines, one wonders whether the water agamid *Physignathus* wasn’t meant instead.

<sup>28</sup> The syllable po:/u: in other dialects is used for ‘toad’, especially in the C languages and in Man Cao Lan, but always in association with another syllable, for example:

EFEO	(43)	tu	pang	pú
	(44)	tú	pâng	pâu
	(50)	tú	báng -	bâu
	(8)	tua	peng	pú

<sup>29</sup> Karlgren #71 \*kâp (D) ‘frog, lizard, oyester’

<sup>30</sup> Note that the TayS syllable *è* is a different tone than in the *é* of ‘rain-ette mugisant’ (cf. *Calotes*).

<sup>31</sup> This is the only example so far of a monosyllabic lizard taxon at the generic level occurring among the families Gekkonidae, Agamidae or Scincidae.

<sup>32</sup> The first syllable of the taxa of group 3 is a member of a family of words found in Chinese and Tai languages, all having to do with closing up, as a frog’s mouth, or a gecko’s mouth, or certain kinds of boxes, or clams, or verbs meaning to shut or close. It is certainly no accident that the closure of the lips in the production of the final unreleased stop mimics the meaning of the words. It is not possible to

deal with the subject at length here, but a few examples seem interesting enough to warrant further study. (cf. Chamberlain 1986)

<sup>33</sup> TV also has the taxon sem C1 ka: B2 khew A1 ‘green skink’, a legendary skink (as there are no known species of this color) which if seen will cause lightning to strike. On another tone Cantonese *shím* means ‘flash’, and there are expressions like

*shím – tîn* ‘lightning’

*shím – tîn – p’ōh – tsz* ‘the goddess of lightning’

<sup>34</sup> It was common enough to be used as food for the fighting thrushes *Garrulax canorus* in northern Vietnam (Bourret 1937 - mai - 21).

<sup>35</sup> Cf. Ahom *īn* ‘crocodile’ perhaps from Cant. *īn* < \**īän* < d- ‘centipede, lizard’ (Karlgren # 235). Read (1934) has *yen lung* ‘*V. salvator*’. For Ahom *Khring* cf. EFEO (30) *khing gi* ‘crocodile’ (Nung of Lang so’ n)

<sup>36</sup> Looks like *hia* ‘*V. salvator*’ and *len* A4 ‘*V. bengalensis*’.

<sup>37</sup> Must belong with *Hemidactylus* but strange initial for ‘house’.

<sup>38</sup> Looks like BT to: A3 tea: η B2 tea: A2, a small Rhacophorid frog, probably *Rhacophorus leucomystax sexvirgatus* (Taylor 1963). Said to be very small, and not eaten.

**Abbreviations and Sources for Data****SOUTHWESTERN DIALECTS**

- |              |   |
|--------------|---|
| 1. Ahom      | Barua (1964)                                |
| 2. BT        | Black Tai, author's fieldnotes              |
| 3. C.S.C.    | Chinese Shan, Cushing (1914)                |
| 4. KhamtiC   | Cushing (1914)                              |
| 5. KhantiH   | Harris (1977)                               |
| 6. Lao (MoE) | Lao, Ministry of Education (1962)           |
| 7. MM        | Kam Muang, Meth (1965)                      |
| 8. MS        | Kam Muang, Sanguan (1969)                   |
| 9. NüaG      | Tai Nüa, Gedney (1965)                      |
| 10. NüaH     | Tai Nüa, Harris (1975)                      |
| TM           | Tai Maw                                     |
| TN           | Tai Nüa                                     |
| TL           | Tai Lüa = Nüa                               |
| 11. SC       | Shan, Cushing (1914)                        |
| 12. Si       | Siamese, Central Thai (various sources)     |
| 13. TV       | Tai of Muong Vat (Yen Chau). Author's notes |
| WT(Minot)    | White Tai, Minot (1940)                     |
| 14. WTD      | White Tai, Donaldson and Dieu (1970)        |
| 15. YS       | Tai Yong of Sanguan (1969)                  |
| 16. SiG      | Siamses, Gaidner (1918)                     |
| 17. LaoG     | Kam Muang, Gaidner (1918)                   |
| 20. PS       | Pak Seng Laos, author's fieldnotes          |
| 21. SN       | Sam Neua Laos, author's fieldnotes          |

**CENTRAL DIALECTS**

- |            |                                   |
|------------|-----------------------------------|
| 22. LC     | Lung Chow, Li (1940)              |
| 23. LP     | Lei Ping, Gedney (fieldnotes)     |
| 24. LM     | Lung Ming, Gedney (fieldnotes)    |
| 25. NungS  | Savina (1924)                     |
| 26. Sz Lok | Gedney (fieldnotes)               |
| 27. TayS   | Savina (1910)                     |
| 28. WN     | Western Nung, author's fieldnotes |

**NORTHERN DIALECTS**

- |           |                             |
|-----------|-----------------------------|
| 29. DioiE | Equirol and Williate (1908) |
| 30. Po-ai | Li (1977)                   |
| 31. Saek  | Gedney (fieldnotes)         |
| 32. SekC  | Cuaz (1904)                 |
| 33. WM    | Li (1956)                   |
| 34. Yay   | author's fieldnotes         |
| 35. Bê    | Savina (1965)               |

NON-TAI LANGUAGES

AUSTROASIATIC:

- |            |   |
|------------|---|
| 36. KhmerJ | Jacob (1974)  |
| 37. KhmerS | Northern Khmer from Srisaket Province, Thailand,<br>author's fieldnotes |
| 38. KhmuD  | Delcros (1966)  |
| 39. MonS   | Shorto (1962, 1971)   |
| 40. SoueiF | Ferlus (1974)   |

CHINESE

- |           |                                |
|-----------|--------------------------------|
| 41. Amoy  | Douglas (1899)                 |
| 42. CantC | Cantonese, Cowles (1965)       |
| 43. MC    | Middle Chinese (Karlgren 1923) |

MIAO-YAO

- |                |              |
|----------------|--------------|
| 44. Hmong Njua | Lyman (1976) |
| 45. Yao        | Wong (1939)  |

FOLK BIOLOGICAL TAXONOMY

- |    |                          |
|----|--------------------------|
| UB | Unique Beginner, Kingdom |
| LF | Life Form                |
| G  | Generic                  |
| S  | Specific                 |

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- |             |                            |
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| 2. (I.2)    | Thỏ of Bac Giang           |
| 3. (I.3)    | Thỏ of Bac Giang           |
| 4. (I.4)    | Thỏ of Bac Giang           |
| 5. (I.5)    | Nung of Bac-Giang          |
| 6. (II.3)   | Tay of Bach-Thông, Backan  |
| 7. (II.4)   | Bac-kan (apparently Thỏ)   |
| 8. (II.5)   | Thỏ of Backan              |
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