

# Reconstructing Austroasiatic prehistory

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[FINAL VERSION]

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**ABSTRACT**

The issue of the homeland, dating and expansion of the Austroasiatic languages and its correlation with results from other disciplines, particularly archaeology and genetics, remains contentious. Structure, dating, claims about subsistence and environmental reconstructions, homeland and directionality of spread should all fit together in a seamless web. The chapter considers the various hypotheses in the literature concerning these issues and supports a version which associates the expansion of Austroasiatic with the MSEA Neolithic, which is broadly 4000 BP. This correlates well with the ‘flay array’ model of Austroasiatic and therefore proposes that this was a demic expansion by populations with significant riverine adaptations in addition to agriculture. It includes comparative evidence for agriculture, livestock, an aquatic lifestyle, but also suggests we reconstruct something of the culture of the early Austroasiatic-speakers, looking at words for ‘trade’, hunting equipment and for musical practice.

## **1. Introduction**

The issue of the homeland, dating and expansion of the Austroasiatic languages and its correlation with results from other disciplines, particularly archaeology and genetics, has characteristically generated considerable heat without a corresponding amount of illumination. Despite the numerous publications discussed below on these topics, few are underwritten by a detailed consideration of the evidence, and often seek to prove assertion by repetition. Structure, dating, claims about subsistence and environmental reconstructions, homeland and directionality of spread should all fit together in a seamless web. Our sparse knowledge of some branches of Austroasiatic and the associated archaeology, particularly Nicobarese, inevitably make this a partial exercise. It is also relevant to note that some aspects of Austroasiatic prehistory may never be recoverable. For example, we can build a hypothesis for the homeland and migrations of Austroasiatic based on existing languages, but it is perfectly possible the ancestors of the present-day subgroups, ‘pre-Austroasiatic’, migrated from locations now overwritten on the linguistic map. With these caveats, the current evidence is brought together to provide context for this overview volume.

The primary requirement for a model of the expansion of any language phylum is a consensus on its internal structure. This is not yet the case in Austroasiatic, where there are two important competing claims on the table, the ‘nested’ model of Diffloth (2005) and the ‘flat array’ proposed in Sidwell & Blench (2011). If a deeply nested structure is correct then Austroasiatic should have a relatively high time-depth, and indeed Diffloth proposes dates of around 8-10,000 BP. If on the other hand, Austroasiatic is a flat array, then a much more recent starting point is likely. Sidwell & Blench (2011) propose ~ 4000 BP, based on current dating of the SE Asian Neolithic, which would be congruent with current understanding of the genesis of agriculture in the region.

A related question concerns the homeland of the phylum. Proposals for this usually focus on environmental and biological reconstructions; if particular species can be reconstructed, this should provide clues to the palaeo-climate experienced by speakers. Diffloth (2005) suggests that a series of reconstructions of tropical animal species point to a southern homeland, thereby excluding China. If, however, he takes his own dates seriously, southern China would have been warmer in the Holocene and thus within the possible range of many species (Cook et al. 2011). Sagart (2011) and Bellwood (2013) favour the middle Yangzi, although there is no direct linguistic evidence for this, and the expansion of the phylum in its present form would have to begin further south. Van Driem (2012a) has conveniently mapped out the Holocene distribution of the species identified by Diffloth which shows that in almost every case one subspecies or another extended into Yunnan<sup>1</sup>. As a consequence, hypotheses about palaeo-environment are strongly linked to dating. The competing claims as to the homeland of Austroasiatic, are (to simplify);

- a) The North, corresponding to a claim for an Austroasiatic substrate in Sinitic or an Austric homeland (Blust, Norman, Schuessler, Sagart, Bellwood)
- b) The West, corresponding to location of Munda, or purported rice domestication (Donegan & Stampe, Van Driem)
- c) The South, corresponding to reconstructed animal species (Diffloth)
- d) The Mekong Basin, corresponding to the centre of gravity of phylum (Heine-Geldern, Sidwell, Blench)

This is a diverse range of hypotheses, and inevitably at least three must be false. This section considers the arguments in favour or against individual proposals.

In the 1970s, Norman & Tsu-lin (1976) put forward the view that ancient borrowings in Chinese were evidence for what they perceived to be an early Austroasiatic presence. However, the words they focus on are widespread regional terms, such as ‘river’, ‘tiger’, occurring in all regional phyla. The word for ‘crossbow’ almost certainly is a relatively late borrowing, to judge by the archaeological record. Schuessler (2007) represents a major extension of the lexical claim and his etymologies for Old Chinese propose many Austroasiatic connections. However, although some of these may be valid, his claims do not distinguish

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<sup>1</sup> The purpose of the article appears to be to suggest a Chinese homeland for Austroasiatic is not logical, but the evidence presented seems to indicate the opposite.

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cultural loans from chance resemblances. He is often content to cite an isolated lexicon item, whereas for the argument to have force, Sinitic would have to borrow from proto-Austroasiatic. The presence of Mangic languages in South China at one time seemed to evidence for relic populations remaining from this ghostly substrate, but we now know these represent a relatively late movement into South China. Blust (1996) proceeded from rather different premises, namely that Austric (a proposed macrophylum uniting Austronesian and Austroasiatic) was valid, and that South China, specifically Leaping Tiger Gorge in Yunnan, made a logical site for their early split. Blust (2013) has rather retreated from Austric, and no other researchers have picked up his suggestion. A recent entrant in the South China stakes is Sagart (2011), who develops both lexical and archaeobotanical evidence. Sagart's model may be described as mixed, since he considers the pre-Austroasiatic to have migrated south from southeast China, but the nucleus of modern Austroasiatic to be in a region between western Myanmar and Northern Thailand, with a date of around 4500 BP. Sagart (2011) also includes a more detailed review of the China origin hypotheses, including some of the critiques levelled at the evidence.

A purely linguistic argument for a western origin for Munda and hence Austroasiatic was put forward by Donegan & Stampe (2004). But the concept that Austroasiatic originated in the Bay of Bengal, between the mouths of the Ganges and Brahmaputra, emerges in Van Driem (2001) although without any appeal to linguistic or archaeological evidence. Unfortunately, the repeated assertion of the same claim (Van Driem 2010, 2011a,b 2012a), often in precisely similar terms, has not increased the attraction of this hypothesis. Indeed so far undiscovered locales of rice domestication and yet-to-be found archaeological sites have been added to buttress the claim, which does not make it the more convincing. Van Driem (2012b) makes the surprising claim that;

By contrast, the absence of evidence for early rice agriculture of great antiquity in meridional mainland Southeast Asia, despite the relatively well researched archaeology of the region, presently embarrasses those who have lately taken to espousing a homeland theory for Austroasiatic along the lower course of the Mekong and around the Mekong delta.

Far from it, the chronology of rice agriculture in what may be called the 'archaeologised' zones is now fairly well understood (e.g. Blench 2005; Castillo 2013). The Bay of Bengal version of Austroasiatic can safely be consigned to science fiction.

Gerard Diffloth's argument has more to commend it. Diffloth (2005) proposes that the following animal species can be reconstructed in proto-Austroasiatic (Table 1).

**Table 1. Proposed faunal reconstructions in proto-Austroasiatic**

Scientific name	English	Reconstruction
<i>Varanus bengalensis</i> , <i>V. nebulosus</i>	land or tree monitor	#tərkuət
<i>Manis javanica</i>	ant-eater	#(bən-)jo:l, #j(ərm)o:l
<i>Bubalus bubalus</i>	buffalo	#tənriak
<i>Arctitis binturong</i>	bear-cat	#tənyu:ʔ
<i>Capricornis sumatrensis</i>	mountain goat	#kiaç
<i>Elephas maximus</i>	Asian elephant	#kaciaŋ
<i>Pavo muticus</i>	peacock	#mra:k
<i>Dinoceros sumatrensis</i>	rhinoceros	#rəma:s
<i>Rhizomys sumatrensis</i>	bamboo-rat	#dəkan

Note: The reconstructed forms, marked #, are not fully reconstructed, but these represent reasonable approximations.

Diffloth concludes 'The obvious implication is that the Austroasiatic homeland was located in the tropics'. Two issues arise from this. Does the data really justify the reconstructions and does the distribution of these species tell us anything significant about Austroasiatic origins. In most cases, reflexes of these proto-forms are found in several branches of Austroasiatic but not all, so they could equally well be regional terms. In almost no case are there reflexes in Nicobarese. Given the occurrence of many species in Yunnan in the past, all that can be excluded is a drier area such as the Middle Yangtse, which has been set aside for some of the

reasons given above. Both Diffloth and Sagart point to the importance of rice in the Austroasiatic agronomic repertoire, but it is not in fact the case that common rice-words are attested in every branch of the phylum. This is fairly important, as the claim is that Austroasiatic genesis is linked to the advent of cereal agriculture and the SE Asian Neolithic. The idea that Austroasiatic originates in the central part of SE Asia first surfaces in Heine-Geldern (1923), and is further supported in Sidwell & Blench (2011). This is partly congruent with hypotheses of Diffloth and Sagart, but has the advantage of explaining the lack of internal structure in Austroasiatic. The arguments for this view of Austroasiatic genesis will be put at greater length in §4.

## **2. The contribution of genetics**

In recent times, a number of papers have appeared arguing for a link between genetics and Austroasiatic. The focus of nearly all these is whether a link can be detected between the isolated Munda and SE Asian Austroasiatic groups (Kivisild et al. 2003; Sahoo et al. 2006; Reddy et al. 2007; Kumar et al. 2007; Van Driem 2007; Thangaraj et al. 2005, 2008; Chaubey et al. 2010; Riccio et al. 2011). Linguists and archaeologists often find these papers difficult to process, partly because they make claims about dates (such as Austroasiatic being 60,000 years old) or use non-standard terms, such as ‘Khasi-Aslian’. In addition, sampling procedures are not those that would commend themselves to researchers outside genetics. Often one ethnolinguistic group is made to stand in for the entire phylum in SE Asia. However, with these caveats, the broad picture is that Munda speakers do show some haplotypes more typically associated with Austroasiatic groups in SE Asia, but many more with their Dravidian and Indo-Aryan neighbours in India. Riccio et al. (2011) say;

Our results do not favor either a scenario where the Munda would be representative of an ancestral Austroasiatic population giving rise to an eastward Austroasiatic expansion to Southeast Asia. Rather, their peculiar genetic profile is better explained by a decrease in genetic diversity through genetic drift from an ancestral population having a genetic profile similar to present-day Austroasiatic populations from Southeast Asia (thus suggesting a possible southeastern origin), followed by intensive gene flow with neighboring Indian populations. This conclusion is in agreement with archaeological and linguistic information.

Despite the empty claim that this is in agreement with archaeological evidence, this picture would be recognised by most Austroasiatic scholars.

There have been relatively few attempts to correlate SE Asian skeletal material with present-day speakers of specific languages. Higham (2001) reviewed the rather sparse material available up to 2000. However, Lertrit et al. (2008) extracted mtDNA samples from bones excavated at two Bronze Age sites in Northern Thailand, Noen U Loke and Ban Lum Khao and then compared their profiles with recent population groups in the area. The resemblance was closest with the Chao Bon, another name for the Nyah Kur, one of the few remaining groups of Monic speakers. This is fairly consistent with what we know of the region; Monic was formerly significantly more widespread, but was driven back by the expansion of Tai groups. Diffloth (1982) provides a useful overview of Monic dialects and the fragmentation of the language. Genetics is beginning to provide insights into patterns of prehistory in SE Asia, but for a more fruitful collaboration with linguists, more direct links will need to be built, to better interpret the results.

## **3. What can be said about early AAS subsistence?**

### **3.1 The reconstruction of Austroasiatic lifeways**

Austroasiatic is now sufficiently well-documented for it to be possible to develop hypotheses about early lifeways, based on partial reconstructions. Because Austroasiatic languages are so geographically dispersed, intensive borrowing between them is unlikely. If we find widespread cognates of subsistence items then almost certainly they are either reconstructible to the proto-language or to a period when the dialect chain was beginning to fragment.

- Austroasiatic was an agricultural society, which both grew cereals, tubers and vegetables, and also produced a wide variety of livestock.
- Austroasiatic was a society with a strong aquatic orientation, using both boats and fishing a wide variety of species

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- Austroasiatic society already had an established cultural life, with musical practice apparently reconstructible
- Austroasiatic society was not apparently hierarchical, as no widespread words for ‘ruler’ can be detected

Early Austroasiatic society was probably characterised by incipient commerce and trading systems. The counting system was decimal and there are traces of a vigesimal system. Table 2 shows a widespread root for ‘trade’ in several core branches, although it is unlikely this can be reconstructed to proto-Austroasiatic.

**Table 2. Evidence for the significance of ‘trade’ in Austroasiatic**

Branch	Language	Attestation	Gloss
	proto Mon-Khmer [A]	*[b]l[ə]j	to trade
Bahnaric	proto North-Bahnaric	*pəliḥ	to trade, exchange
Katuic	Katu [Phuong]	pəblɔj	trade
Khmeric	Khmer	plah	trade (exchange)
Khmuic	T'in [Thin]	mbəl	trade (exchange)
Palaungic	proto Palaungic	*ləj	to trade
Pearic	Pear [of Kompong Thom]	phlas	trade (exchange)

### 3.2 Agriculture and livestock

The first paper to focus on the importance of crops in Austroasiatic is the reconstruction of Munda terms in Zide & Zide (1976). They also proposed a date for the Munda expansion at around 3500 BP, which is in good agreement with the evidence presented in this paper. Blench (2011) sets out the evidence for the importance of agriculture in Austroasiatic as reflected in a wide range of crops. The claim that rice was a fundamental to Austroasiatic subsistence is not really supported by the evidence, as rice words are only in subset of branches, unlike taro. Table 3 shows the branches where common lexemes for domesticated plants occur. The ‘quasi-reconstructions’ (QR) are not phonological reconstructions, but a hypothesis about the possible shape of the proto-form.

**Table 3. Crop quasi-reconstructions in Austroasiatic**

Gloss	QR	Comment
rice (general)	#ba:ʔ	Aslian, Bahnaric, Khasic, Khmeric, Khmuic, Muṅḍā, Palaungic, Pearic
paddy rice	#srɔ	Katuic, Monic, Munda, Nicobaric, Vietic
husked rice	#rəkau	Aslian, Bahnaric, Katuic, Khasic, Khmeric, Monic, Munda, Palaungic, Pearic, Vietic
foxtail millet	#səŋkɔɔy	Katuic, Khasic, Khmeric <sup>2</sup> , Khmuic, Monic, Palaungic, Pearic, Vietic
taro	#trawʔ	Bahnaric, Katuic, Khasic, Khmeric, Khmuic, Mangic, Monic, Muṅḍā, Palaungic, Pearic, Vietic
sesame	#ləŋa	Bahnaric, Katuic, Khmeric, Khmuic, Monic, Palaungic
banana	#tVIVy	Aslian, Katuic, Khmeric, Khmuic, Nicobaric, Vietic
betel pepper	#mpluw	Bahnaric, Katuic, Khasic, Khmeric, Khmuic, Monic, Palaungic, Pearic, Vietic

This distribution suggests that almost all other crops were adopted subsequent to the dispersal of Austroasiatic and that after taro, hill-rice, foxtail millet and sesame were key crops. Paddy-rice was apparently quite late despite its dominance in agricultural systems today. Ferlus (1996) makes the intriguing suggestion that there has been a *glissement sémantique* between taro and rice terms, presumably via the concept of ‘staple crop’. This underlines the relative antiquity of taro in Austroasiatic subsistence systems.

<sup>2</sup> The Khmer cognate, skuəy ក្បួន, is applied to Job’s tears.

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Apart from crops, the speakers of proto-Austroasiatic were also enthusiastic livestock producers. Almost all the major species found in the region today were already known to speakers at an early period, except horse, donkey and sheep. Table 4 shows a series of quasi-reconstructions based on widespread forms.

**Table 4. Livestock quasi-reconstructions in Austroasiatic**

Gloss	QR	Comment
bovid	#ŋwV	widespread regional term but does not necessarily apply to domestic species
cow	#[rə]mɔ̌k	Aslian, Bahnaric, Khasic, Khmuic, Munda, Palaungic
buffalo	#krəpaaw	Aslian, Bahnaric, Katuic, Khmeric, Khmuic, Monic, Palaungic, Pearic, Vietic. Aslian probable loanword.
buffalo	#t.riik	Bahnaric, Katuic, Khasic, Khmuic, Monic, Vietic. With possible Muṅḍā cognate
pig	#k.liik	Aslian, Katuic, Khmeric, Khmuic, Monic, Palaungic, Pearic
pig	#kuul	Aslian, Bahnaric, Monic, Vietic
goat	#b(l)εεŋ	Aslian, Bahnaric, Katuic, Khasic, Khmeric, Khmuic, Monic, Munda, Nicobaric, Palaungic, Pearic
dog	#atʃɔ:k	Aslian, Bahnaric, Katuic, Khasic, Khmeric, Khmuic, Mangic, Monic, Muṅḍā, Palaungic, Pearic, Vietic
cat	#miaw	Bahnaric, Katuic, Khasic, Khmuic, Nicobaric, Palaungic, Pearic, Vietic, though possible ideophonic component
chicken	#syiar	Bahnaric, Katuic, Khasic, Khmuic, Mangic, Palaungic
goose/duck	#h.ŋaŋ	Aslian, Bahnaric, Katuic, Khasic, Khmeric, Khmuic, Mangic, Monic, Palaungic, Pearic, Vietic
duck	#ʃaa[k]	Aslian, Bahnaric, Katuic, Khmeric, Mangic, Monic, Nicobaric, Nicobaric, Palaungic, Pearic, Vietic

The most surprising of these is the goat, which is poorly attested archaeologically but for which the linguistic evidence is very strong. It is also notably that aquatic-adapted poultry, such as geese and ducks, appear to be older than chickens.

**3.3 Boats and aquatic subsistence**

Apart from agriculture, boats and riverine activities were clearly of great significance to early Austroasiatic-speakers. Table 5 shows the SE Asian regional term for 'river', 'valley' which shows up in a variety of language phyla, but which appears to originate with Austroasiatic, to judge by the cognates found across its entire range.

**Table 5. A SE Asian regional term for 'river', 'valley'**

Phylum	Branch	Language	Attestation	Gloss
Austroasiatic	Bahnaric	PB	*krɔːŋ	river
	Khmuic	Khmu Yuan	krɔːŋ	Mekong
	Mangic	Bolyu	huːŋ <sup>13</sup>	river, ditch
	Monic	P-Monic	*krooŋ	stream, creek, river
	Palaungic	proto Waic	*klɔŋ	river
	Palaungic	Palaung	klɔŋ	quantifier for watercourses
	Pearic	Pear [Kompong Thom]	kraŋ	large river
	Vietic	P-Vietic	*k-rɔːŋ	river
Austronesian	Chamic	Cham	krɔːŋ	river
	Chamic	Acehnese	kruəŋ	river
Daic	Tai	Thai	khlooŋ	river
Daic	Tai	Shan	khōŋ	Salween
Sino-Tibetan	Kachinic	Kachin	kruŋ	valley
	Lepcha	Lepcha	kyoŋ	valley
	Sinitic	Old Chinese	*k-hlun	river
	Tibetic	Written Tibetan	kluŋ	river
	Lolo-Burmese	Old Burmese	k <sup>h</sup> loŋ	river

Austroasiatic had several words for ‘boat’, one of which, #*C.lɔŋ*, has a scattered distribution and is only found sporadically in some branches (Table 6). However, it is clearly attested in Munda, which makes it more secure for proto-Austroasiatic than #*duuk*. It was evidently borrowed into Tibeto-Burman languages as these pushed southwards into the Austroasiatic area.

**Table 6. An Austroasiatic root for 'boat'**

Phylum	Branch	Subgroup, language	Citation
Austroasiatic	Bahnaric	PB	*pluŋ
	Katuic	Ngeq	roŋ
	Khasic	P-Khasic	*leəŋ
	Khmuic	Khmu	clɔːŋ
	Monic	Old Mon	dluŋ
	Monic	Middle Mon	gluŋ
	Monic	Mon	klɔŋ
	Munda	Kharia	ɔloŋ
	Palaungic	PPa	*ɟnlɔŋ
	Sino-Tibetan	Kuki-Chin	Lushai
Kuki-Chin		Kyo Chin	mlauŋ
Naga		Chang	loŋ
Lolo-Burmese		Written Burmese	lâuŋ
Lolo-Burmese		Akha	lò

The generic term for ‘fish’, #*ka*, is attested in all branches of Austroasiatic, but perhaps more significantly, the specific term ‘eel’ is widely attested in Austroasiatic and appears to be borrowed into Sino-Tibetan and notably in Austronesian (Table 7);

**Table 7. ‘Eel’ in SE Asian language phyla**

Phylum	Branch	Language	Attestation	Gloss
Austroasiatic	Bahnaric	PB	*-duŋ	eel
	Katuic	PK	*ɟnduŋ	eel
	Khmer	Surin Khmer	ntuaŋ	eel
	Khmuic	Khmu	ɟontùəŋ	eel
	Monic	Nyah Kur	nthòŋ	swamp eel
	Monic	Mon	daluŋ	eel
	Munda	Mundari	ɟuŋ.ɟuŋ	long, very slender fish



Phylum	Branch	Language	Attestation	Gloss
	Munda	Kharia	ḍuṅḍuṅ	eel
	Pearic	PP	*ml(ɔː)ŋ	eel
Sino-Tibetan	Sakish	Kadu	patuṅ	eel
Austronesian	Philippines	Cebuano	induṅ	moray eel sp.
	Borneo	Iban	lundoṅ	eel
	Sumatra	Karo Batak	ḍuṅḍuṅ	eel
	Malayic	Acehnese	ndoṅ	eel
	Malayic	Cham	lanuṅ	eel
	Malayic	Malay	[ular] londonṅ	sea-snake

As Diffloth has suggested, these reconstructions point strongly to a dispersal of Austroasiatic along river valleys, seeking humid terrain for taro plantations, and exploiting aquatic resources. It would be strange not identify the core river as the Mekong, which is the referent of the of the river terms. This suggests that we can pinpoint the Mekong valley as a starting point, and dispersal driven by the adoption of rapid boats.

### 3.4 Early Austroasiatic cultural life

As a fully-fledged agricultural society, the early Austroasiatic speakers can also be expected to have had a fully-fledged cultural life. One good illustration of this is the possibility of reconstructing musical practice. Throughout the region, almost all populations play some type of fiddle, or bowed instrument. In some cases this has a tubular resonator and resembles Chinese examples (e.g. the Khmer instrument shown in Photo 1), elsewhere the resonator is heart-shaped and may be built following Indian or even Arab models. However, as Table 8 shows, there is a widespread, though not universal root, for fiddle which points to its presence during early dispersal.

**Table 8. ‘Fiddle’ in Austroasiatic**

Branch	Language	Citation	Gloss
Khmeric	Khmer	tròḍ 𑜄𑜂𑜫	Cambodian stringed fiddle
Pearic	Pear [of Kompong Thom]	troː	violin [? < Khmer]
Bahnaric	Bahnar	broː	fiddle
Bahnaric	Jruq	krɔː	three-stringed bamboo violin
Bahnaric	Oi	rɔː	fiddle
Bahnaric	Nyaheun	droː	violin
Katuic	Kuy	thruːa	violin
Katuic	Souei	crɔɔ	violin
Katuic	Ngeq	trɔː	tube; violin
Monic	Mon	krò	violin, fiddle
Palaungic	Palaung	təɔ	violin

This is almost certainly borrowed into Burmese as *taro*.

One of the most characteristic instruments of the MSEA area is the free-reed mouth-organ (Blench in press a). Free-reed mouth-organs are played almost everywhere in the region, and the oldest types seem to have a spherical gourd resonator. The remains of a mouth-organ, alongside the more famous arrays of tuned bells, occur in the tomb of Marquis Yi of Zeng, in Suixian country, Hubei and dated to 433 BC (So 2000). Existing reviews of the free-reed mouth-organ are somewhat limited (e.g. Finsterbüscher 1961; Miller 1981; Schwörer-Kohl 1997). Map 1 shows the region where it is played in SE Asia and where it presumably originates. The coincidence of its distribution with Austroasiatic is very marked, being only absent in the Nicobars. The mouth-organ was picked up by the Chinese for the classical orchestra, probably quite early, developed into the *sheng*, which was in turn borrowed in Japan and Korea as the *sho*.

**Map 1. Gourd-mouth-organ in SE Asia**



Source: Blench (in press).

have been something like #-dik.

Another musical instrument is the slit-bamboo rattle. Usually made from a bamboo internode with a lengthways slit it is struck with two sticks. Sometimes the meaning shifts to cowbell, as these were formerly made in this style. Table 9 shows reflexes of a root which must

**Photo 1. Cambodian fiddle-player**



Source: Author photo

**Table 9. Slit bamboo rattle in Austroasiatic**

Branch	Language	Citation	Definition
Bahnaric	Stieng	kɔ̃:k	rattle
Bahnaric	Jruq	rɔʔ	large cowbell
South Bahnaric	Chrau	təɔ:ʔ	slit-drum
Khmeric	Khmer	trədaok ត្រែដាក់	wooden or bamboo rattle / clapper
Katuic	Kuy	tə:ʔ tɔ:ʔ	cowbell
Monic	Mon	hənək	slit-drum
Monic	Nyah Kur	klɔʔ	cattle bell made of split bamboo section
Palaungic	P-Palaungic	*kɔ̃:k	bamboo rattle.
Pearic	Chong	trədaok	wooden bell [ʔ < Khmer]

The crossbow is found across most of the SE Asian mainland, including the Nicobar Islands, but never spread to the remainder of ISEA. Crossbows (*nǚ* 弩) were adopted by the Chinese, who rapidly developed the materials and mechanisms. Bronze crossbow bolts from the mid 5th century BC have been found at a Chu burial site in Yutaishan, Hubei. However, the cross-bow, made almost entirely of wood with bone inlays, is spread across a wide area of the mainland, as far as Nepal (Map 2). There is a very widespread lexeme for ‘crossbow’ found across almost all the language phyla of the region (Table 10). The crossbow is an imperfect but credible match for Austroasiatic, since it was carried to the Nicobars, although it is absent among the Munḍa and the Aslian.

**Map 2. The crossbow in SE Asia**



Source: Blench (forthcoming)

**Table 10. MSEA terms for 'crossbow'**

Phylum	Subgroup	Language	Citation
Sino-Tibetan	Sinitic	Chinese	nǚ弩
Sino-Tibetan	Sinitic	Old Chinese	*nâ?
Sino-Tibetan	Nungic	Anong	thəna
Sino-Tibetan	Nungic	Trung	tānā
Sino-Tibetan	Lolo-Burmese	Moso	tāna
Sino-Tibetan	Jingpho	Jingpho	ndan
Hmong-Mien		PHM	*nha <sup>B</sup>
Austroasiatic	Bahnaric	PB	*snaa
Austroasiatic	Khmeric	Khmer	snaa ៣
Austroasiatic	Pearic	Chong [Samre]	sana:
Austroasiatic	Vietic	Thavung	sanâ:
Austroasiatic	Katuic	Bru	snaa
Austroasiatic	Khmuic	P-Khmuic	*sna? crossbow
Austroasiatic	Monic	P-Monic	*tŋaa?
Daic	Kam-Sui	Sui	hna
Daic	Tai	PTai	*hnaa <sup>c</sup>

The island of distribution in Eastern Nepal is interesting, and suggests that Austroasiatic influence was once more important in this region, as is also attested by the influence of Austroasiatic on Lepcha [Rong].

#### 4. Modelling the link with archaeology

If the linguistic arguments are correct, then Austroasiatic is a flat array phylum with little or no internal structure. This points to a rapid dispersal followed by incursions by Tibeto-Burman shortly after the primary expansion, creating the geographic fragmentation of individual branches apparent from the map. The reconstructions point to a fully agricultural society which seems to have been specialised in river basins, to judge by the crops grown and the pointers to aquatic subsistence (Sidwell & Blench 2011). Moreover, the original environment of speakers appears to have been tropical, although this covers a large region. Given this, we must seek such a society in the archaeological record. There is a single candidate, the SE Asian Neolithic, which satisfies all these criteria. The archaeological evidence points to a rapid expansion of the Neolithic in the Yunnan/Northern Vietnam borderland, some 4000 years ago (Higham 2002: 85 ff.). Higham (2004:47) notes:

The pattern of intrusive agriculturalists settling inland valleys in southern China, while the coast continued to be occupied by affluent foraging groups, is repeated in the Red River area and the contiguous coast of Vietnam.

The most well-known site of this type is Phung Nguyen, about 200 km. inland from Halong Bay. Dates remain problematic, but the adjacent site of Co Loa has been dated to 2000 BC. In summarising the situation, Higham (2002:352) says;

We find agricultural settlements being founded in the lower Red River valley, along the course of the Mekong and its tributaries, and in the Chrao Phraya valley... The dates for initial settlement, as far as they are known, are approximately the same with none earlier than about 2300 BC. Most intriguingly, the pottery vessels in many of the sites over a broad area have a similar mode of decoration. The sites reveal extended inhumation graves and an economy incorporating rice cultivation and the raising of domestic stock.

Rispoli (2007:238) in the most recent, wide-ranging review of 'incised and impressed' pottery says;

The main peculiarity of the incised & impressed pottery style is its sudden appearance around the second half of the 3rd millennium B.C.E. in Neolithic sites distributed in the major river plains of mainland Southeast Asia .... Incised & impressed pottery style, moreover, does not appear in isolation,

but it is associated recurrently with: small polished stone tools; stone or shell bracelets and necklace beads.

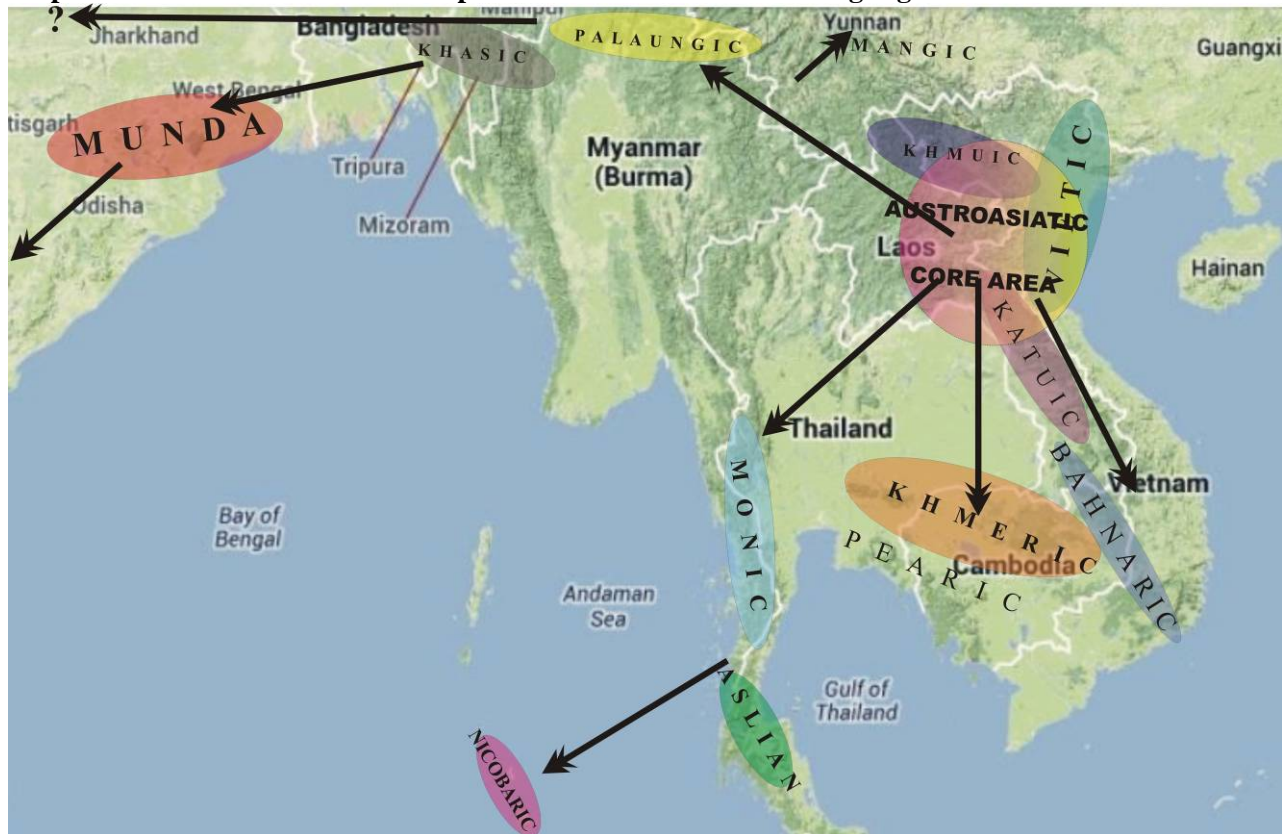
The sudden expansion of this distinctive pottery style and associated toolkit and decorative elements is a marker of the Austroasiatic expansion. The dating of the Neolithic in SE Asia proper has been revised in recent years, and the most recent results (Higham & Higham 2009; Higham et al. 2011; Higham & Thosarat 2012) which make use of Bayesian statistics, have tended to indicate more recent dates, perhaps as early as 3900 BP. However, the direct dating is not on agricultural plants but artifacts, such as shell, in burial sites. To support a more direct link with agriculture, a richer archaeobotanical record is required.

To explain the early dispersal of Austroasiatic, a ‘centre of gravity’ view is adopted, permitting the different groups of Austroasiatic to become established in their various secondary homelands by a series of least radical moves, i.e. moves which are characterised by short distances and plausible directions. Only two long-distance moves need to be posited, the migration of the Munda into northeast India and the maritime transit to the Nicobars. The absence of settlement dates for the Nicobars is particularly regrettable, as it is problematic to model Austroasiatic expansion without understanding when this occurred. Excepting Munda, a conjunction of better boats, crops adapted to humid river valleys, livestock, and a focus on aquatic subsistence underlie the diversification of Austroasiatic. The cultural innovation of adopting rice into their repertoire, including the facility to farm dry rice in areas upland from main waterways, could well have facilitated the outward East-West spread overland, as opposed to the mainly North-South orientation of the Mekong (and Chao Phraya, Irrawaddy etc.) of peoples who had previously established themselves along the riverine environment as fisher-forager-tuberculturalists. Taken together, these elements suggest that we can reconstruct the early history of Austroasiatic as follows;

- a) ca. 4000 years ago, a new pottery style begins to spread rapidly throughout the region. This is associated with beginnings of the Neolithic in the region
- b) early Austroasiatic speakers, already practising taro cultivation, are situated on the middle Mekong and adopt rice and also get access to improved types of boat.
- c) this subsistence revolution stimulates them to move both up and down the Mekong but also to spread westward to parallel river systems, seek new areas for their taro fields
- d) a significant movement westward (perhaps to the Tonle Sap system and/or Chao Phraya Basin) allows the development of a south-western nucleus, the origin of Monic, Nicobarese and Aslian
- e) the rapidity of this movement accounts for the difficulty in finding well-supported nested structures in the phylogenetic tree
- f) subsequent expansions, particularly of the Daic, Sino-Tibetan and Austronesian language phyla fragmented the chain of Austroasiatic languages leading to their comparative geographic isolation in many outlying areas
- g) Muṅḍā languages underwent a typological shift in contact with South Asian languages, but this was limited to a single branch rather than indicative of an early two-way division in the phylum

Map 3 presents a map of the possible pattern of the dispersal of Austroasiatic, developing from this model.

Map 3. A model of Austroasiatic dispersal from the Central Mekong region



## References

- Bellwood, Peter 2013. *First migrants: ancient migration in global perspective*. Chichester: Wiley-Blackwell.
- Blench, Roger M. 2005. From the mountains to the valleys: understanding ethnolinguistic geography in SE Asia. In: *The peopling of East Asia*, Laurent Sagart, Roger M. Blench & Alicia Sanchez-Mazas (eds) 31-50. London: Routledge.
- Blench, Roger M. 2011. The role of agriculture in the evolution of Southeast Asian language phyla. In: *Dynamics of Human Diversity in Mainland SE Asia*. N. Enfield ed. 125-152. Canberra: Pacific Linguistics.
- Blench, Roger M. in press. *'Like waves against the shore': a history of music in SE Asia*. Bangkok: River Books.
- Blust, Robert A. 1996. Beyond the Austronesian homeland: The Austric hypothesis and its implications for archaeology. In: Ward H. Goodenough, ed., *Prehistoric Settlement of the Pacific*. Transactions of the American Philosophical Society, 86(5). 117-160. Philadelphia: American Philosophical Society.
- Blust, Robert A. 2013. *The Austronesian languages*. Canberra: Pacific Linguistics. [Revised online version of hardcopy originally published 2009].
- Castillo, Cristina 2013. *The Archaeobotany of Khao Sam Kaeo and Phu Khao Thong: the agriculture of late prehistoric Southern Thailand*. Ph.D. University of London.
- Chaubey, Gyaneshwer Mait Metspalu, Ying Choi, Reedik Mägi, Irene Gallego Romero, Siiri Roots, Pedro Soares, Mannis van Oven, Doron M. Behar, Siiri Roots, Georgi Hudjashov, Chandana Basu Mallick, Monika Karmin, Mari Nelis, Jüri Parik, Alla Goverdhana Reddy, Ene Metspalu, George van Driem, Yali Xue, Chris Tyler-Smith, Kumarasamy Thangaraj, Lalji Singh, Maito Remm, Martin B. Richards, Marta Mirazon Lahr, Manfred Kayser, Richard Villems and Toomas Kivisild 2010. Population genetic structure in Indian Austroasiatic speakers: The role of landscape barriers and sex-specific admixture. *Molecular Biology and Evolution*, 28 (2): 1013-1024.

## **Roger Blench Austroasiatic prehistory. Final for publisher**

---

- Cook, Charlotte G., Richard T. Jones, Peter G. Langdon, Melanie J. Leng & Enlou Zhang. 2011. New insights on Late Quaternary Asian palaeomonsoon variability and the timing of the Last Glacial Maximum in southwestern China. *Quaternary Science Reviews* 30: 808–20.
- Diffloth, Gérard 1982. Proto-Mon Registers: Two, Three, Four...? *Proceedings of the Eighth Annual Meeting of the Berkeley Linguistics Society*, 148-157.
- Diffloth, Gérard 2005. The contribution of linguistic palaeontology and Austroasiatic. In Laurent Sagart, Roger Blench and Alicia Sanchez-Mazas, eds. *The Peopling of East Asia: Putting Together Archaeology, Linguistics and Genetics*. 77–80. London: Routledge Curzon.
- Donegan, Patricia J. & David Stampe 2004. Rhythm and the synthetic drift of Munda. In: *The Yearbook of South Asian Languages and Linguistics 2004*, Rajendra Singh (ed.) 3-36.
- Ferlus, Michel 1996. Du taro au riz en Asie du Sud-Est, petite histoire d'un glissement sémantique. *Mon-Khmer Studies* 25. 39—49.
- Finsterbüs, Käthe 1961. *Die Mundorgeln des Museums für Völkerkunde zu Leipzig*. Beiträge zur Völkerforschung. Berlin.
- Heine-Geldern, Robert von 1923. *Südostasien*. In Georg Buschan (ed.) *Illustrierte Völkerkunde*. Stuttgart: Strecker und Schröder.
- Higham, Charles 2001. Prehistory, language and human biology; is there a consensus in East and Southeast Asia? In: *Genetic, linguistic and archaeological perspectives on human diversity in Southeast Asia*. Li, J., Seielstad, M., & Xiao, C. (eds.). New Jersey: World Scientific Publishing Company Incorporated.
- Higham, Charles 2002. *Early cultures of mainland Southeast Asia*. Bangkok: River Books.
- Higham, Charles 2004. Mainland Southeast Asia from the Neolithic to the Iron age. In: I. Glover & P. Bellwood eds. *Southeast Asia: from prehistory to history*. 41-67. Abingdon: RoutledgeCurzon.
- Higham, Charles & Thomas Higham 2009. A new chronological framework for prehistoric Southeast Asia, based on a Bayesian model from Ban Non Wat. *Antiquity*, 83: 125–144.
- Higham, Charles, Thomas Higham & Amphan Kijngam 2011. Cutting a Gordian Knot: the Bronze Age of Southeast Asia: origins, timing and impact. *Antiquity*, 85: 583–598.
- Higham, Charles & Rachanie Thosarat 2012. *Early Thailand: from prehistory to Sukhothai*. Bangkok: River Books.
- Kivisild, Toomas, S. Rootsi, Mait Metspalu, S. Mastana, Katrin Kaldma, Jüri Parik, E. Metspalu, M. Adojaan, H.-V. Tolk, V. Stepanov, M. Gölge, E. Usanga, Surinder S. Papiha, C. Cinnioğlu, R. King, Luca Luigi Cavalli-Sforza, Peter A. Underhill & Richard Villems. 2003. The genetic heritage of the earliest settlers persist both in Indian tribal and caste populations. *American Journal of Human Genetics*, 72:313–332.
- Kumar, Vikrant, Arimanda N. S. Reddy, Jagedeesh P. Babu, Tiprisetti N. Rao, Banrida T. Langstieh, Thangaraj, Kumarasamy, Alla G. Reddy, Lalji Singh & Battini M. Reddy. 2007. Y-chromosome evidence suggests a common paternal heritage of Austro-Asiatic populations. *BioMed Central Evolutionary Biology*, 7: 47. 14 pp. <http://www.biomedcentral.com/1471-2148/7/47>.
- Lertrit, P., Poolsuwan, S., Thosarat, R., Sanpachudayan, T., Boonyarit, H., Chinpaisal, C., & Suktitipat, B. 2008. Genetic history of Southeast Asian populations as revealed by ancient and modern human mitochondrial DNA analysis. *American journal of physical anthropology*, 137(4): 425-440.
- Miller, Terry E. 1981. Free-Reed Instruments in Asia: a Preliminary Classification. In: *Music East and West: Essays in Honor of Walter Kaufmann*, ed. T. Noblitt. New York: Pendragon Press.
- Norman, Jerry & Mei Tsu-lin 1976. The Austroasiatics in Ancient South China: some lexical evidence. *Monumenta Serica*, 22: 274-301.
- Reddy BM, Langstieh BT, Kumar V, Nagaraja T, Reddy ANS, Meka A, Reddy AG, Thangaraj K, Singh L. 2007. Austro-Asiatic tribes of Northeast India provide hitherto missing genetic link between South and Southeast Asia. *PLoS ONE*. 2:e1141.
- Riccio, M.E.; Nunes, J.M.; Rahal, M.; Kervaire, B.; Sagart, L.; Tiercy, J-M.; Sanchez-Mazas, A. 2011. The Austro-Asiatic Munda population from India and its enigmatic origin: a HLA diversity study. *Human Biology*, 83:405-35, <http://archive-ouverte.unige.ch/unige:16904>.
- Rispoli, Fiorella 2007. The incised and impressed pottery of Mainland Southeast Asia: following the paths of Neolithization. *East and West* 57:235-.
- Sagart, Laurent 2011. The Austroasiatics: East to West or West to East? In: *Dynamics of Human Diversity in Mainland SE Asia*. N. Enfield ed. 345-359. Canberra: Pacific Linguistics.
- Sahoo, Sanghamitra, Anamika Singh, G. Himabindu, Jheeman Banerjee, T. Sitalaximi, Sonali Gaikwad, R.

## **Roger Blench Austroasiatic prehistory. Final for publisher**

---

- Trivedi, Phillip Endicott, Toomas Kivisild, Mait Metspalu, Richard Villems & V. K. Kashyap 2006. A prehistory of Indian Y chromosomes: Evaluating demic diffusion scenarios. *Proceedings of the National Academy of Sciences of the United States of America*, 103(4): 843–848.
- Schuessler, Axel 2007. *ABC Etymological Dictionary of Old Chinese*. Honolulu: University of Hawaii Press.
- Schwörer-Kohl, Gretel 1997. Mundorgel. In: *Die Musik in Geschichte und Gegenwart, vol 6*. Kassel.
- Sidwell, Paul & Roger M. Blench 2011. The Austroasiatic *Urheimat* : the Southeastern Riverine Hypothesis. In: N. Enfield ed. *Dynamics of Human Diversity in Mainland SE Asia*. 317-345. Canberra: Pacific Linguistics.
- Thangaraj K, Sridhar V, Kivisild T, et al. 2005. Different population histories of the Mundari- and Mon-Khmer-speaking Austro-Asiatic tribes inferred from the mtDNA 9-bp deletion/insertion polymorphism in Indian populations. *Hum Genet*. 116:507-17.
- Thangaraj K, Chaubey G, Kivisild T, et al. (36 co-authors). 2008. Maternal footprints of Southeast Asians in North India. *Hum Hered*. 66:1-9.
- Van Driem, George L. 2001. *Languages of the Himalayas: An Ethnolinguistic Handbook of the Greater Himalayan Region containing an Introduction to the Symbiotic Theory of Language*. 2 vols. Leiden: Brill.
- Van Driem, George 2007. Austroasiatic phylogeny and the Austroasiatic homeland in light of recent population genetic studies. *Mon-Khmer studies*, 37:1-14.
- Van Driem, George 2010. The Shompen of Great Nicobar Island: New linguistic and genetic data, and the Austroasiatic homeland revisited. *Austroasiatic Linguistics: Proceedings of the Third International Conference on Austroasiatic Linguistics, 26-28 November 2007, Rathinasabapathy Elangaiyan Memorial Volume*. In: Keralaputra Shreevinasaiah Nagaraja and Kashyap Mankodi, eds. 224-259. Mysore: Central Institute of Indian Languages.
- Van Driem, G. 2011a. Rice and the Austroasiatic and Hmong-Mien homelands. In: *Dynamics of Human Diversity: The Case of Mainland Southeast Asia*. Enfield, N.J. (ed.) 361-389. Canberra: Pacific Linguistics.
- Van Driem, George 2011b. Lost in the sands of time somewhere north of the Bay of Bengal. In: *Himalayan Languages and Linguistics: Studies in Phonology, Semantics, Morphology and Syntax*. Mark Turin and Bettina Zeisler, eds. 13-38. Leiden: Brill.
- Van Driem, George 2012a. The ethnolinguistic identity of the domesticators of Asian rice. *Comptes Rendus Palevol*, 11 (2): 117-132.
- Van Driem, George 2012b. Etyma, shouldered adzes and molecular variants. In: *Methods in Contemporary Linguistics*. Andrea Ender, Adrian Leemann and Bernhard Wälchli, eds. 335-361 Berlin: Mouton de Gruyter.
- Zide, Arlene R.K. & Norman H. Zide 1976. Proto-Munda cultural vocabulary: evidence for early agriculture. In: *Austro-Asiatic Studies, Part II*. P.N. Jenner, L.C. Thompson & S. Starosta (eds.) 1295-1334. Honolulu: University of Hawai'i.