

# **Waterworld: lexical evidence for aquatic subsistence strategies in Austroasiatic**

**Austroasiatic VII**

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**Roger Blench**

**McDonald Institute for Archaeological Research, Cambridge**

**Department of History, University of Jos**

**Kay Williamson Educational Foundation**

**Visiting Professor, University of New England, Armidale**

**Academic Visitor, Museu Emilio Goeldi, Belem, Brazil**

# Austroasiatic: proposals for homelands and dispersals

- ❖ The Austroasiatic language phylum has long been established, but limited progress has been made towards a consolidated reconstruction of its proto-lexicon.
- ❖ The largest body of putative proto-forms, Shorto (2006) largely consists of a compilation of lookalikes, and his starred forms are supported by citations from as few as two branches of Austroasiatic.
- ❖ These lacunae make it problematic to draw conclusions about the origin and routes of dispersal, as well as the potential subsistence systems of early speakers, a classical goal of historical linguistics.
- ❖ This in turn has implications for dating, since the SE Asian Neolithic is now very well known.
- ❖ This absence has not inhibited scholars from random unsubstantiated guesses (e.g. Van Driem 2007) nor from the enthusiasts of mathematical procedures in applying various procedures to come up with wholly fantastical proposals.

# The internal structure of Austroasiatic

- There may be a problem connected with the internal structure of Austroasiatic.
- Historical linguistics works best with apical structures where proto-forms can be attributed to different nodes following the identification of sound-shifts.
- But it seems likely Austroasiatic has a flat structure, its thirteen branches developing from the diversification of a dialect chain rather than a series of hierarchical splits.
- This would make it 'innovation-linked' rather like Western Malayo-Polynesian; lexemes common to all branches might be rather rare and instead many terms would be shared by a series of near-contiguous branches.

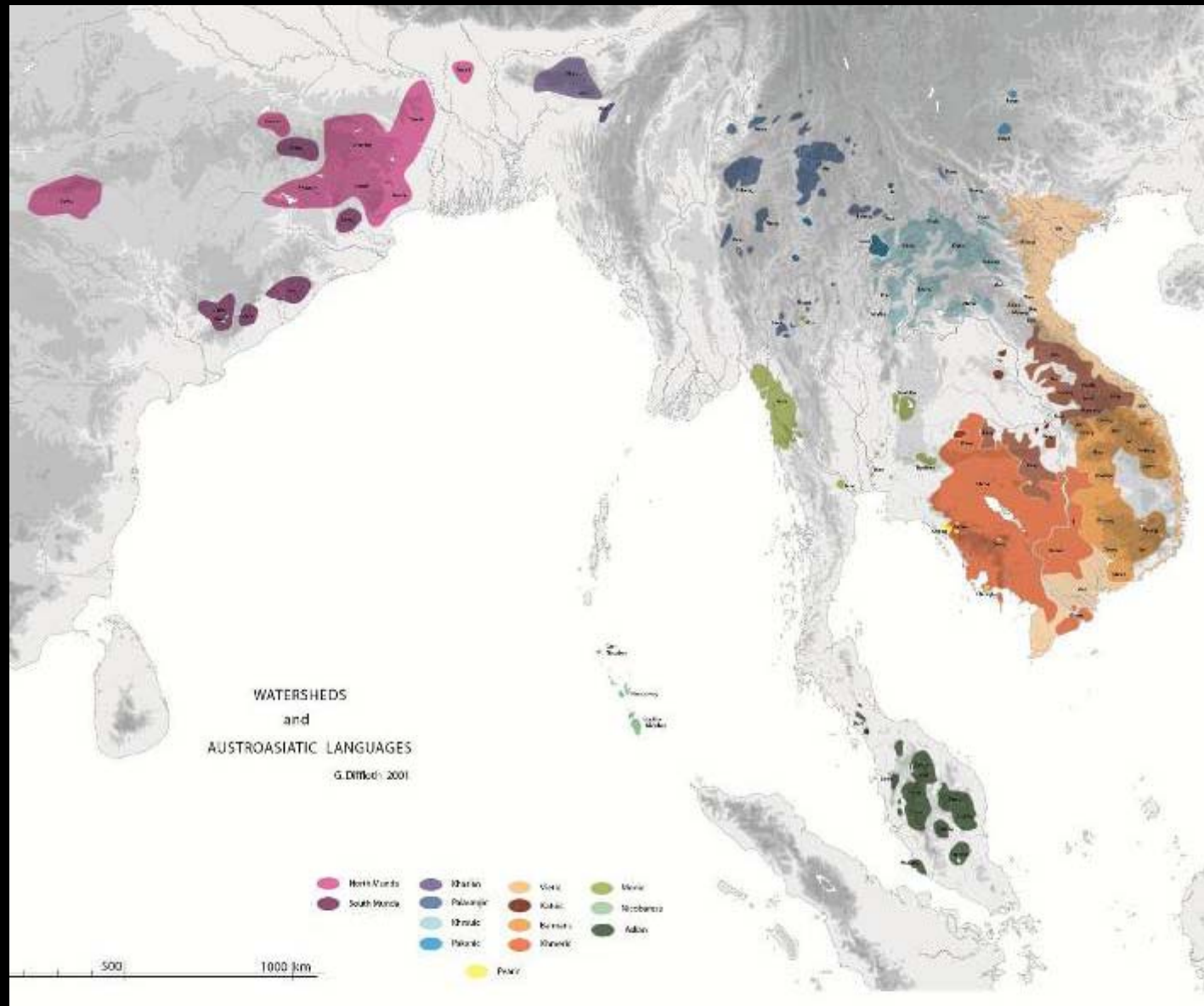
## Austroasiatic language and river basins

- Diffloth (2005) argued that the geographical dispersal characteristic of Austroasiatic reflects a quest for river valleys. Map 2 shows how the scattering of the branches of Austroasiatic indeed follows this pattern to a large extent, although Nicobaric, Aslian and Munda are exceptions.
- If the argument in Sidwell & Blench (2011) is correct, the flat array arises from an initial phase of aquatic dispersal, driven by improved boats, crops suitable for cultivation in humid soils.
- This in turn reflects the early spread of the SE Asian Neolithic, which can be tracked through sites exhibiting a characteristic artefact cluster, including 'incised and impressed' pottery (Rispoli 2008; Higham et al. 2011).
- In this model, the original homeland of Austroasiatic would have been in the middle Mekong and speakers of the gradually differentiating dialects would have dispersed both north and southwest.

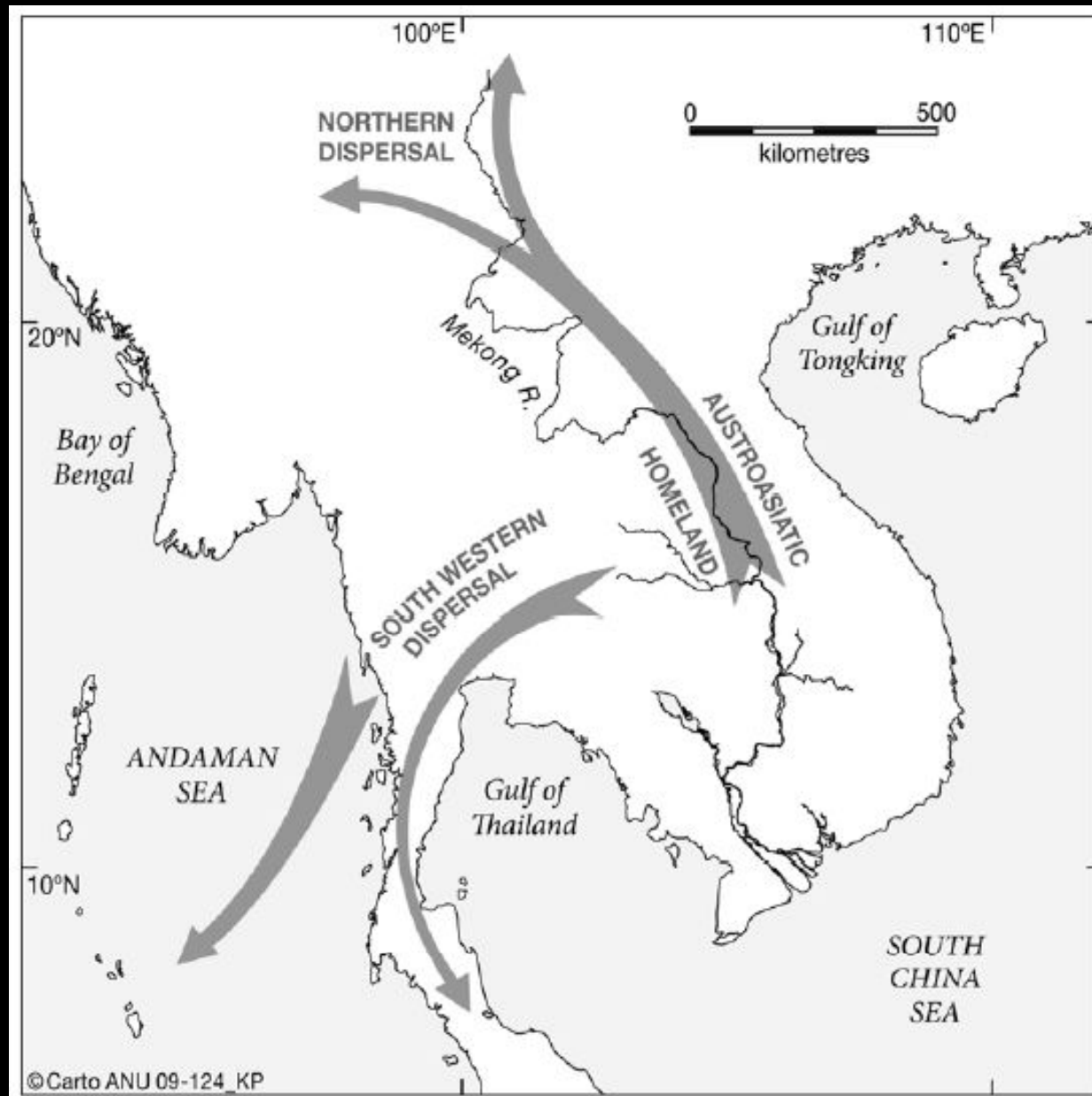
## **Austroasiatic agricultural reconstructions and dating**

- It has been proposed for a long time that Austroasiatic is associated with agriculture, reconstructions of 'rice' etc. but even better attestations for taro etc.
- The introduction of agriculture definitely comes from further north, from the Yangtse valley, where it is about 6000 BP
- It appears in northern Vietnam/Laos etc. around 4000 BP and spreads both east, south and west very quickly
- The 'window' proposed in earlier publications turns out be an artefact of unreliable dating procedures
- So any proposal that disconnects Austroasiatic from these archaeological horizons is in my view not very serious
- The only missing piece of the puzzle is in NE India, where we don't have any serious excavation, hence no dates for the Munda expansion

# Austroasiatic languages (Gerard Diffloth)



# Proposed dispersal pattern of Austroasiatic



## If so...

- ❖ However, *it is not necessary to subscribe to this model*, nor even to a middle Mekong homeland, to accept the importance of rivers in stimulating the early dispersal of Austroasiatic.
- ❖ The Mekong is the most biodiverse river in the world, surpassing even the Amazon, with over 1200 species of fish and many Austroasiatic subgroups are situated within its basin.
- ❖ If aquatic subsistence was indeed important at the period of dispersal, then this should be reflected in the lexicon.
- ❖ This paper is an attempt to draw together the lexical evidence for Austroasiatic, making no presumptions about subgroupings.



# Attestations in other phyla

- ❖ Some of the better-known roots are also attested in other language phyla, notably Tibeto-Burman (Trans-Himalayan)
- ❖ This suggests strongly that when the Austroasiatic expansion was pushing westward, it encountered TB speakers already in situ, with a distinctive non-riverine culture
- ❖ Certainly, well distributed roots which look 'old' in Austroasiatic are here and there in TB
- ❖ Hence the scattered mosaic of borrowings.

# A SE Asian regional term for 'river', 'valley'

Austroasiatic	Bahnaric	PB	*krɔːŋ	river
	Khmuic	Khmu Yuan	króːŋ	Mekong
	Mangic	Bolyu	huːŋ <sup>13</sup>	river, ditch
	Monic	P-Monic	*krooŋ	stream, creek, river
	Munda	Kharia	khirom	large 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
Daic	Tai	Thai	khlooŋ	river
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

# The #*duuk* root for 'boat' in Austroasiatic

Branch	Subgroup, language	Citation
Bahnaric	PB	* <i>duuk</i>
Katuic	PKa	* <i>duuk</i>
Khmeric	Khmer	<i>tuuk</i>
Monic	Nyah Kur	<i>thù:k</i>
Nicobaric	Nancowry	<i>düe</i>
Pearic	Common	# <i>tòk</i>
Vietic	PV	* <i>đu:k</i>

# An Austroasiatic root for 'boat'

Phylum	Branch	Subgroup, language	Citation
Austroasiatic	Bahnaric	PB	*pluŋ
	Katuic	Ngeq	roŋ
	Khasic	P-Kha	*lɛɛŋ
	Khmuic	Khmu	clɔ:ŋ
	Monic	Old Mon	dluŋ
	Monic	Middle Mon	gluŋ
	Monic	Mon	klɔ̀ŋ
	Munda	Kharia	ɖoloŋ
	Palaungic	P-Palaungic	*ɲlɔɔŋ
	Sino-Tibetan	Kuki-Chin	Lushai
Kuki-Chin		Kyo Chin	mloŋ
Naga		Chang	loŋ
Lolo-Burmese		Written Burmese	lâuŋ
Lolo-Burmese		Akha	lò

# A general Austroasiatic term for 'fish'

Branch	Language	Attestation
Aslian	PA	ka:ʔ
Bahnaric	Sre	ka
Katuic	Kuy	ka:
Khasic	PK	*k <sup>h</sup> a
Khmeric	Khmer	ka:-[moŋ &c.] (in compounds)
Khmuic	Kammu-Yuan	káʔ
Monic	Old Mon	kaʔ
Munda	Kharia	ka-
Nicobaric	Nancowry	ká
Palaungic	Lawa	kaʔ
Vietic	Vietnamese	cá

# Catfish sp. in Austroasiatic

Branch	Language	Attestation	Gloss
Bahnaric	Sedang	b.lɔŋ	
Bahnaric	Tarieng	lɔ:n	
Katuic	Ngeq	k.lo:	
Khmeric	Khmer	c.laŋ ឆ្កែ	prob. <i>Macrones</i> sp.
Palaungic	Lamet :[Lampang]	lɔ:n	

# 'Eel' in SE Asian language phyla

Phylum	Branch	Language	Attestation	Gloss
Austroasiatic	Bahnaric	PB	*-duŋ	
	Katuic	PK	*ʔnduŋ	
	Khmer	Surin Khmer	ntuaŋ	
	Khmuic	Khmu	ʔontùəŋ	???
	Monic	Nyah Kur	nthòəŋ	swamp eel
	Monic	Mon	daləŋ	
	Palaungic	Lamet [Nkris]	təla:ŋ	eel
	Munda	Kharia	ɖuŋɖuŋ	eel
	Pearic	PP	*ml(ɔ:)ŋ	eel
Sino-Tibetan	Sakish	Kadu	patùn	eel
	Isolate	Kman	p.lun	eel
Austronesian	Philippines	Cebuano	induŋ	moray eel sp.
	Borneo	Iban	lundonŋ	eel
	Sumatra	Karo Batak	duŋduŋ	eel
	Malayic	Cham	lanəŋ	eel
	Malayic	Malay	[ular] londonŋ	sea-snake

# An Austroasiatic root for ‘prawn’

Phylum	Branch	Language	Attestation	Gloss
Austroasiatic	Bahnaric	Nyaheun	cəŋ	prawn, shrimp
	Katuic	PK	*ʔncəŋ	shrimp
	Khmer	Surin	trej-kə:ŋ	shrimp, prawn
	Khmuic	Phong	pa: ku:ŋ	shrimp
	Munda	Santal	icaʔ	
	Nicobaric	Nancowry	ʃoaŋ	marine shrimp
	Palaungic	Danaw	maiʔ <sup>3</sup> təŋ <sup>4</sup> kəŋ <sup>1</sup>	prawn
	Pearic	Chong [Kompong Som]	pkə:ŋ	prawn
	Vietic	Thavung	kə:ŋ	prawn
Daic	Tai	Proto-Zhuang-Tai	*kuŋ.C	shrimp
	Kra	Lakkia	tsoŋ. <sup>3</sup>	shrimp
	Kra	Biao	kuŋ. <sup>3</sup>	shrimp
Sino-Tibetan	Kuki-Chin	proto-Kuki-Chin	ŋaay kuang	shrimp/prawn
	Naga	Ao	[a]-kuŋ	prawn
	Bodo-Garo	Deuri	cicô	shrimp/prawn



# A central Austroasiatic root for 'shrimp'

Branch	Language	Attestation	Gloss
Bahnaric	Chrau	kəmviḥ	
Khmu		kəmɸuḥ	
Khmeric	Khmer	kəmɸiḥ កំពឹស	
Pearic	Chong [of Samray]	kəmɸiːs	small river shrimp

# A reconstruction for 'crab' in Austroasiatic

Phylum	Language	Subgroup, language	Citation
Austroasiatic	Aslian	CA	#kantam
	Bahnaric	PB	*kta:m
	Katuic	PK	*ktaam, *ʔataam,
	Khasic	PKha	*t <sup>h</sup> aam
	Khmeric	Khmer	kdaam ក្តាម
	Khmuic	PKhm	*kta:m
	Mangic	Mang	ta:m <sup>6</sup>
	Munda	PNM	*kaŋkɔm
	Monic	PM	*kntaam
	Nicobaric	Nancowry	katɔŋ-cafa
	Palaungic	PP	*ktaam
	Pearic	Pear [Kompong Thom]	kta:m
	Vietic	PV	kta:m
Austronesian	Malayic	Malay	kətam
	Chamic	Acehnese	gʷɪtɯəm

# A reconstruction for 'tortoise, turtle' in Austroasiatic

Branch	Language	Attestation	Gloss
Aslian	Jahai	kəh	tortoise sp.
Bahnaric	P-Bahnaric	*kə:p	tortoise
Katuic	P-Katuic	*ʔakəp	turtle
Khmuic	Tai Hat	ku:p	turtle
Nicobaric	Car	kap	tortoise
Nicobaric	Nancowry	kap-ka	green turtle ( <i>Chelonia virgata</i> )
Vietic	Chút [Arem]	kə:p	shell (crab, tortoise)

# Terrapins and fish in water plants on the Bayon



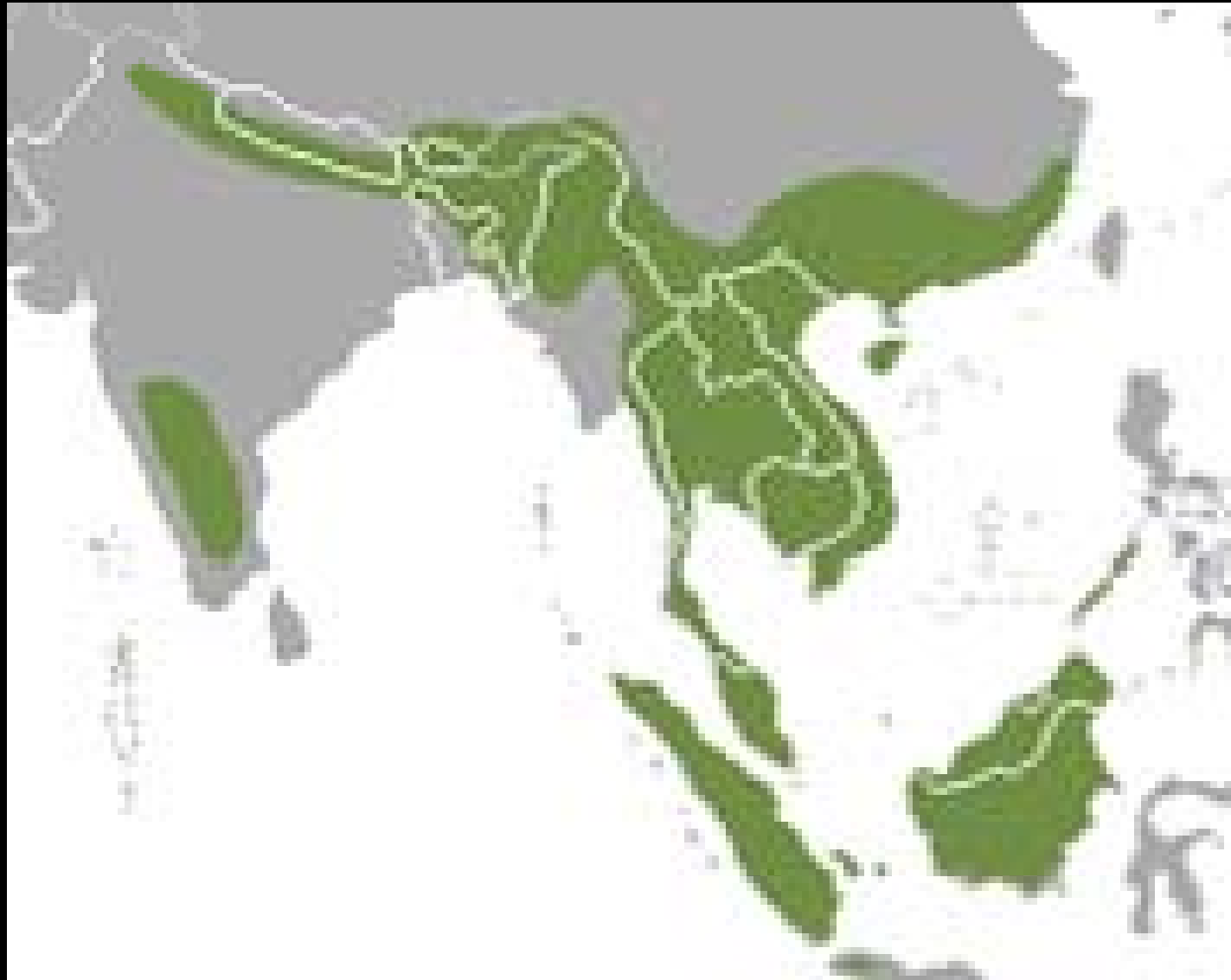
## A reconstruction for 'turtle' in Austroasiatic

Phylum	Language	Subgroup, language	Citation	Gloss
Austroasiatic	Bahnaric	Stieng	b.ləu	tortoise shell
	Khasic	PK	*-ruʔ	turtle
	Khmeric	Surin	nʌ:ʔ	turtle
	Munda	Sora	'ku(:).lu:-n	turtle
	Munda	Kharia	'ku.lu	turtle
	Monic	Mon	naoh ကုတ်	turtle
	Palaungic	Riang [Sak]	ru:s <sup>2</sup>	tortoise, turtle
	Vietic	PV	ʔa-rə:	tortoise
Austronesian	Malayic	Malay	kura-kura	tortoise

## Riverine dispersals and water creatures

- ❖ A few species characteristic of riverine habitats have significant reconstructible roots in Austroasiatic.
- ❖ These are the otter, the crocodile, the otter and the heron.
- ❖ There are two species of otter found throughout the MSEA region, the oriental small-clawed otter, *Aonyx cinerea*, and smooth-coated otter, *Lutrogale perspicillata*.

**Range of the Oriental small-clawed otter,  
*Aonyx cinerea***



**Range of the smooth-coated otter.**  
***Lutrogale perspicillata***





# A SE Asian root for 'otter'

Phylum	Language	Subgroup, language	Citation
Austroasiatic	Aslian	Semelai	bəheʔ
	Bahnaric	Nyaheun	phie
	Bahnaric	Mnong [Rölöm]	bhi:ŋ
	Katuic	PK	*phay
	Katuic	Bru	phɛ
	Khasic	Khasi	kəsiʔ
	Khmeric	Khmer	phè: វែរ
	Monic	PM	*phɛɛʔ
	Pearic	PP	#p <sup>h</sup> e:
	Vietic	PV	*p-se:ʔ
Austronesian	Chamic	PC	*buhay

# An Austroasiatic root for 'crocodile'

Branch	Language	Attestation	Gloss
Bahnaric	PWB	*krbiw	crocodile
Katuic	PK	*krbəə	crocodile
Khmeric	Khmer	krəpəə ក្របី	crocodile
Khmuic	Khmu [Cuang]	c.k <sup>h</sup> rɛ:	crocodile
Nicobaric	Car	rew	crocodile
Pearic	Pear [Kompong Thom]	krəpə: tiek	crocodile

# Crocodile catching fish on the Bayon



## An Austroasiatic root **#kok** for 'heron', 'fishing bird'

Branch	Language	Attestation	Gloss
Aslian	Semai	*d <u>kuuk</u>	helmeted hornbill, <i>Rhinoplax vigil</i>
Bahnaric	PB	*k <u>ɔ:k</u>	egret, heron
Katuic	Pacoh	ka.la:ŋ k <u>ɥ:k</u>	pelican
Khasi	Khasi	koh-[karang]	hornbill
Khmeric	Khmer	kok ក្រែក	heron, egret
Munda	Kharia	k <u>ɔ</u> lɛʔ	heron
Palaungic	PPa	*k <u>V</u> k	heron
Vietic	Vietnamese	c <u>ố</u> c	cormorant

# An Austroasiatic root for 'fish-trap'

Language	Subgroup, language	Citation	Original Gloss
Bahnaric	Sedang	trɔ̃	fish trap
Khmeric	Surin	trù:	bamboo fish trap
Katuic	Kui	thru:	cylindrical fish trap made of bamboo strips
Monic	Nyah Kur	thru	bamboo fish trap with a narrow neck
Munda	Kharia	lonɖra	fish trap sp.
Pearic	Chong [Samre]	tûəɪ	fish trap
Vietic	Thavung	to:ŋ	fish trap

# Khasi bamboo fish-traps



# Austroasiatic languages and riverine dispersal I

- ❖ A combination of linguistic geography and historical linguistics, suggests the possibility that Austroasiatic represents a 'flat array' of languages, and that this is due to an early riverine dispersal.
- ❖ Using a 'centre of gravity' argument, the Middle Mekong is proposed as the original nucleus of dispersal. The period of dispersal is identified with the SE Asian Neolithic, currently dated to ca. 4000 BP.
- ❖ Although early Austroasiatic speakers were clearly crop producers, growing both taro and rice, if they were largely following river basins, aquatic technology and subsistence must have been highly salient in their vocabulary.

## **Austroasiatic languages and riverine dispersal II**

- ❖ The paper shows that a number of lexical items can be shown to be common to many of the branches of Austroasiatic, suggesting them as reasonable candidates for the proto-language.
- ❖ Other roots have more restricted distributions and apply to local areas. Lexical data for Austroasiatic remains highly schematic and imprecise, as well as significantly defective for some branches.
- ❖ This suggests that with greater attention to biological and technical detail, it will be possible to refine some of the reconstructed items proposed here.



wk d q n v

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