

Linguistic clues to Andamanese pre-history: Understanding the North-South divide

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ABSTRACT

The Andaman Islands, were, until the 19th century, home to numerous hunter-gatherer societies. The ten or so tribes of Great Andamanese spread over the north and central parts of the islands are thought to have spoken related languages, while the Onge, Jangil and Jarawa of the southern parts, including Little Andaman, have been assumed to constitute a distinct linguistic family of 'Ongan' languages. Preliminary reconstruction of Proto-Ongan shows a potential link to Austronesian languages (Blevins 2007). Here, preliminary reconstructions of Proto-Great Andamanese are presented. Two interesting differences characterize the proto-languages of northern vs. southern tribes. First, sea-related terms are easily reconstructable for Proto-Great Andamanese, while the same is not true of Proto-Ongan. Second, where Proto-Ongan shows an Austronesian adstrate, Proto-Great Andamanese includes lexemes which resemble Austroasiatic reconstructions. These linguistic clues suggest distinct prehistoric origins for the two groups.

1. An introduction to languages and peoples of the Andaman Islands. The Andaman Islands are a cluster of over 200 islands in the Bay of Bengal between India and Myanmar (Burma) (see Map 1).

[MAP 1 AROUND HERE; COURTESY OF GEORGE WEBER]

They were once home to a range of hunter-gatherer societies, who are best known from the descriptions of Man (1883) and Radcliffe-Brown (1922). These writers, along with the Andamanese themselves, split the population of the Andamans into two primary language/culture groups, the 'Great Andaman Group' and the 'Little Andaman Group' (Radcliffe-Brown 1922:11). The Great Andaman Group inhabit the northern and central reaches of the islands and speak approximately 10 different closely related languages (Aka-Cari, Aka-Bo, Aka-Kora, Aka-Jeru, Aka-Kede, Aka-Kol, Oko-Juwoi, A-Pucikwar, Akar-Bale, and Aka-Bea). The Little Andaman Group, or Ongans, inhabit Little Andaman Island and the southern reaches of the main island chain, and speak three or four closely related languages (Onge, Jarawa, Jangil, and perhaps Sentinelese). It is this north-south divide in language/culture between the Great Andaman Group and the Little Andaman Group that the title of this paper refers to.

Map 2 shows the approximate locations of these tribes and their speakers in the mid 1800s based on 19th century government officer reports.

[MAP 2 AROUND HERE; COURTESY OF GEORGE WEBER]

Jangil has not been spoken for over a hundred years, and today there are no more than 40 speakers of 'Great Andamanese'. Most describe modern Andamanese as a 'mixed language' or koine, involving a melange of the once 10 distinct languages, with dominant features of Aka-Jeru (Abbi 2006:20-22). Most Great Andamanese speakers are bilingual in Andamani Hindi, and little remains of their hunter-gatherer lifestyle. In contrast, Onge, Jarawa, and Sentinelese are still spoken, and these tribes still live primarily a hunter-gatherer lifestyle (Sreenathan 2001; Weber 2006).

The indigenous people of the Andaman Islands, including all speakers of Jarawa and Onge are 'Negritos', - a descriptive term for dark-skinned frizzy-haired people of insular and mainland Southeast Asia, usually of short stature. Negrito hunter-gatherer populations are found in the Philippines, and in peninsular Malay and Thailand. In both the Philippines and mainland Southeast Asia, Negritos are thought to represent populations which pre-date the influx of Austronesian and Austroasiatic speaking populations respectively (see Reid, this volume; Burenhult, this volume; Weber 2006).

Ethnologies of the Andamanese include Man (1883) and Radcliffe-Brown (1922), with recent archaeological studies summarized in Cooper (2002), and a wide range of earlier work summarized in Weber (2006). The Andamanese appear to represent a pre-neolithic hunter-gatherer society and many culture features are shared across the north-south divide. There is no evidence of agriculture. Stone flake tools were used, but wood, shells, and bones (including sting-ray barbs) were preferred as points. There is also no evidence of fire-making. Prior to the introduction of matches in the 19th century, the Andamanese had no means of making fire. They kept hearth fires burning, carried resin torches through the forest, and buried smoldering logs for future use. The Andamanese manufactured rudimentary rafts, dugout log canoes, and single outriggers, but none of their craft were built for long sea voyages. Shelters, made of wood and woven palm leaves, included small temporary huts, put together quickly while hunting; semi-permanent individual family houses; and more solid large communal shelters. Clay cooking pots are made by all groups, though shapes differ across the north/south divide. The most involved technology may be that of the bow and arrow: bow size and shape distinguishes the northern and southern groups, and all tribes have at least four distinct arrow types. Another flourishing technology is the production of head, neck and waist ornaments from flowers and plant fibers. Ceremonial practices shared across the north-south divide include long specialized fasts associated with initiation, the ceremonial use of red-ochre and animal fat as body paint, and the exhumation of human bones, which are made into ornamental necklaces.

The physical world inhabited by the Andamanese is rich and varied. The flora and fauna of the islands include thousands of plant species, with a wide range of hardwood trees, palms, bamboos, tubers, canes, and orchids. There is an abundance of reptiles, including snakes, salt water crocodiles, monitor lizards, turtles, small lizards and geckos. The jungles are home to wild pigs, megapodes, a myriad of other birds, as well as a dozen species of indigenous mammals, including shrews, bats, and a palm civet. Coastal waters

and inlets are home to dugongs, hundreds of fish species, crustaceans, and mollusks. Dogs live on the islands, but were only introduced in about 1858, with dramatic effects on the hunt. Prior to their introduction, wild pig hunts represented a special challenge, with pig jaws hung as trophies, and special initiation ceremonies for a young man's first successful hunt. With dogs, however, the hunt was easier, and the value and prestige associated with prize game fell. The jungles are also home to many bee species, and the Andamanese gather honey regularly during the dry seasons. They have good knowledge of a range of plants useful as bee repellents, and refer to seasons by the flowers in blossom from which bees collect nectar.

With this flora and fauna, it may not be surprising to find that populations are divided into 'coastal' and 'inland' groups. Each Andaman language has a term for this division. For example, in Aka-Bea, coast-dwellers are *ar-yoto* (lit. 'one who uses large nets and harpoon lines'), while inland people are *erem-taga* 'jungle dwellers'; in Onge coast dwellers are *am-bela-kwe* ('person-seacoast-stay'), while forest dwellers are *əŋ-gea-kwe* ('person-land-stay'). Coastal groups tend to excel in turtle hunting, using their acute hearing to shoot turtles in the darkness. Inlanders, on the other hand, are referred to by coast-dwellers as 'deaf', as they lack this particular skill, but show great talent in hunting pigs and other game in the dense jungles.

Linguistic work on languages of the Andamans has been primarily descriptive. Research until approximately 1988 is summarized in the annotated bibliography of Zide and Pandya (1989). Weber (2006) and Blevins (2007) summarize most work done since that time. For Great Andamanese, the most detailed descriptions are Portman's (1887) *Manual of the Andamanese Languages*, Portman's (1898) *Notes on the Languages of the South Andaman Group of Tribes*, Temple's (1903) grammatical and comparative notes, and Man's (1923) *Dictionary of the South Andaman Language (Aka-Bea)*. Reconstructions of Great Andamanese below are based on these sources, unless noted otherwise.

Many researchers assume that the Great Andamanese languages and the Ongan languages are distantly related based on geographic proximity, as well as cultural and racial similarities. Radcliffe-Brown's (1922:14) remarks on this topic are representative of this view:

The identity of the flora and fauna of the Little Andaman with those of the Great Andaman and the shallowness of the strait between the islands suggests that at no very remote period they have been united by a continuous land connection. Whether or not this connection existed at the time when the islands were first peopled, it is at any rate reasonable to suppose that the original ancestors of the present Andamanese had one language and one culture. Once the Little Andaman was peopled, the strait between it and the Great Andaman seems to have acted as an effective barrier, to keep the two divisions of the race apart for many centuries. During this period of this separation each division followed its own line of development, with the result that there arose the considerable difference of language and culture that now exist.

However, little firm comparative linguistic evidence has been put forth to support a family relationship between the Great Andamanese and Ongan languages (Blevins 2007:158-59; Abbi 2008). In recent comparative work on Onge and Jarawa, Blevins (2007) reconstructs a basic Proto-Ongan vocabulary, and suggests a relationship, not with Great Andamanese, but with Proto-Austronesian. In section 2 of this paper, preliminary Proto-Great Andamanese reconstructions are proposed, based on application of the comparative method to available descriptions. Section 3 compares aspects of this preliminary Proto-Great Andamanese vocabulary with features of Proto-Ongan, and suggests early culture differences in sea- versus land-based hunting and gathering. The linguistic differences across the north/south divide are further explored in section 4. Here, a range of Proto-Great Andamanese reconstructions are shown to resemble Proto-Austroasiatic forms. A northern Proto-Austroasiatic adstrate would contrast with a southern Austronesian adstrate, and would support independent linguistic pre-histories for the two groups as well.

Before turning to the comparative data, a note is in order concerning contact between the Andamanese and 'outsiders', since many have the inaccurate impression of the Andamanese as one of the most isolated hunter-gatherer groups on earth. Though the Andamanese have traditionally been hostile to outsiders, there is no question that many different travelers have visited the archipelago. Archaeological evidence dates sea trade between India and Thailand across the Bay of Bengal to at least 2000 years ago; an Arab travelogue of the 9th century describes the Andamanese; and there is extensive evidence that Malaysian, Burmese and Nicobarese took Andamanese slaves, and collected edible swift's nests and sea-slugs from their coasts and off-shore waters (Cooper 2002:8-31). In addition, Blust (1994) suggests that the outrigger was invented only once in human history, by speakers of Austronesian languages, either in Taiwan or in the northern Philippines. He goes on to suggest that the Andamanese acquired the outrigger by contact with the Nicobarese, who themselves had contact with Austronesian speakers. Despite this evidence of contact, the hostility of Andamanese to outsiders (prior to the establishment of the penal settlement at Port Blair) appears to have resulted in little mixing with visitors, for the simple reason that few visitors who stepped ashore seemed to survive (Cooper *op cit.*). The external relationships suggested between Proto-Great Andamanese and Proto-Austroasiatic below, or between Proto-Ongan and Proto-Austronesian by Blevins (2007), then, are not easily attributed to contact *in situ*. They may, however, be taken to reflect potential pre-historic contact zones or family homelands from which migrations to the Andamans took place.

2. Proto-Great Andamanese reconstructions. There has been little past work on the diachronic phonology of the Great Andamanese languages, though Temple (1903) provides a good starting point for comparative phonology and morphology. This is likely because the phonologies of the languages are so similar, that little was felt to be needed, apart from listing cognate sets (see, e.g. Temple 1903:116). Usher (2006), whose primary interest appears to be long-distance comparison, begins by saying "The reconstruction of Proto-Great Andamanese... is well underway" (p.295), but contains no comparative data

from Great Andamanese languages, and only five reconstructed Proto-Great Andamanese morphemes, four being monosegmental pronominal prefixes (see Table 4 below).

I will try to fill this gap by (in some cases, trivial) application of the comparative method to available data from Great Andamanese languages, most of which comes from Portman (1887, 1898), Temple (1903) and the more detailed Aka-Bea dictionary of Man (1923), including appendices. Interpreting historical sources on these languages is not always straightforward. Temple and Man adopt a transcription system recommended by A. J. Ellis which is narrow in its treatment of vowel quality, and criticize Portman for not following suite. However, many of the quality contrasts Man and Temple transcribe appear to be non-contrastive. In presenting Great Andamanese data below, I have taken the liberty of 'normalizing' transcriptions to reflect my phonemic analysis of the languages as having a simple five vowel /i u e o a/ system. In terms of the original symbols used by Man and Temple, their vowel symbols with diacritics are represented here by the same vowel symbol without a diacritic. Other than this, the only differences in transcription are my writing of /ŋ/ for 'ng', the velar nasal, and /c/ for 'ch', a voiceless palatal affricate. With the exception of /c/, /j/, the voiced palatal affricate, and /y/, the voiced palatal glide, all symbols are those of the International Phonetic Alphabet.

2.1 Sound correspondences and the lexicon. The Great Andamanese languages have similar phonological systems. Portman (1887) provides wordlists from (north to south): Aka-Cari (his Aka Chariar); Aka-Kede; A-Pucikwar (his Aka Bojigiab), and Aka-Bea (his Aka Bia-da), while Man's (1923) dictionary of Aka-Bea provides more extensive phonetic, phonological, morphological and lexical material on this southernmost Great Andamanese language which borders Ongan languages to the south. All of these languages appear to have oral and nasal stops at bilabial, alveolar/dental, and velar points of articulation. All languages have palatal affricates, and all lack oral fricatives (though Temple 1903:116 notes that Bojigyab /c/ is "palato-dental and tends to *t*, and that the *ch* of Bea tends in Bojigyab to become *s*") . In addition, all languages have sonorants /l,r,w,y/, and all appear to have a contrast between voiced and voiceless stops /p t k/ and /b d b/ in non-final position. Syllable structure in these languages is relatively simple, with V, CV, VC and CVC syllables in evidence. Words may end in vowels or consonants, and the majority of unaffixed stems are monosyllabic or disyllabic. Stress is transcribed by Man (1923) for Aka-Bea and does not appear to be predictable, although final syllable stress is rare: compare '*rata* 'sea water', '*jabag* 'bad' and '*ya'ba* 'a little'.

Although Portman, Temple and Man all transcribe a wealth of vowel qualities, there is, as noted above, little evidence for more than a five way /i u e o a/ contrast, with allophonic variation, especially in unstressed position. The most variable reflexes occur where, I hypothesize, Proto-Great Andamanese had a schwa, or a consonant cluster split by vowel insertion. Consonantal sound correspondences in Table 1 are based on the comparative data discussed directly below.

Proto-Great Andamanese	*p	*b	*m	*w	
Aka-Cari	p	b	m	w,∅	
Aka-Kede	p	b	m	w	
A-Pucikwar	p/∅	b	m	w	
Aka-Bea	p/b/∅	b	m	w	
Proto-Great Andamanese	*t	(*d)	*n	*l	*r
Aka-Cari	t	d	n	l	r
Aka-Kede	t	d	n	l,y,∅	r
A-Pucikwar	t	d	n	l	r
Aka-Bea	t,d	d	n	l	r
Proto-Great Andamanese	*c	*ɲ	*y	*k	*ŋ
Aka-Cari	c	ɲ	j	k	ŋ
Aka-Kede	c	ɲ	j	k	ŋ
A-Pucikwar	c	ɲ	y	k, c	ŋ
Aka-Bea	c,j	ɲ	y	k, g	ŋ

TABLE 1. GREAT ANDAMANESE CONSONANT CORRESPONDENCES

Reflexes of Proto-Great Andamanese *p are stable (1), with the exception of CVVC forms, where final *p appears to be lost in the southern languages. Note also that Aka-Bea shows variable voicing of *p word-finally, as it does for all inherited voiceless stops. This final voicing can be attributed to regressive assimilation in the context of the suffix /-da/, which generally follows substantives, adjectives and adverbs when they are not followed by a post-position or in construction, and the verbal suffix /-ŋa/ (Man 1923:5). Regressive voice assimilation has resulted in many stems being analyzed with final voiced obstruents, e.g. Aka-Bea *log* 'channel' < **luk* (cf. Aka Bojigiab, Aka Kede, Aka Chariar *luk*), while others, like /bulap/ (1d), are recorded with voiceless and voiced variants of final stops.

(1) Correspondences for Proto-Great Andamanese *p (initial, medial, and final)

Proto-Great Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *por	'bamboo, cane'	por	por	por	por
b. *pila	'tusk, tooth'	pili/ca	pila, pela	pile	pile
c. *ɲipə	'sandfly'	ɲipa	ɲipa	ɲipo	ɲipo
d. *bələp	'to weep, mourn'	bulap, bulab	bilap	bilip	bilup
e. *rərəp	'anvil'	rarap	rarap	rorop	rorop
f. *cuəp	'fasten'	co	ca	cup	cop
g. *kap	'cheek'	-ab-	kap	kap (Aka-Juwai)	

Proto-Great Andamanese *b and *m are also stable, as shown in (2), (3). Note that *b is not reconstructable for word-final position.

(2) Correspondences for Proto-Great Andamanese *b (initial and medial only)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *ba	'mother-of-pearl'	ba	ba	ba	ba
b. *bələp	'to weep, mourn'	bulap, bulab	bilap	bilip	bilup
c. *betmə	'rope, cord'	betma	betmo	betmo	
d. *burəin	'hill, mountain'	boroin	burin	burin	burain
e. *cabia	'seaweed'	cabya	cabia	cabia	cabio

(3) Correspondences for Proto-Great Andamanese *m (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *muən	'dirt, matter, pus, brains'	mun	min	mine	mine
b. *mulə	'egg'	molo	mula	mulo	mulu (Jero)
c. *təmə	'flesh, meat'	dama	toma	tomo	-tomo
d. *yom	'make, work'	yom	yom	yom	jom
e. *yəm	'rain, rain water'	yum	--	jem	--

Proto-Great Andamanese *w occurs mainly in initial position, though at least one clear example of medial *w is found in *cowai 'clam' (4). No final *w is reconstructable at this point. This phoneme is also relatively stable, though in Aka-Chariar the reflex of initial *w is sometimes zero, with coalescence of *wa > e and *wa .

(4) Correspondences for Proto-Great Andamanese *w (initial and medial only)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *waic	'splash'	wij, wej	waic	waic	ec
b. *waka	'lobster'	waka	waka	waka	oka (Jero 'prawn')
c. *wat	'fin'	wat, wad	wat	wat	et
d. *werə	'to open'	were	were	wero	ero
e. *wət	'bat, flying fox'	wot, wod	wat	wot	wot
f. *wal	'lightning'	-wol/oij 'star'	wal	wai	wai
g. *wolo	'adze'	wolo	wolo	wo	olo
h. *cowai	'clam'	cowai	cowai	cowai	cowai

Proto-Great Andamanese *t occurs in initial, medial and final position (5). As with *p, voiced variants are found finally in Aka-Bea. There is also sometimes initial voicing in Aka-Bea when the next consonant in the word is voiced: Proto-Great Andamanese *tu '1sg', Aka-Bea *do-la* 'I'; Proto-Great Andamanese *tomə 'flesh, meat', Aka-Bea *dama*. There is no evidence of *t palatalization before *i: Proto-Great Andamanese *tire 'boy', Aka-Bojigiab *tire*, Aka-Kede *tira*, Aka-Chariar *tire*. Finally, notice that while /rt/ clusters

can occur word-medially in Aka-Bea and Aka-Bojigiab, the same clusters are split by vowel epenthesis in Aka-Kede and Aka-Chariar in reflexes of Proto-Great Andamanese **artəm* 'ancient, old'. Reflexes of intervocalic *t appear as voiced /d/ sporadically in all Great Andaman languages; if this is predictable, further conditions remain to be discovered.

(5) Correspondences for Proto-Great Andamanese *t (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *talak	'whetstone'	talag	talak	toku	taluko
b. *tei	'blood'	ti, tei	tei	teyi	tei (Jero)
c. *təi	'bone'	ta	ta	tuwe	toi
d. *artəm	'ancient, old'	artam	artam	aratom	aratom
e. *lotə	'enter; wear'	loti	lote	lota	-lota
f. *kət	'think, understand'	gad	kot	kot	kot
g. *lat	'afraid, fear'	lat, lad	lat	yat	lat

Though all Great Andaman languages appear to have a contrast between /t/ and /d/, it has a low functional load, and may be due to (i) voicing of *t in Aka-Bea as noted above in assimilation with adjacent voiced sounds; (ii) sporadic lenition of *t > d in all languages, as just noted; or (iii) borrowing of words with [d]. For example, from Proto-Great Andamanese **kiter* 'coconut', we find Aka-Bea *jeder* (i), and Aka Chariar, Jeru *kider* (ii); and from **torup* 'to flip', we find Aka-Bea *dorop*, Aka Kede *dorup*, but Aka Chariar *torup*. In (6) I include all cognate sets where *d might be reconstructed for Proto-Great Andamanese, but the set is quite small, and *d may not be a proto-phoneme. For **cut*, the Aka-Bea *juru* is glossed by Man (1923) as 'go on a voyage', while *cita* 'to sail' is provided by Portman for Aka Kede and Aka Chariar. If these forms are all cognate, then the correct reconstruction may be **cut*, with the sporadic voicing noted above, as well as further lenition of /d/ to /r/ in Aka-Bea.

(6) Correspondences for Proto-Great Andamanese *d (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *dəp	'unripe'	ti/ripa	dop	dop	dop
b. *dədi	'sail, sailing ship'	dadi	dadi	dadi	rali
c. *cuəd	'to go'	jud, juru	cid	cid	cid

Proto-Great Andamanese *n is also found in initial, medial and final position (7). The proto-phoneme and its reflexes show a strong co-occurrence with other sonorants within the morpheme, though there are one or two exceptions, like **pon* 'crab'. Generally, *n continues unchanged. The only exception found so far is Aka-Bea *bad* < **pon* 'crab'. Here, the sound change is most likely assimilatory in the context of the common /-da/ suffix, with a change of pre-Aka Bea **ban-da* > *bad-da* 'crab'. Dental/alveolar *n

contrasts with palatal *ɲ and velar *ŋ in all positions, including before *i: compare *nili 'shrill' with *nipə 'sandfly', and *ɲilip 'a cold, nasal mucus'.

(7) Correspondences for Proto-Great Andamanese *n (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *neu	'pulse'	nu	neu	neu	neu
b. *nili	'shrill'	nili	nili	nili	nili
c. *inə	'water'	ina	ena	ine	ino
d. *un ke	'to leave'	on ke	un-eke	un-i	un-i
e. *burəin	'hill, mountain'	boroin	burin	burin	burain
f. *marən	'soot'	marin	maran	maron	maron
g. *len	'to repair'	len/yi	len	yen	len
h. *muən	'dirt, matter, pus, brains'	mun	min	mine	mine
i. *pon	'crab' (big, edible)	bad	pon	pon	pon

Proto-Great Andamanese *l is also found in initial, medial and final position (8). The lateral has lenited to /y/ or zero in Aka-Kede.

(8) Correspondences for Proto-Great Andamanese *l (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *lat	'afraid, fear'	lat, lad	lat	yat	lat
b. *len	'to repair'	len/yi	len	yen	len
c. *luk	'channel'	log	luk	luk	luk
d. *lotə	'enter; wear'	loti	lote	lota	-lota
e. *pila	'tusk, tooth'	pili/ca	pila, pela	pile	pile
f. *pulua	'mist'	pulia	pulia	poia	---
g. *talak	'whetstone'	talag	talak	toku	taluko
h. *wolo	'adze'	wolo	wolo	wo	olo
i. *pil	'corpse, dead'	pil	pil	pil	pil
j. *teil	'mosquito'	teil	teil	teil	teil
k. *wal	'lightning'		wal	wai	wai

Proto-Great Andamanese *r is found in initial, medial and final position (9), and has /r/ reflexes in all languages, where /r/ is a rhotic approximant.

(9) Correspondences for Proto-Great Andamanese *r (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *raic	'broth, watery juice'	raij	reic	raic	raic
b. *rau	'to bore'	reu	reu	ro	ro
c. *rim	'resin'	rim	rim	rem	rem
d. *romə	'to howl'	romo	roma	romu	romu

e. *tire	'young boy'	dere	tire	tira	tire
f. *korə	'hand'	koro	kora	koro	kora
g. *artəm	'ancient, old'	artam	artam	aratom	aratom
h. *werə	'to open'	were	were	wero	ero
i. *kor	'middle'	---	kor	kor	kor
j. *kider	'coconut'	jeder	ceter	kiter	kider
k. *mucur	'to smile'	mujur	moicar	moijur	moicur

Proto-Great Andamanese *c is found in initial, medial and final position (10), and has /c/ reflexes in all languages. In Aka-Bea, as already mentioned, voiced reflexes are found word-finally (10i,k.l), and when the following consonant in the word is voiced (10h). Non-high vowels preceding /c/ have undergone diphthongization (*a > ai, *e > ei, etc.), though it is unclear whether this is a feature of Proto-Great Andamanese, or a set of parallel developments in the daughter languages. Where possible, I reconstruct this feature for Proto-Great Andamanese, though it is clearly predictable there, and reflects earlier monophthong + palatal stop sequences.

(10) Correspondences for Proto-Great Andamanese *c (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *cabiə	'seaweed'	cabya	cabia	cabia	cabio
b. *cowai	'clam'	cowai	cowai	cowai	cowai
c. *cuəd	'to go'	jud, juru	cid	cid	cid
d. *cuəm	'abscess, wound'	cum	cim	e/cem	e/cem
e. *cuiŋ	'odour'	cuiŋ	cuiŋ	cuiŋ	cuiŋ
f. *cup	'basket'	job	cop	cup	cup
g. *bəicə	'break to pieces'	paica	boice	boica-	boicu-
h. *muicur	'to smile'	mujur	moicar	moijur	moicur
i. *pəic	'pot, vessel'	buj	pait	paic	baic
j. *paic	'hair'	pic	paic	paic	paic
k. *raic	'broth, watery juice'	raij	reic	raic	raic
l. *waic	'splash'	wij, wej	waic	waic	ec

Proto-Great Andamanese does not appear to have had a voiced palatal stop *j. In modern languages, /j/ is either a voiced reflex of *c, or a strengthening of *y, the palatal glide, in initial position (12).

The palatal nasal *ɲ is reconstructable for initial, medial and final positions (11).

(11) Correspondences for Proto-Great Andamanese *ɲ (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *ɲipə	'sandfly'	ɲipa	ɲipa	ɲipo	ɲipo
b. *kaiɲer	'rough'	ɲer,-reɲi	kaiɲer	kaiɲer	kaiɲir
c. *cuiɲ	'odour'	cuiɲ	cuiɲ	cuiɲ	cuiɲ

Proto-Great Andamanese *y is reconstructable for initial position only. In Aka-Chariar and Aka-Kede, *y is strengthened to /j/ (12). Recall that in Aka-Kede, synchronic /y/ is often the reflex of Proto-Great Andamanese *l. Forms like Aka-Kede /yom/ 'work' (12e), show that /y/ can also be the result of borrowing from neighboring languages where *y is reflected as /y/.

(12) Correspondences for Proto-Great Andamanese *y (initial only)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *yar-	'prepare'	yar-	yar-	jor	jor
b. *yarə	'canoe(of this wood)'	yere	yara	jaru	jeru
c. *yitə	'tattoo; write'	yiti	yiti, yite	jito	jido
d. *yiw	'earthquake'	yu-	yiwe	jiwu	jiwu
e. *yom	'make, work'	yom	yom	yom	jom
f. *yulə	'a sail; shadow'	yolo	yulu	jule	julu
g. *yəm	'rain, rain water'	yum	--	jem	--

Proto-Great Andamanese *k is reconstructable in initial, medial, and final position. In initial position it is relatively stable, though in a few instances, *k-loss may be in evidence (e.g. 11b). Aka-Bea shows voicing of *k > g intervocally (13g), in addition to the final voicing triggered by following voiced suffix-initial consonants (13i,j), and the anticipatory voicing when the next consonant is voiced (13b). In two sets, there is evidence of velar palatalization, where *ki > ci (13k, l). Since Aka-Bojigiab is the only language that has palatal reflexes in both sets, I assume velar palatalization took place in this language only, and that palatal forms spread via contact with other tribes.

(13) Correspondences for Proto-Great Andamanese *k (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *kəiŋ	'arise, awake'	geiŋ-, geŋ-,	koijə	koijə	koijŋ
b. *kət	'think, understand'	gad	kot	kot	kot
c. *kor	'middle'	---	kor	kor	kor
d. *korə	'hand'	koro	kora	koro	kora
e. *koi	'new'	goi	kui	kui	koi
f. *kmuəl	'rainy season'	gumul	kimil	kimil	kimil
g. *brukə	'reef (of rocks)'	boroga	buruke	burko	burku
h. *kukal	'to stop'	gugl/i	kukat	kukal	
i. *talak	'whetstone'	talag	talak	toku	taluko
j. *luk	'channel'	log	luk	luk	luk
k. *kider	'coconut'	jeder	ceter	kiter	kider
l. *teki	'put down'	tegi	teic	teici	teici

Proto-Great Andamanese does not appear to have had a voiced velar stop *g. In modern languages, /g/ is usually a voiced reflex of *k, and has the widest distribution in Aka-Bea, due to the obstruent voicing processes already discussed.

Proto-Great Andamanese *ŋ is reconstructable in initial, medial, and final position, though medial cases may turn out to be final (as yet, unanalyzed) multimorphemic items. It is reflected as /ŋ/ in all attested Great Andaman languages (14). All second person pronominal forms, singular and plural, begin with reflexes of *ŋ-, which appears to be a general second person marker.

(14) Correspondences for Proto-Great Andamanese *ŋ (initial, medial, and final)

Proto-Great-Andamanese	gloss	Aka-Bea	Aka-Bojigiab	Aka-Kede	Aka-Chariar
a. *ŋ-	'2 person'	ŋ-	ŋ-	ŋ-	ŋ-
b. *ŋilip	'a cold, mucus'	ŋilip	ŋilip	ŋilip	---
c. *ŋoto	'swim'	---	ŋata	ŋoto	ŋoto
d. *biŋə	'mindful; ask'	---	biŋa	biŋi	biŋi
e. *leŋri	'smooth'	leŋeri	liŋeri	leŋri	leŋre
f. *pəŋ	'mouth; cave; well'	baŋ	poŋ	poŋ	poŋ
g. *təŋ	'above, over; tree'	taŋ	taŋ-, toŋ	toŋ	toŋ

Vowel correspondences for the Great Andamanese languages are somewhat more difficult to systematize. A first attempt at correspondences is shown in Table 2, with most sets in (1)-(14) conforming to these. Vowels which vary widely across the languages are assumed to be phonologizations of earlier schwa: in neutral contexts, this is usually continued as /o/ in the Northern languages and as /a/ in the southern languages, but it is also often subject to assimilation of neighboring consonants and/or vowels.

Proto-Great Andamanese	*i	*u	*a	*e	*o	*ə	*ai	*uə
Aka-Cari	i,e	u	a	e	o	o, V	ai	i
Aka-Kede	i	u	a	e	o	o, V	ai	i
A-Pucikwar	i	u	a	e	o	a, V	ai	i
Aka-Bea	i	u,o	a	e	o	a, V	ai,e,i	u

TABLE 2. SOME GREAT ANDAMANESE VOWEL CORRESPONDENCES (V = VOWEL COPY)

2.2 Aspects of Proto-Great Andamanese morphology. A notable feature of all Great Andamanese languages is the morphological classifier system whereby a limited range of classificational prefixes serve to delineate semantic properties of the prefixed base. In some languages, like Aka-Bea, the use of these prefixes is systematic and ubiquitous for bodyparts. In others, like Aka-Kol, prefixes are absent on the majority of words. Some Aka-Bea examples are given in Table 3, following Man (1923:6-8), who quotes Dr. A. J. Ellis's 1882 Presidential Address to the Philological Society.

	<u>Root:</u>	<i>beriŋa</i>	<i>jabag</i>	<i>lama</i>
<u>Prefix/class</u>		'good'	'bad'	'to miss, fail'
<i>ab-</i>	human/body	<i>a-beriŋa</i> 'good person'	<i>ab-jabag</i> 'bad person'	<i>ab-lama</i> 'a duffer in turtle hunt'
<i>aka-</i>	mouth/voice	<i>aka-beriŋa</i> 'nice taste'	<i>aka-jabag</i> 'bad taste'	<i>aka-lama</i> 'one who uses wrong word'
<i>un-</i>	hand/foot	<i>un-beriŋa</i> 'clever'	<i>un-jabag-</i> 'stupid'	<i>un-lama</i> 'one who misses striking an object with hand or foot'
<i>ig-</i>	eye	<i>ig-beriŋa</i> 'sharp-sighted'	<i>ig-jabag-</i> 'dull-sighted'	<i>ig-lama</i> 'one who fails to see/find an object'
<i>ot-</i>	head/heart	<i>ot-beriŋa</i> 'virtuous'	<i>ot-jabag-</i> 'evil'	<i>ot-lama</i> 'one who is senseless'

TABLE 3. AKA-BEA CLASSIFIER PREFIXES

Reconstruction of the full classifier system is beyond the scope of this paper. However, based on the available limited wordlists, preliminary reconstructions in (15) are proposed, with extremely rough glosses. In some cases, the classifiers may be cognate with body-part roots. For example, Proto-Great Andamanese classifier prefix **ab-* associated with humans, the body, and the flesh, may ultimately be cognate with Proto-Great Andamanese **kap* 'cheek', while Proto-Great Andamanese **ig-* 'eye/face area' may be related to the root of Aka Bojigiab *ir-kadig* 'eye'. The classifier **aka-* relating to the mouth, and by extension to language, may have its source in Proto-Great Andamanese **payaka* 'lips' (cf. Aka-Kol *payaka* 'lips'). While many aspects of the classifier system have yet to be analysed, the absence of a full-blown system in Aka-Kol appears to be due to the recent development of the system, rather than it's near total loss within Aka-Kol.

(15) Proto-Great Andamanese pre-root classifiers (cf. Man 1923: Appendix VI)

Proto-Great- Andamanese	gloss	Aka- Bea	Aka- Bale	Aka- Bojigiab	Aka- Juwai
a. <i>*ab-</i>	human/body/flesh	ab-	o/ab-	ab-	a-
b. <i>*ar-</i>	leg area	ar-	o/ar-	ar-	ra-
c. <i>*aka-</i>	mouth area	aka-	o/aka-	o-	o/oka-
d. <i>*oŋ-</i>	hand/foot area	oŋ-	o/oŋ-	oŋ-	oŋ-
e. <i>*ig-</i>	eye/face area	ig-, i-	ig-	ir-	i-
f. <i>*ot-</i>	head/heart area	ot-	oat-	ota-	ota-
g. <i>*oto-</i>	waist only	oto-	oto-	oto-	---

Though Temple (1903:119-20) suggests a similar classifier system for Onge and Jarawa, more recent work on the language does not support this (Blevins 2007). For example, Temple suggests *ik-*, *ig-*, *i-* as referring to 'cheek, ear', but this appears to be a misparsing of Jarawa *-ikwa*, *-ikwagu* 'ear', Onge *-ikwage* 'ear'. Though bodypart terms do often have complex internal morphological structure, there is no sign of a system similar to that outlined in Table 3.

Preceding these classifiers in Great Andamanese languages are pronominal prefixes marking person and number. Again, reconstruction of the full pronominal system is not yet possible, but available evidence suggests the mono-consonantal prefixes shown in Table 4. The reconstructions in Table 4 differ from Usher (2006:298) in the following ways: they are based on the cognate sets shown; no aspirated proto-phoneme **tʰ* is proposed for Proto-Great Andamanese; 1st person singular is **t-* with an unaspirated dental/alveolar stop; and a 3rd person plural **n-* is not reconstructed.

	Proto-Great- Andamanese	Aka- Bea	Aka- Bale	Aka- Bojigiab	Aka- Juwai	(Proto- Ongan)
1sg	*t-	d-	t-	t-	t-	(*m-)
1pl	*m-	m-	m-	m-	m-	(*et-)
2	*ŋ-	ŋ-	ŋ-	ŋ-	ŋ-	(*ŋ-)

TABLE 4. PROTO-GREAT ANDAMANESSE PRONOMINAL PREFIXES

The pronominal prefix system is one of the few places where Proto-Great Andamanese and Proto-Ongan comparisons are fruitful, as shown by the last column in Table 4. However, given the mono-consonantal status of the Proto-Great Andamanese reconstructions, and the mis-match of number in first person forms, chance resemblances can not be ruled out.

3. Northern coast-dwellers, southern inlanders. As noted earlier, all Andaman tribes appear to be divided into 'coastal' and 'inland' groups, with coast-dwellers hunting and gathering primarily in and along the sea, and inlanders subsisting more on forest flora and fauna. Coastal groups specialize in turtle and dugong hunting, while inlanders once took pride in their pig-hunting prowess. A striking feature of the available Great Andamanese comparative data is the number of cognate sets relating to the sea and its resources, as shown in (17) (see Man 1923:187-88 for identification of Aka-Bea shellfish).

(17) Sea-related cognate sets in Great Andamanese

i. sealife

Proto-Great- Andamanese	gloss	Aka- Bea	Aka- Bale	Aka- Bojigiab	Aka- Juwai
*ba	'mother-of-pearl, scallop'	ba, be	ba	ba	ba
*cabiə	'seaweed'	cabya	cabia	cabia	cabio
*cer	'skate, ray'	cir	ce	ce	cet
*coaR	'porpoise'	coag	coa	cua	coa
*cowai	'clam, <i>Tridacna crocea</i> '	cowai	cowai	cowai	cowai
*kaibaic	'saltwater shrimp'	kaibij	kebit	kebait	kebait
*pioto	'eel'	pioto	pioto	pioto	biota
*pon	'crab, large, edible'	bad	pon	pon	pon
*waka	'lobster, crayfish'	waka	waka	waka	oka
*wat	'fin'	wat, wad	wat	wat	et
*taur	'hawk's bill turtle'	tau	tare	toro	toro
*telem	'cowrie shell'	telim	telem	telem	etelem
*toijn	'oyster'	toijn	toin	tuin	toin

ii. seascape

*bərəkə	'rcky reef; shore cliffs'	boroga	buruke	burko	burku
*cūrə	'sea'	jurū	cire	ciro	ciro
*korə	'coast; shore'	gora	kori	kori	koro
*luk	'channel (navigable by boats)'	log	luk	luk	luk
*tai-be	'coral reef'	taibe	taibi	tebe	---

iii. sea voyaging

*carək	'outrigger canoe'	carig/ma	carok	carok	carok
*cər	'current, riptide'	car/at	car/at	cor/ie	cor/ea
*dadi (?)	'sail, sailing ship'	dadi	dadi	dadi	rali
*raic	'bale out'	raic, rajj	raic	weic	je/raic
*rok	'canoe'	roko	ro	ro	ro/a
*yulə	'a sail; shadow'	yolo	yulu	jule	julu

One interpretation of the semantic richness in this area of Proto-Great Andamanese vocabulary is that the Great Andamanese were primarily and originally sea-oriented hunter-gatherers, with jungle foraging and hunting secondary, or a later development. This interpretation receives some support from archeological evidence. The Andamans are dotted with middens, - cultural deposits consisting primarily of shell, but also of faunal remains, pottery, and bone and stone artefacts (Cooper 2002). The word for kitchen-midden in Aka-Bea is *bud-l'artam* 'encampment of ancient times'. To date, the oldest carbon-dates are from the Chauldari Midden (South Andaman Island, in traditional Aka-Bea territory) (Cooper 2002:51). Here, uncalibrated radiocarbon dates obtained from charred and uncharred shells at 4.5 meters depth are dated at 2280 ± 90 BP (Cooper 2002:47-94). During the early phase of occupation at this midden just over 2000 years ago, shell remains are mostly from species that live in rocky shores and estuaries, while approximately 700 hundred years later, there is evidence of a shift to bivalves from mudflats. In addition, shells (especially Cyrena), were, and continued until Man's time, to be used as knives, scrapers and spoons; Nautilus shells were used as drinking vessels, and arrowheads were made from shaped valves of *Perna eppiphium*, *Tridacna species*, and stingray barbs.

Additional evidence for sea-based subsistence in the North comes from an aspect of lexical semantics. In Aka-Bea, *yat-* is the general word for 'fish' and 'food', suggesting fish as the basic or unmarked food type. The same is true for Aka Kede *tai jeu* 'fish; food'.

The rich Proto Great Andamanese terminology associated with the sea contrasts with preliminary Proto-Ongan reconstructions (Blevins 2007). While there is no lexical resource on Onge or Jarawa to match Man's work on Aka-Bea, Onge and Jarawa wordlists show surprisingly diverse terms for the sea, and creatures in it, as illustrated in (18). As a consequence, it is difficult to reconstruct sea fauna for Proto-Ongan. In contrast, words associated with inland hunting and gathering are reconstructable for Proto-Ongan, including PIG, HONEY, FRUIT/SEED, FOREST, and PATH/TRAIL (Blevins

2007). With respect to this last meaning, note the proposed semantic contrast between Proto-Great Andamanese **luk* 'channel, strait; path, trail, road', where the path in question can be through water or land, and Proto-Ongan **icele* 'path, road', which is unattested in reference to waterways.

(18) Diversity in Onge and Jarawa sea-related terms

CONCH	Onge:	<i>cenagili</i>
	Jarawa:	<i>otahonaw, inotaindom</i>
HERMIT CRAB	Onge:	<i>toŋewe</i>
	Jarawa:	<i>tahodkale</i>
JELLY FISH	Onge:	<i>kele</i>
	Jarawa:	<i>toote toote</i>
PRAWN	Onge:	<i>ŋaŋa</i>
	Jarawa:	<i>yewe</i>
SEA	Onge:	<i>iŋe, kwatannaŋe, balame</i>
	Jarawa:	<i>tomaya</i>
TURTLE	Onge:	<i>narelaŋe, takwatoa</i>
	Jarawa:	<i>ukela</i>
FISH	Onge:	<i>coge</i>
	Jarawa:	<i>napo</i>

Finally, in contrast to the Northern languages mentioned, Onge *coge* 'fish' and Jarawa *napo* 'fish', are not general words for food. They refer only to fish.

A working hypothesis is that these aspects of the Proto-Great Andamanese and Proto-Ongan lexicons reflect prehistoric aspects of culture. The Great Andamanese tribes were originally hunter-gatherers who made primary use of sea resources, while the southern Ongan tribes appear to have had a terrestrial orientation before their separation, which accounts for the reconstructable nature of these terms in contrast to sea fauna.

This proposed difference in resource use is consistent with an interesting aspect of tool distribution in the Andamans. The bow and arrow was used by all Andamanese tribes, and was historically the most important hunting weapon for them (Radcliffe-Brown 1922, Appendix A). Based on careful comparison of bows from the Onge/Jarawa and Great Andamanese tribes, Radcliffe-Brown (op cit.) suggests that 'Little Andaman' (Onge/Jarawa) bow represents the oldest form in the Andamans, with Aka-Bea and other southern Great Andaman bows derived from these, and the North Andaman bows, in turn, derived from those of the southern tribes. After the bow and arrow, the most

important weapon for the Great Andamanese was the harpoon, used for hunting dugong, turtle, porpoise and large fish (Radcliffe Brown 1922:441-443). Harpoons were not used by the Onge or Jarawa, and though Radcliffe-Brown believes harpoons are of relatively recent origin in Great Andamanese culture (op cit.), an alternative is that old harpoons with shell points were replaced with iron barbs once iron became available.

4. A linguistic North/South divide. Nearly every linguist that has compared the languages of the Great Andamanese tribes with Onge and Jarawa has come to the same conclusion: the language groups do not appear to be related (for a recent summary, see Blevins 2007). One notable exception is Temple (1903:120), who says, on the topic of 'Proof of the Identity of Ōnge-Jarawa with the other Groups':

Among an untutored people, so long isolated even from the other Andamanese, one would hardly look for many roots now in common with them, but the following, which occur in such short lists as those available, sufficiently establish a common origin for the family.

Once mistranscriptions, false cognates, and loans are identified in Temple's comparative word list of ten items, one is left with little more than chance resemblances (though Table 4 above shows more fruitful comparisons). Even so, Temple's remarks above are still relevant to any comparison one might make between languages of the Andamans, and between these languages and other language families.

4.1 The South: Proto-Ongan and Proto-Austronesian. In this light, results of a recent study comparing Proto-Ongan with Proto-Austronesian are surprising. Blevins (2007) proposes over 80 cognate sets including Proto-Ongan and Proto-Austronesian reconstructions. Regular sound correspondences are established, basic vocabulary is reconstructed, and morphological and distributional evidence is used to support a hypothesis of a distant genetic relationship between Proto-Ongan and Proto-Austronesian.

Though the evidence is consistent with ancient borrowing, one strong argument against this is the existence of bare CVC roots in Proto-Ongan which do not appear alone in Proto-Austronesian. Examples are shown in (19).

(19) Bare monosyllabic roots in Proto-Ongan, and Proto-Austronesian cognates

	<u>Proto-Ongan</u>	<u>Proto-Austronesian</u>
SMOKE	*bel	*qe/bel
MAT	*kam	*Si/kam
TREE TRUNK; LOG	*taŋ	*ba/taŋ (Proto-Malayo-Polynesian)

If cognates of Proto-Austronesian CVC stems are reconstructable for Proto-Ongan, they cannot be due to contact or borrowing, since they are not attested as free morphemes in any attested or reconstructed Austronesian language. The simplest hypothesis is that they are inherited from a shared mother language, Proto-Austronesian-Ongan. The most

problematic aspect of this hypothesis is geographical: although Austronesian languages are spoken very close to the Andamans, in Sumatra and the southern Malaysian peninsula to the south/southeast, linguistic and archeological evidence point to an Austronesian homeland in southeast China, from where a first migration took Proto-Austronesian speakers across the Formosa strait to present day Taiwan (Blust 1985, Bellwood 1985).

Even if one does not accept the hypothesis that similarities between Proto-Ongan and Proto-Austronesian are due to direct inheritance, most would agree that they defy chance. The only alternative is that, at some period in pre-history, there was sustained contact between speakers of Ongan languages and speakers of Austronesian languages, and that this led to contact-induced change, including lexical borrowing. Under either hypothesis, there was some point in pre-history where the ancestors of present-day Onge and Jarawa speakers were interacting with speakers of ancient Austronesian languages.

It is possible that Proto-Great Andamanese once showed the same lexical and morphological similarities with Proto-Austronesian that are reconstructed for Proto-Ongan. Of the CVC roots in (19), at least one may have a Proto-Great Andamanese CVC cognate: **təŋ* 'tree; above', as reconstructed in (14). However, when basic vocabulary and morphology are compared, Proto-Great Andamanese shows only three to four potentially shared lexemes with Proto-Austronesian and no shared morphology, while Proto-Ongan shows over one hundred cognate sets, including cognate bound morphemes. In contrast, as shown below, an initial comparison of Proto-Great Andamanese with neighbouring language families shows striking resemblances, not with Proto-Austronesian, but with Austroasiatic languages.

4.2 The North: Proto-Great Andamanese and Proto-Austroasiatic. The preliminary Proto-Great Andamanese reconstructions above allow us to assess potential external relationships between Proto-Great Andamanese and other language families. In this area, the most fruitful comparisons I have found to date, as just noted, are with Austroasiatic languages, and possibly, with Proto-Austroasiatic itself. Below, I present a list of preliminary comparisons, which, together, may suggest an Austroasiatic adstrate in Great Andamanese.

The Austroasiatic language family can be seen to surround the Andaman Islands. It includes languages of India and Bangladesh to the north and west, languages of mainland Southeast Asia to the east, and languages of the Nicobars to the south. While the subgrouping of Austroasiatic is disputed, we follow Diffloth (2005) in recognizing three basic subgroups: Munda; Khasi-Khmuic; and Nuclear Mon-Khmer (including Nicobarese).

The cognate sets below are organized alphabetically by English gloss of the Proto-Great Andamanese reconstruction. In all cases where only part of a word is compared, a slash separates the relevant root from the rest of the word. For Great Andamanese languages, pre-root classifiers and post-positions are not included for most roots compared. Great Andamanese data is taken from the sources already noted. Austroasiatic data is primarily from Shorto's (2006) Mon-Khmer Comparative Dictionary (MKCD). When

reconstructions or data are taken from that source, they are followed by the cognate set number they appear in. Reconstructions or attested forms on which reconstructions are based are written in bold, and all Proto-Great Andamanese reconstructions in this section are based on attestations from at least three Great Andamanese languages. Other relevant comparanda are in non-bold italics. If Shorto's reconstruction is based on lexical material from at least two of Diffloth's three subgroups of Austroasiatic (Munda, Khasi-Khmuic, and Nuclear Mon-Khmer), then it is identified as 'Proto-Austroasiatic'. Other reconstructions are simply labeled as Proto-Mon-Khmer, following Shorto's original practise. Shorto's reconstructions are preceded by double-asterisks, and my own by single asterisks. The reader is referred to Shorto (2006) for criteria on which his reconstructions are based. Finally, additional Nicobarese data has been taken from Man (1889) (abbreviated 'M') and from Whitehead (1925) (abbreviated 'W'). Notes on the cognate sets are set directly below each set in smaller point-size.

[1]ADZE

Proto-Great Andamanese ***wolo**.

Aka-Bea **wolo-**; A-Pucikwar **wolo-**; Aka-Kede **wo** (<*woo<*wolo); Aka-Cari **olo**

Proto-Austroasiatic ****wəl** 'to turn; to dig or cut round, hew, dig out' [MKCD:1794] (all major subgroups except Munda)

Car **hul** 'to hew, cut into' [W:90] (cf. Car *ul, uu* 'to dig' [W:308]); Nicobarese **-hola** in **oal-hola** 'scoop a canoe, trough, etc.' [M:183] (cf. *oal, ol* 'inside, interior' [M:183]); Khmer **viəl** 'to dig or cut round, to enlarge [hole]'; Riang-Lang **vəl** 'to stir round and round'.

Shorto's gloss is 'to turn'. However, given the data here, semantics might include 'to dig or cut round, hew, dig out', as one would with an adze. An anonymous reviewer notes that this comparison may be compromised by potential sound-symbolism associated with twisting/turning actions.

[2]AFRAID, FEAR.

Proto-Great Andamanese ***lat**.

Aka-Bea **-lat-**; A-Pucikwar **lat**; Aka-Kede **yat**; Aka-Cari **lat**;

Proto-Austroasiatic ****[c]laat** 'frightened' [MKCD:1086]

(Khmer, Katuic, North Bahnaric and Palaungic).

[3]FORBID, OBSTRUCT, KEEP FROM.

Proto-Great Andamanese ***kənə**.

Aka-Bea **-kana-**; A-Pucikwar **kono**; Aka-Kede **kono**; Aka-Cari **kono**;

Proto-Austroasiatic ****ghaŋ** 'to obstruct, prevent, forbid' [MKCD:785]

(Khmer, Katuic, South Bahnaric, Khasi).

The words in Great Andamanese are glossed by Portman (1887) as 'anchor', though Man (1923) clarifies that this transitive verb in Aka-Bea means 'forbid', with the full term for 'anchor' meaning, literally, 'forbid (canoe) to drift'.

[4]ANCIENT, OLD.

Proto-Great Andamanese ***ar təm**.

Aka-Bea **ar tam**; A-Pucikwar **ar tam**; Aka-Kede **ara tom**; Aka-Cari **ara tom**;

Proto-Austroasiatic ****triəm** 'old' [MKCD:1395]

(cf. Proto-Austroasiatic ***ram**, ***raam** 'decay, age, perish' [MKCD:1086])

Proto-Austroasiatic ***tram** 'aged, of long ago, ancient'

NIC **tiram** 'long ago; formerly, in those days; in the earliest times; once upon a time, formerly' [M:208]; Khasi *iap* **tram** 'to wither'.

Metathesis relates the *rt and *tr clusters. Note that within the Great Andamanese languages, there is evidence of metathesis where *rt clusters are involved. Compare Aka-Bojigiab *ar-bot*, Aka-Juwai *ra-bot* 'hip'; Aka-Bojigiab *ar-cog*, Aka-Juwai *ra-cok* 'leg'; Aka-Bojigiab *ar-kata*, Aka-Juwai *ra-kata* 'loin', etc.

[5]BALE OUT.

Proto-Great Andamanese ***raic** < ***rac**

Aka-Bea **raic**, **raij-**; A-Pucikwar **raic**; Aka-Kede **weic**; Aka-Cari **je/raic**;

Proto-Austroasiatic ****raac** 'sprinkle' [MKCD:837]

Compare, in particular, Shan **hǎt** 'to dash [water]; to bale'; Mon **sat** 'to bale';

Santali **areɛʝ** 'to bale out'.

Compare Proto-Austroasiatic ****saac** 'to bale out' [MKCD:872].

[6] BASKET.

Proto-Great Andamanese ***cup**.

Aka-Bea **job**; A-Pucikwar **cop**; Aka-Kede **cup**; Aka-Cari **cup**;

Proto-Austroasiatic ****ckuup**, ****ckuəp**, etc. 'to cover' [MKCD:1237].

Semantic comparison may appear more distant than it is, given reflexes like Mon *kap* 'to catch with a fish-basket', Compare FASTEN, ADJOIN.

[7]BAT, FLYING FOX.

Proto-Great Andamanese ***wat**.

Aka-Bea **wot**, **wod**; A-Pucikwar **wat**; Aka-Kede **wot**; Aka-Cari **wot**;

Proto-Mon-Khmer ***wət**

Proto-South Bahnaric ****[w]ət** 'kind of bat' [MKCD:A81b] (Stieng **uət** 'small kind of bat frequenting houses'; Biat **wət** 'kind of bat');

Semang **ka:/wed** 'flying fox'

[8]BELT, BAND, SLING.

Proto-Great Andamanese ***ciəp**.

Aka-Bea **cip** 'sling or band made by women from bark which is worn like a sash over one shoulder by women, and sometimes by men, when carrying infants'; A-Pucikwar **ca**; Aka-Kede **cup**; Aka-Cari **cup**;

Proto-Austroasiatic ****cuup**, ****cuəp**, ****ciəp** 'to put on, to wear' [MKCD:1244].

In Nicobarese this stem is used with specific reference to a woman's waistcloth. The lack of clothing makes this one of the few functional items worn by the Andamanese.

[9]BLIND.

Proto-Great Andamanese ***tapə**.

Aka-Bea **tapa**; A-Pucikwar **tapa**; Aka-Kede **topo**; Aka-Cari **taba**;
Proto-Mon-Khmer *[j]ɗaap 'to pass hand along' [MKCD:1262]
The semantic association is between blindness and the act of touching, feeling, groping (cf. Khmer
st̄iəp 'to touch, feel, stroke, grope for'.) Shorto relates the proto-form above to **1042** *[j] **bat**
&c. 'to feel, grasp' by metathesis. See also ****t̄bəʔ** 'touch, feel' [MKCD:124].

[10] PUS; DIRT; MATTER; BRAINS.

Proto-Great Andamanese ***muən**.

Aka-Bea **mun-**; A-Pucikwar **mina**; Aka-Kede **mine**; Aka-Cari **mine**;
Proto-Austroasiatic ****muən** 'pimple' [MKCD:1186].

Add Central Nicobarese **mō** 'mucus; albumen (of egg)' [M:179]

[11] CANOE.

Proto-Great Andamanese ***rok**.

Aka-Bea **roko** (generic); A-Pucikwar **ro**; Aka-Kede **ro**; Aka-Cari **ro**;
Proto-Mon-Khmer ****ɗuk** 'boat, canoe' [MKCD:336].

CAVE (see MOUTH [23])

[12] CHANNEL OF WATER, STRAIT; PATH; ROAD.

Proto-Great Andamanese ***luk**.

Aka-Bea **log**; A-Pucikwar **luk**; Aka-Kede **luk**; Aka-Cari **luk**;
Proto-Austroasiatic ****ruŋ**, ****ruuŋ**, ****ruəŋ** 'channel, river' [MKCD:668]

Cf. also Jahai **rkruk** (< /ruk/) 'to go along a watercourse' (Burenhult 2005);
Proto-Mon-Khmer ****luk**, ****luuk** 'to have a hole in' [MKCD:430]
based on Mon, Katuic, Nicobaric

Proto-Mon-Khmer ****ruŋh** 'hole, hollow' [MKCD:666].

[13] CLAY, POWDER.

Proto-Great Andamanese ***buə**.

Aka-Kede **pua** 'clay; earth'; Aka-Cari **bua** 'clay; earth';
Proto-Austroasiatic ****buəh** 'ash, powdery dust' [MKCD:2034].

Ochreous clay was dried and baked to a powder by the Andamanese, then mixed with animal fat and
applied to people, weapons, utensils, etc. for ceremony and ornamentation.

[14] COUNT, TO.

Proto-Great Andamanese ***lap**.

Aka-Bea **lap**; A-Pucikwar **lop**; Aka-Kede **lup**; Aka-Cari **lub**;
Proto-Austroasiatic ****rap** 'to count' [MKCD:1271]
(Mon, Khmer, South Bahnaric, Khmuic).

[15] CURRENT; TO FLOW.

Proto-Great Andamanese ***cuər**.

Aka-Bea **car/at**; A-Pucikwar **car/at**; Aka-Kede **cor/ie**; Aka-Cari **cor/ea**;

Proto-Austroasiatic ****cuər** 'to flow, to pour' [MKCD:1597].
Austroasiatic glosses include meanings 'current' and 'flow through channel'.

[16]DIGGING STICK.

Proto-Great Andamanese ***lakə**.
Aka-Bea **laka** [Man 1923:179]
Proto-Austroasiatic ****lak** 'to hoe' [MKCD:418].

[17]EGG.

Proto-Great Andamanese ***mulə**.
Aka-Bea **molo**; A-Pucikwar **mula**; Aka-Kede **mulo**; Aka-Cari **mulu** (Jero);
Proto-Austroasiatic ****muul**, ****muəl**, etc. 'round' [MKCD:1772].

[18]FASTEN, ADJOIN.

Proto-Great Andamanese ***cuəp**.
Aka-Bea **co**; A-Pucikwar **ca**; Aka-Kede **cup**; Aka-Cari **cop**;
Proto-Austroasiatic ****bcuup**, ****bcuəp**, etc. 'to adjoin, adhere' [MKCD:1245].

[19]FISHING NET, HAND NET.

Proto-Great Andamanese ***kut**.
Aka-Bea **kud**;
Proto-Austroasiatic ****kuut** 'to tie, to knot' [MKCD:959].
(Munda, Bahnaric, Central Aslian, Khmer)

[20]FLY (INSECT, BITING).

Proto-Great Andamanese ***nipə** 'sandfly'.
Aka-Bea **nipa**; A-Pucikwar **nipa**; Aka-Kede **nipo**; Aka-Cari **nipo**;
Proto-Khmero-Vietic ****jəp** 'horsefly' [MKCD:1247]
(Katuic, Bahnaric)
Proto-Mon-Khmer ****jnjaap** 'to flutter' [MKCD:1249]
(Mon, Khmer)

[21]HILL, MOUNTAIN.

Proto-Great Andamanese ***burə/in**.
Aka-Bea **boroin**; A-Pucikwar **burin**; Aka-Kede **burin**; Aka-Cari **burain**;
Proto-Austroasiatic ****bruu?** 'hill' [MKCD:182]
Kuy **bru**; ; Sora **bəru:-n**, **baru:-n**; Kharia **biru**.

[22]JUICE, WATERY; BROTH.

Proto-Great Andamanese ***raic** < ***rac**
Aka-Bea **raic**, **raij-**, **rac**; A-Pucikwar **raic**; Aka-Kede **weic**, **waic**; Aka-Cari
je/raic;
Proto-Austroasiatic ****raac** 'sprinkle (liquid)' [MKCD:837].

[23] MOUTH; CAVE; OPENING.

Proto-Great Andamanese *pəŋ.

Aka-Bea **baŋ**; A-Pucikwar **poŋ**; Aka-Kede **poŋ**; Aka-Cari **poŋ**;

Proto-Austroasiatic **paŋ 'mouth, opening' [MKCD:605].

In Great Andamanese languages, the same stem means 'to dig', perhaps, literally 'make opening, make hole'.

[24] NECK.

Proto-Great Andamanese *loŋə.

Aka-Bea **loŋo**; A-Pucikwar **loŋo**; Aka-Kede **yoŋo**; Aka-Cari **loŋo**;

Proto-Austroasiatic **tluŋ, **tluuŋ, **tluəŋ 'throat' [MKCD:744].

Central Nicobarese reflexes mean 'neck'.

[25] ODOUR.

Proto-Great Andamanese *cuip < *cup.

Aka-Bea **cuip, cip**; A-Pucikwar **cuip**; Aka-Kede **cuip**; Aka-Cari **cup**;

Proto-Mon-Khmer **jʔuup, **jhuup 'to smell, sniff' [MKCD:887].

[26] PERSPIRATION. (see also [28])

Proto-Great Andamanese *gum/er.

Aka-Bea **gumer**; A-Pucikwar **kimer**; Aka-Kede **kir**; Aka-Cari **kirme** (with metathesis);

Proto-Austroasiatic **gmaʔ 'rain' [MKCD:141].

[27] POT, SMALL VESSEL.

Proto-Great Andamanese *bəic < *bəc.

Aka-Bea **buju**; A-Pucikwar **paic**; Aka-Kede **paic**; Aka-Jeru **pec** (Colebrooke 1794) Aka-Cari **baic**;

Proto-Mon-Khmer **buəc 'kind of small vessel' [MKCD:826].

This form appears to have been borrowed from Aka-Bea into Ongan: compare Onge, Jarawa *bucu* 'cooking vessel, pot', which does not show the otherwise regular sound change of *bu > u (Blevins 2007).

[28] **RAINY SEASON.** (see also [26])

Proto-Great Andamanese ***gum/əl**.

Aka-Bea **gumul** (cf. **yum**, 'rain'); A-Pucikwar **kimil**; Aka-Kede **kimil**; Aka-Cari **kimil**;

Proto-Austroasiatic ****gma?** 'rain' [MKCD:141].

(Katuic, Khmuic, South Aslian; Munda)

[29] **RUB, TO, WIPE.**

Proto-Great Andamanese ***cət**.

Aka-Bea **jit**; A-Pucikwar **cot**; Aka-Kede **cet/o**; Aka-Cari **cet/or**;

Proto-Austroasiatic ****juut** 'to wipe' [MKCD: 994].

Proto-Austroasiatic ****gsuut** 'to rub' [MKCD:1102].

[30] **SAIL (n.).**

Proto-Great Andamanese ***yulə**.

Aka-Bea **yolo**; A-Pucikwar **yulu**; Aka-Kede **jule**; Aka-Cari **julu**;

Proto-Austroasiatic ****yo[o]** 'to oscillate

(based on Khmer, Katuic, North Bahnaric, Khmuic) Note, especially: Khmer **yò:l** 'to oscillate, ripple, wing', Bahnar **ju:l** '[large object] swinging')

Proto-Austroasiatic ****syuul**, ****syuəl** 'to fly through the air' [MKCD:1783]

(based on Khmer, Palaungic, Mon, Bahnaric).

No cognates are known in Nicobarese.

[31] **SWEEP, TO.**

Proto-Great Andamanese ***tbuj**.

Aka-Bea **buj**; A-Pucikwar **bij**; Aka-Kede **tibij**; Aka-Cari **tibel**;

Proto-Austroasiatic ****tpəs**, ****tpuəs** 'to sweep' [MKCD:1916].

[32] **TUSK, TOOTH.**

Proto-Great Andamanese ***pila**.

Aka-Bea **pili/ca**; A-Pucikwar **pila**, **pela**; Aka-Kede **pile**; Aka-Cari **pile**;

Proto-Austroasiatic ****plaa?** 'blade, edge' [MKCD:215];

Proto-Austroasiatic ****m̥la?** 'tusk, ivory' [MKCD:225].

Boar's tusks were used by the Andamanese for planing wood, and were greatly valued. When used in this way, the inner edge of the tusk was sharpened with a *Cyrena* shell, making a sharp edge.

[33] **WINK, TO.**

Proto-Great Andamanese ***ne/mil**, ***ne/mal**.

Aka-Bea **ne/mil**; A-Pucikwar **ne/mil**; Aka-Kede **na/mal**;

Proto-Austroasiatic ****m̥əl**, ****mil** etc., 'to watch (for)' [MKCD:1773]

cf. Khmer **rə/mwəl** 'to steal a glance'

In addition to straightforward vowel and consonant correspondences, there are several notable aspects of these proposed comparison sets. First, where Proto-Austroasiatic

shows *TRV?, T an obstruent and R a sonorant, a vowel of variable quality is often found in Proto-Great Andamanese. Examples from the sets above are repeated in (20) below.

(20) TR/TVR correspondences

Proto-Austroasiatic	Proto-Great Andamanese	glosses
*bruuʔ	*burə/in	hill
*gmaʔ	*gumə/l	rain/rainy season; sweat
*plaaʔ	*pila	blade, edge/tusk, tooth

Second, some Proto-Austroasiatic *CVR words, where R is a sonorant, correspond to vowel-final forms in Proto-Great Andamanese, as shown in (21).

(21) CVR/CVRə correspondences

Proto-Austroasiatic	Proto-Great Andamanese	glosses
*wəl	*wolə	hew/adze
*muul	*mulə	round/egg
*yo[o]l	*yulə	oscillate/sail (n.)

Finally, (22) shows correspondences between diphthongs preceding final palatals in Proto-Great Andamanese and diphthongs or monophthongs in Proto-Austroasiatic. The apparent shift of Proto-Great Andamanese *a > ai and *u > ui before palatals is parallel to sound changes that have taken place in many Austroasiatic languages/subgroups, including Khasi, Lawa, and Central Nicobarese. For example, reflexes of Proto-Austroasiatic *kac 'to pluck, break off, cut' [MKCD 800] include Modern Khmer *kac*, Kuy *kac*, Sre *kac*, but Khasi *keit*, Central Nicobarese *-kaic-*. While this could be seen as an accidental parallel development, it could also be viewed as an instance of drift, where related languages show certain predispositions for certain types of sound change. Note also that the phonotactic of final palatal nasals itself is rare cross-linguistically.

(22) Correspondences in pre-palatal diphthongs

Proto-Austroasiatic	Proto-Great Andamanese	glosses
*raac	*raic (< *rac)	sprinkle/bale out
*jhuup	*cuip (< *cup)	smell, sniff/odour
*buəc	*bəic (< *bəc)	small vessel, pot
*pac, *puuc	*pəic (< *pəc)	chisel/dugout canoe

An initial impression is that within the Proto-Great Andamanese lexicon, the nouns most likely to show resemblances to Austroasiatic forms are basic verbs, objects made and used by the Andamanese, and the natural resources necessary to make these objects. Perhaps due to the nature of the Andamanese classifier system, few body parts are

included in these preliminary sets. However, [23] MOUTH, CAVE is a perfect sound/meaning match, including the semantic range over mouth/hole/opening of body and mouth/hole/opening of earth, land.

Recall that Proto-Great Andamanese reconstructions in section 2 are based only on lexemes attested in three or more Great Andaman languages, and that lexical data on all languages but Aka Bea is limited to at most 600-800 words per language. Despite these handicaps, preliminary comparison of Proto-Great Andamanese reconstructions with Proto-Austroasiatic, and Austroasiatic languages more generally, yields some striking similarities and correspondences. Given the dearth of comparative data, future Proto-Great Andamanese reconstructions will need to be based, in large part, on internal reconstruction of Aka-Bea, - the only language for which extensive lexical and grammatical material is known.

5. Summary and Discussion. Many earlier researchers seem to believe that because the Great Andamanese and Little Andamanese share an archipelago, are all Negritos, and share numerous culture traits, that their languages ultimately descend from the same mother tongue. However, there are numerous geographically defined culture areas in the world which span unrelated languages or language groups. A well studied case involving hunter-gatherers is the culture area of Northwestern California, traditionally inhabited by the Karuk, Yurok, Wiyot, Hupa and Tolowa tribes. Historically these tribes shared numerous belief systems, ceremonial customs, and hunter-gatherer technologies (Kroeber 1925). Nevertheless, comparative linguistic study shows that the five languages represent three distinct language families: Algic (Yurok, Wiyot), Athabaskan (Hupa, Tolowa), and Karuk (isolate). A priori, there is no reason to believe that the Andaman culture area should be any different, and the preliminary comparative evidence above suggests it is not.

Comparative work on the Great Andamanese languages suggests a prehistoric north/south divide culturally and linguistically. Preliminary reconstructions of Proto-Great Andamanese show many sea-related terms, suggesting sustained ocean-side hunting and gathering. Proto-Ongan lacks depth in this semantic field, with predominance of forest plants and animals, suggesting a more land-based subsistence. External linguistic comparisons between Proto-Great Andamanese and Proto-Austroasiatic are fruitful: cognates are in evidence, and preliminary sound correspondences can be formulated. This external connection contrasts with recent work on Proto-Ongan, which appears to contain an identifiable Austronesian adstrate.

These observations lead us to question the generally held view, outlined by Radcliffe-Brown above, that the north/south divide is a recent one, and that both populations descend from a single group in situ, with a break-up of northern and southern groups solidified by the geographic barrier of the strait between Little Andaman and Great Andaman. A different prehistoric scenario seems possible, and indeed necessary, if the distinct Austroasiatic and Austronesian adstrates are to be accounted for. Perhaps speakers of Proto-Great Andamanese and Proto-Ongan arrived in the Andamans by distinct migrations, perhaps even by different routes, from the North and South

respectively? Or maybe, as alluded to earlier, Proto-Great Andamanese and Proto-Ongan are descended from a common mother tongue, but an ancient population split combined with extensive contact between Proto-Great Andamanese speakers and speakers of Austroasiatic languages has overwritten much of their shared history?

While the preliminary nature of the linguistic proposals above must be stressed, they illustrate the many ways that comparative linguistics can inform models of hunter-gatherer prehistory, from hypotheses regarding sea versus land resource use, to mapping of pre-historic language contact zones. As comparative work on Andaman languages progresses, a firmer basis for evaluating these hypotheses should emerge.

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