

Remapping the Austronesian expansion

ABSTRACT

The conventional map of the Austronesian expansion is driven by linguistics; in other words it is drawn around the places where Austronesian languages are actually spoken today. Nonetheless, the Austronesians were a maritime people with considerable navigational skills, and it is not unreasonable to assume that they reached regions where their languages no longer survive. Archaeology, transfer of crops and material culture and historical records can all contribute to redrawing the map of Austronesian migration. Some of these claims are more controversial than others, but the paper draws together and assesses claims for Austronesian presence in;

1. Japan
2. China
3. Thailand/Myanmar
4. Pacific islands
5. Australia
6. India and Sri Lanka
7. Indian Ocean islands
8. The Persian Gulf
9. Madagascar and the East African coast
8. West Africa
9. South Africa
10. The New World

in order to reconceptualise the Austronesian expansion.

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1. Are language phyla valid concepts beyond linguistics?

One of the curious by-products of historical linguistics is that its constructs tend to take on a life of their own. Something that begins life as a purely linguistic hypothesis begins to accrete other disciplines; reconstructions of the hypothetical Indo-European language lead to people called the Indo-Europeans, whose lifestyle can be imagined and whose genetics can be investigated. In some ways this seems reasonable; if there is manifest evidence for the spread of a language family then it should presumably reflect some sequence of events in the real world, perhaps a migration of peoples or of cultural ideas. If a demographic expansion is proposed, then in principle it should have both archaeological and genetic correlates, if these can only be identified. However, modern analogues can also point to the problems that arise from this way of thinking. English is an Indo-European language, and is now spoken in many geographically and culturally diverse regions, reflecting a variety of military and sociological imperatives. An external researcher with no knowledge of these background elements might draw highly inaccurate conclusions from modern-day contexts of English when reconstructing a hypothetical proto-culture. It has been only partly humorously proposed that on purely synchronic evidence, Tok Pisin, rather than Hittite, would be the primary branching of Indo-European.

While mindful of these possibilities of error, it is also possible to be over-cautious. Languages disappear and are assimilated, and to bound the concept of a phylum by the geographical distribution of recently spoken languages would be to recover a very limited image of a broader historical process. In pre-European times, Pama-Nyungan languages covered nine-tenths of continental Australia, but given the known antiquity of the settlement of Australia, it would be perverse not to imagine they replaced or assimilated a greater diversity of pre-existing languages of unknown affiliation.

This paper examines the possibility that we should take a broader view of the expansion of the Austronesians. Studies in Austronesian linguistics are dominated by a characteristic map, looping from Madagascar to Easter Island, and reconstructions of Austronesian culture confine themselves to forms derivable from existing languages. This is perfectly acceptable *as a purely linguistic process*, but rather limited as a contribution to human history. A subset of linguists and archaeologists accept the Austronesian peoples as a historical reality, and assume were highly mobile, making use of advanced maritime technology. It therefore seems reasonable to assume that they were able to reach many places other than those where their languages are spoken today. And there appears to be some *a priori* evidence that this occurred. The paper¹ reviews the evidence for now-vanished Austronesian visits and settlement in a wide variety of locations across the world with a view to a conceptual remapping of the Austronesian expansion. It also includes some examples of later migrations, such as the Javanese in Surinam, where an Austronesian language is still extant but is disappearing, to illustrate the broader processes whereby demographic transfer can rapidly become dissociated from a current spoken language. It should also be possible to distinguish chronological layers within this scenario, for example, those hypothesised in prehistory and those with fairly secure historical documentation. For example, contact between the Austronesian and the New World is inferred from indirect evidence and its dating is controversial and can only be assigned to very broad time periods. However, the presence of Austronesians in the Persian Gulf is recorded in Arabic chronicles which are securely dated and the years of these events can be assigned. The movement of Javanese to Surinam is extremely well-documented and members of these communities can still be interviewed today. This suggests that we can assign at least three types of chronological certainty to Austronesian expansions.

Links between Austronesian languages, such as the similarities between Malagasy and Malay, were noted as early as the seventeenth century, Austronesian undoubtedly begins with Dempwolff in the 1930s, although his *Austronesisch* is what today would be called Malayo-Polynesian or extra-Formosan. It was probably first picked up as an archaeological concept by Peter Bellwood in the 1970s (e.g. Bellwood 1978) and since then has developed rich associations in different disciplines. Books such as *The Austronesians* (Bellwood et al. 1995) assume the reality of their culture across a wide variety of disciplines. Which is not to

¹ The invitation to contribute to this Festschrift seemed a good opportunity to turn it into a paper, especially as my interest in the Austronesians has been stimulated over the years through discussions with Malcolm Ross at a variety of conferences. I would also like to thank xxx for sending me unpublished material contributing to my thinking on these issues. I would especially like to emphasise that they are in no way responsible for some of the hypotheses floated here which intentionally speculate outside the mainstream.

say detractors do not exist; Solheim, Meacham and Terrell being major names (Solheim 1984-5; Meacham 1984-5, 1991, 1995, 2004; Terrell 2004; Terrell et al. 2001). A rather different challenge is presented by writers such as Oppenheimer (2004) who present one view of what is claimed to be the genetic evidence. This paper takes the view that these authors simply do not engage with the linguistic evidence sufficiently thoroughly and that their alternative models simply do not account effectively for the data.

A key issue in the Austronesian expansion debate is between the interdisciplinary archaeologists such as Peter Bellwood who broadly support a ‘Neolithic’ package which includes demic expansion, agriculture, pigs, chickens and certain types of artefact such as the *lingling-o*, and a more resistant archaeological coterie who claim the diversity of material culture on the ground does not support such a simple model (e.g. Szabo & O’Connor 2004; Anderson 2005). In some ways the linguists will tend to side with the unadorned Austronesian expansion model (e.g. Pawley 2003; Pawley & Ross 1993; Gray et al 2009) though sceptical voices are being raised (e.g. Donohue & Denham in press). Recent evidence from a so far unexploited source of evidence, bacteria varieties co-associated with distinct human populations has provided intriguing confirmation for both the Austronesian expansion, the clear distinction from Papuan and Australian populations and a link with the Chinese mainland (Moodley *et al.* 2009).

Austronesian languages are manifestly in geographically dispersed locales; the likelihood that this is just some sort of cultural diffusion seems improbable. After all, in recent history the spread of languages has certainly been riding a carrier wave of actual migration. On the other hand, the situation on the ground will always be more complex than such a model implies; migrants are likely to interact with a diversity of existing cultures and produce a wide variety of outcomes. In that sense, the burden of this paper may seem even more problematic to such archaeologists; for the evidence is undoubtedly highly fragmentary. Nonetheless, there is a clear value in compiling it, to open up the Austronesian debate.

2. The further adventures of the Austronesians

Two very fundamental questions can be asked of Austronesian culture; where did it originate and where did Austronesian navigators reach? Although it is broadly accepted that Taiwan is the ‘homeland’ of existing Austronesian languages, archaeological evidence suggests strongly they are an incoming population. So where was their ultimate homeland? The Austronesian expansion crested a wave of pioneer voyages, populating islands as far-flung as Madagascar and the Marianas. To assume their presence elsewhere would not be unreasonable. If Austronesian languages are no longer spoken in a particular location today, then what type of evidence might there be for their former presence? Table 1 lists some of the possible categories of evidence;

Table 1. Categories of evidence for Austronesian contact

Category	Type	Example
Linguistic	Loanwords	South America
	Historical testimony	East African coast, Arabia
Biological	Introduced plants and animals	Central America
	Zoogeography	Myanmar
	Bacteria geography	Island SE Asia
	Disease	Africa
Genetic	Distinctive lineages, iconography	South America
Archaeological	Material culture, settlement patterns	Uninhabited Pacific islands,
		Australia
Ethnographic	Material culture	Maldives, East Africa

The purpose of this paper is to draw attention to hypotheses concerning Austronesian contact with regions where Austronesian languages are no longer spoken. These include;

1. Japan
2. China
3. Thailand/Myanmar
4. Pacific islands
5. Australia
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Some of these claims are more controversial than others, and I expect at least some to be comprehensively falsified in the future. There is moreover, a not inconsiderable literature, especially on trans-Pacific contacts, which is close to the lunatic fringe. I can only hope to avoid a compilation such as this being summarily consigned to the outbox. The object is to help reconceptualise the Austronesian expansion as something more than a linguistic hypothesis and to suggest new avenues of research and comparison to specialists in particular geographic areas. It should not be assumed that all these possible movements were at the same period; absolute dating is the province of archaeology. For example, the movement to the Yaeyama islands, almost certainly from Taiwan (§3.2) seems to have been quite recent, despite the relatively short voyage necessary. By contrast, archaeology suggests a much older voyage to the remote Marianas (§4.2), indicating a different phase in the technological evolution of Austronesian culture.

3. Japan

3.1 Austronesians on the Japanese islands

The evident capacity of the Austronesians to reach far-flung places has long encouraged scholars to imagine that they could also have reached Japan. A chain of small islands joins the northeast corner of Taiwan to the main Japanese islands, so navigators on Taiwan might also have sailed north while sailing east and south. As a consequence, there is quite a venerable literature imagining an Austronesian origin for Japanese. Although the idea was propounded as early as 1911, its most eloquent exponent has been Ōno Susumu (1970) who believed that Japanese was an Austronesian language with a later Altaic superstrate. He later added Tamil to this unfortunate roll-call, by which time the move into science fiction was almost complete. Hudson (1999) provides a concise account of the evolution of these ideas together with some indication of the ethnic and nationalist agendas that may lie behind them.

However, such ideas were not confined to Japanese scholars. Paul Benedict, much revered scholar of Sino-Tibetan, published a late book, 'Japanese-Austro-Thai' (Benedict 1990) in which he gave lexical evidence for linking Austronesian, Daic and Japanese. Despite the apparent wealth of examples, each proposed cognate depends on significant special pleading, always the sign of a doubtful 'long-range' hypothesis. Needless to say, the mainstream Austronesian establishment has not followed Benedict's lead and Vovin (1994) published a comprehensive demolition of Benedict's arguments. Broadly speaking, neither linguistics nor archaeology have provided any support for the notion that Austronesian mariners reached Japan proper.

A rather different approach to this issue is found in the writings of Ann Kumar (1998, 2007) and Kumar & Rose (2000). Kumar is convinced that there was early contact between Java and Japan and this idea is buttressed with evidence from rice genetics (Morinaga 1968), culture words and similarities of notions of kingship. The linguistic evidence is a series of comparisons between Old Javanese and Old Japanese, some more credible than others, of words from marginal vocabulary, often reduplicated (Kumar & Rose 2000). While it is not impossible that there was some contact between Japan and Java in the early medieval period, the type of pervasive and early influence posited here has not converted other researchers.

The Austronesians have such a distinctive material culture signature that early incursions should surely be evident. There is, however, one striking exception, the Yaeyama islands (八重山諸島 *Yaeyama-shotō*), the southernmost in the Japanese chain politically, but geographically much closer to Taiwan.

3.2 The Yaeyama islands

The Yaeyama islands lie some 100 km east of northern Taiwan and it seems positively unlikely that they were not reached by Austronesians in view of the documented expansion towards the Marianas. However, they have been little known archaeologically until recently, partly because they lie outside the Jōmon area, which is typically the focus of mainstream Japanese archaeologists. Summerhayes & Anderson (in press) summarise Japanese publications on Shimotabaru wares, which are possible evidence for Austronesian colonisation from Taiwan, 4000-3800 BP. Comparisons with Taiwanese pottery and axe forms taken to be a signature of Austronesian expansion suggest striking parallels, although Shimotabaru wares are much reduced in decorative terms. There is, moreover, no unambiguous evidence for agriculture, although it seems likely that pigs (*Sus scrofa riukiuanus*) were translocated at this period. Further north, Hudson *et al.* (submitted) have investigated the site of Nagabaka on Miyako island, and recorded four radiocarbon dates from the bottom level of the midden which range from 1520 to 1215 cal BP and were associated with two *Tridacna* adzes. Such a date is disappointingly recent compared with the dates from the southern Yaeyamas (Iriomote) and there is furthermore no sign of agriculture. As Hudson *et al.* suggest, these sites could be the result of an accidental drift voyages and temporary foraging settlement, eventually abandoned.

3.3 Ships that pass in the night

None of the literature so far seems to have followed what might seem an obvious path, namely to compare the Japanese dialects spoken in the far south of the island chain with Taiwanese Austronesian for possible substrate influence or even loanwords. Comparisons are entirely with putative Old Japanese or variously reconstructed versions of mainstream dialects. The language of Yonaguni island, for example, appears to conserve phonological features of archaic Japanese. Nonetheless, it is quite probable that even if Ryukyuan were investigated, it might not produce no clear evidence for the intersection of cultures as the Austronesians may deserted the islands before the expanding proto-Japanese encountered them.

4. Austronesians in China

4.1 China as a source for the Austronesians

The Austronesians are generally considered to have reached Taiwan by ca. 6000 BP, gradually eliminating or assimilating the Pleistocene populations (Tsang 1995, 2001; Rolet *et al.* 2002; Rolett 2007; Bellwood 2007; Blench 2008) and leading to the highly distinctive pattern of languages found there today. Almost all scholars agree on the Chinese mainland as their source region and there has been a wide body of support for a site such as Hemudu (河姆渡文化), a Neolithic culture that flourished just south of the Hangzhou Bay in Jiangnan in modern Yuyao, Zhejiang. There seem to be some problems with this view (e.g. Anderson 2000). Laurent Sagart (p.c.) has argued that various aspects of Austronesian culture on Taiwan point to a source region significantly further north. One reason for this is that millet, not rice, that lies at the heart of Formosan agricultural rites, whereas the Hemudu horizon is distinctively rice-based (though see Fuller *et al.* 2008 who argue that the rice at Hemudu may not have been domestic). Whatever the case, it points to a significant original Austronesian population on the Chinese mainland, which presumably accounts for a wide range of cultural similarities with Austroasiatic and other minority ethnolinguistic groups. The Austric hypothesis, whereby Austronesian and Austroasiatic constitute a macrophylum has been gaining some support in recent years. Blust (1996) for example, has argued that Austric must have its *Heimat* in Leaping Tiger Gorge, Yunnan. Even supporters of Austric have yet to follow this particular bound. However, no trace of these Austronesian populations appears to remain linguistically; no substrate in Chinese dialects has ever been identified. A macrophylic view strongly developed by Sagart (1994, 2005a) is that Sino-Tibetan and Austronesian are genetically related and cognate items occur in fundamental vocabulary, although more with Sinitic than Sino-Tibetan as a whole.

4.2 The Daic hypothesis

The Daic or Tai-Kadai languages cover a substantial region of East and SE Asia. Thai, their best-known representative, dominates Thailand, but the Daic languages are generally considered to originate in South China, where they are most diverse (Edmondson & Solnit 1988). Despite their importance, little is known

about their prehistory, homeland and the causes of their expansion; proposed archaeological correlations deal only with the most recent phases.

All the language phyla of East Asia have been argued as connected with one another at different times. Early ‘Indo-Chinese’ hypotheses linked Daic with Chinese, or later, Sino-Tibetan (Van Driem 2005). Influential for a long period was ‘Austro-Thai’ first advanced by Benedict (1942, 1975), which broadly claimed Austronesian and Daic were related. Benedict (1990) later expanded his view to include Japanese, a direction in which few have followed. A problem for many authors was that Daic and Austronesian surface morphologies appear to be very different; Daic is highly tonal with very short words, Austronesian is non-tonal and tends to have CVCV stems plus affixes. Hence the tendency was to treat it as isolated or to link it with Sino-Tibetan, which appears much more similar in terms of morphology. Thurgood (1994) argues that the relation with Austronesian is simply that of loanwords.

Benedict is often criticised for irregular semantics and individual arguments for each form, which lowers the threshold for a demonstration of relatedness. However, Ostapirat (2005) makes a more convincing argument for a genetic relationship between Daic and Austronesian based on regular sound-correspondences. Ostapirat does not advance a hypothesis as to the place of Daic within Austronesian, as his paper links ‘proto-Kra-Dai’ with the Austronesian reconstructions of Dempwolff and Blust. Sagart (2004, 2005b), following this line of argument, places Daic on a level corresponding to Malayo-Polynesian as a branch of ‘Muish’, part of his proposed phylogeny of Formosan Austronesian. Indeed the evidence Sagart cites from Buyang, a mainland Daic language, shows that typical Austronesian morphology was conserved *after* the arrival of speakers back on the mainland and that the reduced forms now typical of most Daic languages are a later development.

If this linguistic scenario is accepted, then proto-Daic speakers would have migrated back from the southern Taiwan about 4000 BP, at the same time that other Austronesian speakers were colonising the northern Philippines and only slightly earlier than they reached the Marianas, apparently aided by newly developed maritime techniques (Hunter-Anderson *et al.* 1995). At a period of significant maritime dispersal, there is no reason in principle against such a back-migration. All the diversity of Daic languages is in China: despite the southward extension of Thai today the likely origin of Daic is in Guizhou, although Daic languages were presumably formerly spoken in Guangdong and have now been assimilated by Sinitic. One possible confirmation of this is a cluster of features in material culture and iconography between the cultures of aboriginal Taiwan and the Daic peoples, such as the blackening of teeth, dental ablation, multi-tongue jew’s harps and the motif of intertwined snakes (Blench, forthcoming b).

5. Myanmar/Thailand

The northernmost Austronesian presence in the Gulf of Thailand today is the Moken boat people who live primarily on boats in the Mergui Archipelago, Dung, and other islands in south Myanmar. There are currently some 7,000 Moken in Myanmar. Moken is a Malayic language most closely related to Moklen, spoken further south in the same area. However, given the rich resources of the Andaman Sea and the evidence for Austronesian voyages towards India, it would not be surprising if outriggers ventured further north into the Gulf of Thailand.

Figure 1. Distribution of *Mus cervicolor*



Source: Groves (1995)

A distinctive trail of evidence for such contact is provided by the zoogeography of commensals and domestic animals. Groves (1995) studied the distribution of ricefield commensals such as *Mus cervicolor* and the bandicoot-rat, *Bandicota bengalensis* (Figure 1 and Figure 2), both of which have intriguing distributions. The mainland distributions are in Burma and Thailand and appear to reflect intensive rice-cultivation. Both species are commensals strongly associated with agriculture. The individual records further south point to sea-borne translocation, presumably unintentional and point to Austronesian trading voyages along the Burmese/Thai coast at an unknown point in the past.

6. Pacific islands

Perhaps the most obvious case for evidence of past Austronesian presence is on now-uninhabited Pacific islands. Anderson (2002), in a survey of Pacific islands in remote Oceania, found no less than thirty apparently reached by Austronesian navigators but which were devoid of inhabitants when first reached by European explorers. These were approximately: 5 in the Pitcairn-Henderson Islands region, 8 in the New Zealand region, 1 in New Caledonia, 1 in Tonga, 3 in the Cooks-Societies, 8-9 in the Equatorial islands region and 4 in Hawai'i. The material evidence consists of platforms (*ahu*), shell axes and fish-hooks and other culture item typical or Austronesians. However, there is also substantial evidence for landscape modification and faunal collapse on islands with no archaeological sites. Various explanations have been advanced for their desertion; typhoons, disease, lack of sustainable food and water supplies are all possible causes.

7. Australia

Australia is a large stretch of land, difficult to miss for maritime peoples, and its northern coasts are not unwelcoming for tropical agriculture. It seems hard to imagine that the expanding Austronesian speakers did not encounter it at some point in their journeys. Late (i.e. 13th century) dates for the settlement of New Zealand make it more explicable that Polynesians did not reach the Eastern seaboard.

Malay trepangers were visiting the northern coast of Australia from the 17th century onwards in search of sea-cucumbers (Macknight 1976; Ganter et al. 2006). But there have been claims that linguistic evidence shows Austronesian voyagers must have been landing on the coast of Northern Australia far earlier, as evidenced by deep-level loanwords in Pama-Nyungan languages (e.g. O'Grady & Tryon 1990). Plant material may also reflect this earlier Austronesian presence. Feral taros have been recorded in Arnhem land which may have been left by these earlier voyagers (Levitt 1981) be an earlier Papuan introduction or be part of the indigenous flora. Denham, Donohue & Booth (in press) propose that it represents a record of indigenous horticultural experimentation. An endemic bamboo, *Bambusa arnhemica*, found across parts of Northern Australia, has no mainland relatives and shows links to Asiatic bamboos (Franklin 2003). Two other possible pieces of evidence may be relevant; the introduction of the dingo and the use of outriggers in Cape York. The dingo, a subspecies of an East Asian dog, ultimately descended from the wolf, seems to have arrived in Australia 3500-4000 BP (Koler-Matznick 2002). Its presumed source was Timor, although there is no direct evidence for this. The dates also seem slightly early for an Austronesian maritime source, but surprisingly late for Papuan contact. Early surveying voyages, such as HMS Rattlesnake in 1848, recorded sophisticated outriggers in the Cape York Peninsula, resembling those of the Torres Straits islands (Flood 2006). The presumption is that these must have ultimately had an Austronesian origin, although possibly via Papuan intermediaries, rather than directly.

Figure 2. Distribution of *Bandicota bengalensis*



Source: Groves (1995)

Even better would be evidence such as identifiable pottery sherds. Although rumours have surfaced of Lapita fragments found in Australia, none have ever been formally published. However, it is the case that some offshore islands, such as Keppel island, have unusual archaeological cultures. Rowland (1981, 1982, 1984, 1987) who excavated these islands, never posits Austronesian contact, but his studies on the idiosyncratic fish-hooks and water-craft certainly point to ‘culture contact’. It seems at least possible the east coast of Australia was the end-point of experimental Austronesian voyages but for some reason, perhaps climatic, the travellers never settled permanently².

8. India and Sri Lanka

India is relatively close to the Austronesian world and there is abundant historical evidence for the sea movement of imperial India across the Andaman Sea to SE Asia, with the formation of the so-called ‘Indianised’ States from at least the 6th century onwards (Ray 1989, 2003 & Munoz 2006). However, it would seem unlikely that there was no traffic in the opposite direction. There no direct archaeological or linguistic evidence for this, but as so often, it is not clear in whose interest it would be to look for such evidence. Indirect evidence can be subject to conflicting interpretations; shared cultural traits can result from single introductions or be brought by intermediaries such as traders. However, there would seem to be abundant for shared cultural traits. Hornell (1920) noted striking agreements in the construction of boat-types to suggest ‘Polynesian’ influence in India, and also noted the cultural context of coconut cultivation and toddy tapping. Waruno Mahdi (1999a,b) has synthesised textual references and evidence for shipping types. The argument is long and intricate, but the conclusion is that the Nāgas referred to in early texts ‘typically inhabited islands, the sea coast or banks of rivers. Some of them worshipped megaliths and practised buffalo sacrifice and head-hunting’ (Mahdi 1999b: 182). Identifying such populations with early Austronesian migrants would not be unreasonable. Given the dates for the texts, Austronesian presence would be identifiable from ca. 500 BC.

There is an old argument for the spread of the clove from insular SE Asia to India. Sanskrit *lavanga* (लवङ्ग) is claimed to be cognate with Old Javanese *bun̄a-lawan̄* (Donkin 2003) and Mahdi (1999b) also proposes other relationships including words for ‘lime’ and ‘camphor’. However, there is also phytogeographical evidence for other fruit species (Blench 2008b), for example the bilimbi and carambola (*Averrhoa spp.*), the lime (*Citrus aurantifolia*), the coconut (*Cocos nucifera*), the langsat (*Lansium domesticum*), the noni (*Morinda citrifolia*) and the santol (*Sandoricum koetjape*). Another fragment of related evidence comes from the distribution of the blow-gun (§15.). Although is clearly developed in the Austronesian world, it has a relic distribution in South India and Sri Lanka. Indirect pointers to Austronesian settlement in SE India are quite strong, but archaeological and linguistic evidence remains weak. It seems likely that numbers were never high³ and journeys to India represented opportunistic trade and piracy rather than a concerted attempt to settle, hence the somewhat difficult to interpret textual evidence.

In contrast, much more recent arrivals are represented by the Orang Melayu of Sri Lanka (Adelaar 1991). This Muslim community of about 50,000 persons is descended mainly from Javanese political exiles, soldiers and convicts, who came from Java during Dutch colonial rule, 1658-1796 (Hussainmiya 1987). Although most Sri Lankan Malays are of Javanese ancestry, they also originate on other Indonesian islands such as the Bali, Tidor, Madura, Banda and Ambon.

9. Indian Ocean islands

If indeed there were early and persistent Austronesian contacts across the Indian Ocean, both via outriggers as part of the spice trade and with the rigid ships of the Malay sea-borne empire, it seems curious there is no evidence for settlement of islands in the middle of the ocean (Blench 2007, in press b). The ability of Austronesian navigators, who would have responsible for the spice trade to the Roman Empire well before the rise of Malay shipping, to find very small islands in large expanses of open ocean is well documented,

² Oscar Wilde on America; ‘Of course America had been discovered many times before Columbus, but it had always been covered up’.

³ Although Mahdi (1999b:168) quotes the *Kiṣkindhākāṇḍa* as saying the migrants ‘live on the sea’s milky beach, and in the *tamāla* woods live, and of coconuts eat, their number is countless’.

yet it seems that almost all the Indian Ocean islands were uninhabited at first European contact. Archaeology has so far produced no evidence for Austronesian (or other) incursions on islands such as Diego Garcia, the Seychelles and Mauritius. The situation in the Pacific may have been replicated in the Indian Ocean; Mauritius or the Seychelles may have been reached, but then abandoned. One reason may have been lack of easily exploitable food resources; European sailors tended to rapidly consume any readily caught resource (e.g. the dodo) and bring in and release often destructive species such as the goat in order to ensure future food supplies. Similar depredations leading to collapse of bird faunas in the Pacific, most notably the moa in New Zealand, have been well-documented (Anderson 2002).

The Maldive archipelago some 600 km. south-east of the Indian mainland is today inhabited entirely by speakers of Divehi, an Indo-Aryan language. Although the dominant religion is presently Islam, there is strong evidence for numerous prior visitors from other cultural spheres, most notably Buddhism (Heyerdahl 1986). Archaeology in the Maldives is still underdeveloped, and so far no sites point to Austronesian presence. However, Hornell (1920: 230) observes that constructional techniques in boatbuilding point unambiguously to early Austronesian ['Indonesian' in his terms] contact. Manguin (1993:265) notes 'field work in the Maldives, ...found evidence to prove that the shipbuilding tradition there used to be of the Southeast Asian sewn-plank and lashed-lug type (as opposed to an Indian Ocean sewn-plank tradition'⁴. It seems increasingly likely that the absence of evidence for Austronesian landings is an artefact of the exiguous archaeology.

10. The Persian Gulf

Although Austronesian navigators may also have reached the Persian and Arabian Gulfs as part of their expeditions west across the Indian Ocean, but there is no immediate archaeological evidence for this. But textual evidence from the post-Islamic period provides a more explicit record of their presence. Goeje (1894) was the first to identify reports of the *Sayābiġa* (Sumatrans) settling in the Persian Gulf and Ferrand (1934) expanded these references. Balāduri (9th century) and al-Tabarī report that Sayābiġa were in Sind prior to the expansion of Islam in this region⁵. Isolated from the connection with their home area, they became mercenaries. During the reign of the Calif Abu Bakr (632-634) the Sayābiġa garrisoned Bahrein, while in 656-7 AD, they were employed to guard the treasury at Basra. In 775, Sayābiġa are recorded as taking part in a naval expedition against the coast of NW India. It is this type of flow among mariners that must have been responsible for the interchange of maritime terminology between Malay, Arabic and Swahili (Blench in press, b).

11. Madagascar and East Africa

Austronesian presence in Madagascar is uncontroversial, since the Malagasy language is Austronesian and closely related to Barito languages of Borneo. Nonetheless, its exact genealogy has been subject to considerable debate (Beaujard 2003). Many areas of vocabulary seem to be borrowed from Malay, in particular, sailing terminology (Adelaar 1996). Blust (2005) has shown that the languages of the Samal or Bajau Laut, the nomads still traversing the seas between NE Borneo and the southern Philippines, are part of the Barito group. The earliest evidence for Austronesian settlement of Madagascar is the 5th century AD, although this date is uncertain and only by the 7th century is evidence uncontroversial (Blench 2007). It seems possible that this reflects the expansion of the Srivijaya Malay in the 7th century.

However, if ships could reach Madagascar they could and indeed should have also reached the East African coast, although there are no Austronesian language is spoken there today. Nonetheless, there is significant cultural evidence for Austronesian presence on the East African coast, some of it well before the settlement of Madagascar (Adelaar 2006, in press; Blench 1996, in press a,b). Pliny (ca. 1 AD) refers to the 'men who come across the great ocean on rafts [*rati*]' which he contrasts with coastal traders (Rackham 1942). He describes them traders in spices who make use of the monsoon currents which reverse every six months, corresponding to the Equatorial counter-current. These could well be Austronesians, if *rati* is a description

⁴ It is worth emphasising there are distinctive boat types and shipbuilding techniques in the Maldives not attested in the Indian mainland.

⁵ I am indebted to Philippe Beaujard for this material which will be incorporated in a forthcoming major study he is preparing.

of outrigger canoes. There is no direct archaeological evidence for such early period contacts, but other indications are highly suggestive. These draw from oral traditions, textual, maritime technology, plant and animal transfers, disease and other aspects of material culture (e.g. Hornell 1928, 1936, 1941; Grottanelli 1947; Walsh in press). Evidence for this exchange is the transfer of elephantiasis to Africa and the export of African malaria, and the import of SE Asian fighting cocks⁶ and bananas, *huti*, to the East African coast (Blench in press b). So far there is no direct archaeological evidence, but then there was no evidence for Graeco-Roman trade on the coast until the 1990s, despite the unambiguous textual evidence (Juma 1996).

12. West Africa

Postulating direct Austronesian contact with West Africa may seem much more unlikely to. This hypothesis has a long and somewhat unhappy history beginning with the arguments of Jones (1971) that the African xylophone is an Indonesian import, a claim discounted in Blench (1982). Nonetheless, there *is* a striking problem of explaining the early presence of certain SE Asian food crops on the West African coast (Blench forthcoming a). These are;

- The plantain or triploid banana (AAB)
- The water-yam (*Dioscorea esculenta*)
- The cocoyam (*Colocasia esculenta*)

Phytolith evidence places the plantain in Cameroun ca. 500 BC (Mbida et al. 2000). For the other two, the evidence is that their greatest genetic diversity is in West Africa and they are hardly used in East Africa. These species are not native to Africa, cannot have spread across the continent in historical times and are not Portuguese introductions. A piece of contributory evidence is the Nok terracotta statuettes showing elephantiasis, dated to as much as 500 BC, from Central Nigeria (Fagg 1977). Elephantiasis is a Pacific disease that has to be introduced via human migration (Laurence 1968). It remains quite difficult to imagine that stray Austronesian navigators could have rounded the Cape and touched the coast of West Africa more than 2500 years ago, but then many Austronesian voyages would have seemed like impossibilities before they were demonstrated.

13. South Africa

One of the more recent and better documented movements of an Austronesian language to Africa is the evolution and disappearance of Cape Malay. In 1652, employees of the Dutch East India Company moved away from the Cape settlement to clear farms. Since the Dutch government would not permit the enslavement of indigenous people but allowed the importation of slaves or indentured servants from the Dutch East Indies and elsewhere this became a favoured source. The first Malay slaves arrived in 1657, and Malays came in a steady stream of until the nineteenth century, bringing their distinctive culture and cuisine. Despite the relatively simple narrative given on official websites and general histories, the ethnic composition of the imported slaves was quite complex. According to Armstrong and Worden (1979: 120-121), Madagascar was the main regional source of Cape slaves during the period 1652-1834, whereas India and Indonesia (chiefly Macassar and Batavia) contributed much smaller numbers. Nonetheless, the ensemble of slaves became known as Cape Malays and formed a subset of the mixed-race category known as 'coloureds'. As the numbers of *Vrijezwarten* (manumitted slaves) increased in the 18th century a synthetic culture evolved. Although a form of Malay, *Melayu*, seems to have been their common language for a period it began to give way to Afrikaans in the nineteenth century and has now been wholly replaced. Nonetheless, it has left significant traces in Afrikaans, among others the Malay word for 'banana', *piesang*. By a strange irony, 'Cape Malay' culture, notably its cuisine and music, are strongly promoted in today's tourist literature, and have persisted and developed, as the language and original ethnic identity of these Austronesian migrants has been submerged.

⁶ Recent research by ILRI has radically revised our understanding of the genetics of the chicken (Han Jianlin p.c.). Domestic fowl are now known to have three centres of domestication, India, China and island SE Asia. Many of the chickens of Eastern and Southern Africa are derived from island SE Asia and were *not* introduced via any identified intermediary location.

14. Austronesians in the New World

14.1 California

If Austronesian voyagers could reach Hawai'i presumably they could also reach the west coast of North America. Suggestions of a general relationship between island SE Asia and North America have an old history but more recently a more detailed proposal has been advanced for contact between Polynesians the Chumash Indians and in Southern California between 400 and 800 AD. (Jones & Klar 2005; Klar & Jones 2005). This is based on the unique design of their boats, the *tomol* or sewn plank canoe, and equally striking, Polynesian-type compound fish-hooks. These suggestions remain controversial (see Anderson 2006 and response in Jones and Klar 2006 also Arnold 2007). The Chumash language is relatively well-documented but is essentially dead; nonetheless, this is a question that seems as if it ought to be resolvable through archaeological means.

14.2 Austronesians in South America

Polynesian contact with South America has long been the subject of speculation (Buck 1938; Heyerdahl 1941, 1950, 1952, 1963, 1964; Jett 1968; Key 1998; Langdon 2001) but accounts of it were more theatre than history (blond, bearded Norwegian against the elements). The model was confused, imagining Amerindians voyage in the Pacific, despite their known lack of ocean-going craft. A much more credible model would suppose that Polynesians reached the coast of South America, given their proven maritime skills (Lanning 1969). However, all the hoopla surrounding such a transoceanic colonisation convinced many prehistorians to set their face against such contact.

Scholarly scepticism probably cracked with clear evidence that the sweet potato had reached Eastern Polynesia in pre-Hispanic times (Green 1998, 2005). The Quechua name, *kumar*, closely resembles the widespread Polynesian term, *kumala*. There is, however, a chronological problem with this; Fijian *kūmala* is apparently cognate but must presumably be a borrowing. It seems much more credible that Polynesian contact was quite late, perhaps contemporaneous with the settlement of Easter Island, itself now redated to 1200 AD (Hunt & Lipo 2006). Heyerdahl (1964) also pointed to a number of South American plants and adventives which appear to be recorded in the earliest accounts of flora, for example, the Mexican poppy, *Argemone mexicana*. More recent research has added the possibility that the bottle gourd (*Lagenaria siceraria*) reached Eastern Polynesia from the New World, while occurrences in Western Polynesia originate in SE Asia (Green 2000). So some of Heyerdahl's evidence may not be completely misconceived, despite his wayward interpretations. Anderson et al. (2007) have considered the evidence for Ecuadorian sailing rafts and raise the possibility that their capacity to reach westward has been underestimated. They point to some very striking coincidences in imagery between Rapa Nui and Puná island birdmen figures. Bellwood & Hiscock (2005) also use the cut stonework and birdman imagery as evidence for possible South American contact with Easter Island.

Other types of biological evidence has now been presented, notably in human genetics, where the presence of the characteristic Polynesian motif, the 9 base pair deletion, on the west coast of South America points to Polynesian presence (Sykes et al. 1995). Another curious piece of evidence is the 'blue-egg' chicken, a variety of fowl encountered by the first explorers in this region. Genetic studies of the indigenous chickens argue that this is likely to be a descendant of the Polynesian chicken (Storey et al. 2007) although Gongora et al. (2008) have vigorously opposed this interpretation.

The early appearance of the coconut in the New World has been the subject of considerable controversy. The coconut was previously considered a New World domesticate that spread westwards across the Pacific, but very early dates for coconut in the Sepik suggest a Malesian domesticate. Nonetheless, Zizumbo-Villareal & Quero (1998), in a re-examination of the earliest sources, argue that it was definitely present on the west coast of Central America in the pre-Hispanic era. Baudouin & Lebrun (2008) examined molecular markers for Central American coconuts and compared them with insular SE Asia. The closest similarities are with those of the Philippines and both are quite distinct from the South American coconut cultivars, suggesting two quite distinct introductions. Furthermore such an origin rules out distribution on ocean currents as far as this can be gauged. Whether the date they attach to this introduction (2250 BP) can be justified is more doubtful, but this presents additional evidence for early trans-Pacific contact and perhaps should be matched the enigmatic distribution of the blow-gun in south-central America (§15.). Another possibility, less well-

investigated, is the backstrap loom (Broudy 1979). Technologically, it is very similar to those in SE Asia, and is distributed from Peru through to Central America and the American Southwest. No archaeological finds of textiles apparently using this technology are older than ca. 500 AD, so it has potential for further investigation.

A further interesting thread is the possibility of relatively late contact between the Mapuche Indians of South-Central Chile and Eastern Polynesians (Ramirez 1990/91). Examples of apparent loanwords and other cultural artefacts such as clubs similar to the Maori *patu* make this a possibility, and it certainly has not been rejected out of hand by specialists. However, it would represent a distinct and chronologically different layer from the other contacts discussed in this paper.

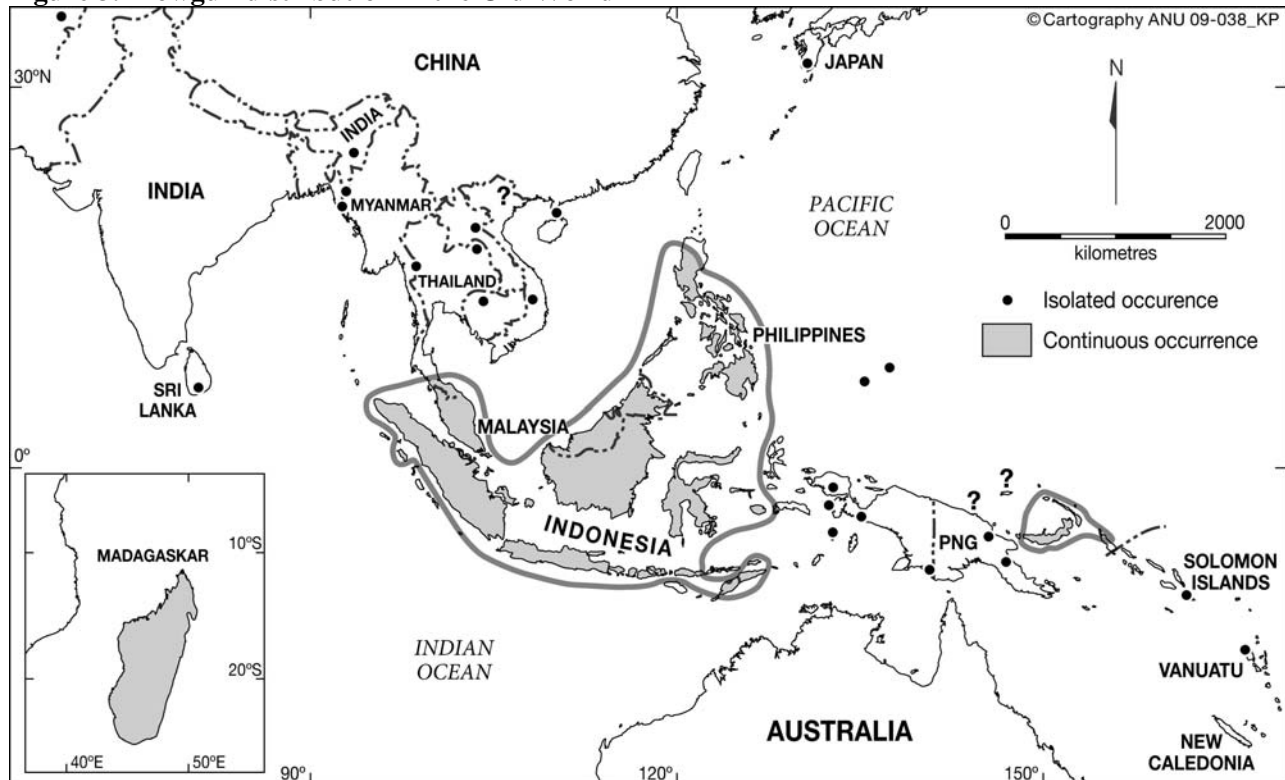
14.3 Surinam

One of the more surprising later adventures of the Austronesians is the presence of a Javanese community in Surinam, the former Dutch colony. The first Javanese came to Surinam in 1890 under slightly confused circumstances (Dew 1981). The settlers multiplied significantly and now represent some 20% of the population. Linguistically, the Javanese spoken in Surinam resembles most closely the central dialects, such as that in Kedu residency. Although the older generation has struggled to maintain cultural traditions, and the usual ethnic revival processes are at work, it seems unlikely that the language is viable in the long term.

15. The strange case of the blow-gun

There is an old traditions of discussions concerning Old and New World similarities, for example the game parchesi, which is very similar in Asia and North America. The key issue is what level of technological complexity is likely to be subject to convergent invention, as opposed to being evidence for diffusion. Archaeologists typically support a strong 'local invention' emphasis unless contrary evidence is overwhelming. One of the most striking examples of a technology spread by Austronesian contact is the blow-gun. Blow-guns used for hunting or warfare may seem like a technology that could be invented many times, but their worldwide distribution is very patchy. Entirely absent from Africa and Western Eurasia, they are typical of SE Asia and a distinctive zone between North and South America (Jett 1970, 1991). Virtually all occurrences within the Old and New World distributions are contiguous, suggesting the technology was only adopted once and diffused, rather than developing through convergent evolution. In the Old World, the blow-gun maps extremely well against the proposed Austronesian migration sites listed in this paper,

Figure 3. Blowgun distribution in the Old World

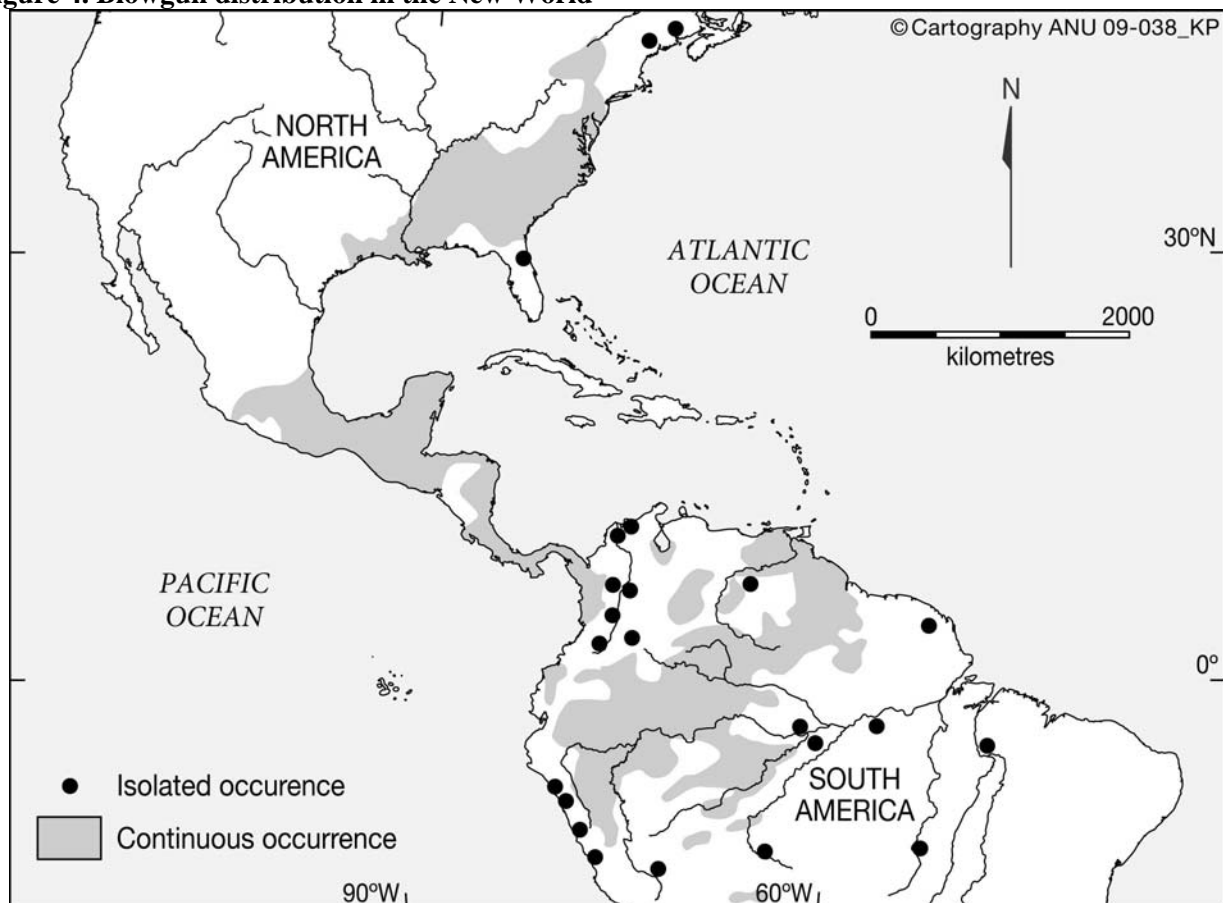


Amended from Jett (1991)

primarily in the Austronesian –speaking areas of insular SE Asia and the Pacific (Figure 3). The absence of the blow-gun in Taiwan and South China argues that if the case for Daic as an Austronesian branching is correct then it would have occurred prior to the development of the blow-gun in the Northern Philippines. Occurrences in eastern Indo-China probably reflect the Chamic incursions, while those on the Irrawaddy and west Thailand the exploratory voyages apparently connected with the transfer of ricefield commensals (§5.). Occurrences in South India and Sri Lanka might be additional evidence for the contact proposed by Waruno Mahdi (§8.).

However, the more controversial issue is whether the distribution of the blowgun in the New World might reflect contact with SE Asia. Essentially, the blowgun occurs in two areas where occurrences are broadly contiguous, Central America and the Amazon and the SE United States (Figure 4 also Ventura 2003). The absences of the blowgun over very large areas of the New World and its complete absence in the Centre and Northwest of the United States argues that it cannot be a technology connected with the Bering Strait migrations. Jett (1991) argues convincingly on technological grounds that the distribution in the SE United States is likely to be a sea-borne diffusion from further south (and this is certainly not impossible given recent understanding of early maritime voyaging in the Caribbean). However, the real problem is that if the blow-gun *were* to be due to Austronesian contact it would have to be fairly old, simply because the distribution is so broad. Realistically, it would have to be part of the same expansion that brought early Austronesian landings on the Marianas, i.e. ca. 3500 BP (Butler 1995). We know from representations in archaeological ceramics that it is older than 1000 AD, but it is possible that its spread was given an impetus in the post-Hispanic era (Métraux 1949). The blow-gun is not known on Taiwan, so this would be related to its apparent invention in the Northern Philippines.

Figure 4. Blowgun distribution in the New World



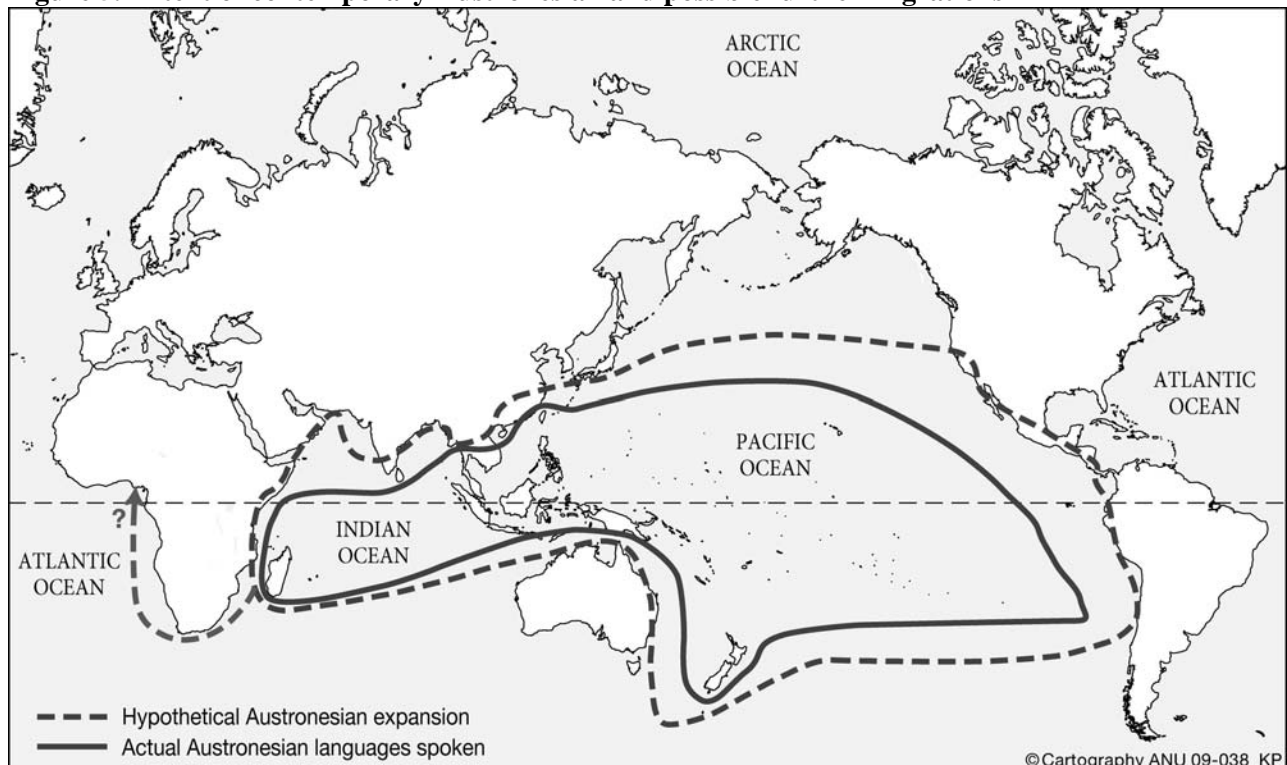
After Jett (1970)

16. Conclusions

The usual concept of the Austronesian expansion is dominated by the presence of Austronesian languages. The much-reproduced maps show the Pacific and a typical loop westwards to Madagascar. Proposals for the

presence of Austronesians elsewhere have a long history and range from the frankly marginal, via the debatable to the likely. The evidence presented in this paper strongly suggests that it is not always helpful to frame our thinking using only synchronic evidence. In some ways this makes the Austronesian adventure even more remarkable, and its exclusion from the mainstream narrative of world history even more inexcusable. It should suggest to linguists that there is a compelling case for examining more closely the languages in areas where Austronesian was formerly spoken for evidence of substrates or loanwords. Figure 5 contrasts the conventional distribution of Austronesian languages with the possibilities discussed in this paper, providing an expanded frame of reference for Austronesianists.

Figure 5. Extent of contemporary Austronesian and possible further migrations



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