INTERDISCIPLINARY APPROACHES TO STRATIFYING THE PEOPLING OF MADAGASCAR

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ABSTRACT

It has long been accepted that the core population contributing to the Malagasy language are the Barito, an inland people of SE Kalimantan, and that a superstrate of Malay nautical terms implies ships under Malay control. However, recent linguistic and genetic research points to a far more complex picture. Malagasy has numerous terms not attested in Borneo languages and only found on other islands in SE Asia, particularly Sulawesi. Genetic research, comparing populations of Island SE Asia with the Malagasy, indicates complex layering, and surprisingly, no strong Barito component.

There are several possible models to explain this anomalous situation, for example that the original vessels which brought the settlers across the Indian Ocean had multi-lingual crews. However, this does not explain why the Barito, a non-maritime people, came to contribute to the core Malagasy culture. A more intriguing alternative is that Madagascar was peopled in waves coming from Island SE Asia, and that a significant component consisted of the ancestors of the present-day Samalic and Orang Laut peoples, the 'sea nomads', whose opportunistic trading and multi-lingual culture would better explain the mixture found in Madagascar today. In addition, the evidence from ceramics indicates that the Comores may have played a key role as a staging post in these migrations.

The present Malagasy language is strikingly uniform, which suggests a significant episode of language levelling, presumably in the medieval period, and related to the establishment of the Merina kingdoms on the plateau. However, Malagasy dialects can provide clues to a more complex history of migration, especially among populations such as the Vezo, who practice a form of nomadic marine exploitation similar to the Samal of SE Asia.

Keywords: Sulawesi; Philippines; migration; Madagascar; lexicon

ACRONYMS

ABVD	Austronesian Basic Vocabulary Database
ACD	Austronesian Comparative Dictionary
AD	Anno Domini
BC	Before Christ
BP	Before present
ISEA	Island Southeast Asia
PAN	Proto-Austronesian
PMP	proto-Malayo-Polynesian
POc	proto-Oceanic
WPMP	Western Malayo-Polynesian

1. Introduction

Unlike the remainder of Sub-Saharan Africa, the dominant language of Madagascar is Malagasy, an Austronesian language related to those spoken in Island SE Asia. How this came to be has been the subject of debate for several centuries. Clearly this must reflect a migration of peoples and should be reflected in the archaeological record. Yet such a link has so far proved elusive. Similarly, Islands SE Asia is a large and diverse place, so a more precise analysis of the likely origin(s) of the Malagasy language is essential to the correlation with archaeology and the reconstruction of prehistory. This paper[1] explores the implications of recent findings that Malagasy is multiphyletic, that its vocabulary and culture originate in several places and we must therefore seek evidence for multiple migrations.

Since the 17th century it has been accepted that Malagasy is an Austronesian language. Dahl (1951) argued that its nearest relative within Austronesian was Ma'anyan, one of the Barito languages of SE Borneo. However, as we know more about both Malagasy and Bornean languages, it has become increasingly clear that the story is more complex. Robert Blust (Austronesian Comparative Dictionary[2]) points out that some Malagasy forms are Austronesian but not found in Borneo languages. Beaujard (1998, 2003) identifies a number of roots occurring in Sulawesi languages which are not attested in general Austronesian but which are reconstructed by Mills (1977), pointing to a specific Sulawesi component in Malagasy. Less clear is a Philippines component; Malagasy has a few words which appear to be borrowed from Philippines languages. These may be the result of Iberian trans-Indian Ocean traffic, post 16th century. Sander Adelaar (1994) observed some time ago that the names of winds and other terms relating to seafaring are direct borrowings from Malay. This superstrate of Malay nautical terms implies ships under Malay control. Blench (2008) analysed the borrowing of natural world terms (especially animal names) from coastal Bantu. All of this argues for a complex layering of migrations to Madagascar, rather than a single founder population, something which is reflected in human genetics. The Malay nautical vocabulary points strongly to Malay-owned ships, presumably seeking trade, as well as raiding for slaves. However, the settlement of Madagascar implies colonisation, and Blench (2010) argues that the shipowners were driven from the East African coast to Madagascar and thence to the cooler highlands by high mortality from disease, especially malaria. If so, the contribution of the Barito, a non-maritime people, to the core of Malagasy language and culture becomes even more surprising.The Barito, as far as we know, were inland peoples with no maritime capacity, and certainly without the skills to navigate the Indian Ocean, so either the Barito were themselves slaves or hired crew.

Extended lexical analysis suggests that Madagascar was peopled in waves coming from different islands in SE Asia, and that a significant component consisted of the precursors of the present-day Samalic and Orang Laut peoples, the 'sea nomads', whose opportunistic trading and multi-lingual culture would better explain the different elements found in Madagascar today. This in turn is susceptible to two different explanations;

> the boat crews were multi-lingual;
> or the populations which settled Madagascar came in distinct waves, from different source islands, each bringing their own cultural package

Or possibly, both may have occurred. If the Malay ships pioneered the route, other enterprising maritime populations could have followed in their wake. Two linked articles by Philippe Beaujard (2003) suggest waves of colonisation, although this model has been criticised by Sander Adelaar. It is not clear whether these alternatives *could* be resolved purely from the linguistic evidence and we will need archaeology linking ISEA with Madagascar to clarify the issue. What can be done in the meantime, however, is to establish more clearly exactly what the linguistic and cultural evidence is telling us.

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[1] The first version of this paper was presented at the Indian Ocean Conference, Madison, Wisconsin, 23-24th October, 2015. I would like to thank the organisers for the invitation to attend and for finding funding to make this possible. Thanks to Mark Horton for advice on the ceramics and to Henry Wright for review comments.

[2] http://www.trussel2.com/acd/

One pathway to resolving these issues is to explore layering in Malagasy vocabulary in more detail. The literature is replete with possible suggestions of connections. By comparing the proposals with large online databases, it is possible to establish their credibility. The core of this paper is thus an examination of the origin of lexemes from islands or regions other than Borneo, more specifically Sulawesi and the Philippines. However, it also considers more briefly the non-linguistic evidence, in particular the distribution of the tube-zither, and recent findings from human genetics. An additional hypothesis in the literature is the identification of the Vezo people of SW Madagascar with the Bajaw, implying a distinct migration. While this is attractive in terms of the similarity in lifestyles, linguistic support is limited. The broad conclusion is that the layers of vocabulary in Malagasy does originate from different islands and that multiple waves of ships is a better fit with the data than multi-lingual crews. In addition, the evidence from ceramics indicates that the Comores may have played a key role as a staging post in these migrations.

2. Models for the settlement of Madagascar

The settlement of Madagascar remains problematic, for lack of archaeological sites which clearly point to Austronesian heritage. Indirect evidence points to prior Palaeolithic settlement of Madagascar from the mainland and presumably by 400 BC (Blench 2007; Virah-Sawmy *et al*. 2010). There have been several claims of significantly earlier settlement (Gommery *et al*. 2011; Dewar *et al*. 2013) but the dating of these is uncertain and they are not associated with vegetation change and megafaunal extinction. Unfortunate publications such as Douglass & Zinke (2015) develop models which promote the shakiest archaeological evidence to solid projections onto the past. Nonetheless, the palaeo-environmental evidence points strongly to a forager presence prior to the Austronesians and some of the resident populations still surviving as marginal hunter-gatherers, the Beosi and Mikea. Even so, genetics shows that some foraging groups are identical to their farming neighbours (Pierron et al. 2014). Ptolemy clearly knows about Madagascar by earlier than 400 AD, and Graeco-Roman ships must therefore have been trading with somebody.

Although the earliest Neolithic sites are around 6th century AD, the dating is far from secure (Dewar & Richard 2012) and we might be better to assume 7th century. The earliest pottery is called Ampasimahavelona (AMV) phase and C14 dates provide a range from the 7th century CE to around the 10th century from the type site but also from Sandrakatsy and Nosy Mangabe. The pottery is undifferentiated brownware and does not clearly point to any particular source either in ISEA or East Africa (Mark Horton pers. comm.).

The first decorated ceramics appear at Mahilaka and are probably post 10th century (Radimilahy 1998). These have wavy lines and dentate decoration, similar to those from the Comores sites at corresponding dates and are often called Dembeni phase pottery (Wright *et al*. 1984). These traits might derive from ISEA but there are no certain comparisons, which may indicate indirect settlement from the Austronesian region. Blench (2010) argued that the first Austronesian settlements were on the coast and that (perhaps) malaria drove the settlers to Madagascar, transporting African serfs/slaves. But the Comores may well be implicated in this complex evolution, as indeed the genetics suggests (Msaidie *et al*. 2011). Crowther et al. (2016) present an up-to-date review of the archaeobotany of cultivated plants in the region which broadly suggests that typically Asian crops such as mung bean and Asian rice dominate the Comores and Northern Madagascar assemblages while those of African origin are preponderant on the inshore islands. Unfortunately none of these are represented in the linguistic evidence presented in this paper.

If the mainland and the Comores were indeed staging posts, then SE Asian mariners interacted with coastal populations before moving on to Madagascar. The peoples on the East African coast most likely were both Bantu agriculturalists and Cushitic-speaking pastoralists. There are two consequences of this in terms of ceramics. If the Barito component did not include potters, they would have to learn this skill from the Bantu on the mainland, and possibly the confrontational relations between residents and invaders did not create a matrix for the unbroken transmission of styles. The Austronesian traditions of ceramics would have been lost and the new settlers on Madagascar would have poorly developed skills as potters. Hence the undifferentiated brownware which has so far been recorded. The challenge is thus to integrate the findings from different disciplines into a comprehensive synthesis of the pattern of interaction between ISEA and the East African coast (Blench 1994).

3. Linguistic evidence

3.1 Overview

The present Malagasy language is strikingly uniform, far more than would be expected following settlement 1500 years ago. This suggests a significant episode of language levelling, presumably in the medieval period, and related to the establishment of the Merina kingdoms on the plateau (cf. Blench 2014a). However, Malagasy dialects can provide clues to a more complex history of migration, especially among populations such as the Vezo, who practice a form of nomadic marine exploitation similar to the Samal of SE Asia (Sanders 2005). The evidence for connections with Manyaan, Malay and Javanese has been laid out in various sources, and will not be repeated here. The most interesting connections are with the island of Sulawesi. The main body of languages on Sulawesi are the Celebic subgroup of Austronesian and include the Toraja and numerous settlements of the Bugis (Mills 1975, 1977). The Celebic languages have a number of lexical innovations, distinct from Proto-Austronesian (PAN), as well as showing striking phonological changes. Malagasy has some specific isoglosses with these Celebic forms as well as a few with the languages of the Philippines. In the case of the Philippines, there is the possibility that similarities are late borrowings, following the Spanish conquest of the islands and the link to the trade routes leading to Sofala and the interior of Mozambique.

In order to establish the status of individual lexical items they need to be compared to large Austronesian datasets. The major sources of data on comparative Austronesian are two online sources, the Austronesian Comparative Dictionary (ACD) and the Austronesian Basic Vocabulary Database (ABVD). The ACD is by far the most complete, but it is based on cognate sets, and therefore does not cite forms the author, Robert Blust, does not consider cognate to his proposed reconstructions. The ABVD is a list some 200 words covering a large number of Austronesian languages, but includes very little cultural vocabulary. Apart from these online sources, there are two publications which present comparative Austronesian wordlists, the Comparative Austronesian Dictionary of Tryon *et al.* (1995) [here CAD] and the comparative lexicon of 37 languages in Arnaud et al. (1997). The latter is far more culturally adapted to the Austronesian world, but is somewhat hobbled by being limited to researchers of French origin, hence the rather eccentric choice of languages.

The main source for comparisons with Sulawesi languages is the massive thesis of Roger Mills (1975, 1977) largely unpublished. This includes much material which is not available elsewhere, and is cited extensively in the tables in §3.2. For the Philippines, there are the comparative wordlists in Reid (1971) and the proto-Philippines forms in Blust (2005 and the ACD). The data tables are divided into two sets, those which show connections with Sulawesi languages (Celebic) and a much small set of cognates with Philippines languages.

For the etymologies of Malagasy, the most important texts are the dictionary of Tanala by Beaujard (1998) and the paper on migrations which draws on the same study (Beaujard 2003). Simon (2006) is an extremely wide-ranging study of the Malagasy lexicon, but was prepared before the main Austronesian databases came online. For Malagasy plant names, the immense compilation of vernacular terms in Boiteau *et al*. (1999) is an indispensable source. Beaujard (2017) is an important study of the cultivated plants of Madagascar which draws in much new lexical and botanical evidence.

3.2 Connections with Sulawesi languages

This section examines a series of shared glosses based primarily on a re-analysis of the suggestions in Beaujard (2003, 2017) and Simon (2006). The data tables present comparisons between Malagasy (Tanala unless otherwise noted) and other Austronesian languages. Individual languages are usually from Sulawesi unless noted otherwise. I have entered the Mayotte forms of Malagasy, based on Gueunier (2016), although it seems they do not retain archaisms, but always reflect standard Malagasy. The classification of individual languages can be established from the Ethnologue[3] or the Glottolog[4].

[3] https://www.ethnologue.com/

[4] http://glottolog.org/

3.2.1 Nouns

I have sorted the nouns into rough semantic groups and placed the wild and cultivated plants at the end of the series of glosses.

Table 1. 'Back, behind' in Malagasy

Language	Attestation
Malagasy, Mayotte	vòho
Pazeh (Formosan)	bukun
Proto-South Sulawesi	*boko(t?)
Bugis	bokoʔ

Commentary: Blust (ACD) only cites this as Pan-Formosan, although the Pazeh form is clearly related to the Sulawesi languages. The other main Austronesian root, **likud*, is attested in the Philippines and Borneo.

Table 2. 'Vagina' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	fàlo	*vagin*
Malagasy, Antemoro	fala	*vagin*
Malagasy, Mayotte	fory[5]	*vagin*
PWMP	*palaq	vagina
Kaili [Celebic]	palo	anus, buttocks
Napu[Celebic]	palo	anus, buttocks
Kambera [Sumba]	para	female genitalia
Maloh	palaʔ	vagina

Commentary: Some Sulawesi languages retain the older PAN root **puki*.

Table 3. 'Anus, bottom' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	fòry	*anus*
PMP	*udehi	last, behind
Mori [Celebic]	puri	buttocks, bottom
Uma [Celebic]	puri	after

Commentary: This root, always without the initial bilabial stop is widely attested in Philippines languages, but with the meaning 'last, behind'. Sulawesi languages retain the stop, and at least some have the meaning 'buttocks'. This is not attested in Borneo languages.

Table 4. 'Spirit' in Malagasy

Language	Attestation	Gloss
Malagasy	-lampo *in* kokolàmpo	*esprit de la forêt*
Sulawesi	rampo	forest spirits

Commentary: This comparison noted by Beaujard (2003).

[5] But see under 'anus' below

Table 5. 'Shovel' in Malagasy

Language	Attestation	Gloss
Malagasy, Antaisaka	sotro	*bêche*
Malagasy, Merina, Mayotte	sotro	*cuiller*
PMP	*sudu(k)	spoon
Malay	sudok	shovel
Mandar	sodo'	shovel
Toraja Kada	pesodoh	shovel

Commentary: The usual Austronesian gloss is 'spoon', but this has become 'shovel' in Sulawesi languages as well as Malay and both meanings are attested in Madagascar.

Table 6. 'Knife' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	gòro	*coupe-coupe à longue lame*
Malagasy, Mayotte	goro	*courbe*
Tolaki	gologolo	kris
Tagalog [Philippines]	gúlok	large knife
Malay	golok	knife

Commentary: The absence of a final velar argues this may have been adopted from a Sulawesi language and not Malay. This is not the more common root for 'knife' which is something like **piso*.

Table 7. 'Money' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Mayotte	vòla	*argent, monnaie*
Tolaki	wulaa	gold
Toraja Saʔdan	bulaan	gold
Wawonii	wula	gold
PAN	*bulaw	golden-coloured

Commentary: A very intriguing etymology, discussed at length in the ACD. Widely attested in the Philippines, it seems to have been extended from a colour term to a metal. Although recorded in Ngaju Dayak, it is most common in Sulawesi and other parts of Eastern Indonesia. It seems unlikely such as term would have been in widespread use in the earliest period of maritime contact, so this probably came into Malagasy somewhat later.

Table 8. 'Joist, rafter' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	ray, rairày	*solives soutenant le plancher*
Bugis	rakiʔ	raft
PMP	*Rakit	raft

Commentary: The shift to 'rafter' in Malagasy is distinctive (presumably the same semantic shift occurred in English) as this root means 'raft' everywhere in ISEA. It is however, also widely attested in Borneo languages, so not necessarily a borrowing from Sulawesi.

Table 9. 'Hill' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	tanèty	*colline*
Proto-South Sulawesi	*tanete	hill
Bugis	tanete	upland
Pattae	tanete	hill

Commentary: PMP has **buntud/buntul* which is probably unrelated. However, it is surprising how few attestations support this. Replaced in Mayotte. The ABVD does not record this word. The CAD shows that Austronesian has a wide variety of local terms.

Table 10. 'Swelling, lump' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	vòro	*gonflement, amas*
Proto-South Sulawesi	*ʔboro	swollen
Bugis	boro'	swelling
Da'a	voru	lump

Commentary: No obvious wider Austronesian cognates.

Table 11. 'Park, enclosure' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Mayotte	vàla	*parc à boeufs, enclos*
Bugis	wala	enclosure
Toraja South	bala	fence, enclosure
Pattae	bala	fence, enclosure
Banggai	bala	fence, enclosure
but possibly; Tamil	வளை vaḷai	circle

Commentary: No obvious wider Austronesian cognates, although it has been suggested there is a connection with Tamil.

Table 12. 'Whirlwind' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	vàra	*tourbillon, trombe*
Bugis (Camba)	bara	storm
Makassar	bara	west wind
Pattae	bara	wind
Mamasa	baraʔ	wind, air

Commentary: Interestingly, the ACD reconstructs **bali* as Pan-Formosan for 'wind' and states that it was replaced in PMP by **haŋin*. However, these forms seem suspiciously close to not be connected to Formosan, and this probably indicates a direct voyage to Sulawesi as part of the initial Austronesian expansion. An excellent testimony to the Malagasy/Sulawesi connection.

Plants

The standard guide to the vegetation of Madagascar is Allorge (2008).

Table 13. 'Raffia palm' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Mayotte	rofia, rafia	*rafia*
PWMP	*Rumbia	sago palm
Bugis	rumpia	sago palm
Malay	rumbia	sago palm
Ngaju Dayak	hambiæ	sago palm

Commentary: This is a problematic term, as it is almost always applied to the sago palm, *Metroxylon*, in ISEA, but has shifted to the raffia palm in Malagasy. It is possible that some of the Sulawesi terms are borrowings from Malay. This word gave rise to the pen-name of the famous Dutch botanist, Rumphius (1627-1702), who was based in Sulawesi.

Table 14. 'Soaptree' in Malagasy

Language	Attestation	Gloss
Malagasy, Antemoro	malàŋi *in* hazo.malàŋi	*Casearia nigrescens*
Proto-South Sulawesi	*langi(ɣ)	*Albizzia saponaria*
Javanese	langir	shampoo

Commentary: This tree is known in Madagascar because it smells like fish. The corresponding tree in Sulawesi is a saponaceous species used for shampoo. In modern Javanese the word means 'shampoo' but presumably formerly applied to a soap tree. Mills (1977: 750) notes that some Philippines languages have *langig*, 'slime on fish or eels'. Not reconstructed in the ACD.

Table 15. 'Banana' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Mayotte	(h)òntsi	*banane*
Bugis	utti	banana
Makassar	unti	banana
PAN	*punti	banana

Commentary: The history of the banana on Madagascar is complex and Beaujard (2017 : 52 ff.) devotes a lengthy section to it. The dominant term today is *akondro*, undoubtedly of Bantu origin. However, an additional set, originally derived from PAN **punti* presumably reflect the triploid bananas brought by the original migrants. The Malagasy forms without initial p- agree with Sulawesi and not with other parts of Austronesian. Blust (ACD) says; 'The Malagasy, Buginese and Makasarese forms agree in indicating a variant **unti*, but until further evidence is forthcoming these will be taken as convergent irregularities'. Since there is so much other evidence linking Sulawesi and Malagasy, this is unlikely to be a coincidence.

Table 16. 'Vine, liana' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Mayotte	vàhi	*liane*
Mandar	uake	root
Toraja saʔdan	waka	liana, root
Duri	waka	liana, root
PMP	*wakaR	root

Commentary: In Borneo and other western languages this has usually lost the initial, thus Malay *akar*, Kenyah *aka*. The Malagasy is thus most like borrowed either from Luzon or Eastern Indonesian languages.

Table 17. 'Stalk, stem' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	tàho	*tige*
Pamona	tako	stalk
Iban	takoŋ	stalk, twig

Commentary: Attested in both Borneo and Sulawesi, but no obvious wider Austronesian cognates.

Table 18. 'Fruit-bat' in Malagasy

Language	Attestation
Malagasy, Tanala, Mayotte	fanìhy
PMP	*paniki
Proto-South Sulawesi	*pan(~ɲ)iki
Konjo	panʔiki

Commentary: This is the 'flying fox', widely eaten in parts of ISEA. This root is widespread in the Northern Philippines and parts of Eastern Indonesia but is unknown in Borneo and western Austronesian languages.

Table 19. 'Midge' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	sisì	*moucheron* [midge]
Bugis	sissiq	gnat
Proto-South Sulawesi	*si(q)sil	insect
Makassar	sissiliq	insect
Pattae	kasisi	mosquito

Commentary: This term is probably related to an Austronesian root **selsel* 'to insert, stick in', although this set of meanings appears to be confined to Sulawesi.

3.2.2 Verbs

Table 20. 'Carry on back' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	rèngitra	*action de porter sur le dos*
Proto-South Sulawesi	*(d)éŋe(C)	carry on back
Bugis	reŋeq	carry on back
Makassar	deŋeq	carry on back
Madurese	man/deŋŋeq	carry on back

Commentary: No obvious wider Austronesian cognates except Madurese.

Table 21. 'Chew, masticate' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Mayotte	hòta	*mâcher, mastiquer*
Proto-South Sulawesi	*kota	chew
Bugis	ota	chew
Ma'anyan [Borneo]	kota	eaten

Commentary: Blust (ACD) does not reconstruct this root and the numerous roots for 'chew' in PAN are quite different.

Table 22. 'Fish by hand' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	sàka	*pêche à la main dans des trous*
Mambi	ma.sakka bau	to fish
Tabulahan	maŋ.saka bau	to fish

Commentary: No obvious wider Austronesian cognates.

Table 23. 'Carry, sling round body' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	sarìry	*action de transporter*
Toraja Saʔdan	sariri	carry slung around body
Wewewa	lilli	*porter en bandoulière*
Ema	slili	*porter en bandoulière*

Commentary: No obvious wider Austronesian cognates.

3.2.3 Others

Table 24. 'Naked' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	bèdañi	*nu*
PWMP	*tilanzaŋ	naked
Proto-South Sulawesi	*belaŋ	naked
Bugis	belaŋ	naked

Commentary: Blust's PWMP (with only three witnesses) is clearly somehow related, but the Sulawesi forms show a direct relationship with Malagasy.

Table 25. 'Full' in Malagasy

Language	Attestation	Gloss
Malagasy	vòky	*plein*
Malagasy, Mayotte	vòky	*rassasié*
PMP	*bukél	seed, swelling, lump
Ilokano [Philippines]	bukél	seed, lump
Proto-South Sulawesi	buke	full

Commentary: The Malagasy is certainly cognate with Sulawesi, but only perhaps with the other PMP forms. The semantic shift is highly distinctive under any circumstances.

Table 26. 'Certainly' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala, Antemoro	màko	*ma foi, assurément*
Bugis Camba	mako	certainly

Commentary: Possibly a late borrowing. Not in the ACD.

3.3 Connections with Philippines languages

Malagasy also shows a limited number of items which connect with Philippines languages. Given the early Spanish and Portuguese connections across the Indian Ocean, late borrowing cannot be excluded.

Table 27. 'Cultivated field' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	sàha, sàka	*champ cultivé, vallée*
Malagasy, Mayotte	sàha	*lit d'un ruisseau*
Tagalog	saka	field

Commentary: No obvious wider Austronesian cognates.

Table 28. 'Physic nut' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	tañatàña	*pignon d'Inde, Jatropha curcas* L.
Tagalog, Cebuano	tangantangan	castor, *Ricinus communis*
Tausug	tangantangan	castor, *Ricinus communis*

Commentary: The physic nut is a New World species, apparently rapidly spread around the world by the Portuguese and Spanish. The nut is extremely bitter and used as a purgative, hence the semantic transfer from castor. Beaujard (2017: 274) that the earlier meaning of *tañatàña* in Madagascar was castor. The connection with Luzon would be surprising, but Tausug is spoken in the Sulu archipelago and so would have been connected with the trade routes linking Sulawesi, Borneo and Madagascar.

Table 29. 'Bean' in Malagasy

Language	Attestation	Gloss
Malagasy, Tanala	àntaka	*dolique*, *Dolichos lablab* L.
Palawan	äntak	bean
Molbog	antak	bean
Visayan	hamtak	*Vigna unguiculata* (L.) Walp.
Madurese	artak	*Vigna radiata* (L.) Wilczek

Commentary: Lablab, *Lablab purpureus*, is an indigenous African bean, exported to Asia (Beaujard 2017: 131 ff.). However, the name is Austronesian and refers to a wide variety of pulses in ISEA languages. Replaced in Mayotte.

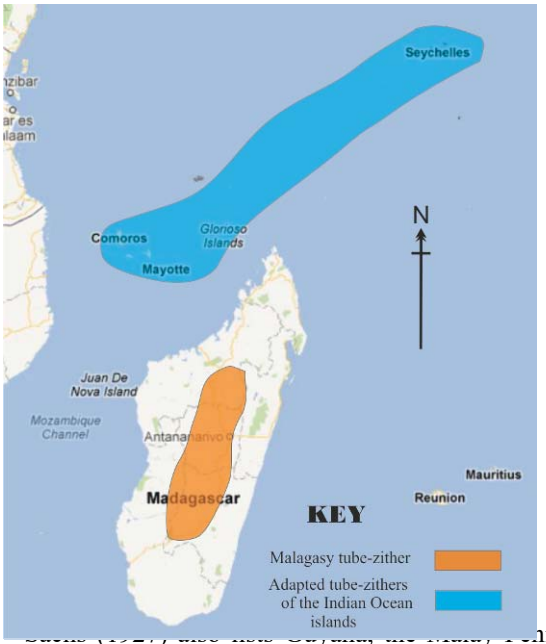
4. Non-linguistic evidence: the tube-zither

One of the most distinctive musical instruments in the Indian Ocean region is the *valiha*, an idiochord tube-zither (Domenichini 1984; Razafindrakoto-Montoya 1997, 2006; Blench 2014b). Such zithers are typically made from a single internode of a broad-diameter bamboo, and the strings are formed from the raised epidermis of the bamboo. Small bridges at either end keep the strings taut and also act to tune them. Modern instruments have wire strings and even tuning pegs to make for increased durability, but these are recent innovations. The general principle is known widely across SE Asia, although more commonly involving instruments made from a half-tube of bamboo laid horizontally on a surface and struck with light beaters, as in Borneo and Sumatra. The player holds the instrument upright, across the chest or horizontally outwards from the body, sometimes perched on a resonator, and played it with two thumbs (Photo 1).

Photo 1. Female *Valiha* player, 1920s

Source: CC

Map 1. Western distribution of the tube-zither



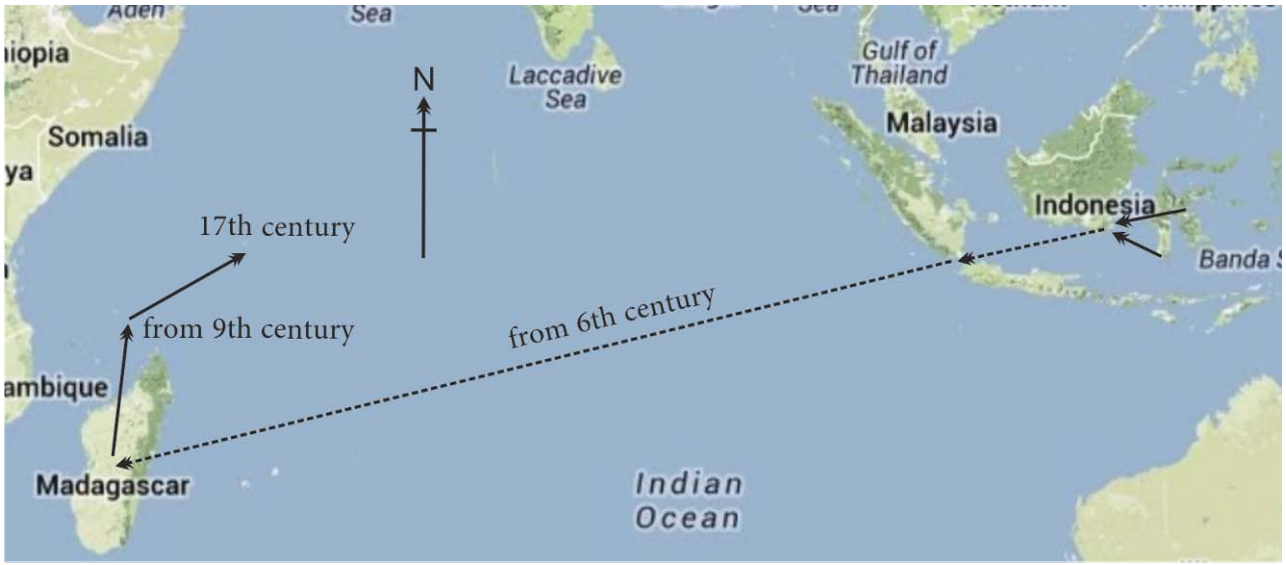
The *valiha* is the national instrument of Madagascar, although the tubular form is only found in the highlands area and is strongly associated with the Merina people. The seventeenth century traveller Peter Mundy (1919) first described the instrument, which he saw in Madagascar in 1638. Instruments with a similar pedigree are also found in parts of island SE Asia, including Sulawesi, Maluku and Timor, but not Borneo (Sachs 1928, 1938; Kaudern 1927). Map 2 and Map 1 show the distribution of the hand-held tube-zither at the eastern and western ends of the Indian Ocean. The red shading on the map of Madagascar shows the restricted highland distribution of the tube-zither, while the blue shading marks the extended forms found on Indian Ocean islands. This instrument is unique to these two regions and does not occur elsewhere in the world[6].

[6] Sachs (1927) also lists Guyana, the Malay Peninsula and the Balkans [!] but checking back to his references, the instruments are structurally quite different.

Map 3 shows a synthesis of information concerning the spread of the tube-zither. The type of instrument common to Sulawesi and Madagascar is not found in Borneo or the coastal areas of East Africa. It seems likely that it must have travelled with individuals direct from Sulawesi or other nearby islands after the establishment of the route to East Africa. The tube-zither was thus carried in the centuries following this, probably not after the eleventh century, when traffic with the east coast of Africa ceased (Blench 1994, 2010).

Map 2. Eastern distribution of the tube-zither

Map 3. Spread of the tube-zither from Sulawesi



5. Genetics

The genetics of the Malagasy have interested many researchers, and the earliest publications set out to test the SE Asian/Bantu mixed heritage hypothesis drawn from linguistics (e.g. Hurles et al. 2005). Inevitably, different samples and different techniques produced variable conclusions. Regueiro et al. (2008) claim to have detected an Austronesian signature in 'East Africa, Madagascar and Polynesia' (also Razafindrazaka et al. 2010). At one point we were asked to believe 'a small cohort of Island Southeast Asian women founded Madagascar' (Cox *et al.* 2012) despite all other types of evidence pointing in exactly the opposite direction. Kusuma *et al.* (2015) detect the signature of 'sea nomads' in Madagascar but at a conference presentation in Paris in 2015, Kusuma et al. compared both Y-chromosome (i.e. nuclear or paternal) DNA with maternal (mtDNA) for some 3000 individuals from Madagascar and Eastern Indonesia. The general result was that the

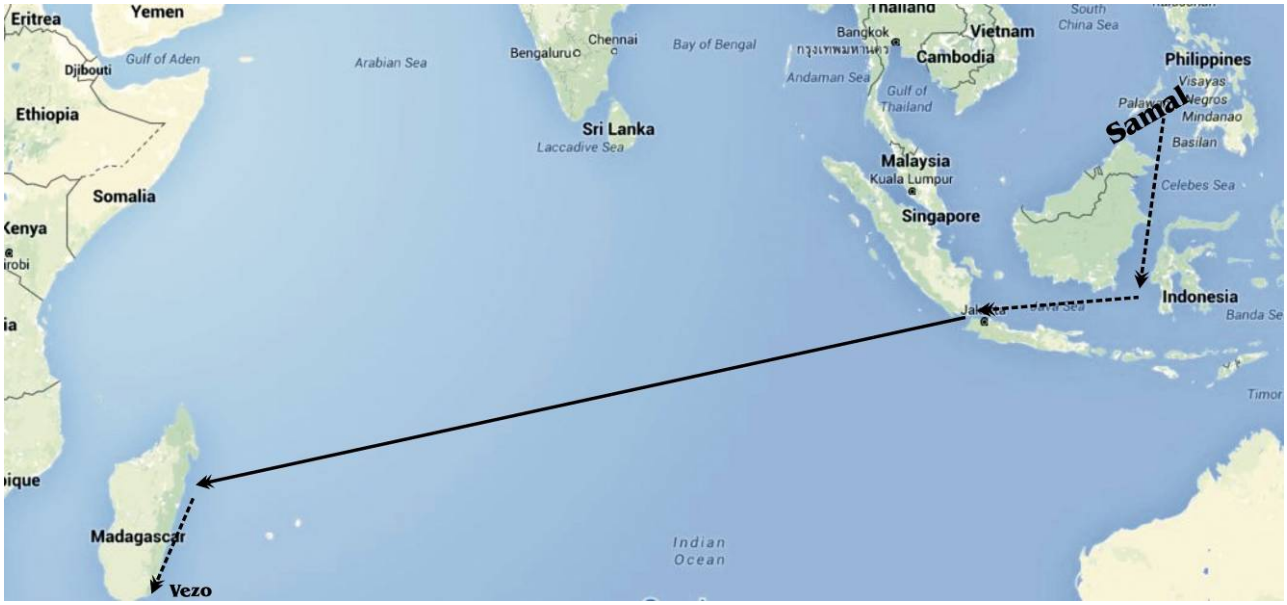
paternal line was far more affiliated to the Banjar (local Malay in SE Borneo) than the Barito, but the maternal lines were more affiliated to Southern Sulawesi, Maluku and other eastern islands. At first sight this is difficult to interpret; had some of the early Malays become Barito-speaking? Presumably the mobile populations were marrying (by consent or seizure) women from the Eastern Indonesian region. The Y-chromosome population apparently closer to Malagasy are located near the Wallace line in southern Sulawesi, Eastern Borneo, and Lesser Sunda islands.

Human geneticists announce their conclusions with a certainty which scholars in other disciplines would consider highly provisional. Neither the ceramics nor the linguistics point to a simple story; clearly a series of complex intermediate stages, involving both the Comores and the East African mainland will play a part in the narrative. There is no doubt that the marked differences between paternal and maternal DNA will need to be interpreted; and as autosomal studies appear they will also be integrated.

6. The Vezo hypothesis

Dahl (1988) argued for a link between the Vezo and the Bajaw or Sama Laut, the sea-nomads who voyage between islands from the southern Philippines to Timor. Their language is part of a group of languages known as Samalic, which is not part of the Philippines group of Austronesian, but most closely related to SE Borneo languages (Blust 2005). The Bajaw are nomadic fishermen, living on their boats and trading sea produce for staples and manufactured trade goods. The Vezo are more land-based but also spend many months a year at sea, living on sandbanks fishing (Koechlin 1975; Sanders 2005). There is little or no direct linguistic evidence in basic vocabulary for a connection between Vezo and Bajaw. However, it is very striking that Vezo marine fish names are very different from other Malagasy names, although they resemble those of their neighbours, the Antanosy (Bauchot & Bianchi 1984). Given that Vezo is generally close linguistically to Merina, this is quite surprising and may point to a distinct origin for their fishing culture. It certainly would not be unreasonable to imagine Bajaw, following the route pioneered by the Malay ships, reaching Madagascar independently. Simon (2006: 474) argues that the etymology Vezo < Bajaw is phonetically plausible. However, this hypothesis needs more positive linguistic evidence before it can be accepted uncritically[7]. Map 4 shows a possible route for a Bajaw migration to Madagascar.

Map 4. The Vezo hypothesis



[7] Beaujard (2017: 374) has a note that Malagasy *fintsa*, *banana sechée*, might be of Samalic origin but provides no evidence.

7. Conclusion

The weight of evidence still points to the most significant component of Malagasy coming from Barito and related languages, with a smaller though still significant element from Sulawesi and possibly the Philippines. The most probable model is that with the rise of Srivijaya in the sixth century, Banjarese trading ships were picking up crew, willing or unwilling, in the region between SE Borneo and Sulawesi. So the 'mixed crew' hypothesis is most likely; individual ships may have been weighted more in favour of one or other ethnicity. Nonetheless, the distribution of a musical instrument such as the *valiha* among the highland Merina, points to some sort of direct Sulawesi connection, so subsequent independent voyages by both 'pre-Bugis' and Samalic peoples are also likely. Ceramics suggest an important role for the Comores as a staging post, but the replacement of its language by Swahili-related lects means the linguistic evidence has been overwritten. The genetics are hard to interpret, but it is striking that Malay is not the dominant language in Malagasy as might be expected from these results. Probably the most obvious lacuna in the data is archaeology; we simply need more sites and dates from both ISEA, the Comores and Madagascar.

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