Language Histories in Island Melanesia



Michael Dunn, Eva Lindström, Ger Reesink Pioneers of Island Melanesia project

ESF-CNRS Workshop on languages and genes: recent work and emergent results
Aussois 22-25 September 2005



This talk

- Eva Lindström (Stockholm Uni)
 Background
- Michael Dunn (MPI, Nijmegen)
 Investigating language relations with statistical methods
- Ger Reesink (Radboud Uni, Leiden Uni)
 And the genetics?

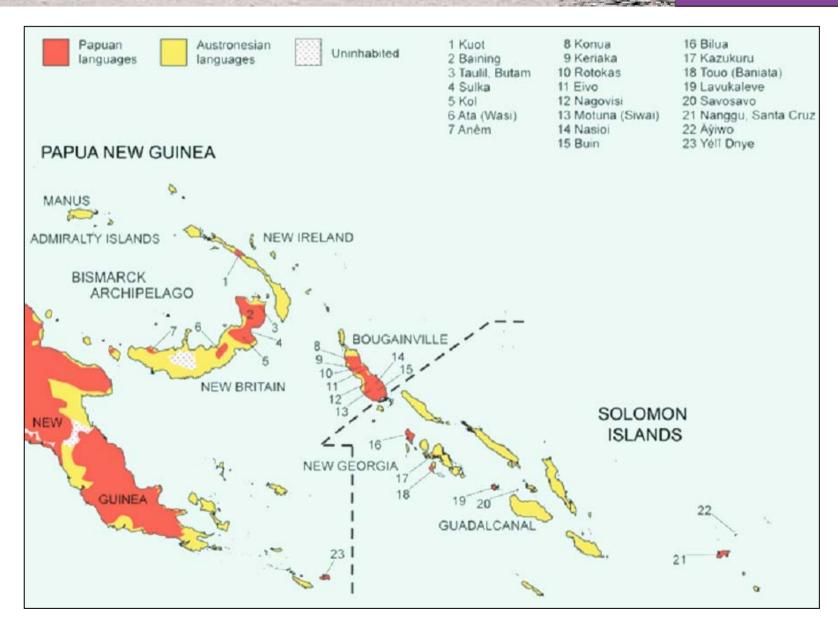


Pioneers of Island Melanesia



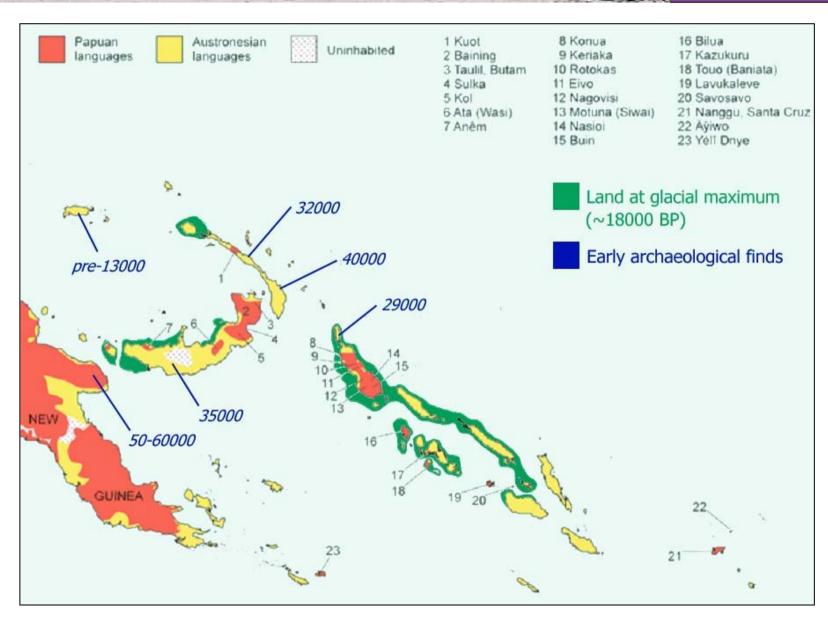


Pioneers of Island Melanesia



1-11

Pioneers of Island Melanesia





So, minimally two strata

- ancient (>40.000 years) = "Papuan"
- more recent (3,500 years) = Austronesian

... but probably multiple arrivals in ancient times







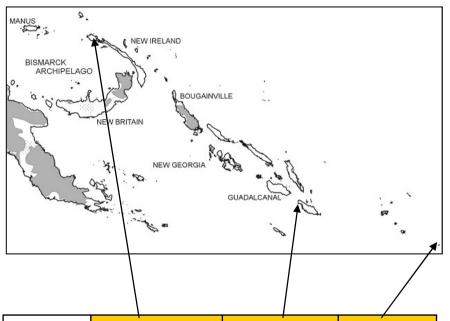




Austronesian, Papuan, and the Comparative Method (CM)

- the CM is a time-honoured method for establishing linguistic relatedness
- it proceeds by establishing cognate forms between two languages presumed to be related
- differences have to be systematic: sound correspondences
- branches and sub-branches in the family tree are based on shared innovations

Reconstruction (I)



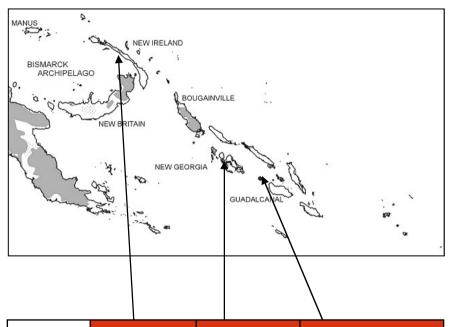
AN: allows for reconstruction because there are enough related forms retaining the same (or closely related) meanings

	Lavongai	Arosi	Anuta		
'eye'	mata, mete	mā	mata	 →	*mata
'die'	mat	mae	mate		*mat(e)
'ear'	talinga	kariŋa-	tariŋa	│ >	*taRiŋa

POc
*maCa
*m-aCay
*Caliŋa



Reconstruction (II)



Papuan: too little shared
vocabulary
fow cimilar forms

- → few similar forms meaning the same thing
- → no sound correspondences
- → no reconstruction of ancestral forms
- → no family trees

	Kuot	Touo	Lavukaleve		
'eye'	irəma	bero	lemi	>	*??
'die'	-parə	yuza	kiu	$\bigg] \longrightarrow$	*??
'ear'	kikinəm	ogoto	ho'vul	$\bigg] {\longrightarrow}$	*??



So, CM for Austronesian ...

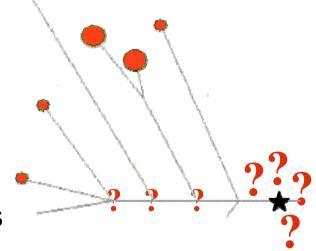
- the Austronesian languages form a family; the result of relatively recent dispersal
- CM is the one universally accepted method for determining linguistic relatedness
- because of the CM, we know that five and panc are cognate, while day and dia are not



... but no CM for Papuan

no telling beyond ~8000 years

 attrition: sound changes and gradual vocabulary replacement obscure any original correspondences



 accretion: lexical loans and contact-induced structural changes give similarities between unrelated languages

but some lower-level families can be seen, e.g. south Bougainville



So, how to investigate Papuan?

There *are* indications of ancient relations among Papuan languages in Island Melanesia.

A number of structural features, absent from Austronesian languages, are suspiciously frequent in IM Papuan, e.g.

- grammatical gender
- verb-final word order
- no distinction between /r/ and /l/

So the *structure of systems* can be investigated, even if the actual forms cannot.

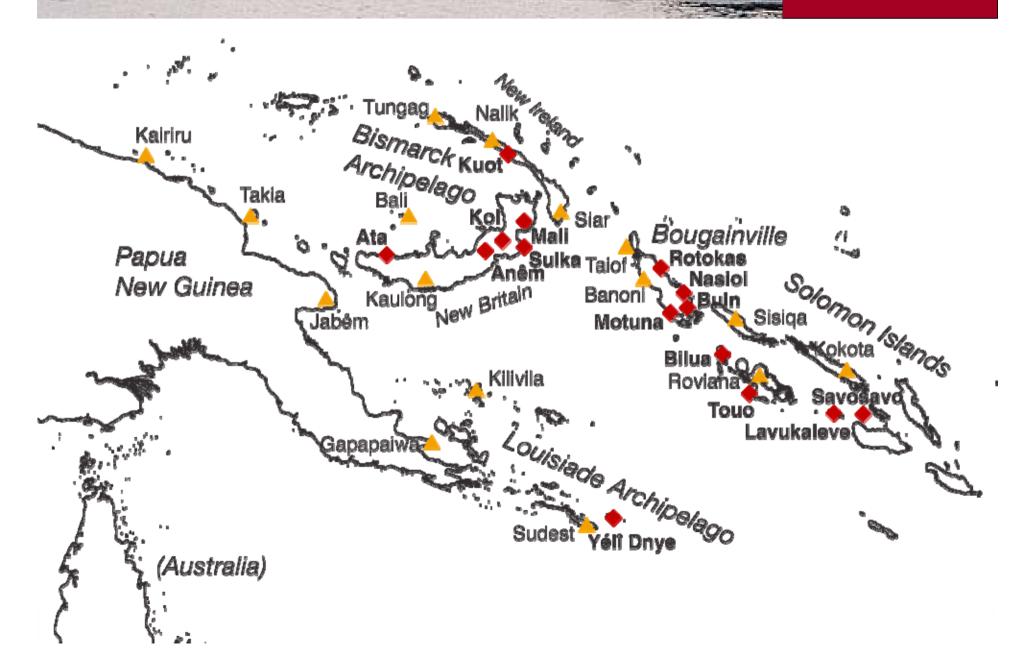
END:

CHARSTATELABELS 1 Frics, 2 PrenasalizedStops, 3 PhonDistBetweenLAndR, 4 PhonVelarFricOrGlide, 5 PhonVoicingContrAmongStops, 6 PhonConsLength, 7 PhonVowellength, 8 ContrPhonTypesForVowels, 9 PhonStress, 10 WordFinalConss, 11 ConsClusters, 12 DefOrSpecArt, 13 IndefOrNonSpecArt, 14 ArticleNounOrder, 15 16 InclExclDist. 17 PronNum, 18 12PronRelationship, 19 resDistDem, 21 NonSpkrAnchoredDem, 22 ledDer, 1 NumDeterminedDecl, 25 GenderDeterminedDecl, 26 28 DualMarkedNoun, 29 PlMarkedNoun, 30 ited istNu Marking, 32 NounClassesGenders, 33 ConcordBeyondNp, 34 NumeralClassifiers, 35 PossClassifiers, 36 PossClasses, 37 Inalienability, 38 MultiplePossConstr, 39 PrefixMarkedPoss, 40 SuffixMarkedPoss, 41 MarkedPossr, 42 MarkedPossessee, 43 PossrPossdOrder, 44 DecimalNumerals, 45 QuinaryNumerals, 46 CollectiveNouns, 47 AdjVerbLexOverlap, 48 AdjAttributionPred, 49 CoreCaseMarking, 50 ObliqueCaseMarking, 51 Prepositions, 52 Postpositions, 53 TamPerson, 54 VerbPrefixesProclitics, 55 VerbSuffixesEnclitics, 56 PunctualContinuous, 57 RealisIrrealis, 58 SSuffix, 59 SPrefix, 60 ASuffix, 61 APrefix, 62 OSuffix, 63 OPrefix, 64 VerbVarTam, 65 VerbVarVClass, 66 VerbVarClauseType, 67 VerbVarPerson, 68 NumStemAlt, 69 PersonStemAlt, 70 SepVerbNumPerson, 71 Portmanteau3Plus, 72 DistributedCategory, 73 NonCore, 74 RecipientObj, 75 3PlacePreds, 76 VerbNeg, 77 VerbDirection, 78 VerbSuppletion, 79 ConjugationClasses, 80 TransIntransAlt, 81 TransitivizingMorph, 82 IntranstivizingMorph, 83 ReflexiveMorph, 84 ReciprocalMorph, 85 VerbClassifiers, 86 Copula, 87 NonVbPreds, 88 SerialVerbConstr, 89 Auxiliaries, 90 VerbCompounds, 91 VerbAdjunctConstr, 92 VbIncorporation, 93 ExistentialVerb, 94 IrregularGive, 95 ClosedClassOfVb, 96 SvIntransClauses, 97 VsIntransClauses, 98 VInitTransClauses, 99 VMedialTransClauses, 100 VFinalTransClauses, 101 FixedConstituentOrder, 102 ClauseFinalNeg, 103 ClauseInitNeg, 104 ImpVs.DeclNeg, 105 VbAndNonVbPredIdentity, 106 SOMorphInBasicConstr, 107 SAMorphInBasicConstr, 108 SOMorphInComplexConstr, 109 SAMorphInComplexConstr, 110 SynConflationOfSO, 111 ControlledUncontrolled, 112 ClauseChaining, 113 SimultaneousSequential, 114 SayInDesidConstr, 115 RelativeClauses, 116 PurpSubClauses, 117 TemporalSubClauses, 118 ComplementClauses, 119 CausBySerialVerbConstr, 120 CausByBoundAffClit, 121 CausByConstrInvolvingSay, 122 MorphTopicOrFocus, 123 TailHeadLinkage, 124 VerbRedup, 125 NounRedup;

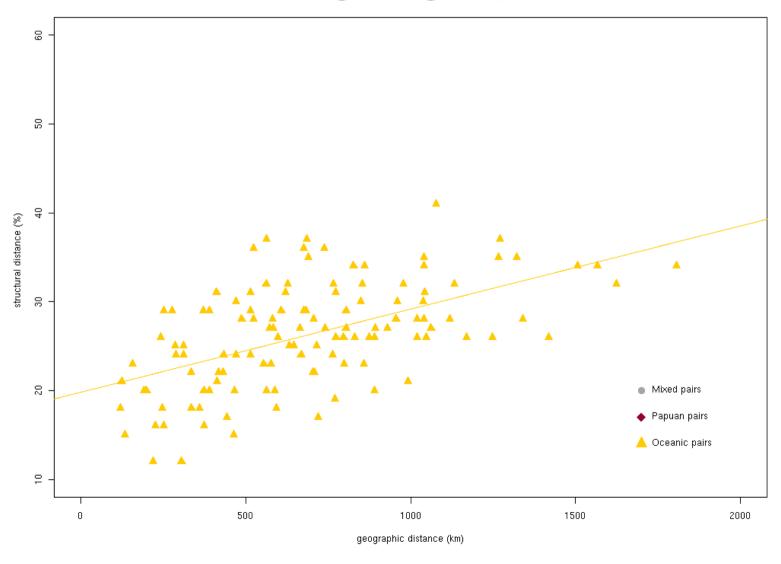
Motuna Kol Rotokas 210 Kuot Touc Nasioi Yeli Dnye Buin Anem Sulka Mali Savosavo Lavukaleve Bilua Banoni Bali Yabem Kilivila Siar Kairiru Roviana Taiof Gapapaiwa Takia 1010100001100011100100000700000000111101010100177117101111101010000110000010107771100117171170100017010101010101017711171 Nalik Kokota Kaulong Sisiga Tungag Sudest

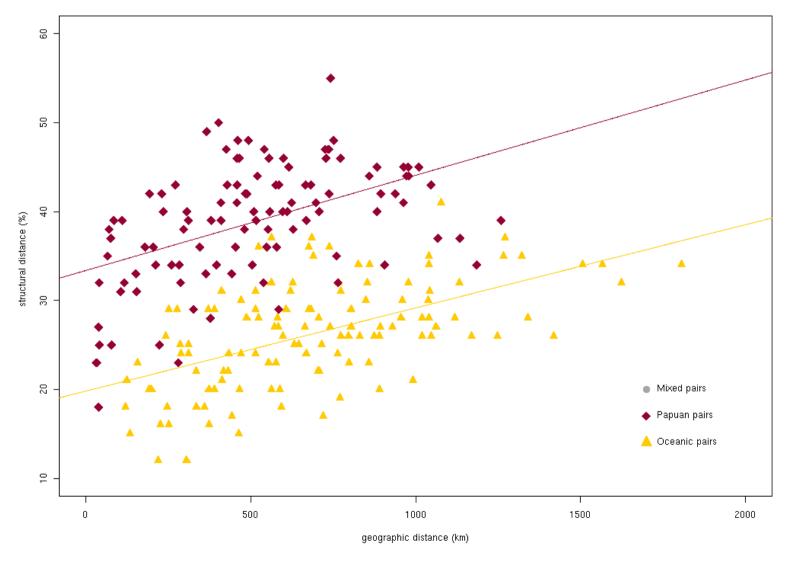
- 125 binary characters
- 16 Oceanic, 15
 Papuan
- Fit known variation of the region
- Broad coverage of grammatical topics (sketch grammars)
- Eliminate logical dependencies
- Did not eliminate typological universal tendencies



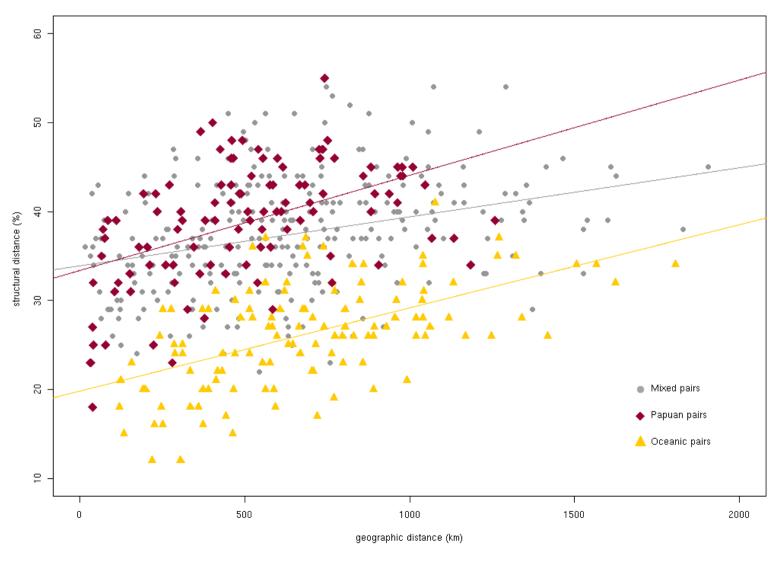


Structural and geographic distance

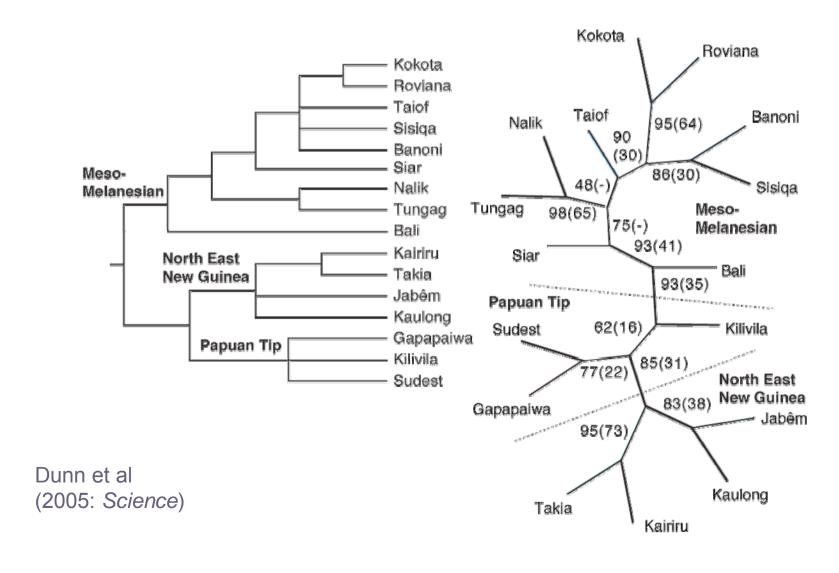




Structural and geographic distance

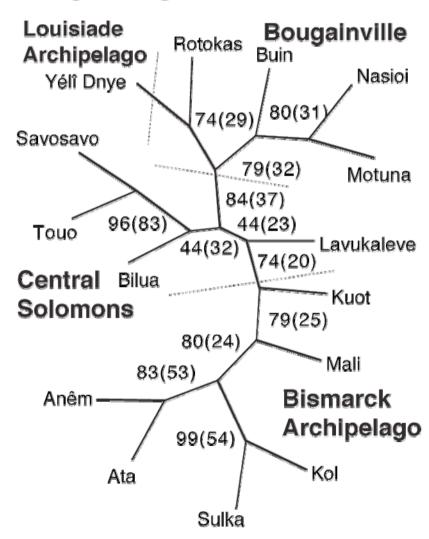


Austronesian languages





Papuan languages

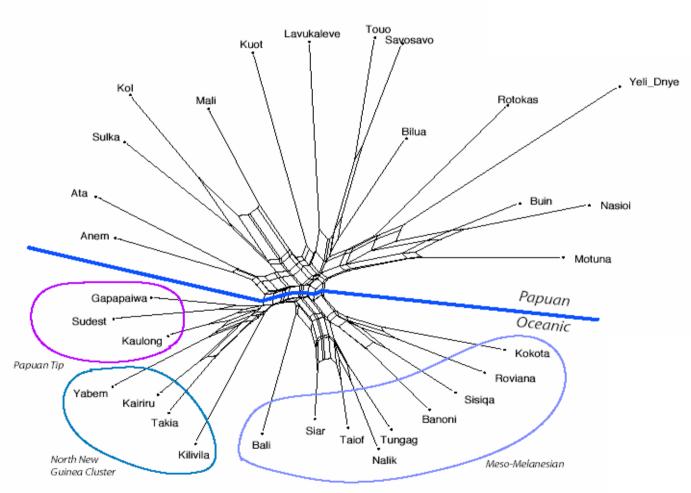


Dunn et al (2005: *Science*)



Papuan-AN contact: conflicting signal



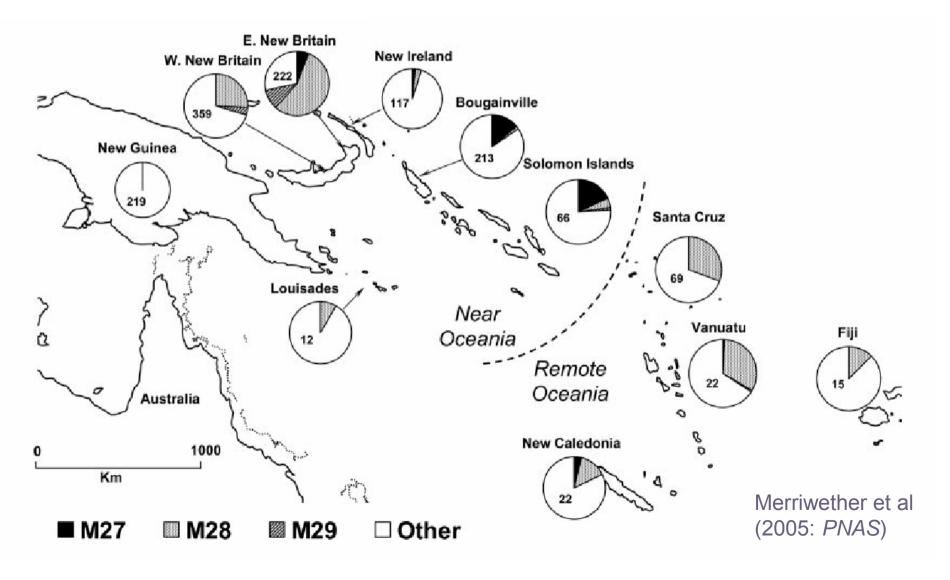


In this version, the following slides have been removed from the genetics section for copyright reasons – other slides have been substituted:

- Friedlaender et al., in press. A. Pawley& M. Ross (eds)
 Papuan Pasts: mtDNA haplogroups in near Oceania (B P Q E N M7 F M27 M28 M29)
- Friedlaender et al., in press. A. Pawley& M. Ross (eds): Papuan Pasts: mtDNA haplogroups in the Bismarcks and Bougainville (B P Q1 Q2 E M27 M28 M29)



mtDNA: M in the SW Pacific





mtDNA: B, P & Q in the SW Pacific

Friedlaender et al (2005: Mol. Biol. Evol.) Kiribati New Ireland Bougainville New Guinea New Britain Solomon Islands Santa Cruz Wallis Vanuatu Coral Sea Australia New Caledonia 1000 Km Other`

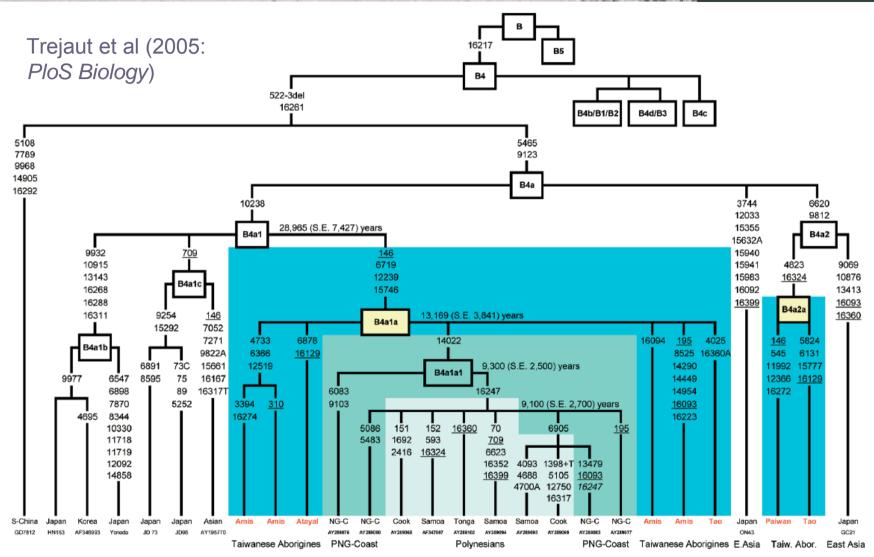


Figure 4. Phylogenetic Tree Relating Haplogroup B4a1 Complete Sequences

Base pair exchange is specified only for transversions. Recurrent mutations are underlined. Coalescence times are shown beside nodes.

DOI: 10.1371/journal.pbio.0030247.g004

mtDNA: B, P & Q in the Bismarcks

and Bougainville Friedlaender et al. (2005: Mol. Biol. Evol.) Kabil (Kuot) New Ireland Matupit (Tolai) Kabakada (Tolai) Tolai 5 Vunairoto (Tolai) Malasait (Baining) Lugei (Ata) Uasilau (Ata) Marambu (Baining) New Britain Watwat (Sulka) Ganai (Sulka) Bougainville 100 Km Other

Y Chromosome haplogroups in NG

Kayser et al (2003: Am. J. Hum. Genet.) Dan Lan Yal Una Ket West New Guinea Papua New Guinea NCo TNB Asm Map O Tro Koi Muv SHI EHI SCo

Figure 3 Y-chromosome haplogroups and their frequency distribution in regional populations from New Guinea. Population abbreviations are as follows: Dan = Dani, Lan = Lani, Yal = Yali, Una = Una, Ket = Ketengban, Awy = Awyu, Koi = Kombai/Korowai, Muy = Muyu, Map = Mappi, Asm = Asmat, Cit = Citak, SHI = PNG southern highlands, EHI = PNG eastern highlands, NCo = PNG northern coast, and SCo = PNG southern coast. Color code is as in figures 1 and 2.





mtDNA haplogroup relations

