

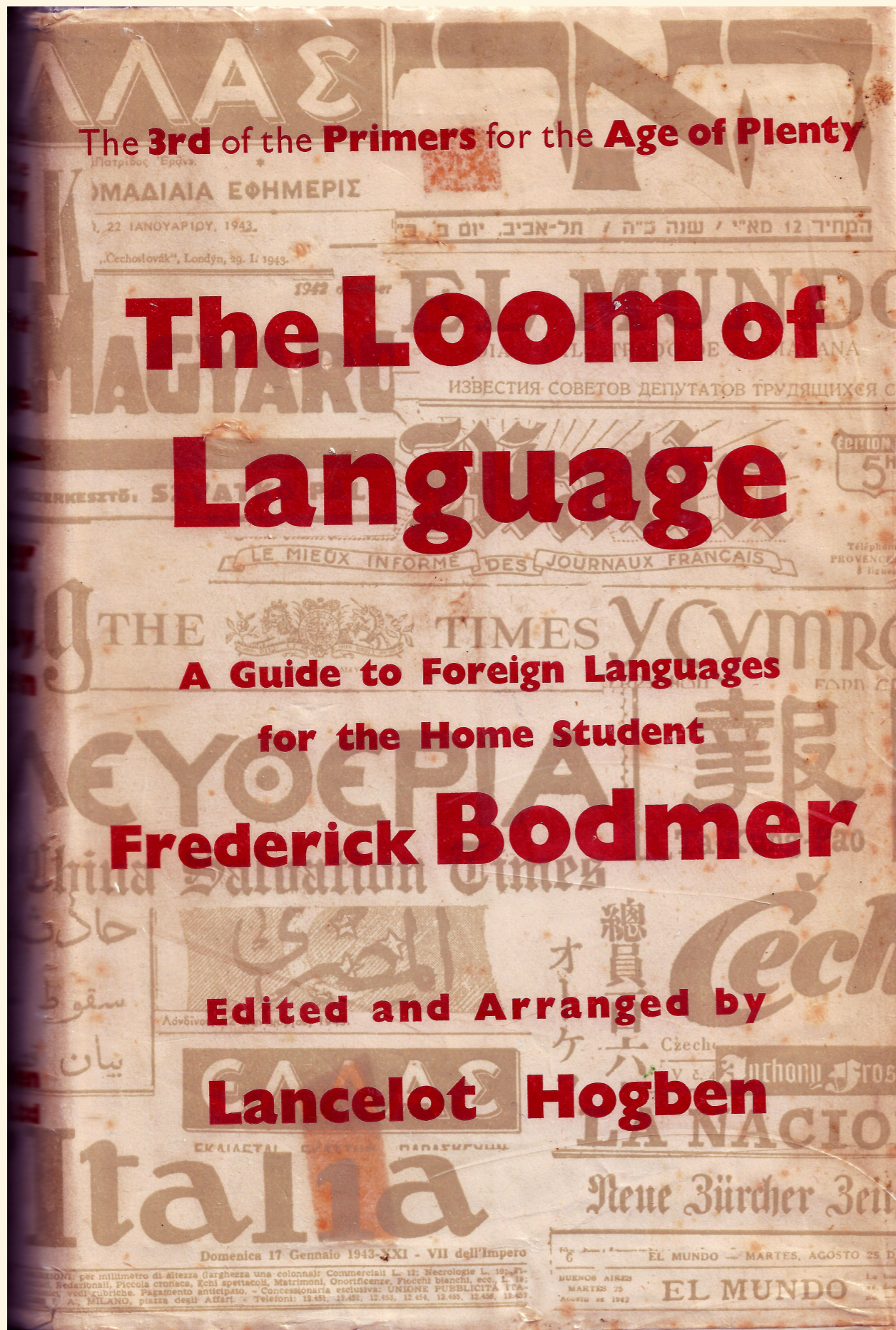
Historical linguistics and the ancient history of Papua New Guinea

Malcolm Ross

The Australian National University

Malcolm.Ross@anu.edu.au





Frederick Bodmer's *The loom of language*, published in 1944

(Bodmer was Chomsky's predecessor at MIT.)

PACIFIC LINGUISTICS
Series C - No. 98

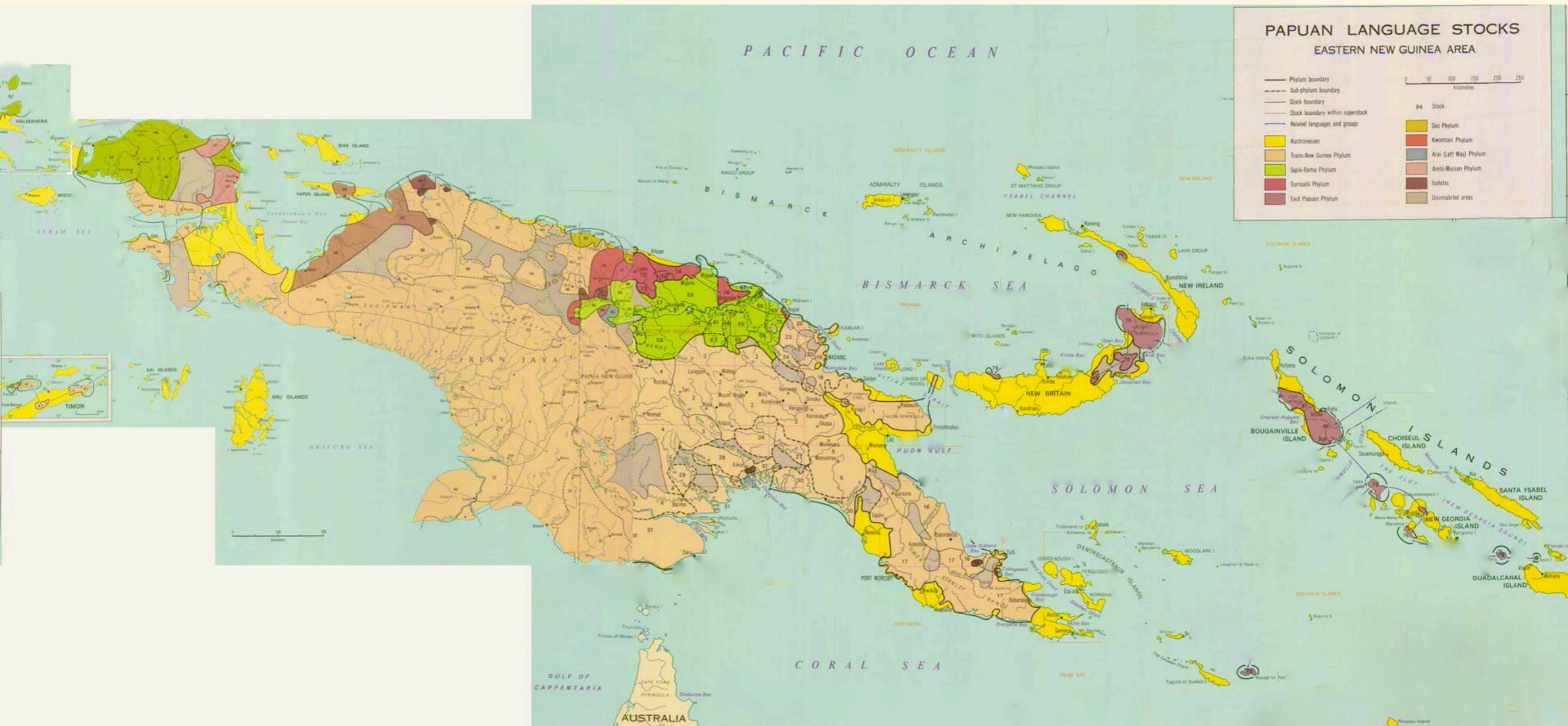
PROTO OCEANIC AND THE AUSTRONESIAN
LANGUAGES OF WESTERN MELANESIA

M.D. Ross



<https://openresearch-repository.anu.edu.au/handle/1885/145428>

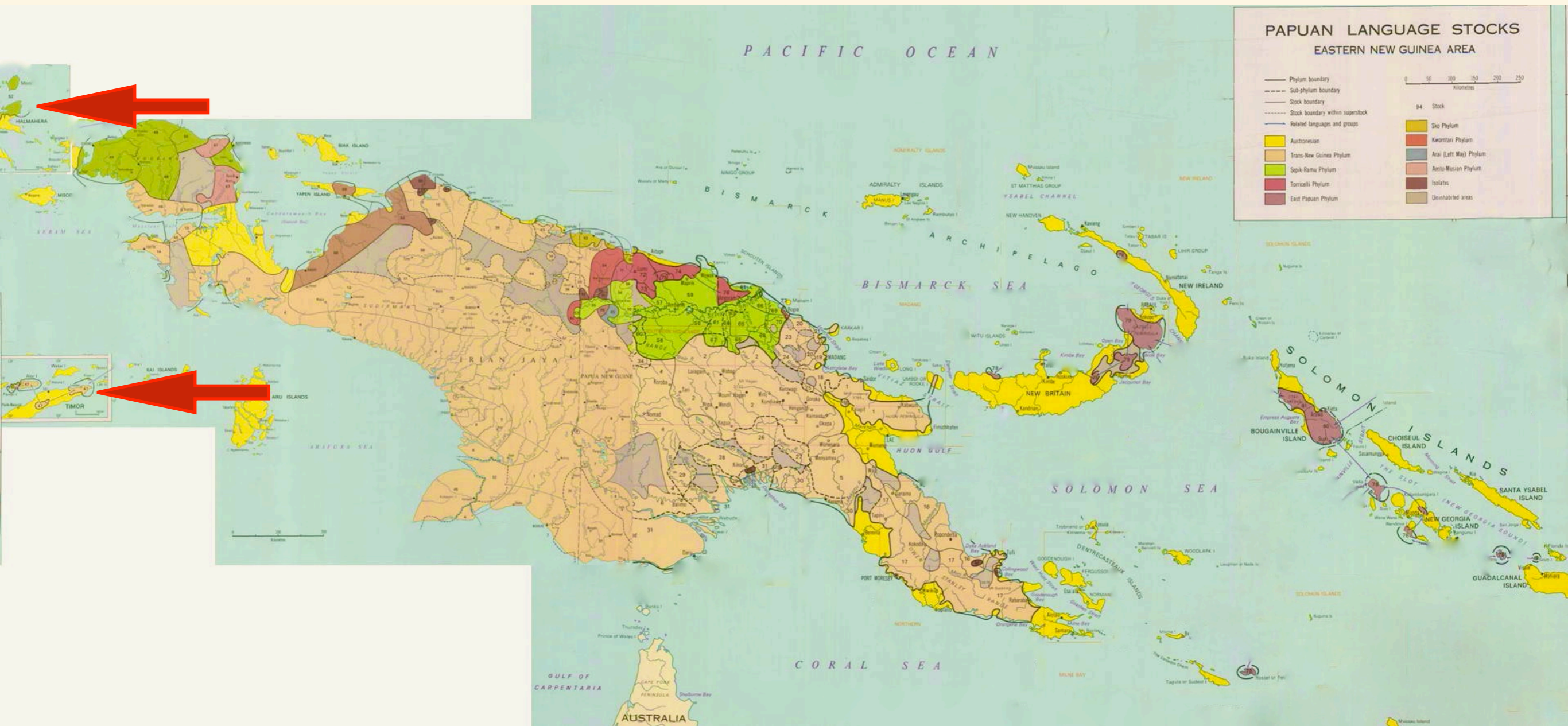
Austronesian and Papuan languages



Austronesian languages in yellow.

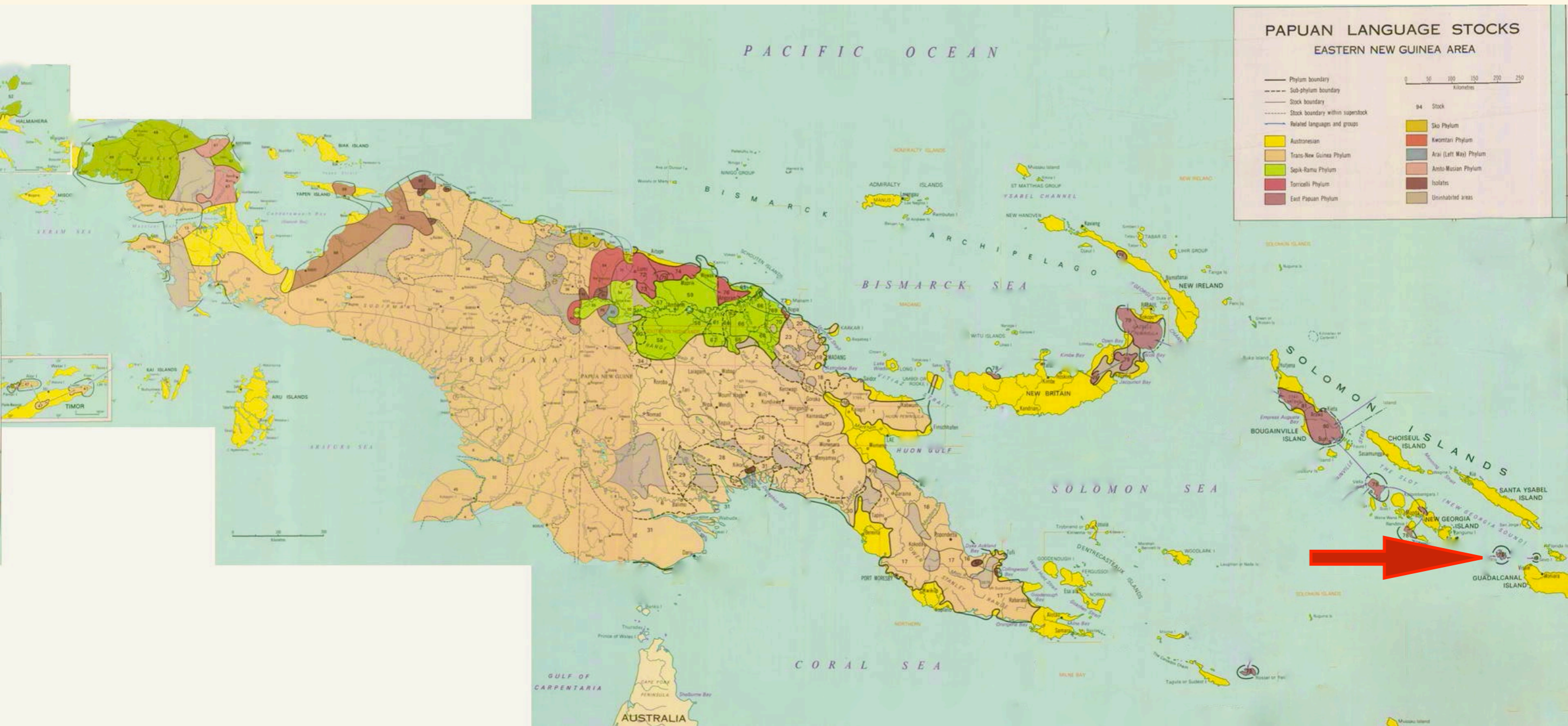
Everything else is Papuan (= non-Austronesian).

Austronesian and Papuan languages



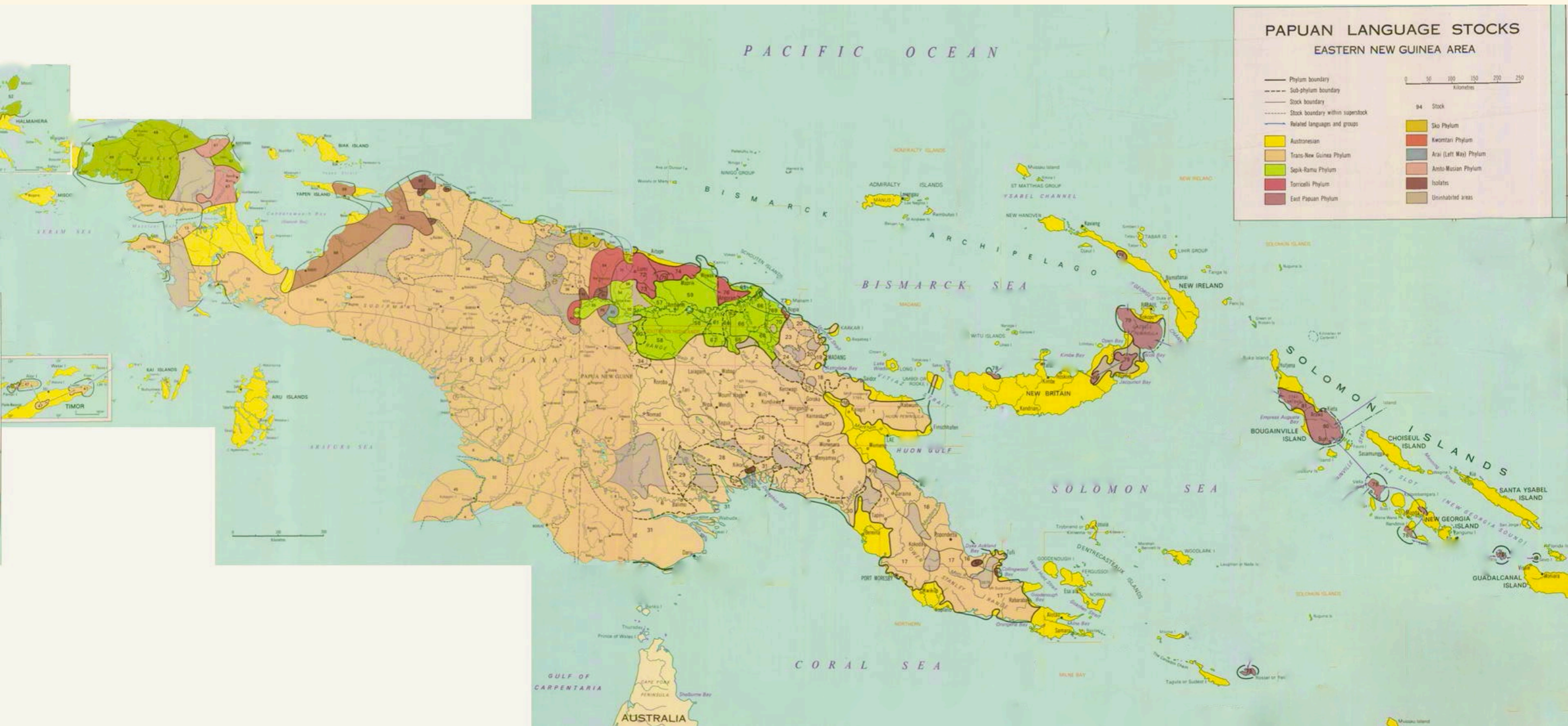
Papuan languages stretch from Timor and Halmahera in the west to some tiny islands in the Solomons in the east.

Austronesian and Papuan languages



Papuan languages stretch from Timor and Halmahera in the west to some tiny islands in the Solomons in the east.

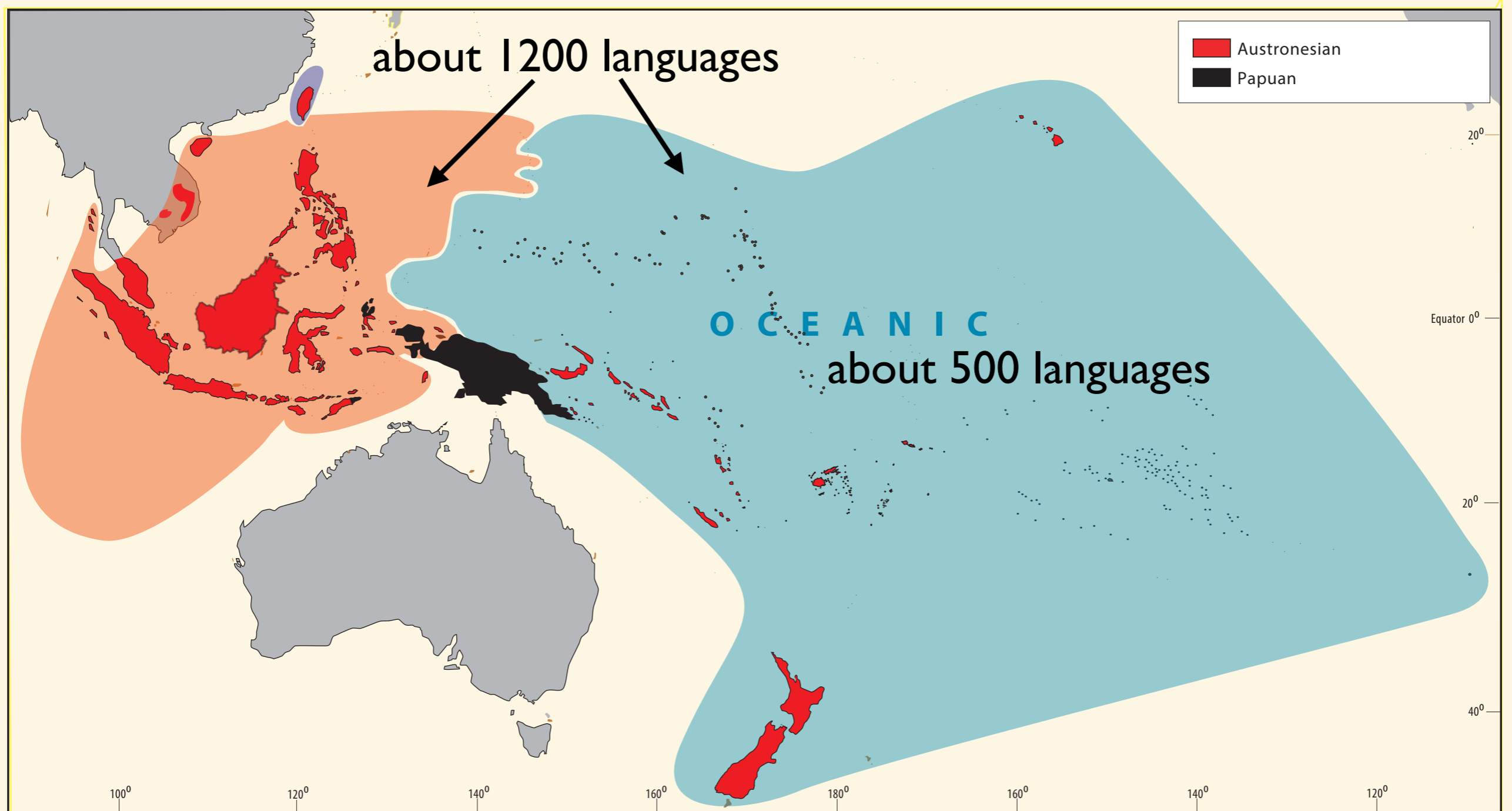
Austronesian and Papuan languages



Austronesian languages in yellow.

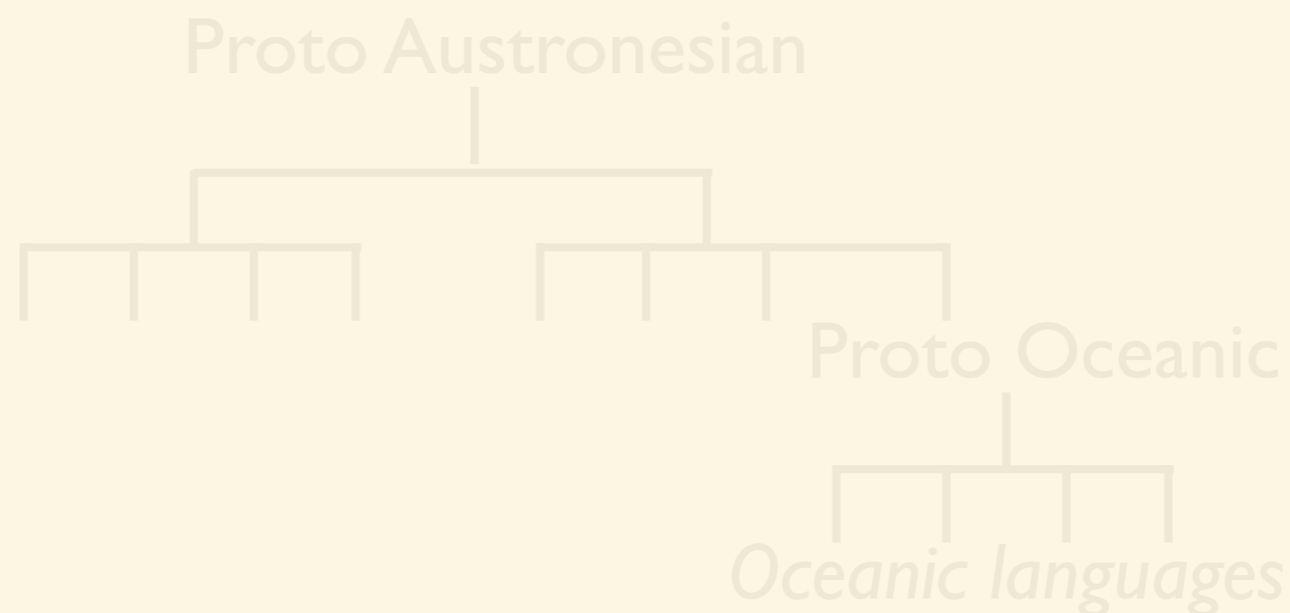
Everything else is Papuan (= non-Austronesian).

- Austronesian languages: perhaps 1200
- Of these, more than **500** (~40%) are Oceanic



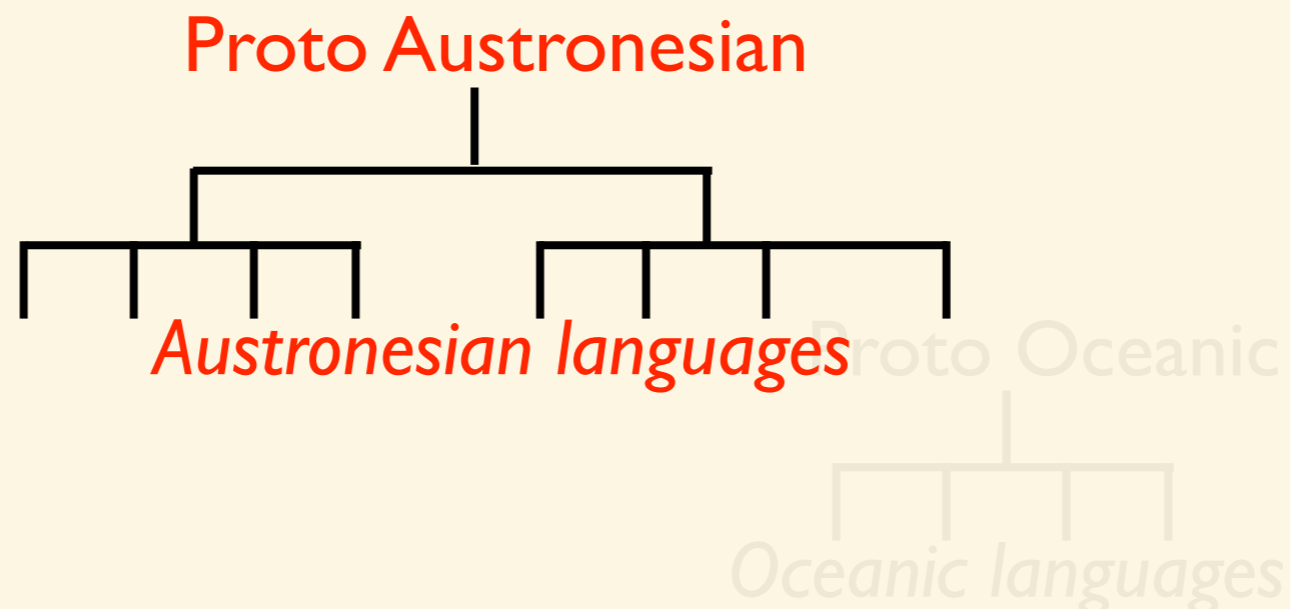
The Austronesian language family

- Austronesian languages form a **family**:
 - all its languages descended are from a single ancestor language—we call it “Proto Austronesian”
- Oceanic languages form a subgroup of Austronesian
 - all its languages are descended from one Austronesian language—we call that language “Proto Oceanic”



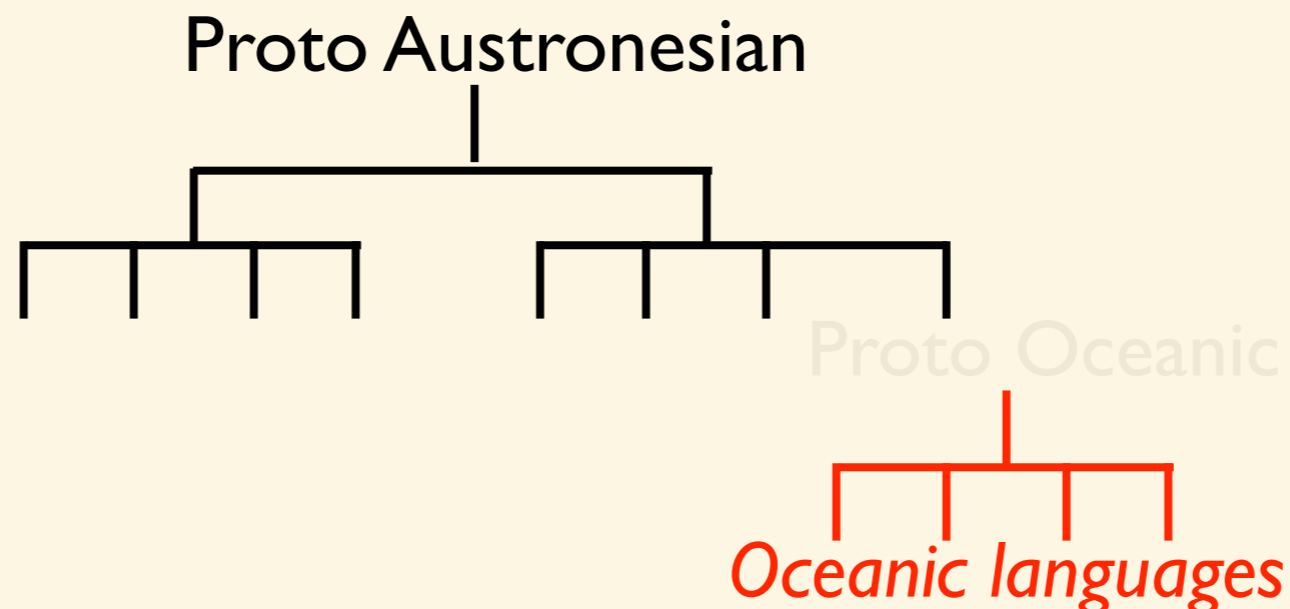
The Austronesian language family

- Austronesian languages form a family:
 - all its languages are descended from a single ancestor language—we call it “**Proto Austronesian**”
- Oceanic languages form a subgroup of Austronesian
 - all its languages are descended from one Austronesian language—we call that language “Proto Oceanic”



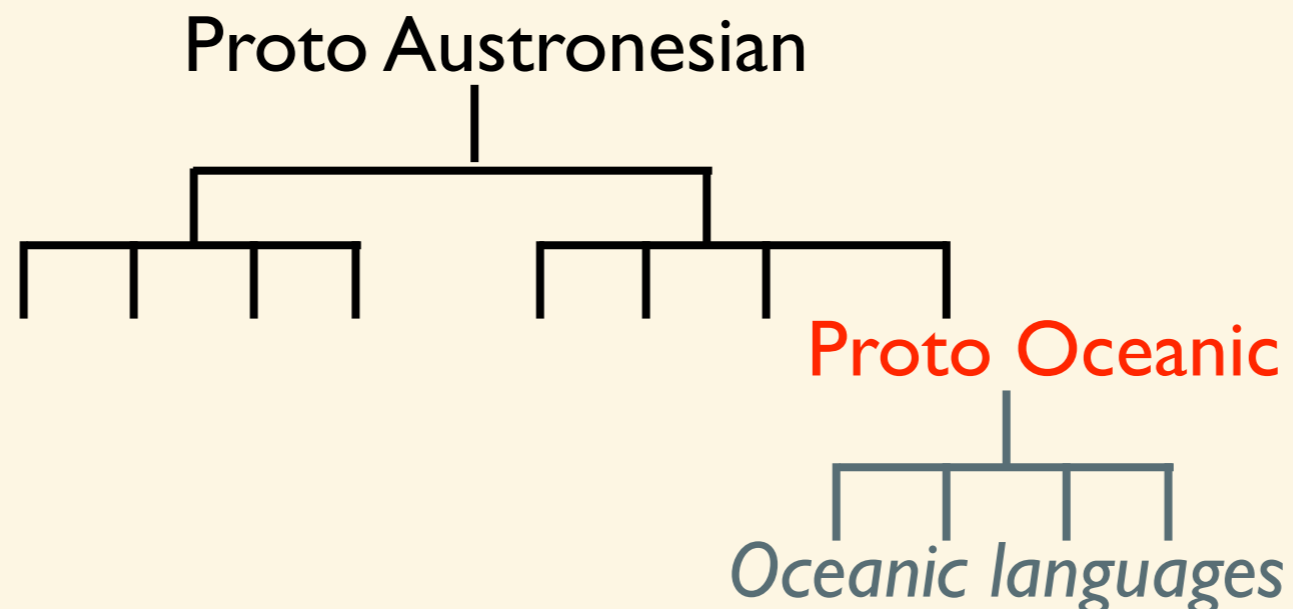
The Austronesian language family

- Austronesian languages form a family:
 - all its languages are descended from a single ancestor language—we call it “Proto Austronesian”
- Oceanic languages form a **subgroup** of Austronesian
 - all its languages are descended from one Austronesian language—we call that language “Proto Oceanic”



The Austronesian language family

- Austronesian languages form a family:
 - all its languages are descended from a single ancestor language—we call it “Proto Austronesian”
- Oceanic languages form a subgroup of Austronesian
 - all its languages are descended from one Austronesian language—we call that language “Proto Oceanic”

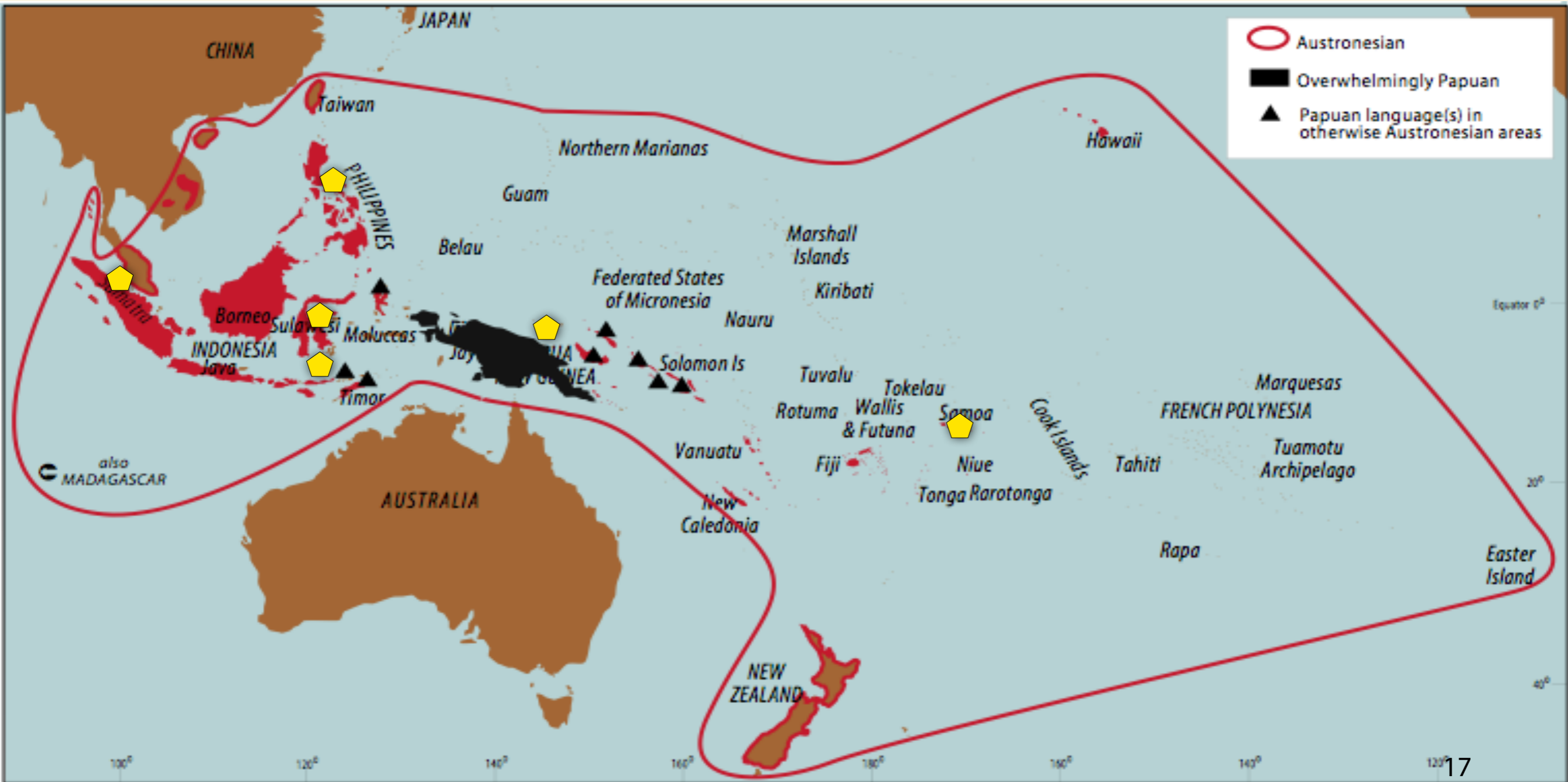


	ear	eye	head louse	three	freshwater eel	seven
Proto Austronesian	*Calɨŋa	*maCa	*kuCuh	*teluh	*tuLa	*pitu
Atayal	tʃanɨaʔ	—	kutʃuʔ	tu-ɣaʔ	tuɣa-qiy	ma-pituʔ
Tsou	—	mtsō	ktsū	turu	tuŋ-roza	pitu
Rukai	tsaɭɨŋa	matsa	kotso	toɭo	tola	pito
Paiwan	tsaɭɨŋa	matsa	qətsiɭu	tyəɭu	tyulya	pityu
Tagalog	tēŋa	mata	kūto	ta-tlo	—	pito
Toba Batak	—	mata	hutu	tolu	—	pitu
Uma	tilɨŋa	mata	kutu	tolo	—	pitu
Manggarai	—	mata	hutu	təlu	tuna	pitu
Kairiru	tilɨŋe	mata	qut	tuol	tun	—
Samoaan	taliŋa	mata	ʔutu	tolu	tuna	fitu

	ear	eye	head louse	three	freshwater eel	seven
Proto Austronesian	*Calija	*maCa	*kuCuh	*teluh	*tuLa	*pitu
Atayal	tʃanjaʔ	—	kutʃuʔ	tu-ɣaʔ	tuɣa-qiy	ma-pituʔ
Tsou	—	mtsō	ktsū	turu	tuŋ-roza	pitu
Rukai	tsa ija	matsa	kotso	to o	tola	pito
Paiwan	tsa ija	matsa	qətsi u	tyə u	tyulya	pityu
Tagalog	tēja	mata	kūto	ta-tlo	—	pito
Toba Batak	—	mata	hutu	tolu	—	pitu
Uma	tilija	mata	kutu	tolo	—	pitu
Manggarai	—	mata	hutu	təlu	tuna	pitu
Kairiru	tilije	mata	qut	tuol	tun	—
Samoaan	taliya	mata	ʔutu	tolu	tuna	fitu

	ear	eye	head louse	three	freshwater eel	seven
Proto Austronesian	*Calɨŋa	*maCa	*kuCuh	*teluh	*tuLa	*pitu
Atayal	tʃaŋia?	—	kutʃu?	tu-ɣaʔ	tuɣa-qiy	ma-pitu?
Tsou	—	mtsō	ktsū	turu	tuŋ-roza	pitu
Rukai	tsaɭɨŋa	matsa	kotso	toɭo	tola	pito
Paiwan	tsaɭɨŋa	matsa	qətsiɭu	tyəɭu	tyulya	pityu
Tagalog	tēŋa	mata	kūto	ta-tlo	—	pito
Toba Batak	—	mata	hutu	tolu	—	pitu
Uma	tiliŋa	mata	kutu	tolo	—	pitu
Manggarai	—	mata	hutu	təlu	tuna	pitu
Kairiru	tiliŋe	mata	qut	tuol	tun	—
Samoan	taliŋa	mata	ʔutu	tolu	tuna	fitu

	ear	eye	head louse	three	freshwater eel	seven
Proto Austronesian	*Calɨŋa	*maCa	*kuCuh	*teluh	*tuLa	*pitu
Atayal	tʃanɨaʔ	—	kutʃuʔ	tu-ɣaʔ	tuɣa-qiy	ma-pituʔ
Tsou	—	mtsō	ktsū	turu	tuŋ-roza	pitu
Rukai	tsaɭɨŋa	matsa	kotso	toɭo	tola	pito
Paiwan	tsaɭɨŋa	matsa	qətsiɭu	tyəɭu	tyulya	pityu
Tagalog	tēŋa	mata	kūto	ta-tlo	—	pito
Toba Batak	—	mata	hutu	tolu	—	pitu
Uma	tilɨŋa	mata	kutu	tolo	—	pitu
Manggarai	—	mata	hutu	təlu	tuna	pitu
Kairiru	tilɨŋe	mata	qut	tuol	tun	—
Samoan	taliŋa	mata	ʔutu	tolu	tuna	fitu



- Austronesian
- Overwhelmingly Papuan
- ▲ Papuan language(s) in otherwise Austronesian areas

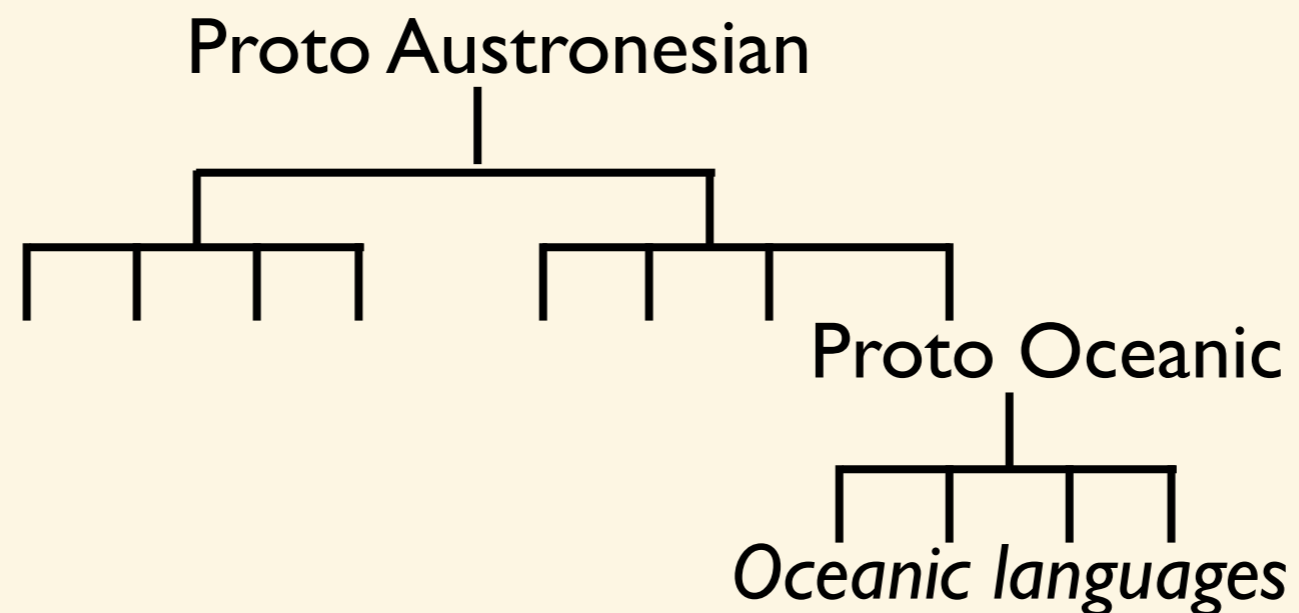
	ear	eye	head louse	three	freshwater eel	seven
Proto Austronesian	*Calɨŋa	*maCa	*kuCuh	*teluh	*tuLa	*pitu
Atayal	tʃanɨaʔ	—	kutʃuʔ	tu-ɣaʔ	tuɣa-qiy	ma-pituʔ
Tsou	—	mtsō	ktsū	turu	tuŋ-roza	pitu
Rukai	tsaɭɨŋa	matsa	kotso	toɭo	tola	pito
Paiwan	tsaɭɨŋa	matsa	qətsiɭu	tyəɭu	tyulya	pityu
Tagalog	tēŋa	mata	kūto	ta-tlo	—	pito
Toba Batak	—	mata	hutu	tolu	—	pitu
Uma	tilɨŋa	mata	kutu	tolo	—	pitu
Manggarai	—	mata	hutu	təlu	tuna	pitu
Kairiru	tilɨŋe	mata	qut	tuol	tun	—
Samoan	taliŋa	mata	ʔutu	tolu	tuna	fitu

Three kinds of linguistic evidence for prehistory

- reading a phylogeny ('family tree')
- finding evidence of contact
- reconstructing lexicon (vocabulary)

Kinds of linguistic evidence for prehistory

- reading a phylogeny ('family tree')
- finding evidence of contact
- reconstructing lexicon (vocabulary)



Kinds of linguistic evidence for prehistory

- reading a phylogeny ('family tree')
- finding evidence of contact
- reconstructing lexicon (vocabulary)

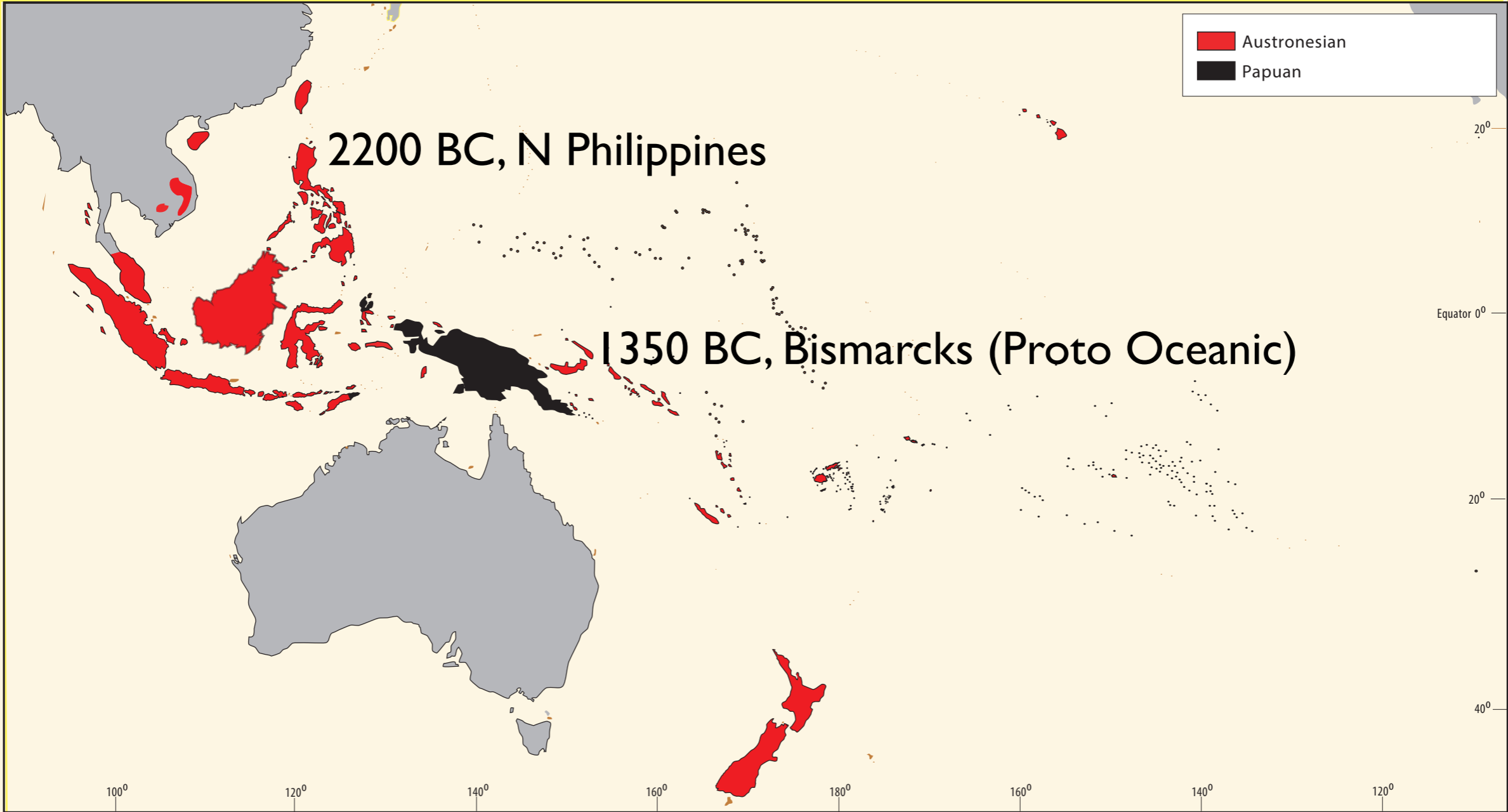
Kinds of linguistic evidence for prehistory

- reading a phylogeny ('family tree')
- finding evidence of contact
- reconstructing lexicon (vocabulary)

Kinds of linguistic evidence for prehistory

- reading a phylogeny ('family tree')
- finding evidence of contact
- reconstructing lexicon (vocabulary)

Kinds of linguistic evidence for prehistory

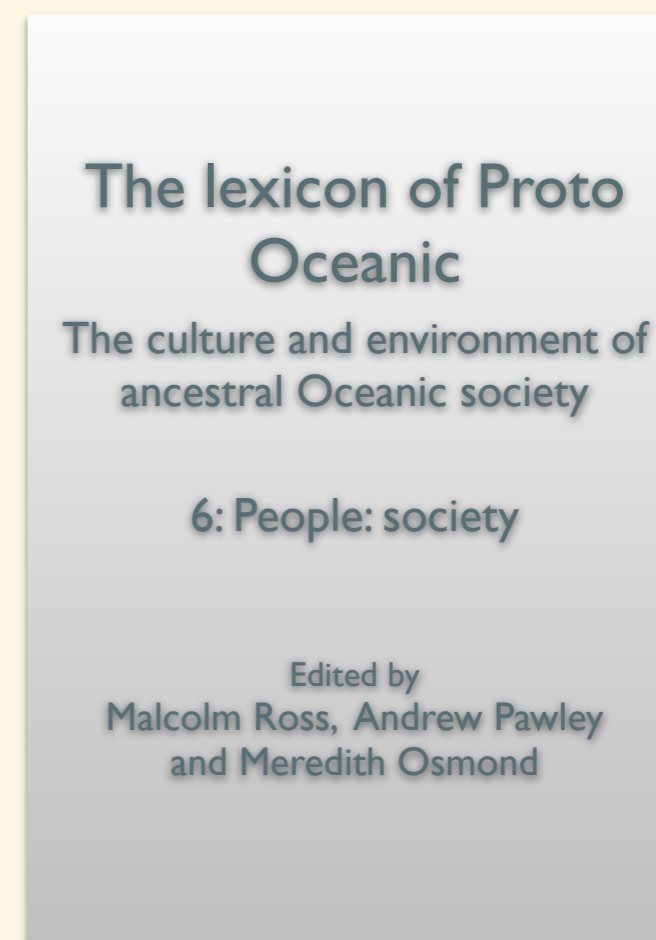
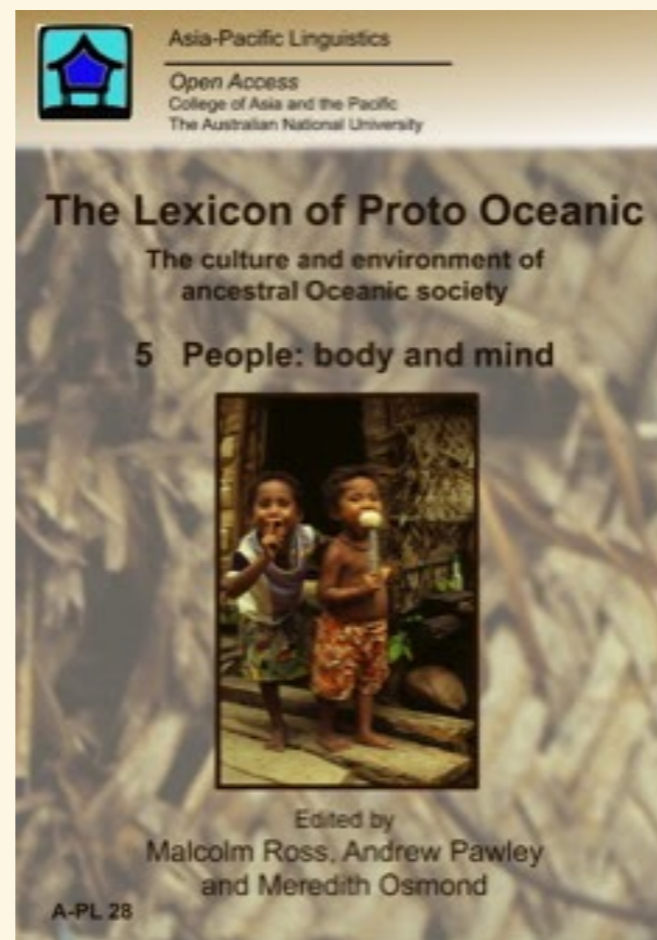
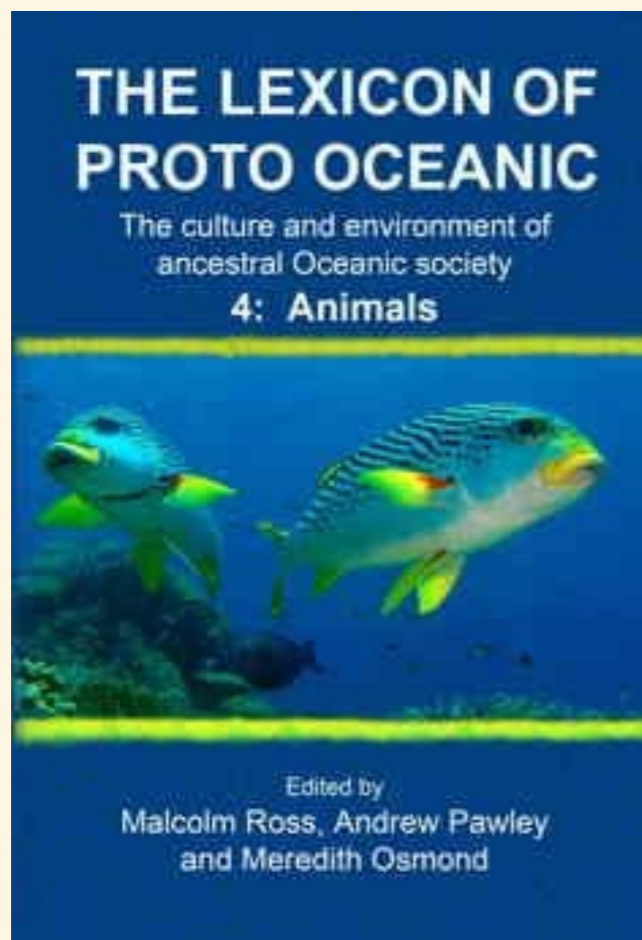
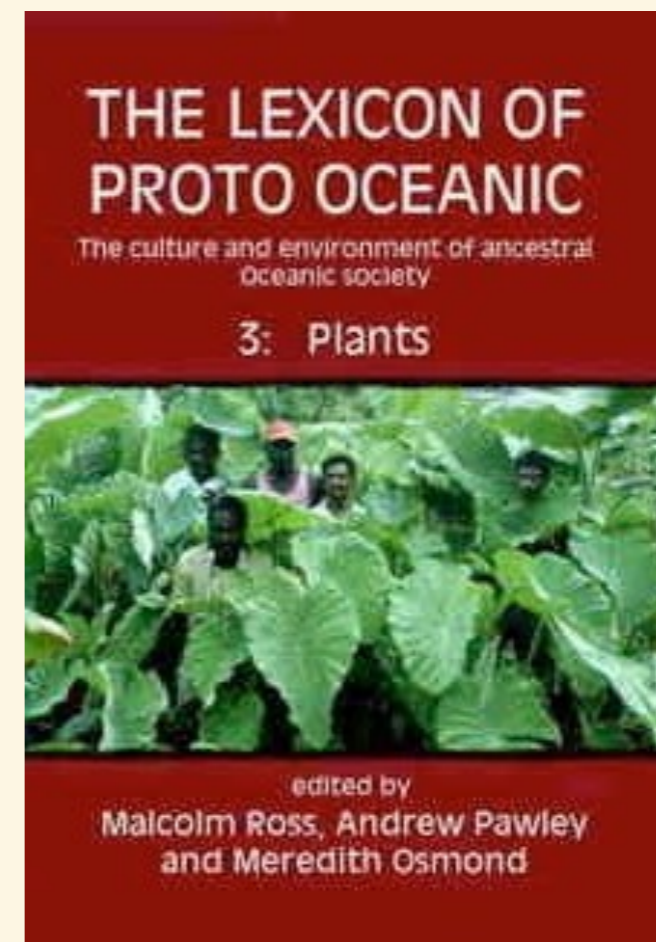
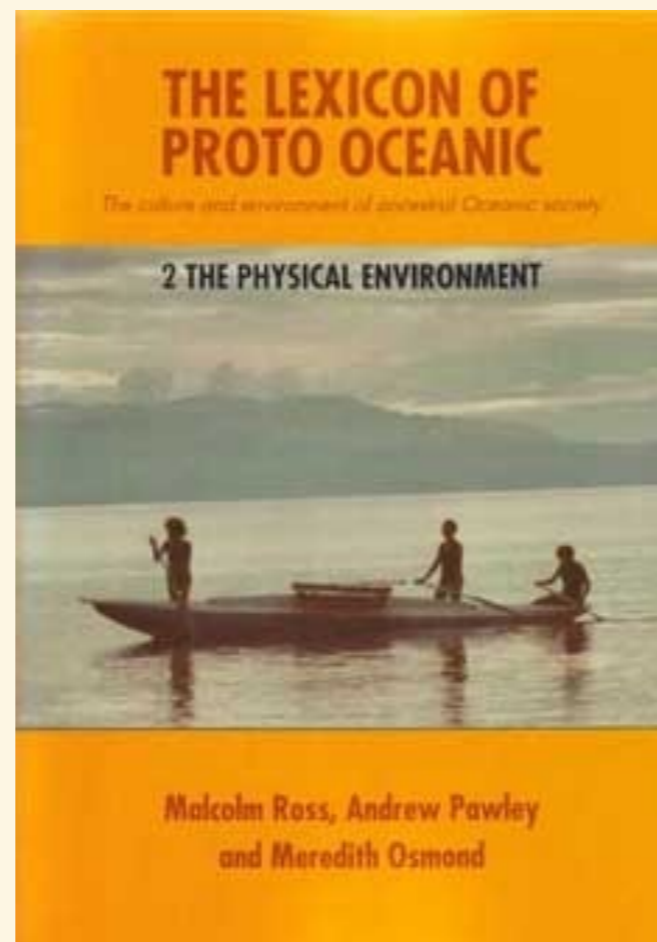
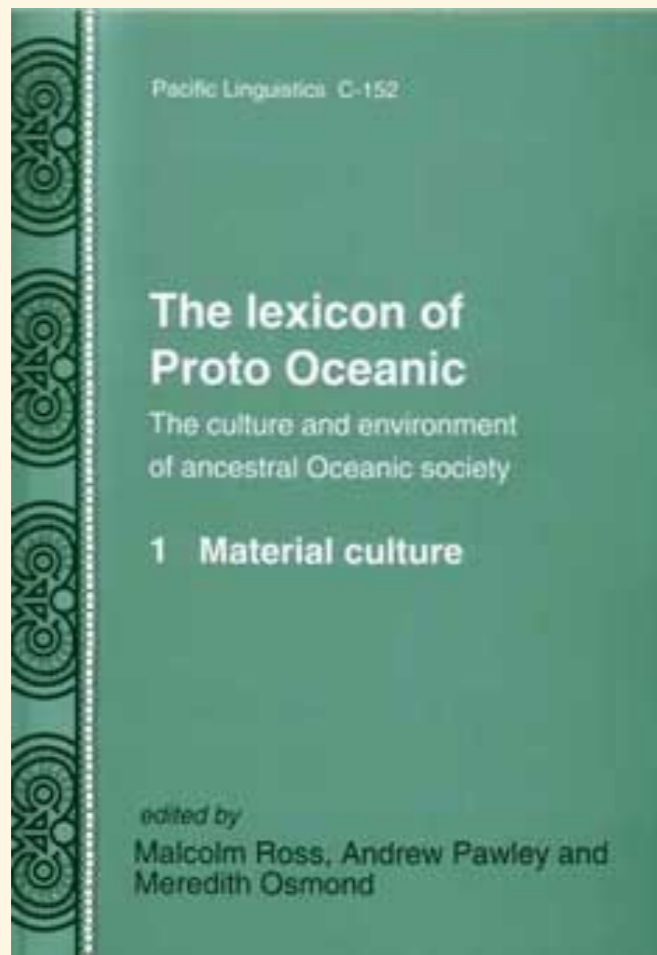


Kinds of linguistic evidence for prehistory

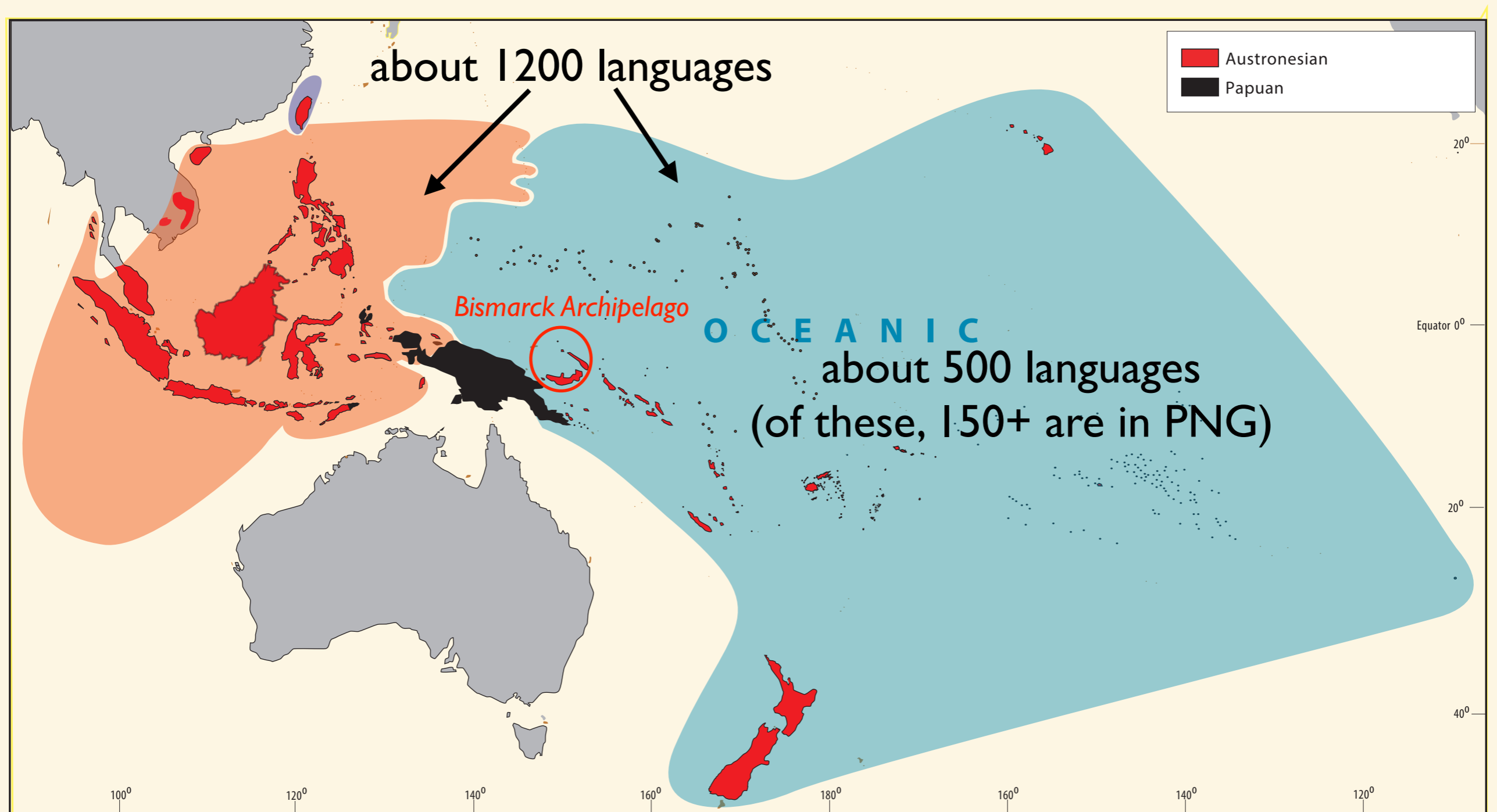
- reading a phylogeny ('family tree')
- finding evidence of contact
 - e.g. in Oceanic languages around Madang (Ross 1996, 2008)
- reconstructing lexicon (vocabulary)

Kinds of linguistic evidence for prehistory

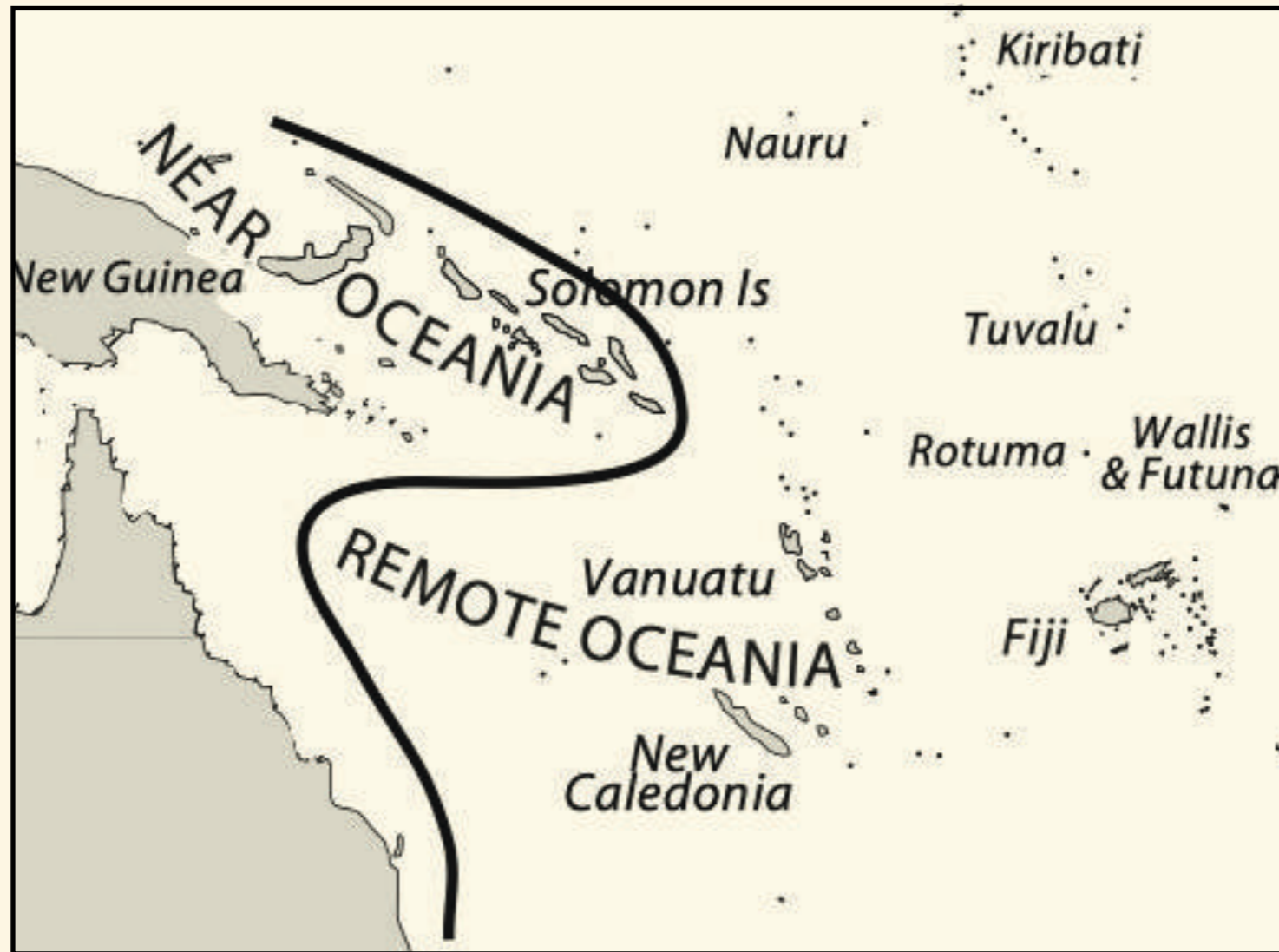
- reading a phylogeny ('family tree')
- finding evidence of contact
- reconstructing lexicon (vocabulary)



- Proto Oceanic was spoken in the Bismarck Archipelago around 1350 BC.

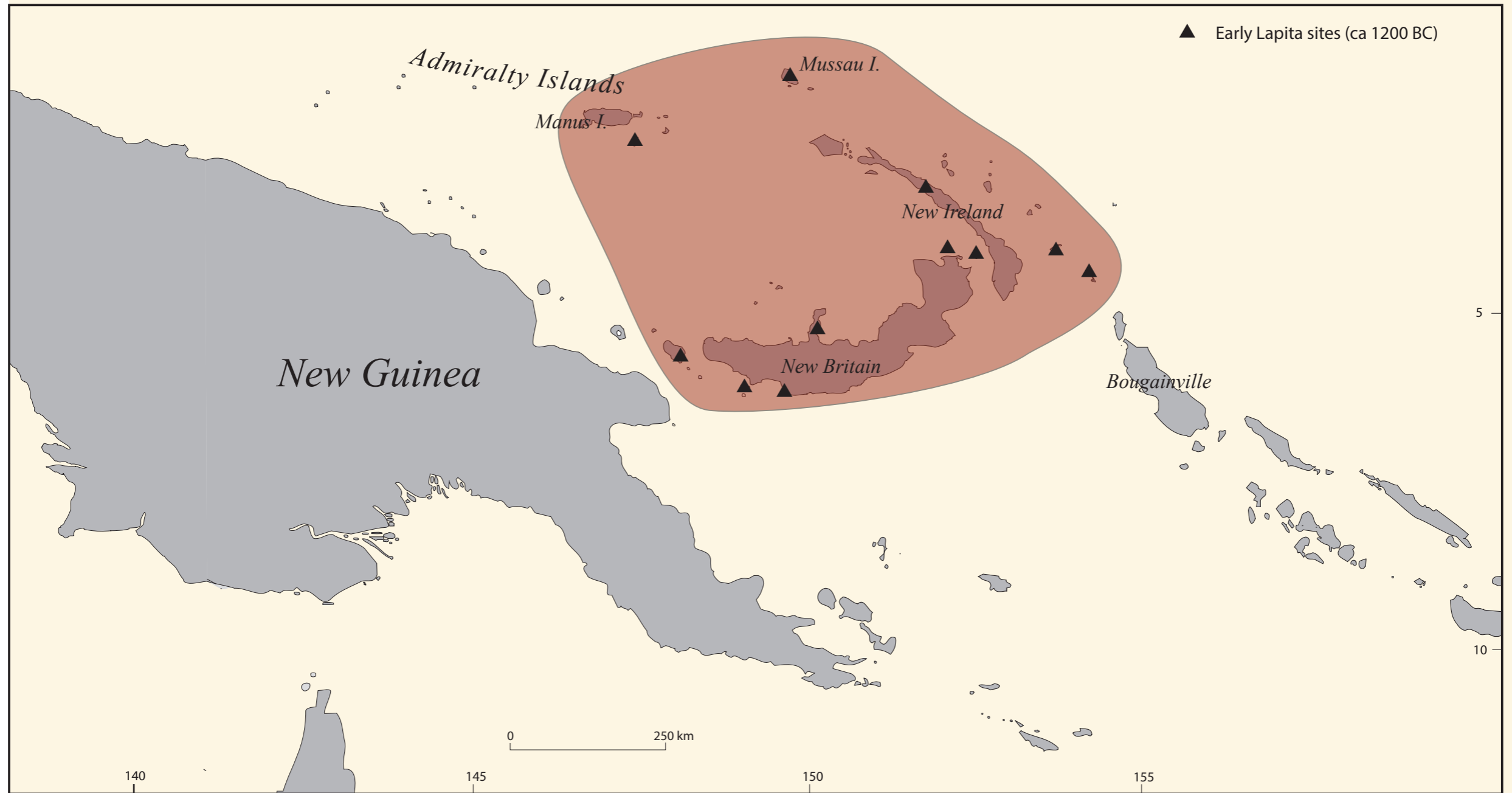


Near Oceania and Remote Oceania



Pawley & Green 1973

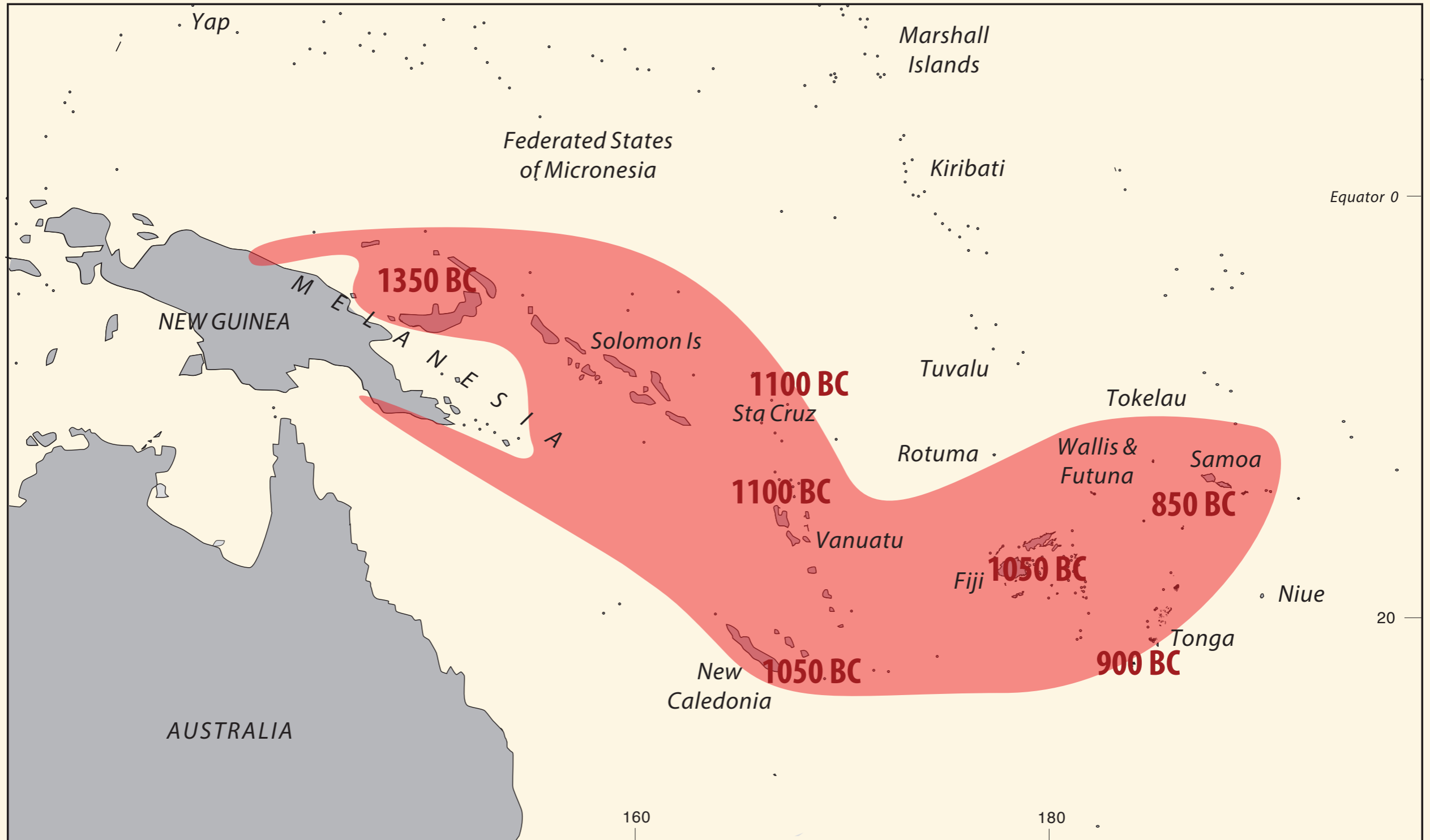
The Lapita culture: early sites ca 1200 BC



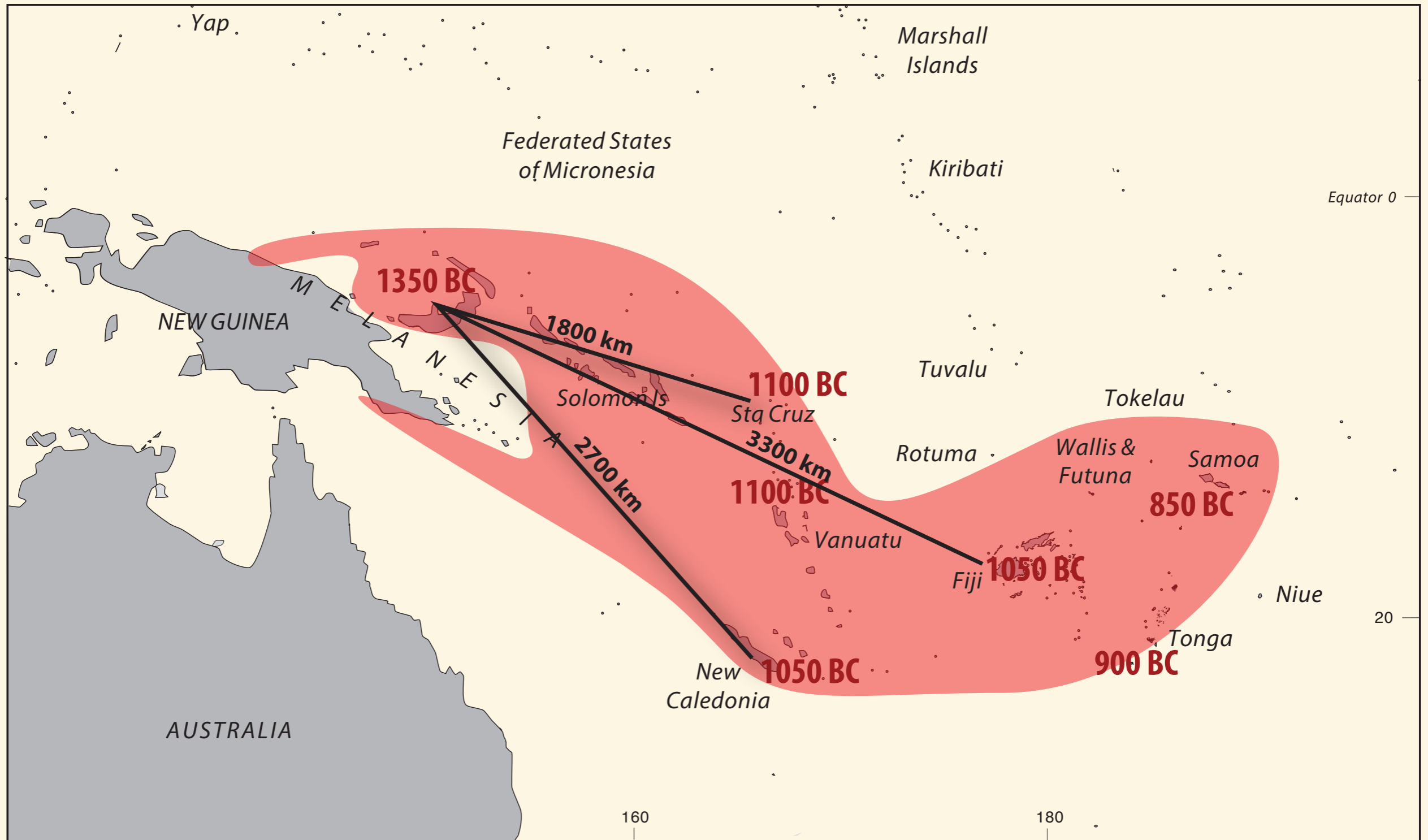


Lapita pottery

The Lapita dispersal



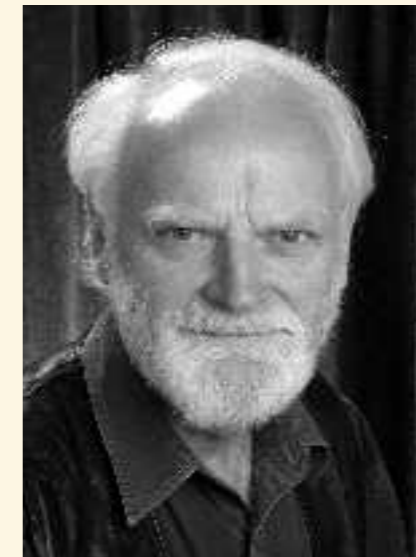
The Lapita dispersal



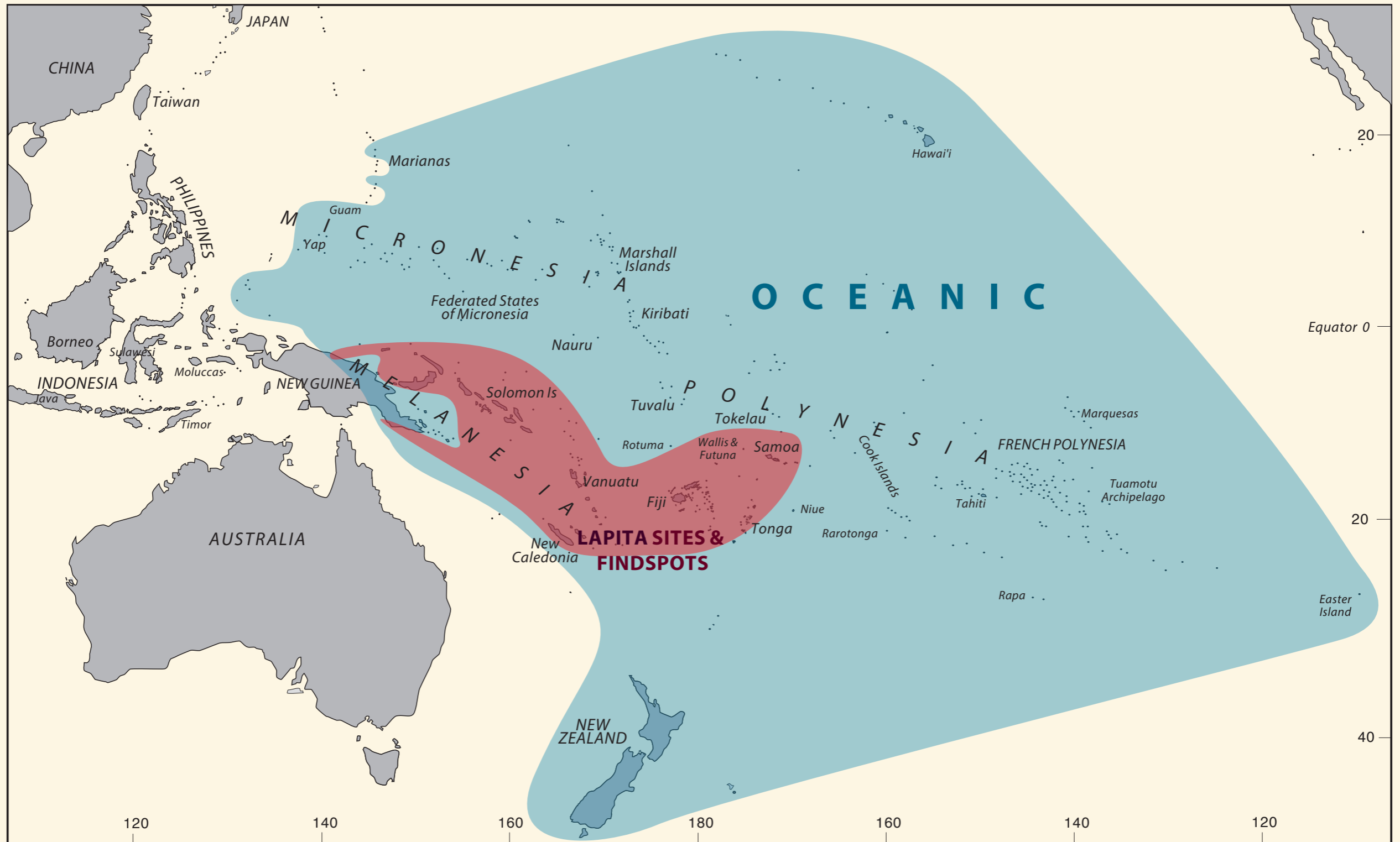
Obsidian



Obsidian tool found in a Fiji Lapita site.
Sourced by Wal Ambrose to the Willaumez
Peninsula of New Britain



Early Lapita people spoke Proto Oceanic



Reconstructing the Proto Oceanic lexicon

- *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society*
 - 1: *Material culture* (1998)
 - 2: *The Physical environment* (2003)
 - 3: *Plants* (2008)
 - 4: *Animals* (2011)
 - 5: *People: body and mind* (2016)
 - 6: *People: society* (forthcoming)

Reconstructing the Proto Oceanic lexicon

- 1: *Material culture* (1998)
 - *Architectural forms and settlement patterns* (Roger Green and Andrew Pawley)
 - *Household artefacts* (Meredith Osmond and Malcolm Ross)
 - *Horticultural practices* (Meredith Osmond)
 - *Food preparation* (Frantisek Lichtenberk and Meredith Osmond)
 - *Canoes and seafaring* (Andrew Pawley and Medina Pawley)
 - *Fishing and hunting implements* (Meredith Osmond)
 - *Acts of impact, force and change of state* (Malcolm Ross, Ross Clark and Meredith Osmond)

Reconstructing the Proto Oceanic lexicon

- terminological reconstruction
- two-pronged approach:
 - hypothesise a Proto Oceanic terminology on basis of present-day Oceanic terminologies
 - search for cognate sets in order to reconstruct forms matching each meaning in the hypothesised terminology
- brainchild of Andrew Pawley



A reconstructed terminology

*waga 'canoe'

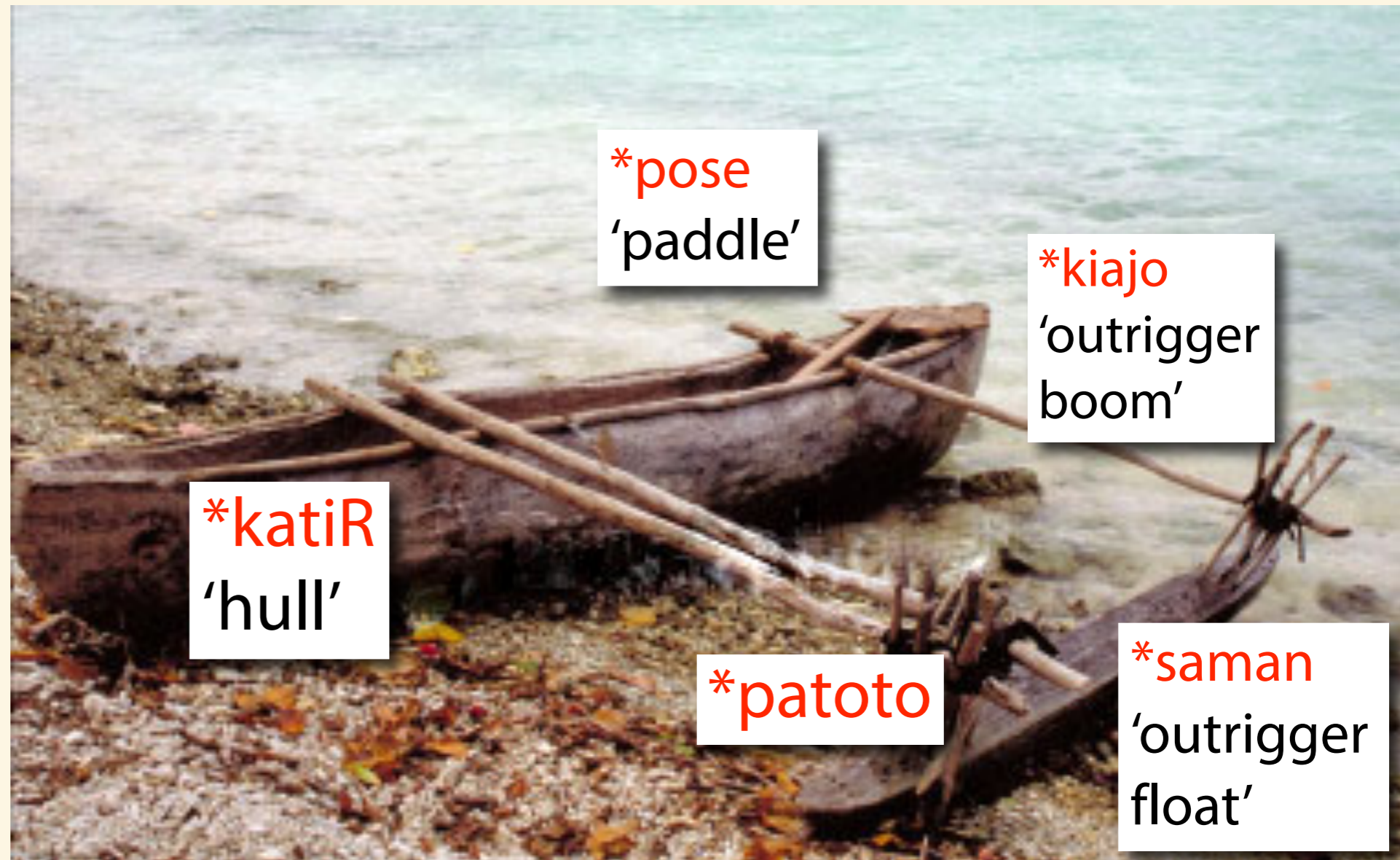
*layaR 'sail'

*tuku 'mast'

*jila 'sail boom'

*jauq 'anchor'

*limas 'bailer'



*pose
'paddle'

*kiajo
'outrigger
boom'

*katiR
'hull'

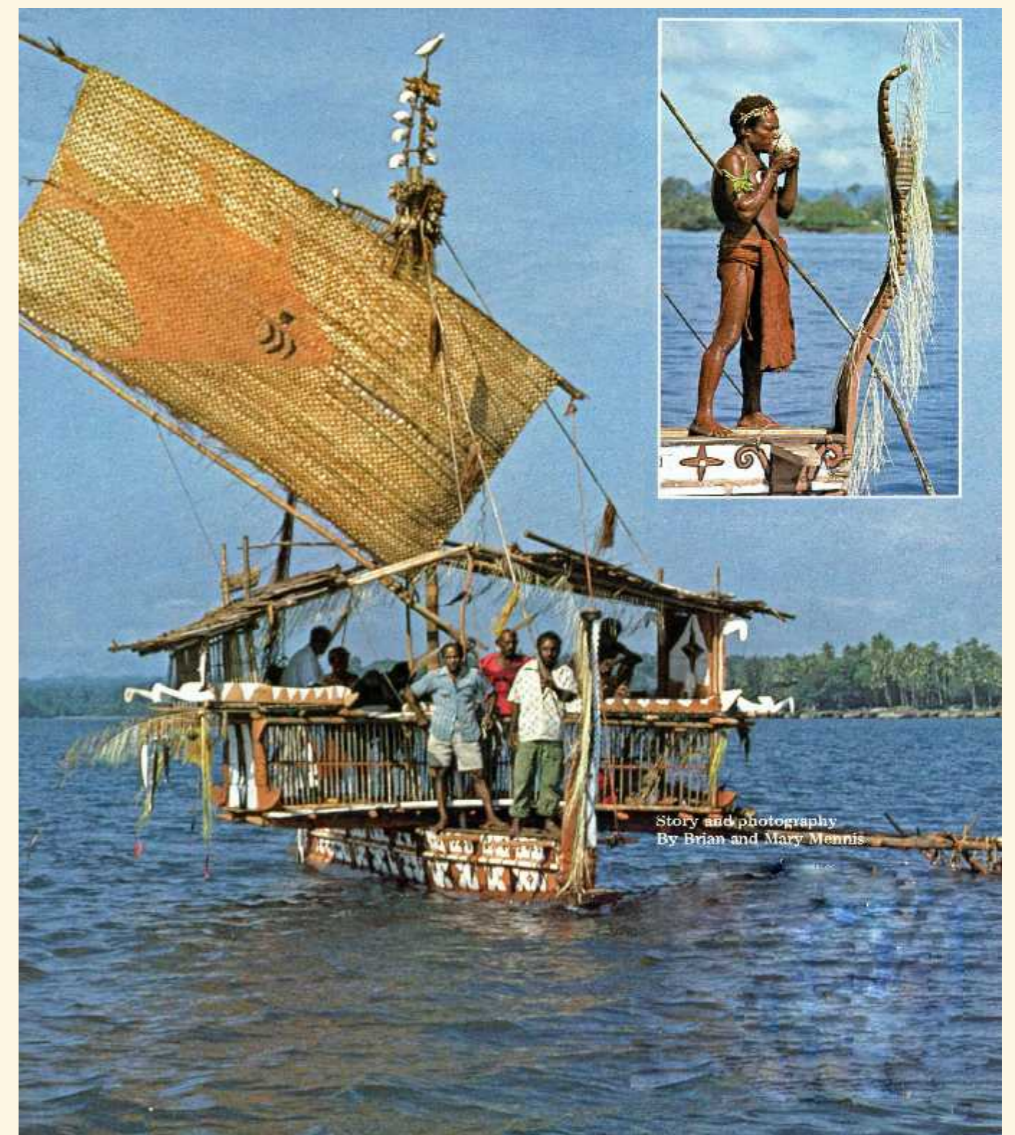
*patoto

*saman
'outrigger
float'

Reconstructed lexicon

POc **waga* 'large sailing canoe; (generic) canoe'

Adm:	Wuvulu	<i>wa</i>	'canoe'
NNG:	Gedaged	<i>wag</i>	'large canoe that goes out on the high seas, has one or two masts and a large platform; ship or boat'
NNG:	Gitua	<i>waga</i>	'canoe'
PT:	Dobu	<i>waga</i>	'sailing canoe'
NCV:	V'ënen Taut	<i>na-uak</i>	'canoe'
NCal:	Nyelâyu	<i>wan̄ga-</i>	'canoe'
Mic:	Kiribatese	<i>wā</i>	'canoe'
Mic:	Marshallese	<i>wa</i>	'canoe'
Fij:	Bauan	<i>waga</i>	'canoe'
Pn:	Tongan	<i>vaka</i>	'boat (generic)'
Pn:	Hawaiian	<i>waʻa</i>	'canoe'



Reconstructed lexicon

POc **waga* 'large sailing canoe; (generic) canoe'

Adm: Wuvulu *wa* 'canoe'

NNG: Gedaged *wag*

'large canoe that goes out on the high seas, has one or two masts and a large platform; ship or boat'

NNG: Gitua *waga* 'canoe'

PT: Dobu *waga* 'sailing canoe'

NCV: V'ënen Taut *na-uak* 'canoe'

NCal: Nyelâyu *wan̄ga-* 'canoe'

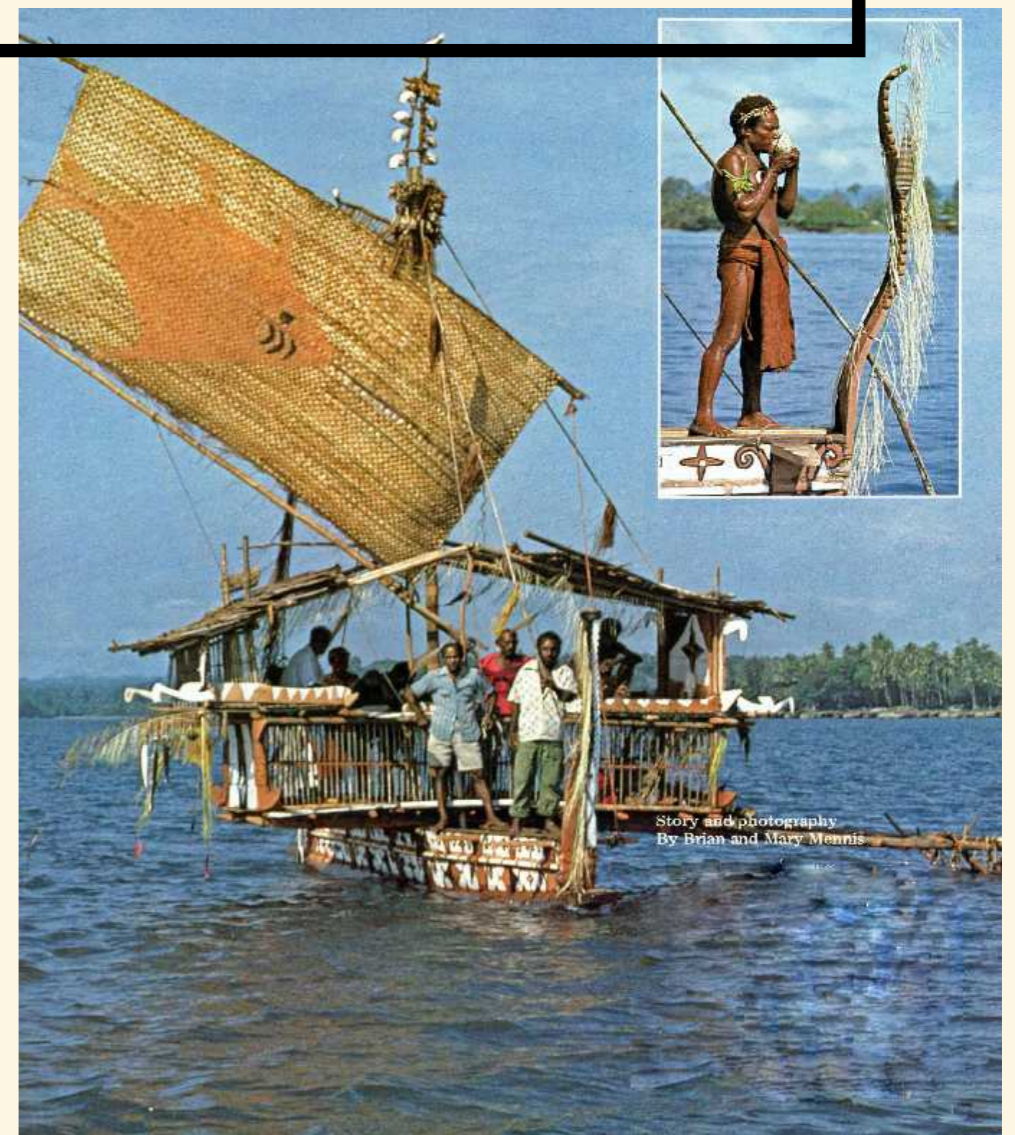
Mic: Kiribatese *wā* 'canoe'

Mic: Marshallese *wa* 'canoe'

Fij: Bauan *waga* 'canoe'

Pn: Tongan *vaka* 'boat (generic)'

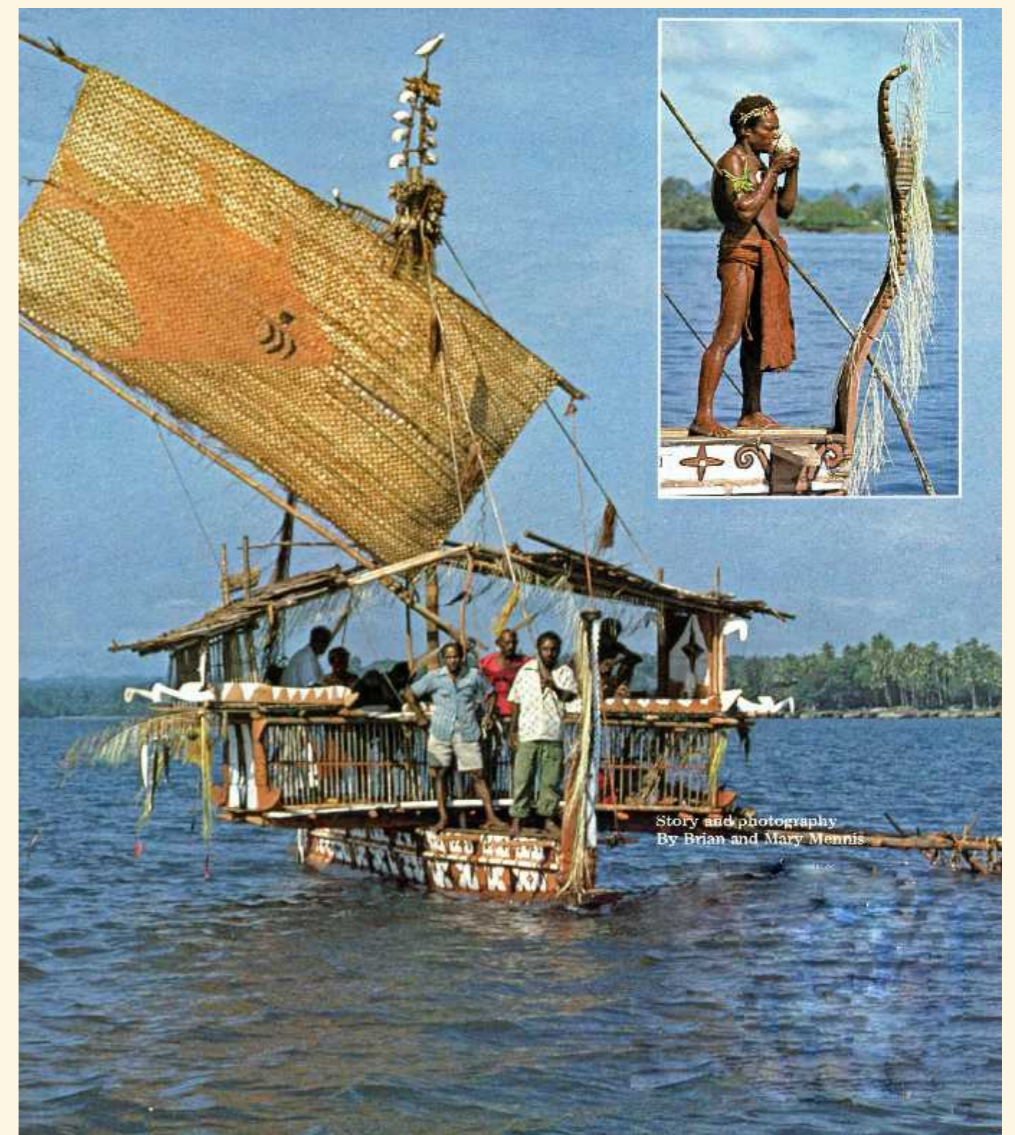
Pn: Hawaiian *waʻa* 'canoe'



Reconstructed lexicon

POc **waga* 'large sailing canoe; (generic) canoe'

Adm:	Wuvulu	<i>wa</i>	'canoe'
NNG:	Gedaged	<i>wag</i>	'large canoe that goes out on the high seas, has one or two masts and a large platform; ship or boat'
NNG:	Gitua	<i>waga</i>	'canoe'
PT:	Dobu	<i>waga</i>	'sailing canoe'
NCV:	V'ënen Taut	<i>na-uak</i>	'canoe'
NCal:	Nyelâyu	<i>wan̄ga-</i>	'canoe'
Mic:	Kiribatese	<i>wā</i>	'canoe'
Mic:	Marshallese	<i>wa</i>	'canoe'
Fij:	Bauan	<i>waga</i>	'canoe'
Pn:	Tongan	<i>vaka</i>	'boat (generic)'
Pn:	Hawaiian	<i>waʻa</i>	'canoe'



Reconstructed lexicon

POc **saman* 'outrigger float'

Adm:	Seimat	<i>cam</i>	'outrigger float'
Adm:	Mussau	<i>samana</i>	'outrigger float'
NNG:	Gedaged	<i>sam</i>	'outrigger float'
MM:	Nehan	<i>haman</i>	'outrigger boom'
NCV:	Paamese	<i>a-sem</i>	'outrigger'
Mic:	Kiribatese	<i>rama</i>	'outrigger float'
Mic:	Marshallese	<i>tam</i>	'outrigger float'
Fij:	Bauan	<i>ḏama</i>	'outrigger float, smaller hull of double canoe'
Pn:	Tongan	<i>hama</i>	'outrigger float, smaller hull of double canoe'

Reconstructed lexicon

POc **saman* 'outrigger float'

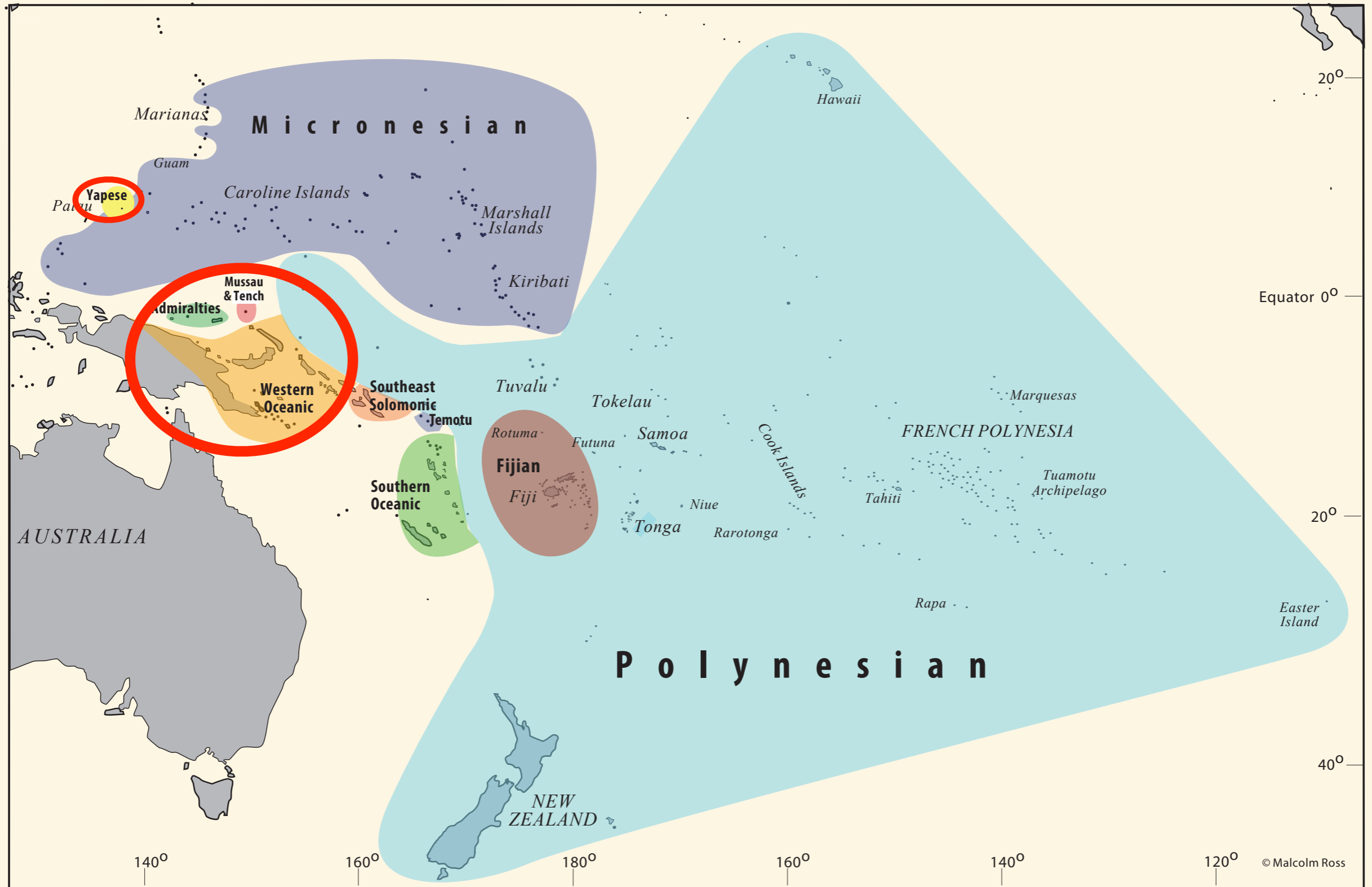
Adm:	Seimat	<i>cam</i>	'outrigger float'
Adm:	Mussau	<i>samana</i>	'outrigger float'
NNG:	Gedaged	<i>sam</i>	'outrigger float'
MM:	Nehan	<i>haman</i>	'outrigger boom'
NCV:	Paamese	<i>a-sem</i>	'outrigger'
Mic:	Kiribatese	<i>rama</i>	'outrigger float'
Mic:	Marshallese	<i>tam</i>	'outrigger float'
Fij:	Bauan	<i>ḏama</i>	'outrigger float, smaller hull of double canoe'
Pn:	Tongan	<i>hama</i>	'outrigger float, smaller hull of double canoe'

Reconstructed lexicon

- Proto Eastern Oceanic **paqu-rua* 'double canoe',
 - from POc **paqu(s)* 'bind' and **rua* 'two'



Reading a phylogeny



Reconstructed lexicon

Root crops:

* <i>talo(s)</i>	taro <i>Colocasia esculenta</i>	< PMP * <i>tales</i>
* <i>m^wapo(q)</i>	taro <i>Colocasia esculenta</i>	< a Papuan source
* <i>piRaq</i>	giant taro <i>Alocasia macrorrhizos</i>	< PMP * <i>biRaq</i>
* <i>qupi</i>	greater yam <i>Dioscorea alata</i>	< PMP * <i>qubi</i>
.....	lesser yam <i>Dioscorea esculenta</i>	
* <i>p^watika</i>	potato yam, aerial yam, <i>Dioscorea bulbifera</i> .	< a Papuan source ??
.....	sweet potato <i>Ipomoea batatas</i>	
.....	American/Chinese taro <i>Xanthosoma sagittifolium</i>	

Reconstructed lexicon

Root crops:

* <i>talo(s)</i>	taro <i>Colocasia esculenta</i>	< PMP * <i>tales</i>
* <i>m^wapo(q)</i>	taro <i>Colocasia esculenta</i>	< a Papuan source
* <i>piRaq</i>	giant taro <i>Alocasia macrorrhizos</i>	< PMP * <i>biRaq</i>
* <i>qupi</i>	greater yam <i>Dioscorea alata</i>	< PMP * <i>qubi</i>
.....	lesser yam <i>Dioscorea esculenta</i>	
* <i>p^watika</i>	potato yam, aerial yam, <i>Dioscorea bulbifera</i> .	< a Papuan source ??
.....	sweet potato <i>Ipomoea batatas</i>	
.....	American/'Chinese' taro <i>Xanthosoma sagittifolium</i>	

Reconstructed lexicon

Root crops:



<i>*talo(s)</i>	taro <i>Colocasia esculenta</i>	< PMP <i>*tales</i>
<i>*m^wapo(q)</i>	taro <i>Colocasia esculenta</i>	< a Papuan source
<i>*piRaq</i>	giant taro <i>Alocasia macrorrhizos</i>	< PMP <i>*biRaq</i>
<i>*qupi</i>	greater yam <i>Dioscorea alata</i>	< PMP <i>*qubi</i>
.....	lesser yam <i>Dioscorea esculenta</i>	
<i>*p^watika</i>	potato yam, aerial yam, <i>Dioscorea bulbifera</i>	< a Papuan source ??

Note: PMP = Proto Malayo-Polynesian

Reconstructed lexicon

Root crops:

* <i>talo(s)</i>	taro <i>Colocasia esculenta</i>	< PMP * <i>tales</i>
* <i>m^wapo(q)</i>	taro <i>Colocasia esculenta</i>	< a Papuan source
* <i>piRaq</i>	giant taro <i>Alocasia macrorrhizos</i>	< PMP * <i>biRaq</i>
* <i>qupi</i>	greater yam <i>Dioscorea alata</i>	< PMP * <i>qubi</i>
.....	lesser yam <i>Dioscorea esculenta</i> (Tok Pisin <i>mami</i>)	
* <i>p^watika</i>	potato yam, aerial yam, <i>Dioscorea bulbifera</i>	< a Papuan source ??

Note: PMP = Proto Malayo-Polynesian

Reconstructed lexicon

WOC *mamisa, *kamisa
< POC *mamis 'sweet' (Ross 2008)

Root crops:

*talo(s)	taro <i>Colocasia esculenta</i>	< PMP *tales
*m ^w apo(q)	taro <i>Colocasia esculenta</i>	< a Papuan source
*piRaq	giant taro <i>Alocasia macrorrhizos</i>	< PMP *biRaq
*qupi	greater yam <i>Dioscorea alata</i>	< PMP *qubi
.....	lesser yam <i>Dioscorea esculenta</i>	
*p ^w atika	potato yam, aerial yam, <i>Dioscorea bulbifera</i>	< a Papuan source ??

Note: PMP = Proto Malayo-Polynesian

Reconstructed lexicon

- **Sea creatures** (Were turtles fish in Proto Oceanic? Pawley 2011)
 - **ikan* 1. typical fish;
 - 2. high-level generic denoting typical fish, sharks, rays, eels, cetaceans (whales, dolphins, porpoises), dugongs, turtles, crocodiles and possibly octopus and squid
 - **sisiq* edible gastropods (snails, slugs: land & sea)
- Land animals
 - **manuk* high-level generic denoting birds, bats and flying insects

Reconstructed lexicon

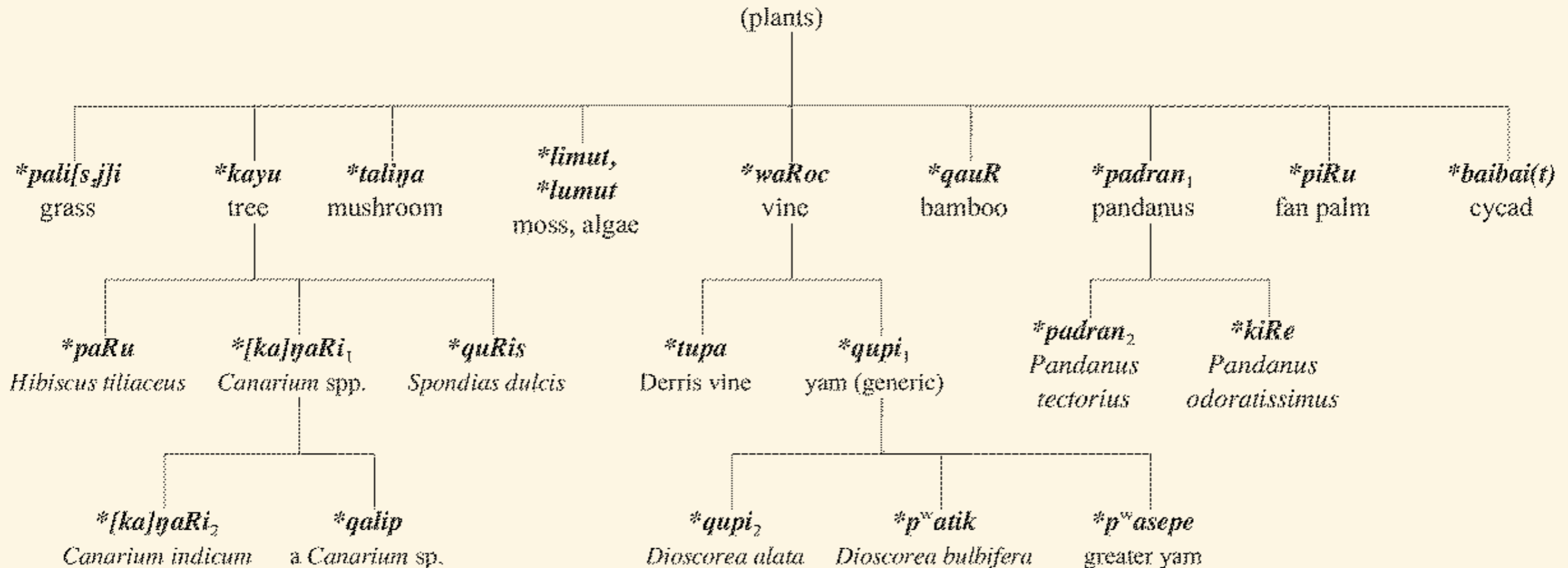
- Sea creatures (Pawley 2011)
 - **ikan* 1. typical fish;
 - 2. high-level generic denoting typical fish, sharks, rays, eels, cetaceans (whales, dolphins, porpoises), dugongs, turtles, crocodiles and possibly octopus and squid
 - **sisiq* edible gastropods (snails, slugs: land & sea)
- Land animals
 - **manuk* high-level generic denoting birds, bats and flying insects

Reconstructed lexicon



- **Plants** (Evans 2008)
 - **kayu* 'tree or shrub, generic name for plants with woody stems and branches, probably not including palms or tree-ferns';
 - **waRoc* 'general term for vines and creepers, plants with creeping or climbing growth structure';
 - **pali[sj]i* 'grasses and possibly also sedges and other grass-like plants';
 - **limut* or **lumut* 'term for mosses, algae and seaweeds';
 - **taliŋa* (= 'ear') 'generic term for mushrooms and fleshy fungi'

Reconstructed lexicon



Evans (2008:83)

Reconstructed lexicon

- Human age cohorts
 - English *baby, toddler, child, teenager, adult*
 - **m^weRa* 'young person from birth to puberty'
 - **m^weRa-m^weRa* 'baby, very young child' (diminutive of **m^weRa*)
 - **tau paqoRu* 'marriageable young person' (person + new)
 - **tam^wata* 'fully grown adult; (generic) person'
 - **matuqa* 'mature, full-grown, ripe, old (person), still vigorous'
 - **m^warap* (V) 'grow old'; (N) 'old person'

Reconstructed lexicon

**tama-* 'father, father's brother, mother's sister's husband'

**tina-*, **kina-* 'mother, mother's sister, father's brother's wife'

**matuqa-* 'mother's brother'

**natu-*, **tu-* 'child of ego, s.s. sibling or parallel cousin'

**[qa]lawa* ' ♂ sister's child'

**tubu-*, **tabu-*, **wawa[-]* kin of grandparent and grandchild generations

**makubu* kin of grandchild generation -

**bawa[-]* 'great-great-grandparent, great-great-grandchild'

**taci-*, **kaci-* 'younger s.s. sibling, younger s.s. parallel cousin'

**tua-*, **tuaka-* 'elder s.s. sibling, elder s.s. parallel cousin'

**papine-* ' ♂ sister', ♂ female parallel cousin'

**m^waqane-* ' ♀ brother', ♀ male parallel cousin'

Key

A final hyphen indicates that the word takes a possessor suffix.

♂ and ♀ mean respectively 'male speaking' and 'female speaking'

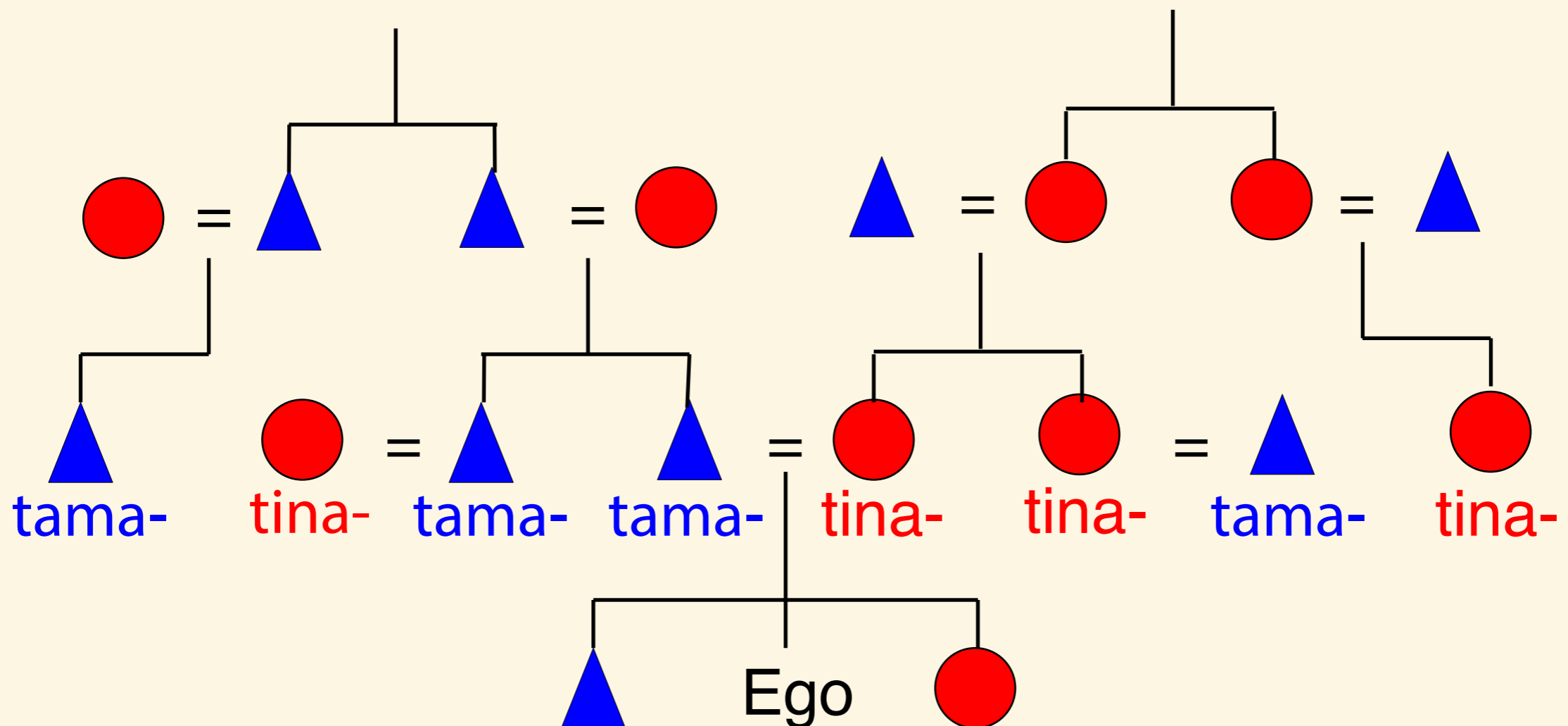
s.s. = 'same-sex'

Reconstructed lexicon: 'father(s)'

**tama-*

short definition: 'father, father's brother, mother's sister's husband'

long definition: 'father; and any male blood relative of the speaker's father's generation related to the speaker through his/her father; and husband of any **tina-* (mother, for which the long definition is parallel to that of **tama-* 'father).'



Further reading??

——, 2017. Linguistic evidence for prehistory: Oceanic examples. In Hsiu-chuan Liao, ed., *Issues in Austronesian historical linguistics*, 67–101. Honolulu: University of Hawai'i Press. (JSEALS Special Publication 1)

-

