

Australian language families and linguistic classifications

This material presents classification information for the Indigenous languages of Australia. They include languages spoken in the area now known as Australia prior to 1788, as well as subsequent languages which have arisen through language contact. Languages are grouped by relationship, using the Non-Pama-Nyungan/Pama-Nyungan distinction for convenience.

I compare the current “Bowern” classification with three others: Dixon (2002), Wurm (1972), and O’Grady, Voegelin and Voegelin (1966). Other classifications could be used, and others also vary somewhat in the details, but as Walsh (1997) has noted, the overall number of languages and broad principles of classification have not changed substantially since the O’Grady, Voegelin and Voegelin (1966) classification. That is apparent here, too: though some details vary, and some individual languages are placed in different subgroups or families, there is broad consensus across the classifications. The main difference is in the number of languages, discussed in more detail in Chapter 7 of this volume. This comparison has both some historical value, in seeing how classifications of Australian languages have changed over time, and should orient the reader to how the current classification compares to others established in the literature.

The internal structure of some of the subgroups are simplified for ease of display. Some of the names have been adapted to make comparisons easier across sources (e.g. I do not list the Yibian Subgroup in OVV, using simply Wardaman as the name). I have rearranged the order of families from previous classifications so as to align different classifications. I have kept Dixon’s names, though I have abbreviated them in places so as to make the items clearer, since Dixon does not follow the naming conventions of previous literature in quite a few cases. Note that while groups within cells are comparable, the languages may occur in different orders within cells.

The “Bowern” classification presented here is based in part on results published in Bouckaert et al (2018), which in turn is one publication from approximately 12 years’ work on language relationships, particularly in Pama-Nyungan (and between Pama-Nyungan and Non-Pama-Nyungan families). That is, the current classification was compiled from a combination of prior sources (evaluated for reliability), inspection of primary materials, including cognate coding, and the results of phylogenetic work published in Bouckaert et al (2018). However, here I present a fairly conservative classification, especially as regards to groupings between Pama-

Nyungan subgroups. I do not list all internal structure within Bouckaert et al (2018), except where it is well established from previous classifications. Though the Bowern classification is “flat” (in not showing relationships within, for example, the Northern languages in Pama-Nyungan), this is for ease of reference and because the details of the more remote relationships within Pama-Nyungan are tentative, not because I believe they don’t exist.

This handbook does not focus on the classificatory work done on Australian languages in the 20th century, mostly because there are already substantial reviews of these classifications in the work of Koch (2014, Koch and Nordlinger 2014, Koch, 2019) and Bowern and Koch (2004; introduction or Chapter 2). The main classifications of the second half of the 20th century -- O’Grady, Voegelin and Voegelin (1966), Wurm (1970), Oates (1971), Tindale (1974), Dixon (1980), Walsh and Wurm (1986), and Dixon (2002), build on one another and are based, to some extent, on similar methodologies. This sets them apart from the earlier classifications, such as Schmidt’s (1919) and others described by Stockigt (this volume), on the one hand, and the phylogenetic classifications of Bowern and colleagues.

The phylogenetic classifications of Bowern (Bowern and Atkinson (2012) and Bouckaert et al (2018)) for Pama-Nyungan are based on inferring a tree from basic vocabulary from sources from across the country. Details on the methods of phylogenetic classification have been published elsewhere (not least, in the publications themselves, though see Bowern and Atkinson 2012 in particular). In brief, the classification is based on vocabulary, that is, the cognacy (or presumed cognacy) of vocabulary on a 200 item wordlist. The cognate codings produce approximately 6500 character sets (as well as approximately double that number of character sets where the word in the language has no known cognates; these are uninformative for subgrouping). We then use an evolutionary framework to model changes in characters over time, which gives probabilistic language classifications, approximate branching times, and (through Bayesian MCMC) an estimate of the confidence of subgroupings. Because the classification is based on 6500 cognate sets, it is relatively robust to individual data errors.

There are four situations where this classification method performs poorly. One is where loan rates are very high. In such cases, classifications may be swamped by similarities due to loans. This is possibly the case with the Bowern and Atkinson (2012) classification of Ngumpin-Yapa, for example. The second is where the languages are very similar. In that case, there is little to choose between conflicting hypotheses (that is, if the varieties differ in only a

few words, they will clearly group together, but their internal subgrouping may be poorly resolved). Thirdly is where the number of overall cognates are very low. For the Western Torres group, for example, two-thirds of the etyma under consideration were either unique or words shared with Papuan languages, which aren't part of the classification (and so are coded as unique for the purposes of classification within Pama-Nyungan). In such cases, classification tends to be contingent on very few etyma. The final issue is languages where the only good cognates are those which are also shared by a large number of other languages (such as Western Torres and Anaiwan). In the case of Anaiwan, the classification is poorly resolved, because there are no or few solid innovations by which to group the languages. The language is clearly Pama-Nyungan, but shares small numbers of words with several subgroups. All these problems result in low posterior probabilities. These points are noted in the classification below. Nonetheless, Bower and Atkinson (2012) recovered all but four of the main subgroups of Pama-Nyungan, as established in the prior literature and classifications such as Wurm's and Dixon's.

It should be noted that there is a fair amount of agreement between the four classifications discussed here. There is some difference for Non-Pama-Nyungan languages, which is to be expected given that, at the time the Wurm (1972) and OVV classifications were developed and published, there were relatively few in-depth studies of linguistic relationships within Non-Pama-Nyungan families, and many of the resources relied on here were published after 1975. The classifications differ primarily in the number of languages (see Chapter 7), as well as in the assignment of some individual languages to subgroups, particularly among the Eastern languages.

Finally, discussion is needed of Proto-Australian, Pama-Nyungan's relationship to other language families, and relationship between Non-Pama-Nyungan families. I consider Proto-Australian 'not proven'. This is not the majority view of Australianists, it must be said: Australianists have presumed that all languages of Australia are ultimately related to one another, even if at too great a time depth to be demonstrable at this point. Another point I consider beyond investigation (at this point) is whether the (putative single) ancestor of all current Australian families (including Tasmanian) is the same as the language(s) of Australia's original settlers, more than 60,000 years ago. In Australia, as elsewhere, languages change sufficiently fast that they are a crucial source of information for the Holocene, but not for further back in

time. Thus I treat the 30 traditional language families of Australia (5 from Tasmania, and 25 from the mainland) as distinct entities, at least for the purpose of this classification.

Some speculation on language family relationships – between Pama-Nyungan and other families, as well as between Non-Pama-Nyungan families – is given in Bower (2020).

Australianists have tended to rely heavily on morphological evidence for demonstrating strengths of relationship between language groups. For example, Harvey and Baker (2017) discuss Non-Pama-Nyungan nominal classification markers as evidence for a single Australian family, and Evans (1995) and Blake (1990) classify Tangkic as Non-Pama-Nyungan (that is, not a subgroup within Pama-Nyungan) primarily (though not exclusively) on the basis of pronouns and verbal morphology. But as I point out in Bower (2020), the morphological evidence isn't absolutely solid. After all, Yolngu pronouns also show some changes from Proto-Pama-Nyungan (e.g. 1sg *ɲarra* as compared to Proto-Pama-Nyungan **ɲayu*, conflation of 2dl and 2pl, replacement of 3pl **thana* with *walal(a)* in some varieties, for example). Verb morphology and lexicon show Yolngu to be solidly Pama-Nyungan, but across the family there are enough morphological differences that on those grounds alone Tangkic is difficult to exclude.

The problem deepens further when we consider lexicon. Australianists, as noted by Campbell (2004), tend to distrust lexical arguments for classification because lexicon is susceptible to borrowing. Yet as Bower et al (2011) showed, Australian loan rates are comparable to the rest of the world: some languages have a lot of loaned basic vocabulary, while others do not. Almost all languages have some identified loans, but few languages have many loans. Therefore lexical information should be, like all evidence, interpreted with caution, but that caution also applies to morphological data. After all, morphology is also borrowable, especially where language contact is extensive. And the lexicon, because it contains both stable and borrowable items, is a good place to evaluate contact claims. For example, if two languages do not share lexical items which are stable, but they share other vocabulary, that is good evidence that the shared vocabulary is due to language contact. The converse, on the other hand (sharing of basic but not non-basic vocabulary) is potential evidence of shared (if remote) genetic relationship.

As mentioned above, some languages, which are clearly Pama-Nyungan, nonetheless have few lexical items in common with other languages in different parts of the family. And yet there are Non-Pama-Nyungan families with apparent conservative cognates with widely found

Pama-Nyungan items. Consider the vocabulary in Nyulnyulan that is shared with Pama-Nyungan languages. Various languages of the Nyulnyulan family have words that are clearly loans from Pama-Nyungan languages. Bardi *yagoo* ‘brother in law’, for example, is a recent loan because it does not undergo either the lenition sound change or the loss of the initial glide that inherited words in Bardi undergo. If this word were truly cognate with *yaku (e.g. Nyangumarta ‘wife’s brother, sister’s husband’, Wardandi *yaku* ‘wife’, Pitta-Pitta *yaku* ‘elder sister’, Yulparija *yakurti* ‘mother’, Mayi-Yapi *yakurti* ‘mother’, etc.), its form in Bardi should be *awoo* /awu/. Likewise, Nyikina *kampi* ‘egg’ is probably a loan, even though there are no diagnostic sound changes to identify it as such, simply because, although it is widespread in Pama-Nyungan, Nyikina is the only one of the Nyulnyulan languages to show it, and it is securely reconstructed within Pama-Nyungan.

Other words are probably loaned into Proto-Nyulnyulan (or at least a stage of the family that predates the breakup of all the languages we see today). Yet others are widespread in Nyulnyulan but are also regional Wanderwoerter, such as *lungkurta* ‘blue-tongue lizard’) and *baarni* ‘goanna’ (see Haynie et al. 2014). However, there are yet other words that are inherited into Proto-Nyulnyulan, in that they show the expected sound changes in the daughter languages and are well integrated into Nyulnyulan morphology, and yet are similar or identical to words in similar meanings which are widespread and reconstructible in the Pama-Nyungan family, either to Proto-Pama-Nyungan or to an intermediate (but high-level) branch of the family. Some cases from basic vocabulary are given in (1) below.

- (1) *ni-lirr ‘3SG.POSS-mouth’
 *ngayu ‘1SG’
 *ngamana ‘breast’
 *kapali ‘father’s mother’
 *ni-marla ‘hand’ (*mara¹)
 *tyamu ‘mother’s father’ (*tyamu, *tyami)
 *kamarta ‘mother’s mother’ (*kamarta)
 *waalka ‘sun’ (*walngka)
 *kutyarra ‘two’ (*kutyarra)
 *ma-kunbira-n ‘urinate’ (*kunpi)

- *mayi ‘vegetable food’
- *ma-ni-n ‘sit’ (*nhi-)
- *ma-wa-n ‘give’ (*wa-)

Nyulnyulan shares more basic vocabulary with Pama-Nyungan languages than it does with Wororan. There are also loans between Wororan languages and Nyulnyulan languages, as would be expected given the history of the region (cf. Bovern 2018). However, there are no clear similarities between Nyulnyulan and other non-Pama-Nyungan families of the region, as discussed in Bovern (2004).

Now, no one to my knowledge has ever proposed that Nyulnyulan is closely related to Pama-Nyungan, and, to be clear, this is not a claim I’m making here. Grammatically and morphologically, Nyulnyulan languages are not at all similar to Pama-Nyungan languages, though one should also note that they are rather different typologically from the Non-Pama-Nyungan Kimberley languages too. I discuss this case not as a claim that Nyulnyulan is Pama-Nyungan, but as a way to evaluate the context of claims for Tangkic relationships, both lexically and grammatically. Nyulnyulan shares as many Pama-Nyungan words as Tangkic does; therefore any investigation of language relationships between Pama-Nyungan and other families needs to look more broadly. Better criteria are needed for evaluating claims of language relationship when the evidence is sparse.

Australian Families apart from Pama-Nyungan

Bowern	Dixon (2002)	Wurm (1972)	O'Grady, Voegelin and Voegelin (1966)
Tiwi ²	Tiwi	Tiwi	Tiwi (Wanuk)
Iwaidjan ³ Amurdak ⁴ Iwaidjic Iwaidja Mawng Garig Ilgar Wurrugu Marrgu	North-west Arnhem Land subgroup Mawung-Iwaydja Mawung Iwaydja Amurdag Marrgu Popham Bay (=Iyi)	Iwaidjan Wargbi Iwaidji Maung Maung Amarag Margu Garik	Iwaidjan Amaragic Iwaidjic Iwaidji Maung Margu
Gunwinyguan ⁵ Gunwinygic Kunbarlang Bininj Kunwok ⁶ Dalabon Jawoyn Warray Uwinymil Wulwulam Rembarrnga- Ngalakgan Rembarrnga Ngalakgan East Arnhem Wubuy Anindilyakwa ⁷ Ngandi	Arnhem Land ⁸ Rembarrnga/Ngalakan Rembarrnga Ngalakan Far east Arnhem Ngandi Nunggubuyu Aninhdhilyagwa Dalabon Gunwinjgu Gunwinjgu Gunbarlang Jarroyn/Warray Jawoyn Warray Uwinjmil	Gunwingguan Gunwinggic Gunwinggu Gunbalang Dangbon Dalabon Ngalagan Ngandi Rainbarngo Djawan Yangman Yangman Wardaman Wageman	Gunwingguan Gunwinggic Bininy Gunwiggu Gundangbon Muralidban Gunbalang Boun-Dalabon Ngalakgan Ngandi Rembarrnga Jawoyn Yangmanic Yangman Wardaman
Kungarakany ⁹	Gungarakanj	Warrai	
Mangarrayi ¹⁰	Mangarrayi	Nunggubuyu	Nunggubuyu
Gaagudju ¹¹	Gaagudju	Andilyaugwa	Groote Eylandtan
Maningrida ¹² Ndjébbana Nakara Gurr-goni Burarra	Maningrida Burarra Gurr-goni Nakkara Ndjébbana	Kungarakany	
Wagiman	Wagiman-Wardaman Wagiman Wardaman	Mangarai	Mangarai
Alawa ¹⁶	Alawa	Kakadju	Kakaduan
Marran Yugul Marra	Marra/Warndarrang Marra Warndarrang	Gunavidjian Gunavidji ¹³	Gunavidjian (Gunabidji)
Warndarrang		Nagaran (Nagara)	Nagaran (Nakara)
Wardaman Wardaman Yangman Dagoman ¹⁷		Bureran Burera Gorogone	Bureran Burarra-Gunnartpa Gorogone
Garrwan ²⁰ Garrwa Waanyi	Waanji/Garrwa subgroup ²¹ Waanji Garrwa	¹⁴	¹⁵
		Maran Mara Nawariyi Wandarang Alawa	Alawa Maran Mara Wandaran
		¹⁸	¹⁹
		Karawan Karawa Wanyi	Karwan Karawa Wanji

Darwin Region ²² Larrakiyan Wulna ²³ Larrakia Limilngan Umbulgarlan Umbugarla Ngomburr Gonbudj Bukurnidja Ngaduk ²⁴	Darwin Region Umbugarla Limilngan-Wulna Limilngan Wuna Larrakiya	Larakian Larakia Wuna	Larakic Larakia Wuna
Jarrakan Gija Miriwoong Gajirrebeng	Kitja/Miriwung subgroup (ND*) Kitja Miriwung	Djeragan Gidjic Gidja Guluwarin Lungga Miriwunic Miriwun Gadjerong	Djeragan Gidjic Gidja Guluwarin Lungga Miriwunic Miriwun Gadjerong
Bunuban Bunuba Gooniyandi	South Kimberley Subgroup (NF*) Bunuba Guniyandi	Bunaban Bunaba Gunian	Bunaban Bunaba Gunian
Worrorran ²⁵ Wunambalic Kwini Wunambal Gamberre Worrorric Unggumi Umiida Unggarrangu Worrorra Yawijibaya Winjarumi Ngarinyinic Worla Ngarinyin Andajin	North Kimberley Areal Group (NG) Worrorra Ungarinjin Wunambal	Wororan Wunambalic Wunambal Gambre Bagu/Gwini Wororic Worora Mailnga Unggumi Umida Unggarangi Yaudjibara Ngarinyinic Ngarinyin Munumburu Manungu	Wororan Wunambalic Wunambal Gambre Bagu/Gwini Wororic Worora Mailnga Unggumi Ungarinyinic Ungarinyin Munumburu Wolyamidi
Nyulnyulan ²⁶ Western Jawi ²⁷ Bardi Nyulnyul Jabir/Jabirr Nimanburru ²⁸ Eastern Yawuru Ngumbar ²⁹ Nyikina Jukun Warrwa	Fitzroy River Subgroup (NE*) Njigina Baardi	Nyulnyulan Nyulnyul/Bardi Yawuru Nyigina Warwa	Nyulnyulan Nyulnyul/Bard Jauor Nyigina Warwa
[Pama-Nyungan] ³⁰		Yanyulan	Yanyulan ³¹ (Yanyula)
Tangkic ³³ Lardil Yukulta Kayardild Minkin	Tangkic subgroup (NA*) Lardil Kayardild/Yukulta Kayardild Yukulta Minkin	[Pama-Nyungan] ³² Tangic Lardil Gayardilt Minkinan (Minkin)	Pama-Nyungan Tangkic Lardil Gayardilt Minkinan (Minkin)

Mirndi ³⁴ Western Ngaliwuru Nungali Jaminjung Eastern Ngarnka Binbinka Gudanji Wambaya Jingulu	NCa Mindi West Mindi Djamindjung/Ngaliwuru Nungali East Mindi Djingulu Ngarnka Wambaya	Djingili-Wambayan Djingili Wambayic Wambaya Ngarndji	Tjingilu Wambaya
		Djamindjungan Djamindjung Jilngali Ngaliwuru Nungali	Djamindjungan Djamindjung Jilngali Ngaliwuru Nungali
Southern Daly ³⁵ Murrinhpatha ³⁶ Ngan'gikurunggurr ³⁷	Daly River areal group ³⁸ Southern Daly Murrinh-patha Ngan.gi-tjemmerri	Murinbatan Murinbata	Garaman Garaman Murinbata Nangumiri
		Daly Moil Ngangikurrungur Brinken Maramanandji Maredan Marengar	Brinken Marithiel Maramanindji
Western Daly Marramaninyshi Marrithiyel ³⁹ Marri Ngarr ⁴⁰ Maranunggu ⁴¹	Western Daly Emmi Marrithiyel Marri Ngarr	Daly Yunggor-Matngala	
Eastern Daly Kamu Matngele ⁴²	Eastern Daly Matngele Kamu		
Anson Bay Batjjamalh Pungu Pungu Kiyuk ⁴³	Patjtjamalh		
Northern Daly Malak Malak Tyerratj	Malak-Malak	Wagaty Wadjiginy ⁴⁴ Maranunggu Ame Mulluk Mullukmulluk Djeraity	Mullukmulluk
Giimbiyu ⁴⁵ Erre Mengerrdji Urningangk	Giimbiyu	Urningangk	Uningank
		Mangerian Mengerai	Mangerian Mengerai

Tasmanian

Classifications generally do not discuss Tasmanian along with other Australian languages (though they do include Meryam Mir, which is Papuan, which is something of an inconsistency in my view). See Bowern (2012c) and discussion of sources in that paper for prior classifications. See also Chapter 77, this volume. Tasmanian languages are not classified in Dixon (2002) or O'Grady, Voegelin and Voegelin (1966); Wurm (1972:169) provides two classifications, one based on material by Schmidt and Capell; the other attributed to O'Grady and Rhys Jones. The two differ in geographic boundaries and in higher-level classifications. Both recognize the groups listed here; but O'Grady/Jones contrasts Northern vs the other groups, whereas Schmidt/Capell group Northern with Western. Note that this classification is tentative

and simply repeats information published elsewhere. Glottolog 4.3 (Hammarström et al 2020) also includes specific classification of Tasmanian languages, based on Bower 2012c and other sources. Here we include classifications based on published sources but recognize that these are tentative and do not take into account the substantial amount of unpublished work completed by the Tasmanian Aboriginal Centre.

Bower (current volume)	Dixon (2002)	Wurm (1972)	O'Grady, Voegelin and Voegelin	Glottolog 4.3
Southeastern Tasmanian Bruny Island Southeastern mainland Tasmanian		Southeastern		South-Eastern Tasmanian Bruny Island Southeastern Tasmanian Hinterland
Oyster Bay Oyster Bay Swanport		Mideastern		Oyster Bay Big River Little Swanport
Northeastern Tasmanian Ben Lomond Northeastern		Northeastern		North-Eastern Tasmanian Ben-Lomond-Cape- Portland NE Tasmanian Dialect Chain
Northern Tasmanian Port Sorrell Northern Tasmanian		Northern		
Western Tasmanian Northwestern Southwestern		Western		Weestern Tasmanian Port Sorell Western Coastal Tasmanian

Pama-Nyungan language subgroups

Macro groups are given as per Bouckaert, Bower, and Atkinson (2018), but should be regarded as tentative, as some of these groupings are not well supported in the tree. The 'Western' node, for example, is well supported, except for whether Yolngu and Warluwaric are included.

Bower (current volume)	Dixon (2002)	Wurm (1972)	O'Grady, Voegelin and Voegelin
Western			
Yolngu ⁴⁶	Yolngu	Murngic ⁴⁷	Murngic
Northern	Southern	Yulngu	Yulngu
Djinang	Dhuwal	Gubabuyngu	Gobabingo
Djinba	Dhay'yi	Djambarr-puyngu	Riraidjangu
Yan-nhangu	Ritharngu	Riraidjangu	Ritarungo
Djangu	Northern	Ritarngu	Wan'guri
Dhangu/Rirratjingu	Nhangu	Waramiri	Dalwongo
Golpa	Dhangu	Dalwongo	Yolngo
Southern	Djangu	Yulngo	Jarnango
Ritharngu	Western	Yarnango	Djariwidji
Central	Djinang	Djinang	Jandjinung
Dhay'yi	Djinba	Djinba	Yulngi
Dhuwal			Djinba
Dhuwala			

Warluwaric ⁴⁸ Yanyuwa Southern Warluwarra Bularnu Wakaya Yindjilandji	Ngarna Yanyuwa Southern Ngarna Wagaya Bularnu Warluwara	Yanyula [non-Pama-Nyungan]	Yanyula [non-Pama-Nyungan]
		Wakaya-Warluwaric Wakaya Warluwara	Warluwaric Warluwara
			Wakayic Wakaya
Warumungu ⁴⁹	Warumungu	Waramungic (Waramungu)	Warumungic (Warumungu)
Ngayarta Yapurarra Ngarluma Ngarlawangga ⁵⁰ Nhuwala Martuthunira Panyjima Palyku, Nyiyaparli ⁵¹ Nyamal Kurrama Jurruru Kariyarra Ngarla Yindjibarndi Yinhawangka	Gasoyne River to Pilbara Pilbara/Ngayarta Nhuwala Martuthunira Panyjima Yintjiparnrti Ngarluma Kariyarra Tjurruru Palyku Nyamal Ngarla	Southwest ⁵² Ngayarda Ngarla Nyamal Bailko Kurrama Kariera Mardudunera Binigura Noala	Southwest Ngayarda Ngarla Nyamal Bailko Kurrama Kariera Mardudunera Binigura Noala
Kartu Nhanda cluster Malgana Nhanda Amangu ⁵³ Wajarri Kalaamaya ⁵⁴ Badimaya Thaagurda ⁵⁵ Yingkarta ⁵⁶	Moore River to Gascoyne Watjarri Watjarri Parti-maya Cheangwa Nana-karti Natingero Witjaari Nhanda Malkana Yingkarta	Kardu Maia Inggarda Malgana Nanda Muliara Wadjeri	Kardu Maia Inggarda Malgana Nanda Muliara Wadjeri

<p>Wiilman Northern: Wajuk Nyaki Nyaki Balardung Nganakarti</p>			
<p>Western Desert (Wati)⁶⁰ Warnman Northern: Manjiljarra Kukatja Wangkajunga Yulparija Southeastern: Antakirinya Kokatha Kartujarra⁶¹ Putjarra Ngalia Ngaanyatjarra Nyaanyatjarra Pitjantjatjara- Yankunytjatjara Pintupi-Luritja Tjupan Kuwarra Cunedelee Wangka</p>	<p>Western Desert language</p>	<p>Wati Wanman Kardutjara and others</p>	<p>Wati (Western Desert) Wanman Kardutjara and others</p>
<p>Marrngu⁶² Karajarri Nyangumarta Mangala</p>	<p>Mangunj Marrngu subgroup Njangumarta Karatjarri Mangala</p>	<p>Marrngu Nyangumarda Karadjeri Mangala</p>	<p>Marrngu Nyangumarda Karadjeri Mangala</p>
<p>Ngumpin-Yapa⁶³ Ngumpin Walmajarri Bilinarra Karranga Ngarinyman Wurlayi Gurindji Mudburra Jaru Malngin Wanyjirra Jiwarliny Ngaridi Yapa Warlmanpa Warlpiri</p>	<p>Northern Desert Fringe Edgar Range to Victoria River Walmatjarri Djaru Gurindji Mudburra Yapa Warlpiri Ngaridi Warlmanpa</p>	<p>Ngarga Walmanba Walbiri Ngaridi Wanayaga Ngalia⁶⁴ Ngumbin Mudbura Gurindji Djaru Malngin Ngarinman Bunara Tjiwarliny-Wolmeri Nyangga⁶⁵ Wirangu Yura subgroup³²</p>	<p>Ngarga Walmanba Walbiri Ngaridi Wanayaga Ngalia³³ Ngumbin Mudbura Gurindji Djaru Malngin Ngarinman Bunara Tjiwarli-Wolmeri Nangga³² Wirangu Yura subgroup³²</p>
<p>Northern</p>			
<p>Western Torres⁶⁶ Kala Lagaw Ya Kalaw Kawaw Ya</p>	<p>A Torres Strait group⁶⁷ A1 West Torres A2 East Torres⁶⁸</p>	<p>Mabuiagic Kaurareg Dauan-Saibai</p>	<p>Maguiagic Kaurareg Dauan-Saibai</p>
<p>Kukatj⁶⁹</p>	<p>[in Paman]</p>	<p>Kalibamu Kukatyi⁷⁰</p>	<p>Kalibamu</p>

<p>Greater Maric⁷¹ Dharambali⁷² Dharumbal⁷³ Guynmal Mbabaram Wulguru Wulguru Coonambella⁷⁴ Bindal North Maric Gudjal Gugu Badhun Warungu East Maric Giya Ngaro Yuru Biri⁷⁵ Biri Yilba Yangga Miyani Wirri Barna Yetimarala Gabalbara Garinybal Barada Yambina Wangan Yiman Ganulu Gangulu Gayiri Dhungaloo⁷⁶ South Maric Wadjabangayi Yandjibara Badjiri Gunggari⁷⁷ Guwamu Wadjigu Gungabula Bidjara Gunya Margany Yiningay Yagalingu Yirandhali⁷⁸</p>	<p>Lower Burdekin⁷⁹ Cunningham Gorton O'Connor</p> <hr/> <p>Rockhampton/Gladstone Darambal Bayali⁸⁰</p> <hr/> <p>Greater Maric Maric proper Bidjara Biri Warungu Ngaygungu Yirandhali Mbabaram Mbabaram Agwamin Proserpine Ngaro Giya Guwa/Yanda⁸¹ Guwa Yanda Kungkari Kungkari Pirriya</p>	<p>Pama-Maric Mari Mandandanji Koa Ilba</p>	<p>Pama-Maric Mari Mandandanji Koa Ilba</p>
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<p>Paman⁸²</p> <p>Northern Paman Linngithigh Yinwum Yatay Gudang Luthigh Anguthimri⁸³ Ndra'ngith Alngith Aritinngithigh Yupngayth Muthanthi Mpakwithi Mpalityan Mbeiwum <i>Uradhi group:</i> Yadhaykenu Uradhi Atampaya Wuthathi Angkamuthi</p> <p>Middle Paman <i>Ump.-Yinty.</i> Umpithamu⁸⁴ Yityingka <i>Northeastern</i> Kuuku-Ya'u Kaanju Umpila Kuuku Yani <i>Wik</i> Wik Alkan Wik Paacha Wik Ep Wik Ngathan Wik Me'anh Wik Ngatharr Wik Mungkan Wik Iyanh Kugu-Muminh Ayapathu Pakanh Kugu Nganhcara</p> <p>Alaya-Athima⁸⁵ <i>Thaypanic</i> Aghu-Tharnggala Kuku Thaypan⁸⁶ <i>Others</i> Ikarranggal</p>	<p>B* North Cape York Northern Paman Gudang Uradhi Wuthati Luthigh Yinwum Anguthimri Ngkoth Aritinngithigh Mbiywom Andjingith</p> <p>Umpila Wik Wik-Ngathan Wik-Me'nh Wik-Mungknh Kuku-Muminh Bakanha Ayabadhu</p> <p>Western CYP Upper SW Thaayorre Oykangand Ogh-Undjan Coastal SW Yir-Yoront Koko Bera Kok Thaw(a) Kok Narr Norman Pama Kurtjar Kuthant</p>	<p>Central Pama Oykangand Okunjan Aghu Tharnggala</p> <p>North-eastern Pama Ompila Kandju Koko Ya'o Northern Pama Uradhi Mpalitjan Yinwun Awngthim Alngith Nggoth Aritinngithig Mbeiwum</p> <p>Middle Pama Wik Munkan Wik Muminh Wik Mean Wik Ep Wik Ngatara Bakanha Western Pama Yir Yoront Thaayorr Coastal Pama Koko Pera Gulf Pama Kunggara</p> <p>Mbabaram</p> <p>Karantic Karanti⁹¹</p> <p>Yidinic Yidin Dyabugay</p> <p>Yalanjic Gugu Yalanji Koko Yimidhir Koko Buyundji Koko Yawa</p>	<p>Yara Nawagi Atherton Pama Tjapukai Idinji Eastern Pama Koko Imudji Muluridji Bay Pama Lamalama Northern Pama Otati Mpalitjan Jinwun Awngthim Nggoth Aritinngithig Mbeiwum</p> <p>Middle Pama Ompila Kandju Wikmunkan Wik Muminh Wikmean Wikepa Wikngatara Taior</p> <p>Western Pama Jir Joront Koko Pera Gulf Pama Kunggara Southern Pama Ogondyan Aghu Tharnggala</p>
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<p>Ogh-Alungul Ogh-Angkula Agu Alojja Koogobatha Takalak Ogunyjan Koko Dhawa Ogh-Awarrangg Kokiny Athima Awu Alaya Southwest Paman <i>RR past group</i> Kuuk Thaayorre Uw-Oykangand Uw-Olgol Uw-Olkola Kuuk-Narr <i>NT past</i> Koko Bera Yir Yoront Yirrk-Mel <i>Norman Pama</i> Kuthant Garandi Kurtjar Ribh Walangama⁸⁷ Lamalamic Umbuygamu Lamalama <small>Rimanggudinhma⁸⁸</small> Flinders Island⁸⁹ Barrow Point Guugu-Yimidhirr Mbara Kuuk Yak Agwamin Yalanjic⁹⁰ Kuku Yalanji Muluriji Gugu Wakura Gugu Djangun Wagaman Yidinyic Yidiny Djabugay</p>	<p>Umbindhamu Southeast Cape York Lama Morroba-Lama Lama-Lama Rimang-Gudinhma Rimang-Gudinhma Kuku-Wara Bathurst Head Flinders Island Marrett River Guugu Yimidhirr Guugu Yimidhirr Barrow Point Thaypan Kuku-Thaypan Kuku-Mini Takalak Walangama Mbara Kukatj</p>	<p>Lamalamic Umbuykamu Umbindhamu Umbuykamu Wurungung Parimankutinma Wurungung Lamalama Coastal Lamalama Tablelands Lamalama</p>	
		<p>Walangama ?</p>	
<p>Mayi⁹² Wanamara Ngawun Mayi-Kulan Mayi-Kutuna Mayi-Yapi Mayi-Thakurti</p>	<p>Mayi Ngawun Mayi-Kutuna</p>	<p>Mayapic Maykulan Wanamara Mayapi</p>	<p>Mayapic Maykulan Wanamara Mayapi</p>
<p>Dyirbalic Dyirbal Nyawaygi Warrgamay</p>	<p>Herbert River Dyirbal Warrgamay Nyawaygi Manbara⁹³</p>	<p>Nyawigic Nyawigi Wulgurukaba Dyirbalic Dyirbal Wargamay Bandyin ?</p>	<p>⁹⁴</p>

Kalkatungic ⁹⁵ Yalarnga Kalkatungu	Kalkatungu Areal group Kalkatungu Yalarnga	Kalkatungic Kalkatungu	Kalkatungic Kalkatungu
		Yalarngic ⁹⁶ Yalarnga	Yalarngic Jalanga
Southeastern			
Waka-Kabi Wuli Wuli Barunggam Bayali Waka Waka Duungidjawu Batyala Guweng Gubbi Gubbi Gooreng Gooreng	Central Eastern Waka-Gabi Dappil Gureng-Gureng Gabi-Gabi Waga-Waga Bigambal Yugambal Bandjalang Gumbaynggirr	Waka-Kabic Miyán Dungidjau Djakunda- Korenggoreng Than Dalla-Batjala Taribeleng Kingkel Wadja Darambal	Waka-Kabic Miyán Keinjan (Dungidjau) Djakunda- Korenggoreng Than Dalla-Batjala Taribeleng Kingkel Wadja Darambal
Turubulic ⁹⁷ Nunukul Tubul Yagara Janday Guwar ⁹⁸	Yagara Guwar	Durubulic Gowar Djendewal Yagara(bal)	Durubulic Gowar Djendewal
Muruwaric ⁹⁹ Muruwari Barranbinya	<with Yuin-Kuri>	Marawari	Muruwari
Central-NSW Ngiyambaa Wailwan Wiradjuri Gamilaraay ¹⁰⁰ Yuwaliaay Yuwaalaraay		Wiradjuric Main Wiradjuri Wonggaibon Kamilaroi Yualyai Wiriwiri ¹⁰¹ Nguri ? Barunggama ? Miyal Bigumbil	Wiradjuric Main Wiradjuri Wonggaibon Kamilaroi Yualyai Wiriwiri Nguri Barunggam Miyal Bigumbil
Bigambal ¹⁰² Bigambal Guyambal Yugambal	<with Waka-Kabi>		
Bandjalangic ¹⁰³ <i>Gold Coast</i> Pimpama Southport Burleigh Heads <i>Condamine/Upper-Clarence</i> Geynyan Gidhabal Dinggabal Galibal <i>Middle Clarence</i> Waalubal Biriin Wudjehbal <i>Lower Richmond</i> Wiyabal Nyangbal Bandjalang <i>Tweed-Albert</i> Minyangbal Yugambeh Nerang Ck Ngahnduwal <i>Copmanhurst</i>		Bandjalangic Gidabal Giabalic Giabal Keinyan	Bandjerangic Bandjarang Bandjalangic Giabal Yugumbal

Nganyaywana ¹⁰⁴ Nyanyaywana Southern Anaiwan	<with NSW>	Aniwan	
Lower Murray ¹⁰⁵ Yitha Yitha Keramin, Kureinji Ngintait, Ngarkat, YuYu Ngaiawang Ngarrindjeri, Yaraldi Peramangk	Lower Murray Yaralde Ngayawang Yuyu Keramin Yitha-Yitha	Narrinyeric Korni Tanganekald Mirili Nganguruku- Ngaiawang Ngult Maraura-Ngintait	Narrinyeric Korni Tanganekald Mirili Nganguruku- Ngaiawang Ngult Maraura
Yuin-Kuri Sydney-Hawkesbury Dhanggati ¹⁰⁶ Darkinyung <i>Sydney Language</i> Dharuk Eora Kuri <i>HRLM</i> ¹⁰⁷ Awabakal Wanarruwa <i>Lower North Coast</i> Birrpai Worimi Katthang Yuin ¹⁰⁸ <i>Northern Inland</i> Ngun(n)awal Gandangara <i>Northern Coastal</i> Dharawal Dhurga Dharumba ¹⁰⁹ <i>Southern Inland</i> Ngarigu Omeo language ¹¹⁰ <i>Southern Coastal</i> Thawa Djirringany	N Central New South Wales ¹¹¹ Awabakal/Gadjang Awabagal Kattang Djan-gadi/Nganjaywana Thangatti Nganjaywana Central Inland NSW Gamilaraay Wiradhurri Ngiyambaa Muruwari Barranbinja O Sydney Dharuk Darkinjung P Southern NSW Southern tablelands Gundungurra Ngarigo NSW Coast Dharawal Dhurga Djirringani Thawa	Yuin-Kuric Yuin Dhawa Dharawal Ngarigu Ngunawal Kuri Gandangara Darkinung Wanarua Kattang Ngamba (Dangadi) Yukambal ¹¹²	Yuin-Kuric Yuin Thaua Thurawal Ngarigo Ngunawal Gandangara Kuri Darkinung Wanarua Worimi Ngamba (Dangadi) Jukambal ¹¹³
Gumbaynggirc Gumbaynggir Yaygirr Baanbay	<with Waka-Kabi (Central/Eastern)>	Gumbainggaric Gumbainggar Yegir	Gumbainggaric Kumbainggar Yegir Yegir
Eastern Victoria Kurnai group ¹¹⁴ Kurnai Muk-Thang Nulit Thanguai Bidawal Dhudhuroa ¹¹⁵ Waywuru ¹¹⁶	(Q) Muk-thang (Kurnai) (R) Upper Murray Pallanganmiddang Dhudhuroa	Yaithmathangic Yaithmathang Duduruwa Pallangamiddah	Kurnic Brataulong ¹¹⁷ Yaitmathangic Jaitmathang
Kulin ¹¹⁸ Bunganditj Kolakngat ¹¹⁹ Wathawurrung Western ¹²⁰ Tjapwurrung Jardwadjali Djadjawurung	West Victorian areal group Kulin Wemba-Wemba Wadha-wurrung Wuy-wurrung Buwandik Buwandik Kuurn-Kopan-Noot	Kulinic Kulin Wergaia Wudjawuru Woiwuru Narinari Druai Marditjali	Kulinic Kulin Djadjala Wudjawuru Taungurong Druai Marditjali Tjapwurung

Mathi ¹²¹ Ladji Ladji Mathi-Mathi Yari-Yari Wathi-Wathi ¹²² Wemba Wemba- Wemba ¹²³ Nari Nari Warrnambool Wotjobaluk Eastern Woiwurrung Boonwurrung Daungwurrung	Kolakngat	Gulyan Kurung Kurnic ¹²⁴ Brataolung	Gulyan Kurung
Yortayortic Yorta Yorta YabulaYabula	Yota/Yabala Yota-Yota Yabala-Yabala	Yotayotic Yotayota Eastern Banygarany	Yotayotic Jotijoti Baraparapa Jabulajabula
Central ¹²⁵			
Yardli ¹²⁶ Malyangapa Yardliyawarra Wadikali		Yalyi Nadikali-Malyangapa ¹²⁷	Yalyi Karenggapa/Wadikali
Thura-Yura ¹²⁸ Ngadjuri Nauo Parnkala Nukunu Adnyamathanha Kaurna Narrungga Guyani Wirangu	Spencer Gulf Kadli Yura Parnkalla Adnjamathanha Wirangu		[Southwest] Nangga Wirangu Yura Nawu Pangkala Kuyani Wailpi/ Adhnyamathanha Jadliaura/Nukuna
Paakantyi ¹²⁹ Kurnu Paaruntiyi Pantiykali Paakantyi Southern Paakantyi Parrintyi Wilyakali	Baagandji	Darling Kurnu	Darling Kula/Kurnu
Arandic Kaytetye Aranda Anmatyerr Alyawarr Antekerrepenhe Ayerreyenge Central Arrente Western Arrarnta Eastern Arrente Lower Aranda ¹³⁰	Arandic Arrente Kaytetj	Arandic Artuya Kaititj Urtwa Alyawarra Lower Aranda	Arandic Artuya Kaititj Urtwa Iliaura Lower Aranda
Karnic ¹³¹ Northern Pitta-Pitta Wangkayutyuru Arabana Wangkangurru	Lake Eyre Basin (WA) North and West Pitta-Pitta Wangka-yutjuru Arabana/Wangkangurru	Pittapittic Ulaolinya Wangkadjera-Pittapitta Mitakudic Mitakudi	Pittapittic Ulaolinya Wangkadjera-Pittapitta Mitakudic Mitakudi

Central Mayawali Karuwali Mithaka Karangura	Central Yandruwandha Diyari Ngamini Midhaga	Arabanic Arabana	Arabanic Arabana
Western Pirlatapa Thirarri Diyari Ngamini Yarluyandi Yawarrawarrka Yandruwandha Nhirrpi	South-west Wangkumara Galali Badjiri	Yandic Yanda	Yandic Janda
Kungkarric Kungkarri Pirriya		Dieric Karna Dieri Pilatapa Jauraworka Karendala	Dieric Karna Dieri Pilatapa Jauraworka Karendala
Eastern Wangkumara ¹³² Ngantangarra Garlali Punthamara		Ngura Punthamara Badjiri ¹³⁴	Ngarna Punthamara Kalali Badjiri ⁵⁶
Yandic ¹³³ Guwa Yanda			

Papuan Language

Meryam Mir (Piper 1989); Eastern Trans-Fly (Papuan).

New Indigenous Languages¹³⁵

- **Creole Languages**
 - **Yumplatok & affiliated north-eastern creole languages**
 - Yumplatok; also known in the literature as Torres Strait Creole, Broken (Shnukal 1988, 1991)
 - Cape York Creole; from the Northern Peninsula Area of Cape York (Crowley & Rigsby 1979, with some commentary in Harper 2001)
 - Lockhart River Creole (Mittag 2016)
 - Napranum Creole (Carter, Angelo & Hudson in press)
 - **Kriol & the Kriol sphere of influence¹³⁶**
 - Kriol (Schultze-Berndt et al 2013; Fitzroy Valley Kriol: Hudson 1985; Ngukurr & Bamyili/Barunga Kriol: Sandefur 1979)
 - Eastern periphery

- Mornington Island Creole (Nancarrow 2014; Community negotiations, Language Perspectives 2015a)
 - Kowanyama Creole (Community negotiations, Language Perspectives 2017)
 - Southern periphery
 - Alyawarr English (potentially also categorised as a blended language; Dixon, 2017, 2018)
 - Wumpurrarni English (potentially also categorised as a blended language; Disbray 2008a)
- **Superdiverse aboriginal settlements**¹³⁷
 - Yarrie Lingo (Angelo Fraser & Yeatman 2019; Community-negotiated project, Language Perspectives 2009)
 - Woorie Talk (Munro & Mushin 2016; Community-negotiated project, Language Perspectives 2015b)
 - Cherbourg Talk (Mushin, Angelo & Munro 2016; Community-negotiated project, Language Perspectives 2009)
- **Potential creole languages**
 - Palm Island (Superdiverse Aboriginal Settlement in northern Queensland)
 - Murdi Language (southwestern Queensland; Community-negotiated projects, Language Perspectives 2009, Munro [Unpublished])
 - ‘heavy Aboriginal English’ (e.g. north-western Western Australia)¹³⁸
- **Mixed languages**
 - Light Warlpiri (O’Shannessy, 2005, 2009, 2013, and much other work)
 - Gurindji Kriol (McConvell, 1988a, 2002; McConvell & Meakins, 2005; Meakins, 2008b, 2010, and much other work)
 - Modern Tiwi (Lee, 1987; McConvell 2010; Wilson, Hurst & Wigglesworth 2018)

- **Languages not otherwise classified**
 - Dhuwaya (Amery 1985)
 - Areyonga Teenage Pitjantjatjara (Langlois 2004)
 - Pidgin Ngarluma (Dench 1998a)
 - Broome Pearling Lugger Pidgin (Hosokawa 1995)
 - Contemporary Noongar (Douglas 1976, Rooney 2011)

Sign Languages

After much consideration, Sign Languages are not further differentiated in this classification. This is because it is currently very unclear how many Sign Languages are and were present in Aboriginal Australia, and how best to delineate them. See Green, Chapter 52, this volume, for discussion.

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¹ Though in Ngumpin-Yapa, $r > rl$ in this position; cf. Warlpiri *marla* (see further Laughren and McConvell 2004).

² See, for example, (Osborne 1974; Wilson 2013).

³ Per Evans (2000).

⁴ See further Handelsmann (1991); Mailhammer (2008)

⁵ See Evans (2003a) and much subsequent work.

⁶ Bininj Gunwok (or simply Gunwok) includes Kunwinjku, Kune, Mayali, and other varieties, per Evans (2003a). I treat these as varieties rather than listed languages for reasons of consistency with other areas of the country, but a case could probably be made for including more varieties here.

⁷ See van Egmond (Chapter 68, this volume) and for more detail van Egmond (2012) for Anindilyakwa's genetic position.

⁸ Though Dixon (2002) groups many of the languages of Arnhem Land together in a single group, I do not consider there to be sufficient evidence of genetic relationship to do so at this point. Dixon (2002) gives both genetic and "areal" groupings. I stick with genetic relationships as I do not consider Dixon's groupings either sufficiently consistent or sufficiently supported by evidence.

⁹ See Parrish (2008); for this and other isolates of North Australia, see also Bowern (2017).

¹⁰ The position of Mangarrayi is uncertain - as well as considering it an isolate, some have assigned it to Gunwinyguan (e.g. Alpher, Evans & Harvey 2003), some to Marran (e.g. Merlan 2003).

¹¹ See Harvey (2002).

¹² See Carew and Beltran (Chapter 70, this volume). See Green (2003) for possible arguments around the relationships between the Maningrida languages and others in Arnhem Land.

¹³ This is the same language as Ndjébbana.

¹⁴ Included in Gunwinyguan.

¹⁵ Included in Gunwinyguan.

¹⁶ Alawa and Marran (including Marra, Yukul, and Warndarang) was proposed in OVV and followed by Heath (1978a) and Sharpe (1976b). Harvey (2012) shows that the relationship between Marra and Warndarrang is not close, and the similarities are most likely due to language

contact. Sharpe (1976b) is agnostic about the relationship between Alawa and Marra. I follow Harvey (2012) here in treating these languages as three separate families (two isolates, and Marra related to Yukul, following Harvey 2012 and Baker 2010).

¹⁷ Tentative as separate language; could also be considered a variety of Wardaman.

¹⁸ Subgroup of Gunwinyguan and listed there.

¹⁹ Subgroup of Gunwinyguan and listed there.

²⁰ See Harvey (2009). I consider this ‘not proven’ (see also notes on Tangkic below) and thus conservatively keep Garrwan as a separate group, distinct from Pama-Nyungan for now.

²¹ Dixon’s (2002) intent is unclear here. Dixon calls this as “subgroup”, but does not say which higher-order group it belongs to. In terms of alpha-numeric classification, this group is included with groups which other authors include as Pama-Nyungan; however, given that Dixon (1997, 2001, 2002) does not accept the unity of Pama-Nyungan, is it unclear on what basis we should assign Garrwan to that grouping.

²² Harvey (2001: 9) considers this group a Sprachbund, and should be considered very tentative.

²³ Also known as Wuna (cf. Harvey 2001).

²⁴ Treatment as a distinct language is tentative.

²⁵ Classification for Wororan broadly follows (Clendon 2014; McGregor & Rumsey 2009). That there are three branches is not in doubt, but the divisions within each group are unclear. See also Spronck (Chapter 69, this volume), who includes more varieties.

²⁶ See Bower (2012a).

²⁷ Jawi is listed as distinct from Bardi. Though the two varieties are now close, there is considerable evidence that the two have partially merged over the course of the 20th Century, given extensive language contact on Sunday Island and the great loss of Jawi people, particularly to influenza and diphtheria. That is, the languages were likely much more different, both lexically and morphologically, than the most recent records suggest.

²⁸ Treated as distinct by Bower (forthcoming) on the basis of material collected by A.R. Peile, which is the only extensive material for the language. The material in Nekes and Worms (1953) for Nimanburru appears to be much more similar to Nyulnyul.

²⁹ Ngumbarl is sometimes said to be a variety of Jukun (cf. Nekes and Worms 1953), but work with Bates’ discussion of Ngumbarl material recorded from Billinge (cf. Coyne 2005) suggests

that it is sufficiently different from Jukun and Yawuru that it should be treated as a distinct language.

³⁰ See below for Pama-Nyungan groups.

³¹ In Pama-Nyungan in subsequent classifications; see Yanyuwa (Warluwarric).

³² Tangkic is Pama-Nyungan in this classification but Minkin is non-Pama-Nyungan and a distinct family.

³³ Bowern (2020) discusses the variable placement of Tangkic as a sister to Pama-Nyungan or a subgroup within it. While early classifications (e.g. O'Grady, Wurm & Hale 1966) placed Tangkic as one of the primary subgroups of Pama-Nyungan on primarily typological grounds, since Evans (1990; 1995) and Blake (1990) it has been customary to treat Tangkic as non-Pama-Nyungan, albeit a close relative (the closest family apart from Garrwan; though see Harvey (2009) for discussion). Evans' basis for classification was the pronominal system, with the reconstructions of Tangkic forms being rather different from those typically reconstructed for Pama-Nyungan (e.g. by Blake 1990). That in itself might not be evidence against shared genetic relationship however, since, after all, pronouns do change, and other Pama-Nyungan subgroups (e.g. Yolŋu, Karnic) are reconstructed with at least some forms other than those reconstructed to Proto-Pama-Nyungan (Schebeck 2001; Bowern 1998). Bouckaert, Bowern, and Atkinson (2018) include Tangkic among the groups discussed in their phylogeny of Pama-Nyungan. In their tree, Tangkic is a subgroup within Pama-Nyungan, not a sister to the Pama-Nyungan family. This classification is based on sparse lexical cognates, but ones which might a priori be thought to be indicative of shared genetic relationship. We might therefore say that Tangkic is a "sparse evidence" question - that is, there are sufficient differences between the reconstructed pronominal systems to cast doubt on the genetic affiliation. Lexical data is historically distrusted in Australia (see e.g. Alpher 2004). The best we might say at this point is that the claim is "not proven". BBA (2018) also includes Nguburindi, Yangkaal/Yangarella and Ganggalida as additional varieties. The placement of Minkin is doubtful; see Evans (1990).

³⁴ See Harvey (2008).

³⁵ Daly language families are per dalylanguages.org (by Ian Green and Rachel Nordlinger). Please note the language/dialect classification given there: "Language names listed vertically are considered by us, as linguists, to be in a dialectal relationship with each other. However, it is important to remember that from a community perspective all of the varieties listed here are

different languages, with those listed vertically just being ‘close’ to each other.” For consistency with the rest of the map I have used the “language” level relationships and listed the first of the names on the map; other names are given in the notes.

³⁶ Also includes Murrinh Kura.

³⁷ Also includes Ngen’giwumirri and Ngan’gimerri, per dalylanguages.org.

³⁸ Dixon (2002) groups all languages of the Daly together as a single family but I follow Green and Nordlinger’s extensive research on the languages in question.

³⁹ This also includes Marri Tjevin, Marri Ammu and Marri Dan, per dalylanguages.org. One language name is given for reference in the classification but others are included on the language map.

⁴⁰ Also includes Magati Ke, per dalylanguages.org.

⁴¹ Also includes Emmi, Menthe, per dalylanguages.org.

⁴² Also includes Yunggurr.

⁴³ The status of this language is unclear. The language name is solely known from other groups, who say that it was different from the closest languages to the mainland. It is therefore tentatively included. See further Ford (1990) and Bower, Chapter 7, this volume, for discussion. Note that Kiyuk is not listed in dalylanguages.org, which is otherwise the main source both classification and mapping of languages of the Daly region (see also Tryon 1974).

⁴⁴ This is the name of the tribe/group of which Batjjamalh/Bachamal is the language name. Wakac is a Batjjamalh word for ‘beach’, hence ‘Wagaty’ (Ford 1990).

⁴⁵ See Campbell (2006).

⁴⁶ This grouping is tentative. Central and Southern Yolngu are clear (and group together), but it is not clear whether Northern Yolngu is a group of its own, or rather a set of languages that branch off sequentially from Proto-Yolngu, and therefore do not form a discrete subgroup of their own. Or rather, it is clear that some “Northern” languages group together, but it is not clear that all of them do. BBA (2018), for example, find no single Northern group, but rather a series of splits. Note further that the position of Yolngu, Warluwarric, Kalkatungic, and Arandic are poorly supported in the BBA tree and so the classification of those groups with respect to other Pama-Nyungan groups should be regarded as tentative.

⁴⁷ Wurm (1972:149) also gives a classification based on work by Bernard Schebeck, but it's not clear how the clan lect mapping relates to the classification given here, since Wurm does not make it clear which names he considers equivalent.

⁴⁸ BBA (2018) strongly supports earlier classifications where Warluwarra and Bularnu and a group, Wakaya and Yindjilandji are a group, and those two groups go together as a sister to Yanyuwa (with the groups of similar time depths).

⁴⁹ Warumungu is usually treated as a family-level isolate within Pama-Nyungan. Both Bown and Atkinson (2012) and Bouckaert, Bown, and Atkinson (2018) found that Warumungu was grouped within Ngumpin-Yapa; the possibility of loans influencing the classification means that I treat this as tentative and here use the more conservative classification.

⁵⁰ Doug Marmion (pers comm) comments that classification of this language is very uncertain, and should perhaps be in a group on its own with Nyiyaparli. Austlang suggests that Ngarla, Ngarlawangga and Yinhawangka are either the same language or closely related varieties. Since there appears to be some uncertainty here, I retain distinct names but do so tentatively. Classifications of "Yinhawangka" have varied substantially (between Wati, Ngayarta, and Wajarri group, per Austlang). On the placement of Nyiyaparli and the names Nyiyaparli and Palyku, see also Battin (2019).

⁵¹ Equivalent to Nyiyaparli per Austlang, following Dench (1998b,c).

⁵² Both OVV and Wurm have a large "Southwest" group which covers most of the Pama-Nyungan languages of Western and South Australia. It is not exactly equivalent to the "Western" group in BBA (2018), though Wurm and OVV's Southwest, plus Warumungu, is a monophyletic group in BBA.

⁵³ Amangu is sometimes classified as a Noongar variety; it also appears to be been an alternative name for Nganakarti (which is clearly Noongar). The grouping within Kartu is per Blevins (2001a).

⁵⁴ Classification is tentative.

⁵⁵ It is not clear whether Thaagurda is closely related to Malgana or is a distinct language (cf. Austlang W15).

⁵⁶ Yingkarta is a sister to Kanyara-Mantharta in Bouckaert, Bown and Atkinson (2018). Kartu and Kanyara-Mantharta are not particularly close relatives; Kartu is sister to the Southwest

languages, while Kanyara-Mantharta is sister to Ngayarta in a “Pilbara” group. Those two clusters form a group. I retain the Kartu classification here pending further research.

⁵⁷ Some group Galaagu and Marlpa together with Ngatjumaya as a single language (or use Marlpa as the cover term for the language).

⁵⁸ There seems some disagreement about whether the name is spelled Mirniny or Mirning. I have used Mirniny per the Goldfields Language Centre.

⁵⁹ Within the Nyungar/Noongar group, it is clear that there are at least three distinct groups. However, it is not clear which varieties go with which, and sources differ on how the varieties are divided. These groups follow Dench (1994); Douglas (1976) also uses three groupings, but not the same three (the differences concern where the Southwestern languages group). See further Chapter 74, this volume for further discussion. BBA (2018) used 10 wordlists across the southwest and recovered the three-way Natju-Mirniny-Nyungar grouping. Within Nyungar/Noongar, subgrouping were less clear, in part because southwestern was overrepresented compared to the other varieties. Amangu appears in Noongar classifications but per Blevins (2001) is classified as Kartu. Amangu is also an alternative name for Nganakarti, a Noongar variety. Language locations and named varieties are based on the Noongar learner’s guide, using their map *Noongar boodja wongki – Noongar dialect map (Noongar waangkiny 2014)*, but have been adapted slightly given other information from surrounding regions (including the relationship between the names Amangu and Nganakarti, for example).

⁶⁰ See Babinski et al, Chapter 75, this volume, for note on the subgroup name. There is more structure in the group than is presented here, but as with Nyungar/Noongar above, sources disagree. There is, for example, agreement that the northern Wati languages are different from the southeastern ones. Others have discussed Western Desert as a dialect chain; sources also agree that Warnman is different from the other languages in the group. The Goldfields language Centre gives four regions for Western Desert varieties. Babinski et al (Chapter 75, this volume) discuss data from 11 varieties and show how subgrouping within the Wati group is difficult. Language placement for the map should be considered approximate, since sources provided conflicting information.

⁶¹ The remaining Wati/Western Desert varieties are not yet classified.

⁶² See Weber (2009).

⁶³ See McConvell and Laughren (2004).

⁶⁴ Classified as Western Desert in Bower.

⁶⁵ See Thura-Yura in the Central group.

⁶⁶ See Alpher et al. (2008) for discussion surrounding views over whether the Western Torres Strait group is Pama-Nyungan.

⁶⁷ Dixon (2002): “These are Papuan languages, not closely related to each other. A1 has a significant Australian substratum.”

⁶⁸ Listed below in “Other” languages in Bower’s classification, since per Piper (1989) and Alpher et al. (2008), Eastern Torres is a Papuan language related to other Trans Fly languages, and Western Torres is Pama-Nyungan. In Bouckaert, Bower and Atkinson (2018) and Bower and Atkinson (2012), Western Torres’ closest relative is Kukatj (see below), but the lexical evidence is very slim, so that is not followed here.

⁶⁹ Breen’s (1976:151) contrastive study of Gog-Nar and Gugadj has some discussion of classification. Wurm (1972) places Kukatj in a group on its own; Breen suggests it is possibly part of Pama-Maric (based on lexical comparison); he suggests that its closest neighbors in terms of classification are not the Norman Paman languages which are geographically closest.

⁷⁰ Said in Wurm (1972) to be of doubtful existence, along with Walangama and Karanti. See Breen (1976) for other discussion.

⁷¹ The comments made above for Western Desert/Wati and Nyungar/Noongar about complexities of classification also apply here. For the term ‘Greater Maric’, see Barrett (2005), though my composition of ‘Greater Maric’ is not the same as his. He includes Pirriya, Kungkarri, and Guwa as ‘Greater Maric’, whereas I class them within an expanded Karnic group. Barrett’s (2005) classification of Maric has three groups: North, East, and South; but there are numerous other varieties which are not included in his classification, particularly in the northwest of the Maric area where data are sparse. Note that both OVV and Wurm (1972) only include 3 Maric languages (though with other dialects listed), whereas even Dixon (2002), who normally “lumps” rather than “splits”, includes 5 in his “Maric proper” and 8 others in other affiliated groups. Sutton (1973:12) includes 34 Maric languages. BBA has South and East Maric as a group, but North Maric groups with Dyrbalic and the (previously unnamed) group including Bindal, Wulguru, and Coonambella. I consider this as tentative and flag this part of the classification as needing further clarification and detailed work with all available sources, and I note that even in this area, linguists differ about the number of varieties according to a “linguistic” classification.

Note that Bower's classification includes many more Maric varieties than previous classifications, part of the cause of differences in the number of languages recognized overall (see Chapter 7, this volume, for some discussion).

⁷² The grouping of Dharumbal within Maric is tentative. As Terrill (2002) notes, Dharumbal appears to have a number of Pama-Nyungan retentions which are not otherwise found in Maric languages, implying it should be a primary group within Pama-Nyungan, rather than a group within Maric.

⁷³ According to Terrill (2002), the language of Great Keppel Island, Wapabara, has considerable differences from Dharumbal. It could therefore be tentatively considered a distinct language.

⁷⁴ Austlang quotes Dixon (2002) and Donohue (2007) as treating Coonambella as a dialect of Wulguru; however, there appear to be sufficient lexical differences in the sources to treat them as different languages here.

⁷⁵ I am agnostic at present on the number of languages here. Clearly the dialectology of this area was complex. Breen (2009) includes the "Biri dialects" within a single language, but treats the rest as distinct (though with similar caveats to those given here).

⁷⁶ This name Dungaloo or Dhungaloo is known only, as far as I know, from a wordlist of 76 items by Hatfield at AIATSIS (PMS 4902). It is clearly a Maric language, and is here tentatively grouped with Biri and varieties. It is, however, sufficiently distinct to be included here, at least tentatively.

⁷⁷ There is some doubt about whether Mandandanyi is a distinct language. It is used as a language name in Barrett (2005), and is listed in Tindale (1974); Tindale gives Kogai as a language name and Mandandanji, Kunggari, and Barrungam as group names. However, Barrungam (per Kite and Wurm 2004 and earlier Holmer 1983) spoke Waka-Waka. Given this uncertainty, I retain Mandandanyi and Gunggari as distinct (though tentatively). Note that there are two language varieties known as "gunggari" (which is a word for 'east' in part of Queensland; Gunggari is therefore most likely an exonym). The language spelled Kungkarri (more closely related to Karnic) here is clearly distinct from the Maric language known as Gunggari. Map information for this area is based primarily on Breen (2009). Breen uses different spellings of several varieties (e.g. Barana for Barna); I retain the more commonly used ones.

⁷⁸ Beale (1975) also includes a language Manjira with Yirandhali. The name does not appear in Austlang; presumably it is the same as the ‘Mungerra’ source for Yirandhali given in Curr (1886). See also Breen (2009).

⁷⁹ Bowerman finds no concrete evidence for a distinct Burdekin group. The three wordlists in Curr (1886) from which Dixon derives the three languages of the group appear to be Yuru (see Terrill 1998), a Maric language, and possibly including words from Bigambal.

⁸⁰ Bowerman places Bayali in Waka-Kabi. See also Breen (2009).

⁸¹ This is a separate group within Karnic in Bowerman’s classification.

⁸² See Black (1980); Hale (1976c,d,e); Hale (1964). Thanks to JC Verstraete, Peter Sutton, and Barry Alpher for discussion of language placements and classification for Paman.

⁸³ Same as Awngthim.

⁸⁴ For Middle Paman, see Verstraete & Rigsby (2015) and Verstraete (2020) for evidence. The grouping of Umpithamu and Yintyingka is given in Verstraete and Rigsby (2015:192-194), they also include Umpila with many of the changes that characterize Yintyingka and Umpithamu within Middle Paman.

⁸⁵ Gugu Mini was included in an earlier version of this classification but is not included here since it appears to be a cover term for a number of groups, including Kokiny and Athima.

⁸⁶ Also known as Awu Alaya.

⁸⁷ Placement within the group is unclear.

⁸⁸ There is also material known as Kuku-Warra (lit. ‘bad language’) but this appears to be an exonym for the languages of the Princess Charlotte Bay region (Barry Alpher pers. comm).

⁸⁹ Also known as Oko Wurrima.

⁹⁰ Note that I have fewer language distinctions than the Pama Language Centre, who also includes Kuku Jakandji and Wulpuru.

⁹¹ Kuthant in Bowerman’s classification, following Black’s work on Norman Paman.

⁹² See Breen (1981b).

⁹³ This term is equivalent to Wulguru, which is probably a cover term for several varieties spoken on Palm Island, Cleveland Bay, and Magnetic Island (per Austlang).

⁹⁴ OVV place Dyirbalic within the Paman subgroup.

⁹⁵ See Blake (1979a).

⁹⁶ “The language is structurally similar to Kalkatungu which constitutes the Kalkatungic Group,” (Wurm 1972:131).

⁹⁷ Per information provided by the Yugara-Yugarapul Aboriginal Corporation, they consider there to be a single Yuggara language, spoken by groups who identify as Miguntyun and Chepara. Gowar (Moreton Island language) is considered separate, and Turubul is possibly based on a misnaming in the 1850s. Austlang gives Yuggera/Yagara as the cover term for three languages: Moondjan (spoken by Nunukul people); Jandai (spoken by Goenpul people), and a third variety spoken by Turrbul people. However, Austlang also gives an (unsourced) alternative: Yuggera and Koopenul; Nunukal and Goenpul, and Ngugi (Moreton Island).

⁹⁸ Jeffries (2011) treats Guwar as a Bandjalangic language which has been heavily influenced by Yagara.

⁹⁹ See Oates (1988), and (Oates 1988:198-99) for the classification of Barranbinya as closer to Muruwari than Central New South Wales.

¹⁰⁰ WL (2008:215) has Gamilaraay and 5 other varieties as a single language, called “Darling Tributaries language”.

¹⁰¹ Wiriwiri, Nguri, and Barungama are Waka-Kabi in the current classification. See Breen (2009) and Terrill (2002) for discussion.

¹⁰² See Bowern, Chapter 7, this volume, and Wafer and Lissarrague (2008: 333-334) for some discussion of the variation in classification of this subgroup. These languages have been variously classified as Yuin-Kuri, Central NSW, Waka-Kabi, and Bandjalangic. BBA shows that they are a distinct subgroup.

¹⁰³ See Sharpe (1985, 2005, Chapter 73, this volume). The classification of this dialect chain is complex. Crowley (1978; 158, 196) gives maps of the Bandjalang languages which are redrawn and adapted by Sharpe (1985:103). This classification is followed by WL (2008: 352ff). Note that the two maps in Sharpe (1985) are not reconcilable to one another, as the shape of the area given as Bandjalangic differs from one map to the other. The dialect labeled Galibal is bisected by the line that divides the Upper Clarence from Middle Clarence. I use the dialect placements from Map 2 imposed on the classification of Map 3, per WL and Crowley (1978).

¹⁰⁴ I follow Wafer and Lissarrague (2008) and Crowley (1976) in recognizing two languages here.

¹⁰⁵ Classification based on the materials in Horgen (2004) and Wafer and Lissarrague (2008). Blake (2011b), Dixon (2002), Waker and Lissarrague (2008) and Horgen (2004) have 5 Lower Murray Languages. I also include Peramangk. This name is not mentioned by Wafer and Lissarrague and Horgen. Austlang says that classification is uncertain (AIATSIS code S5).

Note that Horgen's (2004) map is misleading, since it labels the area colored as Yitha Yitha as Mathi Mathi. I take location information primarily from Wafer and Lissarrague (2008) rather than Blake (2011b). Blake places Mathi Mathi on the Lachlan River and Yitha Yitha around Mildura, while Wafer and Lissarrague (2008) has Yitha Yitha on the Lachlan River and Yari Yari (a Mathi language) near Mildura. This also accords more closely with Horgen (2004). I give several dialect names for each language so as not to privilege one name above another.

¹⁰⁶ Thanggatti is grouped with the Nganyaywana languages in Wafer and Lissarrague (2008). However, I did not find this evidence; in the BBA classification, Thanggatti is grouped solidly within Yuin-Kuri, while Nganyaywana did not clearly group with any particular subgroup or language.

¹⁰⁷ That is, Hunter River-Lake Macquarie, per WL.

¹⁰⁸ I follow Wafer and Lissarrague (2008:105) and Koch (pers comm) in using a four-way distinction between inland and coastal, and northern and southern to describe this complex dialect chain.

¹⁰⁹ This is the language of the group known as Wandandian (cf. Eades 1976: 4).

¹¹⁰ See Wafer and Lissarrague (2008: 67) for the uncertainty surrounding the names and classifications of the Omeo vocabularies. I follow Wafer and Lissarrague in using the name "Omeo language" and Koch (pers comm to Wafer and Lissarrague) in classifying it as Yuin.

¹¹¹ Note that the name Central NSW here in Dixon's formulation does not refer to the same languages as the Central New South Wales group established in other classifications.

¹¹² Treated with Bigambal as own primary subgroup by Bovern.

¹¹³ Treated with Bigambal as own primary subgroup by Bovern.

¹¹⁴ Classification per Hercus (1987) and Clark (2005); see also Fesl (1985).

¹¹⁵ Map placement of these languages is uncertain. Blake (2011b) clearly treats both Pallanganmiddang (Waywurru here) and Dhudhuroa as only extending as far as the Murray River. Bove (2002:134-8) says that Waywurru extended north of the Murray River ("east of

Albury”). See Wafer and Lissarrague (2008: 64-67) for issues around the naming of Dhudhuroa, Waywurru, Pallanganmiddang, and Yaitmathang.

¹¹⁶ This is the name of the language spoken by the Pallanganmiddang people.

¹¹⁷ Kulin in Wurm (1972)

¹¹⁸ See (Blake 2011a; Blake & Reid 1994). Note that the Victorian Aboriginal Corporation for Languages (VACL) has a somewhat different classification, organized partly by geography. See also Eira (Chapter 74, this volume).

¹¹⁹ Also called Gulidjan.

¹²⁰ Werkaya is another name also used for these languages.

¹²¹ See Blake et al. (2011) for discussion. Hercus (1992b) gives three groupings of dialects for this area. Wafer and Lissarrague (2008) have different language placements in some areas. For example, Hercus (1992b) is clear that Wadi-Wadi is downstream of Swan Hill, whereas Wafer and Lissarrague’s (2008:63) map places the name upstream. Hercus’ (1986: 5) map of Baagandji (Paakantyi) and neighbours has Southern Paakantyi country extending as far South as Kureinji (that is, almost to the Murray River), whereas Horgen (2004) extends Mathi Mathi into that area. I have followed Hercus here, except that I also follow Blake et al (2011) in extending Mathi territory north of the Murray.

¹²² There are two different Wati-wati varieties: Swan Hill and Piangil, cf. in Blake et al (2011).

¹²³ Also Baraba-Baraba.

¹²⁴ In East Victoria in Bovern’s classification.

¹²⁵ Note that this is not a monophyletic group in BBA (2018) but is rather a set of subgroups which are not a stable phylogenetic group. However, they do share some features; for example, all the central subgroups have lost verb conjugation classes (cf. Brody 2020), though it is not clear whether this is a shared innovation, since other languages in the family have also lost them.

¹²⁶ See Hercus and Austin (2004). While many language placements are as (at least approximately) according to Wafer and Lissarrague (2008), some placements were irreconcilable with other information (for example, concerning the placement of Wadikali and Pirlatapa).

¹²⁷ Nadikali is presumably a typographical error for Wadikali.

¹²⁸ See Simpson and Hercus (2004).

¹²⁹ Wafer and Lissarrague’s (2008) map of Paakantyi and Darling River varieties varies substantially from the map in Hercus (1986: 5). The locations given on this map are closer to

Wafer and Lissarrague's in most (but not all) respects. Hercus (1986: 8ff) gives five main divisions between varieties, which would seem to correspond to closely related languages (or different dialects). Wafer and Lissarrague (2008: Chapter 10) give two main divisions. I have probably over-differentiated varieties here.

¹³⁰ See Hale (1962): classified as a branch coordinate with other "Aranda" (i.e. all except Kaytetye); see also Koch (Koch 1997a,b; Koch 2004b).

¹³¹ For the difficulties of classifying Karnic, see Breen (2007), responding to Bower (2001).

¹³² Wangkumarra 'southerners' is both a specific name and a more general name for the people of this area. The geographical placement of Wangkumarra here is subject to some uncertainty. Hercus (1986) says that the Wangkumarra, Punthamarra and Kungadityu were the northern neighbors of Paakantyi people.

¹³³ See Breen (1990b).

¹³⁴ Classified as Maric by Bower.

¹³⁵ This classification is reproduced (with additions) from Angelo, D., O'Shannessy, C., Simpson, J., Kral, I., Smith, H. & Browne, E. 2019. *Well-being & Indigenous Language Ecologies (WILE): A strengths-based approach. Literature Review for the National Indigenous Languages Report, Pillar 2*. Canberra: The Australian National University. doi 10.25911/5dd50865580ea. Available from <http://hdl.handle.net/1885/186414>. : Appendix 2, pp. 115-116. There are no doubt other contact languages which are not in this classification, but which are yet to be documented.

¹³⁶ See also Dickson (Chapter 57, this volume) and Angelo (Chapter 66, this volume).

¹³⁷ See Angelo (Chapter 66, this volume) for more information.

¹³⁸ Aboriginal English is shown on the map in North-Western Australia but it should be noted that there are many varieties of Aboriginal English to which the term 'heavy' could apply.