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The Oxford Guide to Australian Languages

EDITED BY

CLAIRE BOWERN

OXFORD GUIDES TO THE WORLD'S LANGUAGES

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AUSTRALIAN LANGUAGES

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We acknowledge the contributions of the First Peoples of the place now called Australia, who have never ceded ownership over this land and its languages.

Short contents

Detailed contents

C. Semantics, pragmatics, and discourse

Series Preface

We know that the close study of individual language families and linguistic areas is vital both to the synchronic and diachronic study of language and to cognitive science more widely. Comparative investigations of this type stimulate exciting synergies between different subdisciplines of linguistics, such as language change, contact linguistics, sociolinguistics, linguistic typology, textual philology, and microvariation in grammar, sound, and meaning within and across languages. Besides reflecting and encouraging the links between these subdomains, the fundamental goal of the series is to publish high-quality, substantial reference works which represent a set of theoretically informed and systematic guides to what is known about the world's languages.

Each *Guide* focusses on a particular language family, subfamily, or areal grouping, and is edited by leading authorities, who bring together contributions from the best international scholars in the field. The *Guides* aim to show the more general theoretical significance of the languages' history, linguistic and sociolinguistic characteristics, and overall to provide an indispensable reference tool both to specialist scholars and students and to professional linguists. The approach adopted in all the *Guides* is systematic and comparative, informed by the latest research and theoretical and methodological perspectives, and, where appropriate, the authors draw on relevant work in such fields as anthropology, archaeology, and cognitive science.

Adam Ledgeway and Martin Maiden
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Abbreviations and conventions

<	acted on by
>	acting on
1	first person
1”	first person non-minimal
1|2	exclusive person
12	first person inclusive
12”	first person inclusive non-minimal
1+2	first person inclusive
1.FOC	first person focalization marker
1PES	first person plural exclusive subject
1SS	first person singular subject
1st	verbal inflection class
2	second person
3	third person transitive subject *a* acting over object *b*
3	third person
3PO	third plural object
3PS	third plural subject
a	augmented
A	agent
A	alveolar
A	Assimilation
A	animate
A	subject of transitive clause
A/P	antipassive
AA	AusPhon-Alternations (dataset)
ABC	Australian Broadcasting Corporation
ABL	ablative
ABS	absolutive
ACC	accusative
ACS	accessory
ACT	active
ACT	actual
ADD	additional
ADES	adessive
ADJ	adjective
ADJ	adjacent demonstrative
ADMON	admonitive
AGM	augmented number
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
ALL	allative
AMB	ambulative
AMBIPH	ambiphoric
ANA	anaphor
ANAPH	anaphoric
AND	connector, conjunction ‘and’
ANIM	animate object
APAS	antipassive
APP	apprehensive
AOR	aorist
AP	antipassive
APPL	applicative
APPLIC	applicative
ART	article (Heath 1980b)
ASP	aspectual suffix
ASS	associative case
ASS	assertive
ASSERT	assertive
ASSOC	associative
ATT	attenuative
AUG	augmented number
AUX	auxiliary
AUXC	auxiliary (continuous aspect) (Heath 1980b)
AVER	averative
AWY	motion away
BBA	Bouckaert, Bowern, and Atkinson (2018)
BEN	benefactive
BGN	Burarra/Gun-nartpa language
C	catalyst
C	contemporary tense
C/T	contemporary?
C_1	initial consonant of a word
CARD	cardinal pronoun
CATAPH	cataphoric
CAUS	causative
CC	circumstantial clause
CFACT	counterfactual
CHAR	characteristic
CL	classifier
CLASS2VERB	class 2 verb stem forming affix
CLC	clitic
CLF	classifier
CM	conjugation marker

CNSW	Central New South Wales
CofR	change of referent
COLL	collective
COM	comitative
COMIT	comitative
COMP	complementizer
CON	concomitative
CON	contemporary tense
CONJ	conjunction
CONT	continuative aspect
CONTR	contrastive focus
CP	compulsional
CS	changed state
CSL	causal
CTF	counterfactual
CTR	contrast
CTRP	centripetal
CTS	continuous, non-moving
CV	coverb suffix
CYP	Cape York Peninsula
D	dental
D	distal (deictic)
D	directional
d.b.	dative/benefactive
DAT	dative
DC	direct case
DEC	deceased
DEF	definite
DEIC	deictic suffix
DEM	demonstrative
DEM(n)	demonstrative (neuter)
DER	derivational[1]
DES	desiderative
DESID	desiderative
DETR	detransitivizer
DI	desiderative-intentional suffix
DIREC	directional
DIST	distal
DL	dual
DM	demonstrative marker
DO	direct object
DPF	'departing from' affix
DS	different subject
D.TERM	direction, terminative
DTR	de-transitivizer
DU	dual
DUB	dubitative
DUR	durative
E	extended argument
E	English
ED	edible gender
EDGE	edge, side
EFF	effector
EL	elative
ELA	elative
EMA	electromagnetic articulography
EMP	emphatic clitic
EMPH	emphatic
EN	epenthetic nasal
Eng	English borrowing
EP	epenthetic morpheme
ERG	ergative
EX	exclusive
EXC	exclusive
EXCL	exclusive
F	feminine gender
FACT	factive
FEM	feminine gender
FF	father's father
F.KPOSS	morpheme cross-referencing female propositus of a kin relationship
FM	father's mother
FOC	focus
FOC	contrastive focus
FORE	foregrounding clitic
FUT	future
G	Gugada
G	goal
GEN	genitive
GENEVT	generic event
GENT	gentilic
GENTIL	gentilic
GER	gerund
GG	Gurr-goni
gun	gun noun class
GUR	Gurindji
GW	Gunwinyguan
H	high tone[2]
H	higher object[3]
HAB	habitual

[1] In Chapter 70 this is glossed as 'derivative affix', which it is assumed is identical to 'derivational'.
[2] For additional annotations associated with ToBI transcription conventions, see Beckman et al. (2006).
[3] In interlinear glossing

HABIT	habitual
HAVE	have suffix
HESIT	hesitation particle
HIST	historical past
HITH	hither
HYP	hypothetical
I	inanimate
I	Iwaidjan
IE	Indo-European
ID	identifiable
IDEO	ideophone
I-IV	numbered noun classes
IM	immediacy
IMM	immediate (past)
IMM	immediacy
IMP	imperative
IMPERFSS	imperfective tense/aspect same subject
IMPF	imperfective
IMPIPFV	imperative imperfective
IMPL	implicated
IMPLIC	implicative
INC	inclusive
INCEP	inceptive
INCH	inchoative
INCHO	inchoative
INCL	inclusive
IND	indicative
IND	individuation
INDF	indefinite
INF	infinitive
INS	instrumental
INST	instrumental
INSTR	instrumental
INT	interrogative
INTENS	intensifier
INTER	interrogative
INTERR	interrogative
INTR	intransitive
INV	inverse
IO	indirect object
IPFV	imperfective
IR	irrealis
IRR	irrealis
ITRV	iterative aspect
jin	jin-marked noun class
KIN	kinship marker
KPOSS	kinship possession
Kr	Kriol borrowing
Ku	Kukatja
L	labial
L	lenition[4]
L	local[5]
L	low tone[6]
L/I	locative instrumental
LCT	locative
LIG	possessor ligative
LIM	limitative
LL	land gender
LOC	locative
LOC/I	local/instrumental case
LOCT	locational case
LOTS	grammatical morpheme meaning 'lots'
LVC	light verb constructions
M	Manyjilyjarra
M	minimal (number)[7]
M	masculine gender
MA	masculine gender (Singer 2006a)
M.ALP	masculine alienable possessive
MASC	masculine gender
MASC	masculine noun class
MED	medial
MED	medial demonstrative
MF	mother's father
MIN	minimal (number)
MJ	major member
M.KPOSS	morpheme cross-referencing male propositus of a kin relationship
MLOC	marked locative
MM	mother's mother
MN	minor member
MOBL	modal oblique
MOTIV	motivative
MOV	continuous, moving
Mp	manipulative
M.POSS	morpheme cross-referencing a male class possessor of a body part
MPROP	modal proprietive
MSC	masculine class

[4] In Chapter 12 only
[5] Languages attesting cognates of a particular etymon but lacking coherence as a phylogenetic group.
[6] In Chapter 14
[7] In Chapter 70

MSC.KPOSS	morpheme cross-referencing masculine class propositus of a kin relationship
MSC.POSS	morpheme cross-referencing a masculine class possessor of a body part
MU	MU-class
MUT	marker of symmetrical information access from speaker perspective
N	noun
N	neuter gender
nact	non-actual (irrealis) mood
NA_{der}	noun class marker
NAR	narrative
NC	nasal + stop cluster
NC	noun classifier
NCD	nasal cluster dissimilation
NDJ	Ndjébanna
NEG	negative
NEU	neuter gender
NEUT	neuter noun class
NF	non-feminine
NF	non-future
NFUT	non-future
Ngaany	Ngaanyatjarra
Ngal	Ngalia
NITV	National Indigenous Television (Australian TV network)
NK	Na-Kara
NLZ	nominalization
NM	non-masculine (Nordlinger 1998a)
NMLZ	nominalizer
NMR	nominalizer
NMZR	nominalizer
NOM	nominative
NOMLSR	nominalizer
NOW	temporal/contrastive clitic 'now'
NP	non-past
NPN	non-Pama-Nyungan
NPP	non-past progressive
NPROX	non-proximal demonstrative
NPRS	non-present
NPST	non-past
NS	non-subject
NSG	non-singular number
NUM	numeral
NVIS	non-visible
Ny	Nyungic
Ny2	Nyulnyulan
O	object
OBJ	object
OBJCOMP	object complementize
OBL	oblique
OBLIG	obligative
OBLIQ	oblique
OLAC	Open Language Archives Community
OP	object-promoting suffix
OPT	optative mood
OR	originative (case)
ORIG	originative
ORIG	origin case
OVV	O'Grady, Voegelin, and Voegelin (1966)
P	Paman
P	past tense
P	patient-like argument
P	plural pronoun
pa	paucal number enclitic (in the vp)
PAIR	pair suffix
PARADISEC	Pacific and Regional Archive for Digital Sources in Endangered Cultures
PART	participial
PART	partitive
PARTIC	participle
PASS	passive
PAST	past tense
PAST PUN	past punctual
PAST.PUNCT	past punctual
PAUC	paucal
pc	past completive
PC	past continuous
PC	pre-contemporary tense
PCON	past continuous
PERF	perfective
PERL	perlative
PERS	personalizer
PES	plural exclusive subject
PF(V)	perfective
PHAB	past habitual
PI	prior information
PI	past imperfective
PIMP	past imperfective
Pitj	Pitjantjatjarra
P-L	Pintupi-Luritja
PL	plural
PLUP	pluperfect
PLUR	plural
PN	Pama-Nyungan
PNy	Pama-Nyungan

POSS	possessive
POSSD	possessed noun
POT	potent
POT	potential
PP	past perfective
P.PFV	past perfective
pPN	Proto-Pama-Nyungan
pPNy	Proto-Pama-Nyungan
PR	present
PR	present (Harvey 2002)
PRE	precontemporary tense
PRECCOMP	preceding event complementizer
PRES	present
PRIV	privative
PRM	prominence marker
PRO	(personal) pronoun
PROG	progressive
PROH	prohibitive
PROM	prominence
PROP	proprietive
PROX	proximal demonstrative
PROX	proximate
PRS	present
PRT	part suffix
PST	past tense
PST.COMPL	past completed
PST.CONT	past continuous
PST.DEF	past definite
PST.INDEF	past indefinite
PTCP	participle
PUNCT	punctiliar (Birk 1976)
PUR	purposive (Heath 1980b)
PURP	purposive
PURPCOMP	purposive [subsequent] event complementizer
PURPs=O	purpose subordinate subject is main clause object
Q	interrogative
QUAL	quality nominalizer, Jaminjung
QUAL'R	qualifier
QUES	question particle (Sharp 1998)
R	retroflex
R/A	realis/assertive
RDP	reduplication
RE	realis
REAL	realis
REC	recognitional
RECOG	recognitional
REDUP	reduplication
REFL	reflexive
REFLEX	reflexive
REFR	referential
REL	relative
REL.DS	relative (different subject)
REL.SS	relative (same subject)
REM	remote
REMEMB	item previously mentioned
REM.PST	remote past
RESUM	resumptive
RLS	realis
RM	reflexive/reciprocal
ROUND	rounded form
RPA	remote past
RR	reflexive/reciprocal
S	single argument of canonical intransitive verb (subject)
S	singular
S	subject
SA	intransitive/transitive subject
SBJ	subject
SEL	selective enclitic
SEQ	sequential
SEQ.SS	sequential, same subject
SER(IAL)	serial
SG	singular
SIDE1	locating referent in small locational context (cardinal)
SIDE2	locating referent in large locational context (cardinal)
SP	'speed' form (action undertaken before departing)
SS	same subject
STAT	state of affairs (contrast action)
STEM	stem-forming affix (McKay 1975)
SUB	subordinate
SUBJ	subject
SUBORD	subordinate
SUBSECT	subsection (skin)
SVC	serial verb construction
TAG	tag question
TAM	tense/aspect/mood
TEXD	text deictic
TH	thematic
TH	temporal clitic
THEN	temporal/contrastive clitic 'then'
TO	motion towards

TOO	'too' clitic (Simpson 1991)
TOP	topic
TPA	today past (inflection)
TR	transitive
TR	transitive conjugation marker
TRANS	transitive
TRE	temporal relative
TRVZ	transitivizer
TWD	towards (directional)
ua	unaugmented
UA	unit augment
uaP	unit augmented Past
UAUGM	unit augment
UNF	unfamiliar
UNM	unmarked [verb form]
UNMKD	unmarked
UP	verticality
USP	underspecified, phonologically null TAM
V	velar
V	vowel
V_1	initial vowel of a word
VAL	valence increaser (Reid 1990)
VB	verbalizer
VBLZ	verbalizer
VCOMP	sentential complement index
VEG	vegetable noun class
W	wife
W	celestial class
WALS	World Atlas of Language Structures
Wang	Wangkajunga
Warn	Warnman
WITH	associative
WL	Wafer and Lissarrague (2008)
WU	WU-gender
Ya	Yankunytjatjara
YK	'you know' clitic
Yul	Yulparija

Abbreviations of kin terms

These abbreviations are used widely in anthropology.

F	'father'
Fa	'father('s)'[8]
M	'mother'
Ma	'mother('s)'
S	'son'
D	'daughter'
B	'brother'
Z	'sister'
H	'husband'
W	'wife'
e	'elder', e.g. eB 'elder brother'
y	'younger' e.g. yZ 'younger sister'
m	'male propositus' e.g. mZ 'male's sister'
f	'female propositus' e.g. fB 'female's brother'

Symbols are concatenated to form complex kin terms e.g. MBDS 'mother's brother's daughter's son'

Other conventions:

-	morpheme boundary
=	clitic boundary
.	'when a single object-language element is rendered by several metalanguage elements (words or abbreviations)'

Ages of children are expressed in the format years;months

[8] This (and 'Ma' for 'Mother') are from Carew and Beltran, Chapter 70. Since they use F for 'feminine gender' and M for 'minimal' noun marking, non-standard abbreviations are used for kinship terms.

Transcription conventions

The individual papers in this volume use several sets of conventions in spelling language examples (International Phonetic Alphabet, standardized language orthographies, and ad hoc researcher conventions). These are explained in the chapters themselves. However, there are a number of conventions that apply across many chapters, which are detailed here.

Consonants

Transcription of consonants, listed left-to-right in the order bilabial, lamino-dental, apico-alveolar, apico-postalveolar (retroflex), lamino-alveopalatal, and dorso-velar, are notated as follows. Notational variants are separated by a comma. See Round, Chapter 10, this volume, for further details.

Stops	p	th	t	rt	c, ty	k
	b	dh	d	rd	j, dy	g
Fricatives	ß	ð				ɣ
Nasals	m	nh	n	rn	ñ, ny	ng, ŋ
Liquids		lh	l	rl	ʎ	
		rr				
Glides	w	yh		R, r	y	

n.g is a heterorganic nasal+stop cluster, as distinguished from the digraph **ng**.

h and **ɦ** are glides, respectively without and with voicing.

rr is a tap or a trill; where the two are distinguished **rrh** is used for the trill.

R is glide (IPA /ɹ/), reserving single lowercase r for diacritic use to indicate retroflection of stops, nasals, and laterals.

ʔ is glottal closure, classed as a stop, glide, or prosodic boundary marker as appropriate for individual languages. This is also represented as 7 or ' in some languages.

l$^{\mathbf{f}}$ and **rl**$^{\mathbf{f}}$ are flapped laterals

t$^{\mathbf{r}}$, **rt**$^{\mathbf{r}}$, **d**$^{\mathbf{r}}$, and **rd**$^{\mathbf{r}}$ are trill-released stops

$^{\mathbf{n}}$**p**, $^{\mathbf{n}}$**t** etc. are prenasalized stops

T** is an initial apical non-nasal (t**,***n**,***l**,***r, *rr**) in a cited reconstruction in which the initial consonant is not material to the discussion.

| (vertical stroke) separates material in a daughter-language that is additional to the reconstructed form of an etymon.

I use the template $\mathbf{C_1V_1C_2V_2C_3V_3}$..., where $\mathbf{C_2}$ and $\mathbf{C_3}$ can represent any intervocalic consonant or cluster, to show syllabic structure, omitting subscripts as appropriate.

Vowels:

i		u
e		o
	a	

v (IPA /ə/) is an unstressed mid-to-high central vowel, not the same as **3**, a (primary or secondary) stressed mid-to-high central vowel. For the Arandic languages, orthographic <e> is used for the stressed non-low vowel, as in the sources.

The front-rounded vowel symbols **ö** and **œ** are used as in the original transcription sources.

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Language maps

The following maps were based on a compilation of sources made over the period 2008–2020. The maps show language family locations to the extent known. The drawing of the language maps and decisions about which varieties and names to represent is described in more detail in Chapter 7. The following notes should be taken into account especially.

As should be clear, the placement of languages in physical space is an abstraction and an idealization. Languages are used by people, who are often multilingual. While some Indigenous groups view language as being particularly associated with geographical regions (that is, that tracts of land belong to certain languages and people speak those languages by virtue of being in that space; see Rumsey 1993, Rigsby 2005, Sutton 1978, for example; see further discussion in Chapters 1 and 49 of the current volume), not all groups view language in that way.

These maps are also 'atemporal'; that is, they are not a specific snapshot of a particular point in time. Language locations change over time. All Indigenous language locations have been affected, to varying degrees, by colonial settlement (cf. Department of Infrastructure, Transport, Regional Development and Communications (DoITRDC), Australian Institute for Aboriginal and Torres Strait Islander Studies (AIATSIS), and Australian National University (ANU) 2020). This is not a map of contemporary language use, but it's probably also not a map of traditional language locations for some parts of the country. At best, it could be a reconstruction for some areas, contemporary continuation for others, and contemporary change in yet other areas. These maps should be considered as a way to relate linguistic groups to one another in space. It should help to visualize the approximate distances between groups, abstracting away from multilingualism, population density, and Indigenous settlement patterns.

This map represents my best attempt to reconcile the myriad of conflicting information about Australian languages and their traditional and contemporary locations. It is important to note that even 'reliable' sources are sometimes irreconcilable. Reasons for conflicting information include a difference in the time period represented, working with different groups or individuals, different ideas of what constitutes a 'language', different choices of which named linguistic varieties to group together, vagueness in prior maps, and aesthetic mapping choices that change information. For these and other reasons, I may have come to different decisions than others about how to represent language–land relationships in Australia, although for the most part, this map is broadly similar to others. Perhaps the biggest difference is the number of languages represented: 490, rather than the '250' that linguists have tended to work with, as further discussed in Chapter 7.

The language map is keyed to the classification beginning on page lxi. Since that is a classification of *languages* (rather than all named *varieties*), only *languages* are shown on the map. This means that groups where the language name and the name of the group are different, show the language names rather than the group names. For some parts of the country, the ethnonyms and the language names are identical (this is true for most, though not all, of the Western and Central blocs of Pama-Nyungan, for example). In parts of Eastern Australia, however, language names were not identical to names for social groups.

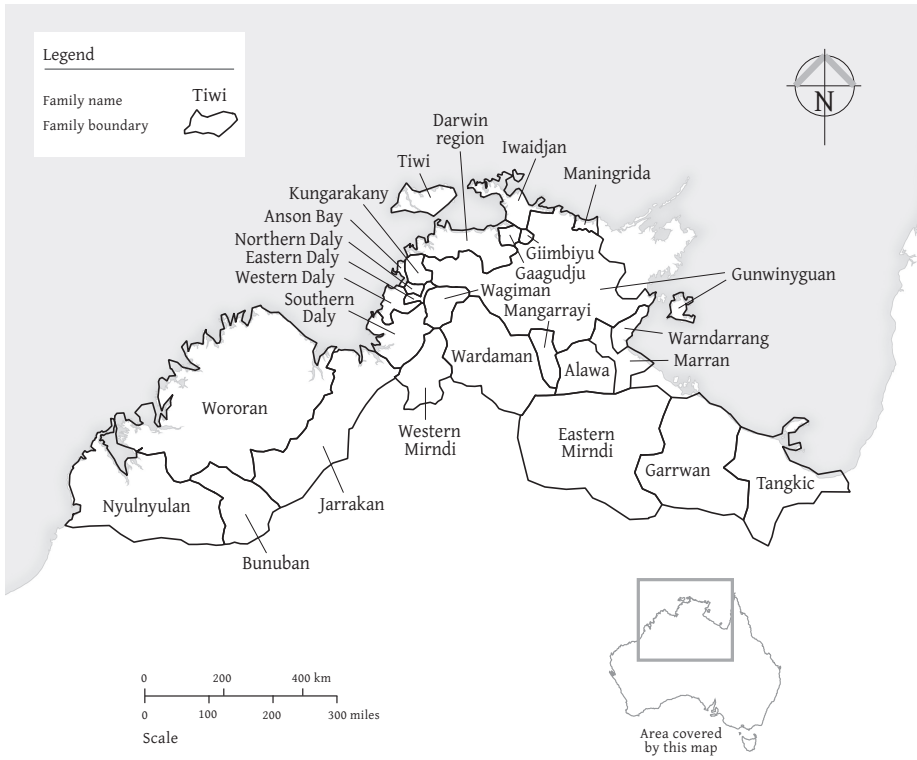
Maps 1 and 2 include classification information, such as families and subgroups. Pama-Nyungan subgroup boundaries are represented by dashed lines; language families have

solid lines. These subgroups of Pama-Nyungan are the ones most familiar to Australianists. They descend from the earlier classifications of roughly 30 groups that were originally not classified more closely together (cf. the Pama-Nyungan rake model described in Bowern and Atkinson 2012). The classification presented on the map is somewhat conservative. For example, it does not show substructure within Paman or Maric in Map 2. The map was designed with historical linguistic uses in mind (for example, units for reconstruction). It does not show groups with cultural affinities to one another (for example, the languages of the Victoria River district) or other ways of grouping languages.

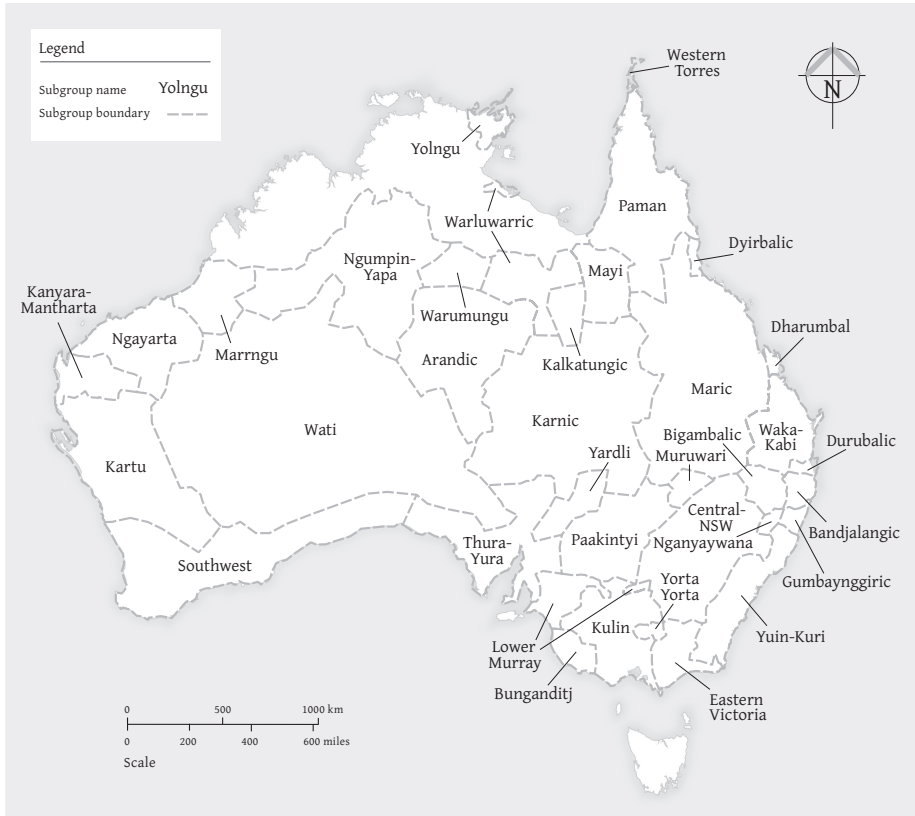
Map 3 does not present boundaries between individual languages. This decision was not undertaken lightly. It was done because it is impossible to represent boundaries accurately in too many cases. In some places, the boundaries themselves are unknown; single fixed boundaries are not the best way to represent the way languages in particular regions shaded into one another; boundaries are disputed; boundaries have changed over the last few hundred years; and other reasons. Of course, the boundaries given in Maps 1 and 2 are derived from language locations presented in Map 3 and are subject to some of the same types of considerations. They should be treated as indicative rather than definitive.

The process of compiling information was as follows. The starting point for this project was the compilation of a language map and list of 'standardized' language names for use in the Chirila database (Bowern 2016a). The language map included both centroid (point) locations and polygons showing the approximate boundaries of languages. In order to be as complete as possible, data were compiled from all available sources on language locations, as well as the language names used in general sources about Australian languages. Numerous compilations exist in the prior literature, with the most important continent-wide surveys including O'Grady, Wurm, and Hale (1966), Tindale (1940; 1974), Wurm and Hattori (1981), and Dixon (2002). Regional surveys were also important, and included both published sources (e.g. McGregor 2004; Wafer and Lissarrague 2008) and unpublished or locally published maps and pamphlets from regional Aboriginal language centres (for example, the Pama Language Centre, VACL, Wangka Maya, the Goldfields Language Centre, and Noongar Boodja Aboriginal Culture Language Centre). The maps were overlaid and geocoded in Google Earth to facilitate comparison. These were checked against the Austlang website from the Australian Institute of Aboriginal and Torres Strait Islander Studies. Some decisions about mapping are given in the notes to the classification, starting on page lxi. In general, I privileged information from Language Centres and from specific reference grammars over the older maps such as Tindale (1974). For the most part, sources were in broad agreement, as might be expected since they were not compiled independently. However, there were substantial minor differences, particularly around boundaries.

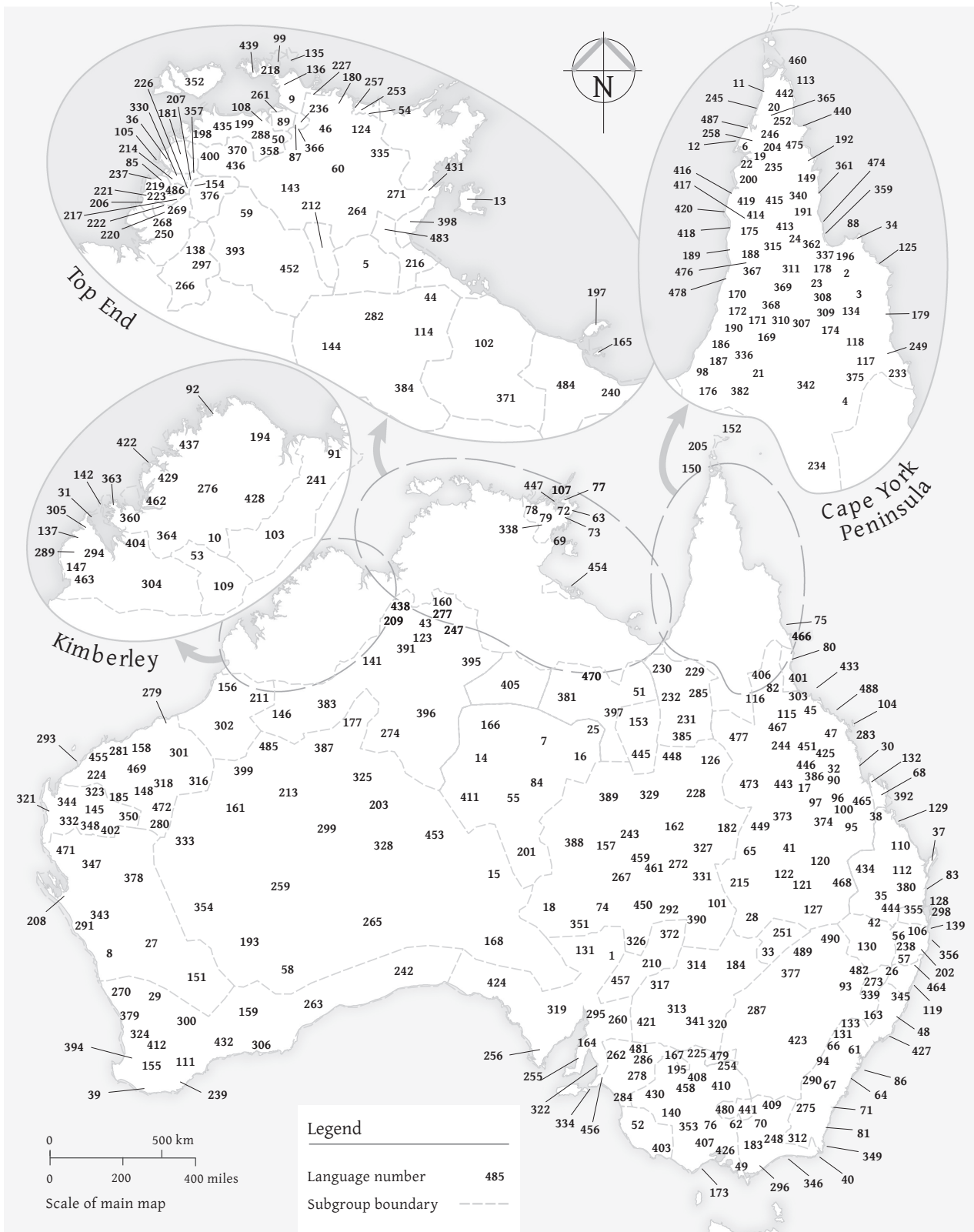
1. Non-Pama-Nyungan language families



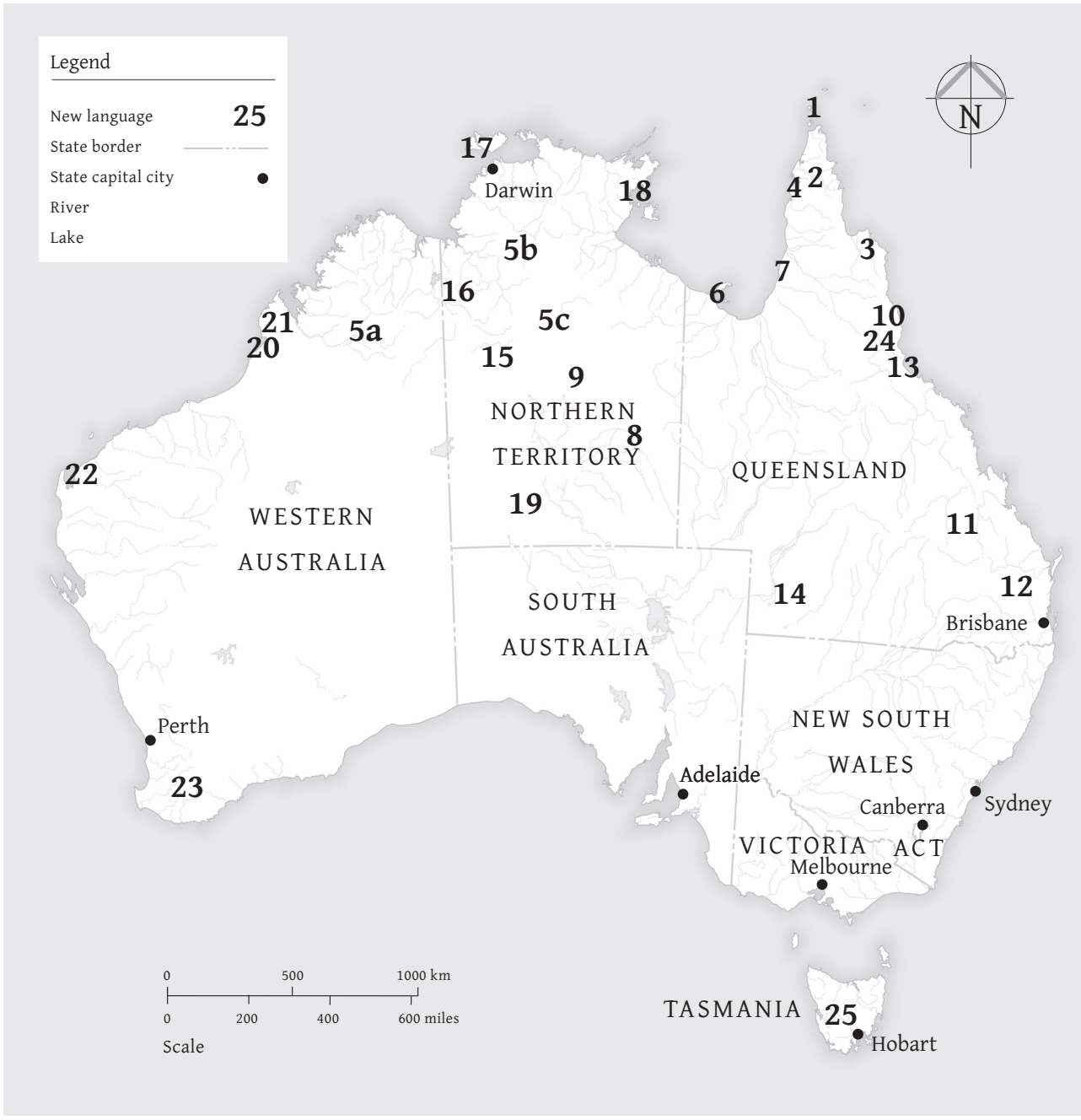
2. Major subgroups of Pama-Nyungan



3. Language locations



4. New Indigenous languages (see p xciii)



Key to language maps

Name	Map No.
Adnyamathanha	1
Aghu Tharnggala	2
Agu Aloja	3
Agwamin	4
Alawa	5
Alngith	6
Alyawarr	7
Amangu	8
Amurdak	9
Andajin	10
Angkamuthi	11
Anguthimri	12
Anindilyakwa	13
Anmatyerr	14
Antakirinya	15
Antekerrepenhe	16
Ara-ara	17
Arabana	18
Aritinngithigh	19
Atampaya	20
Athima	21
Awngthim	22
Awu Alaya	23
Ayapathu	24
Ayerreyenge	25
Baanbay	26
Badimaya	27
Badjiri	28
Balardung	29
Barada	30
Bardi	31
Barna	32
Barranbinya	33
Barrow Point	34
Barunggam	35
Batjjamalh	36
Batyala	37
Bayali	38
Bibbulman	39
Bidawal	40
Bidjara	41
Bigambal	42

Name	Map No.
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Binbinka	44
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Bininj Kunwok	46
Biri	47
Birrpayi	48
Boonwurrung	49
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Bunganditj	52
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GoorengGooreng	110
Goreng	111
Gubbi Gubbi	112
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Gudjal	115
Gugu Badhun	116
Gugu Djangun	117
Gugu Wakura	118
Gumbaynggir	119
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Gunggari	121
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Guwamu	127
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Kuku Thaypan	178
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Kungarakany	181
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Luthigh	204
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Malak Malak	207
Malkana	208
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Mangarrayi	212
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Margany	215
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Narrungga	255
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Ngadjuri	260
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Nukunu	295
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Nyaki Nyaki	300
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Nyikina	304
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Pungupungu	330
Punthamara	331
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Putijarra	333
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Rimanggudinhma	337
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Southern Anaiwan	339
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Wajarri	378

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Wajuk	379
WakaWaka	380
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Wanyjirra	391
Wapabara	392
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Warlmanpa	395
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Warluwarra	397
Warndarrang	398
Warnman	399
Warray	400
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Warriyangga	402
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Warrwa	404
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Wathawurrung	407
WathiWathi	408
Waywurru	409
Wemba Wemba	410
Western Arrarnta	411
Wiilman	412
Wik Iyanh	413
Wik Me'anh	414
Wik Mungkan	415
Wik-Alkan	416
Wik-Ep	417
Wik-Ngathan	418
Wik-Ngatharr	419
Wik-Paacha	420
Wilyakali	421
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Wudjari	432
Wulguru	433
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Wuthathi	440
YabulaYabula	441
Yadhaykenu	442
Yagalingu	443
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Yalarnnga	445
Yambina	446
Yan-nhangu	447
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Yandjibara	449
Yandruwandha	450
Yangga	451
Yangman	452
Yankunytjatjara	453
Yanyuwa	454
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Yaraldi	456
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Yatay	460
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Yetimarala	465
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Yingkarta	471
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Name	Map No.
Yirandhali	477
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YortaYorta	480
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Yugambal	482
Yugul	483
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Yulparija	485
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Yuwaalaraay	489
Yuwaliyaay	490

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 (1997b) has noted, the overall number of languages and broad principles of classification have not changed substantially since O'Grady, Voegelin, and Voegelin (1966). 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 is 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 the classifications more clearly. 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 many 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 (2014a; Koch and Nordlinger 2014) and Bowern and Koch (2004: Chapter 2). The main classifications of the second half of the 20th century—O'Grady, Voegelin, and Voegelin (1966), Wurm (1970), Oates and Oates (1970), Oates (1975), Tindale (1974), Dixon (1980), Wurm and Hattori (1981), 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 (1919a) and others described by Stockigt (Chapters 2 and 6, this volume), on the one hand, and the phylogenetic classifications of Bowern and colleagues on the other.

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 word list. The cognate codings produce approximately 6,500 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 6,500 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) internal 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). The third situation is where the number of overall cognates is 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, Bowern 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 (five 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 Bowern (2020). Australianists have tended to rely heavily on morphological evidence for demonstrating strengths of relationship between language groups. For example, Harvey and Mailhammer (2017) discuss non-Pama-Nyungan nominal classification markers as evidence for a single Australian family, and Evans (1995c) and Blake (1990b) 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 Bowern (2020), the morphological evidence isn't absolutely solid. After all, Yolngu pronouns also show some changes from Proto-Pama-Nyungan (e.g. 1sg *ŋarra* as compared to Proto-Pama-Nyungan *ŋayu, 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 Bowern 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.

Some clearly Pama-Nyungan languages 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 *o* /ɔ/ or *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 but not Nyulnyulan.

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) Proto-Nyulnyulan reconstructions
*ni-lirr '3SG.POSS-mouth'
*ngayu '1SG'
*ngamana 'breast'
*kapali 'father's mother'
*ni-marla 'hand' (*mara[9])
*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. Bowern 2018a). However, there are no clear recurrent or systematic similarities between Nyulnyulan and other non-Pama-Nyungan families of the region, as discussed in Bowern (2004b).

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 other 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.

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

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
		Warrai	
Kungarakany[9]	Gungarakanj	Kungarakany	
Mangarrayi[10]	Mangarrayi	Mangarai	Mangarai
Gaagudju[11]	Gaagudju	Kakadju	Kakaduan
Maningrida[12] Ndjébbana Nakara Gurr-goni Burarra	Maningrida Burarra Gurrgoni Nakkara Ndjebbana	Gunavidjian Gunavidji[13]	Gunavidjian (Gunabidji)
		Nunggubuyu	Nunggubuyu
		Andilyaugwa	Groote Eylandtan
		Nagaran (Nagara)	Nagaran (Nakara)
		Bureran Burera Gorogone	Bureran Burarra-Gunnartpa Gorogone
Wagiman	Wagiman-Wardaman Wagiman	[14]	[15]

	Wardaman		
Alawa[16]	Alawa	Maran Mara Nawariyi Wandarang Alawa	Alawa
Marran Yugul Marra	Marra/Warndarrang Marra Warndarrang		Maran Mara Wandaran
Warndarrang			
Wardaman Wardaman Yangman Dagoman[17]		[18]	[19]
Garrwan[20] Garrwa Waanyi	Waanji/Garrwa subgroup[21] Waanji Garrwa	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
Wororan[25] Wunambalic Kwini Wunambal	North Kimberley Areal Group (NG) Worrorra Ungarinjin	Wororan Wunambalic Wunambal Gambre	Wororan Wunambalic Wunambal Gambre

Gamberre	Wunambal	Bagu/Gwini	Bagu/Gwini
Worrorric		Wororic	Wororic
Unggumi		Worora	Worora
Umiida		Mailnga	Mailnga
Unggarranggu		Unggumi	Unggumi
Worrorra		Umida	Ungarinyinic
Yawijibaya		Unggarangi	Ungarinyin
Winjarumi		Yaudjibara	Munumburu
Ngarinyinic		Ngarinyinic	Wolyamidi
Worla		Ngarinyin	
Ngarinyin		Munumburu	
Andajin		Manungu	
Nyulnyulan[26]	Fitzroy River Subgroup (NE*)	Nyulnyulan	Nyulnyulan
Western	Njigina	Nyulnyul/Bardi	Nyulnyul/Bard
Jawi[27]	Baardi	Yawuru	Jauor
Bardi		Nyigina	Nyigina
Nyulnyul		Warwa	Warwa
JabirrJabirr			
Nimanburru[28]			
Eastern			
Yawuru			
Ngumbarl[29]			
Nyikina			
Djukun			
Warrwa			
[Pama-Nyungan][30]		Yanyulan	Yanyulan[31] (Yanyula)
Tangkic[33]	Tangkic subgroup (NA*)	[Pama-Nyungan][32]	Pama-Nyungan
Lardil	Lardil	Tangic	Tangkic
Yukulta	Kayardild/Yukulta	Lardil	Lardil
Kayardild	Kayardild	Gayardilt	Gayardilt
Minkin	Yukulta	Minkinan (Minkin)	Minkinan (Minkin)
	Minkin		
Mirndi[34]	NCa Mindi	Djingili-Wambayan	Tjingilu
Western	West Mindi	Djingili	
Ngaliwuru		Wambayic	Wambaya
Nungali	Djamindjung/Ngaliwuru	Wambaya	
Jaminjung	Nungali	Ngarndji	
Eastern	East Mindi	Djamindjungan	Djamindjungan
Ngarnka	Djingulu	Djamindjung	Djamindjung
Binbinka	Ngarnga	Jilngali	Jilngali
Gudanji	Wambaya	Ngaliwuru	Ngaliwuru

Wambaya Jingulu		Nungali	Nungali
Southern Daly[43] Murrinhpatha[44] Ngan'gikurunggurr[45]	Daly River areal group[46] Southern Daly Murrinhpatha Ngan.gi-tjemerri	Murinbatan Murinbata	Garaman Garaman Murinbata
			Nangumiri
Western Daly Marramaninyshi Marrithiyel[47] Marri Ngarr[48] Maranunggu[49]	Western Daly Emmi Marrithiyel Marri Ngarr	Daly Moil Ngangikurrungur Brinken Maramanandji Maredan Marengar	Brinken Marithiel Maramanindji
Eastern Daly Kamu Matngele[50]	Eastern Daly Matngele Kamu	Daly Yunggor-Matngala	
Anson Bay Batjjamalh Pungu Pungu Kiyuk[51]	Patjtjamalh		
Northern Daly Malak Malak Tyerratj	Malak-Malak	Wagaty Wadjiginy[52] Maranunggu Ame Mulluk Mullukmulluk Djeraity	Mullukmulluk
Giimbiyu[53] Erre Mengerrdji Urningangk	Giimbiyu	Urningangk	Uningank
		Mangerian Mengerai	Mangerian Mengerai

[10] See, for example, (Osborne 1974; Wilson 2013).
[11] Per Evans (2000a).
[12] See further Handelsmann (1991); Mailhammer (2008).
[13] See Evans (2003a) and much subsequent work.
[14] 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 be made for including more varieties here.
[15] See van Egmond (Chapter 68, this volume) and for more detail on Anindilyakwa's genetic position, van Egmond (2012) and van Egmond and Baker (2020).

[16] 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 consistent or sufficiently supported by evidence.
[17] See Parrish (1983); for this and other isolates of North Australia, see also Bowern (2017a).
[18] The position of Mangarrayi is uncertain—as well as considering it an isolate, some have assigned it to Gunwinyguan (e.g. Alpher, Evans, and Harvey 2003), some to Marran (e.g. Merlan 2003).
[19] See Harvey (2002).
[20] 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.
[21] This is the same language as Ndjébbana.
[22] Included in Gunwinyguan.
[23] Included in Gunwinyguan.
[24] Alawa and Marran (including Marra, Yukul, and Warndarrang) 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).
[25] Tentative as separate language; could also be considered a variety of Wardaman.
[26] Subgroup of Gunwinyguan and listed there.
[27] Subgroup of Gunwinyguan and listed there.
[28] 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.
[29] Dixon's (2002) intent is unclear here. Dixon calls this a '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 (2002) does not accept the unity of Pama-Nyungan, is it unclear on what basis we should assign Garrwan to that grouping.
[30] Harvey (2001: 9) considers this group a Sprachbund, and should be considered very tentative.
[31] Also known as Wuna (cf. Harvey 2001).
[32] Treatment as a distinct language is tentative.
[33] Classification for Wororan broadly follows (Clendon 2014; McGregor and 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.
[34] See Bowern (2012a).
[35] 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 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.
[36] Treated as distinct by Bowern (2023) 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.
[37] Ngumbarl is sometimes said to be a variety of Djukun (cf. Nekes and Worms 1953), but work with Bates's Ngumbarl material recorded from Billingee (cf. Coyne 2005) suggests that it is sufficiently different from Djukun and Yawuru that it should be treated as a distinct language.
[38] See below for Pama-Nyungan groups.
[39] In Pama-Nyungan in subsequent classifications; see Yanyuwa (Warluwarric).

[40] Tangkic is Pama-Nyungan in this classification but Minkin is non-Pama-Nyungan and a distinct family.
[41] 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, and Hale 1966) placed Tangkic as one of the primary subgroups of Pama-Nyungan on primarily typological grounds, since Evans (1990; 1995c) 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's 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 2004a). 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).
[42] See Harvey (2008b).
[43] 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.
[44] Also includes Murrinh Kura.
[45] Also includes Ngen'giwumirri and Ngan'gimerri, per dalylanguages.org.
[46] 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.
[47] 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.
[48] Also includes Magati Ke, per dalylanguages.org.
[49] Also includes Emmi, Menthe, per dalylanguages.org.
[50] Also includes Yunggurr.
[51] 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 Bowern, 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).
[52] 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).
[53] See Campbell (2006).

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 Geoffrey 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 Bowern 2012c and other sources. Here we include classifications based on published sources but emphasise that they do not take into account the substantial amount of unpublished work completed by the Tasmanian Aboriginal Centre.

Bowern (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 Southestern 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		Western Tasmanian Port Sorell Western Coastal Tasmanian

Pama-Nyungan language subgroups

Macro groups are given as per Bouckaert, Bowern, 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.

Bowern (current volume)	Dixon (2002)	Wurm (1972)	O'Grady, Voegelin, and Voegelin
Western			
Yolngu[46] Northern Djinang Djinba Yan-nhangu Djangu Dhangu/Rirratjingu Golpa Southern Ritharrngu	Yolngu Southern Dhuwal Dhay'yi Ritharngu Northern Nhangu Dhangu Djangu Western	Murngic[47] Yulngu Gubabuyngu Djambarr-puyngu Riraidjangu Ritarngu Waramiri Dalwongo Yulngo Yarnango	Murngic Yulngu Gobabingo Riraidjangu Ritarungo Wan'guri Dalwongo Yolngo Jarnango Djariwidji
Central Dhay'yi Dhuwal Dhuwala	Djinang Djinba	Djinang Djinba	Jandjinung Yulngi Djinba
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
Kanyara-Mantharta Kanyara Thalanyji Payungu Purduna Pinikura	Mantharta Kanjara Payungu Thalantji	Kanyara Talandji Bayungu Wadiwangga Mantharda Warienga	Kanyara Talandji Bayungu Targari Wadiwangga Mantharda

Thiin		Tenma	Warienga
Mantharta		Djiwali	Tenma
Warriyangga		Thargari	Djiwali
Tharrgari			
Jiwarli			
Tharrayi			
Kartu	Moore River to Gascoyne	Kardu	Kardu
Nhanda cluster	Watjarri	Maia	Maia
Malgana	Watjarri	Inggarda	Inggarda
Nhanda	Parti-maya	Malgana	Malgana
Amangu[53]	Cheangwa	Nanda	Nanda
Wajarri	Nana-karti	Muliara	Muliara
Kaalamaya[54]	Natingero	Wadjeri	Wadjeri
Badimaya	Witjaari		
Thaagurda[55]	Nhanda		
Yingkarta[56]	Malkana		
	Yingkarta		
Southwest	Western Bight	Nyungar	Nyunga
Ngatju Cluster	Mirning	Watjari	Mirniny
Ngatyumaya	Kalaaku	Mirniny	Mirning
Galaagu[57]	Karlamay	Mirniny	Kalamai
Mirniny[58]			
Nyungar Cluster[59]			
Southern	Nyungar		
Nyunga			
Wudjari			
Goreng			
Minang			
Southwestern			
Bibbulman			
Wardandi			
Kaniyang			
Pinjarup			
Wiilman			
Northern			
Wajuk			
Nyaki Nyaki			
Balardung			
Nganakarti			
Western Desert (Wati)[60]	Western Desert language	Wati	Wati (Western Desert)
Warnman		Wanman	Wanman
Northern:		Kardutjara and others	Kardutjara and others
Manjiljarra			
Kukatja			
Wangkajunga			
Yulparija			
Southeastern:			

Southeastern: Antakirinya Kokatha Kartujarra[69] Putijarra Ngalia Ngaanyatjarra Nyaanyatjarra Pitjantjatjara-Yankunytjatjara Pintupi-Luritja Tjupan Kuwarra Cundeelee Wangka			
Marrngu[70] Karajarri Nyangumarta Mangala	Mangunj Marrngu subgroup Njangumarta Karatjarri Mangala	Marngu Nyangumarda Karadjeri Mangala	Marngu Nyangumarda Karadjeri Mangala
Ngumpin-Yapa[71] Ngumpin Walmajarri Bilinarra Karranga Ngarinyman Wurlayi Gurindji Mudburra Jaru Malngin Wanyjirra Jiwarliny Ngardi Yapa Warlmanpa Warlpiri	Northern Desert Fringe Edgar Range to Victoria River Walmatjarri Djaru Gurindji Mudburra Yapa Warlpiri Ngardi Warlmanpa	Ngarga Walmanba Walbiri Ngardi Wanayaga Ngalia[72] Ngumbin Mudbura Gurindji Djaru Malngin Ngarinman Bunara Tjiwarliny-Wolmeri Nyangga[73] Wirangu Yura subgroup[32]	Ngarga Walmanba Walbiri Ngardi Wanayaga Ngalia[33] Ngumbin Mudbura Gurindji Djaru Malngin Ngarinman Bunara Tjiwarli-Wolmeri Nangga[32] Wirangu Yura subgroup[32]
Northern			
Western Torres[74] Kala Lagaw Ya Kalaw Kawaw Ya	A Torres Strait group[75] A1 West Torres A2 East Torres[76]	Mabuiagic Kaurareg Dauan-Saibai	Maguiagic Kaurareg Dauan-Saibai
Kukatj[77]	[in Paman]	Kalibamu Kukatyi[78]	Kalibamu
Greater Maric[79] Dharambalic[80] Dharumbal[81] Guynmal Mbabaram	Lower Burdekin[87] Cunningham Gorton O'Connor	Pama-Maric Mari Mandandanji Koa Ilba	Pama-Maric Mari Mandandanji Koa Ilba

- Wulguru
  - Wulguru
  - Coonambella[74]
  - Bindal
- North Maric
  - Gudjal
  - Gugu Badhun
  - Warungu
- East Maric
  - Giya
  - Ngaro
  - Yuru
  - Biri[75]
    - Biri
    - Yilba
    - Yangga
    - Miyan
    - Wirri
    - Barna
    - Yetimarala
    - Gabalbara
    - Garinybal
    - Barada
  - Yambina
  - Wangan
  - Yiman
  - Ganulu
  - Gangulu
  - Gayiri
  - Dhungaloo[76]
- South Maric
  - Wadjabangayi
  - Yandjibara
  - Badjiri
  - Gunggari[77]
  - Guwamu
  - Wadjigu
  - Gungabula
  - Bidjara
  - Gunya
  - Margany
  - Yiningay
  - Yagalingu
- Yirandhali[78]

- Rockhampton/Gladstone
  - Darambal
  - Bayali[80]

- Greater Maric
  - Maric proper
    - Bidjara
    - Biri
    - Warungu
    - Ngaygungu
    - Yirandhali
  - Mbabaram
    - Mbabaram
    - Agwamin
  - Proserpine
    - Ngaro
    - Giya
  - Guwa/Yanda[81]
    - Guwa
    - Yanda
  - Kungkari
    - Kungkari
    - Pirriya

Paman[82]
- Northern Paman
  - Linngithigh

B* North Cape York
- Northern Paman
  - Gudang

Central Pama
- Oykangand
- Okunjan

Yara
- Nawagi

Atherton Pama

- Yinwum
- Yatay
- Gudang
- Luthigh
- Anguthimri[91]
- Ndra'ngith
- Alngith
- Aritinngithigh
- Yupngayth
- Muthanthi
- Mpakwithi
- Mpalityan
- Mbeiwum
- *Uradhi group:*
- Yadhaykenu
- Uradhi
- Atampaya
- Wuthathi
- Angkamuthi

Middle Paman
- *Ump.-Yinty.*
- Umpithamu[92]
- Yityingka
- *Northeastern*
- Kuuku-Ya'u
- Kaanju
- Umpila
- Kuuku Yani
- *Wik*
- Wik Alkan
- Wik Paacha
- Wik Ep
- Wik Ngathan
- Wik Me'anh
- Wik Ngatharr
- Wik Mungkan
- Wik Iyanh
- Kugu-Muminh
- Ayapathu
- Pakanh
- Kugu Nganhcara

Alaya-Athima[93]
- *Thaypanic*
- Aghu-Tharnggala
- Kuku Thaypan[94]
- *Others*
- Ikarranggal
- Uradhi
- Wuthati
- Luthigh
- Yinwum
- Anguthimri
- Ngkoth
- Aritinngithigh
- Mbiywom
- Andjingith

Umpila

Wik
- Wik-Ngathan
- Wik-Me'nh
- Wik-Mungknh
- Kuku-Muminh
- Bakanha
- Ayabadhu

Western CYP
- Upper SW
  - Thaayorre
  - Oykangand
  - Ogh-Undjan
- Coastal SW
  - Yir-Yoront
  - Koko Bera
  - Kok Thaw(a)
- Kok Narr
- Norman Pama
  - Kurtjar
  - Kuthant

Cairns
- Djabugay
- Yidinj

Kuku-Yalanji

Umbindhamu

Southeast Cape York
- Lama
  - Morroba-Lama
- Aghu Tharnggala

North-eastern Pama
- Ompila
- Kandju

Koko Ya'o

Northern Pama
- Uradhi
- Mpalitjan
- Yinwun
- Awngthim
- Alngith
- Nggoth
- Aritinngithig
- Mbeiwum

Middle Pama
- Wik Munkan
- Wik Muminh
- Wik Mean
- Wik Epa
- Wik Ngatara
- Bakanha

Western Pama
- Yir Yoront
- Thaayorr

Coastal Pama
- Koko Pera

Gulf Pama
- Kunggara

Mbabaram

Karantic
- Karanti[99]

Yidinic
- Yidin
- Dyabugay

Yalanjic
- Gugu Yalanji
- Koko Yimidhir
- Koko Buyundji
- Koko Yawa

Lamalamic
- Umbuykamu
  - Umbindhamu
  - Umbuykamu
- Tjapukai
- Idinji

Eastern Pama
- Koko Imudji
- Muluridji

Bay Pama
- Lamalama

Northern Pama
- Otati
- Mpalitjan
- Jinwun
- Awngthim
- Nggoth
- Aritinngithig
- Mbeiwum

Middle Pama
- Ompila
- Kandju
- Wikmunkan
- Wik Muminh
- Wikmean
- Wikepa
- Wikngatara
- Taior

Western Pama
- Jir Joront
- Koko Pera

Gulf Pama
- Kunggara

Southern Pama
- Ogondyan
- Aghu Tharnggala

Ogh-Alungul Ogh-Angkula Agu Aloja Koogobatha Takalak Ogunyjan Koko Dhawa Ogh-Awarrangg Kokiny Athima Awu Alaya Southwest Paman *RR past group* Kuuk Thaayorre Uw-Oykangand Uw-Olgol Uw-Olkola Kuuk-Narr *NT past* Koko Bera Yir Yoront Yirrk-Mel *Norman Pama* Kuthant Garandi Kurtjar Ribh Walangama[87] Lamalamic Umbuygamu Lamalama Rimanggudinhma[88] Flinders Island[89] Barrow Point Guugu-Yimidhirr Mbara Kuuk Yak Agwamin Yalanjic[90] Kuku Yalanji Muluriji Gugu Wakura Gugu Djangun Wagaman Yidinyic Yidiny Djabugay	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	Wurangung Parimankutinma Wurangung Lamalama Coastal Lamalama Tablelands Lamalama	
		Walangama ?	

Mayi[92] Wanamara Ngawun Mayi-Kulan Mayi-Kutuna Mayi-Yapi Mayi-Thakurti	Mayi Ngawun Mayi-Kutuna	Mayapic Maykulan Wanamara Mayapi	Mayapic Maykulan Wanamara Mayapi
Dyirbalic Dyirbal Nyawaygi Warrgamay	Herbert River Dyirbal Warrgamay Nyawaygi Manbara[93]	Nyawigic Nyawigi Wulgurukaba Dyirbalic Dyirbal Wargamay Bandyin ?	[94]
Kalkatungic[95] Yalarnnga Kalkatungu	Kalkatungu Areal group Kalkatungu Yalarnnga	Kalkatungic Kalkatungu Yalarnngic[96] Yalarnnga	Kalkatungic Kalkatungu Yalarnngic 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 Miyan Dungidjau Djakunda-Korenggoreng Than Dalla-Batjala Taribeleng Kingkel Wadja Darambal	Waka-Kabic Miyan Keinjan (Dungidjau) Djakunda-Korenggoreng Than Dalla-Batjala Taribeleng Kingkel Wadja Darambal
Turubulic[97] Nunukul Turrubul 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] Yuwaliyaay Yuwaalaraay		Wiradjuric Main Wiradjuri Wonggaibon Kamilaroi Yualyai Wiriwiri[101]	Wiradjuric Main Wiradjuri Wonggaibon Kamilaroi Yualyai Wiriwiri

		Nguri ? Barunggama ? Miyal Bigumbil	Nguri Barunggam Miyal Bigumbil
Bigambal[110] Bigambal Guyambal Yugambal	<with Waka-Kabi>		
Bandjalangic[111] *Gold Coast* Pimpama Southport Burleigh Heads *Condamine/Upper-Clarence* Geynyan Gidhabal Dinggabal Galibal *Middle Clarence* Waalubal Biriin Wudjehbal *Lower Richmond* Wiyabal Nyangbal Bandjalang *Tweed-Albert* Minyangbal Yugambeh Nerang Ck Ngahnduwal *Copmanhurst*		Bandjalangic Gidabal Giabalic Giabal Keinyan	Bandjerangic Bandjarang Bandjalangic Giabal Yugumbal
Nganyaywana[112] Nyanyaywana Southern Anaiwan	<with NSW>	Aniwan	
Lower Murray[113] 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 Dhanggatti Sydney-Central Coast[114] Darkinyung Dharug	N Central New South Wales[119] Awabakal/Gadjang Awabagal Kattang Djan-gadi/Nganjaywana Thangatti	Yuin-Kuric Yuin Dhawa Dharawal Ngarigu Ngunawal	Yuin-Kuric Yuin Thaua Thurawal Ngarigo Ngunawal

Kuri *HRLM*[115] Awabakal Wanarruwa *Lower North Coast* Birrpayi Worimi Katthang Yuin[116] *Northern Inland* Ngun(n)awal Gandangara *Northern Coastal* Dharawal Dhurga Dharumba[117] *Southern Inland* Ngarigu Omeo language[118] *Southern Coastal* Thawa Djirringany	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	Kuri Gandangara Darkinung Wanarua Kattang Ngamba (Dangadi) Yukambal[120]	Gandangara Kuri Darkinung Wanarua Worimi Ngamba (Dangadi) Jukambal[121]
Gumbaynggiric Gumbaynggir Yaygirr Baanbay	<with Waka-Kabi (Central/Eastern)>	Gumbainggaric Gumbainggar Yegir	Kumbainggaric Kumbainggar Yegir Yegir
Eastern Victoria Kurnai group[122] Kurnai Muk-Thang Nulit Thangguai Bidawal Dhudhuroa[123] Waywurru[124]	(Q) Muk-thang (Kurnai) (R) Upper Murray Pallanganmiddang Dhudhuroa	Yaithmathangic Yaithmathang Duduruwa Pallangamiddah	Kurnic Bratauolong[125] Yaitmathangic Jaitmathang
Kulin[126] Bunganditj Kolakngat[127] Wathawurrung Western[128] Tjapwurrung Jardwadjali Djadjawurung Mathi[129] Ladji Ladji Mathi-Mathi	West Victorian areal group Kulin Wemba-Wemba Wadha-wurrung Wuy-wurrung Buwandik Buwandik Kuurn-Kopan-Noot Kolakngat	Kulinic Kulin Wergaia Wudjawuru Woiwuru Narinari Drual Marditjali Gulyan Kurung Kurnic[132]	Kulinic Kulin Djadjala Wudjawuru Taungurong Drual Marditjali Tjapwurrung Gulyan Kurung

Yari-Yari Wathi-Wathi[122] Wemba Wemba-Wemba[123] Nari Nari Warrnambool Wotjobaluk Eastern Woiwurrung Boonwurrung Daungwurrung		Brataolung	
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 Adjnjamathanha Wirangu		[Southwest] Nangga Wirangu Yura Nawu Pangkala Kuyani Wailpi/Adhnyamathanha Jadliaura/Nukuna
Paakantyi[129] Kurnu Paaruntyi Pantyikali Paakantyi Southern Paakantyi Parrintyi Wilyakali	Baagandji	Darling Kurnu	Darling Kula/Kurnu
Arandic Kaytetye Aranda Anmatyerr Alyawarr Antekerrepenhe Ayerreyenge Central Ar rernte	Arandic Arrernte Kaytetj	Arandic Artuya Kaititj Urtwa Alyawarra Lower Aranda	Arandic Artuya Kaititj Urtwa Iliaura Lower Aranda

Western Arrarnta Eastern Arrernte Lower Aranda[138]			
Karnic[139] Northern Pitta-Pitta Wangkayutyuru Arabana Wangkangurru Central Mayawali Karuwali Mithaka Karangura Western Pirlatapa Thirarri Diyari Ngamini Yarluyandi Yawarrawarrka Yandruwandha Nhirrpi Kungkarric Kungkarri Pirriya Eastern Wangkumara[140] Ngantangarra Garlali/Kullilli Punthamara Yandic[141] Guwa Yanda	Lake Eyre Basin (WA) North and West Pitta-Pitta Wangka-yutjuru Arabana/Wangkangurru Central Yandruwandha Diyari Ngamini Midhaga South-west Wangkumara Galali Badjiri	Pittapittic Ulaolinya Wangkadjera-Pittapitta Mitakudic Mitakudi Arabanic Arabana Yandic Yanda Dieric Karna Dieri Pilatapa Jauraworka Karendala Ngura Punthamara Badjiri[142]	Pittapittic Ulaolinya Wangkadjera-Pittapitta Mitakudic Mitakudi Arabanic Arabana Yandic Janda Dieric Karna Dieri Pilatapa Jauraworka Karendala Ngarna Punthamara Kalali Badjiri[56]

[54] 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.

[55] 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 to one another.

[56] BBA (2018) strongly supports earlier classifications where Warluwarra and Bularnu are 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).

[57] Warumungu is usually treated as a family-level isolate within Pama-Nyungan. Both Bowern and Atkinson (2012) and Bouckaert, Bowern, 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.
[58] 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 'Yinhawangga' 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).
[59] Equivalent to Nyiyaparli per Austlang, following Dench (1998b,c).
[60] Both OVV and Wurm have a large 'South-west' 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 South-west, plus Warumungu, is a monophyletic group in BBA.
[61] Amangu is sometimes classified as a Noongar variety; it also appears to be an alternative name for Nganakarti (which is clearly Noongar). The grouping within Kartu is per Blevins (2001a).
[62] Classification is tentative.
[63] It is not clear whether Thaagurda is closely related to Malgana or is a distinct language (cf. Austlang W15).
[64] Yingkarta is a sister to Kanyara-Mantharta in Bouckaert, Bowern, and Atkinson (2018). Kartu and Kanyara-Mantharta are not particularly close relatives; Kartu is sister to the South-west 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.
[65] Some group Galaagu and Marlpa together with Ngatjumaya as a single language (or use Marlpa as the cover term for the language).
[66] There seems some disagreement about whether the name is spelled Mirniny or Mirning. I have used Mirniny per the Goldfields Language Centre.
[67] 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 South-western languages group). See Chapter 74, this volume, for further discussion. BBA (2018) used ten word lists across the south-west and recovered the three-way Natju-Mirniny-Nyungar grouping. Within Nyungar/Noongar, subgroupings were less clear, in part because south-western was over-represented compared to the other varieties. Amangu appears in Noongar classifications but per Blevins (2001a) 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).
[68] See Babinski et al., Chapter 75, this volume, for a 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 south-eastern 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.
[69] The remaining Wati/Western Desert varieties are not yet classified.
[70] See Weber (2009).
[71] See McConvell and Laughren (2004).
[72] Classified as Western Desert in Bowern.
[73] See Thura-Yura in the Central group.
[74] See Alpher et al. (2008) for discussion surrounding views over whether the Western Torres Strait group is Pama-Nyungan.
[75] Dixon (2002): 'These are Papuan languages, not closely related to each other. A1 has a significant Australian substratum'.
[76] Listed below in 'Other' languages in Bowern'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, Bowern, and Atkinson (2018) and Bowern and Atkinson (2012), Western Torres's closest relative is Kukatj (see below), but the lexical evidence is very slim, so that is not followed here.

[77] 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 neighbours in terms of classification are not the Norman Paman languages which are geographically closest.
[78] Said in Wurm (1972) to be of doubtful existence, along with Walangama and Karanti. See Breen (1976) for other discussion.
[79] 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 north-west of the Maric area where data are sparse. Note that both OVV and Wurm (1972) only include three Maric languages (though with other dialects listed), whereas even Dixon (2002), who normally 'lumps' rather than 'splits', includes five in his 'Maric proper' and eight 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 Dyirbalic 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 Bowern'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).
[80] 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.
[81] 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.
[82] 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.
[83] 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).
[84] This name Dungaloo or Dhungaloo is known only, as far as I know, from a word list 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.
[85] There is doubt about whether Mandandanyi is a distinct language (see further Chapter 7, this volume). 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, Barunggam (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.
[86] Beale (1975) also includes a language Maŋira 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).
[87] Bowern finds no concrete evidence for a distinct Burdekin group. The three word lists in Curr (1886), from which Dixon derives the three languages of the group, appear to be Yuru (see Terrill 1998), a Maric language, possibly including words from Bigambal.
[88] Bowern places Bayali in Waka-Kabi. See also Breen (2009).
[89] This is a separate group within Karnic in Bowern's classification.
[90] See Black (1980); Hale (1976c,d,e); Hale (1964). Thanks to J. C. Verstraete, Peter Sutton, and Barry Alpher for discussion of language placements and classification for Paman.
[91] Same as Awngthim.
[92] For Middle Paman, see Verstraete and Rigsby (2015) and Verstraete (2020) for evidence. The grouping of Umpithamu and Yintyingka is given in Verstraete and Rigsby (2015: 192–4), they also include Umpila with many of the changes that characterize Yintyingka and Umpithamu within Middle Paman.

[93] 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.
[94] Also known as Awu Alaya.
[95] Placement within the group is unclear.
[96] 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.).
[97] Also known as Oko Wurrima.
[98] Note that I have fewer language distinctions than the Pama Language Centre, who also includes Kuku Jakandji and Wulpuru.
[99] Kuthant in Bowern's classification, following Black's work on Norman Paman.
[100] See Breen (1981b).
[101] 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).
[102] OVV place Dyirbalic within the Paman subgroup.
[103] See Blake (1979a).
[104] 'The language is structurally similar to Kalkatungu which constitutes the Kalkatungic Group' (Wurm 1972: 131).
[105] 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 Turrubul 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). These groups are together known as Quandamooka.
[106] Jeffries (2011) treats Guwar as a Bandjalangic language which has been heavily influenced by Yagara.
[107] See Oates (1988), and (Oates 1988: 198–9) for the classification of Barranbinya as closer to Muruwari than Central New South Wales.
[108] WL (2008: 215) has Gamilaraay and five other varieties as a single language, called 'Darling Tributaries language'.
[109] Wiriwiri, Nguri, and Barunggama are Waka-Kabi in the current classification. See Breen (2009) and Terrill (2002) for discussion.
[110] See Bowern, Chapter 7, this volume, and Wafer and Lissarrague (2008: 333–4) 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.
[111] 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 labelled 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, as per WL and Crowley (1978). Shaun Davies (at the 2022 Australian Languages Workshop) provided good evidence that prior classifications have over differentiated.
[112] I follow Wafer and Lissarrague (2008) and Crowley (1976) in recognizing two languages here.
[113] Classification based on the materials in Horgen (2004) and Wafer and Lissarrague (2008). Blake (2011b), Dixon (2002), Wafer and Lissarrague (2008), and Horgen (2004) have five 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 coloured 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.
[114] Thanggatti is grouped with the Nganyaywana languages in Wafer and Lissarrague (2008). However, in the BBA (lexical) classification, Thanggatti is grouped solidly within Yuin-Kuri, while Nganyaywana did not clearly group with any particular subgroup or language. For now I retain grouping of Thanggatti within Yuin-Kuri, pending further research. Per members of the Dharug Dhalang project, comparative research of the archival sources and of more contemporary linguistic writings shows that varieties termed Dharug/Dharuk, Eora/Yura, 'Sydney Language' (Troy 1993), and Steele (2005) represent data of one language, named here 'Dharug', with some dialectal variations.
[115] That is, Hunter River-Lake Macquarie, per WL.
[116] 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.
[117] This is the language of the group known as Wandandian (cf. Eades 1976: 4).

[118] 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.
[119] 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.
[120] Treated with Bigambal as own primary subgroup by Bowern.
[121] Treated with Bigambal as own primary subgroup by Bowern.
[122] Classification per Hercus (1987) and Clark (2005); see also Fesl (1985).
[123] 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. Bowe (2002: 134–8) says that Waywurru extended north of the Murray River ('east of Albury'). See Wafer and Lissarrague (2008: 64–7) for issues around the naming of Dhudhuroa, Waywurru, Pallanganmiddang, and Yaitmathang.
[124] This is the name of the language spoken by the Pallanganmiddang people.
[125] Kulin in Wurm (1972)
[126] See (Blake 2011a; Blake and 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).
[127] Also called Gulidjan.
[128] Werkaya is another name also used for these languages.
[129] 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's (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.
[130] There are two different Wathi-Wathi varieties: Swan Hill and Piangil, cf. in Blake et al. (2011).
[131] Also Baraba-Baraba.
[132] In East Victoria in Bowern's classification.
[133] 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.
[134] See Hercus and Austin (2004). While many language placements are (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).
[135] Nadikali is presumably a typographical error for Wadikali.
[136] See Simpson and Hercus (2004).
[137] 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.
[138] See Hale (1962): classified as a branch coordinate with other 'Aranda' (i.e. all except Kaytetye); see also Koch (Koch 1997a,b; Koch 2004b).
[139] For the difficulties of classifying Karnic, see Breen (2007), responding to Bowern (2001).
[140] 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 neighbours of Paakantyi people.
[141] See Breen (1990b).
[142] Classified as Maric by Bowern.

Papuan Language

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

New Indigenous Languages[143]

- **Creole Languages**
  - **Yumplatok and affiliated north-eastern creole languages**

1. Yumplatok; also known in the literature as Torres Strait Creole, Broken (Shnukal 1988; 1991)
2. Cape York Creole; from the Northern Peninsula Area of Cape York (Crowley and Rigsby 1979, with some commentary in Harper 2001)
3. Lockhart River Creole (Mittag 2016)
4. Napranum Creole (Carter, Angelo, and Hudson 2019)

  - **Kriol and the Kriol sphere of influence**[144]

5. Kriol (Schultze-Berndt et al. 2013; 5a. Fitzroy Valley Kriol: Hudson 1985; 5b. Bamyili/Barunga and Ngukurr Kriol: Sandefur 1979; Barkly: Graber 1988)

Eastern periphery

6. Mornington Island Creole (Nancarrow 2014; Community negotiated project, Language Perspectives 2015a)
7. Kowanyama Creole (Community negotiated project, Language Perspectives 2018)

Southern periphery

8. Alyawarr English (potentially also described as a blended language; Dixon 2017; 2018)
9. Wumpurrarni English (potentially also described as a blended language; Disbray and Simpson 2004; Disbray 2008a; 2016)

- **Superdiverse Aboriginal settlements**[145]

10. Yarrie Lingo (Angelo Fraser and Yeatman 2019; Mushin, Angelo, and Munro 2016; Community-negotiated project, Language Perspectives 2009)
11. Woorie Talk (Munro and Mushin 2016; Community-negotiated project, Language Perspectives 2015b)
12. Cherbourg Lingo (Mushin, Angelo, and Munro 2016; Community-negotiated project, Language Perspectives 2009)
13. Palm Island (Dutton 1964; 1965)
14. Murdi Language (south-western Queensland; Community-negotiated projects, Language Perspectives 2009)

[143] This classification is reproduced (with additions) from Angelo, D., O'Shannessy, C., Simpson, J., Kral. I., Smith, H., and 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. 115–16. There are no doubt other contact languages which are not in this classification, but which are yet to be documented.

[144] See also Dickson (Chapter 57, this volume) and Angelo (Chapter 66, this volume).

[145] See Angelo (Chapter 66, this volume) for more information.

- **Mixed languages**

15. Light Warlpiri (O'Shannessy 2005; 2009; 2013, and much other work)
16. Gurindji Kriol (McConvell 1988a, 2002; McConvell and Meakins 2005; Meakins 2008b; 2010, and much other work)
17. Modern Tiwi (Lee 1987; McConvell 2010; Wilson, Hurst, and Wigglesworth 2018)

- **Languages not otherwise classified**

18. Dhuwaya (Amery 1985)
19. Areyonga Teenage Pitjantjatjara (Langlois 2004)
20. Broome Pearling Lugger Pidgin (Hosokawa 1995)
21. Broome Aboriginal Englishes (Hosokawa 1995)[146]
22. Pidgin Ngarluma (Dench 1998a)
23. Contemporary/New Noongar (Douglas 1968 [1976]; Rooney 2011)
24. Jambun English (Schmidt 1985)
25. Palawa Kani

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.

Acknowledgements

Numerous people have assisted with this classification in various ways over almost 15 years. In particular, I thank Barry Alpher, Peter Sutton, and J. C. Verstraete for discussion of Paman; Barry Alpher for discussion on the relationship between Paman and Maric; David Nash and Harold Koch for innumerable points; Denise Angelo, Nick Evans, Jenny Green, Mark Harvey, Luise Hercus, Amanda Lissarrague, Patrick McConvell, Doug Marmion, Rachel Nordlinger, Kazuko Obata, Erich Round, and Jane Simpson. They are not responsible for any errors that remain here, and in some cases we have no doubt come to different conclusions and would not necessarily agree with the classification and maps presented here.

[146] Aboriginal English is shown on the map in North-Western Australia but it should be noted that there are many varieties of Aboriginal English.

Foreword

It is with a great sense of humility and pride that I write the foreword for this important work.

The survival and continuation of Australian languages, the Aboriginal and Torres Strait Islander languages of Australia, is a matter of global significance. In my lifetime I have personally witnessed the agonizing death of my language family and my language group, simply through the forces of interaction and engagement with modern society, represented by the colonial settler society of Australia.

In my language community, Ngalia, my mother and her parents were the first generation to have contact with white Australia. As each of my elders passed, I witnessed the progressive disappearance of the language of my childhood—language that carried all the meanings of my connection to country, language that held the wisdom and insight of countless generations before me, language that allowed us to flourish in a hostile environment. Our language united us through family, kinship, and knowledge of country. It enabled us to communicate not just to survive but to flourish as a society. It is a long, slow, and painful journey with each passing, as the realization dawns that you can no longer speak to those around you, you can no longer share your understandings and insights of the world around you in the same language. Instead you take on the words, ideas, and mannerisms of the languages spoken around you. Sometimes this means speaking other Aboriginal languages, but more commonly in my region it's the adoption of English, or the Aboriginal English dialect, as the primary means of communication.

When you arrive at that accursed destination of being the last speaker, you can never truly express the joy, the pleasure, of hearing and speaking your mother tongue again. Every sound triggers the synapses in your brain. Pleasure courses through your body as you hear the words of your mother tongue. They roll off your tongue, bringing a sensation of immense relief at speaking and connecting with another soul. This is usually the pleasure of a rare and temporary interaction with a linguist or language worker, coming to frame your language into the archive of the world's lost treasures. It's not ideal, but it's an important contribution.

This significant work focussing on Australian Indigenous languages carries the stories of individuals, families, and countries and the histories of spirit, art, and culture. The history of First Nations languages in Australia is mired in genocide, soaked with the blood of the frontier. It survives under the hammer of in-built bias and prejudice and the socially perpetuated oppression of language communities. The numbers speak for themselves: multiple hundreds of languages were spoken prior to contact—some say 200, others up to 700—and yet today only 20 remain as living languages. With the passing of each year, that number moves closer to the precipice. This work commits to record an insight into those languages once spoken and those that still survive today. I hope it will inspire the survival of Australia's First Nations language communities into the future.

Pick it up, read it. Wonder, be inspired, and treasure each word.

Palunya.

Ngula nyaku.

Kado Muir
Ngalia language speaker

CHAPTER 1

Introduction

Claire Bowern

1.1 Introduction: the languages of Australia

This is a book about the Indigenous languages of Australia: the more than 500 languages, including Sign languages, Pidgin, Creole, and Mixed languages, which have been used on the Australian mainland, Tasmania, and the Torres Strait Islands from more than 50,000 years ago to the present.[1] At the time of the 1788 European invasion, one language family—Pama-Nyungan—covered roughly 90% of the Australian mainland. Twenty-seven other language families, now known collectively as non-Pama-Nyungan, were found in the north, from the Kimberley region in the northwest to the Gulf of Carpentaria. There were also probably five Tasmanian language families, containing multiple languages. This linguistic diversity accrued over thousands of years.

The contemporary linguistic landscape of Australia is different. Many of the languages which were in use at the time of European invasion and settlement are no longer spoken. What happened to the Aboriginal people of Australia in the years following 1788 was genocide. Even a purely academic approach to the linguistics of Aboriginal Australia cannot overlook this—it is embedded in the circumstances of documentation, in the types of examples recorded, and in who shapes the record. The Indigenous peoples of Australia are still here, and that is also celebrated and reflected in this volume.

This book grew out of a wish to provide an up-to-date compendium of knowledge on the languages of Australia, particularly including material not covered in the handbooks from the past. To date, there have been several single-authored handbooks of Australian languages (Schmidt 1919a; Capell 1956; Blake 1987a; Dixon 1980; 2002; Wurm 1972), as well as several edited volumes comprising collections of papers about different aspects of language (Koch and Nordlinger 2014; Dixon 1976a; Walsh and Yallop 1993). Because of the need to broaden focus on the 'langscape' (see Angelo, Chapter 66, this volume) as well as questions of linguistic structure, this handbook has not only chapters on typological topics in phonology, morphology, and syntax, but also a substantial number of chapters on semantics and pragmatics, as well as on sociolinguistic topics, on language use, and on linguistic ecology. We also present work on language change across the continent, as well as on the history of research and classification. Additionally, there are chapters with discussion of language areas, families, and selected individual languages. In this way, the handbook both represents the state of the art on Australian language work and reflects the concerns of linguists working on Australian languages.

[1] Traditional figures place the number at 250; see Walsh (1997b) and Bowern (Chapter 7, this volume) for discussion about the number of languages and why the higher figure is more accurate.

1.2 Overview of the volume

Given the number of chapters in the handbook, they are not all summarized here. Instead, I first summarize the sections, and then briefly highlight some of the common themes that authors raise.

1.2.1 Summary of parts

The first part ('Background') provides information about the history of research, classification and language history, and documentation and philological methods. These chapters present information about the forces that have shaped contemporary documentation practices for Australian languages, as well as an overview of the landscape of languages to be discussed in subsequent sections.

Part 2 concerns typology and grammatical structure. The chapters cover phonetics, phonology, morphology, syntax, semantics, pragmatics, and discourse. These chapters build on the long empirical tradition of Australian language documentation and grammar writing to provide a state of the art overview of these aspects of language. These chapters

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contain a variety of case studies and typological approaches, depending on the availability of material.

Part 3 is devoted to sociolinguistics and language variation. It includes an array of topics related to language use, including code-switching and multilingualism, child-directed speech (also known as 'baby talk') and auxiliary registers, as well as language contact and contact varieties (including Kriol).

The five chapters in Part 4 involve language in the community—that is, applied linguistic topics around language policies, language acquisition, and language revival and reclamation. Finally, Part 5 provides additional case studies of many of the themes brought up in previous chapters by discussing individual languages, language areas, and language families. These areas were picked to illustrate particular points in the handbook, as well as to highlight a few of the languages or regions which lack good overviews in other handbooks.

1.2.2 Coverage of topics

Several documentation themes run through the volume. Most authors mention at some point in their chapter that they did not have enough data, or that relevant facts had not been recorded for enough languages. Almost every author points out that some aspect of their topic is understudied—even the topics that have been well researched by Australianist standards.

In compiling the chapters for this volume, my aim was to cover 'Australian (Indigenous) languages' as broadly as possible. This meant including not just the languages which were spoken prior to the European invasion, but also Indigenous languages in current use, such as Kriol and other contact varieties. A further aim was to not focus simply on grammatical topics—that is, the study of languages of Indigenous Australia involves a lot more than typological and historical study, important though that is. Language variation and sociolinguistics, for example, has been a chronically understudied area of Aboriginal linguistics. It is my hope, that by including in a single book work on language policy, language acquisition, language revival, language variation, code-switching, signed languages, auxiliary languages, and similar topics, along with work on phonology, morphology, syntax, and semantics, that the connections between grammatical description and linguistics with a social focus will be more apparent.

For all that breadth, there were a number of topics that I would have liked to have represented in this handbook, but which could not be included. This was either due to lack of information, or in some cases, due to lack of space. For example, there is no chapter on syntactic change because there has not been sufficient reconstruction already done to allow us to synthesize results. There are very few publications on comparative syntactic reconstruction, and the synchronic typology of syntax has focussed on a couple of areas—in particular, adjoined relative clauses, nominal classification systems, and complex predication. Not even nonconfigurationality, which has long been associated with Australian languages (Austin and Bresnan 1996; Hale 1983; Simpson 1991; amongst others), has received a thorough comparative treatment within Australia. Some topics are addressed in passing but would warrant treatment in more detail, such as clusivity (see Gaby and Shoulson, Chapter 24, this volume, in the broader context of pronominals).

In other cases, we have tried to present a more nuanced view of 'facts' (or perhaps more accurately, 'factoids') about Australian languages—that is, aspects of the language which have been treated as received wisdom but are either factually incorrect, trivially true of human language in general, or require more discussion and explanation (see Bowern 2017b for further discussion of this topic). One example involves adjectives. 'Received wisdom' is that Australian languages typically lack a robust distinction between nouns and adjectives. However, as Kim (Chapter 25, this volume) shows, half the languages in her survey have some type of morphological or syntactic distinction between (referential) nominals and adjectives (see also Louagie 2017b). Therefore, we cannot simply maintain an opinion that Australian languages do not have morphological or syntactic distinction between nouns and adjectives (cf. Dixon 2002: 67), when so many clearly do; and where for others, a lack of distinction has been asserted without detailed investigation.

In yet other cases, chapters in this handbook are the first in their respective topic to attempt to synthesize work across the country. For example, suppletion in Australian languages is severely understudied (see Bach and Round, Chapter 29, this volume). In further cases, chapters of this handbook provide some overview on certain aspects of language, but fuller treatments of individual languages await. Formal semantics and negation, for example, lack detailed treatments for most languages of the continent, and these chapters (Bednall, Chapter 32, and Phillips, Chapter 34, for example) are a first general survey that will form a foundation for others to build on.

Unfortunately, several topics needed to be omitted, mostly due to lack of space. Associated motion (Koch 1984; 2021), for example, is a phenomenon that is robustly attested in several groups of Australian languages but relatively rare (though not unknown) elsewhere in the world (cf. Guillaume and Koch 2021). An ideal volume without page constraints would have included more work on lexicography,

grammar writing, and lexical semantics beyond a few key areas, such as kinship (McConvell, Chapter 43), toponyms (Rosenberg, Simpson and Bowern, Chapter 44), and language names (Rosenberg and Bowern, Chapter 49). Also missing, though not by design, are Aboriginal voices around their language work (see Woods and Gaby 2021, for some discussion of this topic). While Miceli and Bowern (Chapter 5) discuss a few ways in which linguistics is part of multidisciplinary approaches to the past, we have not done justice to the many ways in which linguistics and anthropology have been combined over the history of work on Australian languages (cf. Stockigt 2020).

Some other areas are ripe for further analysis and need a fuller study. We have no information about gesture or reference construction where gesture is part of the utterance (though cf. Green 2014). For example, Dahmen (2020) found, in a small-scale study of Jaru, that half the pronouns in the conversational corpus are accompanied by gestures, clearly indicating that gesture and speech are jointly signalling reference. Thus, even though this book is large, it is not, by any means, a fully 'comprehensive' study.

1.2.3 Authors' approach

As is expected from a volume of this scope, different chapters take different approaches to covering their topics. Many authors present a typological overview from a sample. The size of the sample varies, depending mostly on the availability of material or the sampling approach. For example, both Kim and Spronck (Chapters 26 and 30, respectively) have samples of around 40 languages; Kim's is due to problems with material, while Spronck's relates to sampling from major lineages across the continent. Other samples are samples of convenience, used to illustrate particular points but the whole continent was not systematically reviewed. Finally, some other chapters focus on particular, well-studied languages (Tabain's EMA work in Chapter 9; Bradley and Gaby on gender in Chapter 53) to illustrate the phenomenon under discussion.

1.2.4 Supplementary materials and data archiving

Many of the chapters have electronic supplementary materials. These supplements contain the data or source materials that were used in the compilation of the typological surveys. These items can be found at https://zenodo.org/communities/ogal-supplement/.

Although all data on which this volume is based came originally from Aboriginal and Torres Strait Islander people, some analyses are based on primary work with individuals, while others are based on secondary analyses or archival materials, such as fieldnotes. Many of these materials are archived in three repositories: the library of the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), the Endangered Language Archive (ELAR) repository through SOAS, and the PARADISEC digital archive.

1.3 Conventions and context

In the course of approximately 200 years of academic writing about Australian languages, conventions have arisen which may be unfamiliar to people working in other areas of the world. This section explains some of those conventions and notes the approach of the volume.

1.3.1 Terminological conventions

One consideration has been the extent to which a book like this should use the conventions that are most familiar to Australianists, vs. situating the languages in the broader typological literature. For example, for many years, Australianists spoke of three types of Australian languages (that is, in typological terms): prefixing, suffixing, and 'affix-transferring' (Capell 1972). The prefixing languages are the non-Pama-Nyungan languages in the north of the country; the suffixing languages are all Pama-Nyungan, with the exception of the Tangkic, Garrwan, and Eastern Mirndi families. The affix-transferring languages are mostly from the Ngumpin-Yapa and Marrngu subgroups of Pama-Nyungan; they have pronominal argument morphology that usually attaches to a second position clitic (termed a 'catalyst'). We have referenced such material in order to increase the interpretability of earlier literature, while also keeping, as much as possible, within the functional-typological vocabulary most familiar to readers (thus, 'ergative' case rather than 'operative', for example, and 'head/dependent marking' rather than 'affix-transferring'; see e.g. Nichols 1986).

1.3.2 Referring to Australian languages

There are many spelling conventions for referring to Australian languages. In some cases, there are different standards in the anthropological and linguistic literature (Dieri vs. Diyari, for example). In other cases, there have been several spellings according to author (cf. Anindilyakwa

vs. Enindhilyakwa vs. Anindhiljaugwa). In further instances, the conventions represent minor differences in orthography, such as whether voiced or voiceless letters are used to represent the stop series (e.g. Bindubi vs. Pintupi, Nhanda vs. Nhanta) or how lamino-palatals are transcribed (e.g. Walmajarri vs. Walmatjari). Some examples are described in Bowern (Chapter 7, this volume).

Over the course of descriptive and analytical work on Australian languages, a number of other language naming patterns have developed.[2] Some names are traditional; others are the result of research practices by non-Indigenous linguists. For example, it has become customary to refer to subgroups of Pama-Nyungan after the word for 'man' or 'person' (viz. Karnic, Wati, Thura-Yura, Yolŋu, Yuin-Kuri, etc.). In some cases, this has led to problematic conventions. For example, 'Wati' is often used for the subgroup of Pama-Nyungan languages of the Western Desert and adjacent regions of Western Australia, South Australia, and the Northern Territory (see Babinski et al., Chapter 75, this volume). However, *wati* is not a neutral term meaning 'man' or 'person'—in at least some of these varieties, it refers particularly or exclusively to an initiated man. Personal communication with women who speak these languages reveals that they are uncomfortable with the term, which both excludes them as speakers and implies that the language is solely the domain of initiated men. This naming convention apparently arose because of an assumption that many Australian languages have a homonymy between 'man' and 'person'—which is not borne out. That is to say, while researchers have sought to use a consistent strategy for language naming that includes material from Indigenous languages, those conventions can end up as problematic.

Another potentially problematic naming convention is to name a subgroup or family after a particular language (e.g. Gunwinyguan, Nyulnyulan, Warluwarric, Worroran, and the like). These names sometimes appear to language users to prioritize one variety over another. An alternative convention is to use topographic features (cf. the 'Flinders Island language'). Dixon's (2002) classification makes extensive use of this practice, replacing names that were previously in common use with names based on such features (e.g. 'South Kimberley Subgroup' for 'Bunuban'). While this avoids the problems of names based on single languages or words for 'man', they tie Aboriginal languages to English-based naming systems.

In order to make it easier to refer to languages throughout the text, we have somewhat standardized the spelling of language names. We have tried to use the form that is, to our knowledge, the accepted form within the language community, or failing that, in the linguistics literature (e.g. in the Austlang database, found at austlang.aiatsis.gov.au). Notes on variants in spellings are given in the index. This is the most seamless way to be consistent across the volume while acknowledging that those using the volume may try to find information about particular languages in many different ways. We have retained the familiar subgroup names and families while recognizing that this is problematic.

[2] See also Rosenberg and Bowern (Chapter 49, this volume) on language names.

1.4 Overview of the languages of Australia

1.4.1 Language and descent groups

Some important details of language tenure and land tenure may be unfamiliar to some readers of this book, and so are summarized briefly here. Naturally, details vary across the country, but the following schema is broadly applicable.

Language is said to have been placed on the land by ancestral culture heroes, during the Dreamtime (a translation of a term known by various names throughout the country, including *jukurrpa, bukarri(karra)*, *altyerre*, and *milon,* among many others). This 'beforetime' is the foundation of law and lore, morality, and many other aspects of social organization. However, it is not localizable in a particular time; as Stanner (1979: 24) wrote, it is 'everywhen', and an 'unchallengeable, sacred authority'. Perkins's (2016) frontispiece provides a very effective explanation of Dreamtime through language and images (Muecke and Roe 2021 is also evocative). Country is often said to be linguistically and culturally aware—aware of languages spoken on it, responsive to knowledge and proper address, a stance shown in Bawaka Country et al. (2019: 683), where Bawaka Country itself is given authorship on the article:

> This paper is authored by Bawaka Country. For Yolŋu people, Country means homeland. It means home and land, but it means more than that too. It means the seas, and the waters, the rocks and the soils, the animals and winds and all the beings, including people that come into existence there. It means the connections between these things, and their dreams, their emotions, their languages and their Rom (Law). It means the ways we emerge together have always emerged together and will always emerge together. This co-becoming manifests through songspirals, known more commonly as songlines or dreamings. Songspirals are rich and multi-layered articulations, passed down through the generations and sung by Aboriginal peoples in Australia to make and remake the lifegiving connections between people and place.
>
> (Bawaka Country et al., 2019)

As Hobbles Danaiyarri[3] succinctly explained: 'Everything come up out of ground ~ language, people, emu, kangaroo, grass. That's Law'. M. K. Turner (2010: 194) puts it this way:

> The Land needs words ... It's not only words that's sacred but also it comes from our own Land, and comes from our Ancestors. It's a gift from that Land for the people who join into that Land – fathers, and brothers, and sisters, and brothers-in-law, and also our children. We come from the Land, and the language comes from the Land. And everything that grows from the Land, it really relates to our language as well ... *Akarre* is a sacred tongue because it comes from the Land and it's part of us, and because we use it to do things, to say things. *Ane akaltye anthurre angkentye ikwerenheke. Ane angkentye itethe atnerte mpwepe-arenye apeke re.* And that person knows his language, and he knows that his language is born out of the living flesh of that Land.

A person's primary linguistic affiliations come from country (Sutton 1978; Rumsey 1993). That is, because language comes from country, one's language ownership (or custodianship) comes along with the custodianship of country. Deborah Bird Rose (1992: 118) summarizes a discussion with Yarralin people, 'Language, too, is a way of defining country, and thus of defining people who belong to that country. Speaking the language of one's identity is not an issue here. People belong to the area defined by the Karangpurru language, for example, because one or both of their parents were Karangpurru, and this is so regardless of what languages they speak'.

1.4.2 Language and European settlement

Works about Australian languages are accustomed to use the date of European settlement (or invasion) of Australia (1788) as a reference point, and they are written as though we are simply trying to recover as much as possible about the life of Indigenous Australians from several hundred years ago. In this volume, however, I have tried to strike a balance between discussing Australian languages across their histories (reconstruction and change over the course of the last 5,000 years or more) and the very rapidly changing linguistic landscape of the last 50–230 years. Linguists try to use descriptions of languages from points in time at which those languages were still in daily use. However, it is simply a reality that many languages of the Australian continent were described by linguists and the last speakers and signers of those languages, at points when the languages had already fallen out of use as everyday means of communication. In some cases, this was because communities shifted to other languages. More often, though, the shift was brought about because communities were dispersed or 'disrupted' (to use a common euphemism), children were forcibly removed from their families, and individuals were punished for speaking their ancestral languages. This has consequences, because how last speakers use their languages may be quite different from speakers at the time of the invasion; therefore, care must be taken in comparing earlier and later records, even if they appear to refer to the same speech varieties.

It is traditional to talk about 'pre-contact' Australia, referring to the contact between Europeans and Aboriginal and Torres Strait Islanders. But of course, as Vaughan notes (Chapter 54, this volume), linguistic and cultural contact predates European arrival, and even after 1788 is not limited to contact with speakers of English. Other pre-European encounters include (but are not limited to) contact with Macassans who fished along coastal Arnhem Land in northern Australia for trepang (sea cucumber) from the late seventeenth century, as well as contact with Malay, Japanese, and Chinese pearlers in the early twentieth century in the coastal Kimberley region of western Australia (see further Urry and Walsh 1981; Walker and Zorc, 1981; Evans 1992a). Wood (2018) has made arguments for contacts between speakers of Austronesian languages and Paman languages on eastern Cape York Peninsula.

1.4.3 Language classification

In this volume, authors give language family classification information for non-Pama-Nyungan languages; for members of the Pama-Nyungan family, authors give the subgroup they belong to. A few chapters also make use of the primary divisions in Pama-Nyungan discussed by Bowern and Atkinson (2012). This book does not have a detailed discussion of the history of classification of Australian languages, though aspects are covered in brief in Stockigt (Chapter 2, this volume) and in detail for the 19th century in Stockigt (Chapter 6, this volume). Twentieth Century classifications have been covered in detail by Koch (2014a), as well as in the introduction to Bowern and Koch (2004). The front matter and Chapter 7 of the present volume gives some discussion of methods.

1.4.4 Contemporary language use

These days, Indigenous languages in Australia are used in many different ways. Some languages are the primary languages of their communities; others are still present (but used less commonly), or used by a small number of people. Others are known, and still important, but not used as

[3] A Mudburra man of Yarralin (Northern Territory), quoted to Rose (1996: 9); see also Rose (1992).

a primary or daily language of communication. Others are currently being awakened.

Many handbooks of languages treat language as disembodied. This handbook attempts to show language as both elegant structures and as important parts of the lives of people. Along with reading this volume for linguistic information and understanding, I hope that readers of this volume will also mourn, witness, remember, respect, celebrate: mourn what has been lost, and the circumstances under which that happened; witness the consequences and remember what has happened; respect individuals and communities for the choices they make about their lives, land, and languages; and celebrate the work currently being done so these languages continue across the land and are handed on.

1.5 Conclusion

The editor and authors of individual chapters wish to acknowledge that the contents of this volume have been compiled based on the knowledge of expert Indigenous speakers. Given the number of languages considered throughout, these experts cannot all be cited individually, and we had to list the compilers of knowledge as authors in the table of contents, following academic practice. It must nonetheless be recognized that the linguistic knowledge compiled here comes exclusively from Indigenous speakers and signers. The relative absence of Indigenous contributors as authors of these chapters makes it very clear that we have a long way to go to make linguistics more accessible and desirable as a path of study for Australian Indigenous people (see also Gaby and Woods 2021 for discussion of linguistics in an Australian social justice context).

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PART I

Background

CHAPTER 2

A history of the early description of Australian languages

Clara Stockigt

2.1 Introduction

The development of understanding about the diversity, internal relationships, and structure of the estimated 400 languages spoken in Australia at the time of British colonization in 1788 (Bowern, Chapter 7, this volume) has paralleled the exploration and encroachment of the coastal and vast interior regions of *Terra Australis Incognita.* Colonization was slow, and initial struggles were sometimes abandoned.

That the mere thirteen Australian Aboriginal languages which continued to be acquired by children in 2014 (Marmion et al. 2014: xii; Bowern, Chapter 7, this volume) belong to areas of the country remote from large population centres and early European settlement, and typically with unproductive soils and inhospitable climates, tells of the detrimental impact that European occupation has had on Australia's original inhabitants and on their languages. Aboriginal people who have survived the colonial onslaught long enough to have shared their languages with linguists in recent decades tend to originate from parts of Australia, or 'countries', which are remote, sparsely inhabited, and infrequently visited. Languages which have been lost before any record of them had been made, or for which only a fragmentary record was taken, tend to be those belonging to country close to European centres of population. While there are historically interesting exceptions to these tendencies—for example, Arrernte is heard today on the streets of Alice Springs, and Unggumi is no longer spoken despite belonging to country far from centres of European population—the pattern is nevertheless evident.

The earliest written records of Australian languages predate colonization. The first was taken by William Dampier (1998 [1697]), who in 1688 landed close to Cygnet Bay on the northwest of the continent where he recorded the single Bardi word 'gurry'—probably *ngaarri* 'devil' (Metcalfe 1979: 197) without translation, but which he described (Dampier 1998: 222) as being cried by people running 'away as fast as they could'. The window which this single entry provides into Aboriginal experience of early European contact is apparent in other early linguistic documents. In 1840, for example, Teichelmann and Schürmann gave an example sentence in Kaurna, spoken close to Adelaide, which they translated as: 'Don't hang the black man, that the European be not charmed [ensorcelled]'.

The next and more detailed records of an Australian language were collected in 1770 by members on board the Royal Navy research vessel the *Endeavour* commanded by Lieutenant James Cook (Banks 1770; Cook 1893 [1770: 322–3]), who recorded 'words' in Guugu-Yimidhirr, or a closely related variety, spoken on the northeast coast. Banks's wordlist contains what is probably the best-documented (Roth 1901: 6; Breen 1970; Haviland 1974) pathway by which an Australian lexical item entered the English language. Members of the crew of the *Endeavour* were taught the Guugu-Yimidhirr word 'kanguroo' (*gangurru*) referring to the large black or grey marsupial, and the term subsequently entered the English language and came to be used across Australia where related species had their own Indigenous names.

Following the colonization of New South Wales, Australia's earliest established colony, records were made of the Yuin-Kuri languages spoken in coastal regions north and south of Port Jackson (Sydney). William Dawes's documentation of the 'Sydney language' (see Wilkins and Nash 2008) is remarkable in having been written so soon after the colonization of New South Wales yet decades before any subsequent grammatical description.

In 1834 Congregationalist Missionary Lancelot Threlkeld published a grammar of a language spoken near Lake Macquarie, north of Sydney. Threlkeld's work may be considered the earliest extant Australian grammar, since Dawes did not describe case morphology on nouns or on pronouns, although he did conjugate verbs. Following Threlkeld's grammar came the MS grammars of Wiradjuri, written soon after the 'opening-up' of agricultural lands west of the initially impenetrable Great Dividing Range. Wiradjuri materials written by the Basel Mission Institute-trained missionary James W. Günther (1838; 1840) were based on now lost

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analyses by the Basel-trained J. C. S. Handt and the Church Missionary Society missionary William Watson (Bridges 1978: 414–15).[1] Threlkeld's and Günther's grammatical analyses were later published in an important edited volume of grammars produced in Australia by John Fraser (1892a). Fraser's collation rescued much early grammatical material from oblivion, and printed other material for the first time, including Hugh Livingstone's grammar of Minjangbal (1892). After the closure of Wellington Valley mission in 1842, the grammatical structure of languages spoken in New South Wales received little further attention until the Presbyterian Rev. William Ridley began describing Gamilaraay, spoken north of Wiradjuri, in 1852 (1855; 1856b; 1866; 1875).

Note here that the terminology employed today by non-Aboriginal and Aboriginal people to refer to Australian languages—for instance 'Awabakal', 'Kaurna', 'Ngarrindjeri', and 'Arrernte'—is the product of post-colonial linguistic and anthropological investigation. These terms were not recorded in the early sources. The language Threlkeld described was named 'Awabakal' in 1892 by Fraser (1892a), the term being derived from the name of Lake Macquarie *Awaba* marked with the associative suffix *-kal*. The language is nowadays also referred to as 'Hunter River and Lake Macquarie language' (Lissarrague 2006; Wafer and Carey 2011). The mechanisms by which many language names, and all their variant spellings, have come to be the accepted descriptors of languages, and of the people speaking them, remain generally not well understood (see Sutton 1979: 89), and can be difficult to retrieve from the historical record (Stockigt, Chapter 6, this volume; Rosenberg and Bowern, Chapter 49, this volume).

McGregor's (2006b: 2–20) 'history of the histories of Australian languages' finds most Australian linguistic researchers agreeing that the 1930s and 1960s were watershed decades in the history of the description of Australian languages, which McGregor usefully considers as spanning three periods: a first pre-dating 1930; a second between 1930 and 1960; and a third post-1960. Each is defined by the types of linguistic materials collected, the context in which they were sourced, and the types of technical linguistic training brought to the analysis.

2.1.1 The first descriptive era: pre-1930

The record of Australian languages collected in the pre-academic descriptive era, prior to 1930, was recorded predominantly by missionaries (Stockigt 2015: 336–8). Records taken by explorers, pastoralists, men appointed to the office of Protector of Aborigines, and interested individuals are—in comparison with the missionaries' contribution—likely to be shorter, and to contain no grammatical analysis. Notable exceptions include George Fletcher Moore's detailed *Descriptive Vocabulary* (1842) of Noongar spoken around the Swan River Colony (Perth), the numerous grammars by R. H. Mathews (Koch 2008: 211–16) of languages spoken predominantly in Victoria and in New South Wales, and Daisy Bates's record of many languages from Western Australia. Non-missionary scholars of Australian Aboriginal people and languages were often natural scientists, for example, Robert Brough Smyth, Walter Roth, and Charles Chewings, who were trained to observe and record empirical data, and whose work provided necessary contact with Aboriginal people.

But the efforts of early missionaries who were motivated to acquire and describe Australian languages are atypical of the broader picture. Fewer than five percent of Australian languages were grammatically described before 1930. Most missionaries in Australia paid no attention to Aboriginal languages (Harris 1994: 805). Their disinterest might be seen to sit within what the missionary Threlkeld (1850: 10) described:

> [T]he almost sovereign contempt with which the Aboriginal language of New South Wales has been treated in this Colony, and the indifference shown toward the attempt to gain information on the subject, are not highly indicative of the love of science in this part of the globe, … for which it is difficult to account.

A lack of linguistic data emanating from Australia in the nineteenth century was noted in Germany (H. C. von der Gabelentz 1861: 489; F. Müller 1867: 241; 1882: 2; G. von der Gabelentz 1891: 403). As late as 1946 the Austrian linguist and ethnologist Wilhelm Schmidt (1946: 941) described 'a desolate lack of scientifically recorded materials for most Australian languages'. More scathingly, in a review of Schmidt's 1919 classification of Australian languages, the American anthropologist A. L. Kroeber observed (1921: 226) that the international contribution to Australian linguistics stood in contrast to the apathy of linguistic researchers in Australia: 'Perhaps the realization that the first scholarly attempt to deal seriously with these tongues was made in German by an Austrian priest [Wilhelm Schmidt] will stir Australians into effort'.

Missionaries who were linguistically active held individual views about the complementarity of linguistic study, anthropological study, and proselytization, and their views were sometimes at odds with views held by Church officials under whose authority they worked. The missionary Siebert, at the Bethesda Lutheran mission in South Australia, for instance, was forced to defend himself to the South Australian mission board against charges of having spent

[1] Rev. W. Ridley held a copy of Watson's Wiradjuri grammar and vocabulary, which he describes as being in two volumes, and which he returned to the Colonial Secretary of New South Wales sometime before 1873 (Ridley 1873: 275–6).

too much time pursuing academic collaborative research with the Australian anthropologist Alfred Howitt at the expense of Christian evangelization with the Diyari (Nobbs 2005). The role of linguistic study within philosophical approaches to mission practice are not easily categorized by particular Church denominations. In 1907, for instance, the French Trappist Catholic missionary at Beagle Bay in Western Australia, Joseph Bischofs, took part in a local ceremony 'blackened from head to foot and adorned with ochre and feathers' (Mary Durack, quoted in Akerman 2015: vii), while at the nearby Lombadina mission on the Dampier Peninsula German Pallottine Catholics translated scriptures but forbade all ceremonial activity.[2]

Some recent histories (Graetz 1988: 9; Kneebone 2005: 362; Kenny 2013: 87) have emphasized that the Lutherans' missionary activity occurred within a philosophical tradition hailing from J. C. Herder, in which understanding a people's language provided a window into their *Volksgeist* that was necessary for successful conversion. Such accounts have, however, obscured the fact that similar convictions were held within other evangelical denominations, as well as by Catholic missionaries, who dominated the description of the linguistically diverse non-Pama-Nyungan languages from the north of Australia.

Missionaries of different denominations in Australia shared the post-Reformation conviction that Christian conversion occurs *sola scriptura* (through scripture alone) and were expected to learn Aboriginal languages in order to carry out two interrelated evangelical tasks: the translation of religious texts, and the preparation of materials for use in vernacular literacy programmes. The missionary Threlkeld's linguistic achievements were made as part of an established tradition of London Mission Society Bible translation (Roberts 2008: 107). The missionary Watson, of the Church Mission Society, who established the Wellington Valley Mission in 1832, was instructed to 'learn the language and reduce it to writing' (Bridges 1978: 297). Congregationalist missionary George Taplin similarly wasted no time in advancing the grammatical descriptions of Ngarrindjeri, and Moravian missionaries in Australia were trained and also expected to learn the local language (Edwards 2007: 319). In 1836 Threlkeld produced *An Australian spelling book in the language as spoken by the Aborigines*...; in 1856 Rev. Ridley produced a Gamilaraay primer (1856a); and in 1885 Jesuit missionaries at Rapid Creek, close to Darwin in the Northern Territory, printed primers in Larrakia (Harris 1994: 461).

[2] In 1934, in order that Phyllis Kaberry conduct Australian National Research Council funded fieldwork among Aboriginal women in the Kimberley, Adolphus P. Elkin, Professor of anthropology at the University of Sydney, had to negotiate with Western Australian authorities due to a perception that anthropological investigation led to a revival of ceremonies that thwarted the missionaries' efforts (Gray 2002: 33–4).

2.1.1.1 *Description of non-Pama-Nyungan languages*

Tasmanian languages and non-Pama-Nyungan Australian languages are defined by their negative membership within the Pama-Nyungan (henceforth PN) family and are spoken over much smaller areas of north-western mainland Australia. Non-Pama-Nyungan languages were scarcely described before the 1930s. In 1898 Sidney Ray attempted to address this 'scanty knowledge of the tribes and languages of the north-west' by tabulating (pp. 347–8) extant materials, and presenting vocabularies that had been sent by a 'Mr E. B. Rigby' to Ray's collaborator, the Cambridge anthropologist Alfred C. Haddon.

As was the case across the vast majority of the continent where PN languages were spoken, early grammatical analyses of non-PN languages are outnumbered by a plethora of wordlists of variable quality. They include an 1846 vocabulary of Iwaidja by Fr Angelo Confalonieri, and the lexical records of non-Pama-Nyungan languages by Daisy Bates, whose almost insurmountably chaotic but extremely valuable lexical and ethnographic legacy was recorded in the early 1900s (see Thieberger 2016a). J. W. O. Bennett's vocabulary of Larrakia, initially published as a pamphlet (1869), was the only non-PN wordlist appearing in Woods's 1879 (Part VII) compilation of material from South Australia, which until 1911 incorporated the Northern Territory. Of the 239 wordlists appearing in Curr's three volumes of compiled lexical material (1886–1887), only six are of non-PN languages from the north of the country,[3] with vocabularies of Tasmanian languages appearing in an appendix (appendix A, vol. 3).

Although the French Trappist missionary Fr Alphonse Tachon had written a grammar of Nyulnyul by 1895, and the Jesuit missionary Adolf Kristen had written a grammar of Malak Malak by 1899, these works remained unpublished manuscripts, and the material was not assimilated into Australian linguistic thought. Ray (1897), for instance, was not aware of Tachon's 1895 Nyulnyul grammar.

2.1.1.2 *Linguistics and ethnology*

A strong tradition of integrated study of linguistics and ethnology existed in Australian before 1930. Many first-era grammarians made both linguistic and anthropological descriptions of the people they worked with. In the 1840s, Lutheran missionary-grammarians who published inaugural grammars of languages spoken in South Australia (Teichelmann and Schürmann 1840; Meyer 1843; Schürmann

[3] The non-Pama-Nyungan languages included by Curr are Larrakia, Wulna, Iwaidja, Unalla, Yawuru, and a variety from Roper River (Curr 1886–1887, vol. I: 250–77).

1844) each produced ethnographic publications describing the 'manners and customs' of the people speaking languages about which they had earlier published an account (Teichelmann 1841; Schürmann 1846; Meyer 1846). Congregationalist missionary George Taplin and Rev. W. Ridley published linguistic and anthropological material about the Ngarrindjeri in South Australia and the Gamilaraay in New South Wales respectively. The detailed grammar of Pitta-Pitta, spoken in south-west Queensland by Walter Roth (1897), who was practising medicine in the area (Stockigt 2020), appeared as the first chapter of a much larger and influential ethnographic work. Roth later pursued linguistic and ethnological studies in his role as Protector of Aborigines (Breen 2008). But the integration of the two disciplines in this era is most famously represented in writings of the Neuendettelsau-trained Lutheran missionaries Carl Strehlow, father of T. G. H. Strehlow, and to a lesser extent, Johann G. Reuther. Both produced multi-volumed opuses (Strehlow 1907–1920; Reuther 1903–1908), which detailed the language, mythology, and religious beliefs of the Arrernte and the Diyari respectively.

Kenny (2013) argues that C. Strehlow's study of *Volk* and *Sprache* (1907–1920) was born out of a particularly German philosophical tradition. But causal links between beliefs of a particularly German nature and descriptive practices in Australia remain tenuous and elusive. Strehlow's relationship with German Humanist philological traditions is better described as 'secondary and indirect' (Gibson 2016: 636) or 'osmotic' (Sutton 2015: 257). The scholarly investigation of language made by these German missionaries may have sat within the German study of *Ethnologie,* with a focus on 'the relationship between cultural groups in historical and geographical perspective … [and on the study of] material culture, as well as mythology, ritual and language' (Peterson and Kenny 2017: 4), but a dispassionate comparison of the ethnological practices of German Lutheran missionaries with other groups in Australia blurs a clear-cut national or religious philosophical distinction.

2.1.2 The second descriptive era: 1930–1960

By the 1930s, Aboriginal populations had been reduced by almost ninety percent, with many surviving communities residing at government depots and missions where they experienced limited autonomy. The second descriptive era of linguistic research in Australia (c.1930–1960) is described by Stephen Wurm (1972: 17) as having focussed 'strong attention on structural and typological features'. Its onset is demarcated by three typological studies: the study of Australian languages made by the British linguist Sidney Ray (1925), who had previously written grammars of Paman languages (1893; 1907), and the studies produced in 1937 by the Australian anthropological and linguistic researchers Arthur Capell and A. P. Elkin, both of whom steered Australian linguistics towards the modern era. Ranging freely over descriptions of Australian languages written before 1930, Ray, Elkin, and Capell collated and synthesized data recorded in the earlier, pre-academic descriptive era. Their works provide valuable insight into the understanding of Australian linguistic structures that was discoverable at the time.

Improved understanding of non-PN languages was advanced in this middle descriptive era largely through the writings of Capell (1938; 1940; 1942), and missionary-grammarians in Western Australia including Presbyterian minister J. R. B. Love (1938 [1933]) and the Pallottine missionaries Hermann Nekes and Ernest Worms's (2006 [1953]) investigations of Bardi and Nyulnyul collated on the Dampier Peninsula in the 1930s (see McGregor 2000a; 2006b). Capell (1937) advanced the typological distinction between PN and non-PN languages, terming the latter either 'incorporating', due to the fact that verbs tend to mark agreement for the number and case of the subject/agent and the object, or 'prefixing' (p. 43), because morphemes can attach as prefixes to the stem, which does not generally occur in the 'suffixing' PN languages.

The beginnings of the 1930s saw the earliest institutionalized academic investigation into Australian languages. Capell conducted his research within the department of anthropology at The University of Sydney, where Elkin, the department's third professor (1933–1956), had arranged for him to lecture in linguistics. In 1926 A.R. Radcliffe-Brown had been appointed as Australia's first chair of anthropology at the University of Sydney, the position having been funded by the American Rockefeller Foundation.

The establishment of a Rockefeller chair of anthropology in Sydney had been competed for by The University of Adelaide, where anthropological investigation was instead pursued by the Board for Anthropological Research (henceforth BAR) and funded by the Australian National Research Council. The BAR mounted multi-disciplinary expeditions into Central Australia between 1927 and the 1970s, when it was disbanded. In 1930–1931 three members of the BAR formed 'a small language committee' (Tindale 1935: 261). They were Norman Tindale—the entomologist and later curator of anthropology at the South Australian Museum—the geographer Charles Chewings, and John A. FitzHerbert, Hughes Professor of Classics at The University of Adelaide between 1928 and 1957. Around this time FitzHerbert was supervising the earliest grammars of Australian languages written for academic degrees in Australia. These were T. G. H. Strehlow's MA thesis 'An Aranda Grammar' (1938), published as part of

'Aranda Phonetics and Grammar' (1944), which Elkin (1944: 1) introduced as 'the first complete phonetic and grammatical study of an Australian language', and J. R. B. Love's (1938 [1933]) grammar of the non-PN language Worrorra. Both were published in *Oceania,* as was Presbyterian missionary R. M. Trudinger's grammar of Pitjantjatjara (1943), spoken in South Australia. As noted by McGregor (2006b: 5) the founding of *Oceania* in 1930 provided 'one of the very few outlets for articles on Australian languages'. By contrast, nineteenth and early twentieth-century linguistic works tended to be published by the Government Printers operating in capital cities.

Grammatical material known to have been produced outside South Australia in the 1930s occurred under the direction of Radcliffe-Brown. In 1926, Radcliffe-Brown contacted Edward Sapir at The University of Chicago, whom he would have known had studied unwritten American languages, and suggested that Sapir come to Australia to study Australian Aboriginal languages. Sapir instead sent his student Gerhardt Laves, who subsequently made a survey of numerous Australian languages, and in-depth studies of Gumbaynggir, Karajarri, Bardi, Goreng, Matngele, and Ngan'gimerri, while travelling around Australia between 1929 and 1931 (Nash 1993; 2006).

The earliest analyses of Australian languages informed by modern linguistic method were Laves's manuscript Australian materials, and the manuscript grammar of Wik-Mungkan, spoken in Queensland, made by Ursula McConnel. McConnel, whose anthropological studies were supervised by Radcliffe-Brown, had studied linguistics under Sapir and others at Yale. Thus, Radcliffe-Brown can be credited for attempting to address the dearth of erudite early description of Australian languages, which is likely to have initially motivated his 1926 contact with Sapir.

But Laves's manuscript notes made between 1929 and 1931 travelled with Laves back to America, where they remained largely unpublished, until being returned to Australia and deposited in the AIATSIS library in the 1980s (Nash 1993; 2006). While McConnel published 'Wikmungkan phonetics' in 1945, her manuscript grammar of Wik-Mungkan, written close to 1940 based on anthropological fieldwork conducted between 1927 and 1934 (Peter Sutton, pers. comm.) similarly had no immediate impact on the development of linguistic thought in Australia. This document was rescued from imminent destruction in 2006 (Sutton 2010b).

The integration of linguistic and anthropological study practised by McConnel (1940; 1945; 1959) in this period is evident in the polymath abilities of Donald Thomson, who similarly worked on Wik-Mungkan (1935; 1936; 1946), and in Ernest Worms's contribution to Nekes and Worms (2006 [1953]), described by McGregor (2017: 341–2) as philosophically aligned with the Whorfian tradition. Subsequent to these studies, the integrated investigation of language and culture waned within Australian academic institutions, to the extent that the re-introduction of linguistic anthropology into Australia by Bruce Rigsby from America in the 1970s has been perceived as a 'new' approach in Australia (Anderson 2016: 320).

2.1.3 The third descriptive era: 1960–

Thoroughgoing linguistic investigation commenced in Australia after 1960, when chairs of linguistics were established at Australian universities. With the appointment of Stephen Wurm as Senior Fellow in Linguistics at Sydney University in 1957, and of Göran Hammarström as professor of linguistics at Monash University in 1965, the discipline was no longer largely the province of linguistically inclined clergy and members of the general public. That said, the technically excellent salvage work of Victorian languages made by Luise Hercus during the 1960s (1969; see Koch, Austin, and Simpson 2016) was initially not institutionally driven, but rather sustained by a perceived sense of urgency. The establishment in 1961 of the Australian Institute of Aboriginal Studies (AIAS), the precursor to the present-day AIATSIS (Australian Institute of Aboriginal and Torres Strait Studies) greatly improved funding and research opportunities for Australian linguistic research.

This era of Australian linguistic research benefitted from the arrival of Ken Hale in 1959, which eventually placed Australian linguistic description in the sights of the Massachusetts Institute of Technology. But the era is branded most strongly by the grammars of R. M. W. Dixon (1972; 1977a) and the works of his students at The Australian National University, one of whom (Wilkins 1989: 59) describes the Dixonian lineage as being

> highly eclectic as far as their reliance upon, and use of, theory is concerned, and they have drawn freely upon a wide range of approaches to linguistic description ... [They] have evolved in parallel with the evolution of theory and practice in linguistics over the past twenty years. While the grammars do little to build theories, they do test theories, and they frequently provide critiques on the ability of various theories to handle the particulars of the language being described.

Revealing of the significance of the body of work fostered by Dixon in the last decades of the twentieth century are the facts that the era prior to his involvement in the description of Australian languages is popularly referred to 'bB' (before Bob [Dixon]).

This third descriptive era saw the first generation of linguists with PhDs from Australian universities working on Australian languages, notably Donald Laycock, Peter Austin, Peter Sutton, and Terry Crowley. Before then, researchers were qualified either in England, for example, A. Capell (University of London, in 1938) or in America, K. Hale (Indiana University, in 1959), and G. O'Grady (Indiana University, in 1963).

At the same time, and outside the realm of the Australian National University research, the complementary study of language and anthropology, or anthropological linguistics, re-emerged in Australia, with Bruce Rigsby's arrival at the University of Queensland in 1972 and appointment in 1975 to the university's new department of anthropology. Rigsby, who had studied Sahaptin ethnology and language in America, brought 'a new and unique perspective that mixed an American ecological approach ... with a strong foundation in the cultural anthropology of Kroeber ... and the critical role of language and world view (Sapir 1921; Whorf 2012), all premised on a strong, field-based ethnographic approach' (Anderson 2016: 320). Under Rigsby's tutelage, accounts of the socio-geographic complex in Australian languages were developed by Rigsby's students (cf. Sutton 1978; Merlan 1981a). Since then, anthropological linguistics has been integrated into the research precincts of Aboriginal Native Title (Sutton 2003).

One might now conceive of a fourth era of Australian linguistic studies, commencing towards the end of the twentieth century, focussing on the description of language contact varieties (Meakins 2014a: 365–6; Angelo, Chapter 56 and Chapter 66, this volume), sociolinguistics (e.g. Mansfield, Chapter 51, this volume), language acquisition (Wigglesworth and Disbray, Chapter 62, this volume), historiography (McGregor 2008a; Stockigt 2017), and on the philological investigation of nineteenth-century records within language reclamation and revitalization movements gaining momentum among language owners whose forebears spoke their languages (Hobson et al. 2010; Gale, Chapter 64, this volume).

Rather than providing an overview of the analytical and descriptive achievements made within each of these descriptive eras, which would inevitably overlook significant contributions, and would in any case add little to previously arranged accounts of existing materials (Elkin: 1937a; Wurm 1972; McGregor 2008a), the following discussion focusses on the developing understanding of—and ability to describe—Australian linguistic structures in the nineteenth and early twentieth centuries, and the rise of schools of descriptive practice.

2.2 Early analyses of Pama-Nyungan languages

Figure 2.1 locates the Australian languages that were grammatically described before 1910 and marks them chronologically. The works of R. H. Mathews are not represented. Mathews's large body of work, previously assessed by Koch (2008) and described there (p. 181) as a 'bibliographer's nightmare', while broad in scope, is shallow in descriptive depth.

The clustering of early grammars in some regions and the absence of grammatical records from others is telling of the treatment of Aboriginal inhabitants in each of six pre-federation (1901) Australian colonies. The butchering of Aboriginal people inhabiting what became the penal settlement of Van Diemens Land, Australia's second oldest colony, resulted in a sparse lexical record and the absence of any grammatical analyses of Tasmanian languages (Capell 1970: 973; Crowley and Dixon 1981: 395; Bowern, Chapter 7, this volume).

In contrast to the scant linguistic record of Tasmanian languages is the record taken in the colony of South Australia, which between 1863 and 1911 encompassed the Northern Territory, and where early grammars and vocabularies were initially produced in quick succession. The swiftness with which missions were established in South Australia, after its founding in 1836, is atypical of the wider Australian experience, and benefitted the description of languages in this colony.[4] In 1838, the founding chairman of the South Australian Company, George Fife Angas (1789–1879), assisted the passage to the colony of graduates from the *Evangelisch-Lutherischen Missions-Gesellschaft zu Dresden* (Evangelical-Lutheran Mission Society of Dresden) to work among the Aboriginal population (Lockwood 2014: 61–5). Lutheran missionaries consequently dominated the early grammatical description of South Australian languages, making comparatively detailed grammatical descriptions of seven languages before the turn of the twentieth century: Kaurna, Ramindjeri, Barngarla, Diyari, Wangkangurru, Yandruwandha, and Arrernte.

In 1970 Elkin coined the term 'BIITL [before it is too late] research' to stress the necessity of prompt linguistic research in Australia. The sentiment is, however, nearly as

[4] The 1834 South Australian colonization act was passed relatively late within British imperial history. Secretary of State to the Colonies, Lord Glenelg, was among a group of humanitarians who insisted in letters issued to the Colonization Commission in 1836 that the welfare and rights to land of Aboriginal people in South Australia be formally protected by the Colonial Office (Reynolds 1987: 94–102). Their dispossession proceeded anyway.

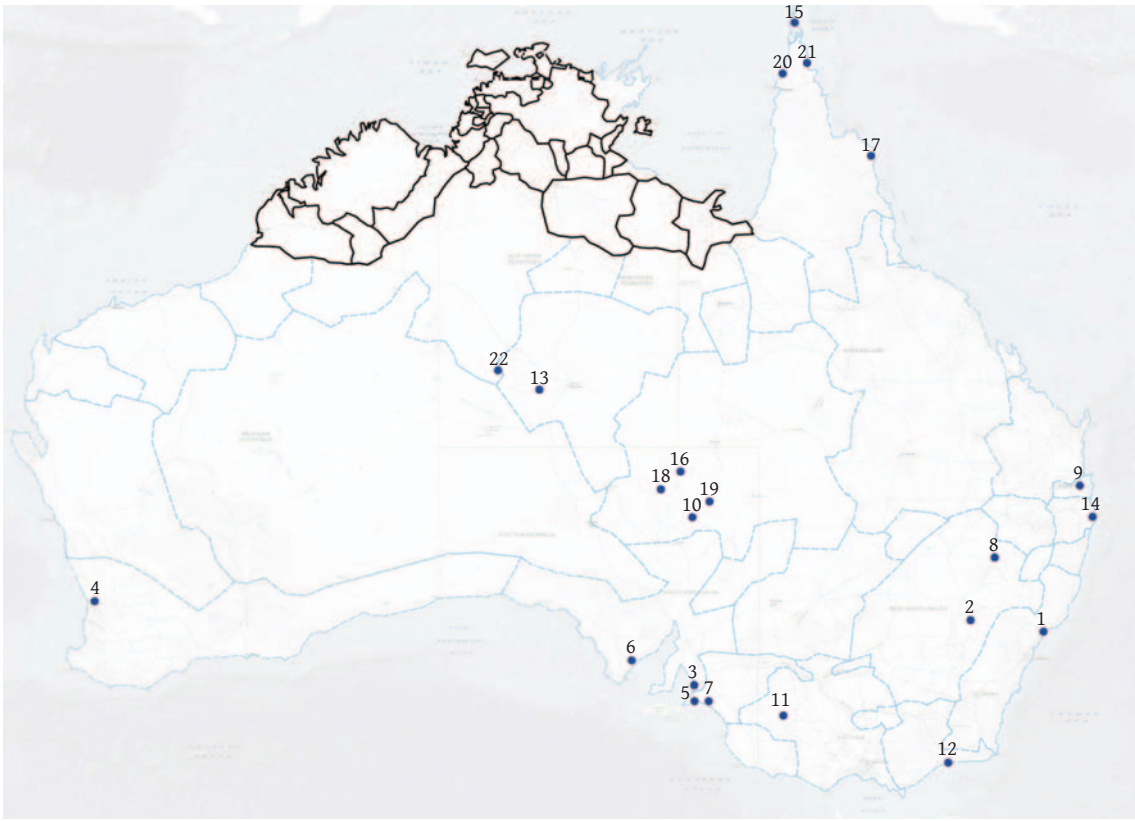


Figure 2.1 Map showing locations of languages described in the corpus, and lower-level PN subgroups.

Source: after Bowern and Atkinson 2012: 820, used with permission of the authors

	Language	Classification*	Spoken in the Colony of:	Early source material
1	Awabakal (HRLM language)	South-eastern: Yuin-kuri	New South Wales	Threlkeld 1834; Hale 1846
2	Wiradjuri	South-eastern: Central NSW	New South Wales	Watson no date (lost), Günther 1838, 1840; Hale 1846; Mathews 1904c
3	Kaurna	Central: Thura-Yura	South Australia	Teichelmann and Schürmann 1840
4	Nyungar	Western: Nyungic	Western Australia	Symmons 1841
5	Ngarrindjeri	South-eastern: Lower Murray	South Australia	Meyer 1843; Taplin 1874, 1872[1870], 1878
6	Barngarla	Central: Thura-Yura	South Australia	Schürmann 1844
7	Ngayawang	South-eastern: Lower Murray	South Australia	Moorhouse 1846
8	Gamilaraay	South-eastern entral NSW	New South Wales	Ridley 1855, 1856a, 1856b, 1866, 1875; Mathews 1903b
9	Turrubul	South-eastern: Durubalic	Queensland	Ridley 1866
10	Diyari	Central: Karnic	South Australia	Koch 1868; Schoknecht 1947; Flierl 1880; Reuther 1899; Planert 1908; Gatti 1930
11	Wergaya	South-eastern: Kulin	Victoria	Hagenauer 1878; Mathews 1902 (Djadjala)

Continued

Continued

	Language	Classification*	Spoken in the Colony of:	Early source material
12	Ganai	South-eastern: Eastern Victoria	Victoria	Bulmer 1878
13	Western Arrernte	Central: Arandic	South Australia (Northern Territory)	Kempe 1891; C. Strehlow no date c.1907, 1908, 1910; Mathews 1907; Planert 1907; Riedel 1931 [c.1923]; T.G.H. Strehlow 1944[1938]
14	Minjangbal	South-eastern: Bandjalangic	New South Wales	Livingstone 1892
15	WTS	Northern: Paman	Queensland	Ray and Haddon 1893; Ray 1907
16	Pitta Pitta	Central: Karnic	Queensland	Roth 1897
17	Guugu-Yimidhirr	Northern: Paman	Queensland	Schwarz and Poland 1900; Roth 1901; Ray 1907
18	Wangkangurru	Central: Karnic	South Australia	Reuther 1901
19	Yandrruwandha	Central: Karnic	South Australia	Reuther 1901
20	Nggerrikwidhi	Northern: Paman	Queensland	Hey 1903; Ray 1907
21	Yadhaykenu	Northern: Paman	Queensland	Ray 1907
22	Luritja	Western: Wati	Western Australia	Mathews 1907; C. Strehlow 1910
1	Nyualnyual	**Non-PN**	Kimberley	Tachon 1895
2	Malak Malak	**Non-PN**	Daly River region	Kristen 1899

* According to Bowern and Atkinson 2012

old as the study of Australian languages itself. Against a devastatingly high rate of post-colonial linguistic extinction (Bowern, Chapter 7, this volume), the description of Australian Aboriginal languages has, almost since its inception, been imbued with a resolve to record material from successive generations of 'last fluent speakers'. The two earliest published grammatical accounts of Australian languages (Threlkeld 1834; Teichelmann and Schürmann 1840) were written by missionaries who continued to refine their analyses at a time when they perceived themselves to have outlived the languages' last fluent speakers (Threlkeld 1850; Teichelmann 1857; 1858a, b). Salvage studies have played a weighty role in Australian linguistic description. Many of the earliest described languages ceased to be spoken before any subsequent substantial record was taken. Consequently, early grammars have recently received considerable attention from within the language reclamation and revitalization movement that has gained momentum among Aboriginal descendants of speakers (see Hobson et al. 2010) (Gale, Chapter 64, this volume; Amery and Gale, Chapter 65, this volume).

The nature of linguistic work carried out in Australia during the nineteenth century generally runs counter to the *Zeitgeist* of genealogical and typological linguistic classification. While similarities between words in Australia and those from around the world were observed by researchers in Australia (Grey 1845; Taplin 1879a; Curr 1886–1887; Fraser 1892b) as part of what Capell (1970: 667) described as an 'epidemic of origin hunting', the early Australian grammars written *in the country* were predominantly synchronic, pedagogical, non-comparative, and non-classificatory.

That said, systematic attempts to collect linguistic materials for comparative purposes commenced in Australia in the 1870s. Within the earliest 'survey era' of Australian languages (O'Grady et al. 1966: 5; McGregor 2006b: 3) surveys were distributed among missionaries, police troopers, pastoralists, and others in contact with Aboriginal people resulting in important published collations of linguistic material, including Curr (1886–87), Brough Smyth (1878), Taplin (1879a), and Bates, the results of whose 1904 survey of Western Australian languages were not published until 1985 (Bates 1985). Curr's four volume *The Australian Race* cast the broadest net of the four, and it is the most renowned of these survey works. Neither Curr nor Bates specifically elicited grammatical material from their informants, as did both Taplin and Brough Smyth. The linguistic material contained in Volume II of Brough Smyth's (1878) two-volume work has been assessed by O'Grady, Voegelin, and Voegelin (1966: 5) as 'quantitively impressive but qualitatively appalling'. Yet the volume contains the most significant record of many Victorian languages. The data Taplin sought in his

	Labial	Inter-dental	Apico-alveolar	Retroflex, Apico-domal	Palatal	Velar
Stop	p	th	t	rt	ty	k
Nasal	m	nh	n	rn	ny	ng
Lateral		lh	l	rl	ly	
Trill			rr			
Glide	w		(r)	r	y	(h)

Figure 2.2 The inventory of consonant phonemes common to many PN languages. Phones separated by dashed lines tend to be orthographically undifferentiated in the early sources.

survey circulated in South Australia in 1874 (Taplin 1879a: 6) were largely anthropological, but the nature of the linguistic questions he posed indicates the developing understanding of Australian grammatical structure. (cf. Stockigt, Chapter 6, this volume).

2.2.1 Phonology and orthography

Australian languages have fairly similar phonemic systems by cross-linguistic standards. Systems with three vowel phonemes are common (cf. Round, Chapter 10, this volume). Consonants typically show a limited number of manner contrasts but a more extensive set of place of articulation contrasts. Figure 2.2 shows a maximally contrastive inventory.[5] Early orthographic treatments of Australian phonologies tended to give a broad transcription of vowel quality, while phonemic articulation contrasts of consonants tended to be under-represented. Phones separated by dashed lines in Figure 2.2 tended to be orthographically undifferentiated in the early sources. Generally, the filter of the European ear saw the orthographic collapse of coronal consonant phonemes, with the letters 't', 'n', 'l' used generically to represent stops, nasals, and laterals at all coronal articulatory places (cf. also Thieberger, Chapter 3, this volume; Giacon and Koch, Chapter 8, this volume).

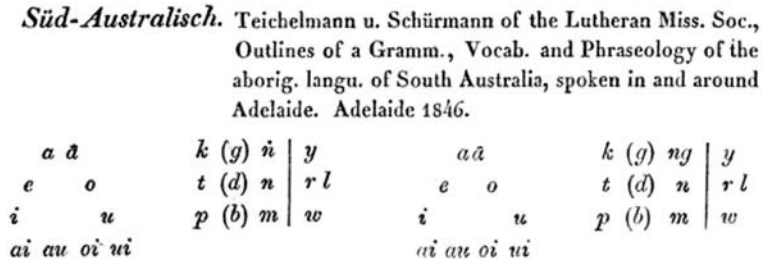
All early records of Australian languages were compromised by the inability to aurally distinguish certain types of segments, the absence of phonemic analysis, and the absence of a standardized system of orthographic representation. The first language of the recorder influenced the spelling of Australian languages. The German-speaking missionaries chose 'j' rather than the 'y' to represent a palatal glide, for instance, and the Italian-speaking Benedictine Bishop Rosendo Salvado (1851) represented palatalized nasals and laterals as 'gn' and 'gl' respectively. The poor correspondence between sounds and letters in the writing system of English greatly impeded the unambiguous representation of Australian phonologies. Consequently, some early recorders (e.g. R. H. Mathews) purported to employ an Italian system of representing vowels, while others attempted to apply conventions established by the Royal Geographic Society (1831; 1885) for writing unwritten languages (see Moore 2013).

Threlkeld (1834: vi) adopted the spelling system employed in the description of languages from Polynesia, where he had spent six years at London Mission Society missions prior to coming to Australia, because he sensed propriety in adopting the 'same character to express the same sounds used in countries which are adjacent'. Although Teichelmann and Schürmann (1840: v), Günther (1840: 338), and Ridley (1856b: 290) were subsequently able to reassure their readers that they followed Threlkeld's 'method of spelling words', early researchers were aware of, and frustrated by, the inadequacy of writing systems.

Palatal stops were more likely than other coronal consonants to be distinguished, and were represented as 'ty', 'tj', or 'ch', followed by palatal nasals and laterals. A notable exception here is the identification of word-final palatalized nasals and laterals by Benedictine missionaries at New Norcia in Western Australia, who having Spanish as their first language were probably predisposed to hear the sounds.[6] While the velar nasal was often undifferentiated from other nasals, or not represented word-initially, some very early grammatical sources (Dawes 1790–1791b: 1ff.; 1790–1791a; Hale 1846) represented the phone using engma (ŋ). Rhotic phonemes, of which Australian languages typically have two or more (Round, Chapter 10, this volume), were sometimes, but inconsistently, distinguished. Impressionistically, the phonemes least likely to be distinguished in the corpus grammars appear to have been the retroflex series and

[5] Diversions from these tendencies are too numerous to be dealt with comprehensively here, but of the early described languages it is notable that Arrernte and Diyari show additional distinctions, a series of pre-stopped and rounded consonants in Arrernte (Breen 2001), and a voicing distinction in Diyari restricted to apico-alveolar and retroflex stops in non-word-initial positions (Austin 1981a [2013: 13]). Guugu-Yimidhirr follows the pattern of many languages in the country's eastern third in having no retroflex series.

[6] Thanks to Peter Sutton for pointing this out.


Süd-Australisch. Teichelmann u. Schürmann of the Lutheran Miss. Soc., Outlines of a Gramm., Vocab. and Phraseology of the aborig. langu. of South Australia, spoken in and around Adelaide. Adelaide 1846.

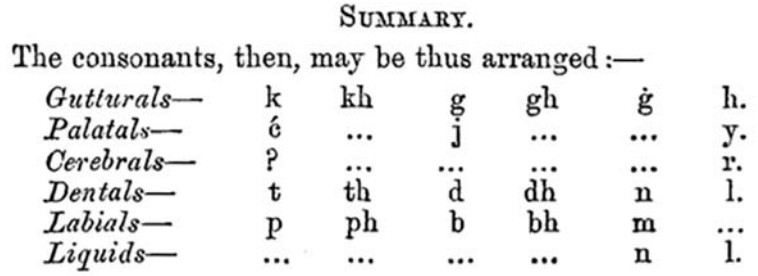
a ā
e o
i u
ai au oi ui

k (g) ṅ | y
t (d) n | r l
p (b) m | w

aā
e o
i u
ai au oi ui

k (g) ng | y
t (d) n | r l
p (b) m | w

Figure 2.3 Lepsius's (1855: 64) two-dimensional representation of Australian phonology based on Teichelmann and Schürmann's (1840) account of Kaurna.


SUMMARY.

The consonants, then, may be thus arranged :—

Gutturals—	k	kh	g	gh	ġ	h.
Palatals—	ć	...	j	...	...	y.
Cerebrals—	?	...	...	...	...	r.
Dentals—	t	th	d	dh	n	l.
Labials—	p	ph	b	bh	m	...
Liquids—	...	...	...	...	n	l.

Figure 2.4 Fraser's (1892a: 8) grid of Australian consonants.

interdental nasals and laterals. Orthographic treatment of Diyari phonology was gradually improved by successive generations of missionaries at the Bethesda mission between 1866 and 1915. After decades of practice, missionaries introduced the representation of retroflex laterals, at least in some words, as with the ergative interrogative *warli,* 'who' shown as *warle* (Reuther 1894) as opposed to *wale* (Koch 1868).

Phonological science was slow to enter Australian description. The earliest presentations of the sounds of Australian languages in systematic diagrams—setting out consonant inventories in tables mapping place of articulation against manner of articulation, and vowels in triangular displays mapping height against backness—occur in descriptions of Australian languages published in Europe (Lepsius 1855: 64; 1863: 226; Müller 1867; 1882; Planert 1907; 1908; Gatti 1930: 1; Sommerfelt 1938: 42, 45) (Figure 2.3). These presentations of both consonants and vowels based on articulatory parameters made by German philologists appear not to have been read by grammarians in Australia, and if they were, not understood or assimilated into Australian practice. Aside from a confused attempt to show consonants in a grid made by Fraser (1892b: 8) (Figure 2.4), the earliest graphic representation of consonants published in Australia was Capell (1956: 8), and the earliest two-dimensional representation of vowel shape given in a grammar produced in Australia appears in T. G. H. Strehlow's grammar in Western Arrernte (1944: 4 [1938]).

The first academic attempts to develop an orthographic system capable of consistently representing the phonological segments of Australian languages occurred on the cusp of the second descriptive era. The 'language committee' from The University of Adelaide, was described by Tindale (1935: 261) as having 'formulated after much consideration, a working list of phonetic symbols applicable to the general study of central Australian languages'.

This move was probably instigated by large lexical projects in which members of the BAR and the 'language committee' were engaged during the 1930s, which were buoyed by a long tradition of investigating Australian languages from Adelaide. Tindale was compiling a *Pitjandjara vocabulary* (1937b) which included 2,950 headwords in Western Desert varieties collected during the BAR expeditions (1935), and in 1931 Chewings had embarked on the ambitious undertaking to collate previously recorded Arrernte vocabularies into a single document (Chewings and FitzHerbert 1931–1932). The immediate problem of reconciling the different spellings for the same entry in multiple sources necessitated the development of an adequate writing system. The problematic orthographic treatment of Australian phonologies must have been at the forefront of FitzHerbert and Tindale's minds during a meeting with Laves, who

visited Adelaide in 1931 while conducting linguistic fieldwork during a trip around Australia (Nash 2006).

The 'language committee' used bold, italic, and plain script to disambiguate phonemes, which they recognized as inconsistently represented in earlier sources. The system clearly differentiated two rhotics, the approximant was placed in italics, and the trill in standard print. The committee also deliberated about using a single symbol to represent voiced and unvoiced stops at identical articulatory places, a practice that the American ethnologist Horatio Hale (1846: 485) (see also Stockigt, Chapter 6, this volume) had considered nearly a century earlier, but had similarly not instigated. While the phonetic system of the Adelaide language committee evinces a peri-phonemic analysis, some phonemes remained orthographically undifferentiated. Palatalized laterals were not recognized although palatalized nasals and stops were differentiated from their alveolar counterparts as digraphs with a final 'j', and the system had no systematized method of representing retroflex sounds.

Fitzherbert's student T. G. H. Strehlow did not follow the system developed by his supervisor, but opted instead to create a broad phonetic orthography. Although Strehlow did not make a phonemic analysis of the languages, his diacritically embellished phonetic system distinguished all phones that were phonemically distinctive, and many more. An early attempt to reflect phonemic structure in the writing system of an Australian language is, however, given in an analysis of Arrernte made in the same year that T. G. H. Strehlow submitted his Master's thesis. Alf Sommerfelt (1938: 42), informed by earlier published accounts of Arrernte, notably Planert (1907), postulated that the language 'ha[d] at its disposal only three really distinct vowels: *a*, *i*, *u*',[7] and represented voiced and voiceless stops having the same articulatory place with a single symbol.

Tracing lineages of understandings of Australian phonemic systems through the careful analysis and comparison of orthographies is a rich field of historical enquiry which remains to be done. John McConnell Black (1917; 1920) recorded South Australian languages using a current phonetic transcription, which represented retroflex and some interdental consonants (Simpson et al. 2008: 93). His influence on the system used by the Adelaide language committee remains undetermined. The little that is known about the exchange of understandings and practices between those studying Australian languages in Adelaide and those studying Australian languages in Sydney suggests that the movement of ideas was limited and unidirectional. U. McConnel's 1945 publication titled 'Wikmunkan Phonetics', written within the realm of anthropology at the University of Sydney, acknowledges (p. 355) the assistance of FitzHerbert, professor of Classics at The University of Adelaide. She also thanks T. G. H. Strehlow. McConnel compares Wik-Munkan and Arrernte phonologies, referring the reader to Strehlow's analysis throughout and noting where her orthographic choice differed from Strehlow's.

2.2.2 Descriptive models

All early grammarians employed a model of grammatical description that was termed the 'word and paradigm' (henceforth WP) model by Hockett in 1954 (Robins 1959). The model Hockett named had developed in Europe to best convey the fusional and synthetic typology of European languages. The model takes the word rather than the morpheme as the minimal unit of analysis.[8] The application of the WP descriptive model to Australian structure resulted in an effective representation of an important range of Australian morphosyntactic data.

But unlike the synthetic and fusional morphology of standard average European languages, Australian morphology is generally both synthetic and agglutinative (see further Shoulson, Chapter 17, this volume; Alpher, Chapter 40, this volume). Individual grammatical categories carried within the word tend to be inflected discretely. Thus, wholesale application of the WP model resulted in descriptions that were unnecessarily repetitive. T. G. H. Strehlow's grammar of Arrernte (1944 [1938]) typifies how the indiscriminate application of the WP model might result in uneconomical descriptions. Presenting first full tables of declension for both indefinite nouns and definite nouns—i.e. those that are followed by a third person pronoun—after already having presented the case forms of third person pronouns in full tables of pronominal declension, he went on to provide full declensions for adjectives, which are syntactically undifferentiated from nouns (1944: 78–86 [1938]).

But most early PN grammarians, especially those who wrote detailed grammars and had learnt the language relatively well, blended two descriptive models when describing PN languages: the WP model, inherited from the classical description of fusional European languages, and a commonsense word-internal model befitting the agglutinative typology of the languages at hand. Meyer (1843) and Schürmann (1844), for instance, show a diminished reliance on the WP model to convey the function of case forms. They chose rather to list the multiple functions of nominal suffixes. In

[7] 'l'on constate que l'aranta ne dispose que de trois voyelles réellement distinctes: *a, i, u*' (Sommerfelt 1938: 42).

[8] Contemporary discussion of the word and paradigm model has developed different senses of the idea of the word and has introduced the notion of the lexeme (Koch 1990).

the introduction to his grammar of Minyangbal, Livingstone (1892: 3) justified his abandonment of the WP model on the basis of the agglutinative nature of Australian languages:

> It is well known that the Australian dialects are agglutinative, everything in the nature of inflection being obtained by suffixes. To this, Minyuġ is no exception; so that if I give an account of its suffixes, that is nearly equivalent to giving an exposition of its grammar. It will therefore, be convenient to take, first, such suffixes as are used with the noun and its equivalents, and, afterwards, those that may be regarded as verbal suffixes.

Sub-word units were commonly recognized and represented by the earliest PN grammarians, for example, Günther 1838: 45; Teichelmann and Schürmann 1840: 5 (Figure 2.5). This occurred prior to August Schleicher's analysis of *wurzeln* 'roots' and *beziehungslauten* 'inflections'—literally 'relational sounds'—given in an 1859 description of Lithuanian, which Blevins (2013: 383) describes as 'almost entirely without precedent in the classical tradition'.

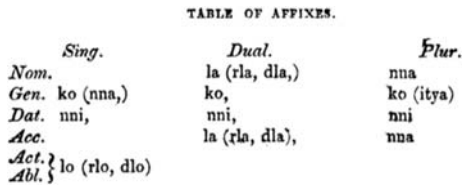


TABLE OF AFFIXES.

	Sing.	*Dual.*	*Plur.*
Nom.		la (rla, dla,)	nna
Gen.	ko (nna,)	ko,	ko (itya)
Dat.	nni,	nni,	nni
Acc.		la (rla, dla),	nna
Act. / *Abl.*	lo (rlo, dlo)		

Figure 2.5 Teichelmann and Schürmann's (1840: 5) presentation of case suffixes (Kaurna).

Some nineteenth-century grammarians in Australia not only recognized and represented sub-word units of meaning, but also innovated pre-theoretical practical descriptive responses that described the relative ordering of word-internal constituents either in terms of process or arrangement, without of course using these terms. In his description of Pitta-Pitta (1897: 8), W. E. Roth gave predictive syntagmatic statements about word internal constituents, instigating a distinctive method of conveying the relative ordering of inflections for number and case on nominals that was more efficient than the traditional exposition of the forms in lengthy paradigms.

The genesis of alternative descriptive models, which did not accord centrality 'to the word as a fundamental unit in the grammar as a whole and as the basic syntactic unit' (Robins 1959: 118) is generally associated (ibid., 111–12) with the description of American Indian languages in the early decades of the twentieth century by Boas (1911) and Sapir (1921, esp. Chapter 4). There are nineteenth-century precedents in the description of Australian languages.

2.2.3 Schools of morphological description

Nineteenth-century Australian grammarians were aware that the description of Australian languages might be compromised by 'categorical particularism': 'one of the major insights of structuralist linguistics of the 20th century (especially the first half) that languages are best described in their own terms ... rather than in terms of a set of pre-established categories that are assumed to be universal' (Haspelmath 2010: 2). The realization that the study of language should be non-aprioristic is widely associated with Boas (1911: 81) (Haspelmath 2010: 4ff.), but is traceable to the writings of W. Humboldt (1827, quoted in Morpurgo-Davies 1975: 105). In 1844, Schürmann perceived a tension between the premises underlying received descriptive linguistic schemata and the new linguistic structures he encountered, and advised (1844: vi) that the description of Australian languages required authors to

> divest their minds as much as possible of preconceived ideas, particularly of those grammatical forms which they may have acquired by the study of ancient or modern languages.

In the earliest grammar of an Australian language, Threlkeld was similarly aware that linguistic principles deduced from the study of classical languages did not have universal application and that Australian languages could not adequately be described by the existing descriptive framework. He wrote (1834: x):

> The arrangement of the grammar now adopted, is formed on the natural principles of the language, and not constrained to accord with any known grammar of the dead or living languages. The peculiarities of its structure being such, as to totally prevent the adaptation of any one as a model.

But even with this awareness, the early grammarians' descriptions were hampered by the absence of appropriate frameworks and terminology to describe the foreign structures. With reference to Threlkeld's grammar of Awabakal (1834), H. Hale appreciated the difficulty in framing a 'mass of information which is entirely new' (1846: 482) without appropriately developed descriptive tools:

> It is not surprising that the novelty and strangeness of the principles on which the structure of the language was found to rest, should have rendered a clear arrangement, at first a matter of difficulty; and some degree of obscurity and intricacy in this respect have caused the work to be less appreciated than its merits deserved.

Understanding of the structures the early grammarians were trying to convey involves stripping back the veil of arcane terminology and inappropriate descriptive

frameworks. The reimagining of the authors' logic when describing previously undescribed structures requires a consideration of the looking glass through which the skewing of the description of Australian linguistic structures occurred.[9] Elkin (1937a: 9) described the process of retrieving material from the early sources as 'careful sieving'.

The early grammarians' knowledge of classical and modern European languages led them to anticipate the presence of grammatical features common to many European languages but absent in Australian languages. Hence early grammars include the description of categories inherent to the traditional descriptive framework but usually inapplicable when applied to Australian languages such as vocative case, articles, morphological marking of comparative and superlative degrees of adjectives, passive voice, and grammatical gender.[10]

On the other hand, early grammarians in Australia encountered an array of 'foreign' morphosyntactic features that could not easily be accommodated within the schema and descriptive models developed to describe the structure and typology of classical European languages. The description of these categories required grammarians to either extend themselves beyond what was descriptively familiar or to borrow techniques innovated by previous grammarians. Early grammarians were most likely to look for guidance from their predecessors' descriptions when describing structures that the traditional grammatical framework was powerless to convey. These areas of the grammar, for which the early missionary-grammarians were theoretically and terminologically ill equipped, are most likely to evince lineages of descriptive practice. Notable instances include the early grammarians' descriptions of the marking and function of the ergative case (see Stockigt 2015), systems of bound pronouns (Gaby and Shoulson, Chapter 24, this volume), the juxtaposition of constituents in inalienably possessed phrases (Ponsonnet, Chapter 22, this volume), the inclusive and exclusive pronominal distinction (Gaby and Shoulson, Chapter 24, this volume) and the large morphological case systems of PN languages.

Comparison of the descriptions of these features reveals three distinct schools of practice that developed in the pre-academic era of Australian linguistic description (Stockigt 2017). The first was instigated by Threlkeld (1834) and is largely confined to grammars of languages spoken in New South Wales (Günther 1838; Ridley 1856b; Livingstone 1892 [1876–1886]). The second was instigated by Lutheran missionaries describing languages spoken near Adelaide in the early 1840s, particularly Teichelmann and Schürmann's (1840) grammar of Kaurna. Different aspects of Teichelmann and Schürmann's descriptive template, which had not been inspired by Threlkeld (1834), influenced a large body of South Australian grammatical description. This school is the most strongly attested of the three identified schools. It is defined by a greater number of shared descriptive practices, which are found in a larger body of work, and it endured for a longer period (1840–1938). T. G. H. Strehlow's grammar of Arrernte (1944 [1938]) is the culmination of this long history of Lutheran grammatical description (Stockigt 2017). The third school of early Australian grammatical description was instigated by W. E. Roth (1897). The features of Roth's template, which define the Queensland School of description subsequently utilized in later grammars of Guugu-Yimidhirr (Schwarz and Poland 1900; Roth 1901) and Nggerrikwidhi (Hey 1903), relate to the description of nouns and pronouns in peripheral cases.

Australian grammarians often worked in intellectual isolation from fellow grammarians posted across far-flung regions of the country. The only early grammar of a Western Australian PN language (Symmons 1841) appears not to have been read by any other early grammarians before republication in Fraser (1892a). Grammars of Diyari written by successive generations of Lutheran missionaries at Bethesda, of which Reuther (1899–1901) is the best known, remained obscure unpublished German MSS well into the twentieth century, and some (Koch 1868; Flierl 1880) remain so.[11] Roth's insightful and well-exemplified grammar of Pitta-Pitta (1897) makes no reference to earlier descriptions of Australian languages, including the Lutheran missionaries' analyses of Karnic languages related to Pitta-Pitta (e.g. Homann 1892; Reuther 1894; 1899). The style of Roth's grammatical description is unique, suggesting that like his ethnological investigation (Mulvaney 2008: 114), the grammar was uninfluenced by earlier analyses. That such a descriptively innovative work was written relatively late in the pre-academic era of grammatical description in Australia, with little or no recourse to previous analyses, reveals much about the development of linguistic ideas in the country.

Like Roth, T. G. H. Strehlow's (1944 [1938]) grammar of Arrernte presented morphosyntactic features as if they were

[9] The metaphor is borrowed from Nowak's (1993) account of the early description of Inuktitut ergativity.

[10] Minjangbal (Livingstone 1892) is the only PN language described in the pre-academic era that has grammatical gender. A relatively large proportion of the small group of about a dozen Pama-Nyungan languages that make a two-way gender distinction in third person pronouns (Dixon 2002: 461) were described in the pre-academic era. Early grammarians of Diyari (Homann 1892), Pitta-Pitta (Roth 1897), Minjangbal (Livingstone 1892), and Kalaw Lagaw Ya (Ray 1907) readily described the distinction (Stockigt 2014).

[11] The grammars of Diyari by Koch (1868) and Flierl (1880) written in German *Kurrentschift* have in 2019 been transcribed and translated into English and deposited in AIATSIS as part of the Centre of Excellence in the Dynamics of Language, Language Documentation Grant, 'Pilot digital archive of historical sources in Australian languages'.