Handbook of Australian Languages

Volume 2

Handbook of Australian Languages

Volume 2

Wargamay
The Mpakwithi dialect of Anguthimri
Watjarri
Margany and Gunya
Tasmanian

edited by
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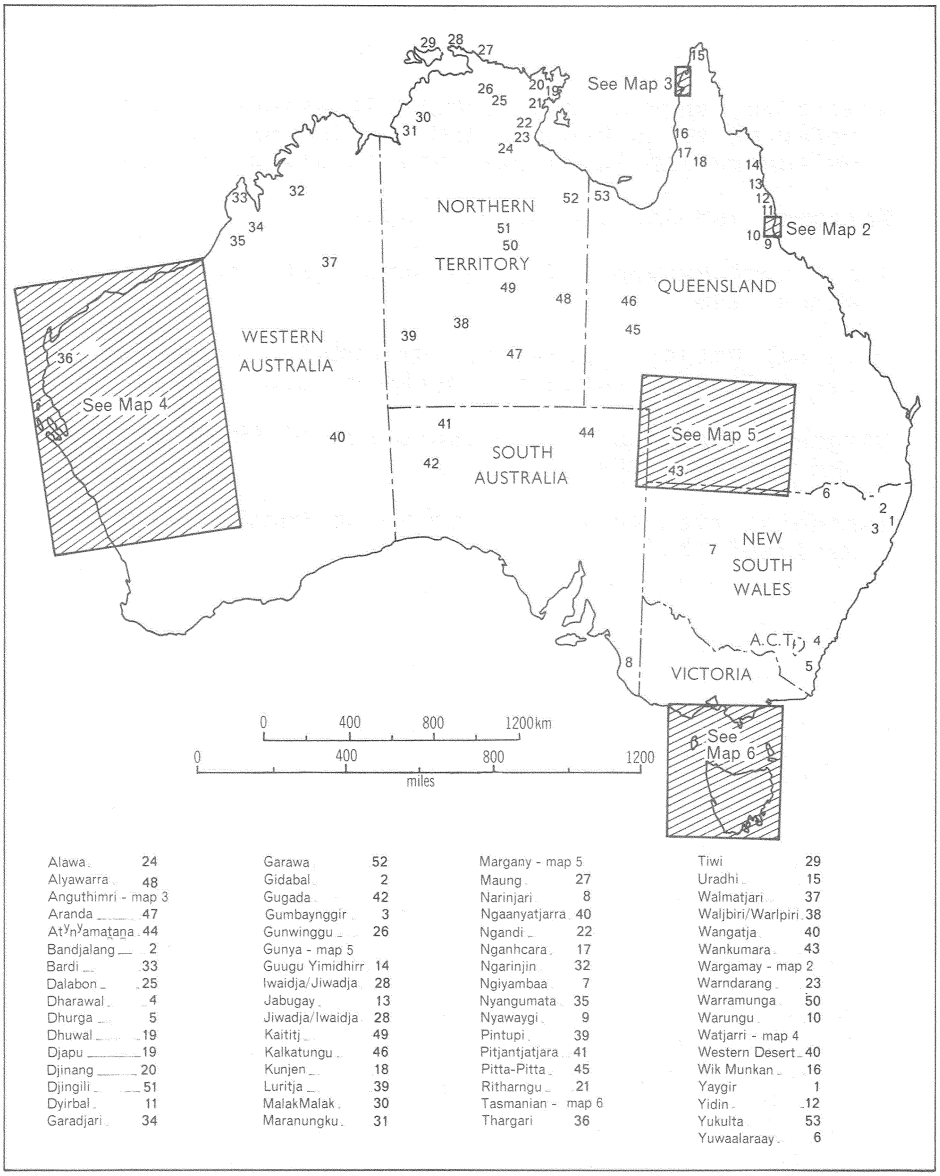

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Map 1: Australia, Showing Approximate Locations of Languages Referred to in Preface and in List of Books Available on Australian Languages

Preface

This *Handbook* is intended to make available short grammatical sketches of Australian languages. Each grammar is written in a standard format, following guidelines provided by the editors, and includes a sample text (where available) and vocabulary lists. Volume 1 was published in 1979 and has been generally well received; about 80% of the printing for the Australian market had been sold within the first eighteen months after publication. It contained an introduction by the editors, discussing some of the recurrent features of languages across the continent, together with grammars of Guugu Yimidhirr, by John Haviland; Pitta-Pitta by Barry J. Blake; Gumbaynggir, by Diana Eades; and Yaygir by Terry Crowley.

The contributions to this volume are salvage studies, giving all the information that is available on four languages which are on the point of extinction, and an assessment of what linguistic impressions can be inferred from the unsatisfactory material that is available on the extinct languages of Tasmania.

The main interest of the *Wargamay* grammar centres on the occurrence of transitive verbs in intransitive constructions (marked by distinctive tense allomorphs and case affixes), which may be the beginnings of a change from an absolutive-ergative to a nominative-accusative grammatical system. *Anguthimri* shows a quite different phonological outline from most Australian languages and Crowley shows how it has in fact evolved from a language of the regular type through the operation of about twenty ordered diachronic changes; these have given rise to series of fricatives, prenasalised stops, and nasalised vowels, among other features. *Watjarri* was spoken about three hundred miles north of Perth and Wilf Douglas discusses its interesting similarities to, as well as important differences from, the Western Desert language. *Margany* and *Gunya*, from southern Queensland, are effectively dialects of a single language. Breen carefully enumerates the dialectal differences (for instance, only Gunya has bound-form pronouns) and also assesses older sources on this language.

It is planned that Volume 3 will contain a grammatical sketch of Djapu - a Yolŋu dialect spoken at Yirrkala in Eastern Arnhem Land - by Frances Morphy. There should also be some of the following: Warumungu by Jeffrey Heath and Jane Simpson; the Yadhaykenu, Angkamuthi and Atampaya dialects of Uradhi, by Terry Crowley; Nyawaygi, by R.M.W. Dixon; Yukulta, by Sandra Keen; Jabugay, by Elizabeth Patz; Warungu, by Tasaku Tsunoda and Peter Sutton; Kaititj, by Harold J. Koch; Nganhcara by Ian Smith and Steve Johnson.

Each contributor to the *Handbook* is normally responsi-

ble for having his grammar typed according to a standard style-sheet, and providing camera-ready copy for the editors. Authors are responsible for their own sub-editing and proof-checking. For this volume Margany/Gunya was typed at Monash University by Joan Juliff; all of the remaining contributions were typed by Ellalene Seymour, at the ANU. It is a pleasure to extend thanks to the typists whose skill in using five different golf-balls and variable 10/12 pitch contributes so much to the quality of the Volume. Rose Butt gave invaluable help with checking manuscripts and proofs for style and consistency; and Val Lyon drew the maps with her customary care and skill.

R.M.W.Dixon

February 1981

Barry J. Blake

Books available on Australian languages

The following list of books on Australian languages that are currently in print includes all works which in the editors' opinion contain reliable information.

Publishers are:

AIAS - Australian Institute of Aboriginal Studies, P.O. Box 553, Canberra City, A.C.T., 2601. Distributor for North and South America: Humanities Press Inc., 171 First Ave., Atlantic Highlands, N.J. 07716, U.S.A. Postage extra

CUP - Cambridge University Press, P.O. Box 91, Albert Park, Victoria 3206 (and offices in U.K. and U.S.A.)

IAD - Institute for Aboriginal Development, P.O. Box 2531, Alice Springs, N.T. 5750. Prices include postage; payment to accompany order.

ML - Mount Lawley College, 2 Bradford Street, Mount Lawley, W.A. 6050. Postage extra.

OLM - Oceania Linguistic Monographs - The Secretary, Oceania Publications, Mackie Building, University of Sydney, Sydney, N.S.W., 2006. Prices include postage; payment to accompany order.

PL - Pacific Linguistics, Department of Linguistics, Research School of Pacific Studies, Australian National University, P.O. Box 4, Canberra, A.C.T. 2600. Postage extra.

SIL - Summer Institute of Linguistics, Australian Aborigines Branch, P.O., Berrimah, N.T. 5788. Postage extra.

GENERAL SURVEYS AND AREAL STUDIES, ETC

Blake, B.J. *Case marking in Australian languages*, 1977, AIAS. $A8.95

Brumby, E. and Vaszolyi, E. (editors) *Language problems and Aboriginal Education*, 1977, ML. $A4.

Capell, A. *A new approach to Australian linguistics*, 1956, OLM. $A2.50

Dixon, R.M.W. *The languages of Australia*, 1980, CUP. $A19.95 paper, $86.50 hard (in Australia); £9.95 paper, £30 hard (in U.K.)

Dixon, R.M.W. (editor) *Grammatical categories in Australian languages*, 1976, AIAS. $A23 paper, $A39 hard.

Heath, J. *Linguistic diffusion in Arnhem Land*, 1978, AIAS. $A8.95

Sutton, P. (editor) *Languages of Cape York*, 1976, AIAS. $A11.50.

Sutton, P. and Walsh, M. *Revised linguistic fieldwork manual for Australia*, 1979, AIAS. $A4.95.

Wurm, S.A. *The languages of Australia and Tasmania*, 1972. Mouton: The Hague

Wurm, S.A. (editor). *Australian linguistic studies*, 1979, PL. $A29

GRAMMARS, DICTIONARIES, TEXT COLLECTIONS

Birk, D.B.W. *The MalakMalak language, Daly River (Western Arnhem Land)*, 1976, PL. $A7.50

Blake, B.J. *A Kalkatungu grammar*, 1979, PL. $A8

-- 'Pitta-Pitta' in *Handbook of Australian languages, Volume 1*

Capell, A. *Some linguistic types in Australia* [Waljbiri, Garadjari, Dalabon, Jiwadja], 1961, OLM. $A4.50

-- *Cave painting myths: Northern Kimberley*, 1972, OLM. $A4

Capell, A. and Hinch, H.E. *Maung grammar, texts and vocabulary*, 1970. Mouton: The Hague

Chadwick, N. *A descriptive study of the Djingili language*, 1975, AIAS. $A3.50

Coate, H.H.J. and Elkin, A.P. *Ngarinyin-English dictionary*, 1974, OLM. $A10.

Coate, H.H.J. and Oates, L.F. *A grammar of Ngarinjin, Western Australia*, 1970, AIAS. $A4.50. Companion tape and booklet $A2, or cassette and booklet $A3

Crowley, T. *The middle Clarence dialects of Bandjalang* 1978, AIAS. $A13.95.

-- 'Yaygir' in *Handbook of Australian languages, Volume 1*

Dixon, R.M.W. *The Dyirbal language of North Queensland*, 1972, CUP. $A22 paper, $A70.50 hard (in Australia); £7.95 paper, £25 hard (in U.K.)

-- *A grammar of Yidin*, 1977, CUP. $A35 (in Australia), £35 (in U.K.)

Dixon, R.M.W. and Blake, B.J. (editors) *Handbook of Australian languages, Volume 1*, 1979. ANU Press, Canberra - $A16 (in Australia); John Benjamins, Amsterdam - Hfl 90 (in rest of world).

Donaldson, T. *Ngiyambaa, the language of the Wangaaybuwan*, 1980, CUP. $A55 (in Australia); £26 (in U.K.)

Douglas, W.H. *An introduction to the Western Desert language, Australia*. Revised edition, 1964, OLM.$A4

-- *The Aboriginal languages of the south-west of Australia*, Second edition, 1976, AIAS. $A5.00

-- *Illustrated topical dictionary of the Western Desert language*, Revised edition, 1977, AIAS. $A2.50

Eades, D.K. *The Dharawal and Dhurga languages of the New South Wales south coast*, 1976, AIAS. $A6

-- 'Gumbaynggir' in *Handbook of Australian languages, Volume 1*

Furby, E.S. and C.E. *A preliminary analysis of Garawa phrases and clauses*, 1977, PL. $A4.50

Geytenbeek, B. and H. *Gidabal grammar and dictionary*, 1971, AIAS. $A7

Glass, A. and Hackett, D. *Ngaanyatjarra texts*, Revised edition, 1980, AIAS. $A7

Hansen, K.C. and L.E. *Pintupi/Luritja dictionary*, Second edition, 1977, IAD. $A8.50

-- *The core of Pintupi grammar*, 1978, IAD. $A8.50

Haviland, J. 'Guugu Yimidhirr' in *Handbook of Australian languages, Volume 1*

Heath, J. *Ngandi grammar, texts and dictionary*, 1979, AIAS. $A18.95
-- *Dhuwal (Arnhem Land) texts on kinship and other subjects with grammatical sketch and dictionary*, 1980, OLM.$A8.50
-- *Basic materials in Ritharngu: grammar, texts and dictionary*, 1980, PL. $A9.50
-- *Basic materials in Warndarang: grammar, texts and dictionary*, 1980, PL. $A7.50
Holmer, N.M. *Notes on the Bandjalang dialect spoken at Coraki and Bungawalbin Creek, N.S.W.*, 1971, AIAS. $A6
Hudson, J. *The core of Walmatjari grammar*, 1979, AIAS. $A9.45
Hudson, J., Richards, E., Siddon, P., Skipper, P. et al. *The Walmatjari: an introduction to the language and culture*, Second edition, 1978, SIL. $A4.75
Kilham, C.A. *Thematic organization of Wik-Munkan discourse*, 1977, PL. $A11
Klokeid, T.J. *Thargari phonology and morphology*, 1969, PL.$A3
McDonald, M. and Wurm, S.A. *Basic materials in Waŋkumara (Gaḷali): grammar, sentences and vocabulary*, 1979, PL. $A5
Metcalfe, C.D. *Baṛdi verb morphology (northwestern Australia)*, 1975, PL. $A8
Oates, L.F. *A tentative description of the Gunwinggu language (Western Arnhem Land)*, 1964, OLM. $A3.50
O'Grady, G.N. *Nyangumata grammar*, 1964, OLM. $A2
Osborne, C.R. *The Tiwi language*, 1975, AIAS. $A12.50. Companion tape or cassette, $A3
Platt, J.T. *An outline grammar of the Gugada dialect, South Australia*, 1972, AIAS. $A7
Pym, N. *Papers on Iwaidja phonology and grammar*, 1979, SIL. $A6.25
Reece, L. *Dictionary of the Wailbri language of Central Australia, Part I, Wailbri-English*, 1975, OLM, $A4.50; *Part II, English-Wailbri*, 1979, OLM, $A7
Sandefur, J.R. *An Australian Creole in the Northern Territory: a description of the Ngukurr-Bamyili dialects (Part 1)*, 1979, SIL. $A5.20
Sandefur, J.R. and J.L. *Beginnings of a Ngukurr-Bamyili Creole Dictionary*, 1979, SIL. $A4.50
Sayers, B. *The sentence in Wik-Munkan: a description of propositional relationships*, 1976, PL. $A7.50
Schebeck, B. *Texts on the social system of the At^{y}n^{y}amaṯaṉa people, with grammatical notes*, 1974, PL. $A11
Sharpe, M.C. *Alawa phonology and grammar*, 1971, AIAS. $A10
Sommer, B.A. *Kunjen phonology: synchronic and diachronic*, 1969, PL. $A4
-- *Kunjen syntax: a generative view*, 1972, AIAS. $A9.50
Tryon, D.T. *An introduction to Maranungku (Northern Australia)*, 1970, PL. $A5
-- *Daly family languages, Australia*, 1974. PL. $A14
Waters, B. *A distinctive features approach to Djinang phonology and verb morphology*, 1979, SIL. $A4.80
Williams, C.J. *A grammar of Yuwaalaraay*, 1980, PL. $A7.50
Yallop, C. *Alyawarra: an Aboriginal language of central Australia*, 1977, AIAS. $A9.95
-- *Narinjari*, 1975, OLM. $A3.50

LANGUAGE LEARNING COURSES

Pitjantjatjara, 10 cassettes and written material, IAD. $A45.15 ($A35.95 to students)
Pintupi, 8 cassettes and written material, IAD. $A39.30 ($A32 to students)
Warlpiri, 11 cassettes and written material, IAD. $A58.75 ($A48.63 to students)
Eastern Aranda, 6 cassettes and written material, IAD. $A29.80 ($A24.25 to students)
Western Aranda, 7 cassettes and written material, IAD. $A33.55 ($A27.00 to students)
Teach yourself Wangkatja, 4 cassettes and book, ML. $A13
Kriol language learning course, 6 cassettes and written material, SIL. $A24

There are also several series of volumes each containing a number of papers on aspects of Australian languages: Pacific Linguistics has published 14 numbers of *Papers in Australian Linguistics*, and *Pacific Linguistic Studies in Honour of Arthur Capell* (edited by S.A.Wurm and D.C.Laycock) contains a dozen papers on Australian Linguistics; AIAS has put out four miscellaneous collections of papers; and SIL has two series of Work Papers.

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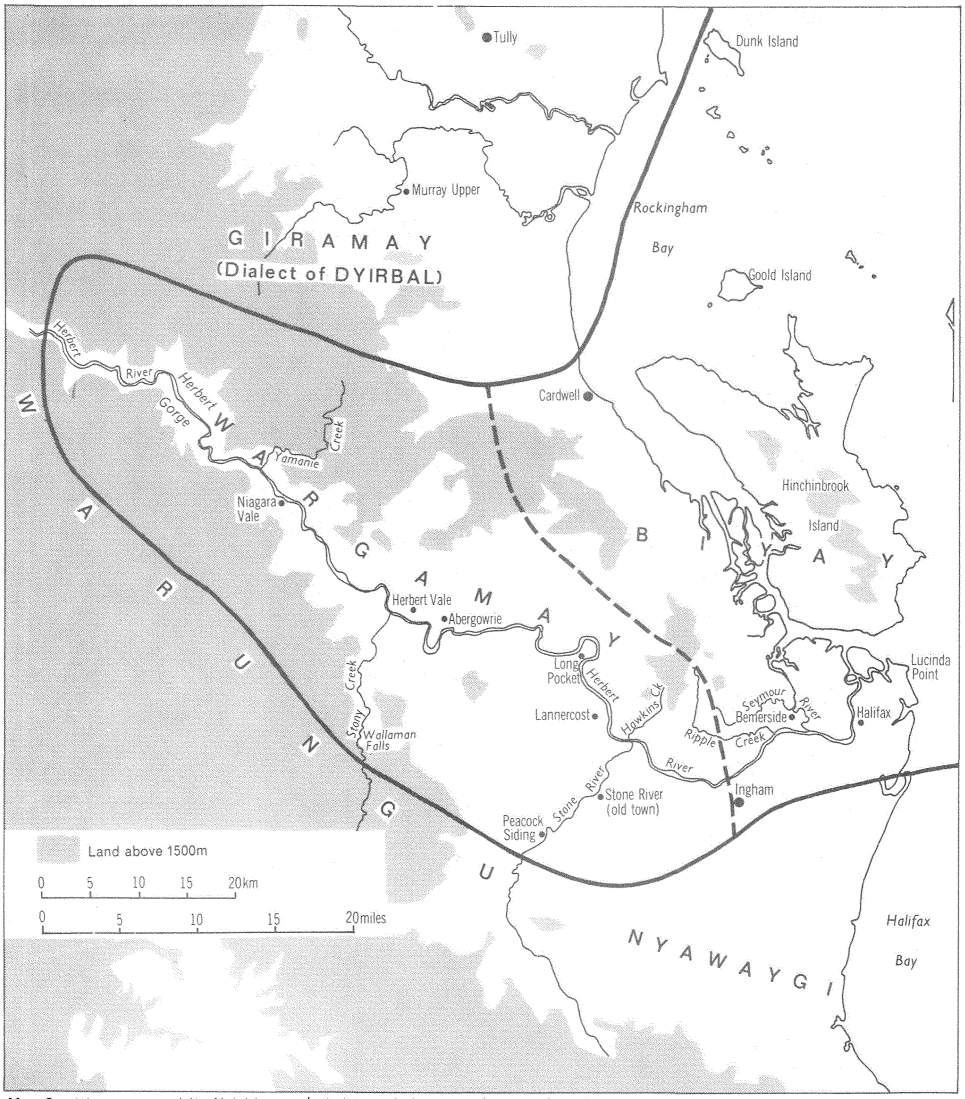
Abbreviations

A	transitive subject (function)
ABL	ablative (case)
ABS	absolutive (case)
ACC	accusative (case)
AVERS	aversive (case)
ALL	allative (case)
C.A.	concurrent action (verb affix)
CAU	causal (case)
CAUS	causative (deriving transitive verb from noun or adjective)
COMIT	comitative (nominal affix
COMP	comparative (nominal affix)
CON	concomitant (nominal affix)
CONJ	conjunctive (verbal affix)
CONSEC	consecutive (verbal affix)
CONT	continuing action (verbal affix)
CONTIN	continuative (verbal affix)
DAT	dative (case)
DESID	desiderative (verbal affix)
DIMIN	diminutive (nominal affix)
du	dual form of pronoun
ERG	ergative (case)
FUT	future (tense)
GEN	genitive
HAB	habitual (verbal affix)
IMMED	imminent action (verbal affix)
IMP	imperative (verb inflection)
IMPERF	imperfect
INCH(O)	inchoative (deriving intransitive verb from noun or adjective)
INST	instrumental (case)
INT	interrogative (verbal affix)
INTR	intransitive
IRREAL	irrealis (verb inflection)
IV	intransitive verb
LOC	locative
NEG	negative
NOM	nominative (case)
NOMLSR	nominaliser
NON-FUT	non-future (tense)
NP	noun phrase
O,OBJ	transitive direct object
PERF	perfect (verb inflection)
PL	plural object (verbal affix)
pl	plural form of pronoun
POSS	possessive (case)
POT	potential (verbal affix)
PRES	present (tense)
PRIV	privative (nominal affix)
PROHIB	prohibitive (particle)
PROP	proprietive (nominal affix)
PROX	proximate (verbal affix)
PURP	purposive (verb inflection)
REC PAST	recent past (verbal affix)
RECIP	reciprocal (verbal affix)
REFL	reflexive (verbal affix)
REDUP	reduplicated
S	intransitive subject (function)
sg	singular form of pronoun
STAT	stative (verbal affix)
SUBORD	subordinate clause

	(verb marking)	VC	verb complex
TR	transitive		
TV	transitive verb		
UNMKD	unmarked (verb inflection)	1	first person
UNEXP	unexpected action (verb affix)	2	second person
		3	third person



Map 2: Wargamay and Its Neighbours (tribal boundaries are only approximate)

Wargamay
by R.M.W. Dixon

1. THE LANGUAGE AND ITS SPEAKERS

1.1 LINGUISTIC TYPE

Wargamay is a fairly typical Australian language with a suffixing, agglutinative structure and free word order. Its most notable characteristic is the fact that transitive verbs can occur in intransitive, as well as in transitive, construction types, mainly to satisfy an 'ergative' syntactic constraint on subordination. In chapter 5 it is suggested that the grammatical changes which have recently taken place in Wargamay could eventually lead to a shift from the present split-ergative morphology to an entirely accusative system.

The consonant inventory consists of four stops (labial, apical, laminal and dorsal), a nasal corresponding to each, one lateral, two rhotics and two semi-vowels. There are three vowels, with a length distinction occurring only in the initial syllable of a word. The dozen or so monosyllabic words all involve a long vowel. Stress goes onto a syllable involving a long vowel if there is one; otherwise onto the first syllable of a disyllabic word but onto the middle syllable of a trisyllabic form.

There are clearly defined classes of nominal (noun and adjective), locational qualifier, time qualifier, pronoun, demonstrative, verb, particle and interjection. Pronouns show singular, dual and plural forms for all three persons (although the 'third person singular' has a wide usage, and may not properly belong in the pronoun class).

There is a system of nine cases for nominals and pronouns, with locational and time qualifiers taking a limited selection from these. There are three systems of case marking for the main syntactic functions of transitive subject (A), transitive object (O) and intransitive subject (S). Nominals and the third person singular pronoun distinguish absolutive (S,O) from ergative (A) case; first and second person non-singular pronouns have separate forms for nominative (S,A) and accusative (O); the remainder -

first and second person singular, third person non-singular, and the interrogative pronoun - have distinct case forms for all three syntactic functions.

Verbs do not show any category of tense; there is instead a rich aspectual-type system. Verbal inflections comprise 'unmarked aspect', perfect, purposive, irrealis, positive imperative, negative imperative and subordinate. There is also a 'continuative' derivational affix, and a comitative suffix that derives transitive from intransitive stems. In addition, transitive and intransitive verbal stems can be derived from nominal and from some interrogative and local roots.

Almost every verbal suffix has two allomorphs - one used on verbs in intransitive constructions with the other being employed on verbs in transitive constructions. Verbal stems fall into two classes: 'intransitive' verbs occur only in intransitive constructions whereas 'transitive' roots can occur in transitive or in intransitive constructions (taking the appropriate inflectional allomorphs).

The scanty material available for Wargamay does not yield overmuch syntactic information. There are, however, well defined complement constructions and also relative clauses. A great deal of the work that is done by syntactic derivation in other Australian languages is achieved in Wargamay by careful employment of transitive verbs in either transitive or intransitive constructions; the kinds of correspondence between these two types of construction are important, both synchronically and diachronically.

Sentence modification is achieved through a set of non-inflecting particles ('not', 'perhaps', 'only' etc). It appears that polar questions can be shown only by a marked intonation pattern.

1.2 DIALECTS

What I refer to as the 'Wargamay language' appears to have had three distinct dialects (shown on the map):

(1) The people living in the rich forest country along the lower reaches of the Herbert River - from just west of the present town of Ingham, through Hawkins Creek, Long Pocket, Herbert Vale and Niagara Vale to Yamanic Creek and the Herbert Gorge - were called Wargamaygan, and referred to their language as Wargamay.

This group had territory on both sides of the river extending just a few miles from the banks; thus Wallaman Falls and the township of Stone River, on the south side, are said to have been included within Wargamaygan territory. ɟu:n was the name given to the Herbert River at the gorge and just downstream from it; and speakers of Wargamay can also describe themselves as ɟu:nbara (-bara 'belonging to' is a productive derivational affix - see 3.1.3). (It is not known for certain whether ɟu:nbara was synonymous with Wargamaygan, or whether it described just one local group of the tribe speaking Wargamay.)

The origin of the name 'Wargamay' is not known. There

may be something in William Craig's suggestion, made in 1898 (see 1.6 below) that the last syllable of 'Wargamay', and of 'Giramay' (which is spoken immediately to the north), is related to maya, the word for 'no' in these two dialects. Certainly the other dialects of the Wargamay language are directly named by their word for 'no'.

(2) The people living around the mouth of the Herbert River (including the present towns of Halifax and Bemerside) called their language Biyay (which was their word for 'no') and could refer to themselves as Biyaygiri, involving the productive derivational affix -giri 'with' (see 3.1.3). The ɟu:nbara would refer to speakers of Biyay as guɲinbara using the common noun guɲin 'the coast, people/things from the coast'.

Biyay, from the mouth of the Herbert River, and Wargamay, spoken up river from it, are mutually intelligible dialects. They have about 90% common vocabulary and very similar grammars - morphological differences include the form of the 'continuative' verbal suffix, and the paradigm of the single irregular verb ɟi:(gi)- 'to sit' (differences of verbal morphology are detailed in 3.5.3; lexical differences are fully catalogued in the Vocabulary by semantic fields).

(3) The people living on Hinchinbrook Island and the adjacent mainland (south from the present town of Cardwell), a country of mountainous jungle and flat mangrove swamps, also appear to have spoken a dialect referred to as Biyay (and to have been themselves called Biyaygiri). Tindale quotes a tribal name 'Bandjin'; this is the common noun baŋgin 'sea water', and thus on a par with names ɟu:nbara and guɲinbara.

Hinchinbrook Biyay did show some lexical differences from Halifax Biyay, but more than 90% of their vocabularies are identical. Since no speakers survive for this dialect, and the only information is from a few short word lists of fifty and more years ago, no details of the grammar are known. However, from informants' comments it is likely that the grammar would have been very close to that of the other two dialects.

These three dialects are recognised, by their speakers and by those of neighbouring languages, to form a tight-knit group - to be, effectively, dialects of a single language. Indeed, the name 'Wargamay' is commonly used to refer to this language. Thus Nora Boyd, the informant for the Halifax dialect, would sometimes say that she spoke Wargamay but at other times (especially if emphasising some difference from the dialect spoken upstream) might specify it more exactly as Biyay. Similarly, speakers of Giramay would talk of Wargamay being spoken over the whole Cardwell/Herbert Vale/Halifax area, but would mention that the variety spoken at Cardwell itself was called Biyay.

We are thus taking over the usage of speakers in referring to (1-3) as the Wargamay dialect, the Halifax Biyay dialect, and the Hinchinbrook Biyay dialect of the Wargamay language. To avoid confusion Wargamay is used below for

the language name, with initial letters normally being employed to refer to dialects:

W - (1) Wargamay dialect
B - (2) Halifax Biyay dialect
H - (3) Hinchinbrook Biyay dialect

1.3 SURROUNDING LANGUAGES

To the north of Wargamay is Giramay - the most southerly dialect of the large 'Dyirbal language' (see Dixon 1972) - spoken by the Giramaygan tribe. Giramay and Wargamay have around 48% common vocabulary, squarely within the 'equilibrium figures' predicted for languages that have been in contiguity for a substantial period (Dixon 1972:331-7,1980a:254-60); a comparison of verb forms shows only 32% being completely or almost completely identical (differing only as regards vowel length, etc) suggesting that the languages may not be closely genetically related.

To the south-east is Nyawaygi which shows about 45% common vocabulary with Wargamay (the figure is about the same for verbs and for non-verbs). Again, there is no evidence for strong genetic connection.

Inland from Wargamay, to the west and south-west, is Waruŋu, the northmost member of the closely related 'Maric' group of languages that extends as far south as the New South Wales border. There is less lexical overlap here - the common vocabulary stands at 35% and a verb count shows 29%. (The Waruŋu data comes from Alf Palmer who also knows Dyirbal and Wargamay and tends to mix these languages together. As a result, the figures quoted for Wargamay-Waruŋu common vocabulary may be somewhat higher than they should be.)

When one turns to grammar there are again no overwhelming similarities in any one direction. Waruŋu is fairly different, but both Giramay and Nyawaygi show interesting points of congruence. Giramay, Wargamay and Nyawaygi do, in fact, have virtually identical paradigms for first and second person pronouns. Wargamay resembles Giramay in having only two verbal conjugations, in having separate inflections for dative and genitive, and in having no monosyllabic verb roots. It resembles Nyawaygi in having contrastive vowel length, in the form of some verbal affixes, and in the form of the interrogative pronoun.

In sum, although Wargamay shows strong similarities to the north (Giramay) and to the south (Nyawaygi) the evidence does not permit us to put forward a close genetic connection in either direction. (Dyirbal and Nyawaygi differ so markedly that there is no chance of connecting all three languages in terms of some 'low node' on the Australian language tree.)

1.4 SECTIONS

Some information about the life and beliefs of the Wargamaygan is included in Lumholtz (1887, 1888, 1889, 1921), and in Craig's letters to A.W.Howitt (see 1.5, 1.6).

Each member of the tribe belonged to one of the four sections. These interrelated as follows:

a man who is:	must marry a woman who is	their children being:
wungu	guɽguɽayŋgan	gurgila/gurgilayŋgan
guɽguɽu	wungurayŋgan	wuɡuru/wuɡurayŋgan
gurgila	wuɡurayŋgan	wungu/wungurayŋgan
wuɡuru	gurgilayŋgan	guɽguɽu/guɽguɽayŋgan

Note that the feminine forms involve the addition of -rayŋgan to a disyllabic masculine form and -ayŋgan to a trisyllabic form (with the -a- replacing the final -u of a masculine form); this is probably related to the feminine suffix -gan which occurs in a number of eastern languages (see Dixon 1972:12-13, 31, 319).

Lumholtz (1889:199) mentioned these terms in an interesting paragraph: 'The black man whom I had persuaded to go with me was related to one of my men, Yanki. He was Yanki's *Otero*. In the tribes the words *otĕro*, *gorgĕro*, *gorilla*, *gorgorilla* are found, which designate various kinds of relations. Sometimes a man would be called *otero* or *gorgero* without the addition of any other name, and still everyone knew who was meant. There are similar words to designate female relations, in which case the termination *ingan* is substituted for the final *o* or *a*, thus *oteringan*, *gorgeringan*, etc.' Lumholtz has clearly transcribed two of the section names reasonably well, but has used *gorilla* and *gorgorilla* where /gurgila/ and /wungu/ would be expected (the Dyirbal equivalent of wungu is ɡigungara, which is no more recognisable here). See also Birtles (1976:15).

In his correspondence with Howitt, William Craig transcribed the section names quite accurately: his letter of 2nd June 1898 give the masculine and feminine forms as *woon-goo/woon-goo-ringan*, *goorgoo-roo/goor-goo-ringan*, *goor-gil-ah/goor-gil-ingan*, *wooth-oo-roo/wooth-oo-ringan*. John Murray (1886) gives identical section names for Hinchinbrook Biyay: *woongo*, *kookooroo*, *koorkeela*, *wooitcheroo*. Note that a corresponding four-section system is employed by the Dyirbalŋan (Dixon 1972:27-31) and in fact over much of south-eastern Queensland (Murray 1886 states equivalences between Hinchinbrook and Wide Bay section names).

A little information has been obtained in the totems associated with each section. Speakers emphasised that there were many more totems, which they could not recall:

wungu - gargay 'small hawk'

guɽguɽu - guŋɡunu 'thunderstorm'; guɽuŋgul 'small hawk' (the latter totem was given by Craig, but is not remembered by present-day informants).

gurgila - 'eel'; yuŋgubala 'black python'; yamani 'rainbow'; waɡa 'crow'

wuɡuru - walɡuwuɽu 'brown snake'; guriɡala 'eagle hawk'.

1.5 CONTACT HISTORY

The first Europeans to visit Wargamay territory were Captain King and the crew of the survey cutter *Mermaid* who anchored off Goold Island - five miles north of Hinchinbrook - from 19th to 21st June 1819. King (1827:199-203) records how he traded fishing hooks and lines for Biyaygiri baskets and turtle pegs, and describes the canoes, forms of bodily decoration, etc.

Goold Island became a favoured place of call for water. The first vocabulary - of some fifteen words - was procured by Mr Evans, master of Captain Blackwood's survey ship *Fly*, in late May 1843 (see Jukes 1847, I:93-4).

A settlement was established at Cardwell in January 1864. The inevitable clashes followed - Aborigines felt they had a right to spear European cattle feeding on their tribal lands and the settlers were so incensed by this that they took human life in return, whereupon the Aborigines retaliated by taking white lives. Dorothy Jones' *Cardwell Shire Story* (1961) provides an excellent history of settlement in the area, paying some attention to the affect it had on Aboriginal society.

On 9th March 1872 a party of police and troopers led by Sub-Inspector Robert Johnstone beat a cordon across Hinchinbrook Island and cornered almost all the tribe on a point. According to Jones' (1961:170-1) interview with an early settler 'those who were not shot on land were shot as they attempted to swim away'; she remarks that what was reported in the paper as the killing of 'a few unfortunates' amounted to 'almost total massacre of the tribe'. The slaughter was purportedly in retaliation for an attack by Aborigines on Europeans shipwrecked from the brig *Maria* (Jones 1961:164-70).

This massacre did attract national publicity. The *Pastoral Register*, a Sydney paper, mentioned that 'a writer in the *Central Australasian*, who proposes to give a narrative of the expedition to the wreck of the ill-fated "Maria" says:- "We brought off with us Mr Johnston, Sub-inspector of Native Police; and from hearing his conversation with some of our fellows, I got my first insight into the atrocious state of public opinion in North Queensland with reference to the blacks. He spoke of killing whole camps - not merely men, but girls and piccanninies - with the greatest coolness"'. The matter was brought up in the Queensland Parliament with the Colonial Secretary stoutly denying that the government 'pursued a policy of extermination in dealing with the blacks'; rather 'the policy of the Government towards the blacks had been for the repression of crime' (*Queensland Parliamentary Debates*, 5th Series, 1871, pp 323-4). Nowhere in the Colonial Secretary's statement, or in the cables he quoted from Johnstone, was there any denial concerning the Hinchinbrook slaughter.

Even after this the white attitude appears not to have softened and in the note by M.Armstrong, Esq., Inspector of

Police, on the Aborigines of 'Hinchinbrook Island and the Mainland Adjacent' in Curr's *Australian Race* (1886, II:418-21) it is said that 'the tribe wore no clothes in their original state, but *those who are now* (in 1880) *allowed to come to Cardwell* do so' (my italics). Indeed, Cardwell continues to this day to be a town with an intransigent attitude towards Aborigines. On commencing fieldwork in October 1963 I enquired of the Cardwell policeman (who was, under the laws in force then, local Protector of Aborigines) whether there might be anyone left with language competence and received the answer 'there are no niggers in this town'.

Murder was only one of the dangers to which the Biyay-giri were exposed. In 1882 a Mr Cunningham was sent by the American showman Barnum to bring back some Australian Aborigines for exhibition. He gathered five men, two women and one baby from Hinchinbrook Island and from Palm Island (twenty miles to the south-east). There was an incident in Melbourne when one Aborigine, Tambo, is said to have killed a policeman who complained about his lack of clothing. But, despite protestations in Parliament and in the press, the party left for America (one Aborigine dying en route); they were then 'exhibited' in London, Brussels, Cologne, Berlin and Paris (see Houzé and Jacques 1884:97-9). There is no record of whether they were ever returned to their tribal lands.

The Wargamaygan, up on the Herbert River, were less affected by European and Chinese contact. They had sufficient numbers and freedom to continue with a recognisable tribal life until the end of the century. The Norwegian zoologist Carl Lumholtz lived among them, by an abandoned cattle station at Herbert Vale, from August 1882 until July 1883. Lumholtz's classic *Among Cannibals* (1889, see also 1887, 1888, 1921), has a great many observations on the life and customs of the tribe. He said that their 'culture - if indeed they can be said to have any culture whatever - must be characterised as the lowest to be found among the whole genus *homo sapiens*' (viii). But Lumholtz himself must be assessed as an unobservant and uninsightful anthropological observer. For instance, he refers (201) to *Yamina*, a monster which lived in a certain water hole and 'of which the natives stood in mortal dread... A gun would be of no use, they said, for the monster was invulnerable'. This was almost certainly the rainbow-serpent, yamani - in this and other instances Lumholtz made no effort to delve below the surface of his informants' comments, and plainly did not realise they had such things as myths. However, despite the shallowness of Lumholtz's cultural understanding and insight (and his failure to learn to speak the language) the information he gives on the break-up of tribal life, in the face of European contact, is outstanding.

William Craig had been running a cattle station at Niagara Vale - a little higher up the Herbert River than Lumholtz's base at Herbert Vale - for some years before, in 1898, he opened up a correspondence with the anthropologist A.W.Howitt in Victoria (Craig mentions that he had written several articles on Aborigines for the *Queenslander*). The letters to Howitt give the section system, marriage laws,

totems and some other cultural information; they appear mostly to deal with the Wargamaygan although there may be some intrusions from Giramaygan (when quoting numbers, for instance, in the letter of 14th April 1898, he gives Giramay bulari 'two' rather than Wargamay yaga). (These letters are in the A.W.Howitt papers, National Museum of Victoria.)

Craig was concerned with the welfare of the Wargamaygan and on 26th January 1898 had written to Parry-Okeden, the Commissioner of Police in Brisbane:

'In the interests of the aboriginals here I take the liberty of writing to you. There are about 80 here who have not yet got down the river and mixed with the Chinese and colored races or learnt the opium habit to any great extent. While I have been here I have found horses and packed the Govt blankets allowed them and always permitted them to camp on my run and hunt through my cattle and gave them medicines as far as I was able. I also killed any waster cattle I had for them.

'As the ticks killed nearly all my cattle, and I am about to leave here, seeing that the Govt intend to do something for the amelioration of the aborigines I think it would not be amiss in the interests of those here to supply you with some information about them, so that if you think fit you may be able to do something for them, as other station owners do not care to have them hunt and camp about their runs or homesteads and they will surely drift down among the Chinese and Malays where the opium charcoal and disease will soon finish them.

'I think there is a splendid place here for the Govt to make a reserve in which they could gather most of the blacks from around the lower Herbert where they are mixed with the alien colored races and dying from opium charcoal and disease. This country has become useless for grazing on account of the heavy undergrowth but the blacks get a good deal of food from the Yu-boo-loo tree nuts (ground to flour) and the Wong-ah or Chestnut. [Craig is probably referring to ɟubula, Podocarpus amarus, and waŋa, Castanospermum australe]. From here over to Cardwell in a straight line about 20 miles there is a range covered with dense coast scrubs in which this food with scrub turkeys eggs etc. is plentiful, and Sea View Range on the other side shuts the Herbert into a gorge and is good hunting and food ground also, while if any agriculture is desired there are enough isolated rich flats that will grow anything tropical...'

Craig's letter was forwarded to the Inspector of Police at Townsville, who asked Constable Holmes of Cardwell to comment. Holmes confirmed that 'the particular tribe of blacks spoken of by Mr Craig are rather a superior class of the general run of blacks in the district the greater proportion of them being free from disease and opium charcoal is a thing almost unknown to them. The Constable has seen these blacks in numbers of from 50 to 60 on the Bora ground about 14 miles to the North West of Cardwell on Saltwater Creek. Not only does the wild fruit that Mr Craig mentions grow here but a great many others.' Holmes was not, however, in favour of making a reserve at the location suggested by Craig because it was hard to reach from Cardwell (the very reason Craig thought it would be suitable, this inaccessibility serving as a protection against the temptations available on the coast). Craig's letter was acknowledged from Brisbane with the assurance that 'the subject is receiving attention'. (Craig's and Holmes's letters are

held in the Archives Section of the Public Library of Queensland.) But nothing positive was ever done. In fact those Aborigines who did not succumb to the Chinaman's opium stood a good chance of being hunted and shot by the 'native police' (cf Kennedy 1902); the only text obtained from Lambert Cocky (see 1.7) in 1972 told of attacks and massacres by this force around the turn of the century.

Still, those Aborigines who did survive were able to live a fairly free life. In 1896 E.J.Banfield went to live on Dunk Island - twenty miles north of Hinchinbrook - and his four volumes of diary and reminiscence (Banfield 1908, 1911, 1918, 1925) contain a good deal of information about Aborigines and their habits, with Aboriginal names for a fair number of plants, animals, etc. In *Confessions of a Beachcomber* (1908:8) Banfield stated that only four of the original 'Dunk tribe' were alive when he settled there, and maintained that their language was nearer to that of Hinchinbrook than to the mainland. Banfield's narrative freely mixes words from Biyay and from dialects of Dyirbal, but in one passage (1908:292-3) he does focus on language and gives parallel 18-word vocabularies from two Aborigines, Tom and Nelly. 'Tom's totemic title, "Kitalbarra", is derived from a splinter of a rock off an islet to the south-east of Dunk Island. "Oongle-bi", Nelly's affinity, is a rock on the summit of a hill on the mainland, not far from her birthplace.' Whereas the words from Nelly are recognisable as a dialect of Dyirbal, those given by Tom appear to be Hinchinbrook Biyay. This may be taken as evidence that Dunk Island was in fact part of Biyaygiri territory.

The period of freedom ended in 1914 when most of the surviving Aborigines were rounded up and taken, some in chains, to the Hull River Mission - Banfield expressed regret at what he considered an unnecessary step in *Last Leaves from Dunk Island* (1925). When the settlement at Hull River was destroyed by a cyclone, in 1918, its inmates were transferred to Palm Island.

It is worth noting that all my informants for Wargamay and Biyay would have been children at the time William Craig left Niagara Vale. No one born in the following generations learnt anything of the language.

1.6 PREVIOUS WORK ON THE LANGUAGE

There are several early vocabularies of the Biyay dialects:

(1) 15 words collected by Mr Evans of HMS *Fly*, May 1843 (Jukes 1847,I:93-4). All but two of these are clearly recognisable as H.

(2) Houzé and Jacques (1884) give about 200 words from 'Île D'Hinchinbrook', taken from 'Bob' and 'Billy'. In most cases only one item is quoted but where there are two variants that given by Billy appears to be Hinchinbrook Biyay whereas that from Bob is Halifax Biyay. There are some general comments on the language and its pronunciation; the quality of transcription is fair.

(3) Edward Curr in his compendium *The Australian Race* (1886, II:418-21) included under 'Hinchinbrook Island and the Mainland Adjacent' a few cultural notes by M.Armstrong, Esq. Inspector of Police, and a vocabulary of about 130 words (together with details of sections) by John Murray. Robert Johnstone wrote of Murray that he was a 'keen observer, a first class bushman with a thorough understanding of the blacks, [and that he] spoke fluently the languages of the tribes of Rockingham Bay, Wide Bay, Rockhampton, the Murray River and the Edward River of N.S.W.' (Jones 1961: 106, quoting from 'Spinifex and Wattle', a series of articles by Johnstone in *The Queenslander*, 1903-4). Murray's vocabulary is predominantly of H (although there may be a few Giramay words mixed in - both biyay 'no' and maya 'no' appear, for instance) and the standard of transcription is again fair.

(4) Banfield's (1908:292-3) 18-word vocabulary gathered from 'Tom' is of H, and is rather well transcribed. The majority of the commonest nouns and verbs Banfield quotes throughout his narratives belong to Dyiru or other dialects of Dyirbal, showing that he had more contact with speakers of this language than with the Biyaygiri (indeed there were at the time many more Dyirbal speakers around than there were Biyaygiri).

(5) On 28th October 1938 N.B.Tindale recorded on Palm Island a vocabulary of about 80 words that was headed 'Bandjin (Biyay)'. This was taken down from Jimmy Banfield, whom I met on Palm Island in 1964, being told that he was the last of the Hinchinbrook tribe; Banfield told me that he knew no Biyay and this was confirmed by other informants. It is thus not surprising that the vocabulary Banfield gave Tindale is almost straight Dyirbal with just a handful of Biyay words interspersed (kai 'ground', kakakau 'walk' and one or two more). It is worth noting that for 'no' Tindale first wrote down imba (the Dyirbal word is yimba) but then crossed it out and inserted bijai with the parenthetic comment 'this is the word which defines their language'.

(6) William Craig recorded a few Biyay words in a letter to Howitt - see (10) below.

(7) Archibald Meston's papers include seven words from Cardwell on page 6 of his notebook Folio 1 (in the Oxley Library, Brisbane); most of them are forms that occur in both Giramay and Wargamay.

The material gathered on the W dialect comprises:

(8) Lumholtz included a page of grammatical comments on the language in *Among Cannibals* (1889:308-9). About 120 words (with just a few Biyay and Giramay intrusions) are scattered throughout the text and also gathered together in a vocabulary at the end (312-3). Lumholtz's ear was not outstanding - thus he spent a great deal of his time trying to obtain a specimen of the tree-climbing kangaroo (Dendrolagus lumholtzii) called in Wargamay bulŋgari, but Lumholtz consistently called it 'Boongary', failing for a year to hear the -l-. But on the whole Lumholtz's language material is fair and useful. In view of the importance of Lumholtz's book a full commentary on his language material

is included in an Appendix at the end of this grammar.

(9) Kendal Broadbent noted about a dozen Aboriginal names for plants and animals in his diary of a trip collecting for the Queensland Museum in the Cardwell district, 1886 (the diary is now in the Queensland Museum Library). Some words are close to some of those obtained by Lumholtz; others appear to be Wargamay or Giramay.

(10) In a letter to A.W.Howitt dated 24th July 1898 William Craig correctly identified the 'tribes' of the region as Warga-mi, Kirra-mi, War-oong-oo, Bei and Nowa-gee. He did not like the term 'tribe', saying that they were more like Scottish clans. Craig took 'language' to be a defining characteristic of this grouping (cf Dixon 1976a), thus:

> 'I give below the groups or clans with their name; it appears to me it is connected with language more than anything else as it does not bind them for agression or tribal organisation nor prevent intermarrying... I give you the five groups close here and a few of their commonest words, so you can see what you can make out of it.

Group	*Sun*	*Moon*	*Fire*	*Water*	*No*	*Yes*	*Where*	*go*
War-ga-mi (no)[a]	Currie, Woo-ee	Ballanee	Wiibara, Wagoon	Ull-oo	Mia	I-ee	minya	yan-ee
Kirra-mi (no)[a]	Currie	Ballanoo	You-goo	Com-oo	Mia	In-yan	wan-ja	yan-ee~~ee~~
War-oong-oo	Yuln-gun	Ballanoo	Boor-ee	Com-oo	Nowa	Yae-oo	wan-ja	yan-ulgoo
Bei (no)	Woo-ee	Ballan	Mingoo	Com-oo	Be-i	Iba	wan-ja	moom-a-goo
Nowa-gee (no)	I cannot give you this just now but Nowa means No							

> 'I give you here some words that I have got from a boy who has been on the Johnstone to the N.of Cardwell and says he knows their talk Uth-an -

(yes)	*Sun*	*Moon*	*Fire*	*Water*	*No*	*(yes)*	*(where)*
Uth-an	Currie	Cug-a-lum	Boan-ee	Bun-a	Imba	Uth-a	min-ya-goo'

Most of the words in the Wargamay and Biyay lines are quite recognisable. 'Woo-ee' indicates wi:'sun' (gari occurs only in Dyirbal), 'moon' is in fact balanu in W and balan in B, 'fire' is wagun, 'water' is ŋalu in W and gamu in H, 'no' is maya in W and biyay in B, 'yes' is in fact ŋayi in both dialects, 'where' is based on the root waɲga- (miɲa is 'what') and 'go' should be gaga- (yani is a Waruŋu form). 'Wiibara' may relate to wi: 'sun' and the derivational affix -bara 'belonging to' (3.1.3) but mingoo and moom-a-goo from the Biyay lines are not recognisable. The inclusion of gamu for 'water' indicates that Craig may have taken the Biyay line from a member of the Hinchinbrook group (Halifax Biyay has ŋalu, like W). The Giramay and Waruŋu lines have a similar sprinkling of errors and the last line (from the Johnstone River) appears to be a northerly dialect of Dyirbal, probably Ngajan (Craig's 'Uth-an').

(11) On 3rd November 1938 N.B.Tindale collected a Wargamay vocabulary on Palm Island. This is, like all Tindale's material, well transcribed and is clearly identifiable as W, with a few B intrusions.

However, Tindale's placement of Wargamay and Nyawaygi on his tribal maps (1940 and 1974) is not correct. He attributes the Bandjin/Biyay tribe solely to Hinchinbrook Island (presumably on Jimmy Banfield's testimony); in fact it occupied the adjacent mainland (attributed by Tindale to Giramay) and the land around the mouth of the Herbert River. In the case of Wargamay, Tindale describes the territory as 'coast at Halifax Bay, inland to slope of Coast Range; north to Ingham and Lucinda Point; south to Black River, twenty miles north of Townsville (seven hordes are mentioned in the literature)'. The literature cited by Tindale is the entry by Cassady and Johnstone in Curr (1886, II:424-31); but this in fact refers to the Nyawaygi tribe (the name is not given but comparison of vocabularies - for instance, those gathered by Tindale himself in 1938 - establishes this quite conclusively). In fact, the territory Tindale ascribes to Wargamay was occupied partly by Biyay but largely by Nyawaygi, a coastal people who Tindale mistakenly attributes to an inland tract. As already noted, the Wargamaygan occupied territory on both sides of the Herbert River - Tindale allocates that on the north bank to Giramay and the southerly portion to Nyawaygi.

(12) About 1961 La Mont West Jnr worked at Palm Island with Jimmy Johnson (Johnson died a few months afterwards). West lent me his notes in 1964. They involve 1300 numbered items (mostly single words), which appear to have been dictated almost randomly by Johnson, with West making no attempt to cross-check or systematise the data he was writing down, or to gain any understanding of the language. Glosses are often misleading and the transcription is phonetically poor - for instance, item 1032 is given as 'wuripa bulumbi wa·kunka - take stick away and chuck in bush'; this is almost certainly (following West's use of voiceless stop symbols) wurpi puṃbi waku·nta 'big-ABS throw-IMP tree-LOC'. In most cases West missed the important, phonologically-distinctive vowel length in initial syllables.

West made a tape-recording of songs, pronouns and a few somewhat halting texts; the tape is deposited with the Australian Institute of Aboriginal Studies. The quality of recording is very poor, and when I played it to Alf Palmer, in 1967, he professed himself unable to make it out. However, it was possible to check with Palmer and with other informants some of the words and grammatical forms, from West's transcriptions of the tape and from my listening to it.

Johnson undoubtedly had a fair command of Wargamay and was said to be an excellent racconteur. But it is clear from the material (corroborated by other informants) that he tended to mix Giramay in with Wargamay. This, together with the poor quality of the Johnson material, severely limits its value. I did use it during my own field work to suggest forms, but always required careful corroboration from a Wargamay informant (see 1.7).

(13) In 1970 Peter Sutton contacted John Tooth, at Minnamoolka Station, and recorded a few minutes Wargamay on tape; no written notes were taken. Sutton made the tape available to me and suggested Tooth as a potentially useful

and reliable informant.

(14) About 1974 Tony Beale recorded a few score words from Nora Boyd, at Ayr, and passed these on to me. (I had previously contacted Mrs Boyd, but Beale discovered her whereabouts quite independently).

(15) Tasaku Tsunoda worked intensively at Palm Island with Alf Palmer (born about 1890) on what was described in 1971 as Kutjal and in 1972 as Waruŋu - see Tsunoda's MA thesis (1974). The material Palmer gave on Waruŋu is splattered with Dyirbal words and morphemes and ideally requires checking with another speaker of Waruŋu. Although Palmer's parents were Waruŋu, he has lived most of his life in Wargamay- and Dyirbal-speaking districts (and, for the last thirty or so years, Dyirbal has been the only one of these languages to be actively *spoken* in everyday affairs).

In September 1974 Tsunoda elicited some Wargamay material from Palmer (as I had done ten years before - see 1.7), making this available to me. A few months later Palmer told Peter Sutton that he had given Tsunoda some Wargamay, but was afraid that a bit of Waruŋu had got muddled in! This material does in fact contain intrusions from Waruŋu and from Dyirbal; it also mixes together the distinct W and B dialects of Wargamay (for instance, Palmer uses both the -bali and -ni varieties of the continuative verbal suffix - 3.5.3).

Most tribes in this area have an extensive 'avoidance vocabulary' used in the presence of (amongst others) a parent-in-law of the opposite sex. The Dyirbal and Yidiɲ term for this speech-style is Dyalŋuy; it is often referred to in English as 'mother-in-law language'. I asked Palmer in 1964 concerning a Wargamay avoidance style and he affirmed there was one, but he could only remember three words (quoted in 1.7 below). However, during 1971-4 Palmer would, apparently randomly, tell Tsunoda that a certain Waruŋu or Wargamay item was 'Dyalŋuy' (especially when, say, two words had been given for the same thing). None of these later Dyalŋuy labellings has any veracity; almost all are straightforward Waruŋu, Wargamay or Dyirbal items.

1.7 SOURCES FOR THIS STUDY

I did some peripheral work on Wargamay in 1964 and 1967 (whilst primarily concerned with Dyirbal) gathering material from Alf Palmer (ǰimbilŋay) at Palm Island. A comparative vocabulary of some 500 items was elicited in Wargamay, Waruŋu, Dyirbal and Giramay and some basic grammatical paradigms in Wargamay were also obtained. In addition, Palmer spoke Waruŋu and Wargamay material of his own choosing (words and simple sentences) onto tapes after I left the field, under the auspices of Jack Doolan of Palm Island. He consistently declined to give any textual material. At this time Palmer volunteered just three words in the Dyalŋuy 'avoidance style' of Wargamay - biŋgubara 'foot', guygara 'water' and mandila 'hand'; the correspondent forms in the unmarked 'everyday style' of Wargamay are bingaɲ, ŋalu and mala respectively. Note though that mandi

is the form for 'hand' in the H dialect (attested in sources (1) - (4) of 1.6). Palmer did not appear very certain of these items, and it was not possible to obtain confirmation from any other informants.

Intensive study of the language ran from 1972 to 1980 and involved work with John Tooth and Lambert Cocky (W dialect) and Nora Boyd (B dialect). Each of these informants was less liable to muddle in material from other languages than were Jimmy Johnson (1.6) and Alf Palmer but it was still necessary to exercise extreme care in separating out Wargamay from the Giramay dialect of Dyirbal. Every putative Wargamay lexical item - given by Alf Palmer and/or Jimmy Johnson - was checked with at least one, and preferably two or all three, of Tooth, Cocky and Boyd. Particular care was taken in checking items which appeared to coincide in Wargamay and Giramay. The grammar was also carefully sifted to exclude extraneous elements.

At first Giramay was used as a means of elicitation. But since Giramay forms and constructions are often close to - but not identical with - Wargamay this sometimes tended to confuse speakers; they would continue in Giramay, or say that Wargamay was 'the same' when in fact there were slight differences. Because of this, most of the later elicitation was done using just Wargamay and English (in which all of the informants were quite fluent).

John Tooth's name is ɟuraminbal, literally 'shoot the cloud' (this relates to the thunderstorm, a totem of his section, guɽguɽu). Born at Abergowrie of a Giramay mother and Malay father, he was brought up by his Wargamay stepfather at Lannercost and Stone River; Tooth speaks the W dialect but is also quite at home in Giramay. He remembers as a boy walking with his tribe to a corroboree near Innisfail; to another at the Argentine Gold Mine, about 40 miles inland from Townsville; and to a third at the tin mine on the Charters Towers/Lynd road. Tooth has worked most of his life at cattle stations on the tablelands north of the Herbert and was contacted in 1972, 1973, 1974 and 1977 at Glen Ruth (formerly Cashmere). His knowledge of Wargamay was rather rusty but this was compensated by his intelligence and application. It was possible to record from him two very short texts, to obtain or check the best part of a thousand lexical items and to elicit on a wide range of grammatical points. John Tooth has a fine linguistic sense; if I made mistakes in trying to construct Wargamay sentences he would reject them because 'it doesn't seem to rhyme', his way of saying they were ungrammatical.

The fact that John Tooth also speaks Giramay (and of course there have been more people to speak to in Giramay than in Wargamay, over the last few decades) affects his Wargamay a little. Tooth tends to use the irrealis inflection -ma mostly in the 'lest' sense, probably because the Giramay verbal inflection -bila is restricted to a 'lest' sense; he would use -ma with a simple future sense sometimes but less often than would Cocky (or Boyd). Tooth would also use transitive verbs in intransitive constructions a little less often than Cocky or Boyd; in Giramay transitive verbs can *only* occur in transitive constructions.

Lambert Cocky (or Atkinson) is named burayŋgubaɽu and belongs to the wuɡuru section. One parent was Wargamaygan and and one Biyaygiri; thus although Cocky's dialect is predominantly W there is some B mixed in (but scarcely any Giramay). Like John Tooth, he was probably born a few years before 1900. Cocky was interviewed in 1972 and 1973 at Dan Sheahan's cane farm, on the bank of the Herbert River, just east of Abergowrie (in original Wargamaygan territory) and in 1974, 1975, 1977 and 1980 at the Eventide Home, Charters Towers. Cocky may have been more fluent in Wargamay than John Tooth but was at first a difficult informant, not inviting direct questions. Despite this, it was possible to check several hundred lexical items with him and to clarify a number of grammatical points; he also recorded one short text (see 1.5).

Nora Boyd, named at birth girɡul, later called ŋuŋuɽu, was the only source for the Halifax Biyay dialect. She was interviewed at Ayr in 1973 and 1974 and at Halifax in 1975. Nora Boyd was reported to be in her nineties (she had a son in an old folks' home, and went to visit him periodically) but was as mentally agile as John Tooth or Lambert Cocky, each of whom was a dozen years her junior. Mrs Boyd spoke pure Biyay and although she could sometimes recognise proferred items to be in the W dialect or in Giramay she would never mix these into her own speech. Nora Boyd did not give texts but was unfailingly courteous in volunteering and checking all manner of lexical and grammatical points. Only a limited amount of work was possible with Nora Boyd, before her death in late 1976; it was not possible to check a number of grammatical points, or whether many W lexemes also occurred in B.

Arthur Wild, named gububaɡi, (born at Abergowrie) was interviewed near Halifax in 1972 and 1973 (he died in 1974). Although most helpful, he was too old and semi-senile to yield any information that had not already been obtained from Tooth and Cocky.

2. PHONOLOGY

This description is in part conceived of as a section of an areal study of the languages in the Cairns/Townsville region. These are, from north to south, Yidiɲ (Dixon 1977a); Dyirbal with major dialects Ngaɡan, Mamu, Dyirbal and Giramay (Dixon 1972); Wargamay with dialects Biyay and Wargamay; and Nyawaygi.

Yidiɲ, Dyirbal and Wargamay have an identical set of sixteen segmental phonemes. In Nyawaygi original *d has changed to r or ɽ except within a consonant cluster; in modern Nyawaygi [d] and [r] can be grouped together as allophones of a single phoneme, giving an inventory of just fifteen phonemes.

The four languages differ in the occurrence of vowel length. Length occurs only in initial syllables in Nyawaygi and Wargamay, only in non-initial syllables in Yidiɲ, and in any syllable in the northerly dialects of Dyirbal.

The southern Dyirbal dialects do not show contrastive vowel length.

It is likely that Wargamay and Nyawaygi preserve a length distinction that was in a proto-language, ancestral to the four modern tongues (Dixon 1980a); this initial length contrast has simply been lost in Dyirbal and Yidiɲ. Yidiɲ has evolved a length distinction in non-initial syllables by a series of recent changes (documented in Dixon 1977a:42-88, 1977b), while the Ngaɟan and Waɽi dialects of Dyirbal have developed long vowels in all types of syllables through a recent change of a quite different type (Dixon 1972:342-5, 1980b). A comparative survey of the occurrence of vowel length in languages of the Cooktown/Cairns/Townsville area is in Dixon, 1976a.

2.1 CONSONANTS

Wargamay has

	labial	apical	laminal	dorsal
stop	b	d	ɟ	g
nasal	m	n	ɲ	ŋ
lateral		l		

There are also

two semi vowels: dorso-labial w and laminal y

and two rhotics, distinguished mainly in terms of place of articulation (although the frontmost rhotic is more often a trill, and tends to involve more taps):

- r normally an alveolar trill (sometimes a single flap)
- ɽ either a semi-retroflex (post-alveolar) continuant or else a flap or short trill articulated towards the back of the alveolar ridge.

Rhotic minimal pairs include gambara 'cyclone', gambaɽa 'body'; gurugu 'grog' (a loan), guɽugu 'dove'. Minimal pairs distinguishing /r/ from /d/ include /bari/ 'stone', /badi/ 'hook fish'.

Apical stop, nasal and lateral involve the tip of the tongue touching the alveolar ridge; sometimes an apico-postalveolar (retroflex) allophone occurs following u. Intervocalically, /d/ can be realised as an alveolar flap [ɾ]. It appears that [ɾ] can be an allophone of both /d/ and /r/ - we have [baɾi] in free variation with [bari] - featuring a trill - for /bari/ 'stone', and [bu:ɾiya] alternating with [bu:diya] for /bu:diya/ 'take!'.

Phonemes in the laminal column normally have lamino-palatal realisation. However, lamino-interdental allophones have been encountered before a and before u (following a normal Australian pattern - Dixon 1970): [ŋaɟa] alternates with [ŋaɟa] '1sg pronoun, A function' and [ɟana] with [ɟana] '3pl pronoun, S function'. Wargamay is mid-way between Dyirbal, which has no interdental sounds, and Nyawaygi, where interdental is the major allophone for laminal stop and nasal.

The labials and velars do not show as much allophonic variation. But /g/ can be labialised when u follows (and, probably, only when there is a dorsal consonant in the

following cluster) e.g. [gʷuygal] 'long-nosed bandicoot'. And /b/ has been heard lenited to a bilabial fricative when non-utterance-initial e.g. [ŋi:ɽaβada], /ŋi:ɽa bada/ 'tie up the dog!'.

Most words beginning in /yi.../ can be realised either as [yi...] or as [i...]; thus /yimirigi/, [imirigi] 'be glad-PERFECT'; /yigara/, [igara] 'crayfish'. However, the initial /y/ must be pronounced in, for example, /yira/, [yira] 'tooth'; it may be that initial [y] can be omitted before [i] only when followed by a nasal or stop. Note that initial /w/ is always pronounced, even before /u/, thus [wudu] 'nose', [wurbi] 'big' (never [udu] or [urbi]). Compare with Yidiŋ where initial /y/ and /w/ are always pronounced (Dixon 1977a:34-5) and Dyirbal where either semi-vowel can usually be elided before a homorganic vowel (Dixon 1972:278).

2.2 VOWELS

In the second or later syllable of a word, Wargamay has three vowel phonemes:

u close back
i close front
a open

In the initial syllable of a word there is a contrast between short and long vowels - effectively a six-term system, u, u:, i, i:, a, a:. The vowels occurring in non-initial syllables are most similar in length and quality to the short vowels in initial syllables.

Since Wargamay is an entirely suffixing language it will be seen that all long vowels occur in roots; affixes exclusively involve short vowels.

There are in fact just two examples of long vowels in a non-initial syllable - ɟi:ɟi: 'bird (generic)' and bi:lbi:l 'peewee (Grallina cyanoleuca)' (the latter, at least, is onomatopoeic). Note that these appear to be reduplicated, although the non-reduplicated forms (ɟi: and bi:l) are not attested. However, in other Australian languages roots that involve 'inherent reduplication' pattern phonologically like compounds - that is, the intramorphemic boundary halfway through the root allows the phonotactic possibilities normal for intermorphemic boundaries (cf Dixon 1977a:36-7 for Yidiŋ) - and these two forms do not therefore pose any serious counterexample to our generalisation that long vowels are restricted to initial syllables.

Minimal pairs involving a length contrast are:

ŋana	'1pl pronoun, SA form'	ŋa:na	'interrogative pronoun, O form'
badi-	'to hook a fish'	ba:di-	'to cry, weep'
giba	'liver'	gi:ba-	'to scratch'
ɟura	'cloud, sky'	ɟu:ra-	'to rub'
ɟulu	'buttocks'	ɟu:lu	'black'
nuba	'bark bag'	nu:ba-	'to sharpen'
ganda-	'to burn, cook'	ga:nda-	'to crawl'

Of the 920-word Wargamay lexicon, 90 items (almost 10%) involve a long vowel. And note that although verbs make up

only 16% of the total lexicon, 38% of long vowel items are verbs. (Comparative evidence suggests that Wargamay vowel length goes back to a proto-language. The fact that such a high proportion of verbs involves long vowels may be partly explained by the fact that, in the course of linguistic evolution, verbs are less likely to be tabooed - and replaced by a form borrowed from a neighbouring language - than are words from other parts of speech.)

Nineteen of the long vowel roots are trisyllabic and 56 are disyllabic e.g.

bu:ŋguray	'a snore'	gu:gal	'mud cod'
ɟu:ɟaɽa	'urine'	ɟa:la	'empty'
ɟu:lnɟuɽuɲ	'navel'	ma:ŋgay	'silly (person)'

There are thirteen monosyllabic words in Wargamay, each containing a long vowel (that is, there are no monosyllables with just short vowels). Seven comprise a closed syllable:

ɟi:l	'a black bird'	gu:ɲ	'spirit of a man'
ɟi:n	'eyebrow'	ma:l	'man'
ɟu:l	'salt' (a loanword)	yi:l	'name'
ɟu:n	'Herbert River/Gorge'		

and six an open syllable:

di:	'tea' (a loanword)	wi:	'sun'
ɟa:	'jaw' (B)	wu:	'hoe' and 'war' (two homonymous loan words)
ŋa:	'not'	ya:	'top of a tree'

The actual phonetic length of a vowel appears to depend on the following consonant (cf Lehiste 1970:27):

(a) the shortest variety appears before a stop - [ɟi·ɟin], /ɟi:ɟin/ 'swamp wallaby';

(b) a slightly longer variety occurs before a nasal - [ma:ni-], /ma:ni-/ 'hold in hand, catch hold of'.

(c) the longest variety of all is encountered before the semi-retroflex rhotic continuant (whether this is itself prevocalic or preconsonantal) - [du::ɽa-], /du:ɽa-/ 'to pull up', [gu::ɽguɽu], /gu:ɽguɽu/ 'beetle'.

In the case of the longest vowels, type (c), I sometimes heard (and transcribed) a long vowel, and sometimes a sequence of vowel-semivowel-vowel i.e. [duwuɽa] etc. Type (b) were consistently transcribed with a long vowel. Many type (a) words were noted sometimes to have a long vowel, and other times to have a short one, in my early transcription. Further questioning was undertaken to resolve the inconsistency, and I was corrected when I said, for instance, [ɟɻgin], the informant especially stressing and lengthening the vowel, [ɟi:ɟin], to indicate the correct pronunciation.

The realisations of Wargamay short vowels /u/ and /i/ range from close to half-close, and that of /a/ from open to half-open. It seems, however, that long close vowels can have more distant allophones - thus /yu:ɽigi/, [yɔ:ɽigi] 'grow-up-PERFECT' for instance.

In a monosyllable /u:/ can be realised as [u:] or [uwu], /i:/ as [i:] or [iyi], and /a:/ as [a:] or as [a?a]. Thus we have [yiyil] alternating with [yi:l], [ma:l] with [ma?al],

and [ŋa:], with [ŋa?a], etc. ([a?a] also occurs in inflected forms of /ma:l/ e.g. [ma:ldu]~[ma?aldu] 'man-ERGATIVE'; but [a?a] has not been encountered as the realisation of /a:/ in any form that involves a polysyllabic root.)

Note that there are arguments against interpreting long vowels as, phonologically, vowel-semivowel-vowel sequences; that is, against writing /bu:di-/ 'to take' as /buwudi-/, and so on. There is a critical morphophonological rule that is sensitive to the number of syllables in a word: for transitive verbs in the W dialect imperative is -ya after a disyllabic stem ending in -i, but is -Ø in all other circumstances (after any stem ending in -a, or after a trisyllabic in -i). Thus we get:

stem		imperative		
	wugi-		wugiya	'give!'
	baba-		baba	'spear!'
	gungari-		gungari	'cut!'
	bu:di-		bu:diya	'take!'

The fact that bu:di- (and also ma:ni- 'take hold of', da:lbi- 'scoop water up' and so on) takes -Ø imperative suggests that the root here involves just two syllables.

There is, however, no morphological criterion applying to monosyllables, and we could consider treating long vowels in monosyllables differently from those that occur in polysyllabic roots. There are no examples of contrast (in monosyllabic or polysyllabic forms) between -iyi- and -i:- or between -uwu- and -u:- so we could assign the sequences -iyi- and -uwu- to underlie surface [i:] and [u:]. There is difficulty, however, with [a:]. The most likely solution here is /awa/ but this is ruled out since it does contrast with /a:/. Thus /mawa/ 'shrimp' is never realised as [ma:] or [ma?a] and demands to be treated in a different way from [ma:l]~[ma?al]. The only way completely to avoid postulating forms which are phonologically monosyllables would be to have an additional phoneme /?/ that would appear in just four roots! The long vowel interpretation, outlined above, is surely preferable to this.

In Dyirbal, sequences /awa/, /uwu/ and /iyi/ can be realised as [a:], [u:] and [i:] respectively, but these are less frequent realisations than [awa], [uwu] and [iyi]; the latter pronunciations are always given in lexical elicitation (Dixon 1972:278). There are in Dyirbal morphological reasons for preferring a vowel-semivowel-vowel interpretation; for instance, locative case is -ŋga onto a disyllabic but -ga after a trisyllabic root ending in a vowel, and the locative of ɟuwumba 'a wild fruit' is -ga (not -ŋga). Note that only about 1% of the Dyirbal lexicon involves /awa/, /uwu/ or /iyi/ sequences, whereas 10% of the Wargamay corpus shows a long vowel.

Plainly Dyirbal imposes its 'vowel-semivowel-vowel' interpretation on any phonetic long vowel (and this is related to a requirement that every word in Dyirbal have at least two syllables) whereas Wargamay would interpret a phonetically identical sound as a phonological long vowel. Thus we have correspondences:

Dyirbal	/ɟiyil/ 'starling'	Wargamay	/ɟi:l/
	/biyilbiyil/ 'peewee'		/bi:lbi:l/
	/yawa/ 'top of tree'		/ya:/
	/ɟawa/ 'doorway'		/ɟa:/ 'jaw'

and close cognates:

Dyirbal	/guwuy/ 'spirit of a man'	Wargamay	/gu:ɲ/

Both Dyirbal /ɟiyil/ and Wargamay /ɟi:l/ could be pronounced [ɟiyil] (and similarly for the second line). This does not, however, hold for the third and fourth pairs. Dyirbal allows /awa/ to be realised as [a:] whereas Wargamay maintains a distinction between /awa/ and /a:/ (the Wargamay phonetic sequence [a?a] is missing from Dyirbal).

2.3 STRESS

Stress is assigned as follows:

(1) if the first syllable involves a long vowel, then it must receive primary stress;

(2) if there is no long vowel in a word,

and (a) the word is disyllabic or quadrisyllabic, primary stress goes on the first syllable;

(b) the word is trisyllabic or quinquesyllabic, primary stress goes on the second syllable.

Secondary stress goes on the syllable next but one after primary stress, except that a final syllable can never bear stress.

Thus:

(1)	mú:ba	'stone fish'	gí:baɽa	'fig tree'
(2)(a)	bádа	'dog'	gíɟawùlu	'freshwater jewfish'
(b)	gagára	'dilly bag'	ɟuɽágay-mìri	'Niagara Vale-FROM'

It will be seen that stress shifts between the absolutive form of a noun (which involves zero inflection) and an oblique form, e.g.

múŋan 'mountain-ABS' muŋán-da 'mountain-LOC'

The Wargamay stress assignment rules make it impossible to get two successive stressed syllables; and two successive unstressed syllables are only possible in a word with an odd number of syllables and the initial vowel long, as gí:baɽa above.

A non-initial vowel that bears primary stress may be phonetically lengthened e.g. [muŋá·nda] 'mountain-LOC'; this must be carefully distinguished from the phonologically contrastive length in initial syllables (which has stronger and more consistent quantitative realisation). Phonological and phonetic length specifications do in fact function at different 'levels'. Thus we have, in the following order:

1. Underlying forms with phonological length specification.
2. Stress rule - onto the first syllable of a disyllabic word, or a word of any length involving a long vowel; but onto the middle syllable of a trisyllabic word with all vowels short.

3. Optional phonetic lengthening of non-initial stressed syllable.

That is, phonetic lengthening is dependent on stress placement, which in turn depends on the occurrence of phonological length.

(Pre-Yidiɲ probably had stress assignment and phonetic lengthening rules rather like modern Wargamay. It then introduced a rule deleting the final syllable of words with an odd number of syllables, under certain phonologically- and grammatically-defined conditions; this made the placement of stress in a word phonologically contrastive, as malá·nu > malá·n 'righthand-ABS' contrasting with málan 'river-ABS'. Finally, contrastive stress (with concomitant lengthening) was replaced by contrastive length (which determines stress placement) - /malá:n/ versus /málan/. See Dixon 1977a,b.)

2.4 PHONOTACTICS

A Wargamay root has phonological structure:

either $C_1V{:}(C_3)$

or $C_1V(:)C_2V(C_2V)^n(C_3)$ where $n \geq 0$

In these structures:

V is any vowel (a, i or u);

C_1 can be any consonant except l or r; that is, it can be a stop, a nasal, a semi-vowel, or ʧ;

C_3 can be y, l, r or any nasal other than ŋ; that is, it cannot be a stop, w, ʧ or ŋ;

C_2 can be

(i) any single consonant; or
(ii) a homorganic nasal-stop sequence; or
(iii) l, r, ʧ or y followed by a non-apical stop, or nasal, or nasal-stop sequence, or by w; or
(iv) n followed by a non-apical stop or nasal.

The following clusters, which would be predicted by these generalisations, have not been encountered: lɲ, nɲ, ʧm, ʧɲ, yɲ, yw; they are assumed to be 'accidental gaps' in the data. Only one example is known of each of lw, nŋ, rmb, rɲ, rw, ʧɲɡ, ʧŋ, ʧw, yŋ.

In addition, -iy- must be immediately followed by a vowel (that is, this sequence can never occur at the end of a syllable).

There are just three words not covered by the general statement. 'Male kangaroo' has been heard as yáwuymbàʧi and as yáwuyɲbaʧi, but when I enquired about the pronunciation it was said slowly as yáwuy báʧi. It seems that a nasal is inserted between second and third syllables and can be assimilated in place of articulation *either* to the preceding *or* to the following segment. ɡú:lŋɡuʧuɲ 'navel' was treated similarly - it was said slowly simply as ɡú:l ɡúʧuɲ, without the nasal segment. The third item is yuʧúynbi

'bank of river', which occurs only in a song.

There are considerably wider cluster possibilities across a morpheme boundary, effectively C_3 followed by C_1 (affixes can begin with almost all segments that can commence words). Across a nominal stem+inflection boundary we can also get possibilities not included under C_2 e.g. -ld- or even -lnd- (for ergative case - see 3.1.1).

Loans generally follow the possibilities outlined above. The only exceptions noted (and these may be ad hoc 'loans', rather than items that were properly assimilated into the language at a time when it was actively spoken) are drayga 'tracker' and layn '(fishing) line'. The mapping of English into Wargamay phonotactics in loans generally follows the principles described for Dyirbal (Dixon 1972: 325-6). Noteworthy examples include bagir 'basket' - where English -s- is lost before the velar stop, and final -t is rendered as -r (Wargamay words cannot end in a stop) - and ŋabiɽbil 'Herbert Vale', where the initial consonant is supplied as ŋ, for an English loan that begins in an open vowel (or h plus open vowel).

2.5 PROBABILITIES OF OCCURRENCE

Relative probabilities of occurrence were calculated, from the 920-item lexicon, for initial, C_1, and final, C_3, consonants. The C_1 count covers all parts of speech whereas the figures for final consonants exclude verbs (which all have roots ending in -a or -i, see 3.5.2).

	root initial		root final	
b	0.19	0.60		
d	0.02			
ɟ	0.15			
g	0.24			
m	0.12	0.22	0.015	0.49
n	0.007		0.365	
ɲ	0.02		0.11	
ŋ	0.07			
y	0.07	0.17	0.16	
w	0.10			
l	0.001		0.31	0.35
r			0.04	
ɽ	0.01			

The relative probabilities for vowels are (with initial syllable figures covering all parts of speech but the non-initial count excluding verbs):

	initial syllable	non-initial syllable
a	0.43	0.47
i	0.18	0.21
u	0.39	0.32

There was no significant difference between figures for open or closed syllables, or for short versus long vowels.

About 63% of non-verbal roots end in a vowel; this compares with figures of 50% for Dyirbal, 44% for Yidiɲ