YUGAMBEH-BUNDJALUNG: WHAT CAN BE LEARNT FROM THE DIALECT DIFFERENCES

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1. INTRODUCTION

Part of the incentive to write this paper came from discussions with Geoff O'Grady during my time on study leave in Victoria B.C. in November, 1993, and I have incorporated a couple of his comments. However, I have, I believe, resisted any temptation to base any argument on proposed Proto Pama-Nyungan reconstructions, and the findings in this language can therefore be used as independent evidence for some possible changes.

The Yugambeh-Bundjalung language[1] was spoken (and is still sometimes in use) by Aboriginal people living in clans from some 16 km south of Brisbane, along the Gold Coast, and south in the Northern Rivers area of New South Wales almost to Grafton, inland to Drake on the Bruxner Highway (east of Tenterfield) and north-west to Warwick and Allora, in Queensland. Dialect names commonly recognised today are Yugambeh, Minyangbal (Minjangbal), Gidhabal and Bundjalung. Very few first language speakers are alive today. (Map 1 shows the language and dialects, with the area covered by Sharpe's Western Bundjalung dictionary highlighted.) The lower Clarence River area including Grafton fell in the range of Gumbaynggir and Yeygir, but the range of the southern Bundjalung dialects spread across the Clarence River to the middle Rocky River area. The myth of the three brothers landing by canoe (usually near Evans Head) is told throughout this area, and all claim to be descendants of the different brothers. Another myth about the cranky old woman Dirahnggan is well known in the Woodenbong to Tabulam area for the origin of the Clarence, and myths of a hunter and two dogs are told in the north (and known to others inland) to explain much of the northern topography. Old volcanic cores dot the landscape in this very fertile part of Australia. At least three traditional paths crossed the Border Ranges through the dense rainforest in pre-contact times, and the groups travelled every three years or so to the Bunya Mountains (Queensland) for the Bunya festival, returning 'sleek and well fed' (to quote one early observer). In at least some areas, semi-permanent dwellings were constructed, as there was no great need to travel extensive distances for food.

One's spouse generally came from a neighbouring clan within the language area; such exchange chains presumably kept dialects from drifting too far apart. Grammatical differences between the different areas were minor. There were some sound shifts from one area to another, mainly allophonic. However in some limited sets of words, vowels (and occasionally) consonants differed between groups, and this is reflected in dialect names,

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[1] The spelling Bundjalung is used in English to ensure that the general public pronounces it approximately correctly (e.g. in the name Bundjalung National Park), although a more correct linguistic spelling would be Bandjalang, and hence as language name Yugambeh-Bandjalang.

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which very often pinpointed a key word or pronunciation in which that dialect differed from its immediate neighbour. (For example, the Galibal said *gali* not *gala* for 'this'; the Gid(h)abal said *gidha*[2] with an interdental fricative; the Minyangbal used *minyang* not *nyang* for 'what, something', while the Nyangbal used the shorter form; the Wiyabal, Wujehbal, Wuyabal, Wehlubal etc. used *wiya, wujeh,*[3] *wuya, wehlu* for 'you (singular)', and the Yugambeh said *yugam(beh)* for 'no'. Very many words and their glosses were invariant right through the area; however, a number of words for common items were not cognate, with one form used in the north and another in the south, or one towards the east and another towards the west. A small number of words show meaning shifts from place to place, another small number show phonemic changes from place to place, and a number of other words differ markedly as one moves through the region. A few irregular verbs show vowel shifts in one of the tense affixes. From anecdotal evidence from descendants of speakers, and from one older speaker of Gidhabal (Boyd pers. comm.) there were almost certainly changes in voice quality, overall pitch and intonation, and perhaps in rate of utterance from place to place. By comparing all the sources, it is possible to note a number of patterns of difference, though none cover all possible words which could show the shift.

Holmer, in his work on the Lismore and Beaudesert dialects (Holmer 1971, 1983 respectively) claims verbs do not distinguish tense, but only aspect, whereas my analysis of both of these (in the first case on more limited data, in Cunningham n.d. and 1969 respectively) showed a system which fitted well with the tense-aspect systems described by Geytenbeek and Geytenbeek (1971) for Gidhabal, Crowley (1978) for Wahlubal/Wehlubal and Smythe (c. 1946) for the (possibly) Casino dialect. However, comparing the examples in Holmer with other data, it would seem that pragmatically—however described—the systems generally worked in a compatible way. Consideration of minor formal and semantic differences in verb affixation will not be discussed in this paper.

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2   The digraph *dh* indicates an intervocalic or word-medial fricative or affricate consistently realised as an interdental fricative in Gidhabal (GD), an interdental fricative or lamino-palatal stop in Wahlubal (WA), and as a lamino-palatal stop, affricate or even sibilant fricative in Yugambeh (Y), Minyangbal (M) and Casino (C) dialects—probably also in intervening dialects on which we have less phonological information. There is no /d/ phoneme (except rarely) word medially except after an alveolar nasal /n/. In this position /j/ is also a stop or affricate. /j/ can occur after /ny/, but /d/ cannot. The Geytenbeeks analysed the archiphoneme /dh/ as an allophone of /d/. I have interpreted it as more akin to /j/, the lamino-palatal stop. A few, mainly onomatopoeic, words in Gidhabal have a word-medial lamino-palatal stop, and corresponding words in Minyangbal (and probably other dialects) have a word-medial or final voiced sibilant. Examples are the words for 'tickle' *gij-gij* (GD) and *giz-giz* (M), and 'lilly pilly' *jijimahm* (GD). Where needed as a guide to pronunciation, *j, dh* and *z* are employed non-word initially in my transcriptions.

3   Throughout this paper, *h* after a vowel symbolises vowel length.
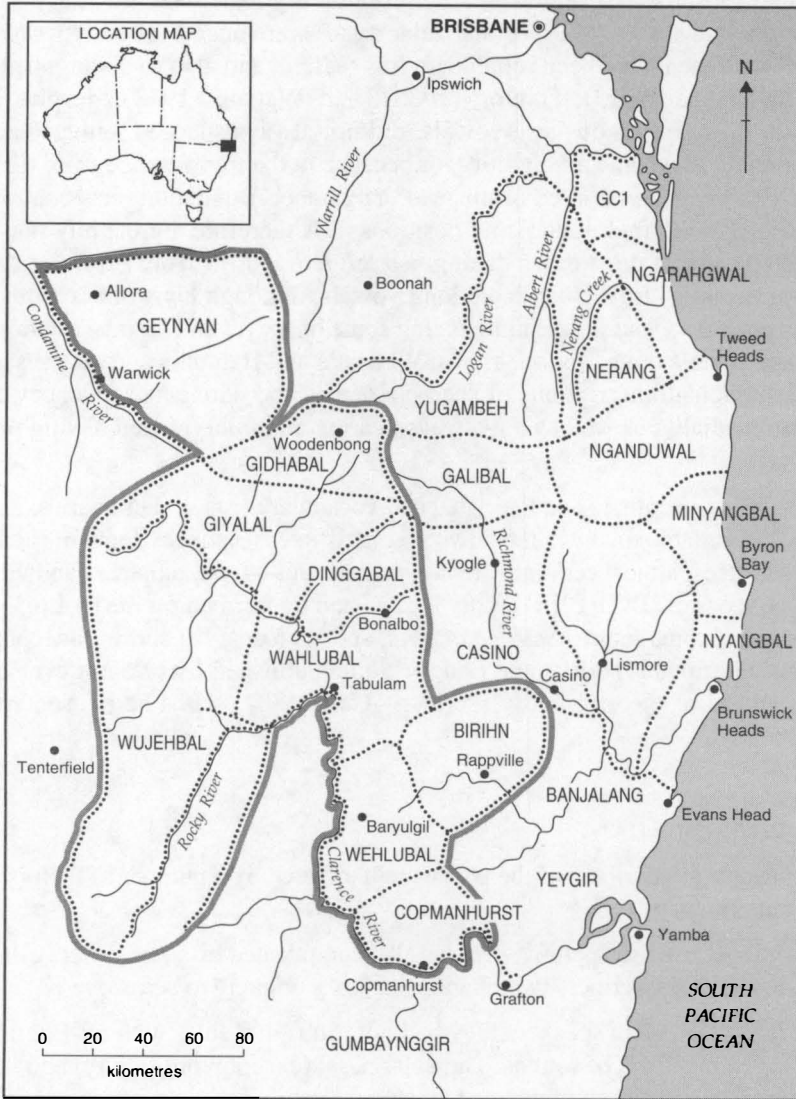
MAP 1: APPROXIMATE LOCATION OF THE BUNDJALUNG-YUGAM DIALECTS
(Broken line encloses the full range of the language)

1.1 THE DATA ON WHICH THIS WORK IS BASED

We have a considerable data bank in Yugambeh-Bundjalung, from many sources, and of widely differing quality and quantity. The first grammar of a dialect of the language was H. Livingstone's 'Minyuŋ' in 1892, and despite some uncertainty about whether some of the transcriptions reflect the vowel /a/ or /u/, and about lamino-palatal nasals and less commonly

lamino-palatal stops, the description and transcription is good.[4] After this early work, it was not until Smythe's work in the 1940s that velar nasals were unambiguously written, and the descriptions since then have been reliable on this feature, and also in distinguishing /a/ and /u/. Allen and Lane (1913), Hanlon (1935), and Watson (1943), despite efforts to disambiguate transcription of these vowels, did not always succeed, either because their systems inherently had some ambiguities, or because in the transference from their notes to print some diacritics were omitted or misread. Yugambeh-Bundjalung has contrasting long and short vowels[5] with four contrasting positions; it is therefore a great pity that Holmer's transcriptions do not in most cases distinguish /e/, /e:/ and /i:/ from /i/, nor do they mark length except (usually) for first syllable long vowels, although his work is valuable for its coverage of vocabulary and for disambiguating some of the /u/ and /a/ transcriptions of other lists. Allen and Lane's transcription, as also Watson's and Hanlon's and all the shorter lists, also have ambiguous transcriptions of such phonemes and phoneme sequences as /ng/, /ŋ/ and /ŋg/ word medially, as well as not always hearing an initial /ŋ/, and having problems at times with /ny/.

As well as these grammars and their attached vocabulary lists or dictionaries, a number of shorter lists are available, many taken down by magistrates or police. Some of these, gleaned from various sources, almost certainly are not independent—for example a handwritten list in Queensland police files (DG1 1910) kindly located and transcribed for me by Liz Dana seems to be the source of some lists in *Science of Man*, and Watson's list shows few changes from (though some additions to) Allen and Lane's. Some published lists do not even accurately reflect the spelling of the original transcriber—Curr (1887) states he revised spellings in some lists.

1.2 INTERPRETING THE DATA

These 'amateur' transcribers of the past were hampered by a number of factors which are reasonably well known:

1. Irregularities of English spelling, perhaps also complicated by some dialect differences in the speech of the transcribers (which information is unlikely to be recovered).

2. Like all normal English speakers they had notorious difficulty with un-English sounds, or un-English positions of sounds. The velar nasal (except word finally) and the lamino-palatal stop and nasal were problems to them.

3. Phonemes symbolised /b/ and /g/ are pronounced in a much more lenis way than in English, and can occur as fricatives. Some /b/ were transcribed *v*, which creates no problem of interpretation by the linguist, but both some /g/ and some velar nasals could have been symbolised with *h*, or *w*, or not symbolised at all, creating an interpretation problem for the linguist as to which phoneme was really there.

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4   Livingstone uses a unitary symbol, g with a dot inside it, for the velar nasal, thus avoiding ambiguity which plagues the other earlier work in other than word-initial or word-final position. Only occasionally has he failed to hear an initial velar nasal. In this paper his symbol has been replaced by /ŋ/.

5   Two successive syllables with long vowels are not allowed within words. Only one exception occurred in my data, see *ŋuhn* in §3.2. When verb affixes would produce two such successive long vowels, length on the second is generally dropped. However in Gidhabal and Yugambeh, but not Wahlubal, the length of the second vowel can 'hop' one syllable to the right, e.g. *nyah- + -li+ -hla* becomes *nyahlelah* in GD and Y, but *nyahlela* in Wahlubal.

4. Despite attempts by many to disambiguate the vowels /a/ and /u/, English patterns often interfered, and if recent data is to be followed, misleading transcriptions were made in many cases.

Contrast in voicing—or lack of it—in the obstruents generally creates no major problem for the linguist interpreting the old data, except that working through many of the lists one realises that a sound transcribed *t* or *d* might reflect the phoneme /d/ or /j/. However, in working with these lists, and comparing them with more certainly transcribed material from recent linguistic work, one forms an impression as to whose work is closest to phonological and grammatical accuracy (in the scant evidence for grammar in their lists), and one is occasionally delighted to find corroboration for what seems at first glance to be a nonce form in one list from a list or grammar from quite a different area of the language's range.

In this paper I am considering evidence for regular, if not universal shifts of sound or grammar, which can be established with confidence from these various records. Many apparent differences are almost certainly due to one or other recorder not hearing some syllables or sounds correctly, or to a different transcription system. For example, it is not unknown today for less academically educated speakers of English to write *g* for the *j* sound, even before *a* or *u*, so use of a *g* in such a list where a more reliable source uses *j* (or *tch* or *ty*, etc.) is not as strong evidence for a sound difference, as the use of *k* can be. If certain recorders show little evidence of being able to distinguish /ny/ and /ng/ from /n/, their record is of minimal help in distinguishing these sounds. If Calley (n.d.) usually uses [j] for the semivowel *y* and [dj] for the obstruent *j*, but occasionally appears to 'slip' and use *y* for the semivowel and *j* for the obstruent, some of his data is not prima-facie evidence for *j* or *y* or lenition of *j*.[6] The transcription of a vowel as *u* from a less reliable source is not clear evidence of the phoneme /u/, whereas if *oo* is written, there is a good chance that the phoneme was /u/.[7] Some of the older lists use *rr* for the rhotic, but also use *r*. After comparing with other sources, a few of the occurrences of single *r* can with reasonable confidence be taken to be an indication of vowel length and quality in such sequences as *ar* ([a:]) or *are* ([ɛ:]). No modern linguist has found any firm evidence of two rhotics in any dialect of Yugambeh-Bundjalung, so the general practice is to assume all other occurrences of *rr* and *r* in older transcriptions represent the same phoneme, and in addition, the strongly trilled articulation of /r/ syllable finally has often given the transcriber reason to write a vowel following the rhotic. But at times I wonder if another reading of the data could suggest a contrast between /r/ (retroflexed continuant) and /rr/ (apical flap/trill) which could have been lost quite recently.

Similarly the generally flapped articulation of the lateral syllable finally before an obstruent, makes it appear there is a vowel intervening in some cases, or the /l/ is heard as /r/ (or by one transcriber as 't', see §3.2.2). In some cases, if the transcriptions of modern-day linguists is any guide, there *is* a vowel intervening. For example, when one linguist writes *walagan* in one dialect list and the same linguist or one equally competent writes *walgan* in

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6   I have used Calley's material with caution. In his later years his ability as a researcher was unfortunately impaired, but his work at this stage, in the late 1950s, seems reliable.

7   But even this generalisation proves false for the currently used pronunciation of some Australian place-names, many almost certainly based on the well-known Pama-Nyungan word for 'shit', for example Goondiwindi (['gandiwindi]), and Goonoo Goonoo (['ganaga'nu])! Therefore I do not put as much weight on an 'oo' transcription, particularly in a syllable presumed to be unstressed, as in 'u' from a good linguist's transcriptions.

another for 'shoulder', I accept both forms as correct (either a vowel has intruded in one dialect or been lost in another).

It should be noted that Yugambeh-Bundjalung speakers I have encountered can outdo Strine-speaking Australians for slurring words and syllables together, a feature not universal in Australian languages—in fact, if most authors are to be believed, I have had unusual experiences in encountering stress-timed languages in Yugambeh-Bundjalung and in non-Pama-Nyungan Alawa. This could have some bearing on the relevance of sound shifts and elisions in Yugambeh-Bundjalung to the consideration of what may have gone on elsewhere in Australia. Especially in a stress-timed language, those who have learnt the language in situations where the language is not in full everyday use, can make a number of 'errors' in learning words and phrases. Possibly our data is more 'tainted' by this feature than we care to believe. Perhaps some investigators did not hear sounds that a careful articulation from a good speaker would have shown to be there. But even if this is so, the data can be used to show what changes can occur in learning and passing on a language. Such changes are not always neat and affecting every possible word, but are still very understandable.

1.3 SUMMARY OF FINDINGS AND RATIONALE

Keeping all these caveats in mind, we have good evidence for a number of phonological changes from dialect to dialect, and sometimes in variant pronunciations from the same area. None affect all possible occurrences of the sound under investigation. Work of recent dialectologists show this as a very normal phenomenon. The cases of complete shifts ('sound changes are without exception') or the pinpointing of the specific mechanism which might block an otherwise near universal sound shift, which has given a solid basis for so much comparative work, are not the only possibilities. Modern-day examples in English include the *sheer/share* merger in New Zealand English, which is gradually 'gobbling up' more and more lexemes, but appears to have originated in a few frequently used words.

It is perhaps pertinent to digress for a moment. Scientific thought of the nineteenth century, which has shaped so much of our attitude to the world, held that in time, precise mathematical rules and careful observation would allow us within a short time to explain all phenomena without exception, and to predict what would happen to any system. Physical laws were immutable, as were linguistic laws. Linguists felt an obligation to show how scientific their discipline was, and strove for the same precision and exhaustiveness. But the *physicists* know better now. It is *not* possible to predict the movement of any fundamental particle: an electron, or a photon can turn up anywhere—even moving backwards in time. What we observe in large systems is the statistical average of movements and interactions of vast numbers of fundamental particles. What is produced in language change over a long time is a statistical average of many changes, including those summarised in the witty linguistic law 'every word had its own history'. Given time certain changes may permeate a whole language or dialect, but at any particular point in time we *may* find changes that have only affected the most common words, or a subset of possible candidates for change, with no perceived phonological or morphological reason why just those words have been affected. Some such changes may in fact never affect all possible candidates for the change, if the process stops for any reason. Many linguists are of course aware of this—or become aware when their reconstructed protolanguage has a plethora of sound correspondences which would suggest far more protophonemes than are feasible for a real language.

1.4 DIALECTS DISTINGUISHED IN THIS PAPER

The list of dialects below are arranged roughly from north to south from Y to BJ and again after the presumed somewhat central C, again north to south from GN to CP.

Y: Yugambeh/Yugumbir/Manandjahli/Wangerriburra as spoken in the Beaudesert area, recorded in Allen and Lane (1913), Watson (1943), Cunningham (1969) and Holmer (1983) (if need be distinguished as Yal, Yw, Ym and Ynh respectively: Yw is heavily derivative from Yal; occasionally other sources are used);

Ywh: Yugambeh as recorded by Hanlon (1935), representing the dialect of Jenny Graham, an ancestor of a number of members of the Kombumerri Aboriginal Corporation, a good quality source;

Ng: Nerang-Gold Coast area (possibly Ngarahgwal) as recorded in various lists in Curr (1887) and *Science of Man*, not of the highest quality;

NC: Nerang Creek, from Curr (1887) collected by F. Fowler;

NG: Ngarahgwal (presumably), Coomera listing in *Science of Man* (1904);

AT: Albert and Tweed, in various lists in Curr (1887), possibly overlapping with one of the above, spellings awful in most lists, but useful;

GC: Gold Coast, a short poorly spelt list from the Tallebudgera Police (approximately 1900–1901);

TD: from the Tweed area, possibly the dialect Livingstone (1892) calls Ngahnduwal, reasonably good source compiled by Joshua Bray, who apparently spoke the language;

TW: another list from the Tweed area compiled by Joshua Bray, and published in *Science of Man* (1904);

M: Minyangbal as recorded by Livingstone (1892) and in a few words in a recent Fingal Head desktop publication;

NY: the dialect attested from Douglas Cook of Cabbage Tree Island, possibly Nyangbal, from my own notes;

MUR: a vocabulary list recorded at Murwillumbah, the dialect probably being Minyangbal, Ngahnduwal or Galibal;

WI: Wiyabal and Wuyebal from Lismore and Coraki, recorded in Cunningham (n.d.) and Holmer (1971) (used here to cover both Wiyabal of Lismore and Wuyebal (BJ) from Coraki, unless BJ specifically noted);

BJ: Wuyebal from Coraki, when not subsumed under WI above;

C: the dialect recorded by Smythe (c. 1946), which Crowley suggests is from the Casino area (however, there is some evidence that Smythe may have had informants from more than one dialect);

GN: the dialect Gidhabal speakers referred to as Geynyan, and was called Kitapul by its compiler, J. Mathew (1926), whose transcriptions are quite good;

UC: an Upper Clarence dialect, possibly Gidhabal or Geynyan, recorded by J.P. Thomas (1900), whose transcriptions, except in distinguishing the nasals, are very systematic;

GD: Gidhabal (or Gidabal), as recorded by the Geytenbeeks (1971) at Woodenbong; .

WU: the dialect, possibly Wujehbal or Dinggabal (possibly the same dialect), from Calley's unpublished notes (c. 1950s) from speakers at Woodenbong;

WU2:   Another listing, recorded at Woodenbong, but of a dialect more closely resembling Calley's than the Geytenbeeks' Gidhabal;

GX: A listing from 'Woodenbury' (sic), which appears to be close to Gidhabal from Woodenbong;

WA: Wahlubal, or Bandjalang, of the Tabulam area, as recorded by Crowley (1978);

WE: Wehlubal or Wiribi, the purported dialect of Baryulgil, recorded by Crowley (1978) and Geytenbeek (n.d.) from Ken Gordon (who, according to recent information from Bundjalung people, is from a family that moved to Baryulgil from elsewhere a generation or two back);

B: Birihn, the Rappville dialect, recorded by Crowley (1978);

CP: Copmanhurst, on the fringe of the Yugambeh-Bundjalung area, showing about 50% clearly Yugambeh-Bundjalung features and 50% quite 'foreign' features, and only attested in an old and not very good list.

When referring in summary to a change in a form through the different dialects, the generalisation *north to south* will indicate an ordering of the dialects similar to this list. A glance at Map 1 will show this is a rather zig-zag east to west path.

Crowley, on the basis of different common words for 'Aboriginal man', 'Aboriginal woman', 'boy', 'eye', 'hand' and 'sun', as well as a few items noted below, groups dialects into three small Gold Coast areas (Pimpama, quite marginal, Southport, and Burleigh Heads, lists labelled AT here), the Tweed-Albert area (including Y, M, TD, TW, GC), Lower Richmond (WI, C, NY), Condamine-Upper Clarence (GN, UC, GD, and probably WU, WU2 and GX), Middle Clarence (WA, WE, B), and Copmanhurst (CP). (See Map 2.) For those who might refer to Crowley (1978) or to Sharpe (1995) and Sharpe et al. (1988, 1996), these areas, together with the dialect names listed in those publications, are listed below.

Tweed-Albert: Ngarahgwal or Ngarahngwal, Yugambeh, Minyangbal, Ngahnduwal;

Lower Richmond: Nyangbal, Wiyabal, Coraki Bandjalang, Galibal;

Condamine-Upper Clarence: Geynyan, Gidhabal (and probably Wujehbal and Dinggabal) and 'Upper Clarence' (Thomas);

Middle Clarence: Wahlubal or Bandjalang from Tabulam, Baryulgil (Wehlubal), Birihn; Copmanhurst
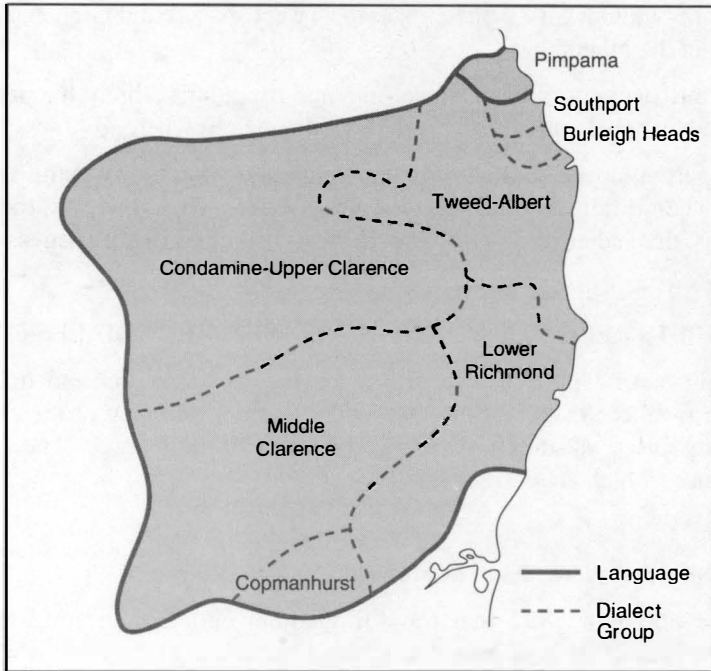
MAP 2: BUNDJALUNG DIALECT GROUPINGS
(Reprinted, with permission, from Crowley (1978:143))

The definitive common words and their distribution, as described by Crowley (and reproduced in Sharpe et al. (1988, 1996)) are:

'man'   *mibiny* [8] in the Tweed-Albert area
           baygal elsewhere

'woman'   *jalgany* in the Tweed-Albert area
           dubay elsewhere

'boy'   *jabuh* in the Tweed-Albert and Condamine-Upper Clarence areas
           janagan/janaŋgan elsewhere

'eye'   *miyi/mih* in the Tweed-Albert, Lower Richmond and Condamine-Upper Clarence areas
           jiyaw elsewhere

'hand'   *daŋgan* in the Tweed-Albert and Condamine-Upper Clarence areas
           jambay in UC and elsewhere

'sun'   *nyaŋga* in Minyangbal, Ngahnduwal and one Tweed-Albert list
           yalgan elsewhere and in two Tweed-Albert lists

Crowley also uses two suffixes:

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8   In the *Dictionary of Western Bundjalung*, a syllable final /ny/ is written *yn*.

-gubih 'thing' suffix, used in all areas but the Middle Clarence,

-jam/-dham 'without', used on verbs in the Tweed-Albert and Gidhabal areas, but only on nouns in the others.

He also takes into account the /eh/ vowel in some irregular verbs in the past indefinite in Yugambeh and Nyangbal, but not (in his data) occurring elsewhere.

Watson in particular uses some diacritics on certain vowels. An acute accent indicates stress usually when it falls on other than the first syllable. By Crowley's, the Geytenbeeks' and my analysis, this indicates a long vowel in the syllable perceived as stressed.

2. VOWEL SHIFTS RELIABLY NOTED IN THE DIFFERENT DIALECTS

Little weight can be placed on a difference between, say, /a/ and /u/ in unstressed syllables, even from the most reliable transcribers, or between any of the short unstressed vowels in many cases, although generally the transcriptions agree. The sections below discuss differences which are easily heard.

2.1 UPWARD SHIFT OF VOWELS IN SOME WORDS

Livingstone noted in 1892 that the Minyangbal called their northern neighbours Ngahnduwal, because they said *ŋahn* (nominative *ŋahndu* ergative) for 'who', whereas the Minyangbal said *ŋehn* (and *ŋehndu*), and were therefore called Ngehnduwal by the Ngahnduwal. *Ŋehn* is also the form in GD, but the vowel is /ih/ in WA, WU and WE. We have this shift in vowel quality occurring in the following words:

'who' *ŋahn* in Ngahnduwal and presumably north (we lack the form in Y)
    ŋehn in M, WI (prob.),[9] GD
    ŋihn in WA, WU, with *yihn* in WE

'you (sg. erg.)'[10] *wahlu* in Y, M, WI, GD, WA
    wahlu/wehlu in C
    wehlu in WE
    wihlu in C

'you (sg. acc.)' *wahnyi* Y, *wahnyi* WI, GD, *wihnyi* WA, WE

Paralleling the above shift is a change in the vowel in three of the irregular verbs:

ban- 'fall' in GD, Y, NY, and WI, *ban-/bin-* in C, *bin-* in WA

yahn- 'sit' in dialects north of WA,[11] which has *yehn-*

-an- in Y, *wan-/war-* 'be, become' in GD, and *wen-/wer-* in WA (reducing to *-un-/-ən-*)

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9   I am relying on memory here, without my own notes. Holmer records *ŋihn*, but he does not distinguish /eh/ and /ih/ in his transcriptions.
10   Also used for nominative in WI, WE, GD and Y.
11   See also §3.5.2.

2.2 DOWNWARD SHIFT OF VOWELS IN CERTAIN WORDS AND AFFIXES

Interestingly, there is a reverse direction shift in a variable word-final vowel in the most common demonstratives, in an interrogative locative, and in the third person singular masculine pronoun, all of which have a variable quality word-final vowel:

gali/gale/gala 'this, close to speaker, visible'

mali/male/mala 'that, close to hearer, visible'

gili/gile/gila 'that, far from speakers, visible'

yili/yile/yila 'where'

nyuli/nyule/nyula 'he (nom.)'

(and a few other two syllable words from closed sets)

Fluctuation between word-final /i/ and /e/ (rarely /a/) is found in the records of the northern dialects (Y, M, Galibal), and between /e/ and /a/ (never /i/) in GD, WA, WE, etc. When suffixed by case or other suffixes, the vowel is unambiguously /a/ (e.g. *nyulayu* 'he (erg.)' all, *nyulagan* 'she' Y, GD). Another shift occurring in the north with the more close front vowel is discussed in the next section.

Short vowel /e/ is relatively restricted in occurrence, and in some dialects it is clear that all other occurrences have arisen from the shortening of /eh/.[12] Elsewhere /e/, when regarded by the analyst as a phoneme, is only found where /a/ has been fronted following a lamino-palatal (/j/ or /y/).[13]

2.3 VOWEL SHIFTS IN IRREGULAR VERB AFFIXES

According to Crowley (1978), Yugambeh-Bundjalung gives evidence of having had a stock of about fourteen irregular verbs, all of which appear to have ended in a consonant (unlike other verbs), and to have taken various augments to give a vowel-final stem for inflection. (For this reason, I have quoted such verbs in their putative consonant final stem forms.) Among the various patterns in these verbs the most common is the addition of *-ga.* The augment *-ba* is used on *yan-* 'go' preceding *-li* antipassive/continuous; *-ga* is used elsewhere. For the tense called 'past indefinite' in Crowley, the Geytenbeeks and Cunningham, such verbs end in *-gahn.* However, in Yugambeh, Nyangbal and Wiyabal some of these verbs end in *-gehn,* and one (where the stress patterns of the language force a vowel shortening) ends in *-gen.* These verbs are:

yan- 'go': *yangehn* in Y, NY, WI, *yangahn* in WA, GD, BJ, C

ban-/-bin- 'fall': *bangehn* in Y, NY, WI *bangahn* in GD, *bingahn* in WA

-anga-/wan-/wen- 'be, become': *-angehn* in Y, NY, WI, *-wangahn* in GD, *-wengahn* in WA

yahn-/yehn 'sit': *yahngen* in Y, NY, WI, *yahngan* in GD, *yehngan* in WA

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[12] See footnote 5.

[13] In some cases recent researchers have disagreed about whether to transcribe a vowel /ih/ or /eh/ in some verb suffixes. Marjorie Oakes, who collected much data over the years from Lismore people, disagreed with my transcription, and she may well have been right.

The limited evidence also suggests these patterns applied in the future tense which would end in -*gehny* where it occurred (this form appeared to have been absent from Y, or to have had an irrealis 'lest' function), and for the past in M, and for at least some forms in WI.

In the verbs, the lengthening of a final /i/ in a verb stem or in the antipassive/continuous suffix -*li* results in /eh/, not /ih/; however the lengthening of the nominaliser suffix -*li* results in the vowel /ih/.

> *nama*- 'hold' + -*li* antipassive + -:*la* => *namalehla* 'was holding'

> *gawari*- 'run' + -: imperative => *gawareh* 'run!'

> *gawari*- 'run' + :*n* past indefinite => *gawarehn* 'ran'

> but *namalihgu* 'for holding' (all), *jiyaw-nyahligu* 'spectacles' (lit. 'eye for seeing') WA

The underlying form of -*gi* for the augment in the eastern dialects of Y, NY, M and WI, contrasting with -*ga* in the other dialects is also substantiated by the form *bangilur* (<bangeloro>)[14] in M.

2.4 /a/ TO /u/ SHIFT IN A LIMITED SET OF WORDS

The dialect title Yugambeh/Yugumbir attests the significance of a shift, presumably from /a/ to /u/ and not the reverse (Alpher (pers. comm.) and O'Grady (pers. comm.), based on other Pama-Nyungan forms) in marking dialect differences. Three common words show this shift (to date I have only found one other candidate):

> *yagam* 'no, not' GD, WA, WU2, *yugam* WE, WU, *yugam, yugum* Y, *yugum* GN,[15] [jogom] (probably *yugum* WI, C)[16]

> *waŋah* 'your (sg.)' WI, WA, *waŋga(h)* M, *wanah* GD, *wuŋah* Y (*wahluŋah* also attested in WI)

> *naŋany* 'food' in GD, WA, C, WI,[17] *nuŋany* Y, WU; cf. *naŋany-gali* 'person (man) fond of food', *naŋahny* 'good hunter', *nuŋuhny* 'feeling love' WA, *nuŋam-gali* 'one who is constantly chewing' GD

> *dalaŋ* 'afraid' C (and *jarany* WI), *duluŋ* GD, *du(h)yi(h)ny* Y (cf. *guyihr* 'afraid' C)

Not as certain, but possibly in this category is

> <koongil> 'arms' Ywh, *gaŋgil* 'upper arm' Ym, 'arm' WA, GD, GN, GX (<kanggil> GN, <congle> GX, <guhngil> Yal, <kuŋgal> M, <kungle> TW, <gungil> Yw, <kuŋgal> M)

Hanlon's <koongil> very probably attests *guŋgil*, and Allen and Lane's spelling makes it quite likely. Most other northerly sources could be either. A transcription like GX <congle>,

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14   Words enclosed in <...> are in original spelling given by sources not compiled by modern linguists, and where an attempt at phonemicisation would hide or over-interpret the evidence of the spelling. This paper does not discuss this verb suffix, which is only attested in Ynh, M and WI.

15   One other list, from the Woodenbong area has <usumba>, attesting the sibilant allophone of /j/, rather than /g/, see /j/ to /g/ alternation below, as well as suggesting /u/ in the first syllable.

16   Smythe uses a broad phonetic transcription. Based on his listing, an /a/ would have been written a, not o. However, he also records [jagam].

17   Holmer records *naŋgany*, but I know I have heard *naŋany* in BJ.

with 'o' after c/k, usually matches with the backed allophone of /a/ occurring contiguous to a velar consonant.

The shift to /u/ (if indeed this is the direction of the shift) occurs in the north.

2.5 SHIFTS IN PRONOUNS

The nominative form of the second person singular pronoun, where not subsumed under the ergative form, as well as the benefactive stem, show vowel changes as well as lenition of /j/ (see §3.1). In the examples here and in §3.1 (and elsewhere where the phonetic form of medial /j/ is significant for the point under consideration), *j* indicates the lamino-palatal stop or affricate, *dh* the interdental fricative, and <z> or *z* a sibilant lamino-palatal fricative.

M: *weh* you nom., cf. *wiya(h)* (<wia>) benefactive (stem *wi(y)-*)

C: [wie:/wudje:]

WI: *wiye/wiya* (stem *wi(y)-*)

BJ: *wu(h)ye/wu(h)ya* (stem *wu(h)(y)-*)

GD: *wudhah* benefactive (stem *wudh-*)

WA: *wudhe/wudha/wuje/wuja*

WU: *wujeh*

Except for Smythe's Casino list, which shows different forms, the lenition of the medial consonant increases towards the east and north, and the initial vowel is pulled forward.

2.6 VOWEL ASSIMILATIONS AND REDUCTIONS

A number of assimilations and reductions occur in conjunction with the attested lenition of /j/ or /r/ to /y/ between vowels. These will be given in other sections. The quality of unstressed vowels is not always as certainly ascribed as for those in stressed syllables, and it is perhaps immaterial whether a phonetic mid front vowel after a lamino-palatal is analysed as phonemically /a/ or /e/, but as well as reduction of /aya/ or /eya/ to /eh/, the following assimilation was found.

ŋ*ayal* 'ground, dirt' WA (replacing *jagun,* which occurs in all other dialects), ŋ*ayil* 'clay' WE, GD (and cf. ŋ*ayir* 'cliff' WA, GD, WU), <ngil> GN, ŋ*irbin/nyirbin* 'gorge wall, very steep slope' GD (cf. ŋ*ihr,* etc. 'forehead')

2.7 OTHER VOWEL SHIFTS

nimbihl 'behind' WE, *nimbihŋgi-* 'return' WE, *numbihl* 'after, behind' GD, C, WI, *numbuh-* 'return' GD, Ym, Ywh, *numbuŋgi-* 'return' C

widhaŋ 'grass' WU, GN, *wudhaŋ* WA, WE, GD, WU2, GX, C, *wihdhaŋ/yihdhaŋ* Y, AT, TD, NC

<kirri> 'pademelon' Yw, <kurree> Ywh

gayi- 'enter, go in' GD, Ywh, M, *gayeh*- WA, *giya*- WU, TD (<kia>)[18]

yuna- 'lie down' WA, WE, WU, M, *yuna-/yina*- C, WI, *yina*- GD, Ym, Yal, *nyina*-Yw

wiyun 'clever man' WA, *wuyan* GD, *wuyun* WI, *wiyuŋ* ([wi:uŋ]) C

and the doublet attested in Gidhabal and Yugambeh, but with wider semantic range in other dialects, covering 'a covering, rag', etc.:

ŋumbiny 'house' WE, GD, GN, Ym, M, *ŋumbin(y)* Yal, Yw, Ywh, *ŋumban* 'blanket' GD, Ym

Given the uncertainty of some of the sources as well as what is known about the phonetic quality of vowels contiguous to /y/ in 'enter, go in', the evidence for the interchanging of /ayi/ and /iya/ is not particularly convincing.

3.   CHANGES IN CONSONANTS

Consonant shifts in the Yugambeh-Bundjalung dialects include examples of lenition and of alternation between consonants with the same point of articulation, of alternation between alveolar and lamino-palatal consonants, and a limited number of alternations between interdental/laminopalatal and velar. There are also some shifts between nasals of different points of articulation. Some of these are common assimilations (such as /n/ assimilating to /ŋ/ before /g/), but a number of putative examples of this are suspected of being transcription inadequacies or ambiguities. Certain points should be noted, however:

1.   In the real world of speech, such assimilations are far more common in connected speech than in citation forms of words, and almost all our data in this language comes from short, often not fluent, dictated sentences;

2.   In the real world of speech, certainly in large speech communities, some speakers, in the course of normal language acquisition, acquire an assimilated form where other speakers do not;[19]

3.   When a language has been going out of active use, many of those who have supplied data have not, or have not for decades, been in a living speech community using the language, and thus may never have had variant pronunciations corrected by the purists of their community (and the Yugambeh-Bundjalung community, in my experience, had its fair share of them!).

3.1   LENITION OF /j/

Lenition of /j/ is quite clearly a factor affecting the Yugambeh-Bundjalung dialects. The interdental fricative realisation of the word-medial archiphoneme in Gidhabal, and the sibilant allophone in northern dialects are lenitions of the lamino-palatal stop. In addition, as one

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[18]   <kia> could stand for *gaya-*, depending on whether the compiler was using 'i' to represent 'short i' or 'long i' in this case.

[19]   O'Grady commented that usually about half his students used a velar nasal in saying *Vancouver*, while the others used the apical. I am also aware that some assimilations and other pronunciation variants are common in some social groups and rare in others among Australian English speakers.

moves across the area from south-west to north-east, the shift is from *j* through *dh* and *zh* to /y/ (IPA [j]) in a variety of words.

Examples of lenition of the lamino-palatal stop/obstruent are found in the first person singular ergative pronoun, and in the second person singular nominative pronoun in those dialects that maintain the old nominative form. Yugambeh, Gidhabal and Wehlubal appear to have lost the nominative form; in Y and GD *wahlu* is used, and in WE *wehlu*. Examples of this lenition, the direction of which few historical linguists would contest as proceeding from the stop towards the semivowel (and sometimes to complete loss), are:

> first person singular ergative: *ŋadhu* WA, WE; *ŋayu* Y, WI; *ŋaw* (nom. and erg.) Ym[20]

> second person singular nominative: *wujeh* (always a lamino-palatal stop or affricate) WU; *wuje/wudhe/wuja/wudha* (more commonly the interdental fricative) WA, WE; *wuhye* BJ;[21] *wiye/wiya* WI; and *weh* M. Gidhabal preserves the root *wudh-* in the benefactive *wudhah*.

There are also a number of words which show this lenition, and in some cases the consonant completely disappears, leaving a long vowel.

> *baji-* 'hit, punch' WI, BJ, GN, C, *badhi-/baji-* WA, WE, *badhi-* GD, *bayi-* Y

> *bijaŋ* 'father' WI, Y, [bidaŋ] C,[22] *biyaŋ* Y, M (also *biyul* in one list for Y), *biyaŋ* 'grandfather' WI[23]

> *wajuŋ* 'mother' (<wydong>) GX, <wadhun> GN, *wajuŋ/wadhuŋ* WA, *wadhuŋ* 'mother' GD, <wajung/wadhung> Yal, Yw, *wajuŋ* M, <wardon>, <waudhuŋ>, <weathung> AT (three sources), [wadhuŋ/wadjuŋ/wi:jaŋ/weijun] 'mother-in-law' C, *wayaŋ* (<wyung>) NC (cf. *wiyaŋ* 'wife's brother' WU, *wuyaŋ* WA, GD)

> *waji-* 'speak, talk, say', WU, WE, *wayi-* WI, *wihya-* C, *wayma-* Y, GD (probably from *wayi- + -ma*)

> *gidha-/gudha-* 'say, tell' GD, *giya-* Y, M, TD, GD, *giyi-* Ym[24]

> *gahja-* 'chase' C, *gaja-/gadha-* 'chase, hunt' WA, *gadha-* GD, *gaya-/gahya-* WI, *gaya-* 'chase, hunt, drive' Yal, Yw, *gayi-* Y, M

> *mujum* 'one's child' WU, *mujum/mudhum* WA, *mudhum* GD, *mudhum/muyum* C, *muyum* Y, M, TD, WI[25]

Unlike the above examples, the next example does not show an unambiguous lenition moving from north to south.

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20 Joe Culham frequently used *ŋaw* rather than *ŋayu/ŋadhu*. It may have been idiolectal, or a further reduction of *ŋayu*.

21 Note that the final vowel of this pronoun, except when it is long, can vary just as the final vowel of *nyula/nyule/nyuli*, etc. does.

22 /d/ does not occur intervocalically, so Smythe is probably in error here; the form is possibly [bidhaŋ] or [bidjaŋ].

23 Possibly in error for 'father'. Note that the homonym *bidhaŋ* 'little' has never been attested as *biyaŋ. It only shows the allophonic shifts in /dh/ common to each dialect.

24 From Joe Culham; all other sources of words for this and Minyangbal attest *giya-*.

25 We also have <margum>, probably *mahgam* 'son', <margumgun> 'daughter' GX, which suggests that *mujum* might have had an alternate *mugum/magam*, paralleling the *jahjam/jahdham/jahgam* alternation in WI (also, apparently, with the u/a vowel shift).

>*yaljal* 'sick' Yal, Yw, C, *yalyal* Ym, M, WI, Ywh, *yadhal* GD

Compare also the following doublets:

>*jaŋ* 'bad', *yaŋma-* 'abuse, swear (at)' WA, GD, WI

>*wudhumbiny* 'groin' GD, *wuyi* 'pubic hair' GD

>*jarahny* 'frog' WA, GD (and other dialects), *yirihny* 'small green tree frog' GD

>*gadhi* 'here, exact area in sight' WA, GD, *gayi* 'here, general area, not in sight, present time' GD (and other demonstratives/locatives)

Compare also the following, where we could be dealing with two words *warjam* and *wajam* in earlier forms of the language, or a doublet formation from *warjam* with elision of /r/, compounded with (in the case of Ym) misstating (through lack of use) the meaning of the word. However, the *wardham* has been called 'the fearful whale' by a Gidhabal speaker, sharks and rays are closely related zoologically (although it is not known how they were classified in coastal dialects), and rays and flying squirrels resemble each other in flatness and broadness.

>*warjam/wardham* 'sea monster' WA, WE, *wardham* GD, *wadham* 'sugar glider, scorpion' GD, *wajam* 'shark' Ym, *waryam* (<warriom>) 'shark' Ng, *wayam* 'stingray, large flying squirrel' Yw, <wemm> Ywh

and:

>*budhay* 'swift' GD, *bujay-buyay* M, *budhay-buyay* 'swallow' (bird) GD

and the following showing other changes:

>*wudhurga-* 'steal' WI, *wurga-* (<wurga>) 'steal' Yal, Yw, <woora> Ywh, TD

and, less securely established:

>*jaraŋ* 'leg, thigh' (most, *yaraŋ* (<yer-ung>) WU2 (a less reliable source)

>*junbar/yunbar* 'fly' WU (best source), *junbar* 'fly' (all others)

3.2 LOSS OF RHOTICS AND LATERAL

It is an easy thing to do, in the case of old and poorly spelt lists in an area where we have good quality recent recordings and transcriptions, to interpret all 'lapses' from good matchings with the recent data as due to the lack of skills of the older recorders, in both phonetics and spelling. However, there are a number of consistencies in some of the lists to suggest these recorders may have been responding to some genuine differences in form and pronunciation of some words, which may not have been evident to later researchers. We are talking, in some cases, of a time depth of about a century, still not a lot, but enough (from what we know of English and other world languages) for some detectable changes in pronunciation to occur. The discussion below (in §3.2.1–3.2.3) relies on a careful consideration of some of the older lists, which leads one to consider the strong possibility that some rhotics have been lost in a number of words, with, in many cases, a lengthening of the vowel, either word finally, or word medially where the purported /r/ was between identical vowels (/*ara/ and /*uru/, and possibly also /*ari/, but not /*iri/).

3.2.1 EVIDENCE OF CONSISTENCY IN AN UPPER CLARENCE LIST

Among the old lists of vocabulary we have one listed as Upper Clarence and collected by J.P. Thomas (1900). A careful checking of this list shows remarkable consistency of orthography when the words are checked against the modern transcriptions (a large proportion of his words also occur in recent lists). He did not distinguish velar nasals, or alveopalatal nasals, consistently from the alveolar nasal, but seems fairly accurate in other areas. His consistency and system encourage confidence in his transcriptions of four key words where in three of them we know there was a final lateral.

Examples of Thomas's transcriptions justifying confidence in his consistency of symbolisation (for the points under consideration, comparing his transcriptions with the known phonemic form of the word whose meaning he gives) are:

<talagerah> equates with *dalagar* 'mud'

<diggerrie> equates with *digir* 'bitter'

<toolooberrie> equates with *dulubir* 'dove'

<cobbirie> equates with *gabir* 'hungry'

<dunerah> equates with *danir* 'ribs'

<yaborah> equates with *yabur* 'one'

<bi-ar-rah> equates with *bayahr* 'centipede'

The interpretation of his word <cumiver> (*gamay-beh* 'big indeed') for 'thumb, big toe' as ending in /r/ is less certain, as his most consistent pattern is to write a vowel following the /r/. Some words which are harder to be sure of are:

<bagabar> for *bagaba* 'shoulder blade'

<mara> for *mahr* 'black duck'

<charo, jara> for *jaru* 'stone'

It is consistent to equate many of his <Vr> sequences within a syllable with a vowel alone, possibly long, when they are within a syllable:

<corndoon> 'hair' (*guhndun*)

<chargum> 'child' (*jahgum*)

<borndun> 'lungs'

<mergam(gun)> 'son (daughter)' (probably *mahgam*, cf. *mudhum/muyum* and <margum> GX)

3.2.2 LOSS OF FINAL /r/ AND /l/

I have long suspected that there may have been a loss of a final /r/ in Yugambeh-Bundjalung words which in recent lists end in /e/ or /eh/. My suspicions were first aroused on the basis of Watson's naming of the dialect as *yugumbir*. My informant, Joe Culham, referred to it as *yugambeh*. Certainly a contributing factor to Joe Culham's pronunciation was his relative toothlessness, which made production of the rhotic a bit vague; however, on the basis of my work and his more deliberate pronunciations, I became fairly confident

whether there was a rhotic or not. Nevertheless, in a number of the older lists, there are spellings that would suggest the presence of a rhotic which more recent investigators did not find. I have even considered whether an earlier version of the language had two rhotics (the most common pattern in most Aboriginal languages), and perhaps the retroflexed (and unflapped) rhotic has either dropped out or merged with the flapped rhotic, in part (at least) determined by its position.

In J.P. Thomas's list, there are four words he spells with final <t>. In three cases, this final <t> corresponds with a final /l/ in other lists. In the Yugambeh-Bundjalung dialects, in word- or syllable-final position, /r/ is trilled, /l/ often flapped, and nasals are often prestopped. From J.P. Thomas's transcriptions, one can surmise this was particularly the case in the data he recorded. He also records a stop finally in many words we know to have concluded in a nasal—which indicates the flap onset of the nasal was particularly marked. The four words he has written with final <t> are:

<bigot> 'Aboriginal man' (*baygal*)

<nogot> 'cheeks' (*nugal*)

<niyett> 'earth' (*nzayil*)

<choolget> 'worms' (cf. *julgeh, julga* in other lists)

This is strong evidence that a final consonant, most likely /l/ from his list (although otherwise I would surmise /r/), was present in **julgil/julgir* 'worm'. My surmise is that a number of other words attested as ending in /eh/ or /e/ in different dialects are later forms of words ending in /*ir/, and the rhotic in question may possibly, like those discussed in §3.2.3, have been a retroflexed 'r' rather than the flapped/trilled /r/ (rr).

In my 1969 monograph on Yugambeh, I followed Watson in naming the language Yugumbir, and given the old age toothlessness of Culham, with whom I worked, rhotics were a slight problem. In the long run I decided there was no /r/, and the second vowel was better represented /a/. The only occurrence of <yugumbir> therefore is in Watson's name for the language, but why did he spell it that way? The *-be(h)* suffix is well attested in Wahlubal and Gidhabal, where it may function as a mild intensifier (GD) or is glossed 'only' (WA). Perhaps this vowel, long in some dialects, has evolved from a /Vr/ sequence. (Holmer hints that *-beh* could be a 'shortened form' for *-bari* 'having'.)

The evidence, therefore, though limited, strongly hints at a loss of some final occurrences of /r/ and perhaps /l/, with consequent vowel lengthening in at least some dialects.

3.2.3 LOSS OF MEDIAL /R/ BETWEEN (IDENTICAL) VOWELS

A few words show a medial /r/, usually in the context /ara/, being replaced by /y/, or the VCV changing to /eh/; in some there is also a change from /j/ to /d/ elsewhere in the word:

jarul 'stone' C, *jaru* WA, WE, GD, WI, <garro> CP, <tarrau/darraw> Yal, Yw, <day-yo, dao> AT, *dehyu* Y, <yeron> AT[26] (and cf. *dawgay* 'rock' WA)

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26   The final 'n' of <yeron> could be a misreading of 'u'. A number of words in old lists appear to have been misread, as 'n' and 'u' were very similar in older styles of handwriting. The source for this form is not one of the most reliable, but it does at least suggest that the initial consonant was lenis enough to have been *heard* as 'y'.

<gorumgun(n) 'star' Yal, Yw, <kuroomgun> AT, *guyuhm(gan)* WA, WE, GD, WU, GX, Ym, Ywh, TD, *guyumgan* C (and <wungyurgum> GN)

waran 'root of tree' Yal, *warahn* 'pelvis' Yal, Yw, *wayan* 'hip' WA, GD, [weijaŋdjar] C, *wayan* 'hips' M, <wahn> Ywh, <wen> TD, *wayanyjar* 'root' WA, *wayangir* 'root of tree or plant' GD

baraŋ (<barang>) 'today, now' Yal, <burang, byein> AT (different sources), *bayahny* C, WI, <baian> Yw, M, <baiad> AT,[27] <barn, baan> NC, TD, *bahny* Ym

girehr/girihr 'shy' GD, *gayehr* 'ashamed, embarrassed, shy' WA, [geije:r] WU

<borrol> 'mountain' Yal (stress on second syllable); <bor'rol, bor'rōl> (stress marked on first syllable) 'mountain range or peak', bū-ūl 'hill')Yw; *buyuhl* Ym; <bool, boo-ool, boiool> Ywh, <poiol> M, <biola> TD, <beoll> AT (one list)

buruhlgan (<brolgun>) 'stone plover' Yw, <buruagun> Y(another list), *buyuhlgan* Ym (apparently derived from 'mountain')

<guran/kuran> 'possum' Yal, *guwihny* (*guyihny*) Ym, *guyahn(y)* Ywh, NC, AT, TD, *guwahn(y)* (<cooan, quaan>) NG

Compare also, although not too much weight can be placed on the sources for WU2 and GX:

<gerung> (presumed *jeraŋ*) 'mouth' WU2, <fedung> GX, *jayaŋ, jehŋ, jeyaŋ* 'mouth, beak, lip' Ym, <jeng> Yal, *jehny* ([dje:nj] C, <diang> Yw, <jang> Ywh, <jerng, chaung> TD, <jairn> MUR, <chang>, <jairn> AT, <djayang> M, *jahŋ* WI (note WI does not distinguish all vowels)

From one record only, there may have been an /r/ in the word for 'possum', which has disappeared, leaving a form all transcribers—including myself—have had difficulty with; was it **guwihny* or was it**guyahny*, or perhaps both are reduced from **guwiyahny* or **guriyahny*, etc. In addition it seems there are close doublets in some dialects which are used for different possums.

guyahny 'possum' WA, GD; also 'rabbit' WA, often used generically for any species of possum, also 'Mt Possum' GD (cf. *ganam* 'black possum' GD)

<guran> 'opossum' Yal, *guwihny/guyahny* 'possum, big forest possum': *guyihny* Ym, <gweeahn> Ywh, quini AT, <quarn> TD, <gueyan> NC, <quaan> Ng, <Kunnumboon> 'place of possums' Ywh

guwin 'ringtail possum' Ym, <wing> Yw

The following hints at elision of /r/ with consequent vowel length:

ŋurun 'hot' WI, 'warm' WA, 'sky' GN, *ŋuhn* 'hot' (almost all)

In my Yugambeh data I have one example of two contiguous long vowels in *ŋuhngahla* 'it's hot'. It is, as far as I know, the only example in any modern linguist's data of two contiguous long vowels, which suggests the elision of /r/ is rather recent in the informant's language history, leaving an anomalous form.

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27 The transcriber has reacted to the pre-stopped nasal that often occurs in this position—after a long vowel—and is very common in the pronunciation of 'today, now'.

If indeed there has been a loss of intervocalic /r/ in a number of words, the limited data also suggests a couple of mechanisms which may have blocked such loss. One is near doublets with unrelated meanings which could result in homonyms. The other is the presence of a lamino-palatal consonant in the word. (All words which may be involved are of the form /C$_1$VrVC$_2$/, where the vowels are both /a/, both /u/ or occasionally /a/ followed by /i/, and the initial and final consonants are different.)

3.3 LENITION OR ELISION OF /l/

It was not always easy with Culham, who I worked with in Yugambeh, to distinguish /l/ and /r/, especially given his articulation problems with loss of teeth. The problem was rather widely encountered in 'salvage work' as it was called—the recording of languages no longer in everyday use. But generally over a short time, I and other linguists made fairly confident decisions on which was which. If we were always and in every respect correct, then there *was* some variation between /l/ and /r/ in presumed cognate words in different dialects and languages. In any case, /l/ appeared also to undergo some of the shifts /r/ undergoes.

3.3.1 LENITION OF /l/ TO /y/

Note that in the first example below, there also appears to be a vowel shift in some dialects, and an /r/ attestation, and a shift from /d/ to /j/:

   duluŋ 'afraid' GD, *dalaŋ* C, *du(h)yi(h)ny* Y (and *jarany* WI)

   bulbul 'Angophera' Ym, <bulbo, būai-iūū> Yal, Yw, *bu(h)y-bu(h)y* (<boiee-boiee>) Ywh, <pubo> Ng

   <koolgum, kooeegum> 'sand' Ywh, <kooigum> 'sandhill' TD, *guygum* 'sand' C

There is lenition and vowel change in the next example:

   wula- 'give' Y, TD, MUR, C, WI, *wiya-* M

3.3.2 LENITION OF /l/ TO /w/

This change appears to be less common. The following doublet is a rare example:

   galga- 'chop, cut' (all dialects), *gawga-* 'cut, slice, saw' GD

3.4 LENITION OF VELARS

Given the very lenis, oftentimes fricative articulation of /g/, it would be surprising not to find /g/ lenited to /w/. Other lenitions also appear to occur infrequently. None of them show any clear trend from north to south or east to west among the dialects, in part because the evidence is so scanty.

3.4.1 LENITION OF /g/ (TO /w/)

Three, perhaps more, words show lenition word initially, two in my own work with one speaker, who varied freely between both forms:

> *gurba-/wurba-* 'hide' Ym, *wuhrba-/ wulba-* C
>
> *guginy/wuginy* 'quick' Ym, *wuginy* Yal, Yw, Ywh
>
> <kurralboo, woolalboo> 'lots of, plenty' Ywh, <kurralboo> TD

Two of the following 'losses' word medially could be regarded as lenitions to /w/, but it is perhaps more accurate to regard them as examples of elision of medial /g/ in a cluster /wg/ or /rg/:

> *jawga-* 'send, allow to go' GD, Y, *jawa-* 'send' WA
>
> <gaugon> 'get angry at' Yal, Yw, <kowgoon, kowoon> Ywh
>
> *wudhurga-* 'steal' WI, *wurga-* (<wurga>) 'steal' Yal, Yw, <woora> Ywh, TD
>
> *juŋgahr* 'pelican' C, *juɲahr* WA, M[28]

The doublet *gundal, wundal* may belong here, with some meaning shift:

> *gundul* 'bark of tree' Ym, Yal, Yw *gundal* (<goondool, gundool> 'canoe' Ywh, <kundal> M,[29] <koondool> 'canoe', <koonjool> 'bark of tree' AT, <condool> 'canoe, bark of tree' NC), *wundal* (<wundul> Yal, <wundal> Yw '(bowl made from cork tree')

3.4.2 /g/ TO /ŋ/ LENITION

The first example here shows a number of changes, though Calley may have missed the lamino-palatal articulation of the nasal in the WU examples:

> *gunbi* 'carpet snake' WU, *ɲuhnyba* 'snake (generic)' WA, *ɲuhnybe* GD
>
> *gawrayjam* 'dumb, without speech' Yw, *ŋawrayjam* Yal
>
> *gulany* 'tick' Ym, *gulan* Yal, Yw, *ŋulan* Yw
>
> <n'gooloolee, goolee-ee> 'diamond fish' Ywh

3.4.3 LENITION OF /ŋ/ TO /w/

I have only found one example to suggest this lenition with any confidence:

> *ŋurahm* 'asleep', *wurahm* C, WI

The following example is perhaps no evidence at all, but I include it in case evidence from elsewhere shows it to be a plausible semantic shift:

---

[28] All northern sources except the recent Fingal Heads source have ambiguous <ng> spelling in this word. However, the Fingal Heads source has a hyphenated placename: <joong-urra-narrian> 'pelican dance', which suggests a velar nasal only.

[29] A number of forms attested from some sources could be interpreted as *gandal/gandul*, but on the basis of Ywh's list and one of the AT lists, it is taken to be *gundal*.

ŋanyjar 'lie, falsehood' GD, <ungjurra, ungdhŭrra>[30] 'false, untrue' Yal, Yw, *wahnyjari-* 'to roll, turn, change, turn into' WA, *wanyjigur* 'blanket' WA

3.5 Variation between apical and palatal articulation

Among the many examples where transcribers differ in the rendition of some sounds, a modest number can be considered as reasonable evidence for such variation. Many earlier workers commented on the difficulty of being sure about some of these sounds; their problem was exacerbated by their not realising that there was no voiced/voiceless contrast.

3.5.1 /d/ to /j/ shift

In my own work I have noticed some variation between initial /di/ and/ji/ in some words, and this variation, and variation in other syllables, is attested in various other sources, some very reliable, and some less so:

> *diraŋ* 'tooth' WA, WE, GD, WU, TD, NC, *diraŋ/jiraŋ* Ym, Ynh, Yal, Yw, AT, <cheering> GX (probably Gidhabal or neighbouring dialect, collected at Woodenbong), *jiraŋ* WI, <titang> (probably *diraŋ*) GN

> *dijimahm* 'lilly pilly' WU, *jijimahm* GD[31]

> *dahbalam/jabilum* 'Tabulam' WA[32]

> *dawga-/jawga-* (<daugar/jaugarr, dhaugar>) 'send' Yal, Yw[33]

> *diman* 'ashes, camp' Ym, Yal, TD, NG, Ng, AT, *dihman* C, 'ashes' GD, *jiman* Yw, Ywh

> *dalal ba-/dulul ba-* 'rattling noise' (many dialects), *jalal ba-* 'make bumping noise' WA, GD

Examples also occur of /d/ to /j/ alternation after /n/, occasionally with shift of /n/ to /ny/. In some cases, for example with *minji-/minyji-* (I do not feel much weight can be attached to the alternation of /n/ and /ny/) the difference is hard to hear and hard to maintain articulatorily, and most of our sources were incapable of noting any distinction.

> *mundurguhm* 'death adder' GD, <munderugam> Ywh, *munulgum* Ym, <mundalgam> Yal (sometimes 'corrupted' to <mundulum> Yw), <manjeralgan/munjeralgan> Yw

---

30   I consider this much more likely to reflect an initial syllable /ŋa/ than anything else. Yal and Yw omit to record initial /ŋ/ in the syllables /ŋan/ and (presumably here) /ŋany/. Ywh records the initial /ŋ/, in such syllables but does not attest this word.

31   Note the general rule that non-word-initial /y/ is an interdental fricative in GD is broken here, as it is in a few other onomatopoeic words.

32   Vowels of unstressed syllables such as the second and third syllables here are not always unambiguously definable.

33   It is not often that Watson's list differs from Allen and Lane's in rendition of /d/ or /j/. Watson consistently uses <dh> when Allen and Lane use <j>. Although the possibility of an error in type setting cannot be ruled out, for Watson's list to have added <h> to Allen and Lane's <d> is less likely than if a <j> in Allen and Lane's list had been rendered as <d>. In transcriptions in this paper, I have replaced word-initial <dh> with <j>, although Watson's general comment that the sound is a flat tongue articulated one rather than a grooved articulation is an accurate observation on all the allophones.

<kundera> 'rat' Yal; <kun'dhera, kun'deřa; mun'dhařu> Yw, *gundur* WI, Ywh Goondaroo

mundaru 'naked' Ywh, Ym, *mundur* 'naked, bare' GD, *munyjah* 'naked' WA[34]

minji- 'laugh' WE, *minyji-* WA, WE, GD

buhn 'coil' GD, *buhn-buhny* 'small whirlwind' GD, *buhny-buhny* 'whirlwind' GD

See also §3.6. Not all the evidence here is very conclusive. For example, the alternation of /n/ and /ny/ before /j/ is quite unremarkable in this language in my opinion, although in my work in Alawa (Northern Territory, a non-Pama-Nyungan language), would suggest that for that language the speakers are far firmer in their differentiation of these two phonemes in this position. If it were not that modern linguists (Cunningham, Crowley, the Geytenbeeks and Holmer) showed their ability to distinguish these two nasals in such a position, almost no weight could be placed on the supposed contrast.

3.5.2 /ny/ TO /y/ INITIALLY, TO /y/ OR /l/ FINALLY

In three cases Watson uses an initial <nyi> where Allen and Lane's list have initial <i> (the glide of initial /y/ before /i/ or /w/ before /u/ is often not apparent). Nor is it always certain to the best of us whether what is heard is an initial syllable /nyi/ or /yi/. I would not regard Watson's hearing or transcription here as weighty evidence, and no other sources support it, but it could be possible. Moreover, as he includes a variant with initial <w> and a different vowel, one suspects he is not just copying Allen and Lane in his work (he did claim to check all his data, and modern Yugambeh people say there is no doubt there were speakers he could have and would have consulted at that time). The second example could perhaps be a doublet.

nyina- 'sit' Yw, *yahna-* Ym, Ywh, M, AT, TD, GD, *yehna-* WA, WE, WU, C, and, curiously a variant <weina> in Yal, Yw

nyiriŋ 'green snake', *yirahny* 'green or whip snake' Ym, <iring, irring> 'green (tree) snake' Yal, Yw, <yerrin> 'green snake' Ywh, <eron> Y(another list), *yiran* 'green tree snake' GD

<nyinga> 'bite' Yw, *yiŋa-* Ym, <inga> Yal, <iŋga> M, *yiŋa-/yiŋga-* WA, WE, GD

We have one case of a final /ny/ attested in one list after /u/ where all other sources suggest /y/ or /l/:

yaguny (<yaguin>) 'bandicoot' GN, *yaguy* 'Eastern Bandicoot' WA, GD, C, *yagu(h)l* Ym, *yaguy* Yal, Yw, Ywh, <yackiel> Y (another source), <yawgu> Ng

3.6 OTHER SHIFTS IN NASALS

In examples below, a small meaning shift correlates with the difference in form, suggesting perhaps fossilised suffixes.

dalaŋ 'red ochre' WA, *dalaŋ* 'white clay' GD, *dalaŋ* 'clay, ochre' WI, *dalahn* 'white' WA, GD, WU, WI

---

[34] This could furnish another example of loss of final /r/.

gudhihn 'red, orange-red' GD, WI (possibly gudhihn), gudhihny 'red' WE, WU, gudhiŋ 'red clay, red ochre' GD

gudhi 'paint, ochre' Ym, 'red clay' Yw, gudhihn 'red' Ym,[35] gudhiŋ 'red ochre, red pigment' Ym, <gogin> 'light red' Yal, <goging> 'dark red' Yal, <kûūtdhi> 'light red' Yw, <kûtdhin 'red clay or pigment' Yw, <kuji> 'red' M, <Coochimudlo> 'Coochiemudlo' (a place) Ywh, <kudgen> 'red land' Ywh

The overlap in meaning of 'clay/ochre' and colour allows the shift of colour term meaning to move through a plausible intermediate step. Dalaŋ keeps its colour reference of 'white' in the compounded word dalaŋehny in WA listed as 'Greyfaced Wallaby', probably the Whip-tailed or Pretty-faced Wallaby, which has white markings on its face. See also §4.1.

3.7 VARIATION BETWEEN /j/ AND /g/

While this variation is not common, it occurs in WI in the common word for 'child', which is sometimes heard with a medial velar fricative:

jahjam/jahgam 'child'

also:

jigay 'catbird' WU, GD, and other dialects, gigay GD

<boobojan, boobigun> 'ashes of fire' Ywh

giwa 'laced monitor (goanna)' Yal, Yw, jiwah Ym

See also gudhi, etc. in §3.6 above, where Allen and Lane has a medial <g>, which could possibly be a mistranscription for <j>.

Variation in the sequence /gi/ to /ji/ (or /ŋi/ to /nyi/) is plausibly accounted for: /g/ and /ŋ/ can be fronted to a palatal articulation, not only in dialects of this language, but in other Australian languages I have worked with. The fricativising of /g/ in Yugambeh-Bundjalung also brings medial /j/ and /g/ closer acoustically.

3.8 OTHER CONSONANT ALTERNATION

3.8.1 /n/ AND /l/

The list of examples is short, but the words are commonly used, and their variation cannot be ignored:

gaban '(rain) forest, (big) scrub' Y, gabal WA, WE, GD, M, C

manaldjahli Ym, manandjahli Ynh 'name of the Beaudesert language'

The word form manal 'ready, ripe, cooked' WA, GD, 'hard, baked' Ym is attested, but never *manan. According to Watson, suffixes <jan> and <ja> are abbreviations; -ja(h), as an affix, is commonly attached to the substantive roots of placenames to indicate 'place of' (Watson 1943). This accords with Culham's explanation of the language and placename Manaldjahli as 'hard, baked ground', although I have no explanation for the final /li/. The

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[35] Except for the source Ym, little certainty exists as to what the final nasal is in this list, except that Yal's <goging> may reflect a final velar nasal.

form *manandjahli* has been the form used by other descendants of speakers; Culham's explanation may be a folk etymology based on his own pronunciation. On the other hand, towards early summer, the Queensland side of the territory can be markedly browner and drier than the New South Wales side.

3.8.2 /n/ AND /r/

dangar 'mud' WA, *dalgar* WA, *dalagar* WE, GD, *dalgar/dalgal* Yal, Yw

3.8.3 /l/ AND /r/

Keeping in mind earlier comments about the difficulty at times in distinguishing these two phonemes, I put forward the following list:

bula, *bulah* all but GD, *buruhr* GD, [burul, burur] 'two, both' C

dalgar 'mud' Yal, [dalagar] C, *dalgal* Yw

yandal 'jaw' WA, *yandar* 'jaws of fish' GD

yabur 'one' WA, WE, GD, WU, C, *yabur*, *yaburu* (all northern dialects) *yabul* (<yabul>) GN

yalbi- 'sing' B, *yarbi-* WA, WE, GD, WU, C, WI

ŋihl 'forehead' WA, <ngil> 'brow, ground' GN, *ŋihr* 'forehead' GD (cf. *ŋirbin*, *nyirbin* 'gorge wall, very steep slope' GD, *ŋihrgil* 'river bank' WA, *ŋihr gawahny* 'seasonal change—breaking of season before and after the monsoonal period', *ŋayir* 'cliff' WA, GD, WU (very likely the same root), *ŋihra-* 'look upward' GD), *yilim* 'eyebrow' Yal, Yw[36]

wulaŋ, *wurahŋ* 'leaf' Ym, *wuraŋ* Yw, Ywh, TD, *wurahŋ* WA, WE, GD, C

gulgun 'language' Ym, *gurgun* Yw

dulgal 'dirty' Ym, Yal, <tŭlgŭrra, tŭlgŭl> Yw, <toolgul> Ywh (cf. §3.8.2)

bawur 'head' Ym, Yw, TD, C, *bawul* Yal, Yw, <bowah> MUR (and <buraugh> AT, <poweroo> NC, <bowra> TD, <powroo, pahroo> Ywh; and <baru> 'head, hair' in one Ynh source)

3.8.4 /l/, /r/ AND /y/

jangar 'wet' WA, B, *jangal* WU, *jangahy* GD

3.8.5 LENITION OF /b/ TO /w/

galbuny 'lyrebird' GD, Ym, <kalbun> Yal, Yw, <kalwun> Ywh, <caboon> Y, Ng, GC

---

[36] This last suggests a loss of initial /ŋ/, but see §3.9 for another suggestion.

mabahŋ 'old man' GD, WU, *mabaŋ* WA, *mabaŋ* 'person of importance' C, *mawahŋ* 'old man' WI

3.8.6 WORDS FOR 'WHERE'

The various words for 'where' suggest various lenitions and losses, in one case lenition of initial /j/ or of medial /l/ to /y/, and in another loss of initial /w/. All medial /nj/ could be /nyj/, the homorganic cluster.

jiyah 'where' WU, *jih* C, *yili/yile/yila* Ym, Yal, Yw, Ywh, AT, NC, TD, *yila, yilah* WA, WE, WU, GD, GN, *yihla* C

wunda/wunji Ynh, *winji/yinji* Ym, M, Ynh, *winji* TD, *yinji* Ng[37]

juganga 'where to?' C

The suffix *-gu* can be added to *yili/yila* and *winji/yinji* forms for 'where to', and *-gal* to *winji/yinji* forms for 'where from'. Some, if not all forms can also be used for indefinite place 'somewhere', etc. Note that only the first line of examples can occur unaffixed.

3.9 METATHESIS

Metathesis has been considered to be a feature which occurs in this language. It has often been suggested that the Yugambeh-Bundjalung word for water *guŋ/guhŋ* has been metathesised from a Proto Pama-Nyungan **ŋuku*, but examples that occur within or between dialects include both consonant and vowel metathesis. For examples of the vowels, see §2.7. Consonant metathesis is exemplified below:

nyulamaŋ/nyulaŋam 'they' WA, GD (a regularised plural form built on *nyula* 'he')

julgu/jugul 'heart' WA, *dulgu* GD, *gulju* WE

and possibly, although the /d/ and /b/ do not match, and there is some doubt about the stressed vowel:[38]

gumbu/gambu 'cobra worm' (a teredo worm, a delicacy) <gūmbo> Yal, <Koomboobah> 'Coombabah' (a place), 'place of cobra worm' Yal, <gŭmbō> Yw, <combo> GC, <Coombabah> 'a pocket of land' Ywh, *dumgahm* WA, *numgahm* GD

One other case could be metathesis, or else initial lenition (but see §3.8.3):

<ilim> 'eyebrow' Yal, Yw, cf. *miyi/mil* 'eye' (one informant only gave *mil*)

3.10 INITIAL DROPPING

There are a few intriguing examples of words with an unanalysed initial syllable occurring before a recognisable morpheme with little or no meaning shift.

nambuhl 'bora ring' GD, *ŋambuhl* WA, *buhl* Yal, Yw, <bul, bule> M

---

[37] Whether or not an initial glide is heard in a language such as this one, an initial front high vowel is interpreted as following an initial /y/.

[38] The connection could just be through the *gam/gahm*.

nambargul (<nambaragool>) 'canoe' Ywh, *bargul* 'bark' GD (and *bagul* 'bark, canoe';
  WA, WE, GD, C)

guwin 'ringtail possum' Ym, *wiŋ* Yw (see also §3.2)

miyumba- 'show, teach' WA, [mi:umba] C, *nyumba-* GD, Yal, Yw, <numbah> Ywh

Two curious examples appear to occur in

Murwillumbah (probably *muy-wulumbah*) the town nearest *wulumbiny* 'Mt Warning',
  and

Muy-ngagambah 'Fingal Caves' (mythical dog place)[39]

The following seems more a case of initial adding, rather than dropping, at least from the
contemporary evidence:

baraŋayil 'light orange colour' GD, *ŋayil* 'clay' GD, 'ground' WA

3.11 ELISION AND/OR PRENASALISATION

dugum 'shellfish' WA, *dugunum* 'species of shellfish' GD, C, *dugunam* 'pipis' WI

gandaygil 'liver' WE, *gandagil* WE

janaŋgan 'boy' WE, WI (also *janaŋ* WI), 'single men's camping ground' GD, *janagan*
  'boy' WA, WU, *janaŋ* (and cf. <yinanga> 'boy' CP)

dandaygam 'old' WE, 'old man' WA, WU, C, *danigam* WU

dagahral 'bad ghost', *dagaw* 'ghost', *dagay* 'ghost, white man' GD

I think other examples can be found, but for the moment these will suffice.

3.12 OTHER

waŋal 'deaf, unheeding, disobedient' Yal, Yw, *waŋam* NC, GC, <wongoom> 'a fool'
  Ywh, <wongalgir> 'deaf' GN

While the similarities in the following are tantalising in both form and meaning, I am inclined
to consider it a chance similarity. However, Geoff O'Grady (pers. comm.) suspects
occasional shifts of Proto Pama-Nyungan *rr to /th/ in Cape York and Kala Lagaw Ya.[40]

bidhaŋ 'little' in all dialects but those to the south-west, which have *beraŋ* WE, WU,
  CP

C has both listed.

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[39] In one older source, which I cannot at present locate, a prefix which may have been <murra> was noted
   for the placename Murwillumbah. Compare also Muy-ŋagambah 'dog place' for Fingal Caves. Together
   with Watson's transcription of Yugambeh as Yugumbir, this may indicate a rather recent loss of /r/ in
   certain positions. Also the Copmanhurst list has <mory-gerongla> 'bora'.
[40] *nyurra 'you (pl.)' > KLY nitha, *yarrang 'beard' > KLY yatha (from O'Grady).

4. MEANING SHIFTS

The cataloguing of phonological shifts above is reasonably exhaustive, but this is not so for the examples below. I am not sure whether a search might not find many more examples.

4.1 ANTONYMIC SHIFTS

dabu-dabuh 'shallow' WA, *dabu-dabu* 'deep' WU

dalaŋ 'white clay' GD, 'red ochre' WA, 'white' C (cf. *dalahn* 'white' WA, GD), *dalahŋ* 'pipe clay, white paint' C

Interchange of 'white' and 'red' as meaning for one stem also occurs in neighbouring dialects of Ifugao, Philippines, an Austronesian language, so precedents for such a shift exist in unrelated languages.

4.2 A FEW OTHER MEANING SHIFTS

guhŋ 'water' WA, 'toddler' GD, *guŋ* 'water' GD, 'water, baby' C (cf. *wuhm* 'baby' C)

<konggong> 'skull, egg' Yal, Yw (vowel could be /a/ or /u/; I have interpreted it as /a/

nyaram 'Frilled-neck Lizard, vulva' WA, 'Blue-tongue Lizard' B, Ywh (also loosely used for Frilled and Jew lizards), 'Bearded Jew Lizard' GD, C, Ym, <ŋarŭm> Yal, Yw

muruhn 'wood, firewood' GD, *muruhny* 'ashes' WE, GD, 'hot coals' WA

mibiny 'Aboriginal person' Y, M, etc., 'person, face; to know someone' GD, 'face', 'to know (someone)' WI, *mibiŋ* 'jaw, chin' C

4.3 GRAMMATICALISATION

The following may be an example of grammaticalisation of the substantive *jaŋ* 'bad'. However, against this we should set *banyar* 'good, great', *banyahr jaŋ* 'very bad', *banyahr guluhl* 'very tired'.

jaŋ 'bad' (all dialects), *-jahŋ/-dhaŋ* 'very' GD, *-jaŋ* C

5. 'FOSSILISED COMPOUND'

In both the languages I have worked on most in Australia, and also noted as a possibility by Evans (1990:186), a word for 'old (man/person)' appears to be derived from a word for 'grey-headed, grey hair':

Alawa (NT) *wurrgul* 'grey hair', *wurrgularr* 'old person', presumed compounded from *wurrgul-warr* 'with grey hair', as the case inflections follow the pattern for -*warr* rather than for other nominals ending in /rr/;

Yugambeh-Bundjalung: *gidhiru* 'grey hair', WA, *gidhur* 'grey colour' WA (also 'chrysalis of witchetty grub', which is grey), *gidhuhm* 'old (of animates), old man' GD.

6. CONCLUSION

The above listings of examples are reasonably exhaustive of the most reliable data. In this paper I have not adduced evidence or speculation from other Pama-Nyungan (or other) languages to support any of these shifts. Because only internal evidence from dialects of Yugambeh-Bundjalung has been used and allowed to speak for itself, the shifts shown to occur can be adduced in support of a number of processes of shift proposed for the whole language family.

Among the dialects of Yugambeh-Bundjalung, we see high to low vowel shifts with dialect, and the reverse, some shifting of /a/ to /u/, gradation of pronoun forms, lenition of /j/ through /y/ to zero, often with compensatory vowel lengthening, lenition of /r/ through /y/ to zero, again often with compensatory vowel lengthening. These appear to occur on a cline through the area where the language is spoken. Other intermittent changes occur, but do not seem so clearly graded for area.

Working from the least ambiguous data on this language and its dialects, collected over a space of a little over a century, it is possible to see examples of a number of changes postulated to link assumed cognates in different Australian languages.

One whole area of supposed sound shift has been left to one side in this paper, and a further study of the data may add to our stock of possible shifts over time. This is where there is compounding or affixation which may obscure the original shape of a morpheme. A possible example of what I mean is the series *waji-, wayi-, wayma-* noted above among examples of /j/ lenition, where a suffix -*ma* is added to one form of the morpheme.

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