CLASSIFICATION OF LAKE EYRE LANGUAGES

Peter Austin

1. Introduction
The genetic classification of Australian Aboriginal languages has been a topic of heated debate among linguists over the past thirty years. The first attempt at a comprehensive classification for the whole continent was that proposed by O’Grady, Voegelin and Voegelin (1966) (see also O’Grady, Wurm and Hale 1966) using the lexicostatistical method. This classification claimed that all Australian languages were members of a single phylum and that there were twenty nine “phylic families” represented on the continent. One of these, Pama-Nyungan, covers the southern eight-tenths of the continent. A revised version of the classification was published by Wurm (1972) who reduced the number of families to twenty six (see also Wurm and Hattori 1982).

Over the past ten years these classifications has been increasingly subjected to scrutiny. Dixon (1980:262ft) voiced strong criticism of the lexicostatistical classifications and claimed to have established a genetic classification (using traditional comparative-historical techniques) whereby all Australian languages, with the exception of Tiwi and Djingili, form a single genetic family and derive from a single ancestor proto-Australian (pA) (Dixon 1980:225). He argues that the distinction between Pama-Nyungan (PN) and non-Pama-Nyungan (nonPN) proposed by O’Grady, Hale and Wurm is not genetic but a typological and areal one. He says that “should not be inferred that PN is in any sense a genetic unity - that there was a proto-PN, as an early descendant of pA” (Dixon 1980:236).

Dixon’s views have been challenged by Blake (1989, 1990) who compared verb pronominal prefix forms in a range of non-Pama-Nyungan languages and has been able to argue for reconstructing a prom-Northern system from which the attested nonPN systems evolve. According to Blake’s proposal, PN and nonPN are genetic labels. Evidence from lexical comparisons presented in Evans (1989) supports Blake’s position. Dixon (p.c. 1988) has accepted the arguments put forward by Blake and Evans and now agrees that Pama-Nyungan is a valid genetic label.

While this work on higher level groupings has been a major focus of research and discussion, there have been relatively few published studies of lower level subgroups within Pama-Nyungan languages. The exceptions are Austin (1981, 1988) who considers the Kanyara and Mantharta languages of Western Australia, Black (1980) the Norman-Pama subgroup of Paman (see also Hale 1976), and Evans (1985) the Tangkic languages of the Gulf of Carpentaria. It is remarkable that little progress to date has been made in “bottom-up” language comparison and the delineation of detailed subgrouping within PN.

This paper is an attempt to classify genetically the languages traditionally spoken in the region around Lake Eyre (northern South Australia) and to reconstruct the ancestor languages from which they descend. I will argue that a close genetic relationship can be demonstrated for the languages spoken to the east of Lake Eyre, and that these languages are more distantly related to Pitta-Pitta of central-western Queensland and Wangkumarra of south-western Queensland (into a grouping that can be called “Karnic”). I will propose a set of

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1 Research for this paper was supported by a grant from the Australian Research Council; I am grateful to Pia Herbert for her research assistance, especially for typing up the Reuther comparative vocabulary materials. Thanks are also due to Gavan Breen and Luise Hercus for allowing me access to their unpublished materials on Lake Eyre languages. Philip Jones assisted with obtaining copies of sections of the Reuther manuscript.
reconstructions for three levels of the Karnic group. I then examine data on languages spoken to the west of Lake Eyre (Wangkangurru and Arabana) and argue that, contrary to suggestions by Breen and Hercus, these languages are not particularly closely related to the eastern Lake Eyre languages and that shared cognates are either due to local borrowing or to common inheritance from a more distant ancestor, probably at a time depth close to Pama-Nyungan. This paper is thus an exercise in detailed genetic reconstruction and subgrouping for a local geographical region of Australia. Hopefully, further studies will illumine other higher level groupings between the reconstructions proposed here and Pama-Nyungan itself.

2. The Lake Eyre Languages
The region around Lake Eyre was traditionally one of some linguistic diversity. The following is a list of the ten languages (and sources of data on them) from the east of Lake Eyre considered in this study:

1. Thirrari (abbreviated as Ti) - spoken on the southern and eastern shores of Lake Eyre. Data sources are Austin 1974-77, 1981, Reuther 1981, MS;
2. Diyari (Di) - spoken east of Thirrari along the lower reaches of Cooper Creek. Sources are Austin 1974-77, 1981, Reuther 1981, MS;
3. Ngamini (Ng) - spoken north of Diyari along the lower Diamantina River. Sources are Breen 1971, Breen 1976a, Austin in prep, Reuther 1981, MS (Reuther’s data is indicated as NgR in the discussion below);
4. Karangura (Kn) - spoken north of Ngamini along the Diamantina River to Birdsville. The meagre data on this language is fully examined in Austin (in press);
5. Yarluyandi (Yl) - spoken north of Karangura to the Mulligan River in western Queensland. Data comes from fieldnotes and tapes collected by Austin and Breen (see also Austin (in prep));
6. Mithaka (Mi) - spoken east of Yarluyandi in south-west Queensland. There is very little data on this language - see Breen 1971, 1976a (also Austin’s transcriptions of Breen’s Mithaka fieldtapes);
7. Karuwali (Ka) - traditionally spoken north and east of Mithaka. There is no contemporary data on this language and only two old written sources: Curr 1886, W.H.W. 1912;
8. Yawarrawarrka (Yw) - spoken east of Karangura and Ngamini in the extreme north-east of South Australia. Data on this language comes from Breen 1971. The Yawarrawarrka recorded by Reuther 1981, MS is a slightly different dialect than that recorded by Breen. It is indicated as YwR in the following;
9. Yandruwandha (Ya) - spoken south of Yawarrawarrka and east of Diyari. There is a large amount of data on this language collected primarily by Breen - see Breen 1971, 1975, 1976b, 1981, 1990, and Kerwin and Breen 1981, 1986. Data on slightly different dialects of Yandruwandha was collected by Wurm 1957, and Reuther 1981, MS (indicated as YaR below);
10. Pirlatapa (N) - spoken south of Yandruwandha and east of Diyari. The slight amount of data on this language has been thoroughly examined in Austin 1990.

To the north and west of Lake Eyre were spoken Arabana (Ar) and Wangkangurru (Wn). These are shown to be closely related languages by Hercus 1990. Other sources of data are O'Grady and Klokeid 1968-69, and Reuther 1981, MS.

South of Lake Eyre were a number of languages that appear to be closely related. I have considered data on the following:
1. Adnyamathanha (Ad) - spoken in the northern Flinders Ranges. Data comes from Coulthard and Schebeck 1987, Schebeck 1987, O’Grady 1967;
2. Pankarla (Pa) - spoken south and west of Adnyamathanha. There is a brief vocabulary in Hale 1960;
3. Nugunu (Nu) - spoken south of Pankarla near Port Augusta. Data comes from O’Grady 1958/60;

Two groups of more distant languages are considered in this study. To the north of the eastern Lake Eyre languages lie the Pitta-Pitta group (abbreviated Pp); these have been described by Blake 1979b (see also Breen 1971). East of the eastern Lake Eyre languages is the Wangkumarra group (abbreviated Wm). Data on these languages comes from Breen (n.d.) (see also Breen 1971, and Robertson 1984, 1985).

Using the available data I have attempted to classify the languages of the Lake Eyre region and to establish reconstructions of putative ancestor languages.

3. Previous classifications of Lake Eyre Languages

O’Grady, Voegelin and Voegelin 1966 and Wurm 1972 classify the eastern Lake Eyre languages as members of the “Dieric Group” of Pama-Nyungan. This group is divided further into three subgroups, the “Karna Subgroup”, the “Ngura Subgroup” and the “Yalyi Subgroup”. Other languages of the region are classified into the Arabanic, Mitakudic and Pitta-Pittic Groups of Pama-Nyungan.

The internal classification of the Dieric Group is given by Wurm (1972:132-3) as follows:²

**Karna Subgroup**
1. Dieri - Tirari - Jandruwanta - Ngameni - Karangura - Yelyendi
2. Pilatapa
3. Jauaraworka (Jawaraworka)
4. Karendala — Kungadutji (Gungadidji) — Kulumali — Bidia — Murulta — Karuwali

**Ngura Subgroup**
1. Punthamara — Ngandangara — Kalali (Garlali) — Bitjara? — Tereila? (Diraila?) — Wangkumarra — Ngurawola
2. Badjiri (Badjara, Baddjeri)

**Yalyi Subgroup**

Nadikali - Malyangapa

Breen 1971 is a major restudy of western Queensland languages using a large amount of newly collected data not available to previous researchers. The classification is primarily lexico-statistically based and Breen modifies the classification of O’Grady et al., setting up a “Karnic Group” which (Breen 1971:21):

“comprises four subgroups: the Narla Sub-Group is the former Arabanic Group; the Palku Sub-Group is the former Pitta-Pittic Group; the Kama Sub-Group comprises the former Karna Sub-Group of Dieric, plus Mithaka, minus Bidia

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² The spelling of language names in Wurm 1972 is retained here.
(Birria), Kungatutji, Kulumali and Karendala; the Ngura Sub-Group is the former
Ngura Sub-Group plus Karendala.”

As evidence of the relationship between members of this Karnic Group, Breen (1971:29)
provides partial cognate counts for comparisons of languages across the group. The figures
are in the range 20%-40% (if we ignore neighbouring languages where cognate counts could
be artificially increased by borrowing), with a low of 19% (for Palku-Ngura subgroups) and a
high of 48% (Karna-Palku, represented by Yarluyandi-Pitta-Pitta). A sample of the figures
given is:

**Karnic Group: Cognate Counts (from Breen 1971)**

<table>
<thead>
<tr>
<th>Wangkangurru</th>
<th>Yandruwandha</th>
<th>Yarluyandi</th>
<th>Pitta-Pitta</th>
<th>Punthamarra</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td></td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Breen also proposes an internal classification of the Karna Sub-Group as follows (Breen 1971:
1:24):

“both the old and new data justify the grouping of Jandruwanta and Jawarawarka
as dialects of the same language, and Dieri, Ngamani, and Jeluyendi as belonging
to a different language.”

This gives the Karna Sub-Group consisting of three distinct languages:
1. Diyari - Ngamini - Yarluyandi
2. Mithaka - Karuwali
3. Yandruwandha - Yawarrawarrika

Lexicostatistical figures of percentage cognates to support this classification are presented in
a table (Breen 1971:22) which may be rearranged as follows:

<table>
<thead>
<tr>
<th>Yandruwandha</th>
<th>Yawarrawarrika</th>
<th>Karuwali</th>
<th>Mithaka</th>
<th>Yarluyandi</th>
<th>Ngamini</th>
<th>Diyari</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td></td>
<td>36</td>
<td>36</td>
<td>74</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>47</td>
<td>53</td>
<td>67</td>
<td>67</td>
<td>50</td>
<td>46</td>
<td>74</td>
</tr>
<tr>
<td>49</td>
<td>51</td>
<td>31</td>
<td>46</td>
<td>74</td>
<td>73</td>
<td></td>
</tr>
</tbody>
</table>

Breen (1971:23) points to phonological and morphological similarities that appear to agree
with the lexical classification:

“morphological similarities between languages in this sub-group provide
supporting evidence for this classification; in particular, they have in common the
use of auxiliaries to form certain verb tenses or aspects ... In addition, they share a
phonological phenomenon unusual in Australian languages: a contrast between
voiced and voiceless stops, probably confined to apical stops”

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3 Breen (personal communication) points out some typographical errors in the original table which are
corrected here.
Breen’s classification of the Lake Eyre region languages has been essentially repeated in several publications by Hercus, most recently in Hercus 1989 where she provides a diagram (j)age 150) “sketch of the genetic relationships between the languages of the Lake Eyre basin and neighbouring areas”. This is given below.

Hercus (1989:150) also argues, however, that alongside these genetic relationships, there has been “diffusion of a grammatical structure”, an affix marking actions performed for the benefit of someone other than the subject, (see also Hercus 1987) and that:

“[t]hese similarities were not regular in any way, sometimes features appear to have crossed from one subgroup or even group to another. Other features were limited in their overall geographical extension: there was no overall pattern, no single focal point, but probably a series of areas where linguistic diffusion took place”.

In connection with this apparent evidence of linguistic diffusion, she notes (Hercus 1989:151):

“ doubt at least part of the reason for the complex network of linguistic diffusion was that the population of the whole area was linked by a network of similar social structures ... There were also strong links in trade and exchange (McBryde 1987) as well as mythological and ritual associations.”

If this is correct, then we must be careful to distinguish between features due to borrowing and diffusion and those due to genetic inheritance in assigning languages to classifications.

4. **Methodology of this study**
My approach has been to follow one of the traditional methodologies of historical linguistics, namely ‘backwards reconstruction’ (see Hock 1986:581ff, Anttila 1972:229ff). Firstly, we propose a subgrouping of languages and then reconstruct intermediate parent proto-languages on the basis of comparisons of the languages believed to subgroup together. Data from immediate daughter languages only is taken into consideration at each level of
reconstruction. The subgrouping I have adopted places all the eastern Lake Eyre languages, plus Wangkumarra and Pitta-Pitta in a single genetic group (Karnic); the eastern Lake Eyre languages are further grouped into Central Karnic and Western Karnic. The subgrouping is summarised as follows (for language name abbreviations see 3 above):

![Tree Diagram]

The reconstructed proto-languages are thus:
1. proto-Western Karnic (pWK) - daughter languages are Diyari, Ngamini, Yarluyandi;
2. proto-Central Karnic (pCK) - daughter languages are pWK, Yandruwandha, Yawarrawarrka, Karuwali and Mithaka;
3. proto-Karnic (pK) - daughter languages are pCK, Pitta-Pitta and Wangkumarra.

Notice that I do not subgroup Arabana and Wangkangurru with the Karnic languages (see further 6 below).

Using the data currently available I am able to propose 374 reconstructions; 46 for proto Western Karnic, 160 for proto-Central Karnic and 168 for proto-Karnic. The reconstructions are detailed in Appendix 1. In a few instances it has been necessary to reconstruct doublets, that is a pair of ancestral forms that are both reflected in the daughter languages. These are also discussed in Appendix 1. There is a finderlist of all the reconstructions in Appendix 2.

5. Classification of Lake Eyre languages
The strongest evidence for the genetic relationship of the Karnic languages comes from comparison of the personal pronoun paradigms. Not only are there sets of forms reconstructable, but also there are developments which seem to be unique to Karnic and that differentiate it as a subgroup of Pama-Nyungan. These innovations are:
1. *ngali as first person dual exclusive, inclusive, as in other Pama-Nyungan languages (see Dixon 1980);
2. development of a gender contrast in third person singular pronouns. We can reconstruct: 3sg masculine *nhawu, 3sg feminine *nhani;

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4 My method was to create a database using DBASE III software, firstly of vocabulary from languages in the lowest level subgroup and to reconstruct their ancestor (pWK in this case). I then added columns to the database for the next level, stored the vocabulary data, and then reconstructed for that level (pCK). At each level, only data from immediate daughter languages (including proto-languages) was considered.
in the singular second and third persons, presence of a distinctive \( k \) in the
dative/purposive paradigm. It seems that this \( k \) has been introduced into the lsg
paradigm in central Karnic by analogy with the 2sg and 3sg forms: cf.

<table>
<thead>
<tr>
<th></th>
<th>1sg nom</th>
<th>1sg erg</th>
<th>1sg acc</th>
<th>1sg dat/purp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di</td>
<td>nganhi</td>
<td>ngathu</td>
<td>nganha</td>
<td>ngakarni</td>
</tr>
<tr>
<td>Ng</td>
<td>nganyi</td>
<td>ngathii</td>
<td>nganha</td>
<td>ngakarni</td>
</tr>
<tr>
<td>Ya</td>
<td>nganyi</td>
<td>ngathu</td>
<td>nganha</td>
<td>ngakarni</td>
</tr>
<tr>
<td>Pp</td>
<td>ngantja</td>
<td>ngathu</td>
<td>nganya</td>
<td>nganyari</td>
</tr>
<tr>
<td>Wm</td>
<td>nganyi</td>
<td>ngathu</td>
<td>nganha</td>
<td>ngantja(ni)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2sg nom</th>
<th>2sg erg</th>
<th>2sg acc</th>
<th>2sg dat/purp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di</td>
<td>yini</td>
<td>yundrru</td>
<td>yinanha</td>
<td>yingkarni</td>
</tr>
<tr>
<td>Ng</td>
<td>yini</td>
<td>yindi</td>
<td>yinanha</td>
<td>yingkarni</td>
</tr>
<tr>
<td>Ya</td>
<td>yini</td>
<td>yundrru</td>
<td>yina</td>
<td>yinggani</td>
</tr>
<tr>
<td>Pp</td>
<td>yinpa</td>
<td>yintu</td>
<td>yina</td>
<td>yinkari</td>
</tr>
<tr>
<td>Wm</td>
<td>yini</td>
<td>yundrru</td>
<td>yina</td>
<td>yinkani</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>3sgm nom</th>
<th>3sgm erg</th>
<th>3sgm acc</th>
<th>3sgm dat/purp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di</td>
<td>nhawu</td>
<td>nhulu</td>
<td>nhinha</td>
<td>nhungkarni</td>
</tr>
<tr>
<td>Ng</td>
<td>nhapa</td>
<td>nhulpa</td>
<td>nhinha</td>
<td>nhungkarni</td>
</tr>
<tr>
<td>Ya</td>
<td>nhunu</td>
<td>n/zulu</td>
<td>yinha</td>
<td>nhunggani</td>
</tr>
<tr>
<td>Pp</td>
<td>nhuwa</td>
<td>n/zulu</td>
<td>yinha</td>
<td>nhukari</td>
</tr>
<tr>
<td>Wm</td>
<td>nhiya</td>
<td>nhulu</td>
<td>nhinha</td>
<td>nhungka(ni)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>3sgf nom</th>
<th>3sgf erg</th>
<th>3sgf acc</th>
<th>3sgf dat/purp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di</td>
<td>nizani</td>
<td>nhandrru</td>
<td>nhanha</td>
<td>nhangkarni</td>
</tr>
<tr>
<td>Ng</td>
<td>nhanpa</td>
<td>nhandu</td>
<td>nhanha</td>
<td>nhangkarni</td>
</tr>
<tr>
<td>Ya</td>
<td>nhani</td>
<td>nhandrru</td>
<td>nhanha</td>
<td>nhanggani</td>
</tr>
<tr>
<td>Pp</td>
<td>nhanpa</td>
<td>nhandtu</td>
<td>nhana</td>
<td>nhankari</td>
</tr>
<tr>
<td>Wm</td>
<td>nhani</td>
<td>nhandrru</td>
<td>nhanha</td>
<td>nhangka(ni)</td>
</tr>
</tbody>
</table>

These are the clearest evidence of genetic affiliation.

Pronoun comparisons are also supported by reflexes of Pama-Nyungan case suffixes. In
Karnic languages the dative/purposive case form (-ngka or -nga) reflects an old Pama-
Nyungan LOCATIVE *-ngka (see Dixon 1980). Note that a locative case form is NOT
reconstructable for Karnic, since each daughter language has a different form for that case
affix. Central Karnic is also marked by an innovation in the ergative case marker, namely the
descent of *-lu as -li.
Comparative grammatical studies in Karnic are at an early stage, but it it likely that further research will point to other grammatical similarities that support the lexical reconstructions.

5.1. Subgrouping

There is some lexical evidence to support the subgrouping of Western Karnic languages, in the form of lexical innovations. The following five reconstructions show replacements from proto Karnic into proto-Western Karnic, ie. local innovations. The forms are:

<table>
<thead>
<tr>
<th>proto-Western Karnic</th>
<th>proto-Karnic</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ngayani</td>
<td>*ngandrra</td>
<td>'1plincl nom'</td>
</tr>
<tr>
<td>*ngayaninha</td>
<td>*ngandrranha</td>
<td>'1plincl acc'</td>
</tr>
<tr>
<td>*maru</td>
<td>*tjimpa</td>
<td>'black'</td>
</tr>
<tr>
<td>*nganthi</td>
<td>*kathi</td>
<td>'meat'</td>
</tr>
<tr>
<td>*pira</td>
<td>*nyangi</td>
<td>'moon'</td>
</tr>
</tbody>
</table>

Central Karnic provides no evidence for such innovation.

5.2. Proto-Karnic phonology

The reconstructed phonological system of Karnic shows six points of articulation for stops and nasals. There also appears to be a voicing contrast reconstructable for apico-alveolar stops (in consonant clusters only). In Central Karnic a voicing contrast for both apico-alveolar and apico domal positions is reconstructable. Both proto languages have four laterals, two semi-vowels and three ‘r-sounds’: flap (*rr), trill (*rrh), and retroflex continuant (*r). There are just three vowels to be reconstructed. The consonant systems are set out in the following table:

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5 The various forms of the Diyari ergative are distributed as follows: -(ya)li after singular common nouns, -li after non-singular common nouns and masculine names, and -ndrru after feminine names. For the dative we have: -ya after singular common nouns, -rni after non-singular common nouns and masculine names, and -nhangka after feminine names.

6 The forms of the Ngamini ergative are: -li after non-singular common nouns, and -nu after singular common nouns (apparently a reduction from *-ndu — Yarluyandi has -ndu in this context).

7 Forms of the Wangkumarra ergative are: -lu after masculine singular nouns, -ndrru after feminine singular and plural nouns.
<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Laming-dental</th>
<th>Apico-alveolar</th>
<th>Lamino-palatal</th>
<th>Apico-domal</th>
<th>Dorso-velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop - voiceless</td>
<td><em>p</em></td>
<td><em>th</em></td>
<td><em>t</em></td>
<td><em>tj</em></td>
<td><em>rt</em></td>
<td><em>k</em></td>
</tr>
<tr>
<td>(</td>
<td><em>-vcd</em></td>
<td><em>d</em></td>
<td><em>rd</em></td>
<td></td>
<td></td>
<td>)</td>
</tr>
<tr>
<td>Nasal</td>
<td><em>m</em></td>
<td><em>nh</em></td>
<td><em>n</em></td>
<td><em>ny</em></td>
<td><em>rn</em></td>
<td><em>ng</em></td>
</tr>
<tr>
<td>Lateral</td>
<td></td>
<td><em>lh</em></td>
<td><em>l</em></td>
<td><em>ly</em></td>
<td></td>
<td><em>rl</em></td>
</tr>
<tr>
<td>Semi-vowel</td>
<td></td>
<td><em>w</em></td>
<td></td>
<td></td>
<td></td>
<td><em>y</em></td>
</tr>
<tr>
<td>Flap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>rr</em></td>
<td></td>
</tr>
<tr>
<td>Trill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>rrh</em></td>
<td></td>
</tr>
<tr>
<td>Continuant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>r</em></td>
</tr>
</tbody>
</table>

The presence of a voicing contrast in proto-Karnic is interesting since this is an unusual feature of Australian languages. It seems, however, that a contrast for apico-alveolars following *t* is attested, as the following near minimal pair shows:

pK *kalta* ‘blue-tongue lizard’ Di, Ng, Yl, Ya, Wm: *kalta*
pK *ngalda* ‘ldlincl nom’ Di, Ya, Yw: ngaldrra; Wm: *ngala*; Ng, Yl: *ngalku*

Following *n* only *t* is found — this descends as *d* or *drr* in Central Karnic and Wangkumarra. A contrast between this voiced sound and voiceless *t* is reconstructable for proto-Central Karnic, as exemplified in:

pCK *kantu* ‘rock wallaby’ Di, Ng, Yl, Ya: *kantu*
pCK *kundrrukundrru* ‘cough’ Di, Ng, Ya, YwR: *kundrrukundrru*

A contrast for apico-domals in intervocalic position is also reconstructable in Central Karnic. Consider the following cognate sets:

*rt*

*karta* ‘boom’ Di, YaR, YwR: *karta*
*warta* ‘butt, trunk’ Di, Ya: *warta*; Ng: *kardi*
*yartu* ‘sated’ Di, Ya: *yartu*
*warnta* ‘short’ Ya, Wm: *warnta*; Di, Ng: *wardu*; Yl, Mi: *wartu*

*rd*

*kardi* ‘sister’s husband’ Di, NgR: *kardi*; YaR, YwR: *kardri*
*marda* ‘stone’ Di, Ng: *marda*; Yl: *marta*; Ya, Yw, Mi, Ka: *mardra*
*mardi* ‘heavy’ Di, Ng: *mardi*; Ya: *mardri*
*mardu* ‘taste’ Di, Ng, Ya, Yw: *mardu*
*parda-* ‘to hold’ Di, Ng: *parda-*; Yl, Pp: *parta-*; Ya, Mi, Ka: *pardrra-
*parndi-* ‘to hit’ Yl: *parndi-*; Ya, Yw, Mi, Wm: *parndrri-

Yandrruwandha, Yawarrawarrka and Wangkumarra also have contrastive voiced stops at other points of articulation (see Breen 1975, n.d.). However reconstruction suggests that voiced stops (other than apicals) arose in these languages following a nasal (homorganic or non homorganic) as the second member of a consonant cluster *WHEN THE WORD-INITIAL CONSONANT IN THE PROTO LANGUAGE WAS A NASAL*. When the reconstructed form begins with a non-nasal consonant then voiceless stops occur in the Yandrruwandha, Yawarrawarrka
and Wangkumarra reflexes. Examples of this are the following which show descent of \*k as voiced g and \*tj as voiced dj and \*th as dh:

1. \*k \---> g
   pK \*mingka ‘hole’ Ya, Mi: mingga; Di, Ng, Yl, Pp: mingka
   pK \*ngarka ‘beard’ Yl, Ya: ngarka; Di, Ng, Ka: ngarka; Wm, Pp: nganka
   pK \*nhangkarni ‘3sgfem dat/purp’ Di, Ng, Yl: nhangkarni; Ya: nhanggani; Wm: nhangkarni(ni); Pp: nhankari
   pK \*nhungkarni ‘3sgmasc dat/purp’ Di, Ng, Yl: nhungkarni; Wm: nhungkarni(ni); Ya: nhunggani; Yw: nhungkarni; Ka: nhukarni; Pp: nhukari
   pCK \*mankarrha ‘girl’ Di, Ng: mankarrha; Ya: man.garrhi; Yw: man.garrha
   pCK \*nhingki ‘here’ Ya: nhinggi; Di: nhingki

2. \*tj \---> dj
   pK \*ngantja- ‘to want’ Di, Ng: ngantja-; Wm: ngandja-; Yl, Ya: yura-; Mi: yuri

3. \*th \---> dh
   pCK \*nhintha ‘shame’ Ya: ninda; Di, Ng, Yl: nthinha

Compare these with reflexes containing voiceless stops:

pK \*kungku ‘head’ Yl, Mi, Ka: kungku; Ya, Yw: kungka; Wm: kuka
pK \*kunki ‘doctor’ Di, Ng, Yl, Ya: kunki; Wm: kunki “ghost”
   pK \*thungka ‘rotten’ Di, Ng, Yl, Ya, Mi, Wm: thungka; Yw: thungwa
   pK \*yunka- ‘sulky’ Di, Ya, Wm yunka; Pp yunku- ‘to sulk’
   pCK \*tarnka- ‘to find’ Di, Ng, Yl, Ya, Wm: darnk-
   pCK \*turnka- ‘to emerge’ Di, Ng, Yl, Ya: durnka-
   pCK \*kingka- ‘to laugh’ Di, Ng, Yl: kingka-; Ya: yingka-; Mi: kingki-
   pCK \*pangki ‘rib’ Yw: pangki; Di, Ya: pangkithirri
   pCK \*purnka- ‘to grow’ Di, Ng, Ya: purnka-
   pK \*kjntha ‘shrimp’ Di, Yl, Ya: kintha; Wm: thintha

5. \*tj \---> tj
   pCK \*pantja ‘knee’ Di, Ng, Yl, Ya, Yw: pantja

6. \*th \---> th
   pCK \*tanthu ‘soft’ Di, Ya, YwR: danthu
   pCK \*kantha ‘grass’ Di, NgR, Yl, Ya, YwR: kantha
   pCK \*thinthipirri ‘elbow’ Di, Ng, Yl, Ya, Yw: thinthipirri
   pK \*kjntha ‘shrimp’ Di, Ng, Ya: kintha; Pp: kintharlu; Wm: thintha

It is probable that the enlarged voicing contrast that is seen currently in these languages results from the spread of the voiced stops out of this environment.9

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8 There seem to be some unexplained exceptions in the Wangkumarra data which need clarification. Note that in the transcription I use \*ng for a sequence of apical nasal followed by a voiced velar stop, in contrast to ng for the velar nasal consonant.

9 There are two problematic cognate sets for this account, namely proto-Karnic \*kanku ‘boy’ reflected in Wangkumarra unexpectedly as kan.gu, and proto-Central Karnic \*yinpa.. ‘to send’ reflected in Yandruwandha as yinba-. Notice also Yandruwandha yinngani 2sg dative, but the medial voiced stop here could be due to analogical pressure from elsewhere in the pronoun paradigms (since other pronouns begin with nasals).
5.3. Changes in the Central Karnic daughter languages

In the descent from proto-Central Karnic we can identify a number of changes that have taken place in individual languages. These are detailed as follows:

1. in Ngamini final u- in verbs corresponds to a- in the other Central Karnic languages when the verb contains a u in the next to last syllable. It seems that Ngamini has undergone a type of limited vowel harmony. Note that these verbs do not take the present tense suffix -yi; the bare root is used for present tense function. Examples are:10

<table>
<thead>
<tr>
<th>Ngamini</th>
<th>Divan</th>
<th>Yan/Yaw</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kumu</td>
<td>kuma</td>
<td>kuma</td>
<td>‘to dance (of women)’</td>
</tr>
<tr>
<td>kurnpu</td>
<td>kurnpa</td>
<td>kurnpa</td>
<td>‘to caress’</td>
</tr>
<tr>
<td>kurrhu</td>
<td>kurrha</td>
<td>kurrha</td>
<td>‘to put’</td>
</tr>
<tr>
<td>kurdu</td>
<td>kurda</td>
<td></td>
<td>‘to fall (of rain)’</td>
</tr>
<tr>
<td>maranguku</td>
<td>maranguka</td>
<td>maranguka</td>
<td>‘to help’</td>
</tr>
<tr>
<td>murdu</td>
<td>murda</td>
<td>murda</td>
<td>‘to stop’</td>
</tr>
<tr>
<td>pupu</td>
<td>pupa</td>
<td>pupa</td>
<td>‘to admonish’</td>
</tr>
<tr>
<td>purrku</td>
<td>purrka</td>
<td>purrka</td>
<td>‘to wade’</td>
</tr>
<tr>
<td>nyurlku</td>
<td></td>
<td>nyurlka</td>
<td>‘to lose’</td>
</tr>
<tr>
<td>yupu</td>
<td>yupa</td>
<td>yupa</td>
<td>‘to annoy’</td>
</tr>
<tr>
<td>yurku</td>
<td>yurlka</td>
<td>yutja</td>
<td>‘to swallow’</td>
</tr>
</tbody>
</table>

2. in Yawarrawarrrka clusters of lateral plus peripheral stops p and k are changed as follows:

(a) retroflex lateral+p becomes stop+p (all my examples are from Reuther and it is impossible to tell if the resulting stop is retroflex)

(b) lateral+k becomes stop+k in the dialect recorded by Breen, and become tj in the dialect recorded by Reuther.11

Examples of these changes are:

(a)

<table>
<thead>
<tr>
<th>Yawarrawarrrka</th>
<th>Yandrruwandha</th>
<th>Ngamini</th>
<th>Divan</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>patpa [R]</td>
<td>parlpa</td>
<td></td>
<td></td>
<td>‘language, tongue’</td>
</tr>
<tr>
<td>pitpa [R]</td>
<td>pirlpa</td>
<td>pirlpa</td>
<td>pirlpa</td>
<td>‘eyebrow’</td>
</tr>
<tr>
<td>witpa [R]</td>
<td>wirpa</td>
<td>wirpa</td>
<td></td>
<td>‘hole’</td>
</tr>
<tr>
<td>witpi [R]</td>
<td>wirpi</td>
<td>wirlpi</td>
<td></td>
<td>‘to whistle’</td>
</tr>
</tbody>
</table>

Compare these with words containing an apical lateral plus stop cluster, such as Yawarrawarrrka kilpa [R] ‘to despise’ and ngalpa [R] ‘lap’.

---

10 The symbol [R] indicates that the form is recorded in Reuther MS and not in materials recorded by Austin and/or Breen.

11 Breen collected a few words from Ben Kerwin of a language he called “Matja”. In this data the word for ‘know’ is represented as kitja-. It may be that Reuther’s Yawarrawarrrka and “Matja” are the same.
(b)\textsuperscript{12}

<table>
<thead>
<tr>
<th>Yawarra [R]</th>
<th>Yawarra</th>
<th>Yandmi</th>
<th>Ngamini</th>
<th>Divari</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kitja</td>
<td>kitka</td>
<td>kilka</td>
<td></td>
<td></td>
<td>‘to know’</td>
</tr>
<tr>
<td>witja</td>
<td></td>
<td>wilka [R]</td>
<td></td>
<td></td>
<td>‘to pull out’</td>
</tr>
<tr>
<td>mitji</td>
<td>mitji</td>
<td>mitji</td>
<td>mirki</td>
<td>milki</td>
<td>‘eye’</td>
</tr>
<tr>
<td>matja</td>
<td>malka</td>
<td>malka</td>
<td>malka</td>
<td></td>
<td>‘mark’</td>
</tr>
<tr>
<td>yutja</td>
<td>yurlka</td>
<td>yurlka</td>
<td>yurlka</td>
<td></td>
<td>‘to swallow’</td>
</tr>
</tbody>
</table>

Notice that in the Yawarrarwarrka recorded by Reuther there is a merger of ancestral *lk with tj. Thus matja [R] ‘long ago’ (pK *matja) and ngatji [R] ‘to beg, pray’ (pCK *ngatji-).

3. In Yandruwandha final a becomes i after rrh. Examples are:

<table>
<thead>
<tr>
<th>Yandruwandha</th>
<th>Yawarrarwarrka</th>
<th>Ngamini</th>
<th>Divan</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>man.garrhi</td>
<td>man.garrha</td>
<td>mankarrha</td>
<td></td>
<td>‘girl’</td>
</tr>
<tr>
<td>kaparrhi</td>
<td>kaparra [R]</td>
<td>kaparra</td>
<td>kaparra</td>
<td>‘root’</td>
</tr>
</tbody>
</table>

4. In Yandruwandha initial tj before i and a becomes y, while before u it remains as tj. Examples are:

<table>
<thead>
<tr>
<th>Yandruwandha</th>
<th>Yawarrarwarrka</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>yarrha</td>
<td>tjarrha</td>
<td>‘boomerang’</td>
</tr>
<tr>
<td>yiwa</td>
<td>tjiwara</td>
<td>‘woman’</td>
</tr>
<tr>
<td>yimpa</td>
<td>tjiimp</td>
<td>‘black’</td>
</tr>
</tbody>
</table>

cf.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>‘kangaroo’</th>
</tr>
</thead>
<tbody>
<tr>
<td>tjukurrhu</td>
<td>tjukurrhu</td>
<td></td>
</tr>
</tbody>
</table>

6. The position of Arabana and Wangkangurru

As noted above, Hercus proposes a close genetic relationship between Arabana-Wangkangurru and Karnic, and classifies them as a subgroup of Karnic. The reasons she has put forward for this classification include lexical and morphological similarities. Unfortunately, neither of these seems to stand up to close inspection.

An example of a morphological similarity proposed by Hercus (in Hercus 1989) is the presence of a stem-forming affix that marks action carried out for a beneficiary other than the subject. Thus Arabana-Wangkangurru has paka- ‘to dig’, paka-la- ‘to dig for someone’, Pitta Pitta marri- ‘to get’, marri-la- ‘to get for someone’, Diyari nandrra- ‘to hit’, nandrripa- ‘to hit for someone’, Ngamini nhirrka- ‘to look’, nhirrka-pa- ‘to look for someone’, Yandruwandha wawa- ‘to look’, wawa-na- ‘to look for someone’. However, the presence of this affix is an areal feature not a genetic one. In Karnic proper the relevant affix (formally Di-ipa, Ng-pa, Ya-na, Pp-la) additionally turns certain intransitive verb roots into causative transitive stems, eg. Diyari yirrtji- ‘to arise’ yirrtjipa- ‘to make rise’, tharrka- ‘to stand’ tharrkipa- ‘to make stand’. In Arabana-Wangkangurru the corresponding benefactive affix does not have a causativising function; this instead is marked by change of stem final a to i.

Perhaps the strongest evidence against subgrouping of Arabana-Wangkangummi with Karnic comes from the two areas we identified as pointers to genetic connection within Karnic, namely pronouns and case forms. Arabana and Wangkangurru do not reflect the pronouns we

\textsuperscript{12} There are some apparent exceptions in Reuther’s Yawarrarwarrka, namely nyurlka- [R] ‘to lose’, kalka [R] evening’, and karlku [R] ‘rushes’.
have reconstructed for Karnic, especially: (a) the characteristic k in dative/purposive forms, and (b) the masculine/feminine distinction in 3sg (Arabana-Wangkangurru only have 3sg *uka). Consider the following examples:

<table>
<thead>
<tr>
<th></th>
<th>proto-Karnic</th>
<th>Arabana</th>
<th>Wangkangurru</th>
</tr>
</thead>
<tbody>
<tr>
<td>1dlincl</td>
<td>*ngalta</td>
<td>arrinpa</td>
<td>arruna</td>
</tr>
<tr>
<td>lplexcl</td>
<td>*ngana</td>
<td>arni</td>
<td>arni</td>
</tr>
</tbody>
</table>

For the cases, Arabana-Wangkangurru do not reflect Karnic innovations from Pama-Nyungan, viz. ergative as -li/-ntu (Ar-Wk have -ru), and dative -ngka (Ar-Wk have Pama-Nyungan -ku, they reflect Pama-Nyungan locative as -nga, from *-ngka/)

When considering lexical similarities, it is important to compare Arabana-Wangkangurru with reconstructed forms at each of the three levels we have identified. Close examination shows that there are only nine forms cognate with pWK and all could be loans (one also has a cognate in Adnyamathanha, to the south, and is probably a loan in that language). The relevant forms are:

- **pWK** *kaka* ‘mother’s brother’ Wn: kaka, Ar: kakaka
- **pWK** *kumarrhi* ‘blood’ Wn, Ar: kubmarrhi [Ad umarrhi ‘blood’]
- **pWK** *kunankarri* ‘south’ Wn, Ar: kudnankarri
- **pWK** *mani* ‘to get’ Wn, Ar: mani
- **pWK** *pantu* ‘lake’ Wn, Ar: pantu
- **pWK** *pjtji* ‘bark’ Wn, Ar: pitjimarrhu
- **pWK** *tharra* ‘thigh’ Wn, Ar: tharra
- **pWK** *wana* ‘yamstick’ Wn, Ar: wana [Ba wana ‘boomerang’ Hercus 1982:298, Ad, Nu wadna ‘boomerang’]
- **pWK** *yantakarra* ‘west’ Wn, Ar: yantakarra

There are thirteen Arabana-Wangkangurru words with cognates in pCK (and two have cognates in Ad and languages to south). These are:

- **pCK** *taka-* ‘to pierce’ Wn, Ar: thaka-
- **pCK** *malhantji* ‘bad’ Wn, Ar: madlanthi
- **pCK** *mankarrha* ‘girl’ Wn: mankarrha [Ad mankarrha ‘big girl, young woman’]
- **pCK** *mardu* ‘taste’ Wn: martu
- **pCK** *marna* ‘mouth’ Wn, Ar: marna
- **pCK** *marrka-* ‘to crawl’ Wn, Ar: marrka-
- **pCK** *milki* ‘eye’ Wn: milkikarti, Ar: miltjaardi
- **pCK** *ngara* ‘heart’ Ar: ngara
- **pCK** *pangki* ‘rib’ Wn, Ar: pangki
- **pCK** *pantja* ‘knee’ Wn: pantjakarti, Ar: pantjaarti
- **pCK** *pirrhi* ‘fingernail’ Wn: pirrhi, Ar: nyirrhi [Ad virrhi ‘claw, nail (of finger or toe)’, Nu pirrinyji ‘fingernail’]
- **pCK** *wakarrha* ‘nape’ Ar: wakarrha
- **pCK** *yartu* ‘sated’ Wn, Ar: yartu

The remaining similarities are cognates with proto-Karnic reconstructions; almost all of these have cognates in languages to the south and east, as far away as Baagandji on the Darling
River, reflecting no doubt a local vocabulary that goes back to Pama-Nyungan (or some ancestor close to Pama-Nyungan). Consider the following:

pK *kaku ‘elder sister’ Wn, Ar: kaku
pK *kalhu ‘liver’ Ar: kalyu
pK *kanti ‘spinifex wax’ Wn, Ar: kanti
pK *kanyini ‘mother’s mother’ Wn, Ar: kadnhini [Ad adnyani ‘mother’s mother’]

pK *karrhawarra ‘eaglehawk’ Wn: karrhawara
pK *karrka.. ‘to call out’ Wn, Ar: karrka- [Ba karrka- ‘to cry out, scream’ Hercus (1982:285)]


pK *kirra ‘boomerang’ Wn, Ar: kirra


pK *maka ‘fire’ Wn, Ar: maka

pK *makamaka ‘hot’ Wn, Ar: makamaka

pK *malka ‘mark’ Wn, Ar: malka [cf. Ad malka ‘mark’]


pK *mirrtja ‘noise’ Wn, Ar: irrtja [cf. Ad itji- ‘to be noisy, make noise’]


pK *nganha ‘1sg acc’ Wn, Ar: anha

pK *ngapiri ‘father’ Ar: apitji

pK *ngarnka ‘beard’ Wn: ngarnka [cf. Ad, Nu, Pa ngarnka ‘beard’]

pK *ngathu ‘1sg erg’ Wn, Ar: athu

pK *ngunku ‘chewing tobacco’ Wn, Ar: ngunku

pK *ngurra ‘camp’ Wn, Ar: ngurra

pK *nhampa ‘to bury’ Wn: nhampa

pK *nhupa ‘spouse’ Wn, Ar: nhupa

pK *paku- ‘to dig’ Wn, Ar: paka- [Ad vaku- ‘to build, construct’]

pK *pampu ‘egg’ Wn, Ar: papu

pK *pani ‘none’ Wn: padni

pK *paratji ‘light’ Wn: paratji , Ar: paru

pK *parta ‘to hold’ Wn, Ar: parta
For these reasons I do not believe that Arabana and Wangkangurru are to be grouped into the same immediate genetic grouping as Karnic, although it is clear that they are related at a more distant level.

7. **Conclusions**

In this paper we have presented a series of arguments about the classification of Lake Eyre languages and suggested that all the eastern Lake Eyre languages belong to a Karnic subgroup. This is further subgrouped into Central Karnic and Western Karnic. Several hundred reconstructions supporting this analysis are given and a number of changes in the daughter languages, including development of a voicing contrast for stops, are traced.

It is likely that further research will see the refinement and modification of the reconstructions presented here, but this paper can serve as a first step towards the establishment of a lower level grouping of the Pama-Nyungan languages.
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Appendix 1: Reconstructions

1. Proto Western Karnic

Reconstructions with reflexes in Diyari (Di), Ngamini (Ng) and Yarluyandi (Yl) only.

*tampu ‘round’ Di, Ng, Yl: dampu
*tanga. ‘chase away’ Di, Ng, Yl: danga
*tapa ‘sore’ Di, Ng, Yl: dapa
*tiitjithandrra ‘star’ Di, Ng, Yl: ditjithandrra
*kaka ‘mother’s brother’ Di, Ng, Yl: kaka;
*kangu ‘sweat’ Di, Ng, Yl: kangu
*karlka- ‘wait for’ Di: karlka-; Ng: karka-; Yl: karlka-
*kilpa ‘cold’ Di: kilpa; Ng: kirpa; Yl: kilpa
*kumarrhi ‘blood’ Di, Ng, Yl: kumarrhi
*kunankarri ‘south’ Di, Ng: kunankarri; Yl: kunan.garri
*kuru ‘stealth’ Di, Ng, Yl: kuru
*mani ‘get’ Di, Ng, Yl: mani
*marnathandrra ‘tooth’ Di, Ng, Yl: marnathandrra
*maru ‘black’ Di, Ng, Yl: maru
*miriwiri ‘maggot’ Di, Ng, Yl: miriwiri
*mulhaparra ‘pigeon’ Di, Ng, Yl: mulhaparra
*murruwa- ‘scratch’ Di, Ng, Yl: murruwa-
*nanda- ‘hit’ Di: nandrra-; Ng: dandrra-; Yl: nanta- [also Thirrari dandrra-]
*ngaka ‘flow’ Di, Ng, Yl: ngaka
*ngama- ‘sit’ Di, Ng: ngama- Yl: ngunhi-
*nganthe ‘meat’ Di: nganthe; Ng, Yl: nganthe
*ngayani ‘1plincl nom’ Di: ngayani; Ng: ngayini; Yl: ngayani
*ngayaninha ‘1plincl acc’ Di: ngayaninha; Ng: ngayininha; Yl: ngayaninha
*nguna ‘arm’ Di, Ng, Yl: nguna
*ngurrhamuku ‘shin’ Di, Ng, Yl: ngurrhamuku
*pakarna ‘also’ Di, Ng, Yl: pakarna
*pantu ‘lake’ Di, Ng: pantu
*pardaka- ‘carry’ Di, Ng, Yl: pardaka-
*parlka- ‘travel’ Di: parlka-; Ng: parka- “run”; Yl: parlka-
*parra hair’ Di, Ng, Yl: parra
*patharra ‘box tree’ Di, Ng, Yl: patharra
*pira ‘moon’ Di, Ng, Yl: pira
*pitji ‘bark’ Di, Ng, Yl: pitji
*putha ‘shallow’ Di, Ng, Yl: putha
*tharra ‘thigh’ Di, Ng, Yl: tharra
*wana ‘yamstick’ Di, Ng: wana; Yl: mangka
*wapa- ‘go’ Di, Ng, Yl: wapa-
*warda ‘which’ Di, Ng, Yl: warda
*warra- ‘throw’ Di, Ng, Yl: warra-
*wayi- ‘cook’ Di, Ng: wayi-; Yl: kula-
*wilha ‘woman’ Di, Ng, Yl: wilha
*wilhapirna ‘old woman’ Di, Ng, Yl: wilhapirna
*yantakarra ‘west’ Di, Ng: yantakarra
*yarrha ‘that way’ Di: yarrha Ng, Yl: yirrha
*yarrkj- ‘bum’ Di, Ng, Yl: yarrki-
*yika ‘squeeze’ Di, Ng, Yl: yika
2. Proto Central Karnic
Reconstructions with reflexes in Diyari, Ngamini, Yarluyandi, Yandruwandha (Ya), Yawarrawarrka (Yw), Mithaka (Mi), Karuwali (Ka).

*taka* ‘to pierce’ Di: *daka*; Ya: *drraka*
*tama- ‘to Cut’ Di, Ng, Yl: *dama-*. Ya, Yw: *drama-
*tampu* ‘testicles’ Ng, Yl, Ya, Mi: *dampu*
*thanu* ‘soft’ Di, Ya, YwR: *danthu*
*tarla* ‘skin’ Di, Yl, Ya, Yw: *darla*; Ng: *karla*; Mi: *ngarla*; Ka: *karla*
*tarnka- ‘to find’ Di, Ng, Yl, Ya, YwR: *darnka-
*tarrpa- ‘to sweep’ Di, YaR, YwR: *darrpa-
*tika- ‘to name’ Di, Ng: *drika-
*tanthu* ‘soft’ Di: *dampu*
*tara* ‘soft’ Di, Ya, YwR: *drrika-
*tina* ‘to rub, scrape’ Di, Ng: *dinka-
*tinga* ‘to rub, scrape’ Di, Ng: *drringa-
*tiftii* ‘sun’ Di, Ng, Yl: *ditjii*; Ya, Yw: *drritjii-
*titijpa- ‘to dry in sun’ Di: *ditijpa-*; Ya *drritijpa-
*tuka- ‘to take out’ Di: *dukara-*. Ya: *duka-
*tundyi- ‘sprain’ Di, NgR: *dulyi-*. YaR, YwR: *drrulyi-
*turtka- ‘to emerge’ Di, Ng, Yl, Ya: *durnka-
*kalda* ‘salty’ Di, Ng: *kaldri*; Yl: *kaldi*
*kala* ‘already’ Ng, Yl, Ya: *kali*
*kalka* ‘yesterday’ Ng, Yw: *kalka*; Di: *kalkawarrha*
*kami* ‘father’s mother’ Di, Ng, Yl, Ya, Yw: *kami*
*kangka* ‘mother’ Di, NgR, Yak, YwR: *kangi*
*kaparrha* ‘root’ Di, Ng, YwR: *kaparrha*; Ya: *kaparrhi*
*kaparrha* ‘come here!’ Ng, Yl, Ya: *kaparrha*
*kapurrha* ‘armpit’ Di, Ng: *kapurrha*; Ya, Yw: *kapurrutja*
*kara* ‘might’ Di, Ng, Yl, Ya: *kara*
*kardi* ‘sister’s husband’ Di, NgR: *kardi*; Yak, YwR: *kardri*
*karla* ‘empty’ Di, NgR, Yak, YwR: *karla*
*karlipilhi* ‘butterfly’ Di, Ng, Ya, YwR: *karlipilhi*
*karlu* ‘rushes’ Di, YaR, YwR: *karlu*
*karrri- ‘to chase’ Di, Ng, Yl, Ya, YwR: *karrri-
*karrtji- ‘to turn’ Di, NgR, Yak, YwR: *karrtji-
*kawalka* ‘crow’ Di, Ng, Yl, Ya, Mi: *kawalka*
*kingka- ‘to laugh’ Di, Ng, Yl: *kingka-*. Ya: *yingka-*. Mi: *kingki-
*kingkalyari- ‘to overflow’ Di, NgR, YaR, YwR: *kingkalyari-
*karta* ‘boom’ Di, Yak, YwR: *karta*
*kukunka* ‘kite hawk’ Di, Ng, Ya: *kukunka*
*kirdakirda- ‘to sigh’ Di, NgR, YaR, YwR: *kirdakirda-
*kuldrurr ‘top of spine’ Di, NgR, YaR, YwR: *kuldrur-
*kuma- ‘bundle’ Di, NgR, YaR, YwR: *kuma*
*kunda- ‘to dance (of women)’ Di, YaR, YwR: *kunda-*. NgR: *kumu-
*kundrurrundurr ‘cough’ Di, Ng, Ya, YwR: *kundrurrundurr-
*kunampira* ‘wild tomato’ Di, NgR, Yak, YwR: *kunampira*
*kungka- ‘to limp’ Di, NgR, YwR: *kungka-
*munmi* ‘haze’ Di, NgR, Yak, YwR: *munmi*
*kurlu ‘smell’ Di, NgR, YaR, YwR: *kurlu*
*kurlirrka- ‘to clean’ Di, NgR, YwR: *kurlirrka-
*kurlunga- ‘to jump’ Di, Mi: *kurlunga-*. Ng, Yl: *kurlkuma-*. Ya: *kurlkupa-
*kurluwa ‘needlebush’ Di, NgR, Yak, YwR: *kurluwa*
*kurnpa- 'to caress' Di, YaR, YwR: kurnpa-; NgR: kurnpu-
*kurnu ‘one’ Di, Ya, Yw, Mi: kurnu
*kurra ‘hoarse’ Di, NgR, YaR, YwR: kurra
*kurrhikira ‘rainbow’ Di, NgR, YaR, YwR: kurrhikira
*kurritharrha- ‘to forget’ Di, NgR, YaR, YwR: kurritharrha-
*kurrukurru ‘secret’ Di, NgR, YaR, YwR: kurrukurru
*kurra ‘hoarse’ Di, Ng, Yl, YaR, YwR: kurra
*kurrhikira ‘rainbow’ Di, NgR, YaR, YwR: kurrhikira
*kurritharrha- ‘to forget’ Di, NgR, YaR, YwR: kurritharrha-
*kurrukurru ‘secret’ Di, NgR, YaR, YwR: kurrukurru
*malkamalka ‘striped’ Di, Ng, Yak: malkamalka; Yw: matjamatja
*malthi ‘cool’ Di, Ng, Yl, Mi: malthi; Ya: malthi “cold”
mama- ‘to take back’ Di, NgR, Yak, YwR: mama-
mankarrha ‘girl’ Di, NgR, Yak; Ya: man.garrhi; Yw: man.garrha
*manu ‘mind’ Di, NgR, YaR, YwR: manu
*maranguka- ‘to help’ Di, Yak, YwR: maranguka-; Ng: maranguku-
*mardha ‘stone’ Di, Ng: mardha; Yl: marta; Ya, Yw, Mi, Ka: mardrra
*mardi ‘heavy’ Di, Ng: mardi; Ya: mardrri
*mardu ‘taste’ Di, Ng, Ya, Yw: mardu
*marlka ‘mulga tree’ Di, Ya: marlka
*marna ‘mouth’ Di, Ng, Yl, Ya, Yw: marna
*marndikila ‘wave’ Di, NgR, YaR, YwR: marndikila
*marrka ‘steady’ Di, YaR, YwR: marrka
*marrha ‘new’ Di, NgR, YaR, YwR: marrha
*marrhu ‘wide’ Di, Ng, YwR: marrhu
*marrka ‘camping out’ Di, NgR, YaR, YwR: marrka
*marrka ‘to crawl’ Di, Ng, Yl, Ya: marrka
*marrtji- ‘to scream’ Di, NgR, YwR: marrtji-
*matia- ‘to bite’ Di, Ng, Yl, Ya, Yw, Mi: matia-
mawa ‘hunger’ Di, Ya, Yw: mawa; Ng, Yl: muwa; Mi: mangka wapi
*milamila ‘mirage’ Di, NgR, YaR, YwR: milamila
*milki ‘eye’ Di, Yl, Mi, Ka: milki; Ng: mirki; Ya, Yw: mitji
*mjintij- ‘to shine’ Di, YaR, YwR: mjintij-
*multhipa- ‘to sprinkle’ Di, NgR, YaR, YwR: multhipa-
*muntju ‘fly’ Ya, Yw: mundju; Di, Ng, Yl: muntju
*mungara ‘soul’ Di, NgR, YaR, YwR: mungara
*muntha ‘self’ Di, NgR, YaR, YwR: muntha
*murrku ‘muddy’ Di, NgR, YaR, YwR: murrku
*muva ‘dry’ Di, Ng, Yw: muva
*ngakarni ‘lsg dat/purp’ Di, Ng, Yl, Ya: ngakarni
*ngamurru ‘almost’ Di, Ng, Yw: ngamurru
*ngana ‘to be’ Di, Ng, Yl, Ya, YwR: ngana
*ngapaka- ‘to make’ Ng: ngapaka-; Di, Yl: nganka-; Ya: ngana-
*ngandi ‘mother’ Yl: ngandi; Di, Ng, Ya, Yw: ngandrrri; Ka: nganditja
*ngapu ‘quiet’ Di, Ng, Ya: ngapu
*ngara ‘heart’ Di, Ng, Yl, Yw: ngara
*ngarda then’ Di, NgR: ngarda; YaR, YwR: ngardrrra
*ngari- ‘to go down’ Di, Ng, Yl, Ya, Mi: ngari-
*ngaru ‘echo’ Di, NgR, YaR, YwR: ngaru
*ngatharra ‘younger sibling’ Ng, Yl, Mi, Ka: ngatharra; Ya, Yw: ngatharra; Di: ngathata
<table>
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<td>to beg</td>
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3. Proto Karnic

Reconstructions with reflexes in Diyari, Ngamini, Yarluyandi, Yandruwandha, Yawarrawarrka, Mithaka, Karuwalji, Wangkumarra (Wm), Pitta-Pitta (Pp).

*tarrha- ‘to ignite’ Di, Ng, Yl, Ya: *darrha-; Yl: *darrhaka-; Pp: *tarrhi- “boil”
*kuku ‘elder sister’ Di, Ng, Ya, Yw, Mi, Ka, Pp: *kaku
*kalhu ‘liver’ Di, Ng, Yl, Ya, MI: *kalhu; Pp: *kalu
*kalta ‘blue-tongue lizard’ Di, Ng, Yl, Ya, Wm: *kalta
*kalumpa ‘clover’ Wm: *kalumba; Di, Pp: *kalumpa
*kanku ‘boy’ Yl, Wm: *kan.gu; Di, Ng: *kanku
*kanti ‘spinifex wax’ Di, Ng: *kandrri; Pp: *kanthi
*kanyini ‘mother’s mother’ Ng, Yl, Ya, Yw, Mi, Ka, Pp: *kanyini; Wm: *kanyidja; Di: *kanhini
*kari ‘river’ Di, Yl, Ya: *karirrhi; Mi: *karitjurru; Pp: *karitjurru “waterhole”
*karlathurrha ‘wild turkey’ Di, Ng, Mi: *karlathurrha; Wm, Pp: *kalathurra
*karna ‘person’ Di, Ng, Yl, Ya, Yw, Mi, Ka, Pp, karna
*karrha- ‘to tie’ Di, Ng, Yl, Ya, Yw, Pp,  *karrha-; Wm: *karrhi-
*karrhavara ‘eaglehawk’ Di, Ng, Yl, Wm: *karrhavara; Ya: *karrhawa; Yw: *karrawa
*karrhukarrhu ‘old man’ Ya, Yw, Mi, Ka, Wm: *karrhukarrhu; Ng: *karrkarrhu; Yl: *kakarrhu
*karrka- ‘to call out’ Di, Ya, Pp: *karrka-; Wm: *karrki-
*karrpa- ‘to sew’ Di, Ng, Ya, Yw, Wm: *karrpa-; Yl: *karrpa- “tie up”
*kata ‘louse’ Di, Ng, Yl, Mi: *kata; Pp: *kata “tick”; Y, YwR: *kadra
*kathi ‘meat’ Ya, Yw, Mi, Pp: *kathi
*kathi- ‘to climb’ Di, Ng, Yl, Yw, Mi, Pp: *kathi-
*kila ‘galah’ Di, Ng: *kilankila; Mi: *kilanggi; Wm: *kilambara; Pp: *kilantji
*kipa, ‘raw’ Ng, Ya, Pp: *kima
*kintha ‘shrimp’ Di, Ng, Ya: *kintha; Pp: *kintharlu; Wm: *thintha
*kiira ‘boomerang’ Di, Ng, Yl: *kirra; Mi, Pp: *tjirra; Yw: *tjarrha; Ya: *yarrha
*kirri ‘clever’ Di, Ng, Ya, YwR, Pp: *kirri
*kuku ‘back’ Mi, Pp: *kuku; Di, Yl: *thuku
*kunda ‘faeces’ Di, Ng, Yl, Ya, Yw, Mi, Ka, Wm, Pp: *kunda
*kungku ‘head’ Yl, Mi, Ka: *kungku; Ya, Yw: *kungka; Wm: *kuka
*kunki ‘doctor’ Di, Ng, Yl, Ya: *kunki; Wm: *kunki “ghost”
*kunthi ‘mosquito’ Di, Ng, Yl, Ya, YwR, Mi, Ka, Pp: *kunthi
*kurntikurnti ‘crooked’ Di, Ng, YwR, Wm: *kurnndi; Pp: *kurntikurnti; Ya: *kurdikurdi
*kurrha- ‘to put down’ Di, Yl, Ya, Yw, Mi: *kurrha-; Pp: *kurrhala- “drop”; Ng: *kurrhu-
kurrri ‘mussel’ Di, Ng, Yl: *kurri; Pp: *kurrijja
*kurrparu ‘magpie’ Di, Ng, Pp: *kurrparu
*kutii ‘swan’ Di, Ng, Yl, Pp: *kuti; Ya: *kudri
*kuyamarrha ‘dogwood tree’ Wm, Pp: *kuyamarrha; Di: *kuyamarrha “stick”
*maka; *thurrhu ‘fire’ Ya, Yw, Pp: *maka; Di, Ng, Yl, Mi, Ka: *thurrhu
*makamaka ‘hot’ Ng, Ya, Pp: *makamaka
*malka ‘mark’ Di, Ng, Ya, Wm, Pp: *malka; YwR *matja
*mara ‘hand’ Di, Ng, Yl, Ya, Yw, Mi, Ka, Wm, Pp: mara
*marni ‘fat’ Di, Ng, Yl, Ya, Yw, Ka, Wm: marni
*matja ‘long ago’ Ya, YwR, Wm: matja; Di: matja “already”
mimi ‘lip’ Di, Ng, Yl, Ya, Wm: mimi
*minta; *pirta ‘navel’ Ya: mindra; Wm: mindra “man’s navel”; *pirnta “woman’s navel”; Di, Ng: pirda
*mingka ‘hole’ Ya, Mi: mingga; Di, Ng, Yl, Pp: mingka
*minha ‘what’ Di, Ng, Yl, Ya, Yw, Wm, Pp: minha
*mirrtja ‘noise’ Di, Ng, Ya: mirrtja; Wm: ilja
*muka ‘sleep’ Di, Ng, Yl, Ya, Mi: muka; Wm: muga
*muku ‘bone’ Di, Yl, Ya, Yw, Wm: muku
*mulha ‘nose’ Di, Ng, Yl, Ya, Yw, Mi, Ka, Wm: mulha; Pp: milya
*murta- ‘stop, finish’ Di, Ya, YwR: murda-; Ng: murdu-; Wm muru-
murlu ‘crab’ Di, Ng, Pp: murlu; Mi: marlu
*murna ‘chest’ Ka, Wm, Pp: murna; Ya: murnathitha; Yw: murnakaldra; Di, Ng, Yl: murnampirri
*murramurrhu ‘rough’ Di, Pp murrumurrhu; Wm murrhu
*ngalta ‘1dlincl nom’ Di, Ya, Yw: ngaldra; Wm: ngala; Ng, Yl: ngalku
*ngaltanka ‘1dlincl acc’ Di, Yw: ngaldranha; Wm: ngalanha; Ya: ngalunha; Ng, Yl: ngalkunha
*ngaltangka ‘1dlincl dat/purp’ Di, Yw: ngaldrrarni; Ya: ngalungga(ni); Wm: ngalanga(ni); Ng: ngalkungka; Yl: ngalkungga
*ngali ‘1dlexcl nom’ Di, Ng, Yl, Ya, Yw, Ka, Wm, Pp: ngali
*ngalingka ‘1dlexcl dat/purp’ Yl: ngalingga; Ya: ngalingga(ni); Ng: ngalingka; Wm: ngalingga(ni); Pp: ngalinga; Di, Yw: ngalirni
*ngalinha ‘1dlexcl acc’ Di, Ng, Yl, Ya, Yw, Wm, Pp: ngalinha
*ngalja ‘saliva’ Di, Ng, Yl, Ya, Yw, Wm, Pp: ngalja
*ngama ‘breast’ Di, Ng, Yl, Ya, Yw, Mi, Ka, Wm: ngama; Pp: ngamanya
*ngampurrhu ‘yellow-belly fish’ Ng, Yl, Ya, Mi: ngampurrhu; Wm: ngampurrha
*ngana ‘1plexcl nom’ Wm: ngana; Wm: ngana(ni); Pp: ngarnha; Ya, Yw: ngani; Di: ngayana; Ng, Yl: nganyurr
*nganangka ‘1plexcl dat/purp’ Wm: nganangga(ni); Pp: ngarnangga; Ya: nganungga(ni); Wm: nganunga; Ng: nganyurrlungga; Yl: nganyurrungga; Di: ngayanarni
*ngananh ‘1plexcl acc’ Wm: ngananhka; Pp: ngarnanhka; Ya, Yw: nganinha; Di: ngayananha; Ng, Yl: nganyurrunnaha
*ngantja-; *yura- ‘to want’ Di, Ng: ngantja-; Wm: ngandja-; Yl, Ya: yura-; Mi: yuri-
*nganta ‘1plincl nom’ Ya, Yw, Wm: ngandra
*ngantangka ‘1plincl dat/purp’ Wm: ngandrranka(ni); Wm: ngandrrarni; Ya: nganungga(ni)
*ngantanka ‘1plincl acc’ Yl, Wm: ngandranha; Ya: nganunha
*nganha ‘lsg acc’ Di, Ng, Yl, Ya, Yw, Mi, Wm: nganha; Pp: nganya
*nganyi ‘lsg nom’ Ng, Yl, Ya, Yw, Mi, Ka, Wm: nganyi; Di: nganhi; Pp: nganja
*ngapa ‘water’ Di, Ng, Ya, Yw, Mi, Ka: ngapa; Wm: ngapu
*ngapiri ‘father’ Di, Yl, Ya, Mi, Ka: ngapiri; Ng: ngapiri; Pp: yapiri
*ngara-; *pangka- ‘to hear’ Di, Ng, Ya, Wm: ngara-; Yl: panga-; Wm: panga-; Pp: planka; Mi, Ka: pangki-
*ngarta ‘mother’s father’ Di, Ng, Yl: ngardarada; Wm: ngardra; Mi: ngarta; Pp: ngartara
“father’s father”
*ngartu ‘nardoo’ Di, Ng, Yl, Ya: ngardu; Pp: ngartu
*ngarka ‘beard’ Yl, Ya: ngarrra; Di, Ng, Ka: ngarka; Wm, Pp: nganka
*ngarrhimatha ‘flood’ Di: ngarrhimatha; Wm: ngarimatha; Pp: ngarrhimantha; Ng, Yl: ngarrhumatha
*ngatha ‘child (father speaking)’ Di: ngathamurrha; Yl: ngathapalki; Ya: ngathalki; Pp: ngathapiyaka
*ngathani ‘child (mother speaking)’ Di, Ng, Yl, Ya, Yw: ngathani; Pp: ngathari
*ngathu ‘3sg erg’ Di, Ya, Yw, Mi, Ka, Wm: ngathu; Ng, Yl: ngathi
*ngunku ‘chewing tobacco’ Di, Ng, Wm, Pp: ngunku
*nguntji ‘to give’ Pp: nguntji; Wm: ngutja; Ya, Yw: ngunyi
*ngurlu ‘forehead’ Di, Ng, Yw, Wm, Pp: ngurlu
*ngurra ‘camp’ Di, Ng, Ya, Yw, Ka, Wm, Pp: ngurra
*nhampa- ‘to bury’ Yl, Mi, Wm: nhampa-; Ya, Yw: nhamba-
*nhanu ‘3sgfem erg’ Ng, Yl: nhanu; Di, Ya, Yw: nhandum; Wm: nhandum; Pp: nhantu
*nhangkarni ‘3sgfem dat/purp’ Di, Ng, Yl: nhangkarni; Ya: nhanggani; Wm: nhangka(ni); Pp: nhankari
*nhanha ‘3sgfem acc’ Di, Ng, Yl, Ya, Yw, Wm: nhanha; Pp: nhana
*nhan ‘3sgfem nom’ Di, Ya, Yw, Ka, Wm: nhan; Ng, Yl, Pp: nhap
*nhawu ‘3sgmasc nom’ Di, Ka: nhawu; Ng, Yl: nhapa; Ya, Yw: nhumu; Pp: nhuwa; Wm: nhiya
*nhinha ‘3sgmasc acc’ Di, Ng, Yl, Ka, Wm: nhinha; Ya, Yw, Pp: yinha
*nhulu ‘3sgmasc erg’ Di, Ya, Yw, Wm, Pp: nhulu; Ng, Yl: nhulpa
*nhungkarni ‘3sgmasc dat/purp’ Di, Ng, Yl: nhungkarni; Wm: nhungka(ni); Ya: nhunggani; Yw: nhungkun; Ka: nhukarni; Pp: nhukari
*nhupa ‘spouse’ Wm: nubadja; Ya: nhiha; Di: nhuwa; Ng, Yl, Mi, Ka: nhiwa
*nyangi ‘moon’ Ya, Yw, Mi, Pp: nyangi
*paku- ‘to dig’ Di, Ya, Yw: paku-; Pp: paka-
*pali- ‘to die’ Di, Ng, Yl, Ka: pali-; Wm: palu-; Ya: paldrri-
*palka- ‘to split’ Di, Ng, Pp: palka-
*pampu ‘egg’ Ng, Yl, Ya, Yw, Mi, Ka, Pp: pampu
*papi ‘none’ Di, Ya: pani; Pp: pani “cannot”
pangka-; *nagara- ‘to hear’ Yl: pangga-; Yw: panga-; Pp: pangka-; Mi, Ka: pangki-; Di, Ng, Ya, Wm: ngara-
*paratji ‘light’ Di, Ng, Ka: paratji; Pp: paratji “flame”
*parta- ‘to hold’ Di, Ng: parda-; Yl, Pp: parta-; Ya, Mi, Ka: pardra-
*parnti- ‘to hit’ Yl: parnti-; Ya, Yw, Mi, Wm: parnteri-
*parra ‘stupid, mad’ Di: parrhawara; Wm: parra; Pp: parrawangku
*parrkulu ‘two’ Yl, Ya, Yw, Mi, Ka, Wm: parrkulu; Di: parrkulu “three”; Pp: parrkula; Ng: parrkuna
*parru ‘yellow ochre’ Di, Ng, Ya, YwR, Pp: parru
*parta *pulyurrhu ‘mud’ Ng, Yl, Mi, Pp: parta; Di, Ya: pulyurrhu; Wm: pulyurrha
*paya ‘bird’ Di, Ng, Yl, Mi, Pp: payer
*philpa ‘eyebrow’ Di, Ng, Yl, Ya: philpa; YwR pitpa; Pp: philpa “forehead”
*pinti ‘grasshopper’ Di, Ng: pintiri; Wm: pintirinya; Pp: pintilya
*pirta; *mintu ‘navel’ Di, Ng: pirta; Wm: pirnta “woman’s navel”, mindra “man’s navel”; Ya: mindra
*pirli ‘dilly bag, net’ Di, Ng, Yl, Ya, YwR, Wm: pirli
*pitipirri ‘pitchere’ Di, Ng, Pp: pitipirri; Wm: pitipiri
*pula ‘3d! nom’ Di, Ya, Yw, Wm, Pp: pula; Ng, Yl: pulku
*pulangka ‘3dl dat/purp’ Yw: pulanggu; Wm: pulangani; Pp: pulanga; Di: pularni; Ng: pulungkku; Yl: pulungga; Ya: pulgani
*pulanka ‘3dl acc’ Di, Wm, Pp: pulanka; Ya, Yw: pulku; Ng, Yl: pulkuna
*pulyurrhu; *parta ‘mud’ Di, Ya: pulyurrhu; Wm: pulyurrha; Ng, Yl, Mi, Pp: parta
*purra ‘urine’ Ng, Yl, Ya, Yw, Mi, Pp: purra; Wm: yura
*purrhalku ‘brolga’ Di, Ng, Yl, Ya, Mi, Pp: purrhalku
*thaka ‘clay’ Di, Ng, Ya: thaka; Wm: thaka “ground”; Pp: thakarra “plain”
thampangarra ‘pelic’ Di, Ng, Pp: thampangarra
*thana ‘3pl nom’ Di, Ng, Yl, Ya, Yw, Wm, Pp: thana
Appendix 2: Index of reconstructions

1dl excl acc pK *ngalinha
1dl excl dat/purp pK *ngalingka
1dl excl nom pK *ngali
1dl incl acc pK *ngaldanha
1dl incl dat/purp pK *ngaldanga
1dl incl nom pK *ngalda
1pl acc pK *yurranha
1pl excl acc pK *ngananhha
1pl excl dat/purp pK *nganangka
1pl excl nom pK *ngana
1pl incl dat/purp pK *ngyaninha, pK *ngantanha
1pl incl nom pK *nganya
1sg acc pK *nganya
1sg dat/purp pK *ngakarni
1sg erg pK *ngathu
1sg nom pK *ngangyi
2dl acc pK *yulanha
2dl dat/purp pK *yulangka
2dl nom pK *yula
2pl dat/purp pK *yurra
2pl nom pK *yurra
2sg acc pK *yina
2sg dat/purp pK *yungkarni
2sg erg pK *yuntu
2sg nom pK *yini
3dl acc pK *pulanha
3dl dat/purp pK *pulangka
3dl nom pK *pula
3pl acc pK *thaninha
3pl dat/purp pK *thanangka
3pl nom pK *thana
3sg fem acc pK *nhanha
3sg fem dat/purp pK *nhangkarni
3sg fem erg pK *nhaatu
3sg fem nom pK *nhaani
3sg masc acc pK *nhinha
3sg masc dat/purp pK *nhungkarni
3sg masc erg pK *nhulu
3sg masc nom pK *nhawu
afraid pK *yaha
alive pK *thipi
almost pK *ngamu
already pK *kali
also pK *pakarna
annoy, to pK *yupa-
anus pK *piiti
arm pK *nguna
armpit pK *kapurrha
ashes pK *thurru
ask, to pK *yaka-
back pK *kuku
back, to carry on pK *thuka-
back, to take pK *mama-
bad pK *malhatjii
bark pK *piti
be, to pK *ngana-
beard pK *ngarnka
beg, to pK *ngaiji-
big pK *pirna
bird pK *paya
bite, to pK *matha-
black pK *maru, pK *tjimp
blind pK *putju
blood pK *kunarrhi
blow, to pK *pulku-
blue-tongue lizard pK *kalta
body pK *pariku
bone pK *muku
boom pK *karta
boomerang pK *kirra
box tree pK *patharra
boy pK *kanku
breast pK *ngama
bring, to pK *waiha-
brologa pK *purrhalku
brother, elder pK *nhyu
brother, mother's pK *kaka
bundle pK *kuma
burn, to pK *yarrki-
bury, to pK *nhampa-
butt pK *warta
butterfly pK *karlipihi
call, to pK *tiika-
call out, to pK *karrka-
camp pK *ngurra
camping out pK *marka
caress, to pK *kurnpa-
carpet snake pK *wama
carry, to pWK *pardaka-
carry on back, to pCK *thuka-
cat fish pK *wakowakwa
caterpillar pCK *panga
centipede pCK *thilthirri
chase, to pCK *karri-
chase away, to pWK *tanga-
chest pK *murna
chewing tobacco pK *ngunku
child (father's) pK *ngatha
child (mother's) pK *ngathani
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cloven pK *kalumpa
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come here! pCK *kaparrha
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cooked pCK *pandrra
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copulate, to pCK *thani-
corroboree pK *wani
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crab pK *murru
crawl, to pCK *marrka-
crooked pK *kurntikurnti
crow pCK *kawalka
cry, to pCK *yungki-
cut, to pCK *tama-
dance (of women), to pCK *kuma-
dead pCK *nharri
die, to pK *pali-
dig, to pK *paku-
dilly bag pK *pirli
doctor pK *kunki
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down, to lie pCK *parrha-
down, to go pCK *ngari-
down, to put pK *kurrrha-
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drive away, to pCK *nharrha-
dry pCK *muya
dry in sun, to pCK *titjipa-
dust pCK *puthurrhu
eaglehawk pK *karrhawara
ear pCK *tharlp
east pK *thirriwia
eat, to pCK *thayi-
echo pCK *ngaru
egg pK *pampu
elbow pCK *thinhipirri
elder brother pCK *nhuyu
elder sister pK *kaku
emerge, to pCK *turnka-
empty pCK *karla
emu pK *warrhukatji
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eye pCK *milki
eyebrow pK *pilpa
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fat pK *marni
father pK *ngapi
father, mother's pK *ngarda
father's mother pCK *kami
father's sister pCK *papa
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find, to pCK *tanka-
fingernail pCK *pirri
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get, to pWK *man-
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give, to pK *nguntji-
go, to pWK *wapa-
go down, to pCK *ngari-
grain pCK *kantha
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grow, to pCK *purnka-
hair pWK *parra
hand pK *mara
hawk, kite pCK *kukunaka
haze pCK *kurumi
head pK *kungku
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heart pCK *ngara
heavy pCK *mardi
help, to pCK *maranguka-
here pCK *nhingki
hit, to pWK *nanda-
hit, to pK *parnti-
hoarse pCK *kurra
hold, to pK *parda-
hole pK *mingka
hole pK *wirlpa
hot pK *makamaaka
hungry pCK *mowa
husband, sister's pCK *kardi
ignite, to pK *arrha-
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itch pCK *pununu
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kangaroo pCK *tjukurrhu
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lake pWK *parntu
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light pK *parntji
limp, to pCK *kungka-
lip pK *mimi
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lizard, blue-tongue pK *kalta
long pCK *payirrri
long ago pK *matja
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lung pCK *pununga
mad pK *parrha
maggot pWK *miriwi
magpie pK *kurrparu
make, to pCK *nganaka-
man, old pK *karrhukarrhu
mark pK *malka
marrow pCK *thurintji
meat pWK *nganthi, pK *kathi
might pCK *kara
mind pCK *manu
mirage pCK *milamila
moon pWK *pira, pK *nyangi
mosquito pK *kunthi
mother pCK *ngandi
mother, father's pCK *kami
mother, mother's pK *kanyini
mother's brother pWK *kaka
mother's father pK *ngarda
mother's mother pK *kanyini
mouth pCK *marna
mud pK *parta, *pulyarrhu
muddy pCK *murrku
mulga tree pCK *marika
mussel pK *kurri
naked pCK *parlu
name, to pCK *ika-
nape pCK *wakarrha
nardoo pK *ngardu
narrow pCK *swulru
navel pK *pirda, *minta
needlebus pCK *kurluwa
nest pCK *warla
net pCK *pirri
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no pK *walya
noise pK *mirrja
none pK *pani
north pK *thinankarra, *walpangkarrha
nose pK *mulha
ochre, yellow pK *parru
old man pK *karrhukarrhu
old woman pWK *wilhapirra
one pCK *kurnu
orphan pCK *ngamurrhu
out, to take pCK *tuka-
overflow, to pCK *kingkalyari-
pelican pK *thampangarra
person pK *karna
pierce, to pCK *taka-
pigeon pWK *mulhapparra
pinch, to pK *milka-
pitchere pK *pijitirri
possum pCK *pilda
push, to pCK *tharda-
put down, to pK *kurrha-
quiet pCK *ngapu
rainbow pCK *kurrhikira
raw pK *kimpa
return, to pK *thika-
rib pCK *pangki
river pK *karirrhi
road pCK *palthu
rock wallaby pCK *kantu
root pCK *kaparrha
rotten pK *thungka
rough pK *murrhumurrhu
round pWK *tampu
rub, to pCK *tinga-
rushes pCK *karlku
saliva pK *ngalja
salty pCK *kaldi
sated pCK *yartu
scratch, to pWK *murrwa-
scream, to pCK *marriji-
search, to pK *wanthi-
secret pCK *kurrukurru
self pCK *muntha
send, to pCK *yinpa-
sew, to pK *karra-
shallow pWK *putha
shame pCK *nhinhia
shin pWK *ngurramuku
shine, to pCK *mintjii-
short pK *warna
shrimp pK *kintha
sibling, younger pCK *ngatharra
sigh, to pCK *kirdakirda-
sinew pCK *thilija
sing, to pK *wangka-
sister, elder pK *kaku
sister, father's pCK *papa
sister's husband pCK *kardi
sit, to pWK *ngama-
skin pCK *tarla
sky pCK *parwilpa
sleep pK *muka
smell, to pCK *panthama-
smell pCK *kurli
smoke pK *thupu
snake, carpet pK *wama
soakage pCK *tjili
soft pCK *tanthu
sore pWK *tapa
soul pCK *mungara
south pWK *kunankarri
speak, to pK *yantha-
spider pCK *marankarri
spine, top of pCK *kuldrri
spinifex wax pK *kantu
split, to pK *palaka-
spouse pK *nhupa
sprain pCK *tulyi-
spinkle, to pCK *mulhipa-
squeeze, to pWK *yika-
stand, to pK *tharrka-
star pWK *tijithandarra
steady pCK *marnta
stealth pWK *kuru
stomach pK *thuntu
stone pCK *marda
stoop, to pCK *purri-
stop, to pK *murda-
striped pCK *maikamalka
stupid pK *parrha
sulky pK *yunka
sun pCK *titti
sweat pWK *kangu
sweep, to pCK *tarrpa-
tadpole pCK *yurndayurnda
take back, to pCK *mama-
take out, to pCK *tuka-
taste pCK *mardu
testicles pCK *tampu
that way pWK *yarrha
then pCK *ngarda
there pCK *nhaka
thigh pWK *tharra
thirst pCK *thardi
this way pCK *yarra
throat pK *yurlku
throw, to pWK *warra-
tie, to pK *karrha.
tobacco, chewing pK *ngunku
tomato, wild pCK *kunampira
tongue pK *thari
tooth pWK *marnathandra
top of spine pCK *kuldrru
travel, to pWK *parka-
tree, box pWK *patharra
tree, dogwood pK *kuyamarrha
tree, mulga pCK *marlka
trunk pCK *warta
turkey, wild pK *karlathurrha
turn, to pCK *karrji-
two pK *parrkulu
unripe pCK *purda
urine pK *purra
wagtail, willy pK *thinthinti
wait for, to pWK *karlka-
wallaby, rock pCK *kantu
want, to pK *nganija-, *yura-
water pK *ngapa
wave pCK *marndikila
wax, spinifex pK *kanti
west pWK *yantakarra
what pK *minha
when pK *winthha
which pWK *warda
whistle, to pK *wilpi-
who pK *warra
wide pCK *marrhu
wild tomato pCK *kunampira
wild turkey pK *karlathurrha
willy wagtail pK *thinthinti
woman pWK *wilha
woman, old pWK *wilhapirna

yamstick pWK *wana
yellow ochre pK *parru
yellow-belly fish pK *ngampurrhu
yesterday pCK *kalka
younger sibling pCK *ngatharra