Reconstructing Proto Koiarian
The history of a Papuan language family
Pacific Linguistics 610

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Reconstructing Proto Koiarian

The history of a Papuan language family

Tom Dutton

Pacific Linguistics
School of Culture, History and Language, College of Asia and the Pacific
in association with the Centre for Research on Language Change
The Australian National University
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Much of the data on which Tom Dutton’s comparative Koiari research is based was collected in the field in the 1960s, and the beginnings of Tom’s comparative work were presented for the first time at the Second International Conference on Papuan Linguistics in Madang in 1986. A further 24 years have elapsed, and one might be forgiven for wondering whether this publication doesn’t come a little too late. But the answer is, no, not at all. It comes at just the right time, when applications of the comparative method of historical linguistics to Papuan languages, and in particular to languages of the Trans New Guinea family (to which Koiarian belongs), are gaining momentum. ‘Papuan languages’ is a cover term for languages of New Guinea and the islands to its east and west which are neither Austronesian nor Australian.

In 2000 an international and interdisciplinary symposium entitled Papuan Pasts was held at the ANU. The symposium focused on the prehistories of people speaking Papuan languages, and the 2005 publication by Pacific Linguistics of an 817-page book of the same title, edited by Andrew Pawley and others and containing the symposium proceedings, gave a much needed boost to Papuan historical studies, previously overshadowed by the study of the prehistories of Austronesian and Australian speakers. Among many other contributions to the volume were two on the largest identifiable family of Papuan languages, the Trans New Guinea family. Pawley’s chapter outlined the chequered history of Trans New Guinea studies since the publication of McElhanon and Voorhoeve’s *The Trans-New Guinea phylum* in 1970, and summarised research published elsewhere showing that there is now lexical and morphological evidence for the family. My own contribution summarised the evidence of pronouns for this and other Papuan families.

Both papers approached the Trans New Guinea family from the top down, as it were, but an awareness has been growing among students of the Trans New Guinea languages that an approach from the bottom up is overdue. This would entail careful application of the comparative method to the numerous microgroups identified both by Stephen Wurm and his colleagues in publications in the 1960s and 1970s and by William Foley in his *The Papuan languages of New Guinea* (CUP 1986), followed by a collation of the results of these microgroup studies. *Papuan pasts* contained one such study, by Bert Voorhoeve on the Asmat-Kamoro, Awayu-Dumut and Ok languages, which built on earlier work by Alan Healey on the Ok and Awayu-Dumut families.

But the application of the comparative method to Trans New Guinea microgroups is finally bearing further offspring after so many years of gestation. Jacinta Smallhorn’s PhD on the Binandere family has recently been submitted for examination. Robyn Loughnane and Sebastian Fedden have examined the relationship between the Ok languages and Oksapmin. Edgar Suter, Don Daniels and Bevan Barrett are investigating the Huon–Finisterre, South Adelbert Range and Kainantu–Goroka microgroups respectively. None of this recent work has yet been published, however, and the publication of this slim volume by Tom Dutton provides a model of the precision which can and must be employed in applying the comparative
method to Trans-New Guinea microgroups and to Papuan microgroups generally. It is not that this publication is late, but that the work which it reports was so far ahead of its time. Its publication in 2010 is most opportune, and the editorial committee of Studies in Language Change is delighted with this addition to the series.

Malcolm Ross
February 2010
# Abbreviations

## Abbreviations of language names

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Language Name</th>
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<tbody>
<tr>
<td>BAR(N)</td>
<td>North Barai</td>
</tr>
<tr>
<td>BAR(s)</td>
<td>South Barai</td>
</tr>
<tr>
<td>BC</td>
<td>Baraic</td>
</tr>
<tr>
<td>KC</td>
<td>Koiaric</td>
</tr>
<tr>
<td>KOI</td>
<td>Koiari</td>
</tr>
<tr>
<td>KTA</td>
<td>Koita</td>
</tr>
<tr>
<td>MAN</td>
<td>Managalasi</td>
</tr>
<tr>
<td>MTN</td>
<td>Mountain Koiari</td>
</tr>
<tr>
<td>(or Mountain Koial)</td>
<td></td>
</tr>
<tr>
<td>OMI</td>
<td>Aomie or Òmie</td>
</tr>
<tr>
<td>PBC</td>
<td>Proto Baraic</td>
</tr>
<tr>
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<td>Proto Koiaric</td>
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<td>PKN</td>
<td>Proto Koiarian</td>
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## Other abbreviations

<table>
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<th>Abbreviation</th>
<th>Explanation</th>
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<td>adjective</td>
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<tr>
<td>BEN</td>
<td>benefactive</td>
</tr>
<tr>
<td>C</td>
<td>consonant</td>
</tr>
<tr>
<td>COND</td>
<td>conditional</td>
</tr>
<tr>
<td>CONJ</td>
<td>conjunction</td>
</tr>
<tr>
<td>DS</td>
<td>different subject following</td>
</tr>
<tr>
<td>F:</td>
<td>word-final (in sound correspondence tables)</td>
</tr>
<tr>
<td>I:</td>
<td>word-initial (in sound correspondence tables)</td>
</tr>
<tr>
<td>IMP</td>
<td>imperative</td>
</tr>
<tr>
<td>INSTR</td>
<td>instrument(al)</td>
</tr>
<tr>
<td>M:</td>
<td>word-medial (in sound correspondence tables)</td>
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<td>NP</td>
<td>noun phrase</td>
</tr>
<tr>
<td>N</td>
<td>noun</td>
</tr>
<tr>
<td>NOM</td>
<td>nominaliser</td>
</tr>
<tr>
<td>OBJ</td>
<td>object</td>
</tr>
<tr>
<td>OR</td>
<td>object reference suffix</td>
</tr>
<tr>
<td>O.S.</td>
<td>opposite-sex (sibling)</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>POSS</td>
<td>possessive</td>
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<td>PRED</td>
<td>predicative</td>
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<td>relative (clause marker)</td>
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<td>SEQ</td>
<td>sequential</td>
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<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>SR</td>
<td>subject reference suffix</td>
</tr>
<tr>
<td>SS</td>
<td>same subject following</td>
</tr>
<tr>
<td>S.S.</td>
<td>same-sex (sibling)</td>
</tr>
<tr>
<td>STG</td>
<td>something</td>
</tr>
<tr>
<td>V</td>
<td>verb</td>
</tr>
<tr>
<td>V-ED</td>
<td>verb-\textit{ed}, having done the action indicated by the verb</td>
</tr>
<tr>
<td>Vowel</td>
<td>vowel</td>
</tr>
<tr>
<td>VI</td>
<td>intransitive verb</td>
</tr>
<tr>
<td>VT</td>
<td>transitive verb</td>
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</table>


1 Background

In Dutton (1969) I proposed a Koiarian family consisting of six languages: Koita, Koiari, Mountain Koiari, Aomie (now Ömie), Managalasi and Barai. This family stretches from around Port Moresby on the southern coast of Papua New Guinea almost to the sea on the north coast at the eastern end of the Hydrographers’ Ranges (Figure 1). It is surrounded by other distantly related families of a common putative stock – Goilalan in the west, Binanderean in the north, Yareban, Manubaran and Kwalean to the east (Dutton 1975b).

The 1969 publication presented a preliminary account of the family and discussed the historical implications of the linguistic relationships between the members and of their present geographical distribution. It was based on the lexicostatistic analysis of apparent cognates in ‘basic’ vocabulary word lists collected from the member languages and such other linguistic and non-linguistic evidence as was then available.

The lexicostatistical evidence suggested that the Koiarian family consists of two sub-families:

- Koiaric (consisting of Koita, Koiari, and Mountain Koiari)
- Baraic (consisting of Ömie, Barai, and Managalasi).

Further, the percentages suggested that the languages of each of the subfamilies have diverged in the manner expressed by the tree in Figure 2. With the exception of the Barai-Managalasi subgroup discussed in §3, this tree is supported by the shared innovations established below.

2 Previous study

Soon after the publication of my 1969 study and my 1975 volume on Central Papuan languages, a Master of Arts degree student in the Department of Anthropology, University of Auckland, Chris Lane, made an historical–comparative study of Koiarian family languages as part of his degree. In his study Lane focussed on the reconstruction of phonology and vocabulary, including both lexical and grammatical items (Lane 1976: 6) of the Baraic subfamily and to a lesser extent Koiarian as a whole using material published in the volumes just referred to, together with short Koiari and Mountain Koiari word lists sent to him from Papua New Guinea. All told he reconstructed eighty vocabulary items for Proto Koiarian (pp. 36-53), ten of which he marked as doubtful since the match between the Koiaric and Baraic reflexes

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1 These lists were part of data supplied to students in a comparative linguistics course at the University of Papua New Guinea in 1975 where I was Professor in the Department of Language and Literature at the time.
Figure 1 Sketch map of the languages of the Koiarian family
was not completely convincing in form or meaning. In addition he reconstructed sixty items for Proto Baraic (exclusive of those items which do not occur as part of the items of the Proto Koiarian list), including three which he considered doubtful (viz. 58 ‘ear’, 59 ‘tooth, and 60 ‘navel’). As well he listed four possible borrowings, two of which, *kuku* ‘tobacco’ and *maua* ‘box’, are clearly Motu\(^2\) in origin, most probably via the former lingua franca Police (now Hiri) Motu.\(^3\) The remaining two (*gobeu* [and variants] ‘sweet potato’ and *mehuya/huiena* [and variants] ‘fish’) are of uncertain origin.\(^4\)

This was a very commendable piece of work with limited materials. It is the purpose of this study to take up the challenges inherent in Lane’s and my earlier work to reconstruct as much of the phonology and vocabulary (including grammatical items) of the Koiarian family and its major subgroups, as possible, given the presently available materials. In the process the composition of the Koiarian family and the subgrouping hypotheses implied by the lexicostatistically derived family tree given above will be examined to see whether these hypotheses can be further justified or not.

Needless to say I shall be covering much of the same ground as Lane covered. In many cases I come to the same conclusions about the phonology and vocabulary of Proto Koiarian and Proto Baraic as he does, not surprisingly given that he used a subset of the material used for this study. To facilitate comparison between our results, I give his reconstructions alongside mine in the sets of reconstructions given below and use the same conventions.

\(^{2}\) Motu is the Austronesian language spoken around Port Moresby.

\(^{3}\) Police (or Hiri) Motu was the lingua franca of what used to be called Papua (or British New Guinea in earlier times) It is now to all intents and purposes moribund in the Koiarian area, being replaced by Tok Pisin, the major lingua franca of Papua New Guinea, and English.

\(^{4}\) Variants of these forms appear as apparent cognates in my study of ‘cultural’ vocabulary in Papua (Dutton 1973: 439). The set comprised one of the so-called MINOR sets of apparent cognates for ‘sweet potato’ ‘limited to closely related and neighbouring languages’. Because of the restricted number and geographic distribution of these apparent cognates I noted (p.475) that one could not tell whether ‘they represent local innovations or isolated cases of more widely distributed forms’ which for one reason or another were not included in the data used for that study.
3 Materials and method

In this study I have used both published and unpublished materials. The published material includes that used by Lane, viz. Dutton (1969, 1975) together with my published dictionary of Koiari which includes a grammatical sketch incorporating a number of previously published papers (Dutton 2003). The unpublished material includes the following.

1. A short manuscript dictionary of Koita compiled sporadically by me over several decades (Dutton 2007). This dictionary contains (a) the vocabulary items listed in my 1975 grammar sketch and vocabulary of Koita; (b) some additional items obtained from Momo Rabura in Kilakila village in 1992; (c) materials collected from the same village by a former student in the Department of Linguistics, Research School of Pacific Studies, The Australian National University, Ms Sandra Warwick-Smith, in 1965; and (d) vocabulary items given in Seligman (1910: 41–93).

2. Manuscript dictionaries, phonological and grammatical statements by team members of the Summer Institute of Linguistics (SIL) who had worked in four of the six Koiarian languages, viz. Mountain Koiari (or Koiali), Ômie, Barai and Managalasi. These include:
   - for Mountain Koiari: Garland & Garland (1975) and Garland & Garland (1986);
   - for Ômie: Tobitt (1964), Austing (1986), Austing & Upia (1975);
   - for Barai: Olson (1975, 1981), Evans (1986);

3. A short manuscript vocabulary, phonological and grammatical sketch of the southern Barai dialect of Pitoni obtained from informants from Doribisoro village in 1966 (Dutton 1966a, b, c). Some of this material was published in the basic vocabulary list in my 1969 volume (pp. 117-130) where it was simply referred to as ‘Barai’. This dialect is geographically and linguistically distinct from that described in Olson (1975, 1981). Olson’s ‘Barai’ is that spoken in the village of Itokama in the headwaters of the Musa River on the northern side of the Owen Stanley Range (Dutton 1969: 66-72). Given the differences between the two dialects and to avoid further confusion, I include evidence from both these dialects in the following comparative data. I refer to Olson’s Barai as BAR(N) and to mine as BAR(S).

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5 A copy of this manuscript has been sent to the National Library Service of Papua New Guinea, Port Moresby.
6 The Garlands refer to Mountain Koiari as Mountain Koiali in their publications.
7 Geographically Barai speakers occupy villages that are spread out in a long, thin, sausage-shaped arc that stretches across the Owen Stanley Range from the headwaters of the Kemp Welsh River on the southern side through the headwaters of the Musa (or Moni) into the headwaters of the Kumusi River on the northern side. There are many dialects, at least nine based on lexical evidence. The Pitoni dialect is the largest dialect (Dutton 1969: 70). Indeed, it and the other dialects on the southern side of the Owen Stanley Range may represent a separate, though very closely related language to the remaining dialects on the northern side.
8 Given that he used both sources it is not surprising that Lane (1976: 7) found differences in the orthography and lexicon between those sources.
4. Basic vocabulary lists and notes collected by me from Koarian and other villages between 1966 and 1969 and listed in my various publications.

In this study I give precedence to the Summer Institute of Linguistics material in those languages in which its member teams have worked, even though most of this, as received, was still in work-in-progress manuscript form. In the few cases where I could not find a relevant cognate in that material I scoured my own unpublished materials for a suitable candidate. Where these latter were used I identify them with ‘TED’ in brackets following the items (as in PKN *giri ‘dry’ for example), or otherwise note them.

In order to be able to help define what is being reconstructed I began by developing a preliminary set of sound correspondences for the whole family based on the clearest cognate cases. By studying this set of correspondences it soon became apparent that there were sufficient innovations in them to accept the existence of the lexicostatistically suggested Koarian and Baraic subgroups, and within the former a Koita-Koari subgroup apart from Mountain Koari. No such position could be adopted for the Baraic subfamily, however; there was no support for the lexicostatistically defined Barai-Managalasi subgroup apart from Ömie within it. I therefore set about making an extended set of sound correspondences leading to the reconstruction of protophonemes and vocabulary items that are labelled herein as Proto Koarian. These correspondences and reconstructions are based on at least one cognate in a Koarian (KC) language and a cognate in at least one Baraic (BC) language. By studying the pattern of sound correspondences within these sets I then make assertions about subgroups within these higher level subgroups. In reconstructing PKC I have taken one cognate from either Koita (kta) or Koari (koi) (or both) and Mountain Koari (mtn); in Baraic I try to give a cognate in each language, or in the case of Barai, in both bar(n) and bar(s), although this has not always been possible.

4 Abbreviations, symbols and conventions

Abbreviations are listed on page xi.

4.1 Orthographic conventions

ú stressed vowel in Managalasi
é sometimes used for stressed vowel in Ömie
: following a vowel in Ömie indicates stress

4.1.1 Conventions in reconstructions

/ or | (in the protoword lists) separates that part of a form reflecting the reconstructed root from a part that does not
[] (within a reconstructed form) indicate that the enclosed reconstructed sound or sounds may or may not have been part of the form
( ) (within a reconstructed form) indicate uncertainty about the shape of the form. Two or more letters contained by a pair of parentheses and separated by a comma or
Reconstructing Proto Koiarian

Commas indicate that the protophoneme was one of those indicated, i.e. \((p,t)\) indicates that \(p\) or \(t\) was part of the reconstructed form but it is not clear which one it was.

\((ab,ba)\) (in reconstructions from Lane 1976) indicates that the order of sounds in the reconstruction is not clear.

5 Some preliminary observations on the constituent languages

5.1 Phonological aspects

Table 1 displays the orthographic symbols used by the different authors in the materials used for this study to represent the segmental phonemes which occur in the six languages of the family. In the chart a ‘+’ indicates that the phoneme specified by the row occurs in the language (or dialects in the case of \(\text{BAR}(n)\) and \(\text{BAR}(s)\)) specified by the column.

It is clear from this chart that the phonemic inventories of the languages of the family are very similar.\(^9\) Thus in each language there are sets of stops, fricatives, affricatives, nasals, a vibrant or lateral, and at least five vowels. General features of these sets are as follows.

1. Stops

In all languages stops contrast as to bilabial, alveolar and velar points of articulation, although in \(\text{MAN}\) there are no voiced stops. Glottal stop is characteristic of the (lexico-statistically defined) Baraic subfamily, although it also occurs in the Koiaric subfamily languages either as an extra-systemic phoneme as in \(\text{oʔe} ‘\text{yes}’\) in \(\text{KO1}\) or as a phoneme in some dialects (e.g. the Southern dialect of \(\text{MTN}\)). In \(\text{BAR}(s)\) [k] occurs as an allophone of /ʔ/ and in \(\text{BAR}(n)\) voiced stops are prenasalised. In \(\text{KTA}\) and \(\text{KO1}\) where there is no /p/ there is a gap in the pattern of stops. However, /f/ (a voiceless bilabial fricative), which has an allophone [p] in \(\text{KO1}\), occurs instead. /f/ may therefore be interpreted as /p/ in these languages, thereby giving more symmetry to the set of stops but less symmetry to the set of fricatives.

2. Fricatives and affricatives

This is the area of apparent widest consonantal variation between the member languages of the family. However, this variation is more apparent than real. Thus all of the languages have a common set of fricatives /s/, /h/\(^{10}\) and /v/ (except \(\text{MTN}\) which has no /v/), and \(\text{KTA}\) has a voiced velar fricative /ɣ/ as well.

3. Nasals

All languages have the same set of nasals /m/ and /n/.

\(^9\) It is hardly necessary to point out, however, that this does not automatically mean that there is a one-to-one correspondence between the phonemes of the languages, comparatively speaking, although as we shall see in §6 there actually is a high correspondence between them. The correspondences in these phonemes is important, however, in determining cases of borrowing.

\(^{10}\) Austing & Upia (1975: 517)) note that for some speakers ‘h and p represent one phoneme.’ Some speakers also use ‘the allophone [h], others [ɸ]; still others fluctuate between the two.’
Table 1  Segmental phonemes in Koarian languages

<table>
<thead>
<tr>
<th></th>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(S)</th>
<th>MAN</th>
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<td></td>
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<td><strong>Stops</strong></td>
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<tr>
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<td>+</td>
<td>+</td>
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</tr>
<tr>
<td>$h$</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td></td>
</tr>
<tr>
<td>$v$</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td>$y$</td>
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<td>+</td>
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<tr>
<td><strong>Affricatives</strong></td>
<td></td>
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<tr>
<td>$ch$</td>
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<td>+</td>
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<td>$j$</td>
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<td>+</td>
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<tr>
<td>$z$</td>
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<td>+</td>
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<tr>
<td><strong>Nasals</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>$m$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>$n$</td>
<td>+</td>
<td>+</td>
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<td>+</td>
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<td></td>
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<tr>
<td><strong>Vibrant/lateral</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>$r, l$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Vowels</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>$i$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>$e$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ɛ, æ$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
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<td></td>
</tr>
<tr>
<td>$a$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$o$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ö$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ð$</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>$u$</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>$ú$</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>
4. Vibrant/laterals

All of the languages have a common vibrant /r/ or lateral /l/. This phoneme also has a common set of allophones in all of the languages. These allophones are usually unflapped in word initial position, and flapped in word medial position. They also have a vibrant quality in the environment of front vowels and a lateral quality elsewhere.

5. Vowels

All of the languages share a common set of five vowels /i, e, a, o, u/. These common vowels contrast in high, mid, and low tongue positions. High and mid vowels contrast in front and back tongue positions. MAN and OMI have additional (generally central) vowels. In none of the languages is vowel length phonemic.

6. Syllable structure, stress and intonation

All syllables in Koiarian languages are open, being either V, or CV, and there are no consonant clusters. Vocoid glides are interpreted as sequences of vowels. Stress is typically contrastive in all of the languages although generally not described in any detail, except for KTA, KOI and BAR(N). It is also generally not marked in the sources, except for MAN where it is indicated by a prime over the stressed vowel, and in OMI where it is usually indicated by a colon after the vowel on which it occurs but sometimes by a prime over the vowel as in MAN. In BAR(N) stress is defined by a combination of pitch (either high or low), and either length or intensity: ‘To mark stress, high pitch combines with increased intensity and low pitch combines with length’ (Olson 1975: 474). Intonation has not been studied in detail in any of the languages except KOI (Dutton 2003). For the above reasons stress and intonation are not taken into account in reconstructing the proto forms listed in this study.

5.2 Morphological aspects

Koiarian languages are typical Trans New Guinea languages. They are SOV languages with ‘medial verbs’ that contrast with ‘final verbs’ in position and morphology (Wurm 1982: 83), relative clauses that come before the head noun, adjectives that follow the noun, and complex verb morphology. Two aspects of this structure which are particularly relevant to the reconstruction of the protofonologies and vocabulary of these languages are noun morphology and verb morphology.

5.2.1 Noun morphology

Nouns in Koiarian languages are generally unmarked for number and take few affixes. Where number is indicated, it is by suffixes, and where case is indicated, it is usually by post-clitics or position nouns. In the Koiaic languages KTA, KOI and MTN the root or stem of the noun can usually be easily identified. In the Baraic languages OMI, BAR(N) and MAN, however, independent or stand-alone nouns (such as one elicits in compiling vocabulary lists with informants) end in characteristic vowels – e in OMI and BAR(N) and a in MAN – which are the result of morphophonemic interaction of this vowel with the root final vowel of the noun.\(^{11}\) In

\(^{11}\) Although I cannot prove it at the moment I suspect that these vowels and the ‘modified noun markers’ in MTN (Garland & Garland 1975: 469, fn.4) are, in form and function, very much like reduced forms of the more elaborate ‘specifiers’ in KTA and KOI (Dutton 1975a: 293–295, 2003: 385–388).
oml most elicited nouns (including borrowed ones) and certain other words occur with ‘the
terminator -e’ (Austing & Upia 1975: 519), e.g., kuku-e ‘tobacco’. When this terminator is
suffixed to a noun ending in a, u, é, ô these vowels retain their value. For example:

Final vowel a:
\[
\begin{align*}
  sa\text{a} + e & > sa\text{ae} \quad \text{‘ground’} \\
  a + e & > ae \quad \text{‘man’} \\
  maja + e & > majae \quad \text{‘sun, time’}
\end{align*}
\]

Final vowel u:
\[
\begin{align*}
  vavu + e & > vavue \quad \text{‘father’} \\
  mu + e & > mue \quad \text{‘garden, work’} \\
  kuku + e & > kukue \quad \text{‘tobacco’}
\end{align*}
\]

Final vowel ū:
\[
\begin{align*}
  dē + e & > dē \quad \text{‘excrement’}
\end{align*}
\]

Final vowel ò:
\[
\begin{align*}
  dō + e & > dōe \quad \text{‘top (of tree)’}
\end{align*}
\]

When e is suffixed to a noun ending in any other vowel (except itself for which there is
no evidence) that vowel is weakened to e. For example:

Final vowel i:
\[
\begin{align*}
  ōri + e & > ōre \quad \text{‘road’} \\
  uʔi + e & > uʔe \quad \text{‘smoke’} \\
  hani + e & > hane \quad \text{‘leaf’}
\end{align*}
\]

Final vowel ô:
\[
\begin{align*}
  jôvō + e & > jôve \quad \text{‘water’}
\end{align*}
\]

Final vowel o: 14
\[
\begin{align*}
  sino + e & > sine \quad \text{‘skin’} \\
  imo + e & > ime \quad \text{‘sugar cane’} \\
  ijo + e & > ije \quad \text{‘tree’} \\
  amo + e & > ame \quad \text{‘village’}
\end{align*}
\]

When nouns occur in compounds or other phrases, however, the terminator only occurs
on the last element. Compare, for example:

\[
\begin{align*}
  \text{huono-re} & \quad \text{kuku-e} \quad \text{kuku} \quad \text{huon-e} \\
  \text{bamboo-in} & \quad \text{tobacco-terminator} \quad \text{tobacco} \quad \text{bamboo-terminator} \\
  \text{‘in the bamboo’} & \quad \text{‘tobacco’} \quad \text{‘tobacco pipe (used for smoking)’}
\end{align*}
\]

---

12 I base the description that follows on that in Austing & Upia (1975) in comparison with entries in the omi
dictionary.

13 This is not quite the picture given by Austing & Upia (1975: 519-21) where vowels are divided into strong (e,
a, é, ô) and weak (i, o, u, ô) sets. From their description it would appear that the vowel u, for example, should
behave in the same way as the remaining three. But this does not appear to be the case judging by the examples
given below.

14 There appear to be exceptions to this rule. For example, the word apo ‘father’ is given in both Austing &
Upia (1975: 517) and the omi dictionary as apo, not the expected ape.
Reconstructing Proto Koiarian

<table>
<thead>
<tr>
<th>a-e</th>
<th>a</th>
<th>sisè</th>
</tr>
</thead>
<tbody>
<tr>
<td>man-TERMINATOR</td>
<td>man</td>
<td>bad</td>
</tr>
<tr>
<td>‘man’</td>
<td>‘bad man’</td>
<td></td>
</tr>
</tbody>
</table>

For comparative purposes these terminator suffixes are separated from the rest of the noun on which they occur by a hyphen, unless the final root vowel is known, in which case that is given. In the former case noun roots are shown as ending in a consonant, instead of a vowel.

BAR(n) is slightly different again. According to Olson (1975: 484) ‘many but not all non-human nouns take a kind of classifying suffix [which] consists of various consonants followed by the vowel e. When the non-human noun occurs in isolation the suffix always occurs with the stem.’ The suffix is retained also when the following word begins with a vowel but is lost when that word begins with a consonant, although, as Olson admits, this analysis ‘is not entirely consistent.’ The following suffixes occur: -ve, -ne, -ge, -me, and -re. For example:

- ma-ve ‘pig’
- maboje ‘many pigs’
- maveinokoro ‘two pigs’

Again, these terminator suffixes cannot be used for comparative purposes and should be subtracted from cited BAR(n) cognates. However, as they are not marked off typographically in the BAR(n) dictionary used for this study there is some uncertainty about where divisions should be made. What I have chosen to do, therefore, is to disregard them and reanalyse non-human nouns ending in e as noun + root-e along the same lines as for some omi nouns and as is also suggested for MAN below leaving preceding consonants to be counted as part of the noun root.

In MAN the suffix -a occurs on ‘almost every slot of a clause when no other more specific case suffix is used’ (Alan Healey: pers. comm., 26/9/1996). Healey calls this a ‘general case’ suffix. But Healey also says:

> we have an apparently similar situation [to BAR(n)] for most of the noun suffixes. However, we divided the morphemes differently and had the various consonants as part of the noun stems and many of the suffixes beginning with a vowel. We are able to write fairly simple rules for consonant loss, both at ends of words and in consonant clusters. But MAN is different from the BAR(n) situation in at least one respect – MAN nouns do not occur unsuffixed except in compounds.

Thus MAN nouns will be treated in the same way as omi and BAR(n) ones, that is, final a vowels will be separated from the rest of the noun by a hyphen.

To recapitulate, the morphophonemic changes occasioned by the use of terminator vowels in Baraic languages have important consequences for the comparison of final vowels in Koiarian languages. Thus without other evidence where nouns end in e in omi and BAR(n) and a in MAN no vowel can be reconstructed for that sound. In those cases I use the symbol ‘V’ as a cover symbol for the set of correspondences involved as is indicated at the end of Proto Baraic sound correspondences in Appendix C. Other than that there are a few cases

---

15 Interestingly the consonants that occur in Olson’s ‘classifying suffixes’ parallel those in Koiari ‘specifiers’ and this is part of the reason for the suspicion expressed above that these are derivatives of ‘specifiers’ in KOU/KTA.
where the data are incomplete and it is not possible to say which protosound the given vowels reflect. In those cases I give the vowels separated by commas and enclosed within parentheses, in accord with the conventions given above e.g. PKN *(e,i)se ‘small’, PKN *(i,o)gau ‘one’, PKN *(m(o,a))- ‘give’.

5.2.2 Verb morphology

Verbs are morphologically the most complex elements in Kioarian languages. In their most basic form they consist of a verb root or stem followed by suffixes which indicate tense and aspect in combination with the number and person of the subject. They may also incorporate other elements but there is considerable variation between the different languages of the family.

In kta and koI I have analysed verbs as consisting of roots followed by suffixes that cross-reference the number of the subject and object ergative-absolutely and a set of tense-aspect person-number suffixes. The subject and object reference suffixes I refer to as sr and or respectively. These vary for singular and plural. Consider, for example,

**KTA:**

<table>
<thead>
<tr>
<th>Da ra-ma-nu</th>
<th>Da era-ya-nu</th>
</tr>
</thead>
<tbody>
<tr>
<td>I stand-SR-SG.PAST</td>
<td>I see-OR-SG.PAST</td>
</tr>
<tr>
<td>‘I stood.’</td>
<td>‘I saw it.’</td>
</tr>
<tr>
<td>No ra-ha-nua</td>
<td>Da era-geve-nu</td>
</tr>
<tr>
<td>We stand-SR-PL.PAST</td>
<td>I see-OR-SG.PAST</td>
</tr>
<tr>
<td>‘We stood.’</td>
<td>‘I saw them.’</td>
</tr>
</tbody>
</table>

**KOI:**

<table>
<thead>
<tr>
<th>Da ra-mi-nu</th>
<th>Da ere-va-nu</th>
</tr>
</thead>
<tbody>
<tr>
<td>I stand-SR-SG.PAST</td>
<td>I see-OR-SG.PAST</td>
</tr>
<tr>
<td>‘I stood.’</td>
<td>‘I saw it.’</td>
</tr>
<tr>
<td>No ra-hi-nua</td>
<td>Da ere-geiyahei-nu</td>
</tr>
<tr>
<td>We stand-PL-PL.PAST</td>
<td>I see-OR-SG.PAST</td>
</tr>
<tr>
<td>‘We stood.’</td>
<td>‘I saw them.’</td>
</tr>
</tbody>
</table>

In this analysis roots and suffixes are all open syllables. MTN verbs are similar in structure but Garland & Garland (1975) analyse them differently. Thus they take the singular form as the unmarked form with one of several possible plural allomorphs replacing part of the root. For example:

**MTN:**

<table>
<thead>
<tr>
<th>Di lami-n-u</th>
<th>Di eleha-n-u</th>
</tr>
</thead>
<tbody>
<tr>
<td>I stand-SG.PAST</td>
<td>I see-SG.PAST</td>
</tr>
<tr>
<td>‘I stood.’</td>
<td>‘I saw it.’</td>
</tr>
<tr>
<td>No la-vi-nu</td>
<td>Di eleg-eve-nu</td>
</tr>
<tr>
<td>We stand-PL-PAST</td>
<td>I see-PL-PAST</td>
</tr>
<tr>
<td>‘We stood.’</td>
<td>‘I saw them.’</td>
</tr>
</tbody>
</table>

If MTN verbs are analysed in the same way as I have analysed KTA and KOI ones the correspondences in some forms of the subject reference suffixes, object reference suffixes and tense-aspect person-number suffixes in relevant verbs are clearer. Consider, for example,
Reconstructing Proto Koiarian

The number of such correspondences is, however, not great. Those that do occur and which underlie reconstructions for Proto Koiaric are given in Table 2 below.

<table>
<thead>
<tr>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>da ra-ma-nu</td>
<td>no ra-ha-nu</td>
<td>da era-ya-nu</td>
</tr>
<tr>
<td>no ra-ha-nu</td>
<td>da era-ya-nu</td>
<td>da era-geve-nu</td>
</tr>
<tr>
<td>da era-ya-nu</td>
<td>da era-geve-nu</td>
<td>da era-geve-nu</td>
</tr>
</tbody>
</table>

In omi, bar(n) and man verb roots are all analysed by those who describe them as ending in consonants – except for a few cases – which interact morphophonemically with following suffixes. The different verb root consonants define different verb classes. For example, Austing & Upia (1975) call verb roots ending in j or v in omi weak verbs because when a suffix beginning with a vowel other than e is added these consonants are lost. Verb roots ending in n (and some ending in v) are strong. Consequently all verbs entered in the omi dictionary are given endings in e. It is therefore a simple matter to separate this suffix from the entry to arrive at the verb root for comparison (e.g. baeje > baej-e ‘get, take’, gave > gav-e ‘see’, vaʔe > vaʔ-e ‘go’).

In bar(n) transitive and ditransitive verb roots are analysed by Olson (1975) as ending in a consonant (e.g. kan- ‘hit’, kuar- ‘tell’, m- ‘give.sg’), but there are some verbs which change stem for singular and plural (e.g. vaj- ‘give.pl.’). Intransitive verb roots end in a vowel (e.g. fi- ‘sit.sg’, mani- ‘stand’, va- ‘go’), but, again, most of these verbs change stem for singular and plural subjects (e.g. kari- ‘sit.pl’, ire- ‘stand.pl’). In the bar(n) dictionary transitive verbs are generally given with the suffix -ie ‘me’ except where the semantics of the verb exclude ‘me’ as a direct object (e.g. ‘pour out, buy/sell, do, sew up, plant’). In that case the verb is given with the suffix -a ‘it’ or occasionally (inexplicitly) -e or -u, and intransitive ones without anything. It is therefore a simple matter to arrive at the verb root by subtracting the suffixes so that the verb root ends in a consonant in accord with the above rule unless there is other comparative evidence to indicate otherwise (e.g. PKN *fósi- ‘pour out’ which is reflected in bar(n) as usi-a and in man as use-o).

In man verb roots are also analysed as ending in a consonant but they are divided into classes according to how that consonant interacts with added suffixes. In the man dictionary entries are given with the suffix -o so again it is a simple matter of subtracting that to arrive at the verb root (e.g. ivo > iv-o ‘laugh’, arevo > arev-o ‘stop, cease’, ijo > ij-o ‘eat, drink’, vaʔo > vaʔ-o ‘go’).

From this it is apparent that the final consonant in these latter languages corresponds with that of the singular s/r or in the Koiaric languages. The question arises then of how verbs are to be reconstructed for Proto Koiarian—should they be reconstructed following the Koiaric or the Baraic model? There is no obvious answer so I shall (as Lane 1976 did) reconstruct them in the form (C)V(C) without intending one solution over the other.

6 Sound correspondences

The sound correspondences from which the protophonemes are reconstructed for PKN, PKC and PBC are given in Appendices A–C respectively. In the lists I = initially, M = medially, F = finally and example numbers refer, as customary, to items in the lists of reconstructions. In making up the lists I sometimes found it difficult to decide whether a sound should be treated
as initial, medial or final in particular sets of cognates. In verbs in particular I count vowels on the ends of verb roots as ‘final’ if the morpheme boundary between them and suffixes attached to them are clear, otherwise I count them as ‘medial’. Thus, for example, in *ra-mi- ‘stand’ the vowel *a is counted as final for correspondence purposes. This contrasts with a case like PKN *raf- ‘clear bush for planting’ where the koı/ktı reflex is yaha- and the omı one is rav-e. In this case the a in the first syllable is counted as medial. The morphological division of forms is explained in §5.

7 Protophonemes

In Table 2 I list the PKN, PKC and PBC protophonemes together with comparative sets of Koiarian, Koiaric and Baraic generalised sound correspondences. These correspondences are given in the order ktı, koı, mtn, omı, bar(n), bar(s), man as in the PKN word list. In the PKN list a vertical line separates Koiaric from Baraic sets. Comments about the correspondence sets in Table 2 follow.

7.1 Consonants

All the consonant phonemes seem to be clear and reasonably, if not very well attested, allowing for some unexplained variation, with the exceptions below.

7.1.1 PKN and PBC *

In PKN there are only four cases (two initial and two medial) involving this phoneme, one of which is suspicious (viz. that in bar(s) göbeʔu ‘sweet potato’). In PBC there are many more examples (11 initial and 10 medial) with just the odd irregular reflex. In fact the set of generalised correspondences is almost identical with the set of generalised correspondences for *k. The only difference is that k contrasts with ∅ in bar(n) in the sets (except for one case of t and one of v). Thus:

<table>
<thead>
<tr>
<th>PBC</th>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(S)</th>
<th>MAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>*k</td>
<td>?</td>
<td>k</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>*ʔ</td>
<td>?</td>
<td>∅</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

This means that in cognate sets where there is no data for bar(n) (indicated by ‘?’) or where bar(n) has no relevant cognate (indicated by ‘–’ in the list) one cannot decide between reconstructing *k or *ʔ at that point (e.g. ‘dog’ could be either *kuo or *ʔuo) so it is reconstructed as *(ʔ,k)uo. Similarly for items numbered 15 (‘thigh’), 40 (‘bush’), 62 (‘night’), 86 (‘pain’), 90 (‘trunk of tree’), 92 (‘locative noun suffix’), 94 (‘N and N’), and 95 (‘heart’).

---

16 By generalised correspondences I mean those correspondences that appear to be the regular correspondences, allowing for unrecognised conditioning and/or borrowing and other external influences. *f, *ɛ and *o are exceptions. See §§7.2.1–7.2.2.
### Table 2  Koiarian generalised correspondences

<table>
<thead>
<tr>
<th>PKN</th>
<th>KTA</th>
<th>KOL</th>
<th>MTN</th>
<th>OMI</th>
<th>BAR(Ñ)</th>
<th>BAR(Ñ)</th>
<th>MAN</th>
<th>PKC</th>
<th>KTA</th>
<th>KOL</th>
<th>MTN</th>
<th>PBC</th>
<th>OMI</th>
<th>BAR(Ñ)</th>
<th>BAR(Ñ)</th>
<th>MAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>*t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>*t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>t</td>
<td>*t</td>
<td>t</td>
<td>t</td>
</tr>
<tr>
<td>*k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>*k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>*k</td>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td>*?</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>*?</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>θ</td>
<td>*?</td>
<td>θ</td>
<td>θ</td>
</tr>
<tr>
<td>*b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>*b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>*b</td>
<td>b</td>
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</tr>
<tr>
<td>*d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>*d</td>
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<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>*d</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>*g</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>*g</td>
<td>g</td>
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<td>g</td>
<td>*g</td>
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</tr>
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<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>*s</td>
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<td>s</td>
<td>s</td>
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<td>s</td>
<td>*s</td>
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</tr>
<tr>
<td>*f</td>
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<td>h</td>
<td>v</td>
<td>h</td>
<td>f</td>
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<td>h</td>
<td>*f</td>
<td>h</td>
<td>h</td>
<td>v</td>
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<td>*f</td>
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<td>v</td>
<td>v</td>
<td>v</td>
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<td>v</td>
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</tr>
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<td>v</td>
<td>h</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
<td>*y</td>
<td>y</td>
<td>v</td>
<td>h</td>
<td>Ø</td>
<td>Ø</td>
<td>*y</td>
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<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>*m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>*m</td>
<td>m</td>
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</tr>
<tr>
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<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>*n</td>
<td>n</td>
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</tr>
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<td>r</td>
<td>r</td>
<td>r</td>
<td>r</td>
<td>*r</td>
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<td>r</td>
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<td>r</td>
<td>*r</td>
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</tr>
<tr>
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<td>l</td>
<td>j</td>
<td>j</td>
<td>j</td>
<td>j</td>
<td>*y</td>
<td>y</td>
<td>y</td>
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<td>j</td>
<td>j</td>
<td>*y</td>
<td>y</td>
<td>l</td>
</tr>
<tr>
<td>*i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>*i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>*i</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td>*í</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>w/o/e</td>
<td>u/o/e</td>
<td>u/e</td>
<td>*í</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>i</td>
<td>*í</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td>*e</td>
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<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>*e</td>
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<td>e</td>
<td>e</td>
<td>e</td>
<td>*e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>*é</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>ê</td>
<td>a/a</td>
<td>a/a</td>
<td>a/a</td>
<td>*é</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>*é</td>
<td>e</td>
<td>e/a</td>
</tr>
<tr>
<td>*a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a/a</td>
<td>a/a</td>
<td>a/a</td>
<td>*a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>a</td>
<td>*a</td>
<td>a</td>
<td>a/a</td>
</tr>
<tr>
<td>*o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o/o</td>
<td>o/o</td>
<td>o/o</td>
<td>*o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>*o</td>
<td>o</td>
<td>o/o</td>
</tr>
<tr>
<td>*ó</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>ò</td>
<td>u/u</td>
<td>u/u</td>
<td>u/u</td>
<td>*ó</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>*ó</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>*u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>*u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>*u</td>
<td>u</td>
<td>u</td>
</tr>
</tbody>
</table>

#### 7.1.2 PKN *d

At the PKN level there appear to be conditioned variants in the daughter languages, viz. *d > OMI, BAR j/*i and *d > MAN ch/*i in the following:

**PKN *didi ‘star’**

OMI: \( jij-e \) ‘star’

BAR(N): —

BAR(S): \( amu|didi \) ‘star’

MAN: \( chi|n-a \) ‘star’

**PKN *idi ‘tree’**

OMI: \( ij-e \) ‘tree’

BAR(N): —

BAR(S): \( idu \) ‘tree’

MAN: \( ich-a \) ‘tree’
However, the evidence is unclear and inconsistent. Thus in \text{bar}(s) we have \text{amudidi} ‘star’, \text{idu} ‘tree’ as against \text{bij-a} ‘kill (pig by spearing)’. Furthermore in \text{bar}(n), \text{omi} and \text{man} there is no evidence of what the final vowel is. This poses a problem given that none of the cognates in \text{bar}(n), \text{omi} and \text{man} end in a vowel derived from final \text{*i} and the present day variation masks the underlying vowel. The problem is not clarified either by PBC *d evidence. While \text{man ne}|\text{chi-a} ‘bush’ (< PBC *j(e,i)a ‘bush’) fits the rule the remaining cognates do not. Nor do they fit a PBC *j > j, ch/\_i hypothesis. Consider the following:

PBC *\text{veda} ‘when?’
\begin{itemize}
\item \text{omi}: ?
\item \text{bar}(n): ?
\item \text{bar}(s): \text{veda}|\text{ha} ‘when?’
\item \text{man}: \text{vecha}, \text{vea} ‘when?’
\end{itemize}

PBC *\text{ide-} ‘which?’
\begin{itemize}
\item \text{omi}: \text{di} ‘which?’
\item \text{bar}(n): \text{ize}|\text{ki} ‘which?’
\item \text{bar}(s): \text{ide}|\text{ʔo} ‘which?’
\item \text{man}: \text{icha}|\text{ra} ‘which?’
\end{itemize}

PBC *\text{jaV} ‘drum’
\begin{itemize}
\item \text{omi}: \text{jaj-}\text{e} ‘drum’
\item \text{bar}(n): \text{daj-o} ‘drum’
\item \text{bar}(s): ?
\item \text{man}: \text{chaj-} ‘drum’
\end{itemize}

PBC *\text{ijV} ‘how much?’
\begin{itemize}
\item \text{omi}: —
\item \text{bar}(n): \text{ije}|\text{ge} ‘how much’
\item \text{bar}(s): —
\item \text{man}: \text{icha}|\text{ro} ‘how much’
\end{itemize}

That is, \text{ch} remains unexplained and unpredictable as derived from PBC *d. Instead it appears to be a conditioned variant of \text{j} derived from PBC *j. That is, PBC *j > ch/\_i as the examples above show.

7.1.3 PKN *f

This protophoneme is set up to account for the correspondence pattern given above. Orthographic \text{f} is chosen to represent this phoneme because

(a) a sound change \text{*f} > h in the daughter languages is considered more natural than a change \text{*h} > f, and
(b) /\textit{f}/, a voiceless fricative, gives symmetry to the fricatives. It is also likely that *\textit{f} derives from an earlier *\textit{p}, i.e. [p], because there is an asymmetry in the voiceless stops which would be removed if *\textit{f} were replaced by *\textit{p}, thus:

\begin{align*}
*\textit{p} & \rightarrow *\textit{t} \quad *\textit{k} \quad *\textit{ʔ} \\
*\textit{b} & \rightarrow *\textit{d} \quad *\textit{g} \\
*\textit{v} & \rightarrow *\textit{s} \quad *\textit{ɣ} \\
*\textit{m} & \rightarrow *\textit{n} \\
*\textit{r} & \\
*\textit{ɣ} & \\
*\textit{y} & 
\end{align*}

If this is so we would expect that *\textit{p} had become [ɸ] (= *\textit{f}) by the time of PKN, and this later became [h] in most of the daughter languages by a commonly encountered sound change.

7.1.4 PKN *\textit{ɣ}

Orthographic *\textit{ɣ} is chosen as the symbol to represent the correspondence set \( \gamma : h : 0 : 0 : 0 : 0 \) (discounting some sporadic, unexplained changes) in contrast with the *\textit{v} and *\textit{f} sets. It is to be noted that *\textit{ɣ} has a conditioned reflex in \( \text{koi} \). Thus PKN *\textit{ɣ} \( > \nu \) everywhere in \( \text{koi} \) except before the high back vowel *\textit{u}, where it has become \( \emptyset \).

7.1.5 PKN *\textit{y}

This is a similar case to that of PKN *\textit{f}. Although the majority of reflexes are \( j \) the phoneme is reconstructed as *\textit{y} for three reasons:

(a) a sound change *\textit{y} \( > j \) in the daughter languages is considered to be a more natural one than the reverse;

(b) /\textit{y}/ gives the pattern of phonemes in the ancestral language more symmetry than /\textit{j}/ would, and

(c) *\textit{y} is a basic phoneme in the inventories of Papuan languages (Foley 1986: 55).

7.1.6 PBC *\textit{j}

This is well attested and very clear, given that \textit{bar}(\textit{s}) \( z \) seems to be an irregularly occurring phoneme with variants \( [z, y, j] \) which could just as easily be symbolised as \( j \). However, the case of *\textit{maja} ‘sun’ is not so clear. Here we have the Baraic correspondences: \( dz : z : - i : - s \).

\begin{align*}
\text{PBC}\hspace{1em} & \text{\textit{maja} ‘sun’} \\
\text{OMI:} & \quad \text{\textit{madza}\text{-}\text{e} ‘sun’} \\
\text{BAR(\textit{N})}: & \quad \text{\textit{maza}\text{-}\text{e} ‘sun, day’} \\
\text{BAR(\textit{S})}: & \quad - \\
\text{MAN:} & \quad \text{\textit{masa}\text{-}\text{a} ‘moon’}
\end{align*}

One might be tempted to set up a separate phoneme for this correspondence set. But that would raise the question of the source of this phoneme in PBC from PKN. There is no obvious one. Alternatively one could treat the reflexes as irregular reflexes of PBC *\textit{d}, given that \textit{bar}(\textit{n}) has a \( z \) in ‘which?’ as illustrated above. On the other hand one could treat it as irregular
reflexes of PBC *$j$ because BAR(s) has reflexes of that phoneme in the following subset of words:

36. PBC *$jaʔi$-‘bite’

OMI: $jaʔih-e$ ‘bite’
BAR(N): $sak-$ ‘bite, sting’
BAR(S): $za-$ ‘bite’
MAN: $jaʔeho$ ‘bite’

37. PBC *$jahua$- ‘cough’

OMI: —
BAR(N): —
BAR(S): $zaha|o$ ‘cough’
MAN: $jahua|vo$ ‘cough’

43. PBC *$juhu$ ‘be afraid’

OMI: $uho|niv-$ ‘be afraid’
BAR(N): $ju|die$ ‘be afraid’
BAR(S): $zuhu$ ‘be afraid’
MAN: $uha|vo$ ‘be afraid’

The latter explanation seems more likely to me given that $j$ (fricative) and $dz$ (affricate) are phonetically more similar than $j$ (fricative) and $d$ (a stop).

7.2 Vowels

Again these are generally very clear except for a relatively few sporadic, unexplained changes. The main problems are with *$i$,*$e$ and *$o$.

7.2.1 PKN *$i$

With respect to PKN* $i$ there are six examples where we find $i$ in KC languages corresponding to $e$ (excluding the unexplained MTN $a$), $o$ or $u$ in BC languages:

<table>
<thead>
<tr>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(S)</th>
<th>MAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>i</td>
<td>–</td>
<td>u</td>
<td>u</td>
<td>u</td>
<td>11</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>$e$</td>
<td>$e$</td>
<td>$u$</td>
<td>(a)</td>
<td>51</td>
</tr>
<tr>
<td>–</td>
<td>i</td>
<td>i</td>
<td>$\emptyset$</td>
<td>$o$</td>
<td>$o$</td>
<td>$\emptyset$</td>
</tr>
<tr>
<td>–</td>
<td>i</td>
<td>i</td>
<td>$e$</td>
<td>$e$</td>
<td>(a)</td>
<td>53</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>a</td>
<td>–</td>
<td>$e$</td>
<td>$e$</td>
<td>$?$</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>$e$</td>
<td>$\emptyset$</td>
<td>$\emptyset$</td>
<td>$e$</td>
<td>115</td>
</tr>
</tbody>
</table>

Because it is not clear what protophoneme these correspondences reflect I have set up the special vowel *$i$ (**$i$-prime**) to account for them.
7.2.2 PKN *é

PKN *e and *o are similar cases to PKN *i. For *e there are six cases where KC e corresponds with a range of vowels in BC languages other than e.

<table>
<thead>
<tr>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAN</th>
<th>BAR(s)</th>
<th>MAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>u</td>
<td>–</td>
<td>4</td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>e</td>
<td>ò</td>
<td>a</td>
<td>a</td>
<td>16</td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>e</td>
<td>o</td>
<td>a/e</td>
<td>o</td>
<td>39</td>
</tr>
<tr>
<td>e</td>
<td>a</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>a</td>
<td>96</td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>–</td>
<td>?</td>
<td>a</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>e</td>
<td>e</td>
<td>(i)</td>
<td>(u)</td>
<td>u</td>
<td>114</td>
</tr>
</tbody>
</table>

‘thick’
‘not’
‘‘s
‘short’
‘vagina’
‘fire’

To account for these correspondences I have set up the special vowel *é (**e-prime**). PKN *ô (**o-prime**) has likewise been set up to account for three cases where KC o corresponds to u (medially) in BC languages, viz.

<table>
<thead>
<tr>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAN</th>
<th>BAR(s)</th>
<th>MAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>o</td>
<td>o</td>
<td>–</td>
<td>u</td>
<td>–</td>
<td>35</td>
</tr>
<tr>
<td>–</td>
<td>o</td>
<td>–</td>
<td>–</td>
<td>u</td>
<td>–</td>
<td>36</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o/ö</td>
<td>–</td>
<td>u</td>
<td>47</td>
</tr>
</tbody>
</table>

‘hair’
‘pour out’
‘younger same-sex sibling’

8 Phonetic values of the protophonemes

The PKN consonants *t, *b, *d, *g, *s, *m, and *n, and the vowels *i, *e, *a, *o, *u can be taken to have their usual phonetic values, because these are the values of the commonest reflexes in both KC and BC. *r is taken to be [r] and *v is [β] for the same reason. *f can be taken to be [φ], because although [h] is the commonest reflex, the change [φ] > [h] is considered more natural than [h] > [φ]. *y is taken to be [γ] as the only logical candidate given that the only other alternatives, [β] and [φ], which occur as reflexes in approximately equal numbers, more clearly reflect *v and *f respectively. *y most probably represents a semivowel even though its commonest reflex is j ([dʒ]), as already pointed out, for the prime reason that y > j is a more likely sound change than the reverse.

As for the special vowels *i-prime, *e-prime and *o-prime it is unclear what they represent phonetically. If anything *i and *é probably represent lower versions of the corresponding vowels *i, and *e, and *ô a raised version of *o. That is, *i probably represents something in between [i] and [ε] and *é something in between [ε] and [a], perhaps [ɛ] while *ô probably represents a raised [o].

PKC and PBC phonemes can be taken to have the same values as corresponding phonemes in PKN with two exceptions.

PBC *j (rather than *y) is reconstructed thus because it has j as its commonest reflex.
PBC *b has prenasalised reflexes in bar(n) and voiceless reflexes in man. If prenasalisation and voicing are taken to be secondary features of or variants on the typical Papuan consonantal system (Foley 1986: 55, 61), then PBC *b might perhaps best be regarded as a voiceless stop. The same is true of PBC *d and *g. However, such an interpretation brings *d and *g into conflict with PBC *t and *k which we have already suggested are represented by voiceless stops. But to suggest that all three represent prenasalised stops also overlooks the fact that the majority of reflexes in PKN, PKC and PBC are not prenasalised. Consequently I suggest PBC *b, *d, and *g be regarded as representing voiced stops as they are in PKN and PKC. Additionally PBC *d possibly has the reflex j occurring before the high front vowel *i, as indicated in §7.1.2.

9 Lists of reconstructions

Lists of PKN, PKC and PBC reconstructions are given in Appendices D–F.

As already pointed out in §3 the PKN set contains reconstructions with a reflex in at least one KC language and a reflex in at least one BC language, the PKC set contains reconstructions with at least one reflex in either kta or ko1 and one in mtn, and the PBC set reconstructions with reflexes in at least two of omi, bar(n), bar(s) and man. The PKC and PBC lists only contain items which do not also occur in the PKN list.

The lists are in alphabetical order with words beginning with *ɣ following those beginning with *g and those beginning with *ʔ listed last. They do not include borrowed items (as far as they are evident).

10 Discussion

10.1 Phonological innovations

10.1.1 Koiaric and Baraic

The table of generalised sound correspondences, Table 2, shows that most PKN protophonemes are reflected consistently by similarly valued phonemes in lower levels. The following uniquely shared innovations establish KC and BC as separate subfamilies, however:

• PKN *ʔ is reflected as glottal stop in BC (except bar(n) where it is zero), but is not reflected in KC.
• PKN *ɣ remains *ɣ in KC but is not reflected in BC.
• PKN *ɣ remains *ɣ in KC but becomes *j in BC.

Although these innovations are admittedly not very strong they are, nevertheless, innovations, and do provide some evidence of the higher level subgroups within PKN.

10.1.2 Koita–Koiari and Mountain Koiari

Among KC languages the following innovations occur:

• PKC *f is reflected as h in kta and ko1 but as v in mtn.
• PKC *y is reflected as y in kta and ko1 but as l in mtn.
PKC *f and *v are reflected by similarly valued phonemes in kta and koι but have merged as v in mtн.

These innovations establish a kta-koι subgroup apart from mtн.

That PKC *ɣ is reflected as ɣ in kta but v in koι establishes the separate identities of kta and koι.

10.1.3 Baraic languages

In BC languages the following innovations occur:

1. PBC *k and PBC *ʔ merge as glottal stop in omи, Bar(s) and man while in Bar(n) *k is reflected as k and there is no reflex of *ʔ.

2. PBC voiced consonants *b, *d, *g become voiceless counterparts in man but remain voiced in the other languages and dialects.

3. PBC *f is reflected as h in omи, Bar(s) and man and as f or zero in Bar(n).

4. PBC *j is reflected as z in Bar(s) but as j in the remaining languages and dialects.

5. PBC *d has possible conditioned variants in omи (j) and man (ch).

6. Some initial vowels in PKN are not reflected in BC languages, as shown in Table 3.

   Out of twelve cases, omи figures in 9, man in 8, Bar(n) in 4 and Bar(s) in 3.

**Table 3  Initial vowel loss in BC languages**

<table>
<thead>
<tr>
<th>PKN vowel</th>
<th>Example</th>
<th>BC languages in which vowel not reflected</th>
</tr>
</thead>
<tbody>
<tr>
<td>*a</td>
<td>2 ‘arm’</td>
<td>man</td>
</tr>
<tr>
<td></td>
<td>3 ‘top’</td>
<td>omи</td>
</tr>
<tr>
<td></td>
<td>6 ‘3sg’</td>
<td>omи, Bar(n), man</td>
</tr>
<tr>
<td></td>
<td>8 ‘older same-sex sibling’</td>
<td>omи, Bar(n), Bar(s), man</td>
</tr>
<tr>
<td></td>
<td>10 ‘breast’</td>
<td>Bar(n), Bar(s), man</td>
</tr>
<tr>
<td>*i</td>
<td>52 ‘one’</td>
<td>omи, man</td>
</tr>
<tr>
<td></td>
<td>54 ‘hear’</td>
<td>omи, Bar(n), man</td>
</tr>
<tr>
<td>*u</td>
<td>97 ‘wind’</td>
<td>omи, man</td>
</tr>
<tr>
<td></td>
<td>99 ‘blow’</td>
<td>omи</td>
</tr>
<tr>
<td></td>
<td>100 pl suffix</td>
<td>Bar(s), man</td>
</tr>
<tr>
<td></td>
<td>102 ‘breadfruit’</td>
<td>omи</td>
</tr>
<tr>
<td></td>
<td>121 ‘(a)rise’</td>
<td>omи</td>
</tr>
</tbody>
</table>

There is no consistent pattern in these innovations. omи shares

- features 1 and 3 with Bar(s) and man;
- feature 2 (devoicing) with Bar(n) and Bar(s);
- feature 4 with Bar(n) and man;
• feature 6 in a more complex pattern. Thus where omī has lost the vowel it does so alone in four cases out of twelve. Where it participates in this loss with another language that language is always man (in 5 cases out of twelve). In the remaining cases omī does not participate but man may. \(^\text{17}\)

What is to be made of this patterning? One obvious conclusion is that it does not define any clear-cut subgroups, a conclusion that is not in accord with the lexicostatistical classification outlined in §1 above in which bar and man subgroup together. A second conclusion is that this patterning probably indicates considerable borrowing between different subsets of these languages at different times.

10.2 Grammatical morphemes

Table 4 gives a list of all the grammatical morphemes included in the lists of PKN, PKC and PBC reconstructions. In this listing, as before, ‘+’ indicates that the item specified by the row is reflected in the language/dialects specified by the column, ‘—’ indicates absence and a ‘?’ uncertainty of occurrence.

<table>
<thead>
<tr>
<th>Item</th>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(S)</th>
<th>MAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal suffixes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PKN 34 *-fe</td>
<td>LOCATIVE</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>—</td>
</tr>
<tr>
<td>PKN 75 *-ni</td>
<td>BENEFATIVE</td>
<td>+</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>—</td>
<td>+</td>
</tr>
<tr>
<td>PKN 100 *-ufu</td>
<td>PL</td>
<td>+</td>
<td>+</td>
<td>?</td>
<td>—</td>
<td>+</td>
<td>—</td>
</tr>
<tr>
<td>PKC 16 *-da</td>
<td>INSTRUMENTAL</td>
<td>—</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PKC 58 *-ta ... ta</td>
<td>‘and’</td>
<td>—</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PKC 84 *-ye</td>
<td>PRED POSS SUFFIX</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC 66 *-on(e,i)</td>
<td>PRED POSS SUFFIX</td>
<td>?</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC 92 *-(ʔ,k)e</td>
<td>LOCATIVE</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC 94 *-(ʔ,k)o ... (ʔ,k)o</td>
<td>‘and’</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal suffixes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PKN 33 *-fe</td>
<td>IMPERATIVE</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>?</td>
</tr>
<tr>
<td>PKN 39 *-gé</td>
<td>DS MEDIAL</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>PKN 46 *-yareme</td>
<td>SEQ CONJ</td>
<td>+</td>
<td>+</td>
<td>—</td>
<td>—</td>
<td>+</td>
<td>—</td>
</tr>
<tr>
<td>PKN 68 *-me</td>
<td>SS MEDIAL</td>
<td>+</td>
<td>—</td>
<td>—</td>
<td>+</td>
<td>+</td>
<td>?</td>
</tr>
<tr>
<td>PKN 74 *-ne(i)</td>
<td>MEDIAL: ‘if, when’</td>
<td>+</td>
<td>—</td>
<td>—</td>
<td>+</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>PKC 5 *-are</td>
<td>RELATIVE: ‘who, which’</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{17}\) Although omī has clearly innovated in having four extra vowels in its vowel inventory compared with all other Koiarian languages (Table 1), very few of these extra vowels occur as reflexes of PKN vowels. For example, PKN *i > omī ê in only two cases and ô in only one out of a total of 49 possible cases (Appendix A).
The listing covers a range of grammatical elements including noun and verb suffixes, pronouns and other elements (embracing question words, demonstratives, limiters, negatives, an interrogative suffix, and a conjunction). The only items of particular note are, however,
the pronouns. Here all have reflexes in all languages except for the first person singular form which has two reconstructed forms, *da in PKC and *na in PBC. These are clearly related in both form and meaning except that PKC has *d corresponding with *n in PBC. Given that *na has been reconstructed for this pronoun to Proto Trans New Guinea (Ross 1995), *na should probably be reconstructed for PKN. In that case PKC *da is another innovation which clearly defines KC as a separate subgroup. In that it agrees with the phonological innovations described above.\(^\text{18}\)

The evidence presented in the PKN, PKC and PBC word lists also shows that the Koarian pronominal system is changing. Thus

- omi has innovative second person singular and plural forms. The expected second singular form a (< PKN *a) has been replaced by the second plural form ja, and the resulting gap has then been filled by a derived form jemê.
- demonstratives are entering the system as replacements for expected 3sg and 3pl forms. This has become established in mtn (Garland & Garland 1975: 430) and happens sporadically in koi.

10.3 Lexis

Table 5 gives a break down of the fields of meaning covered by the reconstructed vocabulary, excluding grammatical morphemes which have already been enumerated above.

<table>
<thead>
<tr>
<th>Category</th>
<th>PKN</th>
<th>PKC</th>
<th>PBC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouns</td>
<td>65</td>
<td>32</td>
<td>51</td>
<td>148</td>
</tr>
<tr>
<td>Body parts</td>
<td>(17 )</td>
<td>(7)</td>
<td>(22)</td>
<td>(46)</td>
</tr>
<tr>
<td>Kin terms</td>
<td>(5)</td>
<td>(2)</td>
<td>(2)</td>
<td>(9)</td>
</tr>
<tr>
<td>Human status</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
<td>(6)</td>
</tr>
<tr>
<td>Environmental (animals, plants, food, etc)</td>
<td>(40)</td>
<td>(21)</td>
<td>(26)</td>
<td>(87)</td>
</tr>
<tr>
<td>Verbs</td>
<td>35</td>
<td>23</td>
<td>23</td>
<td>81</td>
</tr>
<tr>
<td>Adjectives</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Adverbs</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>63</td>
<td>83</td>
<td>259</td>
</tr>
</tbody>
</table>

The list comprises items from a range of fields of meaning. About 50% of the reconstructions at each level are nouns in different semantic fields, about 30% are verbs, and the

\(^\text{18}\) Ross (1995: 143) noted that PBC *na ‘I’ reflects pTNG *na and PKN *a ‘you:sg’ reflects pTNG *ŋa. However, despite the fact that these two pTPNG pronouns are the only ones reflected in Koarian languages he nevertheless feels (p.150) that ‘Koarian [languages]...can ...be tentatively regarded as TNG languages’.
Reconstructing Proto Koian

rest cover adjectives and adverbs in that order of frequency. There is no doubt more proto-vocabulary could be reconstructed for PKN, PKC and PBC given better materials than those used for this study. Table 5 shows, however, that while a considerable portion of basic vocabulary and grammatical items has been retained in the modern daughter languages there have obviously been many changes, some, if not all, of which most probably result from familiar processes like semantic change, borrowing, word taboo or tabooistic distortion. Such changes also no doubt underlie the irregular sound correspondences noted in the sound correspondences tables above. They are also reflected in the lexicostatistic percentages from which the family tree given in §1 above is derived. An intriguing aspect of the reconstructed vocabulary is the number of observed cases of duplicate vocabulary. This vocabulary is listed in Table 6. Although it is not at all clear what this duplication means, the following observations are relevant:

1. In 17 of the 30 cases (see, for example, ‘and’, ‘ascend’, ‘break wood’, ‘bite’, ‘dog’, ‘go’) only PKC and PBC have reconstructed items for the same meaning. There is no evidence of a PKN source for either of these. This presumably reflects a situation where there was already duplicate vocabulary in the parent language from which the speakers of the ancestral languages adopted different members and carried them forward into the lower-order languages. Alternatively this situation may suggest that there was dialectal variation in the ancestral language and that the duplicate PKC and PBC vocabulary reflects the differences between dialects. A third possibility is, of course, that they represent borrowings from some other language.

2. In the remaining cases PBC has a duplicate corresponding to a form in PKN, in particular ‘arm’, ‘betelnut’, ‘breast’, ‘bush’, ‘chop wood’, ‘garden’, ‘get’, ‘lime’, ‘night’, ‘penis’, ‘person’. Of these ‘betelnut’, ‘breast’, ‘bush’, ‘chop wood’, ‘garden’, ‘lime’, ‘night’ are reflected in all the languages except omi. This is in stark contrast to PKC where only two duplicates occur corresponding to a PKN form, viz. ‘not/negator’ and ‘what?’. Further analysis shows that omi reflects the PKN form but not the duplicate form for only five of these items, viz. ‘betelnut’, ‘garden’, ‘lime’, ‘night’ and ‘penis’. Of these, however, only two have the form expected if they were borrowed directly from mtn, the neighbouring, and therefore the most source-suspicious, KC language, viz. ‘garden’ and ‘lime’. The others do not, e.g. omi ha-e ‘betelnut’ is not the form expected if it were a borrowing of mtn vava ‘betelnut’ because we would expect omi to borrow mtn v as v and not h, as indicated by the listing of segmental phonemes in Table 1. Similarly omi veru ‘penis’ should be borrowed as vevu and not veru because, again, mtn v would be expected to be borrowed as omi v and not r. Apart from ‘garden’ and ‘lime’, which may or may not have been borrowed from a KC language—there is nothing diagnostic in the form of these words to indicate which is the more likely event—it is not clear what the underlying social and/or other reasons for this observed lexical duplication are.

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19 Although as far as is known speakers of the modern languages do not practise word taboo, this does not mean it was not practised in the past.

20 Unfortunately I no longer have the resources to try to identify such possible source languages.
Table 6  Reconstructed duplicate vocabulary and grammatical morphemes

<table>
<thead>
<tr>
<th></th>
<th>PKN</th>
<th>PKC</th>
<th>PBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘and’</td>
<td><em>(ʔ,k)o...-(</em>)k</td>
<td><em>(ʔ,k)o...-(</em>)k</td>
<td><em>(ʔ,k)o...-(</em>)k</td>
</tr>
<tr>
<td>‘arm, hand’</td>
<td>*ada</td>
<td>*iJa</td>
<td><em>(ʔ,k)o...-(</em>)k</td>
</tr>
<tr>
<td>‘ascend’</td>
<td>*(ʔ,k)i</td>
<td>*(ʔ,k)i</td>
<td>*(ʔ,k)i</td>
</tr>
<tr>
<td>‘betelnut’</td>
<td>*faya</td>
<td>*siarV</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘bite’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘break wood’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘breast’</td>
<td>*amu</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘bush’</td>
<td>*boto</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘chop wood’</td>
<td>*afa-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘cook, mumu’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘cough’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘dog’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘garden’</td>
<td>*buro</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘get’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘go’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘ground’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘hit’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘hole in ground’</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>‘lime’</td>
<td>*yudi</td>
<td>*suvuamV</td>
<td>*(ʔ,k)i-</td>
</tr>
<tr>
<td>Locative N Suffix</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘middle/tongue’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘navel’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘navel, umbilical cord’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘night’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘not’, NEGATOR</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘penis’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘people (of)’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘pig’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>REL CLAUSE MARKER</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘say/speak/talk’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘see’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘shoulder’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘sit’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘sleep’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘trunk’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘wash oneself’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘wash stg’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘wash (vt)’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
<tr>
<td>‘what?’</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
<td>*(ʔ,k)e</td>
</tr>
</tbody>
</table>
11 Conclusion

The most important result of this study has been the reconstruction of a substantial part of the protophonology and vocabulary, including grammatical elements, of three different levels of the Koiarian family tree, Proto Koiarian, Proto Koiaric and Proto Baraic. Although further evidence is required to clarify aspects of this reconstructive work (e.g., the further justification of Proto Koiarian glottal stop as well as of the Proto Koiarian and Proto Baraic vowels *i-prime, *e-prime, and *o-prime) the main details are clear. The study has also had, as a spin off from this reconstructive work, the partial confirmation of the subgrouping hypotheses previously proposed on the basis of lexicostatistical evidence, viz. the distinction between Koiaric and Baraic subgroups. While the lower level subgrouping of the Koiaric languages into a KTA–KOI subgroup distinct from MTN is also clear, a result that agrees with the lexicostatically derived picture, there is no comparative phonological evidence for a clear-cut subgrouping of the languages of the Baraic subgroup—the evidence is at variance with the lexicostatistical evidence. Better morphological paradigmatic evidence may help decide whether BAR and MAN form a subgroup distinct from OMI or not, or whether some other subgrouping is to be proposed. My own feeling, based solely on the number of instances in which OMI seems to at variance with BAR and MAN in some way, that is, seems to be ‘the odd one out’ or irregular, is that the former is likely to turn out to be correct. But that is a subjective feeling which needs to be tested with further evidence.
**Appendix A: Koiarian sound correspondences**

In this listing ‘?’ means ‘unknown, no evidence’, and ‘–’ means ‘no cognate’.

<table>
<thead>
<tr>
<th>KTA</th>
<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(S)</th>
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<th>Example</th>
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<td>–</td>
<td>–</td>
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27
### Appendix A

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<th>MAN</th>
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<td>b</td>
<td>b</td>
<td>p</td>
<td>118 they</td>
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**PKN *d**

I:  
\[d \ d \ d \ d \ d \ d \ d \ d \ t\]  22 stomach  
\[d \ d \ d \ d \ d \ d \ d \ d \ t\]  23 anus  
\[– \ d \ d \ – \ d \ – \ ?\]  24 run  
\[– \ – \ d \ j \ – \ d \ ch\]  25 star  
\[d \ d \ ? \ d \ – \ – \]  3 top  
\[d \ – \ – \ – \ – \ d \ – \ 4 \ thick\]  48 lime  
\[– \ – \ j \ j \ j \ j \ j \ j\]  19 spear (v)  
\[– \ – \ d \ j \ – \ d \ – \]  25 star  
\[d \ d \ d \ ? \ d \ – \ – \]  48 lime  
\[d \ d \ d \ j \ n \ d \ ch\]  51 tree  
\[d \ d \ – \ d \ – \ – \]  105 what?  
\[d \ d \ d \ r \ d \ d \ d \ – \]  106 taro

**PKN *g**

I:  
\[– \ g \ g \ – \ g \ g \ – \]  38 afterwards  
\[g \ g \ g \ g \ g \ g \ g \ ?\]  39 ds  
\[– \ – \ g \ g \ 0 \ – \ k\]  40 dry  
\[– \ – \ g \ g \ – \ g \ – \]  41 sweet potato  
\[g \ g \ – \ g \ – \ – \]  26 wash (sg obj)  
\[– \ g \ – \ g \ – \ – \]  27 wash oneself  
\[g \ g \ g \ g \ – \ – \]  28 long  
\[g \ g \ g \ g \ g \ k\]  52 one  
\[g \ g \ g \ – \ g \ g \ – \]  80 cloth  
\[g \ – \ – \ g \ g \ g \ – \]  90 sew  
\[g \ g \ g \ – \ g \ – \ k\]  98 bird  
\[– \ 0 \ ? \ g \ – \ ? \ – \]  102 breadfruit  

**PKN *f**

I:  
\[h \ h \ v \ h \ – \ – \ – \]  31 betelnut  
\[h \ h \ v \ h \ – \ ? \ – \]  32 leaf  
\[h \ h \ (f) \ h \ f(?) \ h/y \ – \]  33 IMP PL  
\[h \ h \ f/v \ – \ h \ h/y \ – \]  34 LOCATIVE N SUFFIX  
\[h \ h \ v \ – \ ?(?) \ – \ h\]  35 hair  
\[– \ – \ h \ ? \ 0 \ – \ 0\]  36 pour out  
\[h \ – \ – \ ? \ f \ ? \ – \]  37 buy
<table>
<thead>
<tr>
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<th>KOI</th>
<th>MTN</th>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(S)</th>
<th>MAN</th>
<th>Example</th>
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</table>

PKN *s

| I:   |  s  |  s  |  ?  |  ?  |  t  |  ?  |  t  | 88 bed bug |
|      |  Ø  |  Ø  |  Ø  |  s  |  Ø  |  –  |  Ø  | 89 neck    |
|      |  t  |  –  |  –  |  s  |  s  |  s  |  –  | 90 sew     |
|      |  –  |  –  |  t  |  –  |  d/s | s  |  s  | 91 wash (stg) |
| M:   |  s  |  s  |  s  |  –  |  s  |  –  |  s  | 7 sneeze  |
|      |  –  |  –  |  s  |  –  |  –  |  –  |  –  | 29 small   |
|      |  –  |  t  |  t  |  –  |  –  |  d  |  s  | 30 swim    |
|      |  –  |  s  |  s  |  –  |  s  |  –  |  s  | 36 pour out |
|      |  s  |  h  |  s  |  ?  |  –  |  –  |  –  | 56 heavy   |

PKN *v

| I:   |  ?  |  v  |  h  |  –  |  s  |  ?  |  s  | 104 plant (garden) |
|      |  v  |  v  |  –  |  v  |  –  |  –  |  –  | 105 what?          |
|      |  v  |  v  |  f  |  v  |  m  |  m  |  –  | 106 taro            |
|      |  Ø  |  Ø  |  v  |  –  |  v  |  ?  |  h  | 107 body            |
|      |  v  |  v  |  v  |  v  |  –  |  –  |  –  | 108 night           |
|      |  v  |  v  |  –  |  v  |  –  |  –  |  v  | 109 yam             |
|      |  v  |  v  |  v  |  v  |  –  |  v  |  v  | 110 forehead         |
|      |  v  |  v  |  –  |  –  |  –  |  h  | 111 skin             |
|      |  ?  |  v  |  h  |  v  |  –  |  ?  |  –  | 112 vagina           |
|      |  v  |  v  |  v  |  m  |  m  |  v  |  114 fire            |
|      |  v  |  v  |  v  |  Ø  |  v  |  v  |  Ø  | 115 rain             |
|      |  Ø  |  Ø  |  –  |  v  |  –  |  –  |  –  | 116 bee              |
|      |  v  |  v  |  ?  |  v  |  v  |  –  |  –  | 57 noose             |
|      |  v  |  –  |  –  |  v  |  –  |  –  |  v  | 119 sing             |

Koiarian sound correspondences 29
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<th>OMI</th>
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<td>I: ɣ v h – ṭ – – 42 hit ɣ v – – ṭ – – 43 boy ɣ v – – ṭ ṭ – – 44 fight ɣ v h ṭ – ṭ – – 45 stop ɣ ṭ ṭ ṭ – – – – 47 sibling, s.s., younger ɣ ṭ ṭ – – – – 48 lime ɣ v h ṭ ṭ – ṭ ṭ – – 49 think</td>
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<p>| PKN *m |     |     |     |        |        |     |         |
| I: m m ṭ b – ṭ – – 60 get m m – v ṭ ṭ ṭ ṭ 61 wife m – – m – – – 62 good m m m m – m – 63 woman m – – – m m m 64 good m m m – – – ṭ 65 father (reference) – – m m m – m 66 older m – – m m – m 67 work m m ṭ – m m ṭ – 68 ss and m m ṭ ṭ – m m – 69 animal m m m m m m m m 70 give m m m m m m m – 71 stone |
| M: m m m m m m m m m m 8 sibling, s.s., older – m – – m ṭ – m 9 plateau m m m m m m m m 10 breast m m m – – – m 35 hair m m m – m – – 42 hit m m – – m – – – 43 boy m m – – m ṭ – 46 ss finished m m m m – – – – 55 sugar cane m m m – – – – 65 father (reference) – – m m m m – m 66 older |</p>
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<td>m</td>
<td>m</td>
<td>–</td>
<td>?</td>
<td>m</td>
<td>m</td>
<td>94 scratch</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>–</td>
<td>95 tie</td>
</tr>
<tr>
<td>m</td>
<td>m</td>
<td>m</td>
<td>–</td>
<td>m</td>
<td>m</td>
<td>m</td>
<td>120 louse</td>
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</table>

**PKN *n**

**I:**
- n n n n – n n 72 yes/no
- ? n n n – ? n 73 chew
- n – – ? n ? – 74 conditional v suffix
- n n – n – n ? 75 beneficiary, purpose
- n n n n n n n n 76 eye
- n n n n n n n n 77 cry
- n n n n n n n n 78 we
- n – – – – n – 4 thick
- n n n n – n n 8 sibling, s.s., older
- n n n n – ? – 32 leaf
- Ø Ø n n – n – 63 woman
- n n n n n – n 71 stone
- ? n n n – ? n 73 chew
- n n Ø – n n – 80 cloth
- n n n n n – n 89 neck
- n n n n n – – – 101 egg
- n n n n n n n n 114 fire
- n n n n Ø Ø n n 115 rain

**PKN *r**

**I:**
- r r l r – r r 81 burn (vi)
- r r l r n n r r 82 cooked
- r r l n n r n 83 stand
- y y l r – ? – 84 clear bush
- r r – r r r r 85 straight
- r r l Ø(?) r r – 86 say
- r r l r r r r 87 come
- – r – – r ? r 9 plateau
- r r – – r r r r 11 enter
- r r l r – – – 21 garden
- – – l r r – r 40 dry
- r r l – r – r 45 stop
- r r – – r ? ? 46 ss seq (‘having X-ed’)
- r r l ? r – – 58 dig out
- r r – r Ø Ø r 85 straight
- r r ? ? r ? r 88 bed bug
- – – l r r r r 97 wind

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<th>OMI</th>
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PKN *y

I:

| y   | y   | l   | j   | j   | z   | j   | 117 you (pl) |
| y   | y   | Є   | j   | Є   | z   | Є   | 118 they     |
| y   | –   | –   | j   | –   | –   | j   | 119 sing     |
| y   | Є   | –   | Є   | –   | ?   | ?   | 46 ss sequential |

PKN *i

I:

| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 50 eat |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 51 tree |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 53 name |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 54 hear |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 55 sugar cane |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 56 heavy |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 57 noose |

M:

| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 7 sneeze |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 7 sneeze |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 8 sibling, s.s., older |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 14 fruit |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 18 people (of) |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 24 run |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 25 star |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 36 pour out |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 38 afterwards |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 39 dry |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 40 dry |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 45 straight |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 86 say |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 90 sew up |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 109 yam |

F:

| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 14 fruit |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 17 spear |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 19 spear (v) |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 25 star |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 40 dry |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 43 boy |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 48 lime |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 55 sugar cane |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 57 noose |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 54 hear |
| Є   | Є   | Є   | Є   | Є   | Є   | Є   | 59 do |
## Koiarian sound correspondences

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### PKN *ɪ

- **M:**  i  i  –  –  u  u  u  11  enter
-  –  i  i  Ø  o  o  Ø  52  one

- **F:**  i  i  i  (e)  (e)  u  (a)  51  tree
  i  i  i  (e)  (e)  u  (a)  53  name
  i  i  a  –  e  e  ?  82  cooked
  i  i  i  e  Ø  Ø  e  115  rain

### PKN *e

- **I:**  e  i  –  e  –  –  –  26  wash (sg obj)
  e  i  –  e  –  –  –  27  wash oneself
  e  e  e  ì  –  –  –  28  long
-  –  e  –  i  –  –  29  small
-  –  e  e  –  –  i  i  30  swim

- **M:**  –  –  e  i  –  e  –  41  sweet potato
  e  e  e  ö  Ø  –  Ø  89  neck
  e  e  e  e  –  ?  –  113  penis
  e  e  e  ì  e  e  e  115  rain

- **F:**  e  e  e  –  e  –  –  13  ripe
  e  e  e  –  e  e  i  15  a (certain one)
  e  e  e  ì  e  e  e  22  stomach
  e  e  e  e  –  –  –  28  long
  e  e  e  e  o  (?)  e  ?  33  IMP PL
  e  e  e  –  e  e  –  34  locative n. suffix
  e  –  –  ?  e  ?  –  37  buy
  e  e  e  –  e  –  e  45  stop
  e  –  –  e  –  –  62  good
  e  –  –  e  e  –  e  67  work

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### PKN *é

**F:**
- e – – – – u – 4 thick
- e e e ô a a a 16 not
- e e e o a/e o ?e 39 ds
- e a – – – – a 96 short
- e e – ë ? – a 112 vagina
- e e e (i) (u) u (a) 114 fire

### PKN *a

**I:**
- a a a ja a a a a 1 you sg
- a a a a a a a o 2 arm
- a a a Ø a – – 3 top
- a – – – – a – 4 thick
- a a Ø a – – a 5 chop
- a a a Ø Ø a Ø 6 he
- a a a – a ? a 7 sneeze
- a a a Ø Ø Ø Ø Ø 8 sibling, s.s., older
- – a – – a ? a 9 plateau
- a a a a a Ø Ø Ø 10 breast
- a a – – a a a 11 enter

**M:**
- a a a a a a a a 8 sibling, s.s., older
- – a – – a ? a 9 plateau
- a a – – – a – 12 father (ADDRESS)
- a a a – a – – 13 ripe
- – – a a – – – 14 fruit
- a a – Ø – – – 26 wash (SG OBJ)
- a a – Ø – – – 27 wash oneself
- a a a a a – – 31 betelnut
- a a a a – ? – 32 leaf
- a – – ? a ? – 37 buy
- – a a (<ia) a a a 38 afterwards
- a a a a a a a 42 hit
- a a – – a – – 43 boy
- a a – – – a a 44 fight
- a a – – – a a 44 fight
- a a a – a – a 45 stop
- – a a e/ö o o ui 52 one
- o a a ? a – – 58 dig out
- a a – a a a a a 61 wife
- a a – o a a a a 61 wife
### Koiarian sound correspondences

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Appendix A

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PKN *o

I: – o – o/ô o o – 79 or
  o o o – u o – 80 cloth
M: – – o ö – o – 41 sweet potato
  o o o – o o – 80 cloth
  o o o o/ö/ô o o o 87 come
F: – o – – (e) ? (a) 9 plateau
  o o o – – – a 35 hair
  o o o (e) – o (a) 47 sibling, s.s., younger
  o o o ? o – – 58 dig out
  o o o a a/i a/i a/e 70 give*21
  o o o o o o o û 78 we
  o oi ou u o o – 86 say
  o o o (e) o,e o (a) 87 come
  o o o ö o – u 89 neck
  o o – o – – – 91 wash (stg)
  o o o – – o a 92 blood

PKN *û

M: o o o – u – u 35 hair
  – – o – u – u 36 pour out
  o o o o/ö – u u 47 sibling, s.s. younger

PKN *ê

I: – – he ð u u ð 97 wind
  u u u u u – u 98 bird
  u u u ð u u hu 99 blow (fire)
  u u u ? – ð ð 100 pl. suffix
  u u u u – – – 101 egg
  – u ? ð – – 102 breadfruit
  u u u – – – u 103 nose
  u u u u – u u 120 louse
  u u – ð u u u 121 arise
M: u – – – – u – 4 thick

It is unclear whether this correspondence set reflects PKN *a or PKN *o.
### Koiarian sound correspondences

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### Appendix B: Koiaric sound correspondences

In this listing ‘?’ means ‘unknown, no evidence’, and ‘–’ means ‘no cognate’.

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### Koiaric sound correspondences

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**PKC *b**

I:  
- b  b  b  9 shoulder  
- b  b  b  10 big  
- b  b  b  11 moon  
- –  b  b  12 joke  
- b  b  b  13 break  
- b  b  b  14 pull  

M:  
- b  b  b  1 hole  
- b  b  b  2 two  
- –  b  b  18 fall down  
- b  b  b  56 long ago  
- b  b  b  74 tangget, *Cordyline*

**PKC *d**

I:  
- d  d  d  15 I  
- –  d  d  16 with  
- d  d  d  17 navel  
- –  d  d  18 fall down  
- d  d  d  19 hawk  

M:  
- d  d  d  17 navel  
- d  d  d  20 vomit  
- d  d  t  29 ascend  

**PKC *g**

I:  
- g  g  g  27 OR PL  
- g  g  ug  67 sit down  

M:  
- g  g  g  9 shoulder  
- g  –  g  10 big  
- g/ɣ  s  t/h  35 new  
- g  g  g  48 skirt  

**PKC *s**

I:  
- –  s  s  55 quickly  
- s  s  s  56 long ago  

M:  
- s  s  s  35 new  

**PKC *f**

I:  
- –  h  h  24 side  
- h  h  h  25 back of hand  
- –  h  v  26 hot  

M:  
- h  h  v  3 cook/mumu  
- h  h  v  4 open  
- –  h  v  26 hot  

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#### PKC *$v$ I:  
- $v$ $v$ $v$ 73 how much  
- $v$ $v$ $v$ 74 tangget, *Cordyline*  
- $v$  $-$  $v$ 75 perspire  
- $v$ $v$ $v$ 76 sun  
- $v$ $v$ $v$ 77 ground  
-  $v$ $v$ 78 die  
- $v$ $v$ $v$ 79 not  
- $v$ $v$ $v$ 80 urinate  
-  $v$ $v$ 81 spin  

#### M:  
-  $v$ $u$ 8 butterfly  
-  $v$ $h$ 12 joke  
-  $v$ $\emptyset$ $v$ 27 or pl  
-  $v$ $h$ 68 bite  

#### PKC *$y$ I:  
-  $h$ $v$ 26 hot  
-  $y$ $v$ $h$ 28 or sg  
-  $y$ $v$ $v$ 29 ascend  
-  $y$ $v$ $h$ 30 caus  
-  $y$ $v$ $h$ 33 vine  
-  $y$ $\emptyset$ $h$ 34 path  

#### M:  
-  $y$ $v$ $\emptyset$ 13 break  
-  $y$ $v$ $h$ 14 pull  
-  $h$ $v$ $\emptyset$ 20 vomit  
-  $y$ $v$ $h$ 23 see  
-  $y$ $v$ $h$ 32 return  
-  $v$ $h$ 40 burn  
-  $y$ $v$ $h$ 45 like  
-  $y$ $\emptyset$ $\emptyset$ 59 also  
-  $y$ $\emptyset$ $h$ 71 only  
-  $y$ $v$ $\emptyset$ 72 ashes  
-  $y$  $-$  $h$ 75 perspire  
-  $y$ $v$ $\emptyset$ 80 urinate  
-  $y$ $v$ $h$ 82 sleep  
-  $y$ $g$ $h$ 83 string bag  

#### PKC *$m$ I:  
-  $m$ $m$ $m$ 38 pres cont  
-  $m$ $m$ $m$ 39 old woman  
-  $m$ $m$ 40 burn  

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M: m m m 3 cook/mumu
m m m 17 navel
m m m 31 hit
m m m 34 path
m m m 41 land
m m m 47 middle
m m m 67 sit down
m m m 69 root

PKC *n I: – n m 44 pawpaw
n n n 45 like
n n n 46 mother
n n n 47 middle
n n n 48 skirt
n n n 49 past

M: n n ø 17 navel
n n n 19 hawk
n n n 22 cough
– n n 26 hot
– n n 37 head
n n n 42 eel
– n n 44 pawpaw
n n n 46 mother
– n n 52 what?
n n n 60 ridge
n – n 70 mosquito
n n n 71 only
n n n 76 sun

PKC *r I: r r l 53 dig
– r l 54 because

M: r r l 4 open
r r l 5 who REL
ø – l 10 big
r r l 23 see
r r l 32 return
– r l 55 quickly
r r l 67 sit down
– r l 81 spin

PKC *y I: – y – 7 having done X

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M:  
\[ I i i \] 29 ascend  
\[ - i i \] 32 return  
\[ - i i \] 37 head  
\[ i i i \] 42 eel  
\[ - i i \] 44 pawpaw  
\[ i i i \] 46 mother  
\[ i i i \] 48 skirt  
\[ i i i \] 79 not  
\[ i i i \] 81 spin  
F:  
\[ \emptyset i i \] 2 two  
\[ - i \emptyset \] 18 fall down  
\[ - i i \] 24 side  
\[ i i a \] 32 return  
\[ - i i \] 44 pawpaw  
\[ i i i \] 48 skirt  
\[ i i i \] 62 go  
\[ - i i \] 73 how much  
\[ i i i \] 76 sun  
\[ - i i \] 78 die  
\[ - i i \] 81 spin  

PKC *e  
I:  
\[ e e e \] 20 vomit  
\[ e e \emptyset \] 21 that  
\[ e e e \] 22 cough  
\[ e e e \] 23 see  
M:  
\[ e e e \] 17 navel  
\[ a e e \] 23 see  
\[ - e e \] 26 hot  
\[ e e e \] 27 OR PL  
\[ e e e \] 46 mother  
\[ e e e \] 47 middle  
\[ - e e \] 55 quickly  
\[ e e e \] 57 tail  
\[ e e e \] 79 not  
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F:  
\[ e e e \] 5 who REL  
\[ e - a \] 10 big  
\[ e e e \] 21 that
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# Appendix C: Baraic sound correspondences

In this listing ‘?’ means ‘unknown, no evidence’, and ‘–’ means ‘no cognate’.

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## Appendix C

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**PBC*b I:**

| b   | b   | b   | p   | 11 husband |
| b   | –   | –   | p   | 12 push    |
| b   | m   | b   | m   | 13 tongue  |
| M:  | b   | b   | b   | p   | 1 get      |
| –   | b   | b   | p   | 22 tooth   |
| b   | b   | b   | p   | 75 snake   |

**PBC*d I:**

| d   | d   | d   | –   | 14 leg    |
| d   | –   | d   | –   | 15 thigh  |
| M:  | d   | d   | t   | 21 ear    |
| d   | –   | d   | –   | 23 what?  |
| d   | z   | d   | ch  | 24 which? |
| j   | d   | d   | t   | 25 water  |
| ?   | ?   | d   | ch  | 85 when?  |
| –   | –   | d   | t   | 89 bone   |

**PBC*g I:**

| g   | g   | k   | 20 that |
| –   | ∅   | g   | ∅   | 21 ear   |
| –   | ∅   | g   | ∅   | 22 tooth |
| M:  | g   | g   | k   | 2 see    |
| g   | –   | g   | k   | 68 rotten |

**PBC*s I:**

| s   | –   | s   | s   | 68 rotten |
| s   | s   | s   | –   | 69 ground |
| –   | –   | ∅   | s   | 70 jaw    |
| –   | s   | s   | s   | 71 betelnut |
| s   | –   | s   | s   | 72 shoulder |
| s   | ∅   | –   | s   | 73 bad    |
| –   | s   | ?   | s   | 74 lime   |
| M:  | ?   | s   | ?   | s   | 8 leech   |

**PBC *b**

**PBC *d**

**PBC *g**

**PBC *s**
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**PBC *f**

I:  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  

M:  
- θ  
- θ  
- θ  
- θ  
- θ  
- θ  
- θ  
- ?  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  
- h  

**PBC *v**

I:  
- v  
- v  
- v  
- v  
- v  
- v  

M:  
- θ  
- θ  
- θ  
- θ  
- θ  
- θ  
- θ  
- θ  
- θ  

**PBC *m**

I:  
- m  
- m  
- m  
- m  
- m  
- m  
- m  
- m  
- m  
- m  

M:  
- m  
- m  
- m  
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- m  
- m  
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- m  
- m  

**PBC *n**

I:  
- n  
- n  
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- n  
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### Appendix C

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**PBC *r**

I:  
| M: | r | – | ? | r | 67 milk |
| – | r | r | r | r | 4 sand |
| r | r | r | r | r | 7 house |
| r | r | r | r | r | 11 husband |
| r | r | r | r | r | 13 tongue |
| r | r | r | r | r | 17 son |
| r | r | – | – | r | 29 what? |
| – | r | r | r | r | 30 mouth |
| r | r | r | r | r | 31 who? |
| r | Ø | r | r | r | 31 who? |
| r | – | r | – | – | 39 today |
| – | ? | r | r | r | 41 relative |
| – | r | Ø | r | r | 42 garden |
| – | r | r | r | r | 44 penis |
| r | r | – | – | – | 47 sit pl |
| – | r | – | r | r | 48 lizard |
| r | r | – | r | r | 51 purpose |
| r | – | ? | r | r | 59 cook |
| r | – | r | r | r | 63 yesterday |
| – | r | r | r | r | 71 betelnut |
| r | – | r | r | r | 72 shoulder |
| r | r | r | r | r | 75 snake |

**PBC *j**

I:  
| j    | s    | z    | j    | 36 bite   |
| –    | –    | z    | j    | 37 cough  |
| j    | d    | ?    | ch   | 38 drum   |
| j    | –    | y    | –    | 39 today  |
| j    | –    | –    | ch   | 40 bush   |
| –    | ?    | y    | j    | 41 relative |
| –    | j    | j    | j    | 42 garden |
| Ø    | j    | z    | Ø    | 43 afraid |

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|        |   | Ø | i | i | i | 24 | which?    |
|        |   | Ø | Ø | i | Ø | 25 | water     |
|        |   | i | – | – | i | 26 | arm       |
|        |   | – | i | – | i | 27 | how much  |
|        |   | i | i | i | Ø | 28 | two       |
|        |   | Ø | i | – | i | 29 | what? (2) |
|        |   | – | i | i | i | 30 | mouth     |
|        |   | Ø | e | i | i | 31 | who?      |
|        |   | Ø | – | i | – | 32 | cloud     |
|        |   | – | i | i | i | 33 | full      |
|        |   | – | i | – | i | 34 | now       |
|        |   | – | i | i | Ø | 35 | tail      |
| M:    | – | i | – | i | 8 | leech    |
|       | i | – | – | i | 12 | push     |
|       | i | i | i | i | 13 | tongue   |
|       | – | i | e | – | 14 | leg       |
|       | – | i | – | i | 34 | now       |
|       | – | ie | e | i | 35 | tail     |
|       | i | i | – | e | 36 | bite      |
|       | e | – | – | i | 40 | bush      |
|       | i | i | – | i | 51 | PURPOSE  |
|       | – | ? | i | i | 58 | salt      |
|       | – | – | i | i | 62 | night     |
|       | i | i | i | ej | 64 | sleep     |
|       | ? | i | i | i | 65 | day before yesterday |
|       | i | – | ? | i | 67 | milk      |
|       | – | i | e | i | 71 | betelnut  |
|       | i | – | i | i | 72 | shoulder  |
|       | i | i | – | i | 73 | bad       |</p>
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</tbody>
</table>
The final set of correspondences above involves final terminator vowels in OMI, BAR(N) and MAN and \( u \) in BAR(s) (except for a few sporadic cases). It is not clear which vowel these correspondences reflect. They are therefore represented by the symbol \( *V \), an unspecified vowel.

<table>
<thead>
<tr>
<th>OMI</th>
<th>BAR(N)</th>
<th>BAR(s)</th>
<th>MAN</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>(e)</td>
<td>u</td>
<td>(a)</td>
<td>71 betelnut</td>
</tr>
<tr>
<td>(e)</td>
<td>(e)</td>
<td>e</td>
<td>(a)</td>
<td>75 snake</td>
</tr>
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<td>a(e)</td>
<td>( \emptyset )</td>
<td>u</td>
<td>(a)</td>
<td>81 smoke</td>
</tr>
<tr>
<td>(e)</td>
<td>–</td>
<td>u</td>
<td>–</td>
<td>87 navel, umbilical cord</td>
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<tr>
<td>–</td>
<td>–</td>
<td>u</td>
<td>(a)</td>
<td>89 bone</td>
</tr>
<tr>
<td>–</td>
<td>?</td>
<td>o</td>
<td>(a)</td>
<td>95 heart</td>
</tr>
</tbody>
</table>
Appendix D: Proto Koiarian word list

1. *a *‘you.sg’
   KTA:  a  ‘you.sg’
   KOI:  a  ‘you.sg’
   MTN:  a  ‘you.sg’
   OMI:  ja  ‘you.sg’
   BAR(N):  a  ‘you.sg’
   BAR(S):  a  ‘you.sg’
   MAN:  a  ‘you.sg’

   OMI ja is unexpected. Expected form is a. Initial j possibly accreted by analogy with jeme ‘you.pl’ or possibly ja is a reflex of *ya ‘you.pl’.

2. *ada *‘arm, hand, branch, wing, handle, foreleg (of animal)’
   (Lane: *a*da *‘arm, hand, branch, wing, appendage’)
   KTA:  ada-ka  ‘arm, hand, branch, handle’
   KOI:  ada-ka  ‘arm, hand, branch, handle, foreleg (of animal), wing’
   MTN:  ada  ‘arm, hand, foreleg, branch’
   OMI:  ad-e  ‘branch, appendage’
   BAR(N):  adav-e  ‘wing’
   BAR(S):  (miːrena)  ada|hu  ‘wing’
   MAN:  ta|h-a  ‘wing’

   Austing & Upia (1975: 517) also give ?a:d-e for ‘branch’. As the glottal stop is unexpected this item is disregarded for comparative purposes.

3. *ada *‘top’
   (Lane: *ad(a, o) *‘top’)
   KTA:  ada-he  ‘on top of’
   KOI:  ada-he  ‘on top of’
   MTN:  ho|vada-ve  ‘on top of’ (ho- unexplained; -ve locative suffix)
   OMI:  dō|r-e  ‘top (of tree)’
   BAR(N):  ado  ‘on top’ (? – expected form adoCe)
   BAR(S):
   MAN:

4. *adûne *‘thick’
   KTA:  adûne  ‘thick’
   KOI:
MTN:
OMI:
BAR(N):
BAR(S): adunu ‘thick’
MAN:

5. *afa- ‘cut, chop (wood)’
   KTA: aha- ‘cut, chop’
   KOI: aha- ‘cut (wood), chop’
   MTN: hei ‘to cut’ (ei unexpected; a expected)
   OMI: ah-e ‘cut, break (stick)’
   BAR(N):
   BAR(S):
   MAN: aha|tuv-o ‘cut logs or bamboo’

6. *afu ‘he, she, it’; 3SG PRONOUN (Lane: 3. *afu ‘3sg pronoun’)
   KTA: au ‘he, she, it’; 3SG PRONOUN (expected form ahu)
   KOI: ahu ‘he, she, it’; 3SG PRONOUN
   MTN: au ‘he, she, it’; 3SG PRONOUN
   avu-ho ‘for him/her’
   OMI: hu ‘he, she, it’; 3SG PRONOUN
   BAR(N): fu ‘he, she, it’; 3SG PRONOUN
   BAR(S): ahu ‘he, she, it’; 3SG PRONOUN
   MAN: hu ‘he, she, it’; 3SG PRONOUN

7. *akisi- ‘sneeze’
   KTA: asi|mana-va-nu ‘sneeze’
   KOI: akisi-va-nu ‘sneeze’
   MTN: akisi-a ‘sneeze’
   OMI:
   BAR(N): asi|nuf-ie ‘sneeze’
   BAR(S):
   MAN: asi|puej-o ‘sneeze’

8. *amakina ‘sibling, same sex, older’ (Lane: 4. *(a)makina ‘older opposite sex sibling’)
   KTA: amakina ‘sibling, same sex, older’
   KOI: amakina ‘sibling, same sex, older’
   MTN: amakina ‘sibling, same sex, older’
   OMI: maʔin-e ‘sibling, same sex, older’
   BAR(N): maʔi ‘sibling, same sex, older’
   BAR(S): mahino ‘sibling, same sex, older’
   MAN: maʔin-a ‘sibling, same sex, older’
9. *amaro ‘plateau, flat land’
   KTA: amaro\textit{|di} ‘on (top of)/along the ridge’ (\textit{di} is a fossilised suffix that only occurs in this word; probably a dialect borrowing)
   KOI: amaro\textit{|di} ‘on (top of)/along the ridge’
   MTN: amaro\textit{|di} ‘on (top of)/along the ridge’
   OMI: amaro\textit{|di} ‘on (top of)/along the ridge’
   BAR(N): amar-e ‘flat land’
   BAR(S): amar-a ‘plateau, land (flat)’
   MAN: amar-a ‘plateau, land (flat)’

10. *amu ‘breast’ (Lane: 5. *amu ‘breast’)
    KTA: amu ‘breast (of woman), milk’
    KOI: amu ‘breast (of woman), milk’
    MTN: amu ‘breast (of woman)’
    OMI: am-e ‘breast’ (form unexpected; amu-e expected)
    BAR(N): mo|su ‘breast’ (absence of initial \textit{a} unexplained; medial \textit{o} unexpected, \textit{u} expected; final -\textit{su} unexplained)
    BAR(S): mu|i ‘breast’ (absence of initial \textit{a} unexplained)
    MAN: am-e ‘breast’ (form unexpected; amu-e expected)

11. *ari[ra]- ‘enter, go into’
    KTA: ari\textit{|ra-ya-} ‘fall into a hole’
    KOI: ari\textit{|ra-va-} ‘enter a hole’
    MTN: ari\textit{|ra-va-} ‘enter a hole’
    OMI: ari\textit{|ra-va-} ‘enter a hole’
    BAR(N): aru ‘go in’
    BAR(S): aru\textit{|ye, aru|ʔairo} ‘enter’
    MAN: aru\textit{|v-o} ‘enter, go inside’

12. *baba ‘father (ADDRESS)’ (cf. *mama ‘father (REFERENCE)’)
    KTA: baba ‘father (ADDRESS), dad’
    KOI: baba ‘father (ADDRESS), dad’
    MTN: baba ‘father (ADDRESS), dad’
    OMI: apo, aho ‘father (ADDRESS)’ (\textit{p/h} unexpected; \textit{b} expected)
    BAR(N): baba ‘father, uncle (father’s brother)’
    BAR(S): baba ‘father, uncle (father’s brother)’
    MAN: baba ‘father, uncle (father’s brother)’

    The \textit{p:h} alternation in \textit{omi} is common amongst some speakers as indicated in footnote 10 on page 6. Furthermore \textit{omi p} is not a regular reflex of PKN *b.

13. *bae ‘ripe’ (Lane: 8. *bae ‘ripe’)
    KTA: bae\textit|ka ‘ripe’
    KOI: bae\textit|ka ‘ripe’
MTN:  bae|a  ‘to be ripe, ready to pick’
OMI:  
BAR(n):  bae|je  ‘ripe’
BAR(s):  
MAN:  

14.  *bai ‘fruit’ (Lane: 7. *bai ‘fruit’)
   KTA:  
   KOI:  
   MTN:  bai-fe  ‘fruit’
   OMI:  baj-e  ‘fruit’
   BAR(n):  
   BAR(s):  
   MAN:  

15.  *be ‘a (certain one), some, another’ (Lane: 9. *be ‘a, one’)
   KTA:  be  ‘a (certain one), one, some’
   KOI:  be  ‘a (certain one), one, some, another’
   MTN:  be  ‘a, one, some’
   OMI:  
   BAR(n):  be  ‘another, different’
   BAR(s):  be|hi, be|si  ‘a, one, other’
   MAN:  pe|na  ‘a, one, another’

   MAN also has pi|ni, pi|na ‘a, one, another’. This variation is unexplained.

16.  *bé ‘not, negative’ (Lane: 10. *be ‘negative’)
   KTA:  be|ta  ‘not, no’
   KOI:  be|be  ‘not, no’
   i|be  ‘or not’
   MTN:  be  ‘strong negative’
   OMI:  bô|gô  ‘not’ (author’s fieldnotes)
   BAR(n):  ba  ‘not’
   BAR(s):  ba  ‘not’
   MAN:  pa, pana  ‘not’

17.  *bi ‘spear (n) (Lane: 11.*bi(di)- ‘spear, to spear’) (cf. *bidi- ‘spear (v)’)
   KTA:  
   KOI:  bi  ‘spear (n)’
   MTN:  bi  ‘spear (n)’
   OMI:  bi|j-e  ‘spear (n)’
   BAR(n):  
   BAR(s):  
   MAN:  

18. *bia ‘people (of)’
   KTA:  bia  ‘controller, owner, boss’
   KOI:  bia  ‘one (pron), people (of), group (of people) from, folk’
   MTN:
   OMI:
   BAR(n):
   BAR(s):  bia  ‘man, person’
   MAN:

19. *bidi- ‘spear (v)’ (Lane: *bi(di)- ‘spear, to spear’)
   KTA:  bi-  ‘spear (v), kill (by spearing)’
   KOI:  bi-  ‘spear (v), kill (by spearing), stab’
   MTN:  bi-  ‘spear (v), stab, pierce’
   OMI:  biji|oh-e  ‘spear (v)’ (*d > jʷ*i) ?
   BAR(n):  bij-a  ‘spear (v)’ (*d > jʷ*i) ?
   BAR(s):  bij-a  ‘kill (pig by spearing)’ (*d > jʷ*i) ?
   MAN:  pij|ah-o  ‘spear (v)’ (*d > jʷ*i) ?

20. *boto ‘bush’ (Lane: 13. *boto ‘bush, forest’)
   KTA:
   KOI:
   MTN:  boto  ‘bush’ (author’s fieldnotes)
   OMI:
   BAR(n):
   BAR(s):  boto  ‘bush’
   MAN:

21. *buru ‘garden’ (Lane: 12. ? *b(o,u)ru ‘garden, fence’)
   KTA:  buru (ye ye)  ‘(yam) garden’
   KOI:  buru  ‘garden’
   MTN:  bulu  ‘garden’
   OMI:  buor-e  ‘fence’
   buru  ‘fence’ (Dutton 1969: item 83)
   BAR(n):
   BAR(s):
   MAN:

   OMI buor-e and buru ‘fence’ are taken to be cognate with the KC items, assuming metathesis in the former of u and r as well as a semantic shift from ‘garden’ to ‘fence’ in accord with evidence given in Dutton (1973) of the large scale borrowing of, and semantic changes in, words for ‘garden’ and ‘fence’ (and other agricultural items) across Papua.
22. *de ‘stomach, intestines, faeces’ (Lane: 14. ? *de- ‘trunk, belly, back, buttocks’)
   KTA:  
   KOI:  
   MTN:  
   OMI:  
   BAR(\(\text{N}\)):  
   BAR(\(\text{S}\)):  
   MAN: 

23. *deya ‘anus, buttocks’ (Lane: 15. ? *deya ‘anus, excrement’)
   KTA:  
   KOI:  
   MTN:  
   OMI:  
   BAR(\(\text{N}\)):  
   BAR(\(\text{S}\)):  
   MAN:  

   It is not clear which of the two omi items is the ‘true’ reflex of PKN *deya as both v and g occur as reflexes of PKN *y.

24. *dibu- ‘run’ (Lane: 63. ?ru(a) ‘come, go, run’)
   KTA:  
   KOI:  
   MTN:  
   OMI:  
   BAR(\(\text{N}\)):  
   BAR(\(\text{S}\)):  
   MAN:  

25. *didi ‘star’ (Lane: 16. *didi ‘star’)
   KTA:  
   KOI:  
   MTN:  
   OMI:  
   BAR(\(\text{N}\)):  
   BAR(\(\text{S}\)):  
   MAN:  

26. *eago- ‘wash (sg obj)’ (cf. PKN *so- ‘wash (stg)’)
   KTA:  
   KOI:  
   MTN:  
   OMI:  
   BAR(\(\text{N}\)):  
   BAR(\(\text{S}\)):  
   MAN:
The initial vowels in the KTA and KOI forms reflect the difference between the word for ‘water’ in these two languages, viz. KTA ei and KOI ita respectively.

27. *eagu- ‘wash oneself, bathe’ (Lane: 17. *e(a)gu- ‘wash (tr.)’)
   KTA:  eagu-  ‘bathe’
   KOI:  iagu-  ‘wash (oneself), bathe’
   MTN:  
   OMI:  egu|o-  ‘wash (sg obj)’ (assumes semantic shift from ‘wash (o.s.), bathe’)
   BAR(N):
   BAR(S):
   MAN:

The initial vowels in the KTA and KOI forms reflect the difference between the word for ‘water’ in these two languages, viz. KTA ei and KOI ita respectively.

28. *ege ‘long’ (Lane: 18. *ege ‘long, tall’)
   KTA:  ege  ‘long’
   KOI:  ege  ‘long’
   MTN:  ege|tana  ‘long’
   OMI:  ège  ‘long’
   BAR(N):
   BAR(S):
   MAN:

29. *(e,i)se ‘small’ (Lane: 19. *(e,i)se ‘small’)
   KTA:
   KOI:
   MTN:  ese-ve  ‘small’
   ese  ‘child’
   OMI:  
   BAR(N):  ise|kub-e  ‘small’
   ise|sina  ‘small ones’
   BAR(S):
   MAN:

The correspondences of initial vowels in this item are irregular. There is not sufficient evidence to determine whether these vowels reflect PKN *e or *i.

30. *(e,i)so- ‘swim’ (cf. PKN *so- ‘wash (stg)’)
   KTA:
   KOI:  etova-  ‘swim’
   MTN:  etova-  ‘swim’
   OMI:
The correspondences of initial vowels in this item are irregular. There is not sufficient evidence to determine whether these vowels reflect PKN *e or *i.

31. *faya ‘betelnut’ (Lane: 21.*faya ‘betelnut’)
   KTA:  haya ‘betelnut’
   KOI:  hava ‘betelnut’
   MTN:  vava-e ‘betelnut’ (unexplained medial v; expected form vaha-e)
   OMI:  ha-e ‘betelnut’
   BAR(N):
   BAR(S):
   MAN:

32. *fana ‘leaf’ (Lane: 22. *fana ‘leaf, appendage’)
   KTA:  hana-ka ‘leaf, hair (of head)’
   KOI:  hana-ka ‘leaf’
   MTN:  vana ‘leaf’
   OMI:  han-e ‘leaf’
   BAR(N):
   BAR(S):
   MAN:

   The expected OMI form is hana-e, not han-e, according to the rules of terminator vowel assimilation given by Austing & Upia (1975: 519). hana-e is therefore used for comparative purposes in this item.

33. *-fe (IMMEDIATE) IMPERATIVE PLURAL VERB SUFFIX (Lane: 23.*-fe (IMMEDIATE)
    IMPERATIVE PLURAL SUFFIX TO VERB’)
   KTA:  -ya|he IMPERATIVE PLURAL SUFFIX
   KOI:  -ya|he IMPERATIVE PLURAL SUFFIX
   MTN:  -ve, -fe IMPERATIVE PLURAL SUFFIX
   OMI:  -he IMPERATIVE PLURAL SUFFIX
   BAR(N):  -fo IMPERATIVE PLURAL SUFFIX
   BAR(S):  -he, -ye IMPERATIVE PLURAL SUFFIX
   MAN:

34. *-fe LOCATIVE NOUN SUFFIX, ‘at, to, from’ (Lane: 24.*-fe LOCATIVE NOUN SUFFIX)
   KTA:  -he ‘at, to, from’
   KOI:  -he ‘at, to, from’
   MTN:  -ve, -fe ‘at, to’
   OMI:
   BAR(N):  -he ‘at, from’
   BAR(S):  -he, -’e ‘to, in, from’
   MAN:
35. *fómo ‘hair, fur, feather’
   KTA:  homo-ka  ‘hair’
   KOI:  homo-ka  ‘hair’
   MTN:  vomo  ‘hair, fur, feather’
   OMI:  
   BAR(N):  u  ‘fur’
   BAR(S):  
   MAN:  humat-a  ‘hair, head’

36. *fósi- ‘pour out’
   KTA:  
   KOI:  
   MTN:  (e)hosi|va  ‘pour out (water)’
   OMI:  ‘ote|he’oj-e  ‘pour out’
   BAR(N):  usi-a  ‘pour out’
   BAR(S):  use-o  ‘pour out’
   MAN:  

37. *f(u)ae-v- ‘buy, sell, barter’ (Lane: 25.*f(u)ae-v- ‘buy, sell, barter’)
   KTA:  hae-va-  ‘buy, sell, barter’
   KOI:  
   MTN:  
   OMI:  
   BAR(N):  fuae|v-e  ‘buy’
   BAR(S):  
   MAN:  

38. *gabi ‘afterwards, later’ (Lane: 27. *gabi- ‘afterwards, later’)
   KTA:  
   KOI:  gabi|dahe  ‘afterwards, later’
   MTN:  gabi|e  ‘afterwards, later’
   OMI:  
   BAR(N):  gabi|ne  ‘afterwards’
   BAR(S):  
   MAN:  

39. *-gé MEDIAL VERB SUFFIX DS (Lane: 26. *-g(a,e) CONNECTIVE PARTICLE OR MEDIAL VERB SUFFIX DS)
   KTA:  -ge  MEDIAL VERB SUFFIX DS SEQ, ‘and’
   KOI:  -ge  MEDIAL VERB SUFFIX DS, ‘and, when’
   MTN:  -ge  MEDIAL VERB SUFFIX DS, ‘when’
   OMI:  -go  MEDIAL VERB SUFFIX DS
BAR(N): -ga, -gana, -ke  MEDIAL VERB SUFFIX DS
BAR(S): -ho|ga  MEDIAL VERB SUFFIX DS, ‘when’
MAN: -ʔe  MEDIAL VERB SUFFIX DS, ‘when’ (-ke expected)

40. *giri ‘dry’
KTA:
KOI:
MTN: gili|a  ‘dry out’
OMI: gir|he  ‘dry (clothes)’ (author’s fieldnotes)
BAR(N): iria|eki  ‘dry (not wet)’
    iria|r-e  ‘dry (stg), dry (ADJ)’
BAR(S):
MAN: kira|nana  ‘dry (clothes)’ (author’s fieldnotes)

41. *gobeu ‘sweet potato’ (Lane: no entry. Noted as a possible borrowing.)
KTA:
KOI:
MTN: gobeu  ‘sweet potato’ (also gebeu)
OMI: gōbi-e:  ‘sweet potato’
BAR(N):
BAR(S): gobêlu  ‘sweet potato’ (glottal stop unexpected; no consonant expected)
MAN:

Variants of these forms appear as apparent cognates in my study of ‘cultural’ vocabulary in Papua (Dutton 1973: 439). The set comprised one of the so-called minor sets of apparent cognates for ‘sweet potato’ “limited to closely related and neighbouring languages”. Because of the restricted number and geographic distribution of these apparent cognates I noted (p.475) that one could not tell whether “they represent local innovations or isolated cases of more widely distributed forms” which for one reason or another were not included in the data used for that study. In BAR(S) the glottal stop is unexplained, cf. *yōyo ‘sibling, same sex, younger’ where it also occurs before u but not in *ʔumu ‘louse’, *uburu ‘wind’, and *ufu ‘blow (fire)’.

42. *ya-ma- ‘hit’
KTA: ya-ma-  ‘hit’
KOI: va-ma-  ‘hit’
MTN: ha-ma-  ‘hit’
OMI:
BAR(N): am-e  ‘hit, kill’
BAR(S):
MAN:
43. *ɣami ‘boy, baby, child’ (Lane: 30. *ɣam(i,e) ‘boy, child’)
   KTA: ɣami /ka ‘young boy, child’
   KOI: vami ‘boy’
   MTN:
   OMI:
   BAR(n): (ume) am-e ‘baby (bird)’
   BAR(s):
   MAN:

44. *ɣaraha- ‘fight’
   KTA: ɣaraha- ‘fight’
   KOI: varaha- ‘fight’
   MTN:
   OMI:
   BAR(n):
   BAR(s): ara- ‘fight’
   MAN: ?arah-o ‘fight’

45. *ɣare- ‘stop, leave off’ (Lane: 30. *ɣare-(me)- ‘stop, leave off, cease’)
   KTA: ɣare-me- ‘stop, leave off (sg obj)’
   KOI: vare-me- ‘leave (depart), leave off, stop (doing stg)’
   MTN: hale-ma- ‘leave (stg)’
       hale- ‘leave, depart from, stop, quit’
   OMI:
   BAR(n): ar-e ‘stop’
   BAR(s):
   MAN: are|nav-o, are|v-o ‘stop, discontinue’

46. *-ɣareme MEDIAL SEQUENTIAL SUFFIX, ‘having finished that, and then’
   (Lane: 32. *ɣareme SEQUENTIAL CONJUNCTION, ‘having finished that; and then’)
   KTA: -ɣareme ‘COMPLETIVE ACTION SS (SG), ‘having V-ed then…’
   KOI: -ɣareime ‘COMPLETIVE ACTION SS (SG), ‘having V-ed then…’
   MTN:
   OMI:
   BAR(n): -areme ‘and then’
   BAR(s):
   MAN:

This suffix derives from PKN *ɣare-me- ‘stop, leave off-or’. In my 1975 description of Koita I gave roya-ɣare-me ‘say-leave.off-ss’ as an example of this suffix. This was mis-analysed. In yare-me-, -meis clearly the original singular or, not ss. The ss form of yare-me-is either yare-mi-me or yarei-me when medial m is ‘dropped’, as is common (e.g. in ko i -yareime). The initial y in kta and ko i results from morphophonemic changes.
47. *yóyo ‘sibling, same sex, younger’ (Lane: 35. yöyo ‘younger same sex sibling’)
   
   KTA: yöyo ‘sibling, same sex, younger’
   KOI: vovo ‘sibling, same sex, younger’
   MTN: hoho ‘sibling, same sex, younger’
   OMI: ?o-e ‘sibling, same sex, younger’ (author’s fieldnotes)
   
   BAR(N):
   BAR(s): ?uvo ‘sibling, same sex, younger’
   MAN: ?u?u-a ‘brother’

48. *yudi ‘lime’
   
   KTA: yudi ‘lime’
   KOI: udi ‘lime’
   MTN: ud-e ‘lime’
   OMI: ud-e ‘lime’
   
   BAR(N):
   BAR(s):
   MAN:

49. *yuyu- ‘think’ (Lane: 36. ?yu ‘think’)
   
   KTA:
   KOI: vuvu- ‘think’
   MTN: huhu-a ‘think, remember’
   OMI: 
   
   BAR(N):
   BAR(s):
   MAN: vui ‘think’

   OMI ?uv- ‘think, say, sing (bird), thunder’ is not regarded as cognate with these forms but rather with reflexes of PBC *kume ‘call out’.

50. *i- ‘eat, drink’ (Lane: 37. *i- ‘eat, drink’)
   
   KTA: i- ‘eat, drink, smoke (tobacco)’
   KOI: i- ‘eat, drink, smoke (tobacco)’
   MTN: i- ‘eat, drink’
   OMI: ij-e ‘eat, drink, smoke (tobacco)’ (j unexplained)
   i ‘eat, drink’
   
   BAR(N): i ‘eat’
   BAR(s): i- ‘eat, drink’
   MAN: ij-o ‘eat, drink’ (j unexplained)

51. *idi ‘tree, stick, pole, log’ (Lane: *idi ‘tree, stick, wood’)
   
   KTA: idi ‘tree, stick, pole’
   KOI: idi ‘tree, stick, wood, pole, log’
52. *(i,o)gau ‘one’ (Lane: 28. *(i)ga(u,i) ‘one’)

KTA:
KOI:  igau ‘one’
MTN:  igae ‘one’
OMI:  ge\mu, go ‘one’
BAR(N): ogo\nu ‘one’
BAR(S): ogo\nu ‘one’
MAN:  kui\nu ‘one’ (possibly a metathesised form of iku\nu)

This item highly irregular in its initial vowel correspondences. There is not enough evidence to indicate whether they reflect PKN *\i or *\o. It is only because of the regularity of the consonant reflexes and the correspondence in meanings that it is accepted.

53. *ifi ‘name’ (Lane: 40. *ifi ‘name’)

KTA:  thi ‘name’
KOI:  thi ‘name’
MTN:  ivi ‘name’
OMI:  ih-e ‘name’
BAR(N): iv-e ‘name’
BAR(S): ihu ‘name’
MAN:  ih-a ‘name’

54. *ifi- ‘hear, understand, feel’ (Lane: 39. *if(e,i) ‘hear’)

KTA:  thi- ‘hear (SG OBJ)
KOI:  thi- ‘hear’
MTN:  evi- ‘hear’
OMI:  hej-e ‘hear, listen, feel’
BAR(N): fi-e ‘hear, understand’
BAR(S): the- ‘hear’
MAN:  hej-o ‘hear, listen, know, feel’

55. *imi ‘sugar cane’ (Lane: 41. *imi ‘sugar cane’)

KTA:  imi ‘sugar cane’
KOI:  imi ‘sugar cane’
MTN:  imi ‘sugar cane’
OMI:  im-e ‘sugar cane’
BAR(N):
BAR(s):
MAN:

BAR(s) umoi ‘sugar cane’ is not regarded as cognate; u and oi are unexplained and there are no conditioning factors.

56. *isu ‘heavy’

KTA: isu|ke ‘heavy’
KOI: ehu|ka ‘heavy’
MTN: isu|a ‘heavy’
OMI: îu|he, îu|e ‘heavy’
BAR(N):
BAR(s):
MAN:

BAR(N) irufui ‘heavy’ is not considered cognate because of the unexplained r.

57. *ivi ‘noose, trap, net’ (Lane: 42.*ivi ‘noose, trap’)

KTA: ivi ‘noose, trap’
KOI: ivi ‘noose, trap’
MTN:
OMI: iv-e ‘trap, net’
BAR(N): iv-a ‘pull string on trap’
BAR(s):
MAN:

58. *kar- ‘dig up, dig out, harvest (yams)’

KTA: oro-hanu ‘dig up’ (expected form karovanu)
KOI: karo-vahanu ‘dig out, harvest (yams)’
MTN: kalo-va ‘castrate’
OMI:
BAR(N): karo ‘dig out’
BAR(s):
MAN:

59. *ki- ‘do, make’

KTA: ki- ‘do, make’
KOI: ki- ‘do, make’
MTN:
OMI:
BAR(N): (masire) ki-a ‘make (magic)’
BAR(s):
MAN:
60. *ma- ‘get, take’
    KTA: ma- ‘get (sg obj)
    KOI: ma- ‘get (sg obj)
    MTN: ma- ‘get, take’
    OMI: baej-e ‘get’
    BAR(n):
    BAR(s):
    MAN:

61. *mabara ‘wife’
    KTA: mabara ‘wife’
    KOI: mabara ‘wife’
    MTN:
    OMI: vabor-e ‘wife’
    BAR(n): bara (abe) ‘marry, (take) wife’ (form suspicious; expected bar-e)
    BAR(s): bara ‘wife’
    MAN: na|par-a ‘wife’
         para|nah-a ‘married woman’

    Lane noted that ma- is a common initial syllable in words for females in Koiaric languages
    and suggested that PKC *ma- could be reconstructed for ‘female’. Consider, for example,
    KTA and KOI mae ‘daughter’, MTN ma ‘girl’
    KOI maiovo ‘girl’ and MTN mahoho ‘girl’
    KTA and MTN mabata ‘old woman’
    KTA and KOI mabi ‘unmarried woman’
    KTA mayi and KOI mavi ‘woman’.

62. *maye ‘good’ (Lane: 44. (a) *may(e,a) ‘good’ (b) *mai ‘good’)
    (cf. possible doublet *maʔi ‘good’)
    KTA: maye ‘good’
    KOI:
    MTN:
    OMI mae ‘good, true’
    BAR(n): ma ‘good, true’
    BAR(s): mae ‘be happy’ (Olson 1981: 348)
    MAN:

63. *mayina ‘woman, wife’ (Lane: 45.*mayina ‘woman, wife’)
    KTA: mayi ‘woman, wife, female’
    KOI: mavi ‘woman, wife’
    MTN: mahina ‘wife’
    OMI: magöna|h-e ‘woman’
    BAR(n):
BAR(s): (e) meina ‘woman (= female person)’
MAN:

64. *maʔi ‘good’ (Lane: 44. (a) *may(e,a) ‘good’, (b) *mai ‘good’)
    (cf. possible doublet *maye ‘good’)
    KTA:
    KOI: mai|teka ‘good’
    MTN:
    OMI:
    BAR(N): maj|e ‘real’
    BAR(S): maʔi|na ‘good’
    MAN: maa ‘good’

65. *mama ‘father (REFERENCE)’ (cf. *baba ‘father (ADDRESS)’)
    KTA: mama ‘father (REFERENCE)’
    KOI: mama ‘father (REFERENCE)’
    MTN: mama ‘father’
    OMI:
    BAR(N):
    BAR(S):
    MAN: amo ‘father’ (expected form mama; another form, oma ‘father’, is assumed to be a metathesised form of amo.)

66. *mami ‘old ’ (Lane: 46.*mami ‘old (things)’
    KTA:
    KOI:
    MTN: mami ‘old (of things only)’
    OMI: mamie ‘old (of house)’
    BAR(N): (a)mame ‘old (man), old (woman) (very old)’ (a < e ‘person’)
    BAR(S):
    MAN: (e)ma ‘old (man)’

67. *me ‘work (N)’ (Lane: 47.*me ‘work’)
    KTA: me ‘work (N)’
    KOI:
    MTN:
    OMI: mu-e ‘work (N)’ (u unexplained)
    BAR(N): me ‘clear garden, weed garden’
    BAR(S):
    MAN: (ija) me rum-o ‘weeding’
    me j-o ‘clear garden’

68. *-me MEDIAL SS VERB SUFFIX (Lane: 48.*-me MEDIAL SS VERB SUFFIX)
    KTA: -me MEDIAL SS VERB SUFFIX
69. *mi ‘animal, game, meat’ (Lane: 49. *mi ‘game, animal, meat’)

<table>
<thead>
<tr>
<th>Language</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>KTA</td>
<td>mi</td>
<td>sika</td>
</tr>
<tr>
<td>KOI</td>
<td>mi</td>
<td>‘animal (as game, generic), meat’</td>
</tr>
<tr>
<td>MTN</td>
<td>mi</td>
<td>‘animal’ (author’s fieldnotes)</td>
</tr>
<tr>
<td>OMI</td>
<td>mi (daje)</td>
<td>‘animal (skin, body)’</td>
</tr>
<tr>
<td>BAR(N)</td>
<td>mi</td>
<td>e</td>
</tr>
<tr>
<td>BAR(S)</td>
<td>mi</td>
<td>kuae</td>
</tr>
</tbody>
</table>

70. *m(o,a)- ‘give (sg. IO)’ (Lane: 43. *m(V)- ‘give’)

<table>
<thead>
<tr>
<th>Language</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>KTA</td>
<td>mo-</td>
<td>‘give’</td>
</tr>
<tr>
<td>KOI</td>
<td>mo-</td>
<td>‘give’</td>
</tr>
<tr>
<td>MTN</td>
<td>o-</td>
<td>‘give’</td>
</tr>
<tr>
<td>OMI</td>
<td>ma</td>
<td>mij-e</td>
</tr>
<tr>
<td>BAR(N)</td>
<td>m-ie</td>
<td>‘give me’</td>
</tr>
<tr>
<td>BAR(S)</td>
<td>ma</td>
<td>‘give’</td>
</tr>
<tr>
<td>MAN:</td>
<td>m</td>
<td>aha</td>
</tr>
<tr>
<td></td>
<td>(ape) m</td>
<td>iha</td>
</tr>
</tbody>
</table>

As it stands this item is irregular in its vowel correspondences so that it is not clear whether it reflects PKN *o or *a. Part of the problem with this verb is that it has a variable stem in some of the languages, e.g. in MTN it is ∅ for 3PL recipients (e.g. la eve ‘give them’ (not la ove as expected) and vajaho in MAN while KOI has ma-nu for ‘he gave it’ and mo-nei-nu for ‘he gave it to them’. The MTN form daoma ‘give me’ parallels KOI mi da omi! ‘give me!’ where there is also loss of initial m.

71. *muni ‘stone, rock’ (Lane: 50. *mun(e,i) ‘stone’)

<table>
<thead>
<tr>
<th>Language</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>KTA</td>
<td>muni</td>
<td>‘stone’</td>
</tr>
<tr>
<td>KOI</td>
<td>muni</td>
<td>‘stone’</td>
</tr>
<tr>
<td>MTN</td>
<td>mune</td>
<td>‘stone’</td>
</tr>
<tr>
<td>OMI</td>
<td>muné</td>
<td>‘stone, rock’</td>
</tr>
<tr>
<td>BAR(N)</td>
<td>mun-e</td>
<td>‘stone’</td>
</tr>
<tr>
<td>BAR(S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAN:</td>
<td>mun-a</td>
<td>‘stone’</td>
</tr>
</tbody>
</table>
72. *-n(a,e) ‘interrogative particle (generally suffixed to subject)’ (Lane: 51. *-n(a,e)
‘yes/no interrogative particle probably suffixed to subject’)

KTA: -na ‘question form of specifier (on subject mostly)’
KOI: -ne ‘question form of specifier (on subject mostly)’
MTN: -na ‘question marker (suffixed to subject)’
OMI: -na ‘yes/no interrogative particle, sentence initial’
BAR(N): -ne ‘question marker (on pronoun subject)’
BAR(S): -ne ‘question marker (on pronoun subject)’

This item is irregular in its final vowel correspondences. It is not clear whether they reflect PKN *a or *e.

73. *nana- ‘chew’

KTA: 
KOI: nana- ‘chew’
MTN: nana- ‘chew’
OMI: nano|v-e ‘chew’
BAR(N): 
BAR(S): 
MAN: nana|chav-o ‘chew’

74. *-ne(i) MEDIAL VERB SUFFIX: ‘if, when’ (Lane: 52.? *-ne(i) ‘conditional verb suffix; if, when’)

KTA: -nei ‘when, if (past tense), after, then’
KOI: 
MTN: 
OMI: 
BAR(N): -ne ‘conditional verb suffix, past and future tenses’
BAR(S): 
MAN: 

75. *ni ‘for, BENEFACTIVE (cliticised or suffixed to noun)’ (Lane: 53. ? *-ni noun suffix, ‘for, BENEFACTIVE, PURPOSE’)

KTA: ni ‘to (dative), for (beneactive)’
KOI: ni ‘to (dative), for (beneactive)’
MTN: 
OMI: ni ‘for’
BAR(N): 
BAR(S): bo|ni ‘for (a thing)’
MAN: 

76. *ni ‘eye’ (Lane: 54. *ni ‘eye’)

KTA: ni ‘eye’
KOI: ni ‘eye’
**Proto Koiarian word list**

77. *ni[na]-* ‘cry, weep’ (Lane: 55. *ni-v-* ‘cry, weep’)

<table>
<thead>
<tr>
<th></th>
<th>KTA:</th>
<th>KOI:</th>
<th>MTN:</th>
<th>OMI:</th>
<th>BAR(N):</th>
<th>BAR(S):</th>
<th>MAN:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ni</td>
<td>vi-</td>
<td>‘cry (sg subj)’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ni</td>
<td>va-</td>
<td>‘cry (sg subj)’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>nina</td>
<td>va-</td>
<td>‘cry (sg subj)’ (dialectal variant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

78. *no* ‘we’ (Lane: 57. *no* ‘we’)

<table>
<thead>
<tr>
<th></th>
<th>KTA:</th>
<th>KOI:</th>
<th>MTN:</th>
<th>OMI:</th>
<th>BAR(N):</th>
<th>BAR(S):</th>
<th>MAN:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no</td>
<td>no</td>
<td>‘we’</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>nu</td>
</tr>
</tbody>
</table>

79. *o* ‘or’ (Lane: 57A. *o* ‘or’)

<table>
<thead>
<tr>
<th></th>
<th>KTA:</th>
<th>KOI:</th>
<th>MTN:</th>
<th>OMI:</th>
<th>BAR(N):</th>
<th>BAR(S):</th>
<th>MAN:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>o (ibe)</td>
<td>‘or (not)’</td>
<td></td>
<td></td>
<td></td>
<td>ho, aho</td>
</tr>
</tbody>
</table>

This looks like a borrowing from English via the lingua franca Police (now Hiri) Motu but it is more likely a coincidental correspondence, given that KTA and MTN do not have it, and speakers of these two languages were among the first Koiarian speakers to be contacted and to be in regular contact with Police Motu. In fact it may well be that this common form for ‘or’ aided its incorporation into Police Motu.
80. *ogona ‘cloth, clothes’
   KTA:  ogona  ‘cloth, clothes’
   KOI:  ogona  ‘cloth, clothes’
   MTN:  ogo  ‘cloth, clothes’
   OMI:  
   BAR(N):  ugon-e  ‘clothes, piece of cloth’
   BAR(S):  ogona  ‘clothes’
   MAN:  

81. *ra-ya- ‘burn (v1)’ (Lane: 58.*ra-γ- ‘burn’)
   KTA:  ra-ya-  ‘(stg) burns’
   KOI:  ra-va-  ‘burn (stg)’
   MTN:  laha  ‘burn (intr.)’
   OMI:  rav-e  ‘burn’
   BAR(N):  
   BAR(S):  rae|ma  ‘burning’
   MAN:  (veni) re|n-o  ‘(fire) burns up, be on fire’

82. *ray(i, e)- ‘cooked’ (Lane: 58.*ra-γ- ‘burn’)
   KTA:  ragi|raye  ‘cooked’
   KOI:  ravi|ravi  ‘cooked’
   MTN:  laha-  ‘cooked’ (author’s fieldnotes)
   OMI:  
   BAR(N):  nae  ‘cooked’ (unexplained initial n; expected form rae.)
   BAR(S):  rae  ‘cooked’
   MAN:  

This item is irregular in its final vowel correspondences so that it is not clear whether they reflect PKN *i or *e.

83. *ra-mi- ‘stand (sg. subject)’ (Lane: 59.*ra-mi- ‘stand’)
   KTA:  ra-ma-  ‘stand (SG SUBJ)’
   KOI:  ra-mi-  ‘stand (SG SUBJ)’
   MTN:  la-mi-  ‘stand (SG SUBJ)’
   OMI:  nami|j-e  ‘stand (one person)’
   BAR(N):  mani|a  ‘stand’ (metathesis assumed)
   BAR(S):  rami-  ‘stand’
   MAN:  nami|dz-o  ‘stand’

In OMI, BAR(N) and MAN r is assumed to have assimilated to n under the influence of the following m.

84. *raf- ‘clear bush for planting’ (Lane: 60.*ra-v- ‘clear for planting’)
   KTA:  yaha-  ‘shave, remove hair’ (initial y unexplained; r expected)
KOI:  yaha-  ‘clear grass and/or weeds away’ (initial y unexplained; $r$ expected)
MTN:  lavu|-nu  ‘he weeds’
OMI:  rav-e  ‘weed, clear’
BAR(N):  
BAR(S):  
MAN:  

This item would be reconstructed as *yaf- were it not for the $r$ in OMI.

85. *riri- ‘straight’
   KTA:  ye|riri-yeriri  ‘straight’
   KOI:  riri|taka  ‘straight’
   MTN:  
   OMI:  rëri  ‘straight’
   BAR(N):  a|ri|ari  ‘straight’
   BAR(S):  a|ri|ari  ‘straight’
   MAN:  a|ri|ra, ari|ni  ‘straight’

86. *ro(i,u)- ‘say, speak, talk’ (Lane: 61.*ro(i,u)- ‘speak’)
   KTA:  ro-  ‘say, tell, call (name)’
   KOI:  roi-  ‘speak’
   MTN:  lou-  ‘say, speak’
   OMI:  u|v  ‘say’
   BAR(N):  ro-  ‘speak’ (author’s fieldnotes)
   BAR(S):  ro-  ‘speak’
   MAN:  

This item has irregular correspondences of its final vowels so that without other evidence it is not clear whether they reflect PKN *i or *u.

87. *royo- ‘come’ (Lane: 62.*ro-y- ‘come’)
   KTA:  (o)royo-  ‘come’
   KOI:  (o)rovo-  ‘come’
   MTN:  loho-  ‘come’
   OMI:  rôv-e  ‘come’
   BAR(N):  ruo  ‘come’
   BAR(S):  iro-  ‘come’
   MAN:  roo-  ‘come’
   ro-o  ‘come’

In KTA and KOI the initial vowel $o$ is sometimes elided in certain contexts. The same is true for the verb oti- ‘to go’.
88. *saru ‘bed bug’
   KTA: saru ‘bed bug’
   KOI: saru ‘bed bug’
   MTN: 
   OMI: 
   BAR(\(N\)): tarun-a ‘bed bug’
   BAR(\(S\)): 
   MAN: tarur-a ‘bed bug’

89. *seno ‘neck’ (Lane: 56.*\((e)no(\i)\) ‘neck’)
   KTA: eno-ka ‘throat’
       eno ita ‘nape of neck’
   KOI: eno ‘nape of neck’
   MTN: eno ‘neck (front)’
   OMI: sönö ‘neck’
       sönö ah ‘nape’
   BAR(\(N\)): no-i ‘nape’ (author’s fieldnotes)
   BAR(\(S\)): 
   MAN: nu|an-a ‘back of neck’

90. *sigu- ‘sew up’
   KTA: tigu|hu- ‘sew up’
   KOI: 
   MTN: 
   OMI: sigē|hidz- ‘sew up’
   BAR(\(N\)): sag-u ‘sew’
   BAR(\(S\)): sigu- ‘sew up’
   MAN: 

91. *so- ‘wash (stg)’ (cf. PKN *eago- ‘wash (sg obj)’), *eagu- ‘wash (oneself), bathe’ and *(e,i)so- ‘swim’)
   KTA: 
   KOI: 
   MTN: to|to- ‘wash (stg)’
   OMI: 
   BAR(\(N\)): so ‘wash’
       do|ru-e ‘swim, wash’
   BAR(\(S\)): su ‘wash’
   MAN: so|v-o ‘wash (stg)’

92. *tayo ‘blood’
   KTA: tayo ‘blood’
KOI:  tavo  ‘blood’
MTN:  taho  ‘blood’
OMI:  
BAR(N):  
BAR(S):  avo|du  ‘blood’
MAN:  ‘a-a  ‘blood’

93.  *tubu[are]  ‘cassowary’

KTA:  
KOI:  
MTN:  duba  ‘cassowary’
OMI:  tubor-e  ‘cassowary’
BAR(N):  tubuar-e  ‘cassowary’
BAR(S):  tubuare  ‘cassowary’
MAN:  

Both KTA and KOI have dubu ‘black’ which could possibly be cognate with the other forms because cassowaries are black (apart from their heads). It is discounted here, however, as there is no suggestion in the other language words for ‘cassowary’ or ‘black’ that there is such a connection.

94.  *tumu-  ‘scratch (skin)’

KTA:  tuma-  ‘scratch (skin)’
KOI:  tuma-  ‘scratch (skin)’
MTN:  tuma-  ‘scratch (an itch)’
OMI:  
BAR(N):  
BAR(S): ʔumu  ‘scratch (skin)’
MAN: ʔumur-o  ‘scratch’

OMI urum-e ‘scratch (oneself)’ is not considered cognate.

95.  *tumu-  ‘tie, fasten’

KTA:  
KOI:  
MTN:  umuva  ‘tie, fasten’
OMI:  duoʔum-e  ‘tie around’ (initial d unexplained; t expected)
BAR(N):  tamu  ‘tie string for string bag’
         tamug-e  ‘knot’
BAR(S):  tumue-  ‘tie rope’
MAN:  

96.  *tuʔuaké  ‘short’

KTA:  tuake  ‘short’
KOI:  duaka  ‘short’
97. *uburu ‘wind (breeze)’ (Lane: 34. *y(e,i)buru ‘wind (breeze)’)
   KTA:
   MTN: hebulu ‘wind’ (initial he unexplained; u expected)
   OMI: bur-e ‘wind’
   BAR(N): uburu ‘wind’
   BAR(S): uburu ‘wind’
   MAN: pur-a ‘strong wind’

98. *ugu[fa] ‘bird’ (Lane: 65.*ugu ‘bird’)
   KTA: ugu|ha ‘bird’
   KOI: ugu ‘bird’
   MTN: ugu ‘bird’
   OMI: ug-e ‘bird’
   BAR(N):
   BAR(S):
   MAN: uk-a ‘bird’

   BAR(N) um-e ‘bird’ is not considered cognate because of the unexplained medial m.

99. *ufu- ‘blow fire (to make it burn)’
   KTA: uhu- ‘blow (fire)’
   KOI: uhi|to- ‘blow (fire)
   MTN: uvu ‘blow (with mouth)’
   OMI: huô huô|v-e ‘blow on fire (to stir up)’
   BAR(N): ufi ‘blow (wind)’
   BAR(S): uasi ‘blow (fire)’
   MAN: huasi|h-o ‘blow’

100. *-ufu PL SUFFIX ON KINSHIP NOUNS (Lane: 64. ? -(u)fu PL SUFFIX ON KINSHIP NOUNS)
    KTA: -uhea, -uhu yabara PL SUFFIX ON KINSHIP NOUNS
    KOI: -uhu yabe PL SUFFIX ON KINSHIP NOUNS
    MTN: -uvu PL SUFFIX ON KINSHIP NOUNS
    OMI:
    BAR(N):
    BAR(S): -hu PL SUFFIX ON a few human nouns
       (e.g. varu-hu-mö̃ina ‘girls’)
    MAN: -hu (and variants) PL SUFFIX ON KINSHIP NOUNS
101. *uni ‘egg, kernel’ (Lane: *uni ‘egg’)

KTA:  uni-ka  ‘egg, kernel’
KOI:  uni-ka  ‘egg, kernel, core, stomach’
MTN:  uni  ‘egg (when combined with word for ‘bird’), stomach’
OMI:  un-e  ‘egg’
BAR(N):
BAR(S):
MAN:

In Dutton (1969: 126, item 114) I give OMI ?unə for ‘egg’. As the glottal stop can only be explained as a field recording error this variant is disregarded for comparative purposes.

102. *unu[gV] ‘breadfruit’

KTA:  
KOI:  unu  ‘breadfruit’
MTN:
OMI:  nug-e  ‘breadfruit’
BAR(N):
BAR(S):
MAN:

103. *uri ‘nose’ (Lane: 66.*uri ‘nose’)

KTA:  uri  ‘nose’
KOI:  uri  ‘nose’
MTN:  uli  ‘nose’
OMI:
BAR(N):
BAR(S):
MAN:  ur-a  ‘nose’

104. *va- ‘plant (garden)’

KTA:  
KOI:  va-  ‘plant’
MTN:  ha-  ‘plant’
OMI:
BAR(N):  sa  ‘plant’
BAR(S):
MAN:  (soa) sa|v-o  ‘plant (new garden)’


KTA:  ota|vado  ‘what?’
KOI:  vadu|be  ‘what?’
MTN:
OMI: vadu ‘who?, what? (‘performative’ or ‘rhetorical’ interrogative used to express doubt or uncertainty on the part of the speaker)’
BAR(N):
BAR(S):
MAN:

106. *vadu ‘taro’ (Lane: 69. ?*vadu ‘taro’)
KTA: vadu ‘taro’
KOI: vadu ‘taro’
MTN: fadi|a ‘taro’
OMI: varu|h-e ‘taro’
BAR(N): madu ‘taro’ (initial m unexpected; v expected)
BAR(S): madu ‘taro’ (initial m unexpected; v expected)
MAN:

107. *vafa[a|ta] ‘body’
KTA: aha|ta ‘body’ (no obvious source for final ta)
KOI: aha|ta ‘body’ (no obvious source for final ta)
MTN: vava ‘body’
OMI:
BAR(N): vaja-e ‘body’
BAR(S):
MAN: hah-a ‘body’

108. *vafi ‘night’ (Lane: 70.*vafi ‘night’)
KTA: vahi ‘night’
KOI: vahi ‘night’
MTN: vavi ‘night’
OMI: vahi-e ‘night’
BAR(N):
BAR(S):
MAN:

109. *vaia ‘yam (type)’ (Lane: 71.*vaia(gV) ‘yam (Motu taitu)’)
KTA: vaia ‘yam (type)’
KOI: vaea ‘yam (type)’
MTN:
OMI: vadzi ‘yam’ (vadze expected)
BAR(N):
BAR(S):
MAN: vaja|k-a ‘yam (type of)’

The OMI form is suspicious because it does not end in the characteristic e.
110. *vari ‘forehead, face’ (Lane: 72.*vari ‘forehead’)
    KTA: vari ‘forehead’
    KOI: vari-ka ‘face, front of’
    MTN: vali ‘forehead’
    OMI: vari|j-e ‘forehead’
    BAR(N): BAR(S): vare ‘forehead’
    MAN: vari|ar-a ‘face’
    vari|naʔi ‘in front of’

111. *vata ‘skin’ (Lane: 20. *fafa ‘skin’)
    KTA: vata-ka ‘skin’
    KOI: vata-ka ‘skin’
    MTN: vate ‘skin’
    OMI: BAR(N): BAR(S): MAN: hah-a ‘body’

112. *vé ‘vagina’
    KTA: ve ‘vagina’
    KOI: ve ‘vagina’
    MTN: OMI: vē ‘vagina’
    BAR(N): BAR(S): MAN: va|ju-a ‘vagina’

113. *veyu ‘penis’
    KTA: veyu ‘penis’
    KOI: veu ‘penis’
    MTN: vevu ‘penis’
    OMI: veru-e ‘penis’
    BAR(N): BAR(S): MAN::

114. *vené ‘fire, firewood’ (Lane: 73.*ven(e,i) ‘fire, firewood’)
    KTA: vene ‘fire, firewood’
    KOI: vene ‘fire, firewood’
    MTN: vene ‘fire, firewood’
    OMI: vén-i ‘fire, firewood’
BAR(N):  men-u  ‘fire’ (initial $m$ unexpected; $v$ expected); final $u$ also unexpected; $e$ expected
BAR(s):  menu  ‘fire’ (initial $m$ unexpected; $v$ expected)
MAN:  ven-a  ‘fire, firewood’

115. *ven(í,e) ‘rain’ (Lane: 74.1*veni ‘rain’)
   KTA:  veni  ‘rain’
   KOI:  veni  ‘rain’
   MTN:  veni  ‘rain’
   OMI:  ēnī  ‘rain’ (ēn-e expected)
   BAR(N):  ve  ‘rain’
   BAR(s):  ve  ‘rain’
   MAN:  ne|h-a  ‘rain’ (assume loss of initial syllable ve)

This item has irregularly corresponding final vowels so that it is not clear whether they reflect PKN *í or *e.

116. *vuamu ‘(honey) bee’
   KTA:  uamo  ‘(honey) bee’
   KOI:  uamu  ‘(honey) bee’
   MTN:  
   OMI:  vuomu  ‘bee’ (assume medial $a$ assimilated to $o$ under influence of preceding and following $u$)
   BAR(N):  
   BAR(s):  
   MAN:  

omi vuomu ‘bee’ is suspicious because it does not end in the characteristic terminator vowel $e$.

117. *ya ‘you.pl’ (Lane: 75.*ya ‘you.pl’)
   KTA:  ya  ‘you.pl’
   KOI:  ya  ‘you.pl’
   MTN:  la  ‘you.pl’
   OMI:  je-mē  ‘you.pl’
   BAR(N):  ja  ‘you.pl’
   BAR(s):  ya  ‘you.pl’
   MAN:  jà  ‘you.pl’

In omi the suffix -mē is glossed as ‘animate plural marker’.

118. *yabu ‘they’ (Lane: 76.*yabu ‘they’)
   KTA:  yau  ‘they’
   KOI:  yabu  ‘they’
   MTN:  abu  ‘they’
OMI: jabu ‘they’
BAR(N): bu ‘they’
BAR(S): pu ‘they’
MAN: pu ‘they’

119. *yava- ‘dance, sing’ (Lane: 77. *yava- ‘dance, singsing’)
    KTA: yava|ya ‘dance (n)’
         yava|yava-nu ‘danced (v)’
    KOI:
    MTN:
    OMI: java|-ho ‘dance’
         java|j-e ‘dance’
         java|v-e ‘dance’
    BAR(N):
    BAR(S):
    MAN: java |vej-o ‘sing’

120. *ʔumu ‘louse’
    KTA: umu ‘louse’
    KOI: umu ‘louse’
    MTN: umu ‘louse’
    OMI: um-e ‘louse’
    BAR(N):
    BAR(S): umu ‘louse’
    MAN: ʔum-a ‘lice (on humans)’

121. *ʔuri- ‘(a)rise, get up, stand up (from sitting)’ (Lane: 78. *-uri- ‘rise, get up’)
    KTA: uri-ha- ‘get up, stand up, arise’
    KOI: uri-va- ‘get up, stand up, arise’
    MTN:
    OMI: ri|ʔöj-e ‘get up’
    BAR(N): uri ‘rise, get up’
    BAR(S): uri ‘arise, stand up’
    MAN: ʔuri|dz-o ‘get up, stand up, wake up’
         ʔuri-marav-o ‘get up, stand up, wake up (PL SUBJ)’
Appendix E: Proto Koiaric word list

1. *aba ‘hole (in ground)’
   KTA: aba ‘hole (in ground)’
   KOI: aba ‘hole (in ground)’
   MTN: aba ‘hole (in ground)’

2. *abu(t)i ‘two’
   KTA: ab ‘two’
   KOI: abuti ‘two’
   MTN: abui ‘two’

3. *amufa- ‘cook (in ground on hot stones), mumu’
   KTA: amuha- ‘cook in ground, mumu’
   KOI: amuha- ‘cook in ground, mumu’
   MTN: amuva- ‘make a mumu’

4. *arafa- ‘open (stg)’
   KTA: araha- ‘open (stg)’
   KOI: araha- ‘open (stg)’
   MTN: alavo ‘open (door, window)’

5. *-are ‘who, which’ (REL)
   KTA: -are ‘who, which’ (REL)
   KOI: -are ‘who, which’ (REL)
   MTN: -ale ‘who’ (NOMINAL, PAST)

6. *ata ‘man’ (Lane: *ata ‘man’)
   KTA: ata ‘man’
   KOI: ata ‘man’
   MTN: ata ‘person, people’
7. **-ata** MEDIAL VERB SUFFIX, ‘having done X then VP’
   
   KTA:  *atege*  ‘until’ (< *ata* + -ge with morphophonemic changes)
   
   KOI:  *-yata*  MEDIAL VERB SUFFIX, ‘having done X then VP’
   
   (y morphophonemically determined)
   
   MTN: *-ata* MEDIAL VERB SUFFIX, ‘for a time’

8. **avako** ‘butterfly’ (Lane: *(a,o)(y,v,o)ako* ‘butterfly’)
   
   KTA:
   
   KOI:  *avako*  ‘butterfly’
   
   MTN:  *uako*  ‘butterfly’ (assume loss of initial vowel)

9. **bag(u,i,o)** ‘shoulder’
   
   KTA:  *bagu|ni*  ‘shoulder’
   
   KOI:  *bago|na*  ‘shoulder’
   
   MTN:  *bego*  ‘shoulder’ (medial e unexpected; a expected)

   Final vowel correspondences in this item are highly irregular so that it is not clear whether they reflect PKC *u, i* or *o.*

10. **barug(e,a)** ‘big’
   
   KTA:  *bauge*  ‘big’
   
   KOI:
   
   MTN:  *baluga*  ‘big’

   There is not sufficient evidence here to indicate whether the final vowels reflect PKN *e* or *a.*

11. **bata** ‘moon’ (Lane: **bata** ‘moon’)
   
   KTA:  *bata*  ‘moon’
   
   KOI:  *bata*  ‘moon’
   
   MTN:  *bata*  ‘moon’

12. **bitu-ya-** ‘joke, mock, make fun of’
   
   KTA:
   
   KOI:  *bitu-va-*  ‘joke’
   
   MTN:  *bitu-ha\|vo*  ‘mock, make fun of’

13. **boko-ya**- ‘break (stick)’
   
   KTA:  *boko-ya-*  ‘break (stick, pot)’
   
   KOI:  *boko-va-*  ‘break (stick)’
   
   MTN:  *boko-a*  ‘break, fold’
14. *butu-ya- ‘pull’
   KTA:  butu-ya- ‘pull’
   KOI:  but-va- ‘pull’
   MTN:  butu-ha- ‘pull’

15. *da ‘I’
    KTA:  da ‘I’
    KOI:  da ‘I’
    MTN:  da ~ di ‘I’

16. *da ‘with, by means of’ (INSTR)
    KTA:
    KOI:  da ‘on, on top of, by (car or truck)’
    MTN:  da ‘with’ (INSTR)

17. *demodo ‘navel’
    KTA:  demodo|ne  ‘navel’
         demona  ‘navel’
    KOI:  demodi|nika  ‘navel’ (syllable di unexpected; do expected)
    MTN:  demodo  ‘navel’

18. *dob(i,a)- ‘fall down’
    KTA:
    KOI:  dobi-va-  ‘fall down’
    MTN:  doba-  ‘fall down (people or things)’

19. *duna ‘hawk’
    KTA:  duna  ‘hawk’
    KOI:  duna  ‘hawk’
    MTN:  duna  ‘hawk’

20. *edo[yo]-ya- ‘vomit’
    KTA:  edoyo-ho-  ‘vomit’ (final o unexpected; a expected)
    KOI:  edo-va-  ‘vomit’
    MTN:  edo-a  ‘vomit’

21. *eke ‘that’
    KTA:  eke|ro  ‘that’
         e  ‘that’
    KOI:  eke  ‘that’
    MTN:  ke  ‘that’
22. *eno- ‘cough’
   KTA: eno|to- ‘cough’
   KOI: eno|toto-va- ‘cough’
   MTN: eno- ‘cough’

23. *ere-ya- ‘see’
   KTA: era-ya- ‘see’ (ra unexpected; re expected)
   KOI: ere-va- ‘see’
   MTN: ele-ḥa- ‘see, look’

24. *faki ‘side’ (Lane: *faki ‘side’)
   KTA:
   KOI: haki ‘side’
   MTN: vaki ‘side’

25. *foto ‘back (of hand), top (of foot)’
   KTA: (ada) hoto-ka ‘back (of hand)’
   KOI: (ada) hoto-ka ‘back of hand’
   (vahi) hoto-ka ‘top (of foot)’
   MTN: (ada) voto ‘palm (of hand)’

26. *fufune- ‘hot’
   KTA:
   KOI: huhuneva- ‘be hot, perspire’
   MTN: vuvuneve ‘hot (water)’

27. *-geve ‘OR PL in some verbs’
   KTA: boko-geve- ‘break them’
   er-geve- ‘see them’
   KOI: boko-gei|yahei- ‘break them’
   er-gei|yahei- ‘see them’
   MTN: ua-geve- ‘bite them’
   el-geve- ‘see them’

28. *-ya ‘OR SG in some verbs’
   KTA: era-ya- ‘see it’
   boko-ya ‘break it’
   KOI: ere-va- ‘see it’
   boko-va- ‘break it’
   MTN: el-ḥa- ‘see it’
   ua-ḥa- ‘bite it’
29. *yadi- ‘ascend, go up’
   KTA: yadi-va- ‘ascend, go up’
   KOI: vadi-ma ‘ascend, go up’
   MTN: vati- ‘ascend, go up’

30. *-yaf(a,o) TRANSITIVE VERB FORMING SUFFIX, CAUSATIVE
   KTA: -yaha TRANSITIVE VERB FORMING SUFFIX, CAUSATIVE
   KOI: -vaha TRANSITIVE VERB FORMING SUFFIX, CAUSATIVE
   MTN: -havo TRANSITIVE VERB FORMING SUFFIX, CAUSATIVE

31. *yama- ‘hit’
   KTA: yama- ‘hit’
   KOI: vama- ‘hit’
   MTN: hama- ‘hit’

32. *yoirya-ya ‘return, (lit. turn around [and come])’
   KTA: yoirya-yi (oroyonu) ‘return (lit. turn around [and come])’
   KOI: voira-vi (orovonu) ‘return (lit. turn around [and come])’
   MTN: hoila-ha- ‘return’

33. *yote ‘vine, string, rope’
   KTA: yote ‘string, rope’
   KOI: vote ‘vine, string, rope’
   MTN: hote ‘vine, rope’

34. *yuma ‘path, road’ (Lane: *yuma ‘road, path’)
   KTA: yuma ‘path, road’
   KOI: uma ‘path, road’
   MTN: huma|ha ‘path, road’

   Perhaps KOI lost v (<*y>) to avoid confusion with vuma ‘axe’.

35. *isa ‘new, uncooked, raw, young’ (Lane: *isa- ‘new’)
   KTA: isage ‘new’
   isaye ‘uncooked, raw, young’
   KOI: isasa ‘uncooked, raw, new’ (final a unexpected; e expected)
   MTN: isate uncooked’
   isahete ‘green wood, young person’

36. *(k,t)ae ‘white’
   KTA: kae ‘white’
   KOI: kae|kae ‘white’
   MTN: tae|te ‘white’
37. **kina** ‘head’ (Lane: **kina** ‘head’)
   
   KTA:  
   KOI:  kina  ‘head’  
   MTN:  kina  ‘head, hair’

38. **-ma** VERB SUFFIX, PRESENT CONTINUOUS, SG
   
   KTA:  -ma  VERB SUFFIX, PRESENT CONTINUOUS, SG  
   KOI:  -ma  VERB SUFFIX, PRESENT CONTINUOUS, SG  
   MTN:  -ma  VERB SUFFIX, PRESENT CONTINUOUS, SG

39. **mabata** ‘old woman’
   
   KTA:  (mayi) mabata  ‘old woman (inactive)’  
   KOI:  mabata  ‘old woman’  
   MTN:  mabata  ‘old woman’

40. **mayo[i]i-** ‘burn, cook (by burning)’
   
   KTA:  
   KOI:  mavoi-  ‘burn, set alight, cook (by burning)’  
   MTN:  maho-  ‘cook’

41. **matama** ‘land, ground, place’ (Lane: **mata(m)** ‘land, place’)
   
   KTA:  (da) mata-me  ‘(my) land, ground, place’  
   KOI:  (da) mata-me  ‘(my) land, ground, place’  
   MTN:  matama  ‘place’

42. **mina[ma]** ‘eel’
   
   KTA:  mina  ‘eel’  
   KOI:  mina  ‘eel’  
   MTN:  minama  ‘eel’

43. **mo** ‘male, boy, male child’
   
   KTA:  moe  ‘male child, son’  
   moika  ‘baby boy’  
   KOI:  moe  ‘male child, son’  
   mo  ‘male, boy’  
   MTN:  mo  ‘male child, boy, male’  
   moia  ‘young boy’

44. ***(n,m)itani** ‘pawpaw’
   
   KTA:  
   KOI:  nitani  ‘pawpaw’  
   MTN:  mitani  ‘pawpaw’
45. *nayate ‘like, similar’ (Lane: *nayate ‘be like’)
   
   KTA:  nayate  ‘be like, resemble’
   KOI:  navate  ‘like, resemble, similar’
   MTN:  nahate  ‘like, similar’

46. *neina ‘mother’
   
   KTA:  neina  ‘mother’
   KOI:  (da) neine  ‘(my) mother’
      neina-ka  ‘mother’
   MTN:  neina  ‘mother’

47. *neme ‘middle, tongue’
   
   KTA:  neme  ‘middle, centre’
   KOI:  neme-ka  ‘tongue’
   MTN:  neme  ‘tongue’

48. *nigi ‘woman’s grass skirt’
   
   KTA:  nigi  ‘skirt, woman’s dress’
   KOI:  nigi  ‘skirt, woman’s dress’
   MTN:  nigi  ‘grass skirt’

49. *-nu VERB SUFFIX, PAST TENSE SG
   
   KTA:  -nu  VERB SUFFIX, PAST TENSE SG
   KOI:  -nu  VERB SUFFIX, PAST TENSE SG
   MTN:  -nu  VERB SUFFIX, PAST TENSE SG

50. *ofo ‘pig’
   
   KTA:  oho  ‘pig’
   KOI:  oho  ‘pig’
   MTN:  ovo  ‘pig’

51. *oko ‘this’
   
   KTA:  o  ‘this’
   KOI:  oko  ‘this’
   MTN:  ko  ‘this’

52. *ono ‘what?’
   
   KTA:  
   KOI:  ono  ‘what (is it)? (self questioning)’
   MTN:  ono  ‘what’
53. *rofo-* ‘dig (hole)’
   KTA:  roho-  ‘dig (hole)’
   KOI:  roho-  ‘dig (hole)’
   MTN:  lovo-  ‘dig’

54. *-ru ‘because’
   KTA:  
   KOI:  V-are-ru  ‘because V’
   MTN:  V-ale-rua  ‘because V’

55. *soreka  ‘quickly’ (Lane: *soreka  ‘quick(ly)’)
   KTA:  
   KOI:  soreka  ‘quickly’
   MTN:  soleka  ‘quick(ly), fast’

56. *subuta ‘long ago, before, old’ (Lane: *subuta ‘old, long ago, before’)
   KTA:  subuta  ‘long ago, before, old’
   KOI:  subuta  ‘long ago, before, old’
   MTN:  subuta  ‘before’

57. *(t,d)ete ‘tail’
   KTA:  (to)tete-ka  ‘(dog’s) tail’
   KOI:  (to)tete-ka  ‘(dog’s) tail’
   MTN:  dete  ‘tail’

58. *-ta…-ta ‘and (joining NPs)’
   KTA:  
   KOI:  NP-ta…NP-ta  ‘NP and NP’
   MTN:  NP-ta…NP-ta  ‘NP and NP’

59. *-taye ‘also’
   KTA:  (NP)-taye  ‘also’
   KOI:  (NP)-tae  ‘also’
   MTN:  (NP)-ta  ‘also’

60. *tana ‘raised land, ridge’ (Lane: *tana ‘ridge, mountain’)
   KTA:  tana  ‘raised land, ridge’
   KOI:  tana  ‘ridge of land’
   MTN:  tana  ‘mountain’
Appendix E

61. *tata ‘sibling, opposite sex, older’
   KTA:  tata ‘elder sister’
   KOI:  tata ‘sibling, opposite sex, older, elder sister’
   MTN:  tata ‘sibling, opposite sex, older, elder sister’

62. *ti- ‘go’ (Lane: *ti- ‘go’)
   KTA:  (o)ti-  ‘go’
   KOI:  (o)ti-  ‘go’
   MTN:  ti-  ‘go’

63. *to ‘dog’ (Lane: *to ‘dog’)
   KTA:  to  ‘dog’
   KOI:  to  ‘dog’
   MTN:  to  ‘dog’

64. *tobo ‘full’ (Lane: *tob(o,a) ‘full’)
   KTA:  tobo|ke  ‘full (of water)’
   KOI:  tobo|ka  ‘full (of water)’
   MTN:  toba|loho  ‘to be full (of water)’ (medial a unexpected; o expected)

65. *tu ‘nape of neck’
   KTA:  tuyuka  ‘nape of neck’
   KOI:  tu  ‘nape of neck’
   MTN:  tu  ‘nape of neck’

66. *u- ‘stay, be in a place, live’
   KTA:  u-  ‘stay, be in a place, live, remain’
   KOI:  u-  ‘stay, be in a place, live, remain’
   MTN:  u-  ‘stay, be (in a place)’

67. *[u]gurama- ‘sit down’
   KTA:  gura-ma-  ‘sit down’
   KOI:  gura-ma-  ‘sit down’
   MTN:  ugu-ma-  ‘sit down’
   ugula-mo  ‘sit down’

68. *ua-ya- ‘bite’
   KTA:  
   KOI:  ua-va-  ‘bite’
   MTN:  ua-ha-  ‘bite, gnaw’
69. *umu-ka ‘root, base’ (Lane: *umuka ‘root’)
   KTA: umu-ka ‘root, base’ (-ka PARTITIVE POSSESSIVE SUFFIX)
   KOI: umu-ka ‘root, base’ (-ka PARTITIVE POSSESSIVE SUFFIX)
   MTN: umu-ka ‘root, base (of tree)’ (-ka PARTITIVE POSSESSIVE SUFFIX)

70. *un(a,u) ‘mosquito, gnat’
   KTA: una ‘mosquito’
   KOI: unu|ku ‘gnat’
   MTN: unu|ku ‘gnat’

71. *unaye ‘only’
   KTA: unaye ‘only’
   KOI: unae ‘only’
   MTN: unaha ‘only’ (final a unexpected; e expected)

72. *utuyu ‘ashes’ (Lane: *ut(u,i)(yo) ‘ashes (black)’)
   KTA: utuyo ‘ashes’
   KOI: utuvu ‘ashes’
   MTN: uti ‘ashes, fireplace’ (form unexpected; utuhu expected)

73. *va[e]futi ‘how much’
   KTA:
   KOI: vahuti ‘how much’
   MTN: vaesuti ‘how much’

74. *vabe ‘tangget, Cordyline’
   KTA: vabe ‘tangget, Cordyline’
   KOI: vabe ‘tangget, Cordyline’
   MTN: vabe|re ‘tangget, Cordyline’

75. *vayoto- ‘perspire, sweat’
   KTA: vayoto-yoi- ‘perspire, sweat’
   KOI: vahoto-a ‘perspire’
   MTN: vahoto-a ‘perspire’

76. *vani ‘sun, day’
   KTA: vani ‘sun’
   KOI: vani ‘sun, day, time’
   MTN: vani ‘sun, day’
77. *vata ‘ground, earth’ (Lane: *vata ‘ground, earth’)  
   
   KTA: vata ‘ground’  
   KOI: vata ‘ground, earth’  
   MTN: vata ‘ground, country, earth’

78. *vati- ‘die’  
   
   KTA:  
   KOI: vati- ‘die’  
   MTN: hati- ‘die’

79. *vefite ‘no, not’  
   
   KTA: (maye) veite|ra ‘not (good)’  
   KOI: vohite ‘not, none’  
   MTN: (moaga) vesi ‘not (much)’

80. *veu-ya- ‘urinate’  
   
   KTA: veu-ya- ‘urinate’  
   KOI: veu-va- ‘urinate’  
   MTN: veu-a ‘urinate’

81. *viriviri- ‘spin, twirl’  
   
   KTA:  
   KOI: to|viri|viri ‘car, truck’ (< to ‘dog’ + viriviri ‘go around’)  
   MTN: vili|vili-a ‘spin, twirl, go around in circles’

   When first encountered in KOI this looked like a borrowing from English ‘wheel’ via Papuan Pidgin English; cf. Tok Pisin wilwil ‘bicycle, meat or food grinder, coffee mill’ and wilwilim ‘grind, crush, pulverise stg’ but I now believe this formal similarity to be a coincidence.

82. *ya-ya- ‘sleep, lie down’  
   
   KTA: ya-ya- ‘sleep, lie on ground’  
   KOI: ya-va- ‘sleep, lie down’  
   MTN: la-ha ‘sleep’

83. *yaya ‘string bag’  
   
   KTA: yaya ‘string bag’  
   KOI: yago ‘string bag’  
   MTN: laha ‘string bag’

84. *-ye PREDICATIVE POSSESSIVE SUFFIX  
   
   KTA: -ye PREDICATIVE POSSESSIVE SUFFIX  
   KOI: -ye PREDICATIVE POSSESSIVE SUFFIX  
   MTN: -le PREDICATIVE POSSESSIVE SUFFIX
Appendix F: Proto Baraic word list

1. *abe- ‘get, take’ (Lane: 2. *(ab,ba)e- ‘take’)
   
   OMI: baej-e ‘take’ (assume metathesis; abej-e expected)
   BAR(N): abe|ro ‘get (and come), take’
   BAR(S): abe- ‘take’ (Olson 1981:343)
   MAN: apej-o ‘get, take’

2. *aga- ‘see’ (Lane: 16. *ga- ‘see’)
   OMI: gav-e ‘see’
   BAR(N): aga-e ‘see’
   BAR(S): aga- ‘see’
   MAN: kav-o ‘see’

3. *aja ‘black’ (Lane: 3. *ai ‘black’)
   OMI:
   BAR(N):
   BAR(S): aja ‘black’
   MAN: aja ‘black’

4. *ajarV ‘sand’ (Lane: 4. *aiar- ‘sand’)
   OMI:
   BAR(N): ajar-e ‘sand’
   BAR(S): aiaru ‘sand’
   MAN: ajar-a ‘sand’

5. *ají- ‘ascend, go up’
   OMI: aji|om-e ‘go up’
   BAR(N): aji-a ‘go up’
   BAR(S): aje- ‘go up, ascend’
   MAN: aji|m-a ‘go up, ascend’

6. *ane- ‘trunk (of tree)’ (cf. PBC *(?k)afo ‘trunk (of tree)’)
   OMI:
BAR(N): (ine) an-e ‘(tree) trunk’
BAR(S): 
MAN: (icha) ane\j-a ‘(tree) trunk’

7. *arV ‘house, place, land’ (Lane: 5. *ar(i) ‘house, land’)
   OMI: ar-i ‘ground’
   BAR(N): ar-e ‘house, place’
   BAR(S): aru ‘house’
   MAN: ar-a ‘house’

The OMI form is suspicious. If the underlying final vowel were i the expected form would be are. If, however, this vowel were u, then the expected form would be aru-e.

8. *asinV ‘leech’
   OMI:
   BAR(N): asin-e ‘leech’
   BAR(S): 
   MAN: asin|asin-a ‘leech’

9. *ata- ‘break wood’
   OMI:
   BAR(N): at-ae ‘break off a piece’
   BAR(S): ata- ‘break wood’
   MAN: at-a ‘break wood’

    OMI:
    BAR(N): 
    BAR(S): atei ‘knee’ (e unexpected; o expected)
    MAN: atok-a ‘knee’

11. *baru ‘man, husband’ (Lane: 8. *baru ‘man, husband’)
    OMI: 
    BAR(N): baru ‘husband’
    BAR(S): baru ‘husband’
    MAN: paru-a ‘man, male, husband’

12. *bij- ‘push’
    OMI: bij\im-e ‘push’
    BAR(N): 
    BAR(S): 
    MAN: pij\aho ‘push’
13. *bitarV ‘tongue’ (Lane: 9. *(b,m)(i,e)tar- ‘tongue’)

OMI: bitar-e ‘tongue’
BAR(n): mitar-e ‘tongue’ (m unexplained; p expected)
BAR(s): bitaru ‘tongue’
MAN: mitar-a ‘tongue’ (m unexplained; p expected)


OMI:
BAR(n): di-a ‘leg’
BAR(s): deʔu ‘leg’ (m unexplained; p expected)
MAN: diʔ-a ‘leg’ (tiʔa expected; there is no d in MAN)

15. *du(ʔ,k)a ‘thigh’ (Lane: 13. * duk(a) ‘thigh’)

OMI: du’a|h-e ‘thigh’
BAR(n):
BAR(s): du’a ‘thigh’
MAN:

16. *e ‘person, human being’ (Lane: 1. *(a,e) ‘person, man’)

OMI: a-e ‘man, person’ (initial a unexplained; e expected)
BAR(n): e ‘person, people’
BAR(s): e ‘person’
MAN: e-a ‘person, human being’

17. *farifV ‘son’ (Lane: 14. *fari(fa) ‘child’)

OMI: hari|h-e ‘son’
BAR(n): fari ‘son’
BAR(s): vari ‘son’ (initial v unexplained; h expected)
MAN: hari|h-a ‘son, nephew’

18. *fi- ‘sit (SG SUBJ)’ (Lane: 15. *fi- ‘sit (SG SUBJ)’)

OMI:
BAR(n): fi ‘sit (SG SUBJ)’
BAR(s):
MAN: hi|jo ‘sit down’
     hi|jasavo ‘sit in a group’

19. *fuasi- blow (fire)

OMI: huô-huô|v-e ‘blow on fire (to stir up)’
BAR(n):
BAR(s): uasi ‘blow (fire)’
MAN: huási|h0 ‘blow’
20. *ga- ‘that’ (Lane: 17. *g(a,e)r- ‘that’)

omi:
bar(N):  gafia ‘(up) there’
bar(s):  gar ‘that over there’
man:  ka|jaho ‘that’
i|ja|ka|ro ‘that over there’

21. *gada ‘ear’ (Lane: 58. ? *ada ‘ear’)

omi:
bar(N):  a|d-a ‘ear’ (θ < PBC *g unexplained; no obvious conditioning factor(s); g expected)
bar(s):  gada ‘ear’
man:  a|ta-a ‘ear’ (θ < PBC *g unexplained; no obvious conditioning factor(s); k expected)

22. *gubai ‘tooth’ (Lane: 59. ? *obai ‘tooth’)

omi:
bar(N):  u|ba-e (saki) ‘tooth (ache)’ (θ < PBC *g unexplained; no obvious conditioning factor(s); g expected)
bar(s):  gobai ‘tooth’
man:  upaj-a ‘tooth’ (θ < PBC *g unexplained; no obvious conditioning factor(s); k expected)

23. *ida ‘what?’ (cf. possible doublet PBC ira(b,r,k)V- ‘what?’)

omi:
di|e|hi ‘what?’
bar(n):
bar(s):  ida|ga ‘what?’
man:

24. *ide- ‘which?’ (Lane: 18. *(i)di ‘which?’)

omi:
di ‘which?’
bar(N):  ize|ki ‘which?’ (z unexplained; d expected)
bar(s):  ide|ʔo ‘which?’
man:  i|cha|ra ‘which?’ (ch unexplained; d expected)

25. *[i]do ‘water’ (Lane: 12. *do ‘water’)

omi:
jol|v-e ‘water’ (initial j unexplained; d expected)
bar(N):  do ‘water’
dol|rue ‘swim’
bar(s):  ido ‘water’
ido|su ‘swim’
man:  to-a ‘water’
to|a|ruho ‘swim, wash oneself’
26. *ijV ‘arm’
   OMI: nam|ij-e ‘arm’
   BAR(n):
   BAR(s):
   MAN: ij-a ‘arm’

27. *ijV ‘how much?’
   OMI:
   BAR(n): ije|ge ‘how much?’
   BAR(s):
   MAN: icha|ro ‘how much?’ (medial ch unexplained; j expected)

28. *inoki ‘two’ (Lane: 19. *(in,ni)ok(i,o) ‘two’)
   OMI: nioʔi ‘two’ (form unexplained; inoʔi expected; assume metathesis)
   BAR(n): inok|ro ‘two’
   BAR(s): inoʔi ‘two’
   MAN: noʔo ‘two’

29. *ira(b,r,k)V- ‘what?’ (cf. possible doublet PBC *ida ‘what?’)
   OMI: rab-e: ‘what?’
   BAR(n): irer-e ‘what?’
   BAR(s):
   MAN: irak-a ‘what?’

30. *irV ‘mouth’ (Lane: 20. *ir- ‘mouth’)
    OMI:
    BAR(n): ir-e ‘mouth’
    BAR(s): iru ‘mouth’
    MAN: ir-a ‘mouth’

    OMI: raro ‘who?’ (assume initial vowel loss)
    BAR(n): era ‘who?’ (initial e unexpected; i expected)
    BAR(s): irara, irda ‘who?’
    MAN: irara ‘who?’

32. *isu ‘cloud’ (Lane: 22. *(i)s(o,u) ‘cloud’) (cf. PBC *?imitiV ‘cloud’)
    OMI: su-e ‘cloud’
    BAR(n):
    BAR(s) iso ‘cloud’
    MAN:
33. *ito- ‘full’

OMI:
BAR(N):  ito|eje  ‘full’
BAR(S):  ito|tia  ‘full’
MAN:  ituʔono  ‘full (having no space left)’

34. *iviamai ‘now’ (cf. PBC *jaru- ‘today’)

OMI:
BAR(N):  iviama  ‘now’
BAR(S)
MAN:  iviamai  ‘now’

35. *ivienV ‘tail’

OMI:
BAR(N):  ivien-e  ‘tail’
BAR(S):  ivenu  ‘tail (of dog)’
MAN:  vin-a  ‘tail (of animal, bird, fish)’ (assume initial vowel loss)

36. *jaʔi- ‘bite’

OMI:  jaʔih-e  ‘bite’
BAR(N):  sak-  ‘bite, sting’ (Olson 1981:345)
BAR(S):  sak-ie  ‘bite me’ (initial s unexplained; j expected; medial k also unexplained; ? expected)
BAR(S)  za-  ‘bite’
MAN:  jaʔeho  ‘bite’

37. *jahua- ‘cough’

OMI:
BAR(N):
BAR(S):  zaha|o  ‘cough’
MAN:  jahua|vo  ‘cough’

38. *jajV ‘drum’

OMI:  jaj-e  ‘drum’
BAR(N):  daj-o  ‘drum’ (initial d unexplained; j expected)
BAR(S)
MAN:  chaj-a  ‘drum’ (initial ch unexplained: j expected)

39. *jaru- ‘today’ (Lane: 23. *jaru ‘now, today’) (cf. PBC *iviamai ‘now’)

OMI:  jaru|v-o:  ‘today’
BAR(N):
BAR(N):  jaru|ma’e  ‘today’
MAN:
40. *ji(ʔ,k)- ‘bush’ (Lane: 11. *dik ‘bush’)
   OMI: jēʔ-e, jēʔ-o: ‘bush country’
   BAR(n):
   BAR(s):
   MAN: ne|chiʔ-a ‘bush’

41. *-jor(u,a) RELATIVE (Lane: 24. *jora RELATIVE)
   OMI:
   BAR(n):
   BAR(s): -joru RELATIVE
   MAN: -(f)ora RELATIVE

42. *juarV ‘garden’
   OMI:
   BAR(n): juar-e ‘garden’
   BAR(s): jo ‘garden’
   MAN: juar-a ‘garden’

43. *juhu- ‘be afraid’
   OMI: uho|niv- ‘be afraid’
   BAR(n): jud-ie ‘be afraid’ (d unexplained; h expected)
   BAR(s): zuhu- ‘be afraid’
   MAN: uha|vo ‘be afraid’

44. *juorV ‘penis’
   OMI:
   BAR(n): juor-e ‘penis’
   BAR(s): joru ‘penis’
   MAN: júr-a ‘penis’

45. *kai ‘string, rope’ (Lane: 7. *(a,o)i ‘rope’)
   OMI:
   BAR(n): ka-e ‘string’
   BAR(s): ai ‘string, rope’
   MAN: aj-a ‘string, rope’

46. *kan- ‘hit’ (Lane: 26. *(k,ʔ)an- ‘hit’)
   OMI: an-e ‘hit’
   BAR(n): kan-ie ‘hit, help, shoot’
   BAR(s): ?ana ‘hit (with stick or hand)’
   MAN: ?an|a-o ‘hit’
47. **kari-** ‘sit (pl. subj.)’ (Lane: 27. **kari-** ‘sit (pl. subject)’)

<table>
<thead>
<tr>
<th>OMI:</th>
<th>ari|j-e</th>
<th>‘sit, rest (two)’</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>kari</td>
<td>‘sit (pl.)’</td>
</tr>
<tr>
<td>BAR(S):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAN:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

48. **karu-** ‘lizard’

<table>
<thead>
<tr>
<th>OMI:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>karu|on-e</td>
</tr>
<tr>
<td>BAR(S):</td>
<td></td>
</tr>
<tr>
<td>MAN:</td>
<td>aru|s-a</td>
</tr>
</tbody>
</table>

49. **kavu-** ‘red’ (Lane: 34. **kavu-** ‘red’)

<table>
<thead>
<tr>
<th>OMI:</th>
<th>kavu|e|e</th>
<th>‘red’</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>kavu|ame</td>
<td>‘red, blood’</td>
</tr>
<tr>
<td>BAR(S):</td>
<td>?abo</td>
<td>‘red’ (medial b unexplained; v expected)</td>
</tr>
<tr>
<td>MAN:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

50. **ki[jo]-** ‘laugh’

<table>
<thead>
<tr>
<th>OMI:</th>
<th>ijo|ij-e, ijo|v-</th>
<th>‘laugh’</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>ki</td>
<td>‘laugh’</td>
</tr>
<tr>
<td>BAR(S):</td>
<td>?i-</td>
<td>‘laugh’</td>
</tr>
<tr>
<td>MAN:</td>
<td>?i|v-o</td>
<td>‘laugh’</td>
</tr>
</tbody>
</table>

51. **-kiro** PURPOSE VERB SUFFIX (Lane: 28. **-ki-ro** PURPOSE VERB SUFFIX)

<table>
<thead>
<tr>
<th>OMI:</th>
<th>-i(ro), -ʔirô</th>
<th>POTENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>-kiro</td>
<td>DESIDERATIVE</td>
</tr>
<tr>
<td>BAR(S):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAN:</td>
<td>-iro</td>
<td>PURPOSE</td>
</tr>
</tbody>
</table>

Austing and Upia (1975) do not define or exemplify **omi** ‘POTENTIAL’.

52. **kua-** ‘talk, speak’ (Lane: 32. **ku(a)-** ‘say’)

<table>
<thead>
<tr>
<th>OMI:</th>
<th>?uv-</th>
<th>‘talk’</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>kua|e</td>
<td>‘talk, speak’</td>
</tr>
<tr>
<td>BAR(S):</td>
<td>?ua|re</td>
<td>‘talk’</td>
</tr>
<tr>
<td>MAN:</td>
<td>?ua|rav-o, uav-o</td>
<td>‘talk’</td>
</tr>
</tbody>
</table>

53. **kume-** ‘call out’ (Lane: 33. **(k,ʔ)e(me)-** ‘call out’)

<table>
<thead>
<tr>
<th>OMI:</th>
<th>?uv-</th>
<th>‘call out’</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR(N):</td>
<td>kume</td>
<td>‘call out’ (initial k unexplained; ? expected)</td>
</tr>
<tr>
<td>BAR(S):</td>
<td>ume</td>
<td>‘call out’</td>
</tr>
<tr>
<td>MAN:</td>
<td>?ume|j-o</td>
<td>‘call out’</td>
</tr>
</tbody>
</table>
54. *mafV ‘pig’ (Lane: 35. *maf(u) ‘pig’)
   OMI: mah-e ‘pig’
   BAR(n): mahu ‘pig’
   BAR(s): mah-a ‘pig’

   Although the data suggests PBC *mafV, OMI mah-e does not reflect this, the expected form being mafu-e.

55. *maja- ‘sun’ (Lane: 36. *maza ‘sun, day’)
   OMI: madza|-e ‘sun’
   BAR(n): maza|n-e ‘sun, day’ (z unexplained; j expected)
   BAR(s):
   MAN: masa|p-a ‘moon’ (semantic shift assumed; s unexplained; j expected)

56. *mako ‘hole’
   OMI:
   BAR(n): mako ‘hole in ground’
   BAR(s):
   MAN: maʔo-a ‘hole’

57. *mi- ‘navel’ (Lane: 60. ? *me- ‘navel’) (cf. PBC *vinofV ‘navel, umbilical cord’)
   OMI:
   BAR(n):
   BAR(s): me|mēi ‘navel’
   MAN: mi|sip-a ‘navel’

58. *misV ‘salt’ (Lane: 37. *mis- ‘salt’)
   OMI:
   BAR(n):
   BAR(s): misu ‘salt’
   MAN: mis-a ‘salt’

59. *muru- ‘cook (on hot stones)’
   OMI: muru|oh-e ‘cook on hot stones’
   BAR(n):
   BAR(s):
   MAN: muru-o, muru-vo ‘cook on hot stones’

60. *m(u,o)sV ‘breast’ (Lane: 38. *m(o,u)s- ‘breast’)
   OMI:
   BAR(n): mui ‘breast’ (unexplained form; mus-e expected)
   BAR(s): mosu ‘breast’
   MAN: mus-a ‘breast’
61. *na 'I' (Lane: 57. *na 'I')
   OMI:  na 'I'
   na|ehu 'I'
   BAR(N):  na 'I'
   BAR(S):  na 'I'
   MAN:  na 'I'

62. *na(?ki)i- 'night' (Lane: 39. *naki 'night')
   OMI:
   BAR(N):
   BAR(S):  naʔi|re 'night'
   MAN:  naʔi-a 'night'

63. *n(e,i)ri 'yesterday, tomorrow' (Lane: 41. *n(e,i)ri 'yesterday, tomorrow')
   OMI:  nèri 'yesterday, tomorrow'
   BAR(N):
   BAR(S):  neru 'yesterday, tomorrow'
   MAN:  niari 'yesterday, tomorrow'

64. *ni[n]a- 'sleep' (Lane: 40. *n(ia,ai)- 'sleep')
   OMI:  nia|v-e 'sleep'
   BAR(N):  nina-e 'sleep'
   BAR(S):  nai- 'sleep' (unexpected form; assume metathesis)
   MAN:  nej-o 'sleep' (i + a > e/_.j ?)

65. *nitu- 'day before yesterday, day after tomorrow' (Lane: 42. *n(e,i)tuv 'day before yesterday, day after tomorrow')
   OMI:
   BAR(N):  nitu|a 'day before yesterday, day after tomorrow'
   BAR(S):  nito|he, nitu|ve 'day before yesterday, day after tomorrow'
   MAN:  nitu|i 'day before yesterday, day after tomorrow'

66. *-on(e,i) PREDICATIVE POSSESSIVE SUFFIX
   OMI:
   BAR(N):  -one PREDICATIVE POSSESSIVE SUFFIX
   BAR(S):
   MAN:  -uni PREDICATIVE POSSESSIVE SUFFIX

67. *rihu 'milk, juice'
   OMI:  (amo) rihu-e '(breast) milk'
   BAR(N):
   BAR(S):
   MAN:  (musa) rih-a '(breast) milk'
68. *sag(o,a)- ‘rotten, rotting’ (Lane: 44. *saga(d,r)(e,a) ‘rotten’)
   OMI:  sago|m ‘rotten thing’
   sago|horije ‘rotting’
   BAR(N):
   BAR(S):  saga|loma ‘ripe (banana)’
   MAN:  saka|ha ‘rotted’

   It is unclear from this set whether the stem final vowel reflects PBC *o or *a.

69. *saka ‘ground, earth’ (Lane: 45. *sak(a,i) ‘ground, earth’)
   OMI:  saʔa-e ‘ground’
   BAR(N):  saka-e ‘ground, soil’
   BAR(S):  saʔi ‘ground’ (final i unexpected; a expected)
   MAN:

70. *sanoʔu ‘jaw, chin’
   OMI:
   BAR(N):
   BAR(S):  anoʔu ‘jaw, chin’
   MAN:  sano-a ‘jaw, chin’

71. *siarV ‘betelnut’ (Lane: 46. *s(i)er- ‘betel nut’)
   OMI:
   BAR(N):  siar-e ‘betelnut’
   BAR(S):  seru ‘betelnut’ (medial e unexpected; assume e < i + a)
   MAN:  siar-a ‘betelnut’

72. *sirefi ‘shoulder’ (Lane: 47. *sir- ‘shoulder’)
   OMI:  sireh-a ‘shoulder’
   BAR(N):
   BAR(S):  siroi ‘shoulder’ (final oi unexplained; e expected)
   MAN:  sireh-a ‘shoulder’

73. *sise- ‘bad’ (Lane: 48.*sise- ‘bad’)
   OMI:  sis-ë ‘bad’
   BAR(N):  is-e ‘bad’ (initial s expected)
   BAR(S):
   MAN:  sise-a ‘bad’

74. *suvuamV ‘lime’
   OMI:
   BAR(N):  suvuam-e ‘lime’
BAR(s):
MAN: suam-a ‘lime’

75. *tabarV ‘snake’ (Lane: 49, *taba ‘snake’)
   OMI: tabôr-e ‘snake’
   BAR(n): tabar-e ‘snake’
   BAR(s): tabare ‘snake’
   MAN: tapar-a ‘snake’

76. *tadi- ‘plane, scrape off’
   OMI:
   BAR(n): adi-a ‘plane, scrape off’
   BAR(s):
   MAN: tatia|h-o ‘scrape off’

77. *tit(i,u)- ‘drill, make a small hole in’
   OMI:
   BAR(n): titu-a ‘make a small hole in’
   BAR(s):
   MAN: titi|-o ‘drill’

It is not clear from this data whether the root final vowel reflects PBC *i or *u.

78. *tuʔu- ‘ashes’
   OMI:
   BAR(n): tuv|ar-e ‘ashes’ (medial v unexpected; glottal stop expected)
   BAR(s): tuʔo|tu ‘ashes’
   MAN: tuʔ|a ‘ashes (where fire is built)’

79. *ufu- ‘cut, cut off, slice’
   OMI:
   BAR(n): ufu ‘cut (grass), slice’
   BAR(n):
   MAN: uhu-o ‘cut, cut off’

80. *ui ‘hair, fur, feathers’ (Lane: 51. *u(i) ‘hair of head’)
   OMI: u ‘hair’ (expected form u-e)
   BAR(n): (siroe) u ‘(dog’s) fur’
   BAR(s): (uʔo) ui ‘(dog’s) fur’
   MAN:
81. *uʔV ‘smoke’ (Lane: 56. *(ʔ)(o,u)(k,ʔ)(i) ‘smoke’)
   OMI: uʔa-e ‘smoke’
   BAR(n): (arene) u ‘(fire) smoke’
   BAR(s): (menu) uʔu ‘(fire) smoke’
   MAN: (vena) uʔ-a ‘(fire) smoke’

82. *va ‘liver’ (Lane: 52. *va ‘liver’)
   OMI: va-e ‘liver’
   BAR(n): vak-a ‘liver’
   BAR(s): va ‘liver’
   MAN:

83. *vaʔ- ‘go’ (Lane: 54. *vaʔ- ‘go’)
   OMI: vaʔ-e ‘go’
   BAR(n): va ‘go’
   BAR(s): vaʔ-o ‘go’
   MAN: vaʔ-o ‘go’

84. *ve ‘sun, day’ (Lane: 53. *ve ‘sun’)
   OMI:
   BAR(n): ve ‘day and night, rain’
   BAR(s): ve ‘sun’
   MAN: ve-a ‘sun’

85. *veda ‘when?’
   OMI:
   BAR(n):
   BAR(s): veda|ha ‘when?’
   MAN: vecha, vea ‘when?’ (ch unexplained; d expected)

86. *vi(?k)ε ‘pain (v.)’
   OMI: viʔε|h-e ‘pain’ (author’s fieldnotes)
   BAR(n):
   BAR(s): ie|nu- ‘pain’ (initial ð unexplained; v expected; also ð between i and e unexplained; glottal stop expected)
   MAN: hia|nimo ‘pain (to have)’ (ð between i and e unexplained; glottal stop expected)

87. *vinofV ‘navel, umbilical cord’
   OMI: vinoh-e ‘navel and umbilical cord’
   BAR(n):
BAR(s): \textit{vinohu} ‘navel’
MAN:

88. *\textit{vej}- ‘chop, cut down’

OMI: 
\textit{(idze uedz-} ‘chop (wood)’ (author’s fieldnotes) (initial may be transcription error for expected \textit{v})

BAR(n):
BAR(s): \textit{veda} ‘chop wood’
MAN: \textit{vuijo} ‘cut down with axe’

89. *\textit{(?)}\textit{adV} ‘bone’ (Lane: 25. *\textit{kad-} ‘bone’)

OMI:
BAR(n):
BAR(s): \textit{adu} ‘bone’
MAN: ?at-a ‘bone’

90. *\textit{(?)}\textit{k}\textit{afo} ‘trunk (of tree)’ (Lane: 55. *\textit{?af(o)} ‘trunk (of tree)’) (cf. PBC *\textit{ane-} ‘trunk’)

OMI: 
\textit{aho|naj-e} ‘trunk’

BAR(n):
BAR(s) \textit{(idu)}\textit{aho} ‘(tree) trunk’
MAN: ?ah-a ‘(tree) trunk’

91. *\textit{?ajujV} ‘banana’

OMI: 
\textit{uj-e} ‘banana’

BAR(n): 
BAR(s): 
MAN: ?ajúj-a ‘banana’

92. *-(?\textit{k})\textit{e} ‘locative noun suffix’ (Lane: 29. *\textit{-(k,e,i)} ‘locative noun suffix’)

OMI: 
\textit{-?e} ‘at (with temporals)’

BAR(n):
BAR(s): \textit{-?e} ‘at’ (in addition to \textit{-de}, \textit{-he})
MAN: \textit{-i (~ -a)} \textit{PREMODIFIER SUFFIX OR OBLIQUE CASE SUFFIX} (A. Healey, pers. comm.)

93. *\textit{?imitiV} ‘cloud’ (cf. PBC *\textit{isu} ‘cloud’)

OMI:
BAR(n): \textit{amit-e} ‘cloud’ (initial \textit{a} unexplained; \textit{i} expected)
BAR(s):
MAN: ‘imiti-a ‘clouds’
94. *\(\tilde{k}ko\ldots\tilde{k}ko\) ‘and (joining nouns)’ (Lane: 30. *N1-ko…N2-kō ‘N1 and N2’)
   OMI: -ʔo…ʔo ‘and, with, also’
   BAR(N):
   BAR(s): -ʔo…ʔo ‘and (joining nouns)’
   MAN: -ʔo…ʔo ‘and, with, also’ (unexplained form; -ʔo…ʔo expected)

95. *\(\tilde{k}oiʔV\) ‘heart’ (Lane: 43. *oi- ‘heart’)
   OMI:
   BAR(N):
   BAR(s): oiʔo ‘heart’ (unexpected form; initial glottal stop expected)
   MAN: ʔoj-a ‘heart’

96. *\(\tilde{k}uo\) ‘dog’ (Lane: 31. *(u)(k,ʔ)o ‘dog’)
   OMI: ʔo-e ‘dog’
   BAR(N):
   BAR(s): uʔo ‘dog’ (? suspicious here, zero expected)
   MAN: ʔu-a ‘dog’
References

—, 1966c. Basic vocabulary lists in communalects of the Koiarian languages. [Copies of sound recordings available on paradisec compact discs.] Unpublished manuscript, Research School of Pacific and Asian Studies, The Australian National University.


