

CHAMBA DAKA AND BANTOID: A FURTHER LOOK AT CHAMBA DAKA CLASSIFICATION

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Chamba Daka was presented in a previous study as a Niger-Congo isolate after a cognate search in a variety of well-documented languages. This search is here extended to the basic vocabulary of a selection of non-Bantu Bantoid languages. Chamba Daka terms are graded for their frequency within non-Bantu Bantoid and on a wider Niger-Congo scale. Chamba Daka is found to have little basic vocabulary in common with Mambiloid and only sporadic similarities with various Adamawa languages. Only about ten percent of Chamba Daka's basic vocabulary would link it to non-Bantu Bantoid (only the terms for 'fire' and 'be dry' seem to be held in common), though thirty percent suggests a Benue-Congo affiliation. Fifteen percent remains untraced, however, and another quarter suggests Voltaic affinities. Chamba Daka, therefore, remains without a close neighbor and of uncertain affiliation in Niger-Congo.

Après une recherche de termes apparentés dans plusieurs langues bien documentées, une étude antérieure définit le tchamba-daka comme une langue isolée de la famille Niger-Congo. Cette recherche s'élargit ici au vocabulaire de base d'un échantillon de langues bantoïdes non bantoues. Les termes tchamba-daka sont évalués selon leur fréquence à l'intérieur du bantoïde non bantoue ainsi qu'à un niveau supérieur du Niger-Congo. On constate que le tchamba-daka et le mambiloid partagent peu de vocabulaire commun et que les comparaisons possibles entre de tchamba-daka et la branche Adamawa sont sporadiques. Moins de dix pourcent du vocabulaire de base lie le tchamba-daka au bantoïde non bantoue (seuls les termes pour 'feu' et pour 'être sec' semblent être partagés). Néanmoins, un tiers de ce vocabulaire permettrait d'affilier le tchamba-daka au Benoué-Congo. Or, le tchamba-daka est toujours individualisé par environ quinze pourcent de son vocabulaire de base et un quart encore le relie à la branche voltaïque. Il est donc toujours impossible de rattacher le tchamba-daka étroitement à un autre groupe Niger-Congo.

1. BACKGROUND AND SOURCES

Boyd (1994) considered the classificatory position of two closely related forms of Chamba Daka (CD), a dialect cluster designated Adamawa group 3 by Greenberg (1966) but subsequently viewed as reclassifiable as Benue-Congo (BC, Bennett 1983) or more specifically Bantoid (Watters 1989, Hedinger 1989, Blench 1993).¹

1.1 PREMISES

This study was based on the following premises:

Chamba Daka is a Niger-Congo isolate because the greater part of its vocabulary is composed of 1) common Niger-Congo roots whose presence are of little use in subclassification; 2) roots for which no cognates have yet been found elsewhere; and in the remainder of its vocabulary are, 3) items which bear a great resemblance to terms appearing sporadically in one or another of a variety of languages or language groups.

The items in the lexicon of any language may be said to "come from somewhere," i.e., they were in some older form of that language, and may therefore be found in other descendants, or they entered the language at some time through borrowing. The process of seeking cognates for the individuating part 2) of the Chamba

¹ The author wishes to express his sincerest thanks, firstly to Pascale Piron, who was kind enough to examine this article closely, point out several inaccuracies of detail, and suggest numerous improvements in its overall intelligibility; and secondly to Bruce Connell, who has also read the paper carefully, remarked on a number of theoretical difficulties which will require further examination, and provided specific data from his recently completed survey of Mambiloid languages, some of which are cited here as "pers. comm." He also suggests broadening the language sampling used here to Proto-Lower Cross (see his 1994 reconstructions). This has not been done here insofar as apparent Chamba Daka cognates represented in Proto-Lower Cross, which have no cognate in any of the other languages in the sampling, are few (see Connell, forthcoming; some have nevertheless been cited in appendix 1). Clearly, however, such an extension would be particularly useful in providing a sort of "Benue-Congo counterweight" to Voltaic, i.e., a language at a geographic remove such that (recent) borrowing is not a significant factor in lexical comparison.

Daka lexicon may therefore be carried on indefinitely, on an ever wider scale. The most plausible search procedure involves examining extended vocabularies of individual Niger-Congo languages at ever greater geographical and linguistic remove. While some cases of clear sound-meaning correlations may appear in basic vocabulary, one would expect a predominance of cognation involving some meaning shift; otherwise, it would already have been established by simple inspection.

Protolanguages are extremely helpful in this search, since, if a root is common to a group, an examination of the corresponding comparative series may show a range of phonetic or semantic divergence which will strongly support the etymology.

If this search were to reveal massive cognation and regularity of correspondences in a single language, Chamba Daka would have found a 'nearest neighbor'. If this nearest neighbor also belonged to some larger linguistic unit, finding it would be equivalent to establishing a continuum between that larger unit and Chamba Daka. As long as such a language cannot be found, there is no such continuum, and Chamba Daka cannot be made a member of any unit. This kind of reasoning may also apply in reverse to any larger Greenbergian unit, once comparative study is undertaken in any part of it. A case in point is Gur, where, after establishment by Manessy (1969, 1975, 1979) of a Central Gur (referred to hereafter as Voltaic in a narrow sense), it has seemed necessary to exclude Dogon and to question the position of Senufo (see Naden 1989).

The sources used in Boyd (1994) included available extensive vocabularies of individual languages and fully reconstructed protolanguages, whenever historical contact with Chamba Daka was known or assumed to have existed; and the northwestern part of Guthrie's (1967/71) Common Bantu and Manessy's Voltaic reconstructions. The use of Common Bantu widened the range of Benue-Congo neighbors, while Voltaic was introduced as the only available protolanguage in a hypothetical Gur-Adamawa continuum (see Williamson 1989:12-18).

1.2 SUMMARY OF CONCLUSIONS

While it is possible to discern some regularity in initial-consonant correspondences, Chamba Daka terms do not lend themselves to inclusion in comparative series based on segment-by-segment reconstructions, with respect to either protolanguages or individual languages.

The cognation discovered has little impact on classification. First of all, as long as Chamba Daka remains unamenable to higher-level reconstruction, there is no way to prove that any cognates in geographically close languages are not borrowings, and that those in distant languages are not due to chance. (Naturally, proof of the presence of the root on a wider scale exponentially diminishes the explanation by chance.) Secondly, the search process throws up at best a few common roots here and there, never the massive correlation of data which, if it ever did appear, would constitute "finding a nearest neighbor" for Chamba Daka.

The classificatory position of some members of so-called Northern Bantoid (e.g., Vute) is perhaps not essentially different from that of Chamba Daka.

Kleinewillinghöfer (1995) expressed disappointment with the limited choice of languages considered by Boyd (1994) and the failure to justify the criteria for this choice. He would, for example, have welcomed the enlargement of the search in the direction of word lists of basic vocabulary, such as Williamson (1968) and Williamson and Shimizu

(1973). Clearly, such lists are generally insufficient for the establishment of regular correspondences; nevertheless, since such correspondences do not in any case seem to be forthcoming, this remains a legitimate avenue for further research.

Piron (1997) has now produced a lexicostatistical study of Bantoid. Since it does not include a Chamba Daka language (though Dong, a language with considerable lexical similarity to Adamawa 5 Mumuye, was included under the unfortunate denomination "Dakoid"²), it is reasonable to proceed in this direction and check the basic vocabulary (92 items) of non-Bantu Bantoid (NBB), as she defines it, against the Chamba Daka lexicon to determine whether any particular relationship can be discerned, and furthermore, whether the subsequent comparison of extensive vocabularies of any of the languages included in Piron's study with Chamba Daka might be revealing. This will be done below in the following way:

The corresponding Chamba Daka term is given, when one exists, for each of Piron's glosses; in a few cases of semantic overlap, two Chamba Daka terms are cited. Piron's numbering (corresponding to the alphabetical order in French) is retained.

Two grading systems are applied to describe the frequency and degree of resemblance of each Chamba Daka item to terms in other languages. The first of these systems compares Chamba Daka with non-Bantu Bantoid languages only and is intended to show how closely Chamba Daka is related to the languages of this group. It consists of a scale of 0 to 4, defined as follows:

No matches are found for the Chamba Daka form:

0 : no matches

0': no matches outside Mambiloid

Matches are found, but the Chamba Daka form is individualized by its phonological structure:

1 : sporadic matches in non-Bantu Bantoid subgroups; characteristic structural features in Chamba Daka

2 : matches in most non-Bantu Bantoid subgroups, characteristic structural features in Chamba Daka

Non-Bantu Bantoid/Chamba Daka cognates have similar phonological structures:

3 : structural matches with part of non-Bantu Bantoid

3': structural matches with part of non-Bantu Bantoid, structural differences with respect to other parts

4 : good structural matches in most subgroups, sporadic cases of structural variation

The Chamba Daka/non-Bantu Bantoid grading appears immediately after each Chamba Daka item in appendix 1.

It is impossible to reproduce full lists of non-Bantu Bantoid cognates here, or indeed repeated citations of cognates from Boyd (1994), but a brief commentary is supplied, together with summarizing forms where helpful.

² The criterion set by Williamson (1989:18–19) for the applicability of an "-oid" denomination is that "the relationship between the languages concerned should not be less than 40% on a standard lexicostatistic list." On this writer's own simple calculations, the figures for Chamba Daka/Tiba and Chamba Daka/Dong, grouped by Blench (pers. comm.) in a putative "Dakoid", are less than 30%; but even if a different list or a more generous counting procedure could jack these figures up to the required level, it would still be contrary to the spirit of the current system to use an "-oid" denomination for a group comprised solely of the extreme cases of a constellation of fairly closely related speech forms such as the ones clustering around Nnakenyaare Chamba Daka (probably itself a Koiné), and widely divergent languages on the limit of the cognacy ratio, such as Tiba and Dong, with no intermediate term.

An unexpected aspect of the survey in Boyd (1994) was the extent of Chamba Daka cognation with Voltaic reconstructions and, where these were lacking, with an individual Voltaic language (Dagara). Indeed, the number of cognates recorded was only slightly less than with the far more abundant Benue-Congo material, and well ahead of any Adamawa language or language group. It has therefore been considered useful to apply a second grading system in order to show the corresponding situation with respect to the basic vocabulary considered here, i.e., to show how widely each item is represented outside non-Bantu Bantoid, particularly in other Benue-Congo components (Platoid, see Gerhardt 1989, and the northwest part of Common Bantu) and in Voltaic data. This places the Chamba Daka/non-Bantu Bantoid data in perspective by showing when common roots are proper to this grouping and when they are more widespread, as well as giving a basis for comparison of the strength of Chamba Daka/non-Bantu Bantoid ties with respect to the degree to which Chamba Daka resembles other possible classificatory neighbors. The following code is used:

Distributions with no pertinent classificatory implications:

- CD : item unique to Chamba Daka in the sampling
- BV : item well represented in both Benue-Congo and Voltaic
- CD(s): Chamba Daka item has unique structural feature(s), but cognates in both Benue-Congo and Voltaic

Distribution with questionable classificatory implications:

- CD*: item with a sporadic distribution, i.e., found only in Chamba Daka and one or two (Benue-Congo or Adamawa) language groups

Distributions with strong classificatory implications:

- CB : item relating Chamba Daka to Benue-Congo only
- CB(s): Chamba Daka has a particular structural feature for a Benue-Congo root
- CV : item relating Chamba Daka to Voltaic only
- B(V)/(B)V: item attested in both Benue-Congo and Voltaic, but displaying a structural feature which associates Chamba Daka more closely either to Benue-Congo, marked B(V), or to Voltaic, marked (B)V

The corresponding code appears at the end of each item in appendix 1, which contains the full set of data treated in this way.

2. RESULTS OF ANALYSIS

2.1 GRADINGS

Items uncharacteristic of non-Bantu Bantoid:

A large number of items (10: 2a, 9b, 11, 38, 52b, 54, 69, 70, 75, 85) graded 0 or 0' have no evident cognates in any of the groups envisaged, or have cognates only in nearby Adamawa (6: 12, 27, 52a, 67, 68, 79), Mambiloid (3: 6b?, 16, 73), Platoid (5: 5, 24?, 35a, 62b, 87?) or even Chadic (3: 22, 86?, 90?) languages. To these may be added the compounded nominals 31, 41, which are widely represented elsewhere by lexical items, and the expression 47, often of uncertain composition. Finally, there are four items graded 1 (3, 28, 57, 63), which show fair to weak correspondences in Ekoid, Tivoid, or Tikar for roots not clearly attested elsewhere.

Many of the remaining items graded 0 (12: 6a?, 13b?, 32, 36?, 59?, 62a?, 65, 66, 72, 74, 80?, 92) have evident or likely Voltaic cognates (although in many cases, the data are far too sparse), but none in the Benue-Congo sampling.

There are a further three 0-graded items (35b, 44, 49) which, though setting Chamba Daka clearly apart from non-Bantu Bantoid, nevertheless show individuated forms of roots which are widespread in both Benue-Congo and Voltaic.

Finally, item 89, though without non-Bantu Bantoid cognates, is a well-known Niger-Congo root, represented in both Benue-Congo and Voltaic.

Structurally different items shared with non-Bantu Bantoid:

There are five more or less widespread Benue-Congo/Voltaic roots (2b, 4, 25, 56, 58) apparently present in both Chamba Daka and small parts of non-Bantu Bantoid, though with structural differences, and therefore graded 1 (the individuality of Chamba Daka often persists on the wider scale). The place of 64 'be full' may be here, or the root may be more widespread: in the non-Bantu Bantoid sampling, Ekoid and Tivoid provide the only Benue-Congo cognates, but the data are very incomplete.

Three roots graded 1 (23, 30, 81), while poorly represented in non-Bantu Bantoid, seem to be present elsewhere in the Benue-Congo sampling but not in Voltaic. The presumed Chamba Daka cognates are again individuated by structural features.

Items graded 2 involve well represented Chamba Daka/non-Bantu Bantoid cognation with clear structural differences in initial consonants, root vowels, and/or vestigial suffixes. Most of these (9: 8, 14, 18, 33, 39, 48, 51, 55, 82) are widespread both elsewhere in Benue-Congo and in Voltaic. The individuality of Chamba Daka usually persists on the wider scale (with the exception of initial l in 'lie', 'sleep', 'tongue', also present in Mambiloid).

In four cases graded 2, however, Manessy provides no Voltaic reconstructions. The situation of each of these items is different:

9a 'burn' : Chamba Daka corresponds to the CB reconstruction;

13a 'hair' : Chamba Daka may be connected with a particular Ekoid form for a root apparently limited to non-Bantu Bantoid and a few Bantu languages;

21 'two' : the root is general in Benue-Congo, but the Chamba Daka form is structurally unique.

In the final case, 40 'far', the lack of correspondence with non-Bantu Bantoid is primarily morphological, and it is easy to reconstruct a Chamba Daka verb *dèḍè* 'be long, far' corresponding to the Common Bantu form; however, insofar as this root is thought to be Niger-Congo, and Greenberg cites at least one convincing example from Voltaic, it may be that it should be included in the set of nine common roots above.

Finally, in five cases graded 2 (1, 10, 20, 53, 84), though the roots are general in Benue-Congo and Voltaic, the structural features of the Chamba Daka forms are clearly more reminiscent of their Voltaic cognates.

Note, furthermore, that in five cases graded 2 (8, 10, 13a, 53, 84), the Chamba Daka structural particularities are minimal with respect to at least one non-Bantu Bantoid subgroup, usually Tivoid or Ekoid/Kenyang. These items are therefore alternatively gradable 3'.

Structurally similar items shared with non-Bantu Bantoid:

Items graded 3 are few in number and divide into four categories: two items (17b, 71) which, despite fairly good matches in Tikar at least, seem to occur hardly anywhere else in the sampling; two widely represented Benue-Congo/Voltaic roots (50, 88) which Chamba Daka shares with a part of non-Bantu Bantoid and with Voltaic; one root (76) close to the Chamba Daka and Jukunoid forms (though with rare cognates in non-Bantu Bantoid and Voltaic); and one item (7) with best matches in Voltaic (despite fairly close resemblance to the Tikar form).

Four items are graded 3' owing to matches of varying exactness, mainly in Ekoid, Tivoid, and/or Ring. One (34) is clearly a general Benue-Congo/Voltaic root; another (77) is probably so, given Greenberg's proposition of it as Niger-Kordofanian, although it does not appear clearly in Manessy's Voltaic. The third (37) seems to be characteristically

Benue-Congo. The fourth (29) is particularly interesting in that it may be specific to Chamba Daka and non-Bantu Bantoid.

Items graded 4 are mostly general Benue-Congo/Voltaic, though resemblance to Chamba Daka forms may be greater in one non-Bantu Bantoid group or another (26, Jarawan, Ekoid, Mambiloid; 42, Jarawan, Ekoid; 43, northeastern Grassfields; 45, Grassfields, Tikar, Ekoid; 46, Jarawan; 60, Ring, Ekoid) and in portions of non-Bantu Bantoid and Common Bantu (15, Grassfields, Ekoid; 83, Grassfields, Ekoid, Tivoid), than in Voltaic. Another item (91) with strong Chamba Daka resemblances in Ring and Ekoid may perhaps be included here, although there are also apparently some close matches in Voltaic.

There are, nevertheless, two roots graded 4 which seem characteristic of Benue-Congo alone, with best resemblances in Tivoid (17a) or in Mambiloid (78, a root perhaps specific to Chamba Daka, Tiba, and non-Bantu Bantoid).

There are also two other roots graded 4 which, while general Benue-Congo/Voltaic, display greater affinity with Voltaic than with the presumably cognate forms in the Benue-Congo sampling (outside Ekoid): 19, 61.

2.2 CLASSIFICATION

The individuality of Chamba Daka with respect to the sampling is marked: to start, there are the ten 0-graded items without recognizable cognation, and the four items graded 1 which nevertheless have only fair to weak matches in Ekoid, Tivoid, or Tikar (see 2a above). Then, among apparent Niger-Congo roots, a considerable number (let us cite at least twelve graded from 0 to 2: 4, 8, 14, 33, 35b, 39, 40, 44, 48, 55, 56, 58) show characteristic phonological or (pseudo)morphological features in Chamba Daka which range from the quite unusual (14, 44) to the relatively unexceptional (8, 48) in Benue-Congo and/or Voltaic.

Any particular relationship between Chamba Daka and Mambiloid can quickly be excluded by inspection of the data in appendix 1. There are only four items (5, 6b, 16, 73) which Chamba Daka shares exclusively with Mambiloid (generally with a single language in the group) in non-Bantu Bantoid, plus rare cases of structural agreement such as 33 and 78; and overall, there is no greater affinity than what might be expected between ultimately related languages in fairly close geographic proximity.

By the same token, the few striking similarities with terms in the neighboring Adamawa languages in groups 2, 4, and 5 languages (9 items: 12, 13b, 27, 36, 49, 52a, 67, 68, 79, assuming Dong belongs in this set) and Chadic Bachama (three items: 22, 86?, 90?) could easily be set down to borrowing in one direction or the other. Of particular interest is the level of lexical resemblance in basic vocabulary between Chamba Daka and ethnically related Chamba Leko (a language belonging to Adamawa group 2), given the large number of common terms in the overall lexicon (see Boyd 1994:129-42). There are in fact only ten clearly related items (counting 18 'lie down' and 82 'sleep' separately). Of these, only four (13b 'hair', 52a 'cloud', 68 'louse' and 73 'round') are not well-represented in non-Bantu Bantoid as well. While the interpenetration of the two Chamba languages is surprisingly small at this level, it is nevertheless equally surprising that there should be as many as four exclusively common items, certainly more than for any other individual language in the sampling.

The resemblances on which the inclusion of Chamba Daka in non-Bantu Bantoid might be founded are root 13a (graded 2), which seems to be most closely associated with particular Ekoid forms; root 29 (graded 3') common to Chamba Daka, Tivoid, and Ring with a more distant form in Jarawan; root 78 (graded 4), though structurally closer to Mambiloid.

Reference may also be made to the four roots doubtfully graded 1: 3, 28, 57 (= 13a), and 63.

The four roots (graded 0 and 0') apparently common to Chamba Daka and Mambiloid (5, 6b, 16, 73) and the two roots (graded 3) common to Chamba Daka and Tikar

(17b, 71) are of doubtful relevance insofar as isolated correspondences with the more peripheral components of non-Bantu Bantoid are unhelpful in proving non-Bantu Bantoid affiliation.

A weak Chamba Daka/non-Bantu Bantoid relationship is thus established by six to twelve roots.

Even if Chamba Daka were not to be specifically non-Bantu Bantoid, it might still be included as part of another group or separately in Benue-Congo. Thus far, such inclusion will depend on the twelve roots just cited, together with:

- at least three items graded 0 with cognates in Platoid (5, 35a, 62b);
- three roots graded 1 (23, 30, 81), despite the Chamba Daka particularities;
- at least two items graded 2 with no Voltaic cognates (9a, 21);
- item 37 graded 3', and item 17a graded 4, also unattested in Voltaic;
- the nine items rated 4 displaying greater Benue-Congo than Voltaic structural affinity: 15, 26, 42, 43, 45, 46, 60, 83, and perhaps 91.

There is thus a total of thirty-one items available for this purpose.

As a general rule of thumb, the greater the level of contact (usually signified by geographical proximity), the greater the possibility that any cognation between languages or language groups is a result of borrowing. Since members of Platoid, Ekoid, and Adamawa are current neighbors, roots found in Chamba Daka and in any one of these units are plausibly attributable to contact. The same is true of any particularly marked localized structural resemblance involving more widespread roots. The data cited above must be weighted in the light of this principle.

The argument for a closer relationship to Voltaic is based on twelve 0-graded items (see above) without Benue-Congo cognates in the sampling; one item graded 1 (25), five items graded 2 (1, 10, 20, 53, 84), plus item 7 graded 3, and items 19 and 61 graded 4, all showing greater Chamba Daka structural resemblance to Voltaic, i.e., twenty-one items in all.

3. CONCLUSIONS

Chamba Daka is a highly individuated language, with regard to both the proportion of basic vocabulary which remains "untraced" (with no visible cognation) and the processes of phonological change which roots well attested elsewhere appear to have undergone.

Items with Benue-Congo cognation are preponderant but not in the majority, while the proportion of Voltaic items is much higher than would be expected, given the geographical separation and the classificatory positions hitherto suggested.

In view of Boyd (1994), the results of this article, and the further facts a) that the only Chamba Daka noun morphology consists of five irregular cases of singular/plural suffixing (a feature uncharacteristic of Benue-Congo), and b) that the only verb morphology consists of derivational suffixation on a Benue-Congo model, it may still reasonably be maintained that the classification of Chamba Daka within Niger-Congo is indeterminate.

The number of Chamba Daka/Ekoid resemblances in the set of roots graded 4 is nevertheless striking. The examination of extensive vocabularies of certain varieties of Ekoid might shed further light on the composition of the Chamba Daka lexicon.

Since we are aware of the current ethnic relationship, the small number of near identities involving Chamba Daka/Chamba Leko items is plausibly attributable to more recent contact between these languages. At the same time, a significant number of close resemblances to Chamba Daka items are scattered over a variety of other languages and language groups. Explanation of these, whether by inheritance or by contact, remains speculative.

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APPENDIX 1: CHAMBA DAKA ROOTS IN BASIC VOCABULARY WITH COGNATES IN NON-BANTU BANTOID

The numbering below corresponds to that of the items in Piron (1997). An index of English glosses is given in appendix 2.

The grading for Chamba Daka/non-Bantu Bantoid resemblance (0–4) appears in parentheses immediately after the Chamba Daka term in bold letters.

The symbols indicating wider distribution appear at the end of each entry.

In the Chamba notation used here, **ɛ** **ɔ** represent higher vowels than **e** **o**, while **ɶ** is a central vowel [ə]. Otherwise, the notation is standardized.

1. tree, **tím** (2): matches in eastern Grassfields, Ekoid, and part of Tivoid, but no final nasal or even nasal vowel (Williamson 1968 and Williamson and Shimizu 1973 contains a couple of **tum** counterexamples in Jukunoid); however, several OV languages have the singular of this root in the ***be** class, which has a nasal variant. Note that Jarawan has the root **ngun** for 'tree', cf. Wawa **kón**, Konja, Tiv **kwín(ɪ)**, Central Plateau ***kwan** (Gerhardt 1969), matching CD **nwúní** 'firewood'. (B)V

2a. sit, **pòk** (0): no evident matches, but 2b. wait, **tíkì** (1): fairly well represented (with an affricate initial) in Grassfields and perhaps in Kenyang with the sense 'sit', although the medial consonant is present only in the latter and Mundani; Boyd (1994:68–69) relates this term to a very widespread root with senses 'sit, stop, remain', cf. CB ***-tjgad-**. CD, BV

3. (be) many, **júm** (1): Tiv **yúm**, but sporadic **yaɔm** in Grassfields. CD*

4. white, **būrki** (1): best matches are in Mambiloid plus certain Tivoid dialects, but no trace of **-ki** 'suffix'. CD(s)

5. drink, **sóó** (0¹): Wawa **sòó**; Konja **hùù** is closer to Ekoid **wó**, **yó** (associated with **n(yo)** elsewhere). Piron (1997:69) points out that this root is widespread in Plateau and could ultimately be of Chadic origin. CD*

6a. good (feeling), **vèrèn** (0): no matches; the only possible Benue-Congo cognate thus far recorded (in part of Jukunoid) is furthermore doubtful, both phonologically and semantically (see Boyd 1994:64–65); but cf. 6b. good (perception), **sèmèn** (0): Mundani (Grassfields) **ntsè**, Amasi (Tivoid) **ncòm**, and comparable roots in Mambila and Konja (and Chamba Leko); but these are less likely than the Mambiloid and even Jukunoid matches cited by Boyd (1994:88–89), with labial C₂ but meaning shift. CV?, CD*?

7. mouth, **mūm** (3): Twumwu (Tikar) **nwúm**, Tikar **m̄**: (this form is also found in neighboring Bafia, Bantu A.53). **n/m** alternation in the initial consonant of this root is widespread among Niger-Congo languages, but the presence of a final consonant corresponds best to the **mob/m** forms in the OV ***no**: series. (B)V

8. arm, **wáā** (2?): this term is presumably related both to CB ***-bókò** and to an OVG ***'ba**. The CB root tends to appear in NBB as **bo** or **kwo** (although there are traces in a few languages of the medial consonant). The initial consonant in both of these forms can weaken to **w**: examples are found in Grassfields, Tivoid (Tiv itself has **wégh**), and Kenyang (similar forms can be found in part of Plateau). Such weakening can even be observed within Bantu (Piron 1997:84). CD(s)?

9a. burn (intr.), **píí** (2), 9b. burn (tr.), **dìi** (0): **fí** widespread in Ekoid, **fu**, **fwi**,... widespread in Ring, sporadic elsewhere in Grassfields (cf. CB ***-pí-**). No matches for **dìi** (nevertheless, note CB ***-díǵ-** 'become burnt' and **dìN** 'fire' in Gurunsi). CB, CD

10. ash, **tóqomáā** (2): closest match is **mtwem** in Tiv; others little better than in Mambiloid, cf. Jarawan **tùp**, Ekoid **tššŋ**, Central Plateau ***twaj**. OV ***to**, Gurunsi-Kurumfe, GK ***tom**. (B)V

11. hot, **sùsúú** (0): one Ekoid dialect has **sup** against **fup** in others; otherwise only **tsə**, **tse** in Tivoid, **eceni** in Tikar, **cŋ**, **sŋ** sporadically in Grassfields and Kenyang (see 81 'sun'). CD

12. road, **bəŋə** (0): no matches. A comparable root has thus far been found only in Adamawa 4 Pere (although there is a more distant resemblance to a root found in parts of Adamawa 5 Mumuye). CD*

13a. hair, **nùúsà** (2), 13b. body hair, **gīpsí** (0): Ekoid generally **núù**, but **nùshû** in Nkim/Nkumm; **nyu(ŋ)** widespread in Grassfields. Curiously, forms very like the ones in Ekoid appear in Gurunsi (Manessy 1969 II:50), but apparently derive from the roots ***nyu** 'head' and perhaps a ***si/u** 'hair' (widespread in Adamawa-Ubangi), subsequently reinterpreted as a noun-class marker. Since, however, the Gurunsi series also includes items of the form **nyu/ipusV** (Manessy 1969.2:50), it may be that **gīpsí** is in fact a denasalized cognate and perhaps a direct descendant of a Voltaic root ***(n)yu-pun-sV** 'head-hair-pl. suffix', **nùúsà** being a more recent introduction. Note, however, that, given the initial stop in CD **tíí** 'head', it is unlikely that the latter could be internally reconstructed as a 'hair-head' compound. Chamba Leko has **gīs-** 'hair'. CB(s)?, CV?

14. dog, **nwōnā** (2?): no disyllabic structures or final nasal: the general NBB root is **bə**, **və**, **gə** with nasal prefix. (An interesting and plausible cognate can nevertheless be found in several Adamawa 6 languages, which have **wárá** or **wóró** 'leopard', the possibility of a semantic relationship between dogs and large cats being established by the Fulfulde 'bush dog' for 'lion'.) Voltaic ***ba**. CD(s)?

15. heart, **téém** (4): widespread root, particularly in Ekoid and Grassfields (Tivoid has mostly initial **sh**, Tikar initial **l**); also in Chamba Leko. Regular initial **d** correspondence in Voltaic. B(V)
16. horn, **gāām** (0'): common in Vute/Wawa and other Mambiloid languages with the exception of Mambila/Kwanja (Connell, pers. comm.). CD*
- 17a. neck, **mìn** (4): widespread (including Mambiloid) often without final consonant or with final **l** and/or with open front vowel, but some **min** in Tivoid. CB
- 17b. **gúù** (3): **gŪ** in Tikar (**gúñùún** in Konja). CD*
18. lie (down), **làà** (2): invariably nasal initial, or perhaps **y** in Tivoid (see 'sleep'); in Benue-Congo, **l** seems prevalent only in Plateau (and in Bantu forms deriving from CB *-**dáad**- 'sleep'). Nasal initial also widespread in Adamawa, but Chamba Leko **l**, Muiyue **r**. CD(s)
19. stand (up), **jìm** (4): Ekoid has **yímì**, **yèmè**, **yèm**... (initial **t** > **c** in Grassfields; **l** in Tikar and Jarawan); Konja has **ywèè**. The Voltaic initial is reconstructed as ***j(im)**, although only part of the series has a voiced initial **z**, **j**. (B)V
20. tooth, **nún** (2): a **nyi(n)** form is general in Tivoid (**mín/ŋ** in Ekoid) as well as throughout Mambiloid. Initial **n** is found in only a small part of OV (though reconstructed in ***nin**). (Of course, it needs to be determined in any given instance whether there is neutralization of the **ni/nyi** contrast, not the case in CD). (B)V
21. two, **bààrá** (2): final **r/l** is present mainly in Jarawan and part of Ekoid. The LH tone pattern is found in two Jarawan languages and part of Tivoid. CB(s)
22. say, **sát** (0): no good matches (but sporadic **s**-initial roots in Grassfields and Tikar); the root is probably of Chadic origin (cf. nevertheless the Ekoid citations with **còód** for 'speak' in Williamson 1968 and Williamson and Shimizu 1973). CD
23. give, **nyáá** (1): mostly **f/p/h** initial; no palatal initial when nasal except Beoid Noni and Mambiloid Tep (Connell, pers. comm.); otherwise **na** in Tiv as in Wawa/Vute). See Piron (1997:163) on the distribution of **n**- forms in Niger-Congo (including certain Voltaic languages); note particularly Central Plateau ***nwaak**. CB(s)
24. water, **wóók** (0): no matches. See 47 'swim' There may be rare Benue-Congo cognates in Plateau (**mhó'**) and in Lower Cross (PLC ***-móóŋ**), cf. Williamson 1968 and Williamson and Shimizu 1973. CD*?
25. bark, **pókó** (1): Ekoid **kpágá** (also PLC ***-kpók**); see Tivoid **gu/vu**, elsewhere **go**, perhaps cognate with **kup**, **kop**, cf. 60 'skin'. Voltaic ***pog**. (B)V
26. hear, **wúk** (4): **y/zu(')** in Grassfields, (**w/y/g**)**ə/ok** in Jarawan/Kenyang/Ekoid/Mambiloid. Manessy's OV ***wum** seems an unlikely cognate. B(V)?
27. star, **jōsí** (**míí**) (0): no matches; sense is '(small) spark'. Matching root thus far found only in Adamawa 4 Momi. CD*
28. woman, **nwúù** (= 'wife') (1): Ekoid prefixes in **nèŋ** are likely to be cognate with CD, compare CD **nénwù** (< **nèè nwúù** 'female person'); possible matches elsewhere (nonnasal initial in Ring) are nevertheless unsure. CD*
29. fire, **yísí** (3'): **wúsū** (sometimes **kúsū**) in Tivoid and Ring; **bís** in Jarawan. The extraordinary similarity of these data to the items assembled by Greenberg (1966:139) to justify a common Nilo-Saharan root for 'fire' should not be overlooked. Piron's (1997:203) mention of a possible Chadic link is probably a misunderstanding. CB

30. leaf, **yáà** (1): Ekoid **nyáàn** in several dialects; CB ***-jánì**. Similar forms are recorded in Dong and elsewhere in western Adamawa. CB(s)
31. liver: compounded with **téém** ‘heart’ in CD. CD
32. (be) cold, **wát** (0): no matches (though some **fo**; also cf. rare cases of **ɲwet** in Mbam-Nkam, cited by Williamson (1968) and Williamson and Shimizu (1973); Oti-Volta-Gurunsi (OVG) ***wa**. CV
33. smoke, **dùù** (2): Mambiloid **ju(m)**; otherwise, no better NBB matches than **di**, **li**, **yi**. CD(s)
34. knee, **lúù** (3'): matches in Ring; Ekoid has final velar nasal, Tivoid has nasal initial; Voltaic ***dun**. BV
- 35a. fat, **bèp** (0), 35b. oil, **múm** (0) : NBB mostly **fum**, **fòm**. If 35b is cognate, the grading should be (2). This root could perhaps equally well be related to the widespread Adamawa form **nu/om** (also in Voltaic), though CD also has **nòò** ‘be fat’. 35a is widespread in Plateau and perhaps cognate with eastern Grassfields ‘meat’. CD*, CD(s)?
36. big, **wàrí** (0): no good matches (unless **wè** in Bafut (Ngemba)?). Cognates are found in Dong, Tiba, Adamawa 4 and 5, and perhaps in Voltaic. See Boyd 1994:124–25. CV?
37. man, **lèrúùm**, **lúùm** (= ‘male’) (3'): **lum** frequent in Ring and Ekoid (also in Grassfields Ndemli and in Plateau); also some **nom** in parts of Ekoid and Tivoid. CB
38. leg, **dííng** (0): no matches. CD
39. tongue, **lǎǎ** (2): general root but usually at least one nasal consonant or vowel; the main exceptions are Ekoid and Jarawan with non-nasal medial stop. CD(s)
40. long, **dǎǎrí/dǎmsá** (s/pl) (2): following Piron (1997:259), we may consider there is some Niger-Congo root with which **dap/f**, **r/lap** in Ring, Ekoid, and Tikar (plus sporadic correspondences in Tivoid and Mambiloid) may be held cognate; the match with CD is best with respect to the plural). The root is nevertheless not reconstructed by Manessy for Voltaic (despite Greenberg’s 1966 citations). CD(s)?
41. moon, **sú-/bánén** (0): no matches (compounded from ‘sun’; also note Central Plateau ***pyan**). CD
42. eat, **líí** (4): widespread root, generally **y/z/zh/ji**, but initial **l/r** in Jarawan and Ekoid (as well as Plateau). Regular initial **d** correspondence in Voltaic. Chamba Leko **lin**, with high vowel uncharacteristic of Adamawa. B(V)
43. walk, go, **gèt** (4): widespread root, but **g/jet** only in northeastern Grassfields (and Konja); otherwise final **n** (sometimes initial **k**). Regular initial **k** correspondence in Voltaic. B(V)
44. mountain, **kúsūm** (0): no good matches (unless **ked**, **kwed** in few languages?). CD(s)
45. bite, **lóóm** (4): very widespread root, initial **l** in much of Grassfields, Tikar, and Ekoid; initial nasal elsewhere. Regular initial **d** correspondence in Voltaic. Chamba Leko **lum**. B(V)
46. die, **wúú** (4): generally initial labial, velar, or labiovelar stop; **w** only in Jarawan and Mbe (Ekoid) (also in Plateau and Adamawa 11 Fali). Voltaic initial velar, labiovelar (OV ***kpi**, ***ku** ‘die’) or **s** (G ***si₂**, ***su₂** ‘death’). B(V)

47. swim, **gàà** (**wóók** 'water') (0): no matches (unless a fairly widespread **(g)wo(k)**: the question also arises of a possible relationship between this latter root and CD 'water'). CD
48. nose, **nùùn** (2): **nyun** in Tivoid (part of Ekoid has **mîn**). Outside of Mambiloid and part of Tivoid, roots without nasal consonants are prevalent. The palatal initial is also attested (but not reconstructed as such) in large parts of OV. CD(s)
49. black, **vīrkī** (0): no good matches (**y/j/s** initials). The Mumuye form **vīkī** is very close, however. Voltaic ***bid** (and PLC ***-bíd**). CD(s)
50. name, **yírí** (3): present in Ring as well as in Mambiloid (and part of Plateau; elsewhere **l/ri** is frequent). BV
51. new, **pāsī** (2): **p/f/hi/e/a** practically universal, no disyllabics (many lacunae in Ekoid). The Voltaic reconstructions have **l**, **'d** as C₂. The CD form is, however, matched by Central Plateau ***pas**. B(V)
- 52a. cloud, **mōp** 'vapour' (0), 52b. **nyīk** 'raincloud' (0): no matches. 52a is common to CD and Chamba Leko. CD*, CD
53. night, **tàkāā** (2): practically universal **c/t/duk** (except Mambiloid and some Grassfields **s/jim**), no cases of open vowel except Noni **taŋ** (and possibly one Ekoid dialect). ***ta** 'night' is also a partial series in Gurunsi (Manessy 1969.2:94). (B)V?
54. eye, **tùk** (0): no matches (even for **nīn** 'face', CV, also common for 'eye' in Adamawa). CD
55. egg, **gāā** (2): **k/j/gi/e** in Ekoid, Tivoid and part of Mambiloid (otherwise **p/b/w/gom**); no cases of open vowel. CD(s)
56. bird, **sāā** (1): mostly **siŋ** in Mbam-Nkam (also in Mambiloid Nizaa), but some **sáŋ** (Ghomala), **sak** (Fe'fe'). The structure of the root in Voltaic, which ranges over 'bird, bat, chicken', is hard to interpret. CD(s)
57. (finger)nail, **nùúsà** (= 'hàir') (1): Batu (Tivoid) **nyásā** (**ká sā** in another dialect), cf. 13 'hair'. CD*
58. ear, **tāā** (1): almost universal **tu(ŋ/k)** but rare appearances of vowel **a** in Grassfields (see Piron 1997:354) and composite forms of uncertain interpretation in Mambiloid (Piron 1997:354–55, though Connell (pers. comm.) reports a low rounded front vowel in some dialects, as in Tiba). CD(s)
59. bone, **nínā** (0): no matches. May correspond to Voltaic 'horn' (OV ***ŋin**). CV?
60. skin, **gùù** (4): **(n)gu(p)** almost universal, but occasional **kop**. Absence of the final consonant particularly evident in Ring and Ekoid. Voltaic initial **gb**. B(V)
61. person, **nèé** (4?): **nè** in most of Ekoid and part of Tivoid; apparently initial nasal (or cl. 1 + **w**) + back vowel almost everywhere else in NBB. Likewise, OVG has ***ni**, ***nu**, ***non**. Piron (1997:367–68) summarizes and does not challenge the evidence for cognacy of nV forms with those apparently related to CB ***-ntu**. This hypothesis depends on the link provided by **nVt** forms such as those in Lower Cross and Plateau. Nevertheless, as the Vute examples (and others in northern Adamawa, e.g., Chamba Leko **néd**) show, the structure of such roots may be **ne-d** (pl. **ne-b**), though this seems to suggest either very widespread case suffixing in Benue-Congo or an ancient borrowing. The semantic range of ***-ntu** 'some(one, thing)' also seems not to be found in languages with **nV(C)** forms. (B)V

- 62a. small, **míí** ‘small, child’, 62b. **wéé** (0): no matches for either (though 62a may be related to Voltaic ***bi** with nasal variant of the plural suffix *-**be**, cf. **méém**, pl. of **míí**). Plateau has cognates for 62b meaning ‘child’. These items are conceivably doublets of a single Niger-Congo root. CV?, CD*
63. stone, **váàn** (1): Tiv **wéén**, otherwise mostly **ti**, **tal**. Perhaps related to Adamawa 4 (Pere group) **vààle**, Vute **mwàár**; also note Central Plateau ***fan**. CD*
64. (be) full, **sùnn** (1?): Ekoid, Tivoid(?) **sui**, **sun**, **sue(l)** (many lacunae), forms similar to Voltaic. CD(s)?
65. rain, **dùrí** (0): no matches (but cf. Wawa ‘cloud’). Gurunsi ***du/o**, but with suffix **-n** rather than **-r**. CV
66. feather, **kèngà** ‘wing’ (0): no matches. Gurunsi ***k₁e/i/a**, with following velar or velar nasal. This root is subsequently subsumed under OVG ***kpan** ‘arm’. Ulrich Kleinewillinghöfer (pers. comm.) reports forms closely resembling CD in both Adamawa 1 Waja and Adamawa 7 Yungur; Adamawa 5 Yendang has **gbôn** (infralow tone). CV
67. fish, **wúūk** (0): no matches (but Dong **yok**, Tiba **yúks**). CD*
68. louse, **láká** (0): no matches. There is an identical root in Chamba Leko (and a clear PLC cognate: ***ó-láŋ**). CD*
69. tail, **tōō** (0): no matches (mostly **sa** and **kwin/sin**, but **ti** in Mambila). Kleinewillinghöfer (pers. comm.) reports a possible cognate in Adamawa 7 Yungur. CD
70. who?, **máà** (0): no matches. CD
71. what?, **nyáā** (3): often **k/ga** but **yá**, **yén** in Tikar, some **jen** in Ekoid (many lacunae). CD*
72. root, **nìksà** (0): no matches (though much **d/ru/ok** in Ekoid with apparently nonnasal prefixes). The OV series includes items of the form **nyigr**. CV
73. (make) round, **dāgh** (0¹): no matches except Mambila(?). There is also a similar root in Chamba Leko. CD*
74. red, **jū** (0): no matches (mostly **baŋ**, **f/bin**). See Boyd 1994:96–97. CV
75. sand, **gēērāā** (0): no matches. CD
76. blood, **nyéng** (3): no good matches (though much **l/nuŋ**, **lem** in Grassfields and Ekoid) except Ipulo (Tivoid) **-yínk**. Corresponding roots are found in Bantu, Upper Cross, and Jukunoid (Piron 1997:448). The OV series also includes items of the form **ziy**. BV
77. know, **nyíí** (3¹): **nyí** in Nkim, Nkumm (Ekoid, otherwise **məŋ**, but also much **zhi**, **yi**, **li** in Grassfields. BV?
78. (be) dry, **sūùm** (2): best matches in Mambiloid (voiced initial elsewhere in NBB: **z/j/y/wu/om**). CB
79. breast, **nyésà** (0): no matches, but cf. Tikar **nyo**, **nywon** (Dong apparently has the CD root: **úsa**, cf. Tiba **ýsùn**; possible cognacy with Central Plateau ***basan**). CD*
80. seed, **bíí** (1?): some **gwi**, **zwi** in Grassfields (= Tikar **bèwí?**, cf. 62 ‘small’). See Boyd (1994:54–55). CV?
81. sun, **sūū** (1): **cwi** in Ring, Ekoid **jui** (but one **sui**); the root seems to be present in part of Jukunoid (***suT**, see Boyd 1994:94–95); probably connected in some way with CB ***-júbà**, cf. 11 ‘hot’. CB(s)

82. sleep, **lāām** (n) (2): Ekoid **lal**, **nan**, Tiv **non**, some **lo** in Grassfields; final **m** only in Mambiloid, though in most of Adamawa including Chamba Leko. CD(s)
83. earth, **sáá** (4): **s/sh/ci/e** general in Grassfields and widespread in Ekoid and Tivoid; note CD-like central vowels primarily in Ring, but apparently associated with strengthening (affrication) of the initial consonant, as in CB. Voltaic initial **t** (also in Konja). B(V)
84. head, **tī** (2): Grassfields (and part of Tivoid) **tu**, Ekoid **si**; only Kenyang has **ti** (though **t/c/s/shi** are general in Plateau). OVG ***ti/u** ‘forehead’. (B)V
85. all, **dāt** (0): no matches. CD
86. kill, **būt** (0): no matches (the general root is **zhu/w/yu**). Perhaps of Chadic origin despite the CB root (cf. Central Plateau ***pyat**). CD?
87. one, **nòñí** (0): no matches (though one Grassfields **no'** against general **mo'**; also cf. Ekoid **(n)yiñ**, Central Plateau ***niun**. Closest is perhaps Proto-Jukun ***ndo** (see Boyd 1994:84–85). CD*
88. come, **báá** (3): Ekoid, Tiv **b/vá** (also Wawa **bárà** and two Grassfields entries), Voltaic ***ba**. BV
89. belly, **púú** (0): apparently cognate with CB ***-pú** (also present in part of Jukunoid), and not with CB ***-bùmV**, the latter being well represented in the NBB sampling (the other frequent NBB root is **y/la**, also found in Adamawa 5); cf. sporadic Plateau **p/buru** and OV **pu**. BV
90. meat, **kááká** (0): no matches. A possible source is Bachama **sə-kaake** ‘thing-grass = animal, meat’. CD
91. see, **nyéén** (4): **(n)yen** widespread in Grassfields and Ekoid (some **ne** in Tiv, **hen** in Mambila, Konja). OV ***ña**, but G ***na/e**. B(V)
92. fly, **dùm** (0): no matches (but cf. Tikar **jìmi** and 19 ‘stand (up)'). OV ***du** ‘go up’. CV

APPENDIX 2: ALPHABETICAL LIST OF ENGLISH GLOSSES
 APPEARING IN APPENDIX 1

- | | | |
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