

Tongass Tlingit and Na-Dene

Author(s): Eric P. Hamp

Proceedings of the Fifth Annual Meeting of the Berkeley Linguistics Society (1979), pp. 461-470

Please see “How to cite” in the online sidebar for full citation information.

Please contact BLS regarding any further use of this work. BLS retains copyright for both print and screen forms of the publication. BLS may be contacted via <http://linguistics.berkeley.edu/bls/>.

The Annual Proceedings of the Berkeley Linguistics Society is published online via [eLanguage](#), the Linguistic Society of America's digital publishing platform.

Tongass Tlingit and Na-Dene

Eric P. Hamp
University of Chicago

Michael Krauss in a 1973 circular letter, cited by Pinnow (1976:19), is perhaps the first scholar in possession of our modern understanding of Tlingit to make known the extraordinary importance of the Tongass dialect to all of Tlingit studies. However, given Krauss's known demurrer on the genetic affiliation of Tlingit to Athabaskan-Eyak, and in the absence of a satisfactory set of cognate stems, one could scarcely expect him, being a prudent man, to exploit this knowledge immediately for purposes of Na-Dene comparisons. In mentioning Na-Dene I exclude Haida, which has as yet not been shown to share more than a few random traits typical of areal diffusion.

We turn first to the consonants. Boas (1917:9-10) trichotomized the non-continuants as "surd", "sonant", and "fortis"; the surds are stated to be strongly aspirated, while the fortes are described as what we would call glottalized. Leer (1978:7) and the modern Tlingit grammarians more adequately label these, respectively, "aspirated", "plain", and "glottalized". The consonants then are

Obstruents:

Non-continuant:

Plain	d	dz	j	dl	g	gw	<u>g</u>	<u>gw</u>	?
Asp.	t	ts	ch	tl	k	kw	<u>k</u>	<u>kw</u>	
Glott.	t'	ts'	ch'	tl'	k'	k'w	<u>k'</u>	<u>k'w</u>	

Continuant:

Plain	s	sh	l	x	xw	<u>x</u>	<u>xw</u>	h
Glott.	s'		l'	x'	x'w	<u>x'</u>	<u>x'w</u>	
Non-obstruents	n	y		r	w			

I have departed in the above in some minor particulars from the standardized orthography as tabulated by Leer, chiefly by writing [?] for the standard period (full-stop) sign and r for y or ɣ. It should be noted that [+continuant] implies [-voice], while [-continuant, plain] may entail [+voice].

We may immediately observe that [?] and h can be associated not only with the "plain" category, on the basis of their [[±]continuant] characterization, but also with the glott. and asp. series on the basis of the characterizing features of these latter.

The absence of labials and of continuants with front articulation will be immediately noticed; other dialects of Tlingit merge the asymmetric r [ʀ] with y and w. Beyond this we need not here dwell further on the consonantal phonetics.

Tlingit, generally, distinguishes long and short vowels and has high and low toned syllables; but Tongass shows instead of tone distinctively different modified varieties of length. What is most striking and important (Krauss apud Pinnow 1976:19 and Leer 1978:5) is that while Tongass has a separate but simple phonetic match for general Tlingit low tone, it has two non-predictable kinds of length for general Tlingit high tone. That is, *áa* matches Tongass [a^h] finally, [a^h] before obstruents, and [á[·]] before non-obstruents; but *áa* matches both sustained [a:] and clipped [á[·]]. Krauss has since reported (in press) that Leer now finds in the Heinyaa dialect two distinctive high tones corresponding to Tongass sustained and clipped, but this will alter neither the argument that follows nor the essentiality of the Tongass phonetics for our conclusion.

Leer has described (1978:10) the Tongass vowels as short (V), long sustained (VV[·]), long clipped (VV'), and long fading (VV[˘]). From his verbal descriptions VV' may clearly be represented as [V[·]?], and the fade of VV[˘] by [h]; we then have for these four [V], [V:], [V[·]?], and [V^h]. If now we interpret these distinctions in terms of features, the four Tlingit qualities in their four length-types can be accommodated as follows:

	i	e	a	u	v ^h	v [·] ?	V:
[front]	+	+	-	?			
[low]	-	+	+?	?			
[round]	-	-	-	+			
[tense]	-	-	-	-	+	+	+
[asp]					+	-	-
[glott]					-	+	-

It is immediately apparent that we have gained two sorts of clarity in such a feature analysis. We now have not simply three sorts of long vowel; there are instead those marked [asp], those [glott] and then the neutral variety. Secondly, we see that our syllabic analysis will suffice also to account for important consonantal phonetic distinctions. That is, t' etc. may be related to V[·]? as [-asp, +glott], t etc. to v^h as [+asp, -glott], and d etc. to V: as [-asp, -glott]. In other words, we have reached a much more general set of phonetic primes for the system. We shall see too that they are ultimately much more explanatory.

Leer has already perceptively put these vowel nuclei into relation with the Eyak, which Krauss has shown to be in exact correspondence with Athabaskan syllables. Leer makes the following

equations: Tong. V = Eyak V, Tong. V` = Ey. Vh, Tong. V' = Ey. V?, Tong. V· = Ey. V·; only Ey. V·? fails to find a match. Is the last secondary or an archaic retention? Leer also offers (loc.cit.) equations for the Tongass lengths with the Heinyaa-Saanyaa tones. The structural equivalence of Tongass and Eyak discovered by Leer is unmistakable, and if we re-express these nuclei in terms of the feature analysis I have suggested above we see that we simply arrive at the following tautological (identical) set: [-length], [+asp, -glott], [-asp, +glott], [+length, -asp, -glott], respectively. One suspects then that Ey. V·? may be a secondary development. We may now abbreviate the last set which we have derived as *V, Vh, V?, V: --We write these with an asterisk in case we wish to view these captions not just as an isomorphous set of typological equivalences but as a series of structurally related contrastive phones of a parent language, i.e. of Na-Dene.

I speak here of "viewing" these as reconstructions because as yet these correspondences are not observed in and extracted from matching descendants of common morphs. Krauss has remarked on (see Pinnow 1976:70,89) the vast divergence of Athabaskan-Eyak and Tlingit stems while demonstrating the closeness of their prefixes, i.e. the grammars are comparable but the lexica seem not. However, more recently Krauss (in press) seems at last more hopeful for a genetic lexical relation. I would suggest here that we may have the sort of lexical loss within a genetic relation that I have tried to show (1970) for the affixal grammar of the Altaic numerals. Additionally, from the geographic separation of Tongass and Eyak Leer has urged a very persuasive argument (1978:9) for their joint preservation of a conservative Na-Dene system of nuclei.

Following this line of thought and on the basis of the above feature analysis and tentative reconstruction, we may go one step further. If the nuclei written above as *V, Vh, V?, V: are regarded (with the optional exception of *V:) as sequences of proto-phonemes then we may say that any *V had the privilege of being followed by *h or *?. Similarly, t' etc. may be regarded as *t?, and t etc. as *th, and s' etc. as *s?; it would not be surprising for an original spirant + *h simply to have absorbed any *h. Na-Dene would then have had the simple phonotactic structure *vowel ± obstruent ± h/? . The Na-Dene obstruent segments may then have been distinguished simply for [±continuant].

REFERENCES

- Boas, F. 1917. Grammatical notes on the language of the Tlingit Indians. Philadelphia: The University Museum.
- Hamp, E.P. "On the Altaic numerals." In R. Jakobson and S. Kawamoto edd. Studies in general and Oriental linguistics, Tokyo 1970, 188-97.
- Krauss, M. in press. In M. Mithun and L. Campbell edd. The languages of Native America, Austin: University of Texas Press, 1979.
- Leer, J. 1978. Introduction, in Frank and Emma Williams, Tongass texts, Fairbanks: Alaska Native Language Center, Univ. of Alaska.
- Pinnow, H-J. 1976. Geschichte der Na-Dene-Forschung, Indiana Beiheft/Sup(p)lem. 5. Berlin.

Early Bantu Population Movements and Iron Metallurgy:
The Linguistic Evidence

Jean-Marie Hombert
University of California, Santa Barbara

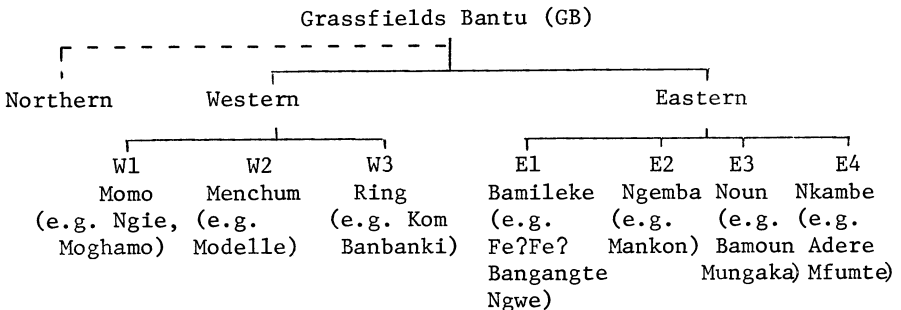
1. Introduction

Although Bantu languages are spoken over a vast geographical area covering most of subequatorial Africa, they are closely related to each other thus indicating a relatively recent spread. Archaeologists estimated that the spread of Bantu populations started some 2500 years ago.

Where was the homeland of Proto-Bantu speakers located? Why was their expansion so successful? Which migratory routes did they follow? The purpose of this paper is to present new data from a group of languages located in the area which has been suggested as the homeland area of Proto-Bantu speakers. These data will be used to evaluate answers which have been proposed for the last two questions.

2. The Proto-homeland

One of Greenberg's main achievements in his monumental work on classification of the languages of Africa was to realize that the group of Bantu languages was not a linguistic family by itself as was previously believed but rather that all these closely related languages were a sub-branch of the Benue-Congo branch of Niger-Congo. He suggested that the original homeland of Proto-Bantu speakers was located in the northwest of the Bantu area, approximately around the present-day Cameroon-Nigerian border,¹ since it is there that the linguistic diversity is the greatest. Languages located in this area used to be called Semi-Bantu because it was believed that the Bantu features found in these languages were due to borrowing; Greenberg² however, classified them as Bantu. Subsequent work in the area³ clearly established that he was correct and that all these languages which are now called the Grassfields Bantu languages are in fact⁴ genetically related to Bantu. A preliminary classification^{3,4} of these languages is presented below and their geographical distribution is shown in Map 1.



3. Iron metallurgy

The success and the efficiency of the Bantu expansion has been attributed to or associated with the knowledge of iron metallurgy. It is assumed that such knowledge would have made the Bantu better farmers, better hunters and better warriors thus allowing a fast and successful spread. An impressive amount of archaeological research has been carried out in the eastern and southern parts of the Bantu area (especially in Kenya, Tanzania, Zimbabwe and Zambia). Radiocarbon dates obtained from these sites suggest a spread of the Bantu populations closely in agreement with the population movements derived from lexicostatistic studies. Unfortunately archaeological data are not as common for the western zone in general and are quasi non-existent for the Proto-homeland area. It is then impossible to tell, on archaeological grounds, whether Proto-Bantu speakers knew about iron technology when they first left their homeland. However we have reasons to believe that the iron industry which is still practiced today in the Grassfields area is in fact a very old one. First, the dimension of the slag heaps found at certain sites especially in Babungo give an approximate idea of how long the smelting furnaces have been used. Second, oral tradition indicates that the ancestors of some of the people who currently live in the Grassfields area learned iron working techniques from other tribes established in the area some twenty generations ago - that is approximately 300 to 500 years ago (Jeffreys (1961)). More interestingly, Jeffreys found some pieces of iron slag too big to have been produced by the smelting furnaces currently found. This suggests that larger furnaces were used in the Grassfields in a more remote past. It should be pointed out that furnaces of this size were still used until very recently by various tribes located in the Eastern Bantu area such as the Haya (Schmidt (1978), Schmidt and Avery (1978)) and the Fipa (Greig (1937)). Obviously the arguments we just presented are not very conclusive and do not allow us to draw any conclusions for the period corresponding to the first Bantu population movements some 2500 years ago. Let us now turn to the linguistic evidence. Maps 2, 3 and 4 show the distribution of the various roots which have been reconstructed for axe, hoe and spear respectively in Proto-Grassfields. Let us now compare these reconstructions with corresponding Proto-Bantu forms (from Guthrie (1967 1971):

	Proto-Grassfields Bantu (PGB)	Proto-Bantu (PG)
'axe'	tím	témò
'axe'	jàm	jèmbè
'hoe'	sók	cúkà
'spear'	kòṅ	gòṅgá

Since Guthrie's reconstructions were arrived at without taking into account the Grassfields languages, these data suggest that Bantu speakers knew about axes, hoes and spears when they left the Grassfields area. If we now consider words more closely associated with iron technology, such as 'smith/smithy' PGB *lám, iron-slag PGB *yite and iron-ore PGB *sa, we are faced with a different problem:

corresponding forms cannot be found in other Bantu languages. In summary it seems that correspondances between Proto-Grassfields Bantu reconstructions and Proto-Bantu as reconstructed by Guthrie can only be established for items which are not specifically related to iron technology. 'Axe', 'Hoe' and 'Spear' could have been made out of wood and stone at the time Proto-Bantu speakers left their original homeland. When items more specifically related to iron technology are considered, correspondances with Guthrie's Proto-Bantu forms cannot be established. This suggests that when Proto-Bantu speakers left the Grassfields area some 2500 years ago, they did not know about iron technology.

4. Migratory routes

Phillipson (1977a,b) suggests that Proto-Bantu speakers left their homeland in two directions: a southward route through the equatorial forest and an eastward route through the savannah, north of the equatorial forest (see Map 5). Maps 6, 7 and 8 show the distribution of the PB roots for 'axe', 'hoe' and 'spear' discussed in the previous paragraph. The fact that *jèmbè and *cúkà have cognates in PGB but are otherwise restricted to the eastern part of the Bantu zone strongly supports the existence of the eastward route north of the forest as proposed by Phillipson. The distribution of the gòngá root can be interpreted as supporting the southward route although borrowing due to geographical proximity cannot be discarded here as easily as in the two previous cases.

5. Conclusion

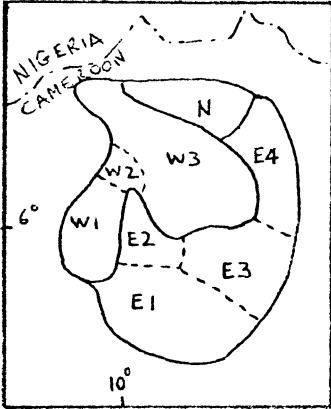
Linguistic reconstructions of lexical items related to iron technology in the languages of the Cameroonian Grassfields suggest that speakers of Proto-Bantu probably did not know about iron technology when they left their homeland. However the distribution of certain items associated with tools which were probably made out of stone and wood during these early migrations is consistent with the claim that two migratory routes were used: an eastward route north of the equatorial forest and a southward route through the forest.

Acknowledgements

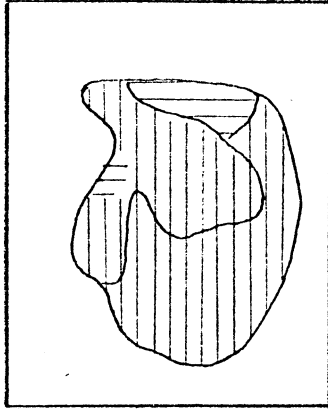
I would like to thank the members of the Grassfields Bantu Working Group for their help and suggestions on this project. This research was partially funded by a NSF grant.

Footnotes

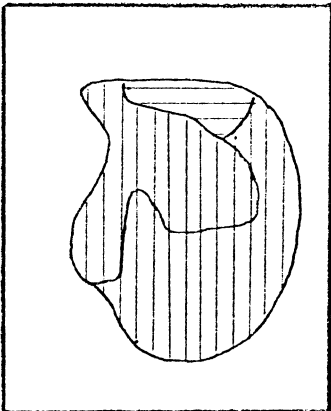
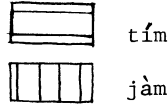
1. Guthrie (1962b) proposed that the Proto-Bantu homeland was located south of the equatorial forest, about halfway between the two coasts. Recent lexicostatistic studies however (Coupez, Evrard and Vansina (1975) Heine (1973), Henrizi (1973)) support Greenberg's position.
2. See for instance, Dunstan (1966), Hyman (1972) and Voorhoeve (1963).
3. A complete classification and Proto-Grassfields Bantu lexical reconstructions are currently being prepared by members of the Grassfields Bantu Working Group.
4. Since the exact relationship of the Northern languages with the Eastern and Western languages is not completely clear, this group



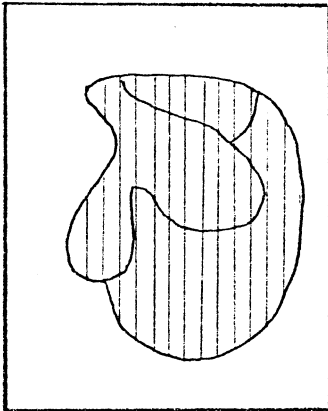
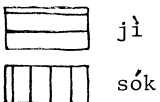
Map 1
Distribution of the
Grassfields Bantu Languages



Map 2
Distribution of 'axe'

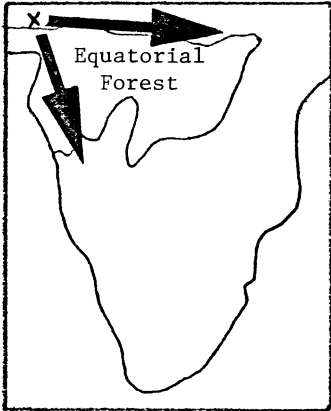


Map 3
Distribution of 'hoe'

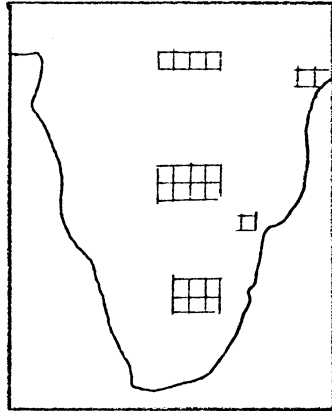


Map 4
Distribution of 'spear'

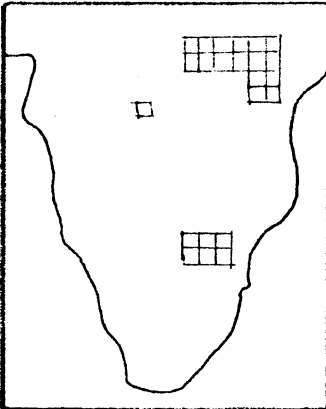




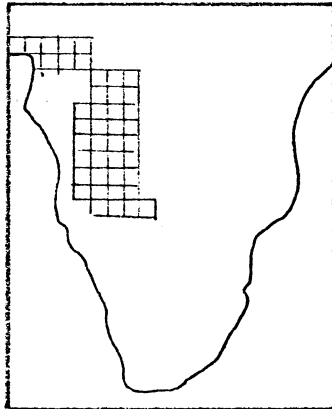
Map 5
Early Bantu Migratory
Routes



Map 6
Distribution of 'axe'
*jèmbè



Map 7
Distribution of 'hoe'
*cùkà



Map 8
Distribution of 'spear'
*goṅgá

has been connected with a dotted line to the other two groups.

5. See for instance, Phillipson's work.

6. Although smelting has been progressively abandoned in the last fifty years, smithing is still very common especially in the Ndop plain area.

7. The word 'iron' itself has two roots: *kás found in Ring languages and *tén found elsewhere in Grassfields Bantu. These two roots are probably cognates with PB *gèdà (although the tone correspondence is irregular) and PB *tádè. But as it was shown by de Maret and Nsuka (1977) it is not clear that the original meaning of these stems was 'iron'.

8. Because of insufficient data we were not able to reconstruct the tone of 'iron-slag' or 'iron-ore'.

Bibliography

Coupez, A., E. Evrard and J. Vansina (1975) "Classification d'un échantillon de langues bantoues d'après la lexicostatistique", Africana Linguistica, 6, 131-158.

De Maret, P. and F. Nsuka "History of Bantu metallurgy: some linguistic aspects", History in Africa, 4, 43-65.

Dunstan, E. (1966) "Tone on disyllabic nouns in Ngwe", Journal of West African Languages, 3, 1, 33-38.

Greenberg, J. H. (1963) "The languages of Africa", International Journal of American Linguistics, 29, 1, II.

_____. (1972) "Linguistic evidence regarding Bantu origins", Journal of African History, 13, 2, 189-216.

Greig, R. C. H. (1937) "Iron smelting in Fipa", Tanganyika Notes and Records, 4, 77-81.

Guthrie, M. (1962a) "Some developments in the prehistory of the Bantu languages", Journal of African History, III, 2, 273-282.

_____. (1962b) "Bantu origins: a tentative new hypothesis", Journal of African Languages, 1, 1, 9-21.

_____. (1967-1971) Comparative Bantu I-IV, Farnborough: Gregg International Publishers.

Heine, B. (1973) "Zur genetischen gliederung der Bantu sprachen", Afrika und Übersee, 56, 164-185.

Henrici, A. (1973) "Numerical classification of Bantu languages", African Language Studies, 14, 82-104.

Hyman, L. M. (1972) "A phonological study of Fe?Fe?- Bamileke", Studies in African Linguistics, Supp. 4.

- Jeffreys, M. D. W. (1942) Report on the Local Iron Industry Bamenda Division. Buea Archives.
- _____. (1948) "Stone-Age Smiths", Archiv für Völkerkunde, 3, 1-8.
- _____. (1952) "Some Notes on the Bikom Blacksmiths", Man, 52, 75, 49-51.
- _____. (1961) "Oku Blacksmiths", Nigerian Field, 26, 3, 137-144.
- _____. (1962) "Some Notes on the Kwaja Smiths of Bamenda", Man, 62, 236, 152.
- _____. (1971) "Some Notes on the Iron Workers of Bamenda", Nigerian Field, 36, 2, 71-74.
- Phillipson, D. (1976) "Archaeology and Bantu Linguistics", World Archaeology, 8, 1, 65-82.
- _____. (1977a) "The Spread of the Bantu Language", Scientific American, 236, 4, 106-115.
- _____. (1977b) The later prehistory of Eastern and Southern Africa, Africana Publishing Company, New York.
- Schmidt, P. R. (1978) Historical Archaeology: A Structural Approach in an African Culture, Greenwood, Westport, Connecticut.
- _____ and D. H. Avery (1978) "Complex iron smelting and prehistoric culture in Tanzania", Science, 201, 1085-1089.
- Voorhoeve, J. (1963). "La classification nominale dans le Bangangte", Journal of African Languages, 2, 3, 206-209.