

# **Kordofanian** Schadeberg, T.C.

## Citation

Schadeberg, T. C. (1989). Kordofanian. *The Niger-Congo Languages*, 66-80. Retrieved from https://hdl.handle.net/1887/8823

Version: Not Applicable (or Unknown)

License: <u>Leiden University Non-exclusive license</u>

Downloaded from: <a href="https://hdl.handle.net/1887/8823">https://hdl.handle.net/1887/8823</a>

**Note:** To cite this publication please use the final published version (if applicable).

# 3 Kordofanian

Thilo C. Schadeberg

Kordofanian languages are spoken in the Nuba Mountains in the Republic of the Sudan. The name 'Kordofanian' is an unfortunate choice since in the Sudan, particularly in the Nuba Mountains, the geographical and political term 'Kordofan' refers to the area north of the Nuba Mountains around El Obeid. It might be desirable to coin a more suitable and locally more acceptable name for this language family.

The present survey chapter is based on literature and data collected by myself in 1974-75.

#### 3.1 EARLY SCHOLARSHIP

In 1838 Duke Maximilian in Bavaria bought the freedom of four men on the slave market in Alexandria. Taking them home, he put them in the care and under the instruction of his former tutor, Karl Tutscheck, who felt a language could be studied with the help of a single speaker even at great distance from that person's linguistic community. One of the four young Africans was Djalo Djondan Are from Tumale, and part of the information he provided on his people and language was published between 1847 and 1853 by Karl's brother Lorenz Tutschek. Prior to this, only two short Kordofanian word lists had been published, one on 'Takele' and one on 'Schabun' (Rüppell 1829). Nothing else followed until the end of the 19th century except another small word list from 'Tegelé' (Munzinger 1864). A full description of this language by Munzinger came into the possession of Reinisch at Vienna but has since been destroyed. The fact that the Tegali dialect cluster figures in each of the early linguistic contacts with Kordofanian might be explained by the relative importance of the Tegali kingdom in the 19th century.

The significance of this area for African language classification was realized by Lepsius (1880). In this century several linguistic surveys have been carried out in the Nuba Mountains (Seligman 1910/11; Meinhof 1915-1919; MacDiarmid and MacDiarmid 1931; Stevenson 1956-1957; Schadeberg 1981a, b). Gradually, the extent of the Kordofanian language

family, its grammatical and lexical characteristics, and its internal relationships have become apparent.

Nevertheless, the quality of this survey chapter is severely limited by the scarcity of in-depth descriptions. Meinhof (1943/44) wrote the first short grammar of any Kordofanian language, a sketch of Ebang (Heiban) based on analysis of published translations of two Gospels. The most complete existing description of any Kordofanian language is a grammar of Moro by Black and Black (1971). Fr. Carlo Muratori's notes on Orig, another dialect of the Tegali cluster, were reanalyzed and edited by Schadeberg and Elias (1979). As for the Kadugli language group (not here considered to be Kordofanian), Reh (1985) provides an extensive and detailed description of Krongo.

#### 3.2 CLASSIFICATION

#### 3.2.1 INTERNAL CLASSIFICATION AND LANGUAGE INVENTORY

There is one level of classification within Kordofanian that is unambiguous and non-controversial. I refer to units at this level as 'groups', and there are four such groups:

- 1. HEIBAN (Koalib; Koalib-Moro)
- 2. TALODI (Talodi; Talodi-Masakin and Lafofa)
- 3. RASHAD (Tegali; Tegali-Tagoi)
- 4. KATLA (Katla; Katla)

I have added in parentheses the group names first as used by Greenberg (1963) and then those of Tucker and Bryan (1956). The group names I propose are the names of towns centrally located in the respective areas; the riverine terminology popular in African linguistics cannot be applied to the Nuba Mountains for lack of permanent surface water. No confusion should arise between group names and language names since none of the place names are identical with the name any particular linguistic grouping gives itself.

The overall division into groups was first established by MacDiarmid and MacDiarmid (1931). The only amendment to their grouping was Greenberg's (1950) inclusion of Tegem (Lafofa) in the Talodi group.

There is a fifth group which has been classified as Kordofanian by Greenberg since 1950, i.e., KADUGLI (Tumtum; Kadugli-Krongo). I propose to exclude Kadugli from Kordofanian (see sec. 3.2.3).

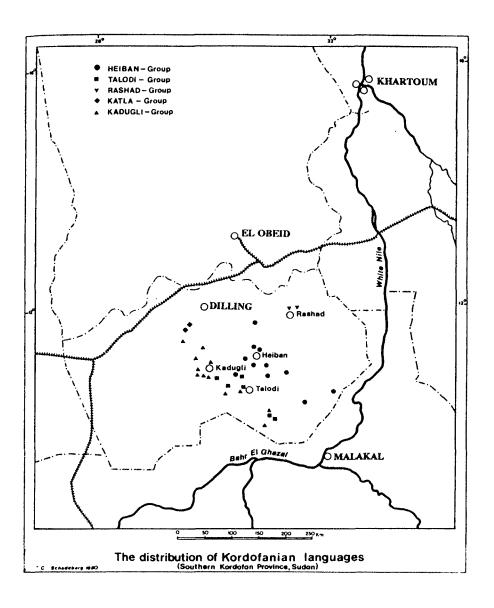


PLATE 3 Kordofanian languages

TALC	DI group	<b>:</b>					(speakers)
•		Masakin) ha, Masakin)	}				12,000
_	•	Iills settlemei					3,800
Joman	g (Talodi	)					1,500
Nding	(Eliri)	•					500
Tegem	(Lafofa)	)					3,000
	, ,						
							20,800
20%							
40%						İ	
60%				N T			
80%							
	Ngile	Dengebu	Tocho	Joṁang	Nding	Tegem	

Tegem is very different from the other languages of the Talodi group but there is good lexical, phonological, and morphological evidence for joining Tegem and 'Narrow Talodi' into one group or branch of Kordofanian. I cannot exclude the possibility that some alleged dialects of Masakin and of the cluster called 'Moro Hills' may turn out to be separate languages.

RASHAD group:	(speakers)
Noun class dialects (Tagoi cluster):	
Goy (Tagoi), Orig (Turjok), Umale (Tumale), etc.	11,000
Classless dialects (Tegali cluster):	
Gom (Rashad), Tegali, etc.	25,000
	36.000

A breakdown into dialects with and without noun classes appears to be the basic genetic division of the Rashad group. The two dialect clusters share about 70% basic vocabulary (100-word list). There are a number of outlying hills about which no linguistic data is available, but where closely related dialects are supposed to be spoken.

KATLA group:	(speakers)
Kalak (Katla)	10,900i
Lomorik (Tima)	1,100?
	********
	12.000?

The two Katla languages share about 50% basic vocabulary (100-word list). Even less is known about this group than about the others.

It is not clear at present whether the four groups should be regarded as primary branches of Kordofanian or whether intermediate levels of relationship should be recognized. Tucker and Bryan originally (1956) posited a 'Larger Unit' consisting of the three groups Heiban, Talodi (and their 'Single Unit' Lafofa), and Rashad. Later (1966), they separated Rashad from this 'Larger Unit' and also drew attention to Stevenson's (1957:51) observation that specific lexical resemblances exist between Rashad and Katla.

At least since Meinhof (1915-19) the question of historical subgrouping and intergroup relationships has been complicated by confusing it with typological classification into languages with and without noun classes.

#### 3.2.2 EXTERNAL CLASSIFICATION WITHIN NIGER-CONGO

One of Greenberg's 1963 revisions of his own earlier classification of African languages was to join Niger-Congo and Kordofanian as two primary branches of a single family he called Niger-Kordofanian (also: Congo-Kordofanian). Since then, the genetic relatedness between Kordofanian and Niger-Congo has not been seriously questioned. Still, some linguists believe this kind of historical relation to be too remote to be recoverable by conventional methods of historical linguistics (e.g., Möhlig 1983:175). Convincing lexical resemblances between Kordofanian and other branches of Niger-Congo are scarce. Though Greenberg (1963) lists forty-five sets of possible cognates (not counting seven sets linking Niger-Congo exclusively with Kadugli), it remains to be seen which and (less importantly) how many of these will survive the test of internal Kordofanian and Niger-Congo reconstruction. Bennett and Sterk (1977) concluded that their lexical evidence was insufficient for proving genetic relationship between Niger-Congo and Kordofanian (and Mande). Not wishing to reject such links altogether, they assumed an initial three-way split; this position is maintained in the present volume (Niger-Congo Overview).

While the extent and importance of lexical evidence is still uncertain, there is other evidence for which the only possible explanation seems to be common historical origin: similar noun class systems appear in most major groupings of Niger-Congo and Kordofanian. At first sight, this may appear to be no more than a typological similarity, and as such, irrelevant to the question of genetic relatedness. However, it has to be

pointed out that this type of noun class system is, if not unique, extremely rare in the languages of the world; the noun class systems found in Caucasian and Australian languages are quite different. It is also rare for a language to acquire a noun class system through borrowing, Mbugu being the only such case ever cited. It is therefore justified to view the presence of this particular type of noun class system as an argument for genetic relations within Niger-Congo, as indeed Greenberg did (1950:393): "The very fact of the existence of noun affix classes for singular and plural in Niger-Congo and Kordofanian is indicative of possible further connections, since such formations are rare elsewhere in the world." At this time, Greenberg did not yet claim Niger-Congo and Kordofanian to be related. Later (1972:190) he wrote: "It is not too much to state that in at least one instance, that of Niger-Kordofanian, grammatical resemblances were treated as more decisive than lexical ones."

However, similarities between the Niger-Congo and Kordofanian noun class systems are not only typological but can be extended to proper sound-meaning correspondences as well. The meaning of gender is to be understood not only as the vague common semantic feature of part of the nouns occurring in it, but also as that set of nouns (i.e., their meanings) itself. In the figure below (adapted from Schadeberg 1981c), six noun classes of Kordofanian are compared with what I believe are cognate forms in Atlantic, Kwa, Benue-Congo, Gur, and Adamawa-Ubangi.

	1	3	4 pl of 3	5	6 pl of 5	ба
Kordofanian	gu- people	gu- tree	j-	li- egg	<b>უս</b> -	ŋ- liquids
Atlantic	gu-	gu-	Ci-	de-	ga-	ma-
(Doneux 1975)	people	tree nam	es	head, name		liquids
Oti-Volta	υ	-bv	-Ci	-dı	-a	-ma
(Manessy 1975)	people	tree	1	egg, hea	ıd	liquids
Togo Remnant	0-	0-	i-	li-	a-	N-
(Heine 1968)	people	firewood		egg, hea	id, name	liquids
Benue-Congo	u-	u-	(t)i-	li-	a-	ma-
(De Wolf 1971)	people	tree		egg, hea	id, name	liquids
Bantu	NP mu-	mu-	mi-	j-	ma-	ma-
(Meeussen	PP ju-	gu-	gi-	li-	ga-	ga-
1967)	people	tree		egg, nar	ne	liquids
Mba (Ubangi)	-V	-V	-е	-le		-me
(Carrington	Num g-	w-	ø-	l-		
1949)	man			name		liquids

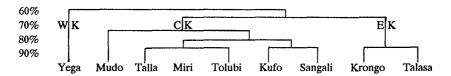
FIGURE 3.1. Comparison of six Kordofanian noun classes

The exact place of Kordofanian within Niger-Congo is less clear than its general relation to it. Regarding Kordofanian as one of the three primary branches of Niger-Congo is the least speculative guess possible in the absence of specific investigations. Future research may show Welmers' hunch to be correct (1973:17): "It is possible that the relationship between the Kordofanian languages and the non-Mande Niger-Congo languages is closer than the relationship of any of them to Mande."

#### 3.2.3 THE KADUGLI GROUP

The Kadugli group comprises nine rather closely related languages. Below I give their names as I recorded them, except in the case of Krongo, where a phrase meaning 'home-speech' is actually used. In parentheses I add the name of the village from which I obtained my data, plus the names of some other villages where the same language is spoken. These village names are more commonly used to identify languages and dialects than the proper names listed here. The numbers of speakers were derived in the same way as for the Kordofanian languages earlier.

KADUGLI group:	(speakers)
Yega (Keiga-Timero, Keiga-al-Kheil, Demik)	7,500
Mudo (Kamdang, Tulishi)	11,000
Talla (Kadugli)	18,000
Miri (Miri Juwa, Miri Barra)	14,000
Tolubi (Tuna, Katcha)	7,000
Kufo (Kufa, Kanga)	8,000
Sangali (Tumma, Krongo-Abdallah)	6,500
Krongo (Tabanya, Dimodongo)	17,000
Talasa (Talasa, Kurondi, Tumtum)	1,600
	90.600



The above tree was produced by a preliminary lexicostatistical subclassification that, impressionistically, appears to be supportable by morphological evidence. For example, Central Kadugli distinguishes three genders by concord; Eastern Kadugli has an additional plural 'gender'; only Yega (Western Kadugli) has no such concord (see Stevenson 1957:55-56).

Right from the start Greenberg noted that Kadugli "shows considerable divergence from the remainder" (1963:149). Goodman, in a review of Greenberg (1963), goes one step further: "Particularly dubious is the relationship of the Kadugli-Krongo group to the remaining Kordofanian languages" (1970:121). I maintain that it has not been shown that Kadugli is part of Kordofanian, nor that it should be classified as Niger-Congo (see Schadeberg 1981d).

#### 3.3 PHONOLOGICAL CHARACTERISTICS

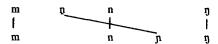
The phonetic and phonological characteristics of Kordofanian languages are poorly documented and analyzed. The most detailed description (Black and Black 1971) concerns Moro (Heiban group which has an atypically complex system of consonants and consonant clusters. This section presents what I take to be two typical sets of phonological properties of Kordofanian languages. Many of these features may have an areal distribution as well. It remains to be seen what their significance for Niger-Congo comparative studies might be.

### 3.3.1 POINTS OF ARTICULATION (CONSONANTS)

Most Kordofanian languages distinguish five places of articulation for oral stops: bilabial, laminal (inter)dental, apical alveolar or retroflex, palatal, and velar (eg., /b, d, d/d, j, g/).

Thus there are two distinct places of articulation in the dentalalveolar region, and the distinction is enhanced by an additional difference in the shape of the tongue. The dental articulation appears to be more frequent and less marked than the alveolar or retroflex one. Speakers of languages lacking this opposition generally use the dental articulation. Such languages are the two dialect clusters of the Rashad group, but also non-Kordofanian languages such as For (of Darfur) and Sudanese Colloquial Arabic. (I have described the areal spread of this feature in Schadeberg (forthcoming).)

Only four points of articulation are contrastive for nasals. Generally, these are bilabial, alveolar, palatal, and velar. However, I have recorded dental nasals in two dialects of Masakin (i.e., in Dengebu) and, as an idiolectic variant, in Ngile. In each case the dental nasal takes the place of and corresponds to the palatal one.



The presumed change from  $/\mathbf{p}/$  to  $/\mathbf{p}/$  does not entail a merger with  $/\mathbf{n}/$  since it probably arises from a super-distributed articulation in which the contact between the tongue and the roof of the mouth extends from the palatal to the dental region.

Double and secondary articulations are not typical for Kordofanian languages. Labial-velars /kp/ and /gb/ occur only in Kalak (Katla group). Labialization is found in some languages of the Heiban and Talodi groups. In Jomang, labialization of bilabial and velar consonants appears to be conditioned by a preceding rounded vowel, e.g., daa-joom<sup>w</sup>aŋ 'Jomang village'.

#### 3.3.2 MANNER OF ARTICULATION (OBSTRUENTS)

A striking feature of Kordofanian consonant systems is the low functional load of the voiced/voiceless distinction. Obstruents are generally voiced between sonorants (vowels, nasals, liquids) and voiceless in obstruent sequences as well as word-finally. Word-initially, much fluctuation between voiced and voiceless obstruents is found both within and across languages. For particular languages it may be necessary to recognize an unconditioned voicing contrast, but I have not found it necessary to do so in reconstructing proto-Heiban (PH), proto-Talodi (PT), and proto-Rashad (PR) lexical items. A possible source for synchronic intervocalic voiceless stops is the simplification of long stops, which I analyze as sequences of identical stops.

Intervocalic lenition of obstruents commonly changes voiced stops into fricatives - except for  $\mathbf{d}/\mathbf{d}$ , which changes into the retroflex flap  $\mathbf{r}$ . Voiced stops and continuants are often in free variation. A typical full table of (phonetic) obstruents may look like this:

pp	ţţ	tt	cc	kk
	ţ	t	c	k
p b	ď	đ	j	g
β	ð	t	y	¥

Voiceless fricatives are generally rare. A labiodental /f/ as distinct from /p/b/ occurs in the Rashad group. The alveolar fricative /s/ has a wider distribution throughout the four branches of Kordofanian. I have reconstructed \*s for PR corresponding to \*ts in PT and to /c/ʃ/s/ in Kalak. Thus it appears that proto-Kordofanian (PK) had an affricate \*ts from

which many instances of present-day /s/ are derived. A further step is the weakening of /s/ to /h/, as in Goy (Rashad group) and Lomorik (Katla group).

#### 3.4 MORPHOLOGICAL CHARACTERISTICS: NOUN CLASSES

Three of the four Kordofanian language groups (Heiban, Talodi, and Rashad) have noun class systems strongly reminiscent of those found elsewhere in Niger-Congo. I have attempted to reconstruct noun class systems for the three groups. (From here on, d and t (without any diacritic) represent dental obstruents; voicing is not distinctive in reconstructions.)

HEIBAN sing. plur.	TALOI sing.	DI plur.	RASHAD sing, plur.	
*gu- *li- *g- *j- *d- *n- *n- *n- *n- *d- *d-	*b- *w- *j- *d- *d- *g- *ts- *ŋ-	*(y)- *g- *m- *r- *n- *w- *y-	*w- *d- *y- *g- *j-	>*y- >*ŋ- *s- *n-

FIGURE 3.2. Reconstructed noun class systems

The two languages of the fourth group, Katla, also have number marking by prefixes, but these are less numerous and there is no concord.

Reconstruction of the PR noun class system relies totally on evidence from the Tagoy dialects. Different explanations exist for why these dialects have a fully operative noun class system that the Tegali dialects lack. Meinhof (1916:71-72) felt the two languages could not possibly be related genetically and that their close lexical resemblances must, therefore, be due to extensive borrowing. Greenberg (1963), who excludes the possibility of mass borrowing of basic vocabulary, regards the two dialect clusters as closely related and assumes the loss of noun classes in the Tegali dialects. Tucker and Bryan (1966:270) agree that the two dialect clusters must be closely related, but since at that time they were no longer convinced that Rashad was part of a bigger genetic unity (i.e., Kordofanian) they explain the resemblances between the noun class systems of Tagoy on the one hand and of Heiban and Talodi on the other by

'adoption', i.e., Tagoy is supposed to have borrowed its whole noun class system. I find this hypothesis unlikely.

Firstly, such borrowing of a whole noun class system - if it exists at all (cf. Mbugu!) - is extremely rare. Secondly, the Tagoy noun class system is characteristically different from any system found in the Heiban or Talodi groups; in other words, we know of no possible donor language. Thirdly, the borrowing hypothesis entails a number of highly specific historical assumptions for which no independent evidence is available: PK must have had a noun class system since three of its descendants did preserve it: Heiban, Talodi, and the unknown language (X) from which Tagoy borrowed it; Rashad supposedly lost it; then Tagoy borrowed it from X; and finally X disappeared.

I prefer to follow Greenberg (1963) and simply assume the loss of noun classes in Tegali. This hypothesis is supported by what I take to be remnants of earlier noun class prefixes in Tegali, e.g., a great number of place names starting with t- and some instances of a prefix n-, which is used to form abstract nouns and language names. For instance, the Tegali dialect spoken in the town of Rashad is called nagom, and the town itself is called togom.

The figure 3.3 is an attempt to line up possibly related noun class prefixes from Heiban, Talodi, and Rashad, together with approximations towards proto-Kordofanian reconstructions.

Noun classes 1 and 3 through 6a have been used above to show that Kordofanian is part of Niger-Congo. The correspondences appear to be well established.

Gender 1/2 is the 'personal' gender. It regularly contains ethnonyms and, in Heiban and Talodi, 'also the words 'person/people', 'man', and 'woman'. Some animals also take this gender, e.g., 'bird', 'dog', 'fish', 'snake', but there is usually an alternative gender for these nouns. (Compare Rere ku-raw/la-raw 'big bird' with ta-raw/pa-raw 'small bird'.) The sound correspondence PH \*gu- to PT \*b- has its exact nasal parallel in the corresponding prefixes of class 6 (PH \*nu-: PT \*m-). I assume that PT \*y- is a regular reflex of PK \*li-. No word-initial \*l has been reconstructed for PT, but there are a few compounds in Tegem (Lafofa) where \*l appears to have been preserved word-internally, e.g., im-b-vgt/i-l-vgt 'my wife/my wives'.

	HEIBAN	TALODI	RASHAD	KORDOFANIAN
1. sg.	*gu-	*b-	*w-	*gu-
2. pl.	*li-	*y-	*y-	*li-
3. sg.	*gu-	*b-	*w-	*gu-
4. pl.	*j-	*g-	*y-	*gi-
5. sg.	*li-	*j-	*y-	*li-?
6. pl.	*ŋu-	*m-	*ŋ-	*ŋu-
6a. coll.	*ŋ-	*ŋ-	*ŋ-	*ŋ-
7. sg.		*ts-	*j-	*j-
8. pl.	*n-	*n-	*n-	*n-
9. sg.	*ŋ-	*ŋ-		*ŋ-
10. pl.	*j-	*s-	*s-	•
11. sg.	*g-	*g-	*g-	*g-
12. pl.	*n-	*n-	_	*n-
13. sg.	*d-	*d-	*d-	*d-
14. pl.	*d-	*r-		*d-?
15. sg.	*d-	*d-	*d-	*ď-
16. ?	·	*w-	{LAB}	

FIGURE 3.3. Noun class prefixes

Gender 3/4 contains the word for 'tree' in Heiban and Talodi, and a whole series of specific tree names in Rashad. Class 3 is the same as class 1; it has been assigned its own number only for easier reference in the wider context of Niger-Congo comparison. In Rashad, classes 2 and 4 have merged.

The most stable item in gender 5/6 is 'egg'; Heiban and Talodi also attest 'head', 'bone', and 'star'. It is not clear what phonological difference should be reconstructed to account for the distinct Talodi reflexes \*y- and \*j- of PK classes 2 and 5 \*li-.

The one-class gender 6a is for liquids and contains words such as 'blood', 'fat', and 'water'. The phonological difference with the class 6 prefix is minimal: Heiban \*ŋu- and \*ŋ- are generally not distinct before rounded vowels. The two class prefixes have completely merged in Rashad, but they are nearly distinct in Talodi.

Evidence for the other classes is less compelling if we insist on more than phonetic similarity. Gender 13/14 might vaguely be characterized as the gender of 'elongated things'; likely reconstructions include items such as 'horn', 'root', 'tail', and probably also 'tongue'. Rashad has no direct reflexes of this gender, which is not surprising since Rashad

does not distinguish PK \*d from PK \*d and has replaced the plural class 14 by the existing plural class 6.

#### 3.5 CONCLUSION

Descriptive and comparative work on Kordofanian languages is still in its infancy. The study of Kordofanian deserves high priority in view of the isolated but prominent position this linguistic unit has within Niger-Congo. The linguistic distance between the four groups is considerable. Kordofanian has been presented here as related to Niger-Congo, but so far no particular links with any subgroup of that language family have been discovered. Available evidence points to a long presence of Kordofanian in its present location, the Nuba Mountains, which it shares with several other language groups. Except for Kadugli, these have all been classified as Eastern Sudanic. It has been argued (Thelwall and Schadeberg 1983) that of all those groups, Kordofanian represents the oldest linguistic layer in the Nuba Mountains. This will be an important point to consider when the time comes to address the question of the origin of Niger-Congo.

#### BIBLIOGRAPHY

- Bennett, Patrick R. and Jan P. Sterk. 1977. South Central Niger-Congo: A reclassification. SAL 8:241-73.
- Black, K. and Mrs. K. Black. 1971. The Moro language: Grammar and dictionary. Linguistic Monograph Series 6. Khartoum: Sudan Research Unit, Faculty of Arts.
- Carrington, J.F. 1949. Esquisse de la langue mba. Kongo-Overzee 15:90-107.
- De Wolf, Paul P. 1971. The noun class system of Proto-Benue-Congo. The Hague: Mouton.
- Doneux, J.L. 1975. Hypothèses pour la comparative des langues atlantiques. Africana Linguistica 6:41-129.
- Goodman, Morris. 1970. Some questions on the classification of African languages. *IJAL* 36:117-22.
- Greenberg, Joseph H. 1950. Studies in African linguistic classification: 7. Smaller families; Index of languages. Southwestern Journal of Anthropology 6:388-98.
- ———. 1963. The languages of Africa. The Hague: Mouton; IJAL 29.1, Publication 25 of the Indiana University Research Center in Anthropology, Folklore and Linguistics. Bloomington: Indiana University Press.
- \_\_\_\_\_. 1972. Linguistic evidence regarding Bantu origins. JAfrH 13.2:189-216.
- Heine, Bernd. 1968. Die Verbreitung und Gliederung der Togorestsprachen. Kölner Beiträge zur Afrikanistik 1. Berlin: Dietrich Reimer Verlag.
- Lepsius, Richard. 1880. Nubische Grammatik mit einer Einleitung über die Völker und Sprachen Afrika's. Berlin: Wilhelm Hertz.
- MacDiarmid, P.A. and D.N. MacDiarmid. 1931. The languages of the Nuba Mountains. Sudan notes and records 14:149-62.

- Manessy, Gabriel. 1975. Les langues oti-volta. LACITO 5. Paris: SELAF.
- Meeussen, A.E. 1967. Bantu grammatical reconstructions. Africana linguistica 3, Annalen van het Koninklijk Museum voor Midden-Afrika 61:79-121. Tervuren.
- Meinhof, Carl. 1915-19. Sprachstudien im egyptischen Sudan. Zeitschrift für Kolonialsprachen 6(1915/16):161-205, 264-84; 7(1916/17):36-80, 110-33, 212-50, 326-35; 8(1917/18):46-74, 110-39, 170-96, 257-67; 9(1918/19):43-64, 89-117, 167-204, 226-55.
- Möhlig, Wilhelm J.G. 1983. Niger-Kordofanisch. *Lexikon der Afrikanistik*, ed. by H. Jungraithmayr and W.J.G. Möhlig, pp.175-76. Berlin: Dietrich Reimer.
- Munzinger, Werner. 1864. Werner Munzinger's Bericht über seine Reise von Massua nach Kordofan, 1861 und 1862. Die deutsche Expedition in Ost-Afrika, 1861 und 1862, ed. T. v. Heuglin et al., pp. 1-13. Ergänzungsheft No. 13 zu Permann's 'Geographischen Mittheilungen'. Gotha: Justus Perthes.
- Reh, Mechthild. 1985. Die Krongo-Sprache (niino mo-di): Beschreibung, Texte, Wörterverzeichnis. Kölner Beiträge zur Afrikanistik 12. Berlin: Dietrich Reimer.
- Rüppell, Eduard. 1829. Reisen in Nubien, Kordofan und dem peträischen Arabien. Frankfurt am Main: Friedrich Wilmans.
- Schadeberg, Thilo C. 1981a. A survey of Kordofanian. Vol. I: The Heiban group. SUGIA Beiheft 1. Hamburg: Helmut Buske Verlag.
- -----. 1981b. A survey of Kordofanian. Vol. II: The Talodi group. SUGIA Beiheft 2. Hamburg: Helmut Buske Verlag.
- ———. 1981c. Das Kordofanische. *Die Sprachen Afrikas*. Band 1: *Niger-Kordofanisch*, ed. by B. Heine, T.C. Schadeberg, and E. Wolff, pp. 117-28. Hamburg: Helmut Buske Verlag.
- . 1981d. The classification of the Kadugli language group. *Nilo-Saharan*, ed. by T.C. Schadeberg and M.L. Bender, pp. 291-305. Dordrecht: Foris Publications.
- -----. forthcoming. Zwei areale Sprachmerkmale im Ostsudan. Vienna.
- and Philip Elias. 1979. A description of the Orig language (Southern Kordofan)
  based on the notes of Fr. Carlo Muratori. Archives d'anthropologie 26. Tervuren:
  Musée Royal de l'Afrique Centrale.
- Seligman(n), Brenda Z. 1910/11. Note on the language of the Nubas of Southern Kordofan. Zeitschrift für Kolonialsprachen 1:167-88.
- Stevenson, Roland C. 1956-57. A survey of the phonetics and grammatical structure of the Nuba Mountain languages, with particular reference to Otoro, Katcha and Nyimang. AuÜ 40(1956):73-84, 93-115; 41(1957):27-65, 117-52, 171-96.
- Thelwall, Robin, and Thilo C. Schadeberg. 1983. The linguistic settlement of the Nuba Mountains. SUGIA 5:219-31.
- Tucker, Archibald Norman. 1966. Linguistic analyses: The non-Bantu languages of north-eastern Africa. Handbook of African languages. London: Oxford University Press for IAI.
- ———— and Margaret A. Bryan. 1956. The non-Bantu languages of north-eastern Africa.

  Handbook of African languages, Part III. London: Oxford University Press for IAI.
- Tutschek, Lorenz. 1848. Über die Tumale-Sprache. Gelehrte Anzeigen, hrsg. von Mitgliedern der k. bayer. Akademie der Wissenschaften, nos. 91-93: columns 729-52. Bulletin der königl. Akademie der Wissenschaften 29-31.
- ———. 1848-50. On the Tumali language. Proceedings of the Philological Society for 1846-47 and 1847-48 3:239-54. PPS for 1848-49 and 1849-50 4:138-39.
- Welmers, William E. 1973. African language structures. Berkeley: University of California Press.