

The documentation of the Kru language Oubi

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1 Introduction

Jenny Jaffe is a Dutch-American wildlife veterinarian, and as such has worked in all kinds of places where the wildlife is not the only interesting thing about the location. Whenever she is in a country for more than a week or two, she puts in some effort to be able to communicate in the local language. This has led to basic knowledge of languages like Malagasy, Thai, Kikongo, Kichwa (Ecuador) and Danish as well as more advanced levels of Spanish, French, German, Italian, Bahasa Indonesia and Krio (Sierra Leone). She enjoys making the connection with locals and communicating with colleagues in their own language. Though she is not a linguist, she finds joy in comparing how languages work, how words are formed, unusual expressions, and completely new sounds.

Sebastian Nordhoff is a linguist who has worked on the languages of Paraguay and Sri Lanka. He now runs the open access publisher Language Science Press.

2 Primatology

The Max Planck Institute for Evolutionary Anthropology had a department for primatology from 1997–2019, headed by Christophe Boesch. Boesch set up the Tai Chimpanzee Project in 1979 with his wife Hedwige. The Department investigated issues related to the evolution of social systems and social behavior, e.g. how ecology played a role in the evolution of differences (“culture”) between chimpanzee groups and populations.

Tai National Park (Parc National de Tai) is a national park in Côte d’Ivoire that contains one of the last areas of primary rainforest in West Africa. It was inscribed as a World Heritage Site in 1982 due to the diversity of its flora and fauna. Tai National Park covers an area of 3,300 km² with a 200 km² buffer zone up to 396 m.

The Tai Forest reserve was created in 1926, and promoted to national park status in 1972. It was recognized as a UNESCO biosphere reserve in 1978, and added to the list of Natural World Heritage Sites in 1982. It is the largest island of forest remaining in West Africa remaining relatively intact.

The Tai Chimpanzee Project: The Tai chimpanzees (*Pan troglodytes verus*) have been the subjects of behavioral research for over forty years (founded in 1979 by Christophe and Hedwige Boesch). At present the project is following four habituated neighbouring communities totaling some 150 individuals. Each group is followed by a team of one or two Ivorian field assistants, international research assistants, PhD students and researchers on a daily basis. Teams start in the morning to conduct their nest-to-nest follows of the chimpanzees. Studies of the Tai chimpanzee population have led to insights into the construction and use of tools, cooperative hunting behavior, and many aspects of chimpanzee social life. More recently, comparisons of behavior patterns seen at Tai with those exhibited in other chimpanzee populations all over Africa have led to the recognition of chimpanzee culture, an attribute previously restricted to humans. The Tai chimps are known for their nut-cracking behavior. There is also a group of habituated monkeys (sooty mangabeys) observed daily, who live in the same area as the Tai chimps.

Interestingly, while the chimps are very important for the study of cognition, human evolution, and even communication (vocalisations, drumming and gestures), the language of the actual humans working in the national park had never been studied.

The MPI/RKI project There is currently a joint project of the MPI-EVA and the Robert-Koch-Institut on chimp health. Jaffe was the field vet in charge, responsible for necropsies of all mammals found dead (with a priority given to chimps and monkeys). She investigated diseases and injuries in the habituated chimps and monkeys. Her PhD will focus on naturally occurring pathology in the wild chimps, including kidney disease and healing after severe injuries due to leopard attacks. In the evenings, she recorded some Oubi, which she then deposited with the ELAR archive at <https://www.elararchive.org/dk0653> (Jaffe 2021).

The deposited data mainly consists of word lists, basic grammar and life history of the oldest male speaker of Oubi, called Toubaté Georges, speaking about his fascinating life (including a stint as a soldier for the French army in Indochine) in both French and Oubi.

3 The Oubi language

Oubi (also called Glio) is a Western Kru language (Figure 1) spoken in Côte d'Ivoire (Figure 2). The variety represented here is from the Tai national park. Speakers represented here are bilingual in French. On the other side of the Liberian border, speakers are bilingual in English. Vanderaa (1991) gives 2,500 speakers in Côte d'Ivoire and 3,500 in Liberia.

Linguistic information about Oubi is scant. We have a wordlist which contains some phonological analysis (Marchese 1983b; Zogbo n.d.), but no grammatical information.

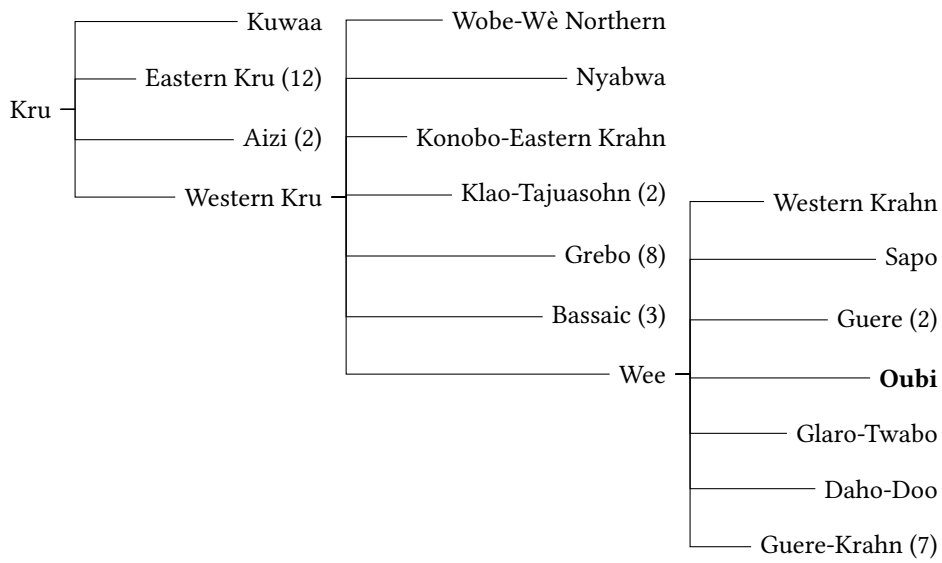


Figure 1: The position of Oubi within the Kru family. Numbers in parentheses indicate aggregated languages in a subgroup.

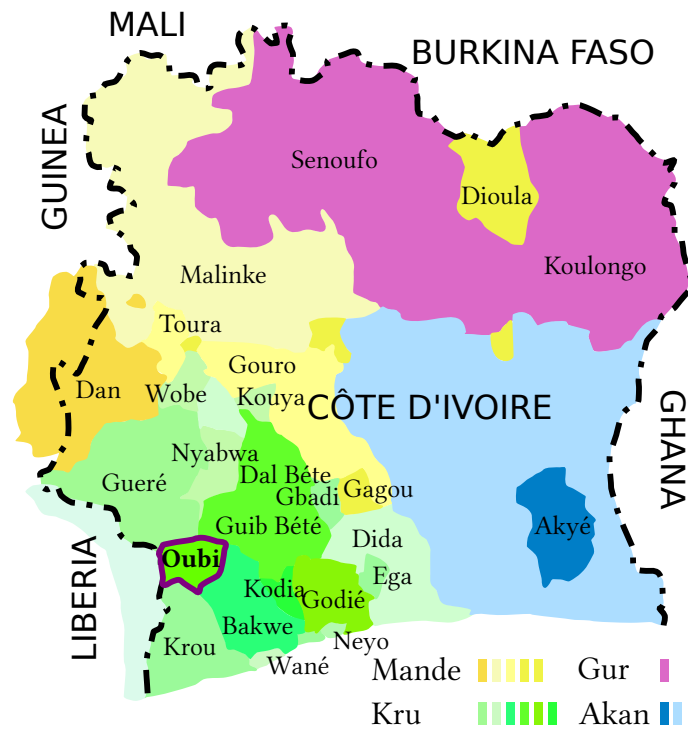


Figure 2: The location of Oubi in Côte d'Ivoire

i u
 e o
 ε ɔ
 a

Figure 3: Oubi vowels

	Labial	Alveolar	Palatal	Velar	Uvular
stops	p b	t d		k g	
fricatives	f	s (ʃ)			h
affricates			dʒ tʃ		
nasals	m	n	ɲ	ŋ	
laterals		l			
rhotics		r			
approximants	w		j		
complex	^m b	ⁿ d	(ⁿ dʒ)	gb (ⁿ g)	

Figure 4: Oubi consonants

4 Phonology

4.1 Inventory

We have identified 7 vocalic and 25 consonantal phonemes, given in Figures 3 and 4. Zogbo (n.d.) contains additionally /i/.

Notable consonants include prenasalized ^mb, ⁿd, and coarticulated gb. There might be labialized p^w, g^w, h^w, but further phonological analysis is necessary to ascertain whether we are dealing with a simple segment or with a complex onset here (Marchese 1983a). It might also be the case that ^mb and ⁿd are implosives ɓ, ɗ.

Additional vowels ɪ or ʊ could be expected, but could not be ascertained in minimal pairs. The difference between [e]/[ɛ] and [o]/[ɔ] cannot be assumed to be rendered faithfully in the words given here.

4.2 Vowel quantity

Words with different vowel durations were found, but no minimal pairs could be retrieved as of yet.

4.3 Tones

There are at least three different tones. See Figures 5 and 6. Given the linguistic (Dutch, American) and professional (vet) background of Jaffe, an analysis or even a transcription of the tone system was beyond the possibilities of this project. It is hoped that this shortcoming will soon be fixed by researchers with more training in this area.

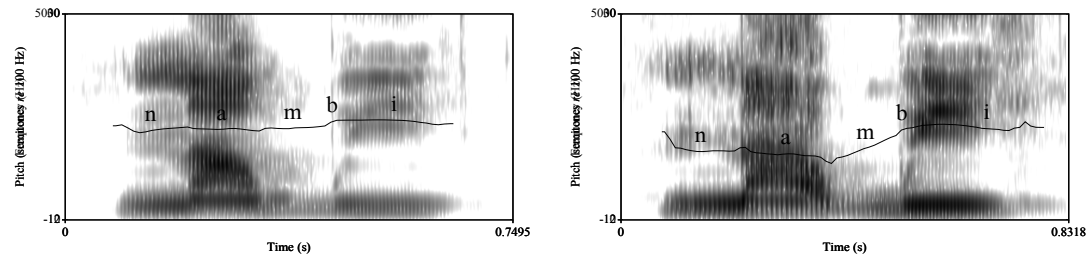


Figure 5: *nambi* ‘mon père’ vs *nambi* ‘ton père’

4.4 Suprasgmentals

There might be some vowel harmony phenomena.

- (1) a. *nowa* : *nuwi*
‘ear’ ‘ears’
- b. *kora* : *kuri*
‘hand’ ‘hands’

We see that upon the addition of a [+high] suffix *-i*, the vowel of the stem becomes [+high] as well.

4.5 Syllable structure

The syllable structure appears to be

- (2) (C)(L)V(:)(N)

L stands for /l/, /r/, or /w/ (if /w/ is to be analyzed as a separate segment here). N stands for a nasal.

4.5.1 Nucleus

The nucleus consists of one vowel, which can be short or long. Complex nuclei (i.e. diphthongs) have not been attested yet.

- (3) a. *mi* ‘go’
- b. *kooleng* ‘forest’

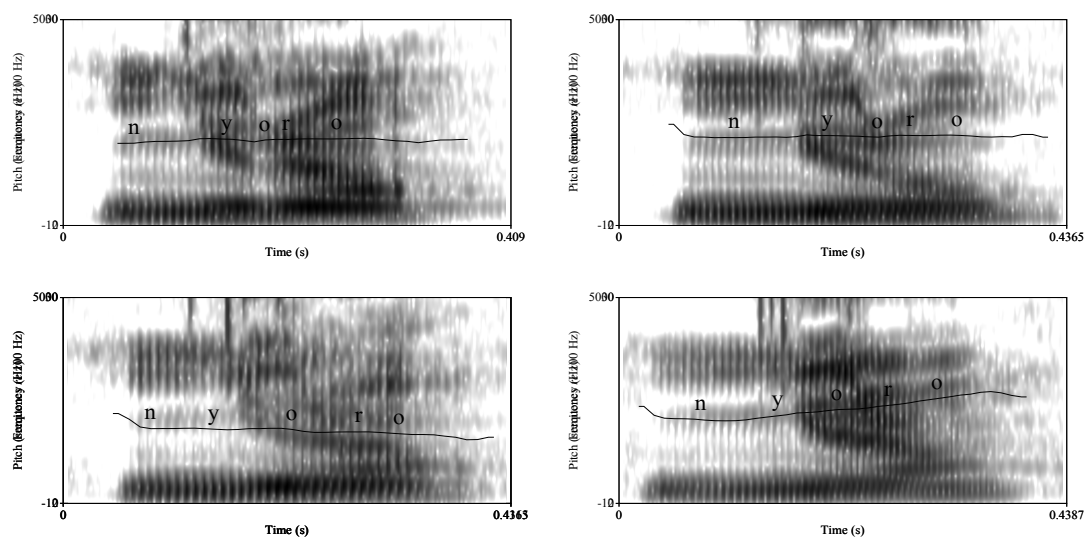


Figure 6: The fourfold minimal pair *nyoro* ('woman' (top left), 'women' (top right), 'day' (bottom left), 'name' (bottom right)). Next to tones, vowel quality might also play a role.

The nucleus may equally consist of a nasal.

- (4) *m* 'five' (Figure 7)

4.5.2 Onset

Most words have an onset. Attested words without an onset are

- (5) a. *arapo* 'tobacco (powder)'
 b. *oloa* 'rubber'

The onset normally consists of one consonant. All nasals can occur in the onset (*nga* 'tomorrow', *nyoswa* 'God'). Complex onsets do exist. The second consonant is /l/ or /r/ in these cases. Depending on analysis, *pw*, *gw*, and *hw* could be seen as a simple onset consisting of one complex segments or as a complex onset consisting of two segments (Marchese 1983a).

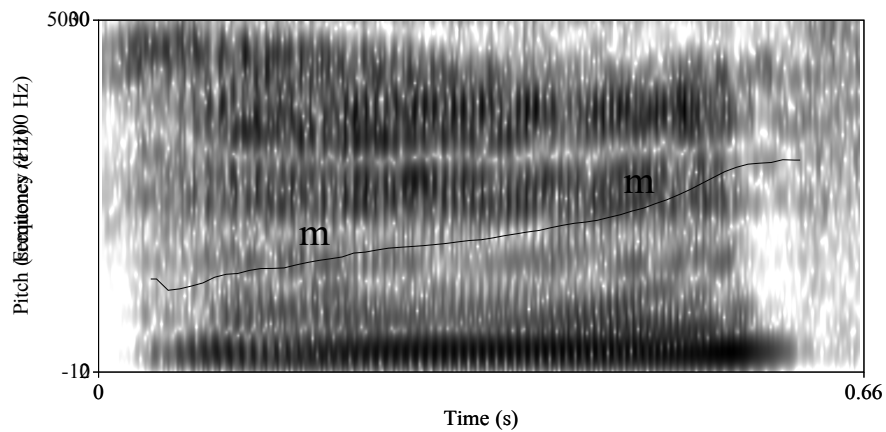


Figure 7: *m* ‘five’

Attested words with complex onsets are

- (6) a. *kli* ‘strength’
 b. *kra* ‘now’
 c. *hɾɛŋ* ‘hurt’
 d. *chrɔ* ‘butterfly’
 e. *srɛ* ‘braids’
 f. *pwe* ‘legs’
 g. *djwe* ‘SINGULATIVE’
 h. *gwe* ‘chimp’
 i. *kwe* ‘banana’
 j. *kwɛŋ* ‘dead’
 k. *hwong* ‘here’

4.5.3 Coda

The nucleus can optionally be followed by a nasal or a glottal. The nature of the glottal needs further investigation. It is provisionally rendered as *h*.

- (7) a. *hwong* ‘here’
 b. *poh* ‘leg’

4.6 Word structure

Mono- and disyllables are common. There are a couple of trisyllables:

- (8) a. *tamanu* ‘guêpe maçonne’
 b. *geregbo* ‘rooster’

5 Morphology

5.1 Noun classes

This section lists the morphological noun classes that could be established. Note that we have no insights into the tone system. Tones might change in parallel, independently, or not at all between singular and plural.

We assume e- For some classes, this is still transparent in suffixation of *-i* to an otherwise unchanged stem. Other classes lose the final vowel upon adding *-i*. Yet other classes have their final vowel coalesce with the *-i*, leading to fronting and unrounding from [o] to [e] and from [ɔ] to [ɛ].

5.1.1 i-based

X-i

- (9) a. *dada* : *dada-i* ('duck' : 'ducks')
b. *fa* : *fa-i* ('goat' : 'goats')
c. *ku* : *ku-i* ('carp' : 'carps')
d. *sowo* : *sowo-i* ('horse' : 'horses')
e. *segu* : *segu-i* ('chameleon' : 'chameleons')
f. *wu* : *wu-i* ('mouth' : 'mouths')
g. *dje* : *dje-i* ('finger' : 'fingers')

a→i

- (10) a. *kla* : *kli* ('bone' : 'bones')
b. *nyawa* : *nyawi* ('cat' : 'cats')
c. *ka* : *ki* ('crab' : 'crabs')
d. *nya* : *nyi* ('pangolin' : 'pangolins')

e→i

- (11) *gbe* : *gbi* ('dog' : 'dogs')

5.1.2 ε→i

- (12) a. *dowe* : *dowi* ('animal' : 'animals')
b. *tone* : *toni* ('fly' : 'flies')
c. *blale* : *blali* ('sheep' : 'sheep plural')
d. *nawe* : *nawi* ('firewood 1 stick' : 'firewood plural')
e. *nyire* : *nyiri* ('breast' : 'breasts')

o→i

- (13) a. *sowo* : *sowi* ('donkey' : 'donkeys')
b. *dolo* : *doli* ('bird' : 'birds')

ɔ→i

- (14) *umɔ* : *umi* ('butt cheek' : 'butt (both sides)')

u→i

- (15) a. *fu-u* : *fu-i* ('sponge' : 'sponges')
b. *nalu* : *nali* ('feather' : 'feathers')
c. *tramanu* : *tramani* ('wasp' : 'wasps')
d. *gɔru* : *gɔri* ('lizard' : 'lizards')
e. *tu* : *ti* ('tree' : 'trees')
f. *wlu* : *wli* ('cord' : 'cords')
g. *pu* : *pi* ('gun' : 'guns')

5.1.3 coalesced

o→e

- (16) a. *gbo* : *gbe* ('foot' : 'feet')
b. *taro* : *tare* ('bat' : 'bats')
c. *wogbo* : *wogbe* ('mushroom' : 'mushrooms')
d. *paro* : *pare* ('comb' : 'combs')

ɔ→ɛ

- (17) a. *hwɔɲ* : *hwɛɲ* ('arm' : 'arms')
b. *pɔ* : *pwɛ* ('leg' : 'legs') [Slightly irregular]
c. *plɔ* : *plɛ* ('liver' : 'livers')
d. *chrɔ* : *chrɛ* ('butterfly' : 'butterflies')

o→ɛ

- (18) *mo* : *mɛ* ('horn' : 'horns')

o...a→u...i

- (19) a. *nowa* : *nuwi* ('ear' : 'ears')
b. *kora* : *kuri* ('hand' : 'hands')

5.1.4 a-based

Some nouns have their plurals based on the addition of a formative *-a*. This cannot be traced to the *-i*-based process mentioned above. All of the retrieved concepts pertaining to this class are (large) animals (cf. Marchese 1988: 328).

e→a

- (20) a. *tuwe* : *tuwa* ('buffalo' : 'buffaloes')
b. *gbuwe* : *gbuwa* ('crocodile' : 'crocodiles')

ε→a

- (21) a. *nugbe* : *nugba* ('hippo' : 'hippos')
b. *howe* : *howa* ('giant pangolin' : 'giant pangolins')

5.1.5 X-a

- (22) *di* : *di-a* ('spear' : 'spears')

5.1.6 Singulative

A singulative is used for instance for small animals.

- (23) a. *toni djwe* : *toni* ('one fly' : 'flies')
b. *beya djwe* : *beya* ('one termite' : 'termites')

6 Word order

6.1 Clauses

Word order is S V O. To wit:

- (24) a. *Dji di djre*
leopard eat monkey
'The leopard eats the monkey'
b. *Djre di dji*
monkey di leopard
'The monkey eats the leopard'

Some verbs trigger special suffixation on the undergoer:

- (25) *Dji weŋie djre-wɔŋ*
leopard bite monkey-SUF
'The leopard bites the monkey.'

Past/perfective is not segmentally marked. A marking via tones is probable.

- (26) Dji di djre toro
leopard eat monkey yesterday
'The leopard ate the monkey yesterday.'

Overt segmental marking of TAM or negation changes the word order from SVO to SAuxOV. This can trigger suffixation on the undergoer according to unknown criteria.

- (27) Dji **ni** djre di-**o** nga
leopard FUT monkey eat-SUF tomorrow
'The leopard will eat the monkey tomorrow.'

Negation is complex. It has double exponency and is sensitive to TAM. The preverbal negation markers are *ne* and *e* for present and past respectively, while the postverbal marker is *wɛ*

- (28) Dji **ne** djre di **wɛ**
leopard NEG.PRS eat monkey NEG
'The leopard does not eat the monkey.'

- (29) Dji **e** djre di toro **wɛ**
leopard NEG.PAST eat monkey yesterday NEG
'The leopard did not eat the monkey yesterday.'

In the future/irrealis, we find preverbal *ne mou* and no postverbal marker. The first one is the same as the one used for the present.

- (30) Dji **ne** **mou** djre di nga.
leopard NEG.PRES FUT monkey eat tomorrow
'The leopard won't eat the monkey tomorrow.'

7 Semantics

Some cursory remarks about semantics:

- the number system is quinary/vigesimal.
- innie and outie (belly buttons) are lexicalized and bear no morphological resemblance to each other
- same for ants: *dari* (red), *goplu* (large black), *tere* (small black biting), *kei* (tiny black), *nyao* (driver ants) are all different and have no umbrella term.

8 Outlook

8.1 Kru

The descriptive status of Kru is generally very poor (Harald Hammarström p.c.). It is as of yet unclear whether the Kru languages are genealogically related to the surrounding languages from the Atlantic-Congo family.

The Kru languages seem to form some dialect continuum (Marchese 1989; Allou 2017), where the mutual genealogical and contact relations are difficult to disentangle.

The chimp station is a very good environment to record natural data since a) there is a good pool of speakers b) speakers are generally not busy with other things like farming c) technological infrastructure is good, and d) transport of data to Leipzig and from there to a suitable archive should be easy to set up as there is regular circulation of the scientists.

Possibly, no in-depth linguistic training is required to oversee the recording workflow. This is true for documentation only, of course. Linguistic analysis will require more training than vets or similar will have at their disposal.

8.2 Repositories for data and analyses

We have set up a repository to gather and collection linguistics insights about the Oubi language (<https://lgdesc.github.io/glio1241>). This repository is uses the GitHub Pages setup to disseminate the findings. It is possible to work a) collaboratively b) distributed, and c) offline and include audio without too much technical knowledge. Tracking of open problems and issues is built-in, so that the task "Write-up of tone analysis" could be assigned to the user "Jane Smith" for instance, and be ticked off when it is done. The theoretical underpinnings for this are explicated in Weber (2006); Nordhoff (2008; 2012). The current version can be found here: <https://lgdesc.github.io/glio1241>. A similar project is Lau (2021+), describing the Abesabesi language from Nigeria.

With a data repository like ELAR <https://www.elararchive.org/dk0653> and an analysis repository like the one presented here, there can be a division of labor between data collectors and data analyzers.

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References

Allou, Serge Yannick. 2017. *Description linguistique et sociolinguistique du kouzie (parler kru de Côte d'Ivoire)*. Université Félix Houphouët Boigny. (Doctoral dissertation).

- Jaffe, Jenny. 2021. *Documentation of oubi*. London: Endangered Languages Archive. <http://hdl.handle.net/2196/00-0000-0000-0003-B45G-H> (7 June, 2021).
- Lau, Jonas. 2021+. *Abesabesi grammar*. <https://abesabesi.cceh.uni-koeln.de/grammar.html> (7 June, 2021).
- Marchese, Lynell. 1983a. La famille linguistique Kru. In *Atlas linguistique Kru: Essay de typologie*, 3rd edn., 9–88. Abidjan: Agence de Coopération Culturelle et Technique (ACCT).
- Marchese, Lynell. 1983b. Listes de lexemes kru. In *Atlas linguistique Kru: Essay de typologie*, 3rd edn., 323–405. Abidjan: Agence de Coopération Culturelle et Technique (ACCT).
- Marchese, Lynell. 1988. Noun classes and agreement systems in Kru: A historical approach. In *Agreement in natural language: approaches, theories, descriptions*. Stanford: CSLI.
- Marchese, Lynell. 1989. Kru. In John Samuel-Bendor (ed.), *The Niger-Congo languages : A classification and description of Africa's largest language family*, 119–139. Lanham: University Press of America-SIL.
- Nordhoff, Sebastian. 2008. Electronic reference grammars for typology: Challenges and solutions. *Journal for Language Documentation and Conservation* 2(2). 296–324. <http://hdl.handle.net/10125/4352>.
- Nordhoff, Sebastian. 2012. The grammatical description as a collection of form-meaning pairs. In Sebastian Nordhoff (ed.), *Electronic grammaticography*, 33–62. Manoa: University of Hawai'i Press.
- Vanderaa, Larry. 1991. *A survey for Christian reformed world missions of missions and churches in West Africa*. Grand Rapids, Michigan: Christian Reformed World Missions.
- Weber, David. 2006. Thoughts on growing a grammar. *Studies in Language* 30(2). 417–444.
- Zogbo, Lynell. N.d. *Oubi word list*. Also available via <https://lgdesc.github.io/glio1241/lexicon/ZogboWordlist>. http://www.reflex.cnrs.fr/database/index.php?module=reconstruction&state=dst_search_in.