

This lecture was delivered in ECAS 2009 (3rd European Conference on African Studies, *Panel 142: African waters - water in Africa, barriers, paths, and resources: their impact on language, literature and history of people*) in Leipzig, 4 to 7 June 2009.

"From the Yellow Nile to the Blue Nile. The quest for water and the diffusion of Northern East Sudanic languages from the fourth to the first millenia BCE".

Dr. Claude Rilly (CNRS-LLACAN, Paris)

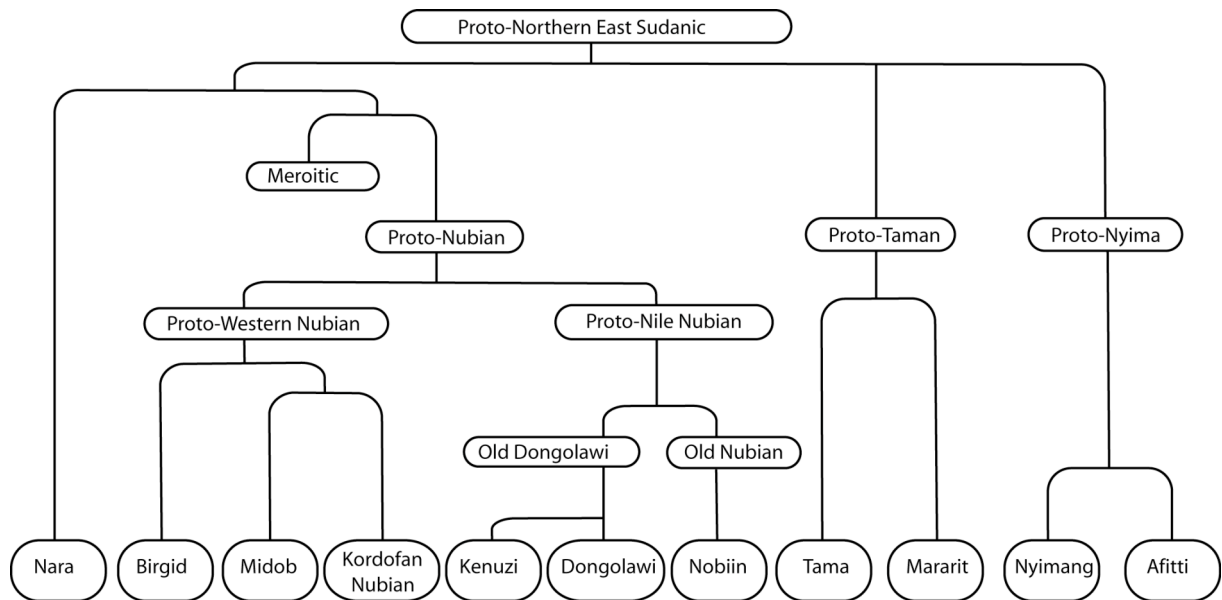
The quest for water and hence, for food supply, is a key issue in the appearance and diffusion of languages in the Sahelian regions of Africa. Climate changes, as occurred from the end of Neolithic period down to the second millennium BCE, played a major role in the redistribution of populations along the Nile river and its tributaries and can explain the appearance of a recently defined linguistic family, namely Northern East Sudanic (NES). This paper must be considered as a synthesis of several recent publications I wrote on this subject, so that I shall have to refer the reader, more often than not, to these earlier studies. Detailed demonstration of all these points would require much more time than is allotted to me.

The Northern East Sudanic language group

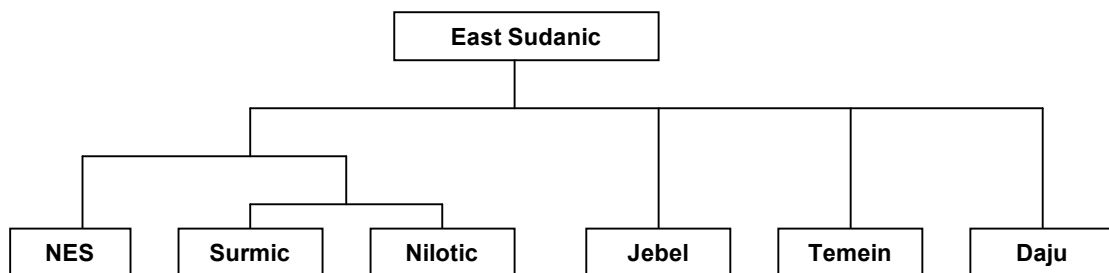
In his seminal study published in 1963, J. H. Greenberg divided the languages of Africa into four major phyla or superfamilies, namely Afroasiatic, Niger-Congo, Khoisan and Nilo-Saharan. If the three first phyla were more or less obvious, Nilo-Saharan was not so easily constituted, requiring from Greenberg a long work to merge twelve different families into one phylum. Still today, many linguists have doubts about the validity of this particular family. However, the core of this phylum, namely the East Sudanic group, is generally considered as secure. It was already constituted in Diedrich Westermann's classification of African languages, in the first half of the 20th century. Greenberg did not work any sub-classification and presented East Sudanic as a simple "rake"-shaped genealogical tree, comprising nine branches : Nara (formerly called Barya), Nubian, Taman (Tama + Mararit), Nyima (Nyimang + Afitti), Surmic, Jebel (Ingessana + related languages), Temein, Daju and Nilotic. Most of these languages extend from Western Chad (Taman) to Southern Ethiopia (Surmic) and in the case of the huge Nilotic family, further south to Uganda, Kenya and Tanzania.

A last language was left aside, namely Meroitic, the language of the inscriptions of the ancient kingdom of Meroe, in Sudan (300 BCE – 350 AD). Very little was known about this language since most of the texts still escaped translation. The scattered elements of lexicon and grammar worked out by the decipherer of the script, Francis Llewelyn Griffith (1911) were just enough to dismiss a direct filiation with the Nubian languages that superseded Meroitic in the Middle Nile valley in the Middle Ages. In 1964, Bruce G. Trigger, a young Canadian archaeologist, published a short paper where he tentatively linked Meroitic with East Sudanic languages, principally Nubian and Nara. However, the data he used for Meroitic were partially erroneous and his theory was rejected by the main specialist of Meroitic, Fritz Hintze. According to Hintze, in spite of several common points (chiefly typological) between Nubian and Meroitic, no positive conclusion for an actual genetic link could be drawn without morphological and lexical reconstruction of Proto-East Sudanic and subsequent comparison with Meroitic (Hinze 1989).

Coming to this issue some forty years after Trigger, I could rely on further progress in the understanding of Meroitic on the one hand, and in new descriptions of East Sudanic languages on the other hand. The results of this work have been partially published in several papers (for instance in Rilly 2008a) and is detailed in my next book in press (*Le méroïtique et sa famille linguistique*). It displays cogent evidence, both lexical and morphological, for including Meroitic in a sub-group of East Sudanic which I termed "Northern East Sudanic" (NES), after a suggestion of the Nilo-Saharanist M. L. Bender. This family comprises four of the East Sudanic groups : Nara, Nubian, Taman and Nyima, plus Meroitic. All these languages display the same typological features (word-order for instance), although they are separated by typologically different languages. Moreover, I reconstructed some 170 lexical proto-forms and several morphological elements such as article, copula, case-endings, plural markers, negative particle. All of them fit closely with their Meroitic counterpart and it has been possible to work out an overall classification of NES where Meroitic can be precisely located.



The other East Sudanic languages are not as closely related. Contrary to Bender's assumption (Bender 1996), I think they do not constitute a single family, "Southern East Sudanic" or, according to Bender's terminology, "En" (whereas NES was "Ek"). Nilotic and Surmic are closer to NES and between them than Jebel, Daju and Temein. A tentative genealogical tree would be as follows :



Proto-NES lexicon, although resulting from a strictly linguistic reconstruction, was obviously spoken by a homogeneous community restricted to a continuous territory. It includes several cultural items such as "spear", "shield", "build / plait", "house / hut", "door". Even the name of the Creator God can be reconstructed as *Aberdi (Nara *èbbéré*, Proto-Nubian *ebed-, Nyimang *ábrđi*, Meroitic *Apede-* [əbede]). The economic structure of this original population can also be determined. The proto-lexicon includes several items connected with cattle and livestock tending : "goat", "sheep", "milk", and on a more restricted scale, "cow" and "bull", but nearly no word connected with agriculture, excepted a common term for "millet" which has various meanings in daughter-languages so that the original meaning might have been just "grain" or "cereal". No common term can be reconstructed for "field", "to weed", "to irrigate". It is therefore highly probable than the proto-NES speakers were pastoralists, using wild cereal processing as an additional mean of subsistence. It might be significant that in Meroitic and Proto-Nubian, the word for "slave" (resp. *nob* [nuba] and *nogu) was derived from the Proto-NES word for "earth", "silt" (*log-).

The original cradle of Proto-NES : lexical and statistical issues

If the Proto-NES community lived in a restricted area, the question arises to know where this area was located and why the daughter-languages are presently spread upon such a wide space, from Chad to Eritrea, though no historical element can be found in favour of an diffusion of a imperial type. The answer can partly be found in the Proto-NES lexicon. Meroitic is the earliest known NES-language and since it was spoken along the Middle Nile, one could tentatively assume that there lied the cradle of Proto-NES. However, no common word can be reconstructed for the specific fauna or flora of the Nile banks. For instance, the word for "crocodile" in Nile Nubian (*elum / ulum*) and in Nara (*âálmâ*) is adapted from the Proto-NES word for "hyena" (*alum, cf. Nyimang *ólúm*, Nubian Midob *ármí* "jackal") : when settling along the rivers (Nile or Atbara/Gash), Nubians and Nara have operated a semantic shift from the hyena to the crocodile, both animals having dangerous jaws. Similarly, no common root can be found for "hippo" and "fish". It could be assumed that populations living in semi-arid areas have just lost these proto-words. However, it is more likely that these animals were absent from the Proto-NES lexicon. Evidence can be found in Nile Nubian (Kenuzi / Dongolawi and Nobiin) *erid ~ erit* "hippo". A more recent term is *essi-n-tii* in KD and *aman-tii* in Nobiin, both compounds meaning "river-cow". Reinisch already assumed that these compounds were just updated forms of *erit*. The old word *erit* is derived from Proto-Nubian *iwer + *n + *tii "cow of the river" and have been updated in both languages when the old word for "river" has been superseded by the word for "water", *essi* in KD, *ámán* in Nobiin. The Old Nubian word is not yet attested, but it must have been close from the compound *iwer-n-tii, since it is obviously from the Old Nubian word that the Sudanese Arabic *girinti* "hippo" was borrowed, instead of standard Arabic *hiṣaan al-baḥr* "river horse", which was literally translated from Greek *hippo-potamos*. Such metaphorical designations as "river cow" or "river horse", as much from Nubians than from Greeks or Arabs, are typical of populations encountering a new animal.

As for "fish", most NES-languages borrowed the word from other languages (in Nara from Tigre, in Nyimang from Temein or Arabic, in Tama from Chadic Arabic). The word is different in both Nile Nubian languages (KD *karre*, nobiin *àḡíssi*), so that it is doubtful if a common proto-word has ever existed in Proto-Nubian, not to mention Proto-NES. It is significant that the elite of the kingdom of Kush at the time of King Piankhy (ca. 730 BCE), although settled along the Nile for centuries, considered fish-eaters as impure and unworthy to enter the Amun Temple. However, Neolithic populations settled along the Nile lived at least

partially on fish, as attested by archaeological remains. So, Kushites (ancestors of Meroites) as well as Nubians, can hardly be considered as originating from the Nile banks.

The Proto-NES lexicon for plants exhibit similar features. Names of trees such as "dum palm" (*Hyphaene thebaica*) or "jujube tree" (*Zizyphus spina-christi*) can be reconstructed as *ambi(-ti) and *kusir(-ti). These trees are typical of semi-arid areas such as Kordofan, whence most of the dried jujubes sold on Sudanese markets come today. By contrast, no Proto-NES root can be reconstructed for "date palm", although this tree is known at least since 2000 BCE in the Middle Nile Valley. All the designations of this tree in Mararit, Western Nubian and Nyima were borrowed from the Nile Nubian word (KD *benti*, Nobiin *féntí*), which is itself a loanword from Ancient Egyptian *bnr / bny* (with Nubian singulative suffix *-ti*) and probably passed into Nile Nubian through Meroitic.

All these lexical elements tend to indicate that the original cradle of the NES-languages must be sought in the Sahelian regions rather than along the Nile. The "principle of least movement", used mainly in genetic studies for the diffusion of species – but also relevant for historical linguistics –, can help in locating more precisely this original cradle. According to this principle, when a species spread over a large territory, the greatest genetic variety is statistically observed near the original centre of diffusion. Among the three main branches of NES, two (Taman and Nyima) are located in the Sahelian zones of Darfur and Kordofan. In the remaining branch (Eastern branch), this is also the case of Proto-Nubian.

The original cradle of Proto-NES : chronological and palaeoclimatic issues

Another issue is chronology : when did Proto-NES split into different groups ? The earliest attested daughter-language is by far Meroitic. Early scholars thought it appeared in the Nile Valley at the time of the first rulers of Napata, around 850 BCE. However, I have presented elsewhere (Rilly 2007b) evidence that traces of Proto-Meroitic personal names could be found in Egyptian texts dated to the end of the Kingdom of Kerma (ca. 1600 BCE). In addition, strong elements in favour of the presence of names fitting with the Proto-Meroitic phonology can be found in the Egyptian lists of bewitched enemies from Kerma as early as the 12th Dynasty (ca. 2000 BCE). Therefore a chronological span around the second half of the third millenium BCE for the splitting of the NES-group is by no means exaggerated. The question is now to find what event caused this splitting.

The University of Cologne have conducted in the last decades an ambitious archaeological project (BOS, later ACACIA, cf. Kuper & Kröpelin 2006, Jesse 2004) in the region of the Wadi Howar. This wadi – also called the "Yellow Nile" – is a former tributary of the Nile running from Ennedi range, in Chad, through Darfur and Kordofan and joining the Nile at el-Debba, north of the great bend of the Nile, 100 km south of Kerma, where the first Kushite state was founded around 2500 BCE. As Eastern Sahara underwent desertification, between 5000 and 3500 BCE, the Wadi Howar attracted a numerous population, especially from the North, until its course became disrupted and finally just temporary around the middle of the 2nd millenium BCE. Nowadays, only the Upper Wadi Howar, in Darfur, retains some water at the time of the seasonal rains. The Wadi Howar was densely populated during three millenia, as can be deduced from the 1700 archaeological sites of various size spotted by the Cologne team. The banks of the wadi are surrounded by additional archaeological sites such as Gebel Tageru in the south, Erg Ennedi in the north and Ennedi range in the west.

Three phases of settlement have been determined in the Wadi Howar. From 5000 to 4000 (phase 1), the river is continuously full and its bank harbour settlements of hunter-gatherers, that live also on fish and molluscs. From 4000 to 2200 (phase 2), the Lower Wadi

Howar, close to the Nile, gets dry. New settlers, coming from the neighbouring regions where desertification is gaining ground, are now living mainly on cattle. Goats and sheep are introduced at the end of this period. Contacts with the Nile valley are indicated by imported ceramics of the "herringbone" type. From 2200 to 1100 BCE (phase 3), the whole wadi is dry most of the time, with some humid places during the rainy season in the Upper and Middle Wadi Howar. Settlements are still numerous, but more scattered. The main diet is now made of sheep and goats, as cattle is too exacting for an increasingly arid environment. Donkeys, introduced to Sudan from at least 2500 BCE, play a major role in the nomadic way of life of the last settlers. After 1100 BCE, the region becomes hardly hospitable, excepted in the Upper Wadi Howar.

What can be deduced from the history of Proto-NES fits perfectly with these archaeological and palaeoclimatic data. The crystallisation of the proto-language possibly occurred when cattle-tenders settled together along the Wadi Howar around 4000 BCE, whereas the splitting into different linguistic groups would result from the progressive dessication of the river.

Splitting and migrations of the NES groups

The original splitting into three main branches (Eastern, Taman, Nyima) might have occurred at the beginning of the third millenium BCE. The Eastern branch was probably settled in the eastern parts of the riverbed that were still hospitable at this time, namely the Middle Wadi Howar. As aridity increased, this branch splitted into three groups : Kushites, Proto-Nara and Proto-Nubians. Kushites (the ancestors of Meroites) headed to the Nile banks where they took part in the founding of the Kingdom of Kerma (2500 – 1500 BCE). It seems that the first settlement on this site, called Pre-Kerma (3500 – 2500 BCE), was too early to have already included Kushites as they might still have been living in the Wadi Howar at the time. By contrast, the anthropologist Christian Simon (in Bonnet 1990, p. 103-106) has demonstrated that the population of the Kingdom of Kerma was genetically heterogeneous. Three main clusters (A, B, C) can be determined. Cluster A is close to a sample of modern Kenyan skeletons. Cluster C is very similar to a sample of Middle Empire skeletons from the region of Assuan, whereas Cluster B, although distinct from Cluster C, shares many common features with it. Cluster C is mainly present in the first times of Kerma (*Kerma ancien*, 2500 – 2050 BCE) and possibly represents the descendency of the Pre-Kerma population, that founded Kerma 4 km away from the original settlement, when the Nile riverbed shrunk because of increasing aridity. However, the fact that their cemetery remained on the ancestral site might indicate cultural and ethnical continuity between Pre-Kerma and the new city. Cluster A and B were already present in *Kerma ancien*, but become majoritary in the following stage (*Kerma moyen*, 2050 – 1750 BCE). The early Kushites were probably one these two group (presumably B). Nonetheless, their importance grew rapidly in the population of the city and their language, Proto-Meroitic, became the language of the elite and possibly of a great part of the population as is obvious from the Egyptian sources.

The Proto-Kushite migration from the Wadi Howar to the Nile took place roughly at the same time than the migration of Proto-Nara. It seems Proto-Nara split later in two groups. A first group, the ancestors of modern Nara, went upstream along the Nile and along its tributary, the Atbara river, to Western Eritrea, where they settled probably during the second millenium BCE and where they still live today. The second group settled in Lower Nubia. This population of semi-nomadic cattle-tenders has been labelled as "C-group" by early archaeologists. They were rapidly incorporated into the successive kingdoms of Kush (Kerma, Napata, Meroe), and later in the early Nubian kingdoms. However, they kept their original

language alive until the early Middle Ages since one of the two Nile Nubian languages, Nobiin, includes specific non-Nubian words that are close to Nara (Rilly 2008b). Cultural links between the C-group and the early population of Eritrea have been evidenced by Fattovitch (1990) from ceramic analyses.

The movements of the Proto-Nubians, the third group of the Eastern branch of NES, are more mysterious. Nubians for sure did not invade the Nile Valley before the last period of the Kingdom of Meroe (see Rilly 2008c). On the other hand, it seems that the spectacular phonological changes that affected the Western Nubian languages (especially Midob and Kordofan Nubian) took place only recently, so that the splitting between the Nubian groups might be not so old, not earlier anyway than the end of Antiquity. Finally, the general proximity between Meroitic and Proto-Nubian, and the conservative aspects of Proto-Nubian phonology and lexicon (reflecting faithfully Proto-NES) tend to show that it remained a long time isolated and untouched by exogenous influences. Proto-Nubians might have remain in regions that were still hospitable until the first millenium BCE, such as some parts of the Middle Wadi Howar or the Gebel Tageru. They progressively gained influence over a great territory. In the middle of the 3rd century BCE, Eratosthenes describe them as "a great people living west of the Nile". The conflicts with the Meroites became more and more frequent, as attested in the Meroitic texts mentioning military campaigns against the "Nuba". The increasing dessication of the region pushed them towards the green banks of the Nile and they finally invaded the Kingdom of Meroe around 350 BC, putting an end to the last pharaonic power of the Nile.

As for the Proto-Taman, whose language constituted the second branch of the NES linguistic group, they probably went upstream to the Upper Wadi Howar, which still has some seasonal water, no far from the region where they live today. If they came there through different routes, there is no way to know it because historical data for them are available only for the last four centuries.

Finally, the Proto-Nyima, the third branch of NES, went obviously to the south, just north of the Nuba mountains where they had contacts with the Nubian Christian kingdoms as attested by the names of some days of the week (for ex. Nyimang *kìràgè* "Sunday" < Old Nubian *kuriAke* / *kurake* < Greek κυριακῆ, see Rilly, *in press*, p. 188-190). They were pushed into the Nuba mountains by the slave-raiding "Arabic" tribes of Kordofan, not earlier than the 14th century.

The Wadi Howar diaspora and the cradle of East Sudanic (ES)

This hypothesis, namely the Wadi Howar diaspora, was issued independently by the present author and Prof. G. Dimmendaal, professor at the Institut für Afrikanistik of the Cologne University, on the same basis, i.e. converging linguistic, archaeological and palaeoclimatical data. As we reconstructed this scenario in 2003, Prof Dimmendaal presented a first paper in Lyon on the subject. He recently published a first cursory article in an edited book (Dimmendaal 2007) and has a more detailed paper in press for the next issue of *SUGIA*. It is obviously significant for the validity of this hypothesis that it was issued at the same moment by two scholars working on East Sudanic languages.

Although roughly similar, Dimmendaal's theory and the author's differ in the identification of the original population of the Wadi Howar. In his opinion, they were Proto-East Sudanic speakers and not merely Proto-Northern East Sudanic, although he admits our classification of NES as a consistent group. He assumes that the Proto-ES speakers split into three groups : Nilotic and Surmic in the Lower Wadi Howar, NES in the Middle Wadi Howar and Temein and Daju in the Upper Wadi Howar.

I think the key issue for this question is a matter of chronology. Dimmendaal followed the outdated theories of our predecessors and placed therefore the appearance of Meroitic on the Middle Nile around 800 BCE. This late date leaves, between the crystallisation of Proto-ES around 4000 BCE and the dispersion of the groups, a sufficient span of time (more than two millenia) for the daughter-languages to acquire the linguistic differentiation that exist between them. However, Meroitic is attested much earlier, at the end of the second millenium, as stated above in this article. So the migration of a part of the Eastern branch of the NES group did not occur much later than 2500 BCE and accordingly, the splitting of the NES languages into three branches hardly occurred before 3000 BCE, because the three branches, Eastern, Taman, Nyima display considerable divergences whereas the Eastern group is very coherent. Finally, there is no more than one millenium left for the crystallisation of Proto-ES, its splitting along the wadi into three groups and for the Proto-NES to gain a cultural homogeneity which can be deduced from the common lexicon. This span of time seems too small, especially in consideration of the large differences existing between the East Sudanic language groups, as much for typology than for lexicon or morphology.

Another solution must therefore been found to explain the appearance of Proto-ES and its articulation with NES. Domestication of cattle gives here a clue. The ES languages exhibit common roots for cattle-tending, here the word for "cow" :

Nubian :

Old Nubian : *touei-* cow, *tini-* cattle

Kenuzi-Dongolawi : *tii*

Nobiin : *tii*

Kordofan Nubian / kadaro, ghulfan : *té*, tagle, dair, dilling : *tii*

Birgid : *tei*

Midob : *tàə*

Taman / Tama : *tee*, Erenga : *tè*, Mararit : *tee*

Surmic / Didinga : *tánà*, Murle : *táj* (pl. *tiin*), Baale : *tájja*, Majang : *taŋ*

Jebel / Gaam : *tóó*

Temein : *nṭeŋ*, pl. *ki-tuk*

Daju : *teyné*

Nilotic / Shilluk : *dean*, Nandi : *tàny*, Maa : *kí-tèŋ*

Proto-Nilotic : **ḍeŋ*, pl. **ḍok* (Dimmendaal, pc)

We might therefore suppose that Proto-ES were already cattle-tenders. As domestication is not attested in the Wadi Howar before 4000 BCE, one must suppose either that Proto-ES appeared at this time and in this place – and this is Dimmendaal's opinion, or that Proto-ES is earlier and appeared somewhere else – and this is my opinion.

The first traces of domesticated cattle in Africa are known on the southern sites of the Libyan desert, not far from the Sudanese border: Nabta Playa, Bir Kiseiba and Gilf Kebir, the latter being famous for his wonderful rock-paintings. For Nabta Playa, domesticated cattle remains were dated to 8000 BCE. This early date has been recently confirmed by the discovery in El-Barga, a site close to Kerma, of similar remains dated by radiocarbon to 7000 BCE. The analyses of the Cologne team (see Kuper – Kröpelin 2006) have shown that the population of the region of Nabta Playa and Gilf Kebir, where desertification occurred as soon as the end of the 6th millenium, went south to the Wadi Howar and some other Northern Sudanese sites in search of more hospitable pastures for their cattle.

In my opinion, the crystallisation of Proto-East Sudanic took probably place in the South of Egypt, where animal husbandry appeared much earlier than in Wadi Howar. The dessication of the Egyptian desert caused a first diaspora between the ES groups. One of these

groups went further south, in the Wadi Howar region, developing a specific culture during several centuries, before growing aridity caused a second diaspora that drove them to different regions. This scenario of a double diaspora explains the common lexicon for cattle in ES groups and leaves enough time for these groups to get the considerable linguistic differences that exist between them.

REFERENCES

- Bender, M. L. 1996, *The Nilo-Saharan languages : a comparative essay*, Munich, Lincom Europa.
- Bonnet, C. 1990 (éd.), *Kerma, royaume de Nubie*, Geneva, Musée d'art et d'histoire.
- Dimmendaal, G. 2007, in Bubenzer, O., A. Bolten et F. Darius (éds.), *Atlas of Cultural and Environmental Change in Arid Africa*, Cologne, Heinrich-Barth-Institut : p. 148-149.
- Dimmendaal, G. , *in press*, « Eastern Sudanic and the Wadi Howar and Wadi el Milk diaspora », to appear in *SUGIA* 19.
- Fattovitch, R., 1990, « The Peopling of the Northern Ethiopian-Sudanese Borderland between 7000 and 1000 BP: A Preliminary Model », in Scholz, P. O. & D. G. Müller (Eds.), *Internationales Jahrbuch für äthiopische, meroitische and nubische Studien*, Nubica I / II, Cologne, Jürgen Dinter : p. 3-45.
- Greenberg, J. H. 1963 : *Languages of Africa, 2nd rev*, The Hague, Mouton.
- Griffith, F. Ll. 1911, *The Meroitic Inscriptions of Shablûl and Karanóg*, E. B. Coxe Expedition to Nubia, VI, Philadelphia, University of Pennsylvania.
- Hintze, F. 1989, « Meroitisch und Nubisch, eine vergleichende Studie », *Beiträge zur Sudanforschung*, 4 : p. 95-106.
- Jesse, F. 2004, « The Wadi Howar », in Welsby, D. & J. R. Anderson (Eds.), *Sudan. Ancient Treasures*, The British Museum Press : p. 53-60 .
- Kuper, R. & St. Kröpelin, « Climate-Controlled Holocene Occupation in the Sahara : Motor of Africa's Evolution », *Science*, 313, August 2006 : p. 803-807.
- Rilly, C. 2007a, *La langue du royaume de Méroé. Un panorama de la plus ancienne culture écrite d'Afrique subsaharienne*, Bibliothèque de l'École pratique des hautes études, Sciences historiques et philologiques, t. 344, Paris, Champion.
- Rilly, C. 2007b, « The Earliest Traces of Meroitic », in Payne, D. L & M. Reh (Eds.), *Advances in Nilo-Saharan Linguistics. Proceedings of the 8th Nilo-Saharan Linguistic Colloquium, University of Hamburg, August 22-25, 2001*, Cologne, 2007, Rüdiger Köppe : p. 207-214.
- Rilly, C. 2008a, « The linguistic position of Meroitic. New perspectives for understanding the texts », *Sudan & Nubia*, p. 2-12.
- Rilly, C. 2008b, « On a retrouvé les mots du groupe C », *La Recherche* 425 (01/12/2008), p. 48-51.
- Rilly, C. 2008c, « Enemy Brothers. Kinship and Relationship between Meroites and Nubians (Noba) », in Godlewski, W. & A. Łajtar (Eds.), *Between the Cataracts. Proceedings of the 10th Conference of Nubian Studies, Warsaw, 27 August – 2 September 2006. Part one. Mains Papers*, Varsovie, PAM : p. 211-225.
- Rilly, C. *in press*, *Le méroïtique et sa famille linguistique*.
- Trigger, B. G. 1964, « Meroitic and Eastern Sudanic: a Linguistic Relationship? », *Kush*, 12 : p. 188-194.