

CENTRAL AFRICAN HUNTER-GATHERERS  
IN A MULTIDISCIPLINARY PERSPECTIVE:  
CHALLENGING ELUSIVENESS

**Offprint of the article**

‘Are the African Pygmies an ethnographic  
fiction?’

by Roger M. Blench

pp. 41-60

N.B. The bibliography in this volume is a  
composite, so I have printed the references  
separately from the original computer file.

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*Introduction: the traditional view*

The literature on African pygmies is becoming extremely voluminous, although coverage of the many groups remains extraordinarily uneven. The origin of the African pygmies formerly excited considerable scholarly debate but has recently been rather in abeyance. The common view, however, is that the pygmies are the ancient denizens of the forest zone, dating from at least the Middle Stone Age (MSA) (see e.g. Cavalli-Sforza 1986a). They would have lived by hunting and gathering until they encountered expanding Central Sudanic, Adamawa-Ubangian and Bantu-speaking farmers ca. 4000 bp<sup>1</sup>. Since that date they have lived in a symbiosis with the farmers, often as a despised and marginalised group. If this is the case, then major archaeological sites in the area of the present-day rain-forest are presumed to be the traces of these ancient pygmy groups. These sites have problems of dating, but it is usually assumed that the sites, "Sangoan" or "Lupemban" are ca. 40,000 years old (the usual limit of radio-carbon dating).

A problem with this identification has always been the absence of any distinctive pygmy language. All pygmy groups encountered speak Central Sudanic, Adamawa-Ubangian or Bantu languages, usually those of the agricultural group to which they are bound. However, in some cases they speak a quite different language, but never a language unrelated to those spoken elsewhere in the region. The usual explanation for this is that they have "lost" their language, that they once spoke different languages altogether but that these had vanished through their association with farming peoples. If so, various authors have reasoned that it should be possible to recover elements of this language by identifying substrate elements, especially those dealing with hunting technology and food exploitation. This view has been given a major boost by the publications of Bahuchet (1992b, 1993a, 1993c) comparing the languages of the Aka and Baka pygmies. These pygmy groups speak only distantly related languages, but share a considerable amount of vocabulary in semantic fields associated with subsistence.

In view of their physical distinctiveness, the pygmies have long been the subject of biological and genetic studies, such as those collected in Cavalli-Sforza (1986) or Seitz (1994). None of the results of these studies are unambiguous but the tendency is to underline the distinctiveness of the pygmy populations. Recent genetic trees published in studies of the genomes of African populations appear to confirm this

<sup>1</sup> Lower case indicates uncalibrated or estimated figures

point of view, especially those in Cavalli-Sforza et al. (1994) which place the Mbuti as a primary branching of sub-Saharan populations.

Despite this, the identification of the pygmies with the ancient hunter-gatherers known through archaeology remains problematic. The present paper<sup>2</sup> argues against such an identification and suggests that the pygmies should be regarded rather as specialised castes of their larger neighbours who have developed a distinct ethnicity relatively recently. It also suggests that there are other candidates for the makers of stone tools, the residual non-pygmyoid hunting-gathering groups that today fringe the rain-forest. Despite their fragmentary nature, these populations are more phenotypically and linguistically diverse than the pygmies. This in turn helps explain why Africa is apparently so much less diverse linguistically than Papua or the New World, despite being the supposed Heimat of modern humans. It also has implications for the romantic view of the pygmies as the inhabitants of the "deep forest" and in some sense the "indigenous people" of the continent.

#### *Reasons for being suspicious of the traditional view*

##### a. Language

All pygmy groups encountered speak Central Sudanic, Adamawa-Ubangian or Bantu languages. While it is of course possible for linguistic shifts to eliminate languages, it is remarkably suspicious that this has happened universally. There is an obvious contrast with the Khoisan languages – although many have disappeared, many remain. Moreover, Khoisan remains as a substrate in many Bantu languages, where its distinctive phonology remains easily traceable. Since we have no evidence for them, it must be argued that the "lost" languages of the pygmies had phonologies and word structures conveniently similar to the incoming languages so that no trace of them can now be reconstructed.

If the pygmies have indeed shifted languages it would be logical for them to retain many terms associated with food production in the forest as well as terminology for flora and fauna since they would have been familiar with these prior to the coming of the agriculturists, for whom the forest would be a strange environment. Letouze (1976) attempted to extract distinctive pygmy vocabulary relating to flora in the Cameroun region but at that period too little was known about the ethnobotanical vocabulary of either the Bantu or other pygmies to reach any conclusion. More recently this question has been studied in detail for the Aka and Baka by Bahuchet (1992b, 1993a, 1993c) who share a considerable amount of vocabulary in semantic fields associated with subsistence.

Bahuchet takes this shared lexicon for a survival of the original Ur-language of the pygmies. There seem to be several problems with this. The most important is that also shared in these semantic fields are words for relatively recently introduced items, such as cassava, a New world cultigen. Although the Aka and Baka do not exactly border one another, they are relatively close in geographical terms and it seems likely that these are recent areal spreads. This cannot be tested since Bahuchet does not provide the non-pygmy distribution of many of the lexical items on which the case rests. Klieman (p.c.) observes that at least some of them are found widely in this region in languages spoken by agriculturists. To compound this, Demolin (1996) has recently compared the diverse languages spoken by the pygmy groups in the northeast of the rainforest in the Ituri. By contrast with Bahuchet, he finds no evidence for substrate languages.

##### b. Archaeological evidence

Dating sites of the antiquity required by this argument is problematic. Stone tools are often found in unstratified contexts and can only be dated indirectly through typology or sediments. Sites across the region today covered by rainforest are described in Clark (1966), Van Noten (1982a), De Maret (1985, 1993) and Clist (1995, this volume; and references therein). The principal finds are heavy-duty picks, pushplanes, choppers and associated light-duty tools of types usually known as Sangano or Lupemban. In southern Africa there is, in global terms, a very early appearance of microliths, perhaps earlier than 50,000 bp, marking the beginning of the Late Stone Age. Microliths also occur in forest edge sites such as Matupi Cave (Van Noten 1982b) and Shum Laka (De Maret et al. 1995) where they have been dated to or before 40,000 bp. Nowhere is there skeletal material associated with these early finds which could clarify the physical type of its makers.<sup>3</sup>

Although there has always been rainforest in Central Africa, its size, shape and extent has varied dramatically through time. Palaeoclimatological evidence has almost the same margins of error as the dating of stone tools (see summary for Gabon in Clist 1995 and for other regions of Central Africa in Moeyersons & Roche 1982). As a result it is virtually impossible to be sure that the users of any given artefacts were "in" the forest as opposed to in the savannah or on their margin (see also MacDonald, in press, b). The archaeological evidence can then only be used to conclude the following:

- tool-making hominids were present in parts of Central Africa from as early as 200,000 BP
- their physical type cannot yet be deduced from archaeology

<sup>2</sup> This paper was first presented at the Colloquium on hunter-gatherers of Equatorial Africa, Leiden October 7-9, 1996. I would like to thank those present for constructive discussions of the hypothesis. This revision incorporates much data from the presentations at that meeting. In addition I would like to acknowledge discussions with Bruce Connell, Didier Demolin, Kevin MacDonald, Mark Thomas, Kay Williamson and James Woodburn who have acted to considerably sharpen the argument.

<sup>3</sup> Skeletal material dated to ca. 7000 bp has been found at the rock-shelter site of Shum Laka, Cameroon. Further analysis of this material is expected in the near future.

- whether they exploited the rain forest from its margins or lived in the forest cannot be determined
- c. Biological arguments: Genetics
 

The biological literature has tended to argue that the pygmies are an ancient and separate race (Hiernaux 1968). The most detailed examination of the biological/genetic evidence for the origin of African pygmies is Cavalli-Sforza (1986b; reprised in Cavalli-Sforza et al. 1994). Despite a considerable sample of rain forest groups the results are ambiguous. A primary result is the separateness of the Khoisan. Cavalli-Sforza et al. (1994:175, 180) say "The San differ from other sub-Saharan Africans  $0.1082 \pm 0.0140$  that is, more than any sub-Saharan group differs from any other" and "the San show no special association with pygmies more than that with other sub-Saharan Africans".

In the analysis of the pygmy data the populations are divided, rather unsatisfactorily, into three groups:

  - Mbuti – Eastern pygmies
  - Aka – Western pygmies
  - Pygmoids – all other pygmies including the Cameroun groups, the Rwandese Twa and those of NW Congo (Baka?)

Of these groups only the Mbuti show any striking result; the others are so affected by "admixture" as to be hardly distinct from other sub-Saharan groups. Cavalli-Sforza et al. (1994: Fig. 3.5.1) show a genetic tree mapping the genetic distance of sub-Saharan populations, and the Mbuti appear as one of the first branching of sub-Saharan populations (although still closer to these than to NE Africans, which include most Afroasiatic speakers).

This might initially appear to be strong counter-evidence to the claim made in this paper. However the tree also groups together closely the following:

- Sandawe (central Tanzania) with Fulbe, Wolof and Serer (Senegambia)
- San (Southern Africa) with Somali (Horn of Africa)
- Kunama (northern Ethiopia) with SE Bantu
- Bantoid (central Cameroun) with Hausa (savannah West Africa)

These groupings are all geographically remote from one another and neither their cultures nor their languages have anything in common, being part of different phyla. Such conjunctions correspond to no known historical or archaeological data. It seems very difficult to know what meaning to attach to them or how to use them in any credible reconstruction of African prehistory.

Another more disturbing aspect of this type of analysis is the way inconvenient conjunctions are removed when Cavalli-Sforza is writing directly of the links with language. Thus in Cavalli-Sforza (1991) where the standard genetic classifications of

- language phyla are mapped against the results from DNA, these inconvenient results have disappeared, appearing to make the match between disciplines more convincing than it is actually.

As superficially attractive as DNA is for building models of African ethnohistory, all that cladograms show are mappings of conjunctions and frequencies of genes. There seems to be no particular reason why these should be codistributed with language phyla and apparently they are not. The results from genetics are so remote from the results derived from other disciplines that they cannot presently contribute to this debate.

- d. Biological arguments: Dwarfing and the tropical forest environment
 

It is generally accepted that one of the effects of inhabiting a tropical forest environment is dwarfing. In Africa, both wild and domestic animals have undergone size reduction. The forest zone has pygmy elephants, hippos, chimpanzees and buffaloes, while cows, pigs, sheep, goats and horses all exist in dwarf forms (Epstein 1971:231). Similarly, there is evidence that shortness of stature is positively correlated with tropical forest, not just in Africa but across the world (Cavalli-Sforza et al. 1994). This has been interpreted as a response to inbreeding in an adverse environment, but a more positive view would be that there are considerably reduced energy costs in moving rapidly around in a tropical forest with reduced height and bodyweight. Whatever the reason, the evidence is that size reduction occurs and that strong selection pressure can produce these effects within a relatively short period, at least in evolutionary terms, to judge by domestic animals.

An interesting confirmation of this hypothesis comes from a very different source, studies of the "insulin-like growth factor I" (IGF-I). Diamond (1991) has reviewed various theories that purport to explain the short stature of pygmies. A popular view is that the failure to develop the IGF-I after puberty is an inherited genetic predisposition. This would be consonant with an ancient population whose genetic make-up would thus be quite distinct from the adjacent agriculturists. However, a recent investigation (Dulloo et al. 1996) has shown that this is not the case, that lack of IGF-I is not genetic and must thus be attributed to contingent environmental effects. This is what would be expected if the pygmies have adapted to the forest only relatively recently.

#### *Reasons for being suspicious of the traditional view: Subsistence*

- a. Can hunter-gatherers live off rainforests?
 

One of the arguments that has swept through the literature in recent years relates to the practicality of existing in the rainforest all year round solely through the products of hunting and gathering. At least two authors have argued that it is virtually impossible to live on hunted and gathered resources within a tropical rain forest throughout the year (Headland 1987 and Bailey et al. 1989). Again, no pygmy group

has been reported that does not spend at least part of the year at the edge of the forest or does not come regularly to cultivators' settlements to trade forest products for carbohydrates and other necessities. All recorded pygmy groups at least partly depend on agricultural food sources; in some cases, hunters only enter the forest to kill game if farmers agree to bring staples to specified "drops" to keep them fed. This is partly because, compared with the savannah, the labour costs of exploiting the forest are very high and meat is correspondingly scarce, especially without iron technology.

The importance of this is that in pre-agricultural times when there could have been no trade of staples for meat, it seems extremely unlikely that the early inhabitants of the region would have been spending most of the year in the forest. As today, they would have lived on an ecotone, digging yams and other tubers for staples for part of the year and only going into the forest in specific seasons for honey or game. If this were the case, then it is much less likely that the specific adaptation to the forest through acquiring short stature would have occurred. Selective pressure on individuals would have been much less significant if they spent much of the year in an environment where height was irrelevant.

#### b. Hunting technology

Any hunting-gathering people with long experience of a particular environment and depending on it for subsistence is likely to develop very specific hunting technology and practices. This is certainly the case with the Hadza, whose arrows and poisons are distinctive in African terms (Woodburn 1970) and also for the Dahalo, former elephant hunters of the East African coast.

By contrast, in the case of the pygmies, there is no evidence for a distinctive hunting technology; all of their techniques are also known to their farmer neighbours (Bahuchet 1993a). Were it the case that the pygmies were primordial hunter-gatherers, then they should have developed a distinctive repertoire of technologies to exploit environmental food-sources. But every type of hunting technology used by pygmies can also be paralleled well beyond the forest zone. An argument based on absence in a situation of very incomplete documentation is inevitably shaky, but this state of affairs is, at the very least, suggestive.

An additional piece of negative evidence is noted by Clist (this volume). He observes that no pygmy group has ever been recorded as using stone tools in even a residual fashion. This would be surprising if the pygmies indeed had an entire lithic toolkit until relatively recently. Other hunter-gatherers, despite using iron today, often regard stone tools as of ritual importance, and in one striking case, are still able to manufacture them (McCalman & Grobelaar 1965).

#### *Reasons for being suspicious of the traditional view: Cultural evidence*

##### a. Music

The music of the pygmies has been much reproduced and indeed has gained wide currency in the international "world music" market. Much has been made of the polyphonic vocal music accompanied by a type of yodelling that is certainly common to Congolese rain forest groups. Fürniss (1992) has described this music in some detail. However, it is important to emphasise that this technique is not common to all pygmy groups. The western pygmies (Kola, in Bahuchet's terminology), the Great Lakes Twa and the southern Twa (for example, those in the Kafue swamps) have quite different music. Similarly, although the pygmies have a wide range of musical instruments, they seem to be, without exception, borrowed from or identical with those of their farmer neighbours past or present (see Fürniss & Bahuchet 1995).

Another frequent observation are the similarities between pygmy and Bushman music, at least in the case of polyphonic yodelling. At first hearing, these do indeed sound similar and have been put together on recorded compilations. However, a recent detailed comparison of these two types of music examining underlying structural principles concludes that these similarities are only superficial: rhythmic and organisational features of these two musics are quite different (Fürniss & Olivier, this volume).

*Reasons for being suspicious of the traditional view: Summary*

Table 1 presents a synopsis of the types of evidence that seem to count against the antiquity of the pygmies.

Table 1. Summary of evidence against the antiquity of pygmy culture

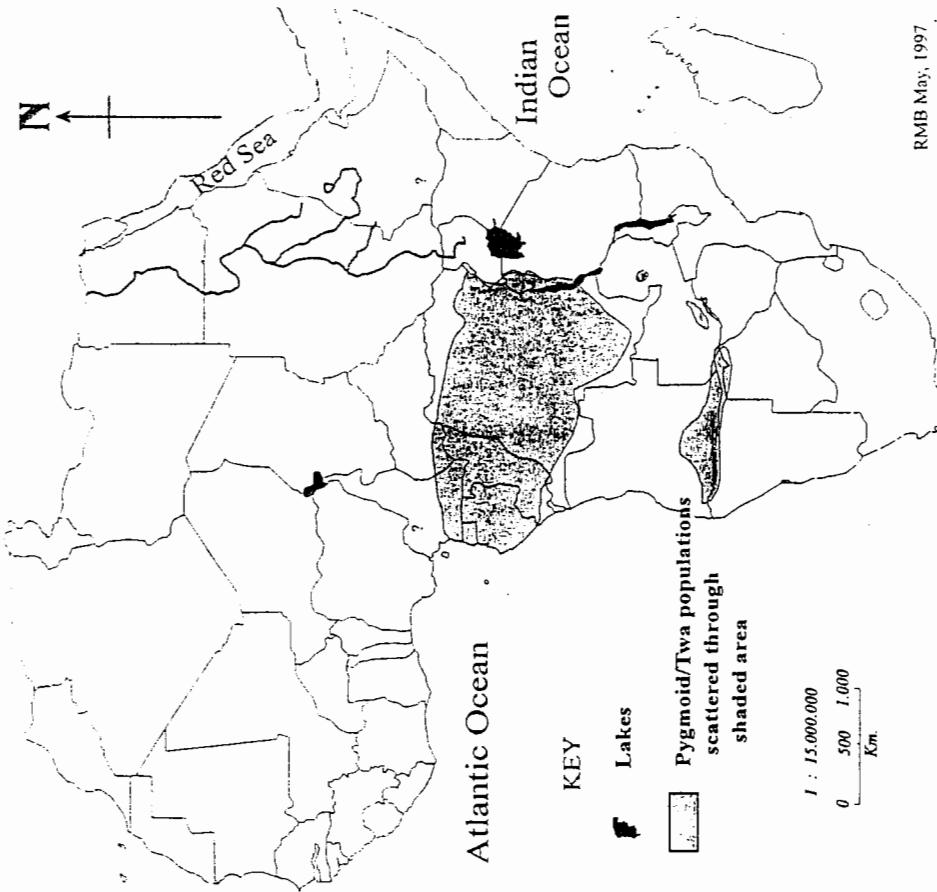
Category of Evidence	Examples	Comment
Linguistic	Substrates	No clear evidence for substrate languages of unrelated phyla
Archaeological	Stone tools	No direct evidence as the nature of populations making the tools
Biological	DNA	Historical interpretation of all DNA results are problematic
	Short stature	Can arise within a few millennia
Subsistence	Trade	Tropical forest may not support hunting-gathering without trade
Hunting technology		No clear evidence of distinctive hunting technology
Culture	Music	Music has no features common to all pygmy groups, nor parallels for its supposedly distinctive features beyond the pygmy area

*Counter-evidence: Pygmies and Twa outside the forest*

A feature of the pygmy/Twa complex that is seldom fully analysed is the widespread presence of "Twa" populations well south of the rain forest proper. Indeed many maps of pygmies seem to ignore these southern groups (e.g. in Bahuchet 1993c). However, there are "Twa" populations in semi-arid Angola, Namibia, Botswana and Zambia (Dorman 1925, De Almeida 1965, 1994 and Estermann 1976 [1958]). Those in Zambia and Botswana are characteristically found in swamps, but in Angola in desertic regions. Documentation on the Twa of the Namibia/Angola region is very limited and tends to confuse them with Khoisan populations.

Map 1. Pygmy/Twa populations in Africa

Mediterranean



RMB May, 1997

Estermann (1976) provides useful material on the Twa of Angola. He says:

"The southern Twa today live in close economic symbiosis with the tribes among which they are scattered — Ngambwe, Hayakona, Zimba and Himba. None of the individuals I have observed differs physically from the neighboring Bantu" (Estermann transl. Gibson 1976:32).

An expansion of this data is given in Estermann (1983:71-90).

Map 1 presents a preliminary distribution of these groups based on the scattered literature.

There are Twa populations scattered across areas where there is no evidence for rain forest. Most non-forest Twa are taller than the pygmies and in some cases physically indistinguishable from the Bantu. There are two possible explanations for this:

- either these are simply specialised hunter-gatherer groups who never were pygmies
- or they came along with the Bantu as they emerged from the forest and grew correspondingly taller in a savannah environment.

In most cases the literature suggests that they have the same despised "shameful" status as their rain forest counterparts suggesting b) as the most likely scenario.

#### *In that case, what happened?*

The general argument is that the pygmies of south-central Africa simply are the same as their agricultural neighbours. If the rainforest could not support hunting-gathering all year round, then the early Ubangian speakers moving eastward from Cameroon would have settled on ecotones; the edge of the forest, the borderlands of swamps or the banks of rivers. A specialised group of hunters evolved who went into the forest to exploit it at certain times of the year. Like many specialised occupational groups in Africa, they became endogamous, and were eventually regarded as a "separate" ethnic group, as are blacksmiths in many other regions.

To function effectively in the tropical forest there is considerable selective pressure to be of short stature. The reasons for this are not well understood and may have to do with heat loss. More likely, however, is the potential to run quickly through dense vegetation without being obstructed and thus to chase down more game. Presumably in the early period, those who were too tall were simply reabsorbed into the arable community, or failed to breed because of selection pressure against them. Small stature would eventually have been a factor in stimulating endogamy and creating the outcaste status that many Twa have today.

A distinctive marriage pattern in relation to the taller cultivators is that pygmy women can marry cultivator husbands and leave their community. This option is not open in reverse; pygmy males cannot usually marry women of the cultivators. Taller

women are then absorbed into the farmer community. Farmers will preferentially choose slightly taller pygmy women, thereby leaving behind the shortest females to reproduce within the pygmy community.

Over time, the pattern of the evolution of pygmy groups occurred in many of the fringing areas of the rainforest and the groups in turn became more numerous and diverse. Patterns of population movement and displacement caused a mosaic of relationships to occur so that speakers of different languages became attached to new groups and cultural and linguistic mismatches gradually developed. In turn there would have been substantial contact between different pygmy groups as they developed forest skills. The common language of technology reported by Bahuchet would then be a contact phenomenon and not a substrate speech-form. It also explains why there are apparently no common forms west of the Aka and Baka: simply lack of contact.

The client pygmy groups attached to various groups of Bantu would then have developed an independent status even when the Bantu emerged south of the rainforest and began to colonise the savannahs. Experience in swamp exploitation meant that the Twa gravitated towards such areas, where they are sometimes found today.

The time-scale of this process is hard to gauge since, although it is possible to place approximate dates on the Bantu expansion, the earlier movements of Adamawa-Ubangian speakers are at present virtually undated. However, if we accept the beginnings of the Bantu expansion at ca. 4000 bp (e.g. Clist 1995) then the Adamawa-Ubangian expansion was presumably slightly earlier. An estimated date for the beginnings of this process would then be 5-4000 bp.

#### *If not pygmies, then who?*

If the argument of this paper is accepted (and to a certain extent even if it is not) there is an obligation to deal with, and account for, the totality of the populations inhabiting the African continent. The Hadza are a well-known example of an isolated African population with a distinctive language and way of life. However, in remote areas outside the rain forest today are other peoples whose affiliations are at best doubtful. This section provides a conspectus of such peoples and also lists the speakers of probable language isolates even when they are not hunter-gatherers.

#### *African hunter-gatherers and language isolates*

##### a. Inventory

KWADI: These people, called Koroka by Estermann (1976 [1958]) and Kwepe by their Bantu neighbours and who call themselves !Kwa/tse (=Kwadi) inhabit the lower reaches of the Coroca river in southwest Angola. The Kwadi are also discussed by De Almeida (1965, 1994) and Redinha (1974). They live mostly by fishing but are also said to keep cattle and goats and to undertake some limited cultivation. They speak a click language conventionally classified with Khoisan, although its position is

tentative, because it seems to share little with other Khoisan languages other than the clicks (Westphal 1963). Physiologically the Kwadi seem to resemble neither the San nor the neighbouring Bantu populations. Most authors consider them to be remnants of a pre-Bantu population and to be related to the Dama (see below). There were only fifty Kwadi in the 1950's, of whom only 4 or 5 were competent speakers of the original language. The present status of both the people and the language is unknown.

**KWISI:** The Kwisi people lived by fishing on the sea-shores of south-west Angola when first encountered by Portuguese navigators in the eighteenth century, where they are recorded as Mucuixes on a map drawn by Pinheiro Furtado (Estermann 1976:22). The Kwisi are also described by De Almeida (1964) and Redinha (1974). They have come under heavy cultural influence from the neighbouring Kuvale people, who speak a Bantu language, but as Estermann observes and his pictures clearly show, they do not resemble them physically. Estermann records that in the 1950's no ethnographer had managed to work with the still mobile bands that roamed the seashore. It is almost certain that this is still the case as the long Angolan civil war has covered much of the intervening period. Estermann considered that the Kwisi must somehow be related to the Bergdama of Namibia, physically if not linguistically.

**YAMA** (AARON VEDDER 1928) *...through their art & customs of savages from Africa*,  
the first comprehensive account of the Dama people of Namibia is by Vedder (1923; English adaptation 1928). The Dama or Bergdama or Berg Damara are outsiders' names for a people who call themselves the Nu Khoi and live in the Aus mountains and on the Swakop river. The Dama were the cause of some astonishment to the earlier visitors to Namibia as they spoke a Khoisan language (Nama), had clear elements of their culture borrowed from the Tswana but were physically unlike either. Vedder observes:

Expressed in more modern language this remains essentially the position today.

In the otherwise comprehensive treatment of the Khoisan people of Southern Africa by Schapera (1930) the Dama are given cursory treatment. However, in a note on their religion, Schapera (1930:397) does observe that their religious system is quite distinctive and seems to have influenced incoming San speakers. Other more recent descriptions of the Dama include Knussmann (1969) and Knussmann & Knussmann (1970) who also conclude that the Dama constitute an entirely distinct physical group.

**CIMBA:** An article by McCalman & Grobelaar (1965) describes two groups of “OvaTjimba” living in an extremely remote region of the northern Kaokoveld in Namibia. Although speakers of Herero, the neighbouring Bantu language, their everyday use of stone tools and hunting-gathering lifestyle seems to set them apart from the surrounding Bantu peoples. These authors quote previous literature which appears to classify them as impoverished (i.e. cattleless) Herero and suggest that Cimba is no more than an economic classification. McCalman & Grobelaar (1965) show quite clearly that the Cimba are a distinct people, both culturally and phenotypically, suggesting that previous ethnographers fell prey to Herero mythologising. Additional material on genetics is provided in Van der Merwe (1969).

**SANDAWE:** The Sandawe are a click-speaking people of central Tanzania. They are not today hunter-gatherers, and presently farm and keep smallstock. However, various writers (e.g. Ten Raa 1986) have argued that these are relatively recent additions to their cultural repertoire and that they were probably hunter-gatherers until recently. Recent research suggests that the Sandawe language may be related to Khoisan although at a very considerable time-depth (Sands 1995).

**OKIEK:** The Okiek are Kalenjin-speaking hunter-gatherers who live in dispersed settlements in Kenya and Tanzania often in some sort of symbiotic relationship with the Maasai.

**YAAKU:** The Yaaku of central Kenya are hunter-gatherers with a specialisation in honey-hunting. They numbered some 50 individuals when first investigated in detail in 1971 and were then losing their language rapidly and becoming assimilated to the adjacent Maasai (Heine 1975). They speak an unusual Cushitic language which may either be Central Cushitic or group with Dahalo (q.v.). Brenziger (1992) reports on a survey in 1989 which found that as few as ten speakers with some command of the language remained. Brenzinger, Heine & Heine (1995) is an ethnobotanical study of the Yaaku and the Mukogodo Maasai.

**DAHALO:** The Dahalo people, or dááko, who today only number some 400, live on the Kenya coast not far from Mombasa (Tosco 1991). They speak a Cushitic language, which however, has clicks resembling those of Khoisan / Hadza. This phonological feature has excited numerous speculations of contact with Khoisanoids but no convincing case for lexical similarities has yet been established.

**BONI:** The Boni are a related set of peoples essentially practising hunting-gathering living in southwestern Somalia and the adjacent parts of Kenya. Recent work on these languages and peoples is summarised by Heine (1977, 1978, 1981, 1982).

**IK/SOO:** The Kuliak peoples, consisting of the Ik, Soo (=Tepes) and Nyangi live in northeastern Uganda and adjacent Sudan. The Nyangi seem to have now disappeared completely as have the Dorobo reported in Wayland (1931) who apparently also

spoke a Kuliak language. The Ik were made famous through a rather sensational monograph by Turnbull (1973) whose empirical bases are questioned in Heine (1985). More recent work on the status of these languages and peoples is found in Heine (1976) and Carlin (1993).

**ONGOTA:** The Ongota or Birale are a very small group of hunter-gatherers living in symbiosis with the Tsamay in southwestern Ethiopia. Their language has been the subject of much discussion but remains only doubtfully classified as Afroasiatic (Fleming 1990, Fleming et al. 1992).

**SHABO:** The Shabo or Mekeyir live in southwestern Ethiopia and their language has proven hard to classify. Most authors consider it to be part of Nilo-Saharan (e.g. Fleming 1991).

**KAJAKSE:** The Kajakse are a small group of hunter-gatherers living in Dar Sila in southeastern Chad described briefly in Le Rouvre (1989:129-130). Their language is supposed to be related to neighbouring Mubi and is thus Eastern Chadic.

**LAAL:** The Laal are a small population (some 300) of fishermen living in central Chad. Their language is analysed in Boyeldieu (n.d.). Although it has elements of neighbouring Chadic and Adamawa languages it appears to be difficult to classify unambiguously.

**JALAA:** The Jalaa no longer exist as a distinct ethnic group. Jalaa is a language spoken by perhaps twenty elderly individuals among the Cham people of northeast Nigeria (Kleinwillinghöfer, in press). However, although it has numerous loanwords from Adamawa languages, it has proved impossible to classify satisfactorily its core vocabulary.

#### b. Some puzzles

**OROPOM:** The Oropom people of Karamoja, Uganda are described in an article by Wilson (1970) as still using "stone age" cultural elements. Wilson provides a sample of their language, which despite the efforts of some linguists has never proven relatable to existing languages. However, no other researcher has been able to track the Oropom again and there is some doubt as to their existence in the form described by Wilson.

**KUJARGE:** Doornbos & Bender (1983) describe briefly a people living on the Sudan/Chad borderland, the Kujarge. The Kujarge live in seven settlements near Jebel Mirra with scattered individuals living on the edge of other communities in the region. They number perhaps 1000 and live principally by hunting-gathering. So little is known about their language that its classification is in doubt. It shows some links with the neighbouring Kajakse who speak a Chadic language and are also largely hunter-gatherers.

#### c. Summary: remnant populations

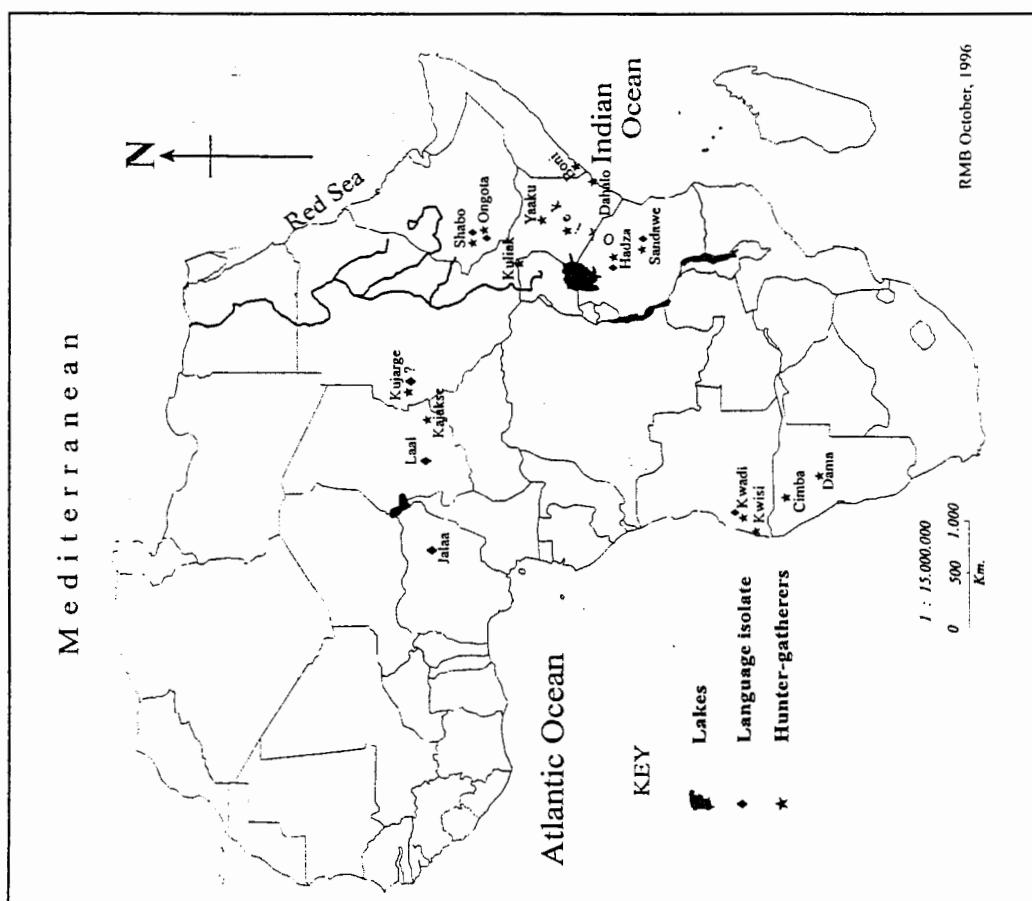
These remnant populations have features in common: they live in remote areas, they are isolated, and most are or have recently been hunter-gatherers and/or speak languages which have proved difficult to relate conclusively to the major language phyla of Africa. This does not imply that they have anything in common, genetically, linguistically or otherwise.

Table 2 and Map 2 show the groups discussed with the languages they speak and their possible classification. The final column of the table shows whether they are hunter-gatherers or have been so in the recent past.

Table 2. Summary of African isolates

People	Alternative	Location	Language	Classification	Hunter-gatherer
Kwadi	Koroka, Kwepe	Angola	!Kwas/!se	Khoisan?	-
Kwisi	Mucuixes	Angola	Kuvale	Bantu	+
Dana	Bergdama(mra)	Namibia	Nama	Khoisan	-
Cimba	OvA Tjimba	Namibia	Herero	Bantu	-
Hadza	Kindiga	Tanzania	Hadza	Isolate	+
Sandawe		Tanzania	Sandawe	Khoisan?	-
Okiek		Kenya/Kenya	Okiiek	Nilotic	+
		Tanzania			
Dahalo	Kenya	Dahalo	Cushitic	+	
Yaaaku	Kenya	Yaaaku	Cushitic	+	
Boni	Somalia	Af Boon	Cushitic	+	
Ik/Soo	Uganda	Kuliak	Nilo-Saharan	+	
Ongota	Birale	Ethiopia	Ongota	Afroasiatic?	+
Shabo	Mekeyir	Ethiopia	Shabo	Nilo-Saharan?	-
Oropom		Uganda	Oropom	Isolate	-
Kujarge	Sudan	Kujarge	Chadic?	+	
Kajakse	Chad	Kajakse	Chadic	+	
Laal	Chad	Laal	Isolate	-	
Jalaa	Nigeria	Jalaa	Isolate	-	

Map 2. African hunter-gatherers and language isolates



There is a considerable literature on modern hunter-gatherers as the products of "encapsulation" and it may well be that not all of these groups are in fact direct inheritors of a pre-agricultural past. Nonetheless, ethnographers too can fall prey to the models presented by local dominant groups as the case of the Cimba suggests. The Cimba probably are an ethnographically distinct group but it is in the interest of the Herero to present them as marginal Hottentots.

The Southern African group, the Kwadi, Kwasí, Dama and Cimba are referred to in the earlier literature. Nurse et al. (1985:151) are clearly puzzled by their biological affinities and conclude "The only tenable alternative explanation is that they descend from pre-Khoi autochthonous who lived in small groups all speaking different languages". Reports suggest that the Hadza and the Dahalo are physically quite distinct from their neighbours. However, in the case of the other peoples here discussed there appears to be no direct evidence of their physical type.

#### *Terms for pygmy in Bantu languages*

Vansina (1990), in considering the pre-Bantu inhabitants of the Central African rain forest, assumes that the pygmies were already present but that there were other autochthonous. He says:

"Therefore the first farmers may have found fishermen as well as hunter-gatherers in the area. Such people would not have looked like pygmies" (Vansina 1990:47)

Vansina (1990:56, 33) then develops the argument that the original meaning of the term -túá (Guthrie's CS 1804:5) was 'bushpeople', i.e. hunter-gatherers, and that only later it came to mean pygmies for which another term \*-yaka can be reconstructed. If so, this casts an interesting light on many oral traditions supposedly featuring pygmies which may simply refer to autochthonous. Only when these two terms merged<sup>4</sup> with the developing ethnicity of the pygmies would be their important ritual role (for example in the Kuba kingdoms) gradually develop.

Schadeberg (in this volume) in an examination of the vocabulary applied to pygmy populations in Bantu languages makes the point that in some of the earliest dictionaries of Bantu languages the definitions given do not apply specifically to pygmies but refer rather to 'forest-dweller, person who lives in the bush' and do not imply specifically small size. Later dictionaries tend to define Twa as specifically 'pygmy' and this may represent a consolidation of European definitions rather than the underlying meaning of the term. The expanding Bantu encountered forest-dwellers who were the original referent of the terms nowadays applied to the pygmies.

<sup>4</sup> A comparable example would be the merging of all travelling peoples in English to the category "gypsy".

### *Interpreting oral traditions*

A problem for this argument is that oral traditions seem frequently to record pygmies as the original inhabitants of the forest and to suggest that they were already present when the Bantu farmers expanded into these regions. Clist (1995:130) has written of Gabon:

"Au Gabon, les textes et les traditions orales sont suffisamment éloquentes: les pygmées habitaient toutes les régions du Gabon et étaient présents à l'arrivée des premiers villageois."

Such a statement could be paralleled for other regions of the rain forest. Schadéberg (this volume) points out that pygmies appear in chieftaincy rituals where they appear to play a part which represents them ceding their territory to the incoming Bantu population.

The explanation for this may be that the people the farmers encountered were not pygmies, but simply dispersed forest-dwellers as envisaged above. Over time, as the terms for these people and the pygmies merged, the traditions have been reinterpreted to refer to pygmies.

### *Conclusion: rethinking African prehistory*

#### a. Summary

The argument of this paper can be summarised as follows:

- The cultures of African pygmies do not show many features that would be expected if they genuinely were the ancient inhabitants of the continent.
- This is because it is not the case.
- African pygmies are the genetic inheritors of a specialised hunting and gathering sub-caste of the Adamawa-Ubangian and Bantu-speaking peoples which evolved to seasonally exploit the tropical forest. Their origins may lie as much as 4-5000 years ago.
- Prior to this period, the African continent (including West Africa) was inhabited by a range of other hunting-gathering peoples including the surviving Khoisanoids.
- These peoples would have spoken highly diversified languages and have been phenotypically diverse. In terms of ethnolinguistic diversity Africa would then have resembled the New World or Papua more than it does today.
- the expansion of Niger-Congo languages, above all, eliminated most of this diversity. Remnant hunting-gathering populations persisted in small marginalised or encapsulated groups occasionally retaining but usually losing their languages.

#### b. Evidence needed to disprove this hypothesis

Arguments from absence are always tricky; arguing to the fictive existence of an entire culture from the lack of cultural features is walking a high wire. This section suggests the results that would be needed to disprove this hypothesis:

- A large and carefully chosen sample of DNA material from pygmy and Twa groups over their entire geographical range shows that they have distinctive features in common that do not simply duplicate their larger agricultural neighbours
- A comparison of pygmy languages over the entire range in the field of hunting technology, plant and animal names etc. demonstrates significant substrate features that cannot be more economically explained by inter-group contact
- Skeletal material from archaeological sites that shows morphological similarities to modern-day pygmies and is of a date far older than 4-5000 years.
- c. A model  
If this hypothesis is accepted then a fairly significant rethink on African prehistory is required. Recent work on both DNA and skeletal material has tended to emphasise Africa as a centre of genetic and morphological diversity. This has largely been in the service of the "out of Africa" hypothesis, which has anatomically modern humans emerging from the continent some 150-100,000 years ago and out-competing hominids elsewhere in the world to become the ancestors of modern human populations.
- The reality of this model is open to question: however, it is important to notice the corollary, that Africa is the principal centre of genetic diversity among humans. Interbreeding populations of hominids close to modern humans may have existed for a substantial period of the Pleistocene and produced considerable phenotypic (and more controversially, linguistic) diversity in the period 150-50,000 years bp. The situation would then resemble more closely those regions of the world where hunting and gathering dominated the economy until recently and where no large-scale state systems evolved to impose uniformity. The main regions where this is the case are the New World, Australia, Papua and Siberia.<sup>5</sup>
- This diversity would then have been largely eliminated in the regions where the major language phyla expanded. Nilo-Saharan languages may have been the first to expand in Africa but Niger-Congo was substantially more successful in terms of geographic range (Blench 1993). The cause of the expansion of these groups is the subject of discussion<sup>6</sup> but it is clear they successfully out-competed the sparse

<sup>5</sup> Smaller sub-regions such as the Andaman islands could be included.

<sup>6</sup> Kingdon (1993) has put forward the innovative argument that modern African populations are related to the Andamanese and Vedoid groups and represent a "strandloper" back-migration to Africa from Asia. While this is not impossible, without more convincing physical evidence it must be deemed

populations of hunter-gatherers who were already living throughout this region (see MacDonald, in press, a). Only Khoisan speakers survived in substantial numbers. The others were reduced to marginal groups virtually concealed among speakers of languages within the major language phyla.

The dense, humid tropical forest required a very specific type of exploitation; without iron it was difficult to cut down enough of it to farm in the forest. The farmers therefore used the ecotones, rivers, clearings in the forest, or created a derived savannah wherever burning was an effective strategy. To exploit the seasonal produce of the forest a specialised group of hunters developed; these became the African pygmies.

d. Political and development implications

Compared with the other hunter-gatherer populations discussed here, the pygmies have been the recipient of considerable attention from development agencies and human rights monitors. While this is not in principle problematic and the case of the Rwandan Twa suggests that it is fully justified (Lewis & Knight 1996), the motivations and intellectual substructure of some of this work are shaky, to say the least. The pygmies may or may not be the "indigenous" people of the tropical forest and indeed the forest itself seems increasingly less likely to be the primeval entity beloved of its advocates. The "lost" hunter-gatherers of West-Central Africa may have co-evolved with the forest over the last 100,000 years, manipulating its structure to meet their subsistence needs ever more effectively. These techniques they passed onto the inheritors of the forest before being overwhelmed genetically by the incoming agricultural populations. Justice and human rights for present-day pygmy populations should be based not on an ephemeral conception of an essentially mythic historical identity but on a solid appreciation of the situation of the people today.

**N.B. The volume in which this paper was published had an integrated bibliography. However, in fact, the editor's made a complete mess of the references and many of them were excluded. Hence this appendix, which is not part of the published text.**

## References

- Bahuchet, Serge. 1992. *Histoire d'une civilisation forestière. I: dans la forêt d'Afrique centrale, les Pygmées Aka et Baka*. Louvain: Peeters.
- Bahuchet, Serge. 1993a. *Histoire d'une civilisation forestière. II: La rencontre des agriculteurs. Les Pygmées parmi les peuples d'Afrique Centrale*. Louvain: Peeters.
- Bahuchet, Serge. 1993b. History of the inhabitants of the Central African Rain Forest: perspectives from comparative linguistics. pp. 37-54 in *Tropical forest, people and food*. eds. Hladik, C. et al. Paris.
- Bailey, Robert C., G. Head, M. Jenike, B. Owen, R. Rechtman and E. Zechenter. 1989. Hunting and gathering in a tropical rain-forest: is it possible? *American Anthropologist*, 91:59-82.
- Bender, M.L. 1983a. ed. *Nilo-Saharan Language Studies*. Michigan: Michigan State University Press.
- Bender, M.L. 1983b. Remnant languages of Ethiopia and Sudan. In Bender, M.L. *Nilo-Saharan Language Studies*. Michigan: Michigan State University Press.
- Bender, M.L. 1989a ed. *Topics in Nilo-Saharan Linguistics*. Hamburg: Helmut Buske Verlag.
- Bender, M.L. 1991a. ed. *Proceedings of the Fourth Nilo-Saharan Conference*. Bayreuth, 1989. Hamburg: Helmut Buske Verlag.
- Bender, M.L. 1991b. Subclassification of Nilo-Saharan. In Bender, M.L. 1991a : 1-36.
- Blažek, V. 1991. Comparative analysis of the Ongota lexicon. Paper to the 21st Colloquium on African Languages, Leiden.
- Blench, R.M. 1993. Recent developments in African language classification and their implications for prehistory. pp. 126-138 in *The Archaeology of Africa. Food, Metals and Towns*. eds. Shaw, T., Sinclair, P., Andah, B. and Okpoko, A. London: Routledge.
- Boieldieu, Pascale. n.d. *Présentation du láà:l ou "Gori" (Moyen-Chari, Tchad)*. ms. Paris: CNRS.
- Brenzinger, Matthias, Heine, Bernd and Ingo Heine. 1995. *The Mukogodo Maasai: an ethnobotanical survey*. Köln: Rudiger Koppe.
- Carlin, Eithne. 1993. *The So language*. Köln: Afrikanistische Monographien, 2, Universität zu Köln.
- Cavalli-Sforza, L.L. 1986a. *Pygmies as a model of the Upper Palaeolithic*. In Cavalli-Sforza, L.L. ed. *African Pygmies*. 422-426. Orlando, Florida: Academic Press.
- Cavalli-Sforza, L.L. ed. 1986b. *African Pygmies*. Orlando, Florida: Academic Press.
- Cavalli-Sforza, L.L. Menozzi P. and A. Piazza. 1994. *The History and Geography of Human Genes*. Princeton, New Jersey: Princeton University Press.
- Clark, J.D. 1966. *Prehistoric cultures of Northeast Angola and their significance in tropical Africa*. Lisboa: Publicações do Museu de Dundo.
- Clist, Bernard. 1995. *Gabon: 100 000 ans d'Histoire*. Libreville: Sepia.
- Clist, Bernard. 1996. Evidence of very old human settlements in the tropical forest of Gabon. Paper given at the Colloquium on hunter-gatherers of Equatorial Africa, Leiden October 7-9, 1996.
- De Almeida, António 1965. *Bushmen and other non-Bantu peoples of Angola*. Johannesburg: Witwatersrand University Press.
- De Almeida, António 1994. *Os Bosquímanos de Angola*. Lisboa: Ministério do planeamento e da Administração do Território.
- De Maret, Pierre 1985. Recent archaeological research and dates from Central Africa. *Journal of African History* 26:129-148.
- De Maret, Pierre et al. 1993. Preliminary results of the 1991-1992 field season at Shum Laka, northwestern province, Cameroon. *Nyame Akuma* 39:13-15.
- De Maret, Pierre et al. 1995. Continuing research at Shum Laka rock shelter, Cameroon (1993-1994 field season). *Nyame Akuma* 43:2-3.
- Demolin, Didier. 1996. *The languages spoken by the Pygmies in the Ituri: comparative and historical perspectives*. Paper given at the Colloquium on hunter-gatherers of Equatorial Africa, Leiden October 7-9, 1996.
- Diamond, Jared M. 1991. Why are Pygmies small? *Nature*, 354:111-112.
- Doornbos, P. & Bender, M.L. 1983. Languages of Wadai-Darfur. pp. 43-79 in *Nilo-Saharan Language Studies*. ed. M.L. Bender. Michigan: Michigan State University Press.
- Dornan, S.S. 1925. *Pygmies and Bushmen of the Kalahari*. London: Seeley, Service.
- Dulloo, A.G., Shahkhalili, Y., Atchou, G., Mensi, N. Jacquet, J. and L. Girardier. 1996. Dissociation of systemic GH-IGF-I axis from a genetic basis for short stature in African Pygmies. *European Journal of Clinical Medicine*, 50:371-380.
- Ehret, C. 1986. Proposals on Khoisan reconstruction. *Sprache und Geschichte in Afrika*, 7,2:105-130.
- Elderkin, E. D. 1983. Tanzanian & Ugandan isolates. *Nilotic Studies: Proceedings of the International Symposium on Languages and History of the Nilotic Peoples, Cologne, January 4-6, 1982*. eds. R. Vossen & M. Bechhaus-Gerst. Kölner Beiträge zur Afrikanistik, 10. Köln. D. Reimer. 499-521 pp. 499-522 n Vossen, R. & Bechhaus Gerst, M. (eds.), *Nilotic Studies*. Reimer, Berlin.
- Epstein, H. 1971. *The origin of the domestic animals of Africa*. 2 vols. New York: Africana Publishing Corporation.
- Estermann, Carlos. [ed. and Gordon G. Gibson] 1976. *The ethnography of southwestern Angola, Volume I*. New York: Africana Publishing Company.
- Estermann, Carlos. 1983. *Etnografia de Angola (sudoeste e centro)*. Colectânea de artigos dispersos. Lisboa: Instituto de Investigação Científica Tropical.
- Excoffier, L. Pellegrini, B. Sanchez-Mazas, A. Simon, C. & Langaney, A. 1987. Genetics and History in sub-Saharan Africa. *Yearbook of Physical Anthropology*, 30:151-194.
- Fleming, Harold C. 1983. Kuliak External Relations: Step One. In Vossen, R. & Bechhaus-Gerst, M. eds. *Nilotic Studies*, II. : 423-478.
- Fleming, Harold C. 1991. Shabo: presentation of data and preliminary classification. pp. 389-402 In Bender, M.L. *Proceedings of the Fourth Nilo-Saharan Conference*. Bayreuth, 1989. Helmut Buske Verlag, Hamburg.
- Fleming, H.C. 1990. Omotica, Afrasiana and more: Ethiopia as the ever-flowing vase. *Mother Tongue*, 12:22-30.
- Fleming, H.C., Yilma, A., Mitiku, A., Hayward, R., Miyawaki, Y., Mikesh, P. and Seelig, J.M. 1992. Ongota or Birale: a moribund language of Gemu-Gofa (Ethiopia). *Journal of Afroasiatic Languages*, 3,3:181-225.
- Fürniss, Susanne 1992. *La système pentatonique de la musique de Pygmées Aka (Centrafrique)*. Thèse de Doctorat, Université de Paris III –Sorbonne Nouvelle.
- Fürniss, Susanne and Serge Bahuchet. 1995. Existe-t-il des instruments de musique pygmées? pp. 87-110 in Dehoux, V., Fürniss, S., Le Bomin, S., Olivier, E., Rivière H and F. Voisin. eds. *Ndroje balendro: musiques, terrains et disciplines. Textes offerts à Simha Arom*. Louvain: Editions Peeters. SELAF 359.
- Fürniss, Susanne and Emmanuelle Olivier. 1996. *Pygmy music/Bushman music: new elements of comparison*. Paper given at the Colloquium on hunter-gatherers of Equatorial Africa, Leiden October 7-9, 1996.
- Grimes, J.E. & Grimes, B.F. 1993. *Ethnologue Language Family Index*. Dallas: SIL.
- Headland, T.N. 1987. The wild yam question: how well could independent hunter-gatherers live in a tropical rain forest ecosystem? *Human Ecology* 15,4:463-491.

- Heine, Bernd 1975. Notes on the Yaaku language (Kenya). *Afrika und Übersee*, 58:27-61, 119-138.
- Heine, Bernd 1976. *The Kuliak languages of Eastern Uganda*. Nairobi: East African Publishing House.
- Heine, Bernd 1977. Bemerkungen zur Boni-Sprache (Kenia). *Afrika und Übersee*, 60: 242-295.
- Heine, Bernd 1978. *The Sam Languages. A history of Rendille, Boni and Somali*. Afroasiatic Linguistics, 6,2. Malibu: Undena Publications.
- Heine, Bernd 1981. Some cultural evidence on the early Sam-speaking people in East Africa. *Sprache und Geschichte in Afrika*, 3:169-200.
- Heine, Bernd 1982. *Boni dialects*. Berlin: Reimer.
- Heine, Bernd 1985. Some notes on the Ik. *Africa*, xx.
- Hieraux, Jean 1968. *La diversité humaine en Afrique sub-saharienne: Récherches biologiques*. Bruxelles: Institut de Sociologie, Université Libre.
- Kagaya, R. 1993. *A Classified Vocabulary of the Sandawe Language. Asian and African Lexicon*. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa, 26.
- Kingdon, Johnathan. 1993. *Self-made man and his undoing*. London: Simon & Schuster.
- Kleinewillinghöfer, Ulrich. in press. *The language of the Jalaa: a disappearing language isolate*. Paper in *Sprache und Geschichte in Afrika*.
- Knussmann, R. 1969. Bericht über eine anthropologische Forschungsreise zu den Dama in Südwestafrika. *Homo* 20:34-66.
- Knussmann, R. and R. Knussmann 1970. Die Dama — eine Altschicht in Südwestafrika? *Journal der Südwestafrikanische Wissenschaftliche Gesellschaft* 24:9-32.
- Landfranchi, R. and D. Schwartz eds. 1990. *Paysages Quaternaires de l'Afrique Centrale Atlantique*. Paris: ORSTOM.
- Le Rouvreur, A. re-ed. 1989. *Sahéliens et Sahariens du Tchad*. Paris: L'Harmattan.
- Letouzey, R. 1976. *Contribution de la botanique au problème d'une éventuelle langue pygmée*. Paris: SELAF.
- Lewis, Jerome and Judy Knight. 1996. *Les Twa de Rwanda*. France: World Rainforest Movement/IWGIA/Survival International.
- MacDonald, Kevin C. in press, a. Archaeology, Language and the Peopling of West Africa: a consideration of the evidence. To appear in *Archaeology and Language II*. R.M. Blench and M. Spriggs eds. London: Routledge.
- MacDonald, Kevin C. in press, b. The archaeology of Central Africa. To appear in *Blackwell's Archaeological Dictionary*. Ian Shaw ed. Oxford: Basil Blackwell.
- McCalman, H.R. and B.J. Grobbelaar 1965. Preliminary report of two stone-working OvaTjimba groups in the Northern Kaokoveld of south West Africa. *Cimbobasia* 13:1-39.
- Moeyerson, J. and E.Roche. 1982. *Past and present environments*. pp. 15-26 in Van Noten 1982a.
- Nurse, G.T., J.S. Weiner and T. Jenkins 1985. *The peoples of Southern Africa and their affinities*. Oxford: Clarendon Press.
- Redinha, J. 1974. *Distribuição étnica de Angola*. (8a edição). Luanda: Cita.
- Ruhlen, M. 1991. (rev. ed. from 1987) *A guide to the World's Languages. Volume 1: Classification*. London: Edwin Arnold.
- Sands, B. 1995. *Evaluating Claims of Distant Linguistic Relationships: The Case of Khoisan*. Ph.D Dissertation. Los Angeles: University of California.
- Schadeberg, Thilo. 1996. *Batwa and other Bantu names for the invisible people*. Paper given at the Colloquium on hunter-gatherers of Equatorial Africa, Leiden October 7-9, 1996.
- Schapera, I. 1930. *The Khoisan peoples of South Africa*. London: Routledge & Keegan Paul.
- Ten Raa, Eric. 1986. The acquisition of cattle by hunter-gatherers: a traumatic experience of cultural change. *Sprache und Geschichte in Afrika*, 7,2:105-130.
- Tosco, Mauro 1991. *A Grammatical Sketch of Dahalo*. Hamburg: Buske.
- Turnbull, Colin. 1973. *The mountain people*. London: Jonathan Cape.
- Van der Merwe, A. le R. 1969. Isolated homogeneous groups in nutritional studies: report on a pilot survey on the Himba and Tjimba of the Baynes mountains. *South African Medical Journal* 43:331-336.
- Van Noten, Francis 1982a. *The Archaeology of Central Africa*. Graz: Akademische Druck- und Verlagsanstalt.
- Van Noten, Francis 1982b. *The Stone Age in the North and East*. pp. 27-40 in Van Noten F. 1982a.
- Vansina, Jan. 1990. *Paths in the Rainforests*. London: James Currey.
- Vedder, H. 1923. *Die Bergdama*. Hamburg: Friedrichsen.
- Vedder, H. 1928. Die Berg Damara. In *The native tribes of South West Africa*. pp. 39-78. Cape Town: Cape Times.
- Wayland, E.J. 1931. Preliminary studies of the tribes of Karamoja. *Journal of the Royal Anthropological Institute* 61:187-230.
- Westphal, E. 1962a. On classifying Bushman and Hottentot languages. *African Language Studies*, 3: 30-48.
- Westphal, E.O.J. 1962b. A re-classification of Southern African non-Bantu languages. *Journal of African Languages*, 1,1: 1-8.
- Westphal, E.O.J. 1963. The linguistic prehistory of Southern Africa: Bush, Kwadi, Hottentot and Bantu linguistic relationships. *Africa* 33:237-265.
- Westphal, E.O.J. 1966. Linguistic research in S.W.A. and Angola. in: *Ethnische Gruppen in Südwestafrika*. Windhoek. South West Africa Scientific Society. 125-144.
- Westphal, E.O.J. 1971. The click languages of Southern and Eastern Africa. pp. 367-420 in Berry, J. & Greenberg, J.H. eds. *Current Trends in Linguistics Vol. 7, Sub-Saharan Africa*. Mouton, The Hague.
- Wilson, John G. 1970. Preliminary observations on the Oropom people of Karamoja, their ethnic status, culture and postulated relation to the peoples of the late stone age. *Uganda Journal*, 34,2:125-145.
- Winter, J.C. 1979. Language shift among the Aasax, a hunter gatherer tribe in Tanzania. *Sprache und Geschichte in Afrika* 1: 175-204.
- Woodburn, James. 1970. *Hunters and gatherers: the material culture of the nomadic Hadza*. London: British Museum.