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Strategies of environmental adaptation and patterns of transhumance of the Shuwa Arabs in the Nigerian Chad Basin

Ulrich Braukämper

Introductory remarks

The Shuwa of the Lake Chad region are the westernmost representatives of the *Baggara* (Ar.: cattlemen), Arabic-speaking semi-nomads who occupy a broad strip of savanna between the tenth and thirteenth parallel from the White Nile to the eastern Borno State of Nigeria. Their ancestors were camel nomads who started infiltrating the sub-Saharan "*Bilad al-Sudan*" via the Nile valley in the late 14th century. From the middle of the 17th century onwards they moved south of the Sahel until they struck an ecological borderline to areas beyond which the keeping of camels proved to be increasingly difficult or even impossible. It now became a question of survival for them either to adopt agriculture or cattle-breeding, or a combination of both. The necessity of change forced upon them led to the development of a special agropastoral system which was characterized by semi-nomadic cattle-breeding and the cultivation of millet (mainly *Pennisetum americanum*). They adopted cattle-herding mainly from the Fulbe (Fulani), who had been migrating to the eastern Sudanic zone east of the Shari river from the 16th century onwards, and they became familiar with the cultivation of crops through intensive contact

with the autochthonous peasant populations of the area. This process of "Baggarization" was more or less complete by 1800.¹

The ancestors of the Shuwa migrated to the territories of Borno southwest of Lake Chad for the most part between c. 1750 and 1810. Since they originated in a semi-arid zone, they faced particularly harsh conditions in the Chad Basin, because this region was one of the most humid habitats of the African Sahel/savanna belt. They were thus opposed by rigorous environmental constraints which they had to overcome by intensive cultural strategies. These involved special methods of keeping animals in temporarily inundated areas and a highly efficient use of grazing resources by cycles of transhumance.

The number of so-called *Baggara* Arabs in the five states of Sudan, Central Africa, Chad, Cameroon and Nigeria may amount to 3 million, and the Shuwa in the Chad Basin can be estimated at half a million.² Most of them have become inhabitants of permanent settlements and only a minority is still maintaining the traditional semi-nomadic way of life.

Among the Shuwa, the dwellers of permanent villages are called *hallal* (derived from Ar. *hille* = 'village') whereas

those parts of the population who live as (semi-)nomads are labelled *nas al-diran* ('people of the cattle camps').³

However, there is no strict division of these two categories: Members of the *diran* (sg. *dor*) used to live temporarily in villages and village people occasionally spend some time in the mobile camps. Usually, the cattle herds of the Shuwa villages are too large to be kept there throughout the year, so also parts of the *hallal* have to look for temporary pastures at some distance beyond their settlements. The differences in systems of sedentary cattle-farming, transhumance within a relatively restricted geographical range, and nomadism over distances of several hundred kilometers are fluent.

In general, apart from their more efficient utilization of pastures because of a higher spatial mobility, know-how with regard to pastoral practices (*sarha*) is more advanced among *diran* people than among villagers. The activities of the nomads are almost fully devoted to the well-being of their animals, whereas the involvement of the nomads in agricultural work is marginal (though not nonexistent). Herding units (*da'n*) which can be controlled by one man comprise c. 60 – 100 head of cattle, a size which is more or less similar among the Fulbe of north-eastern Nigeria (cf. Stenning 1964: 169sq.). In the *diran* the same people always take care of these units, whereas cattle owners in the villages – if they do not employ hired herdsmen – have established a system of sharing the work of cultivation (and sometimes also of handicrafts) and of livestock-rearing among themselves. The level of experience of the *hallal* concerning the needs of animals is therefore usually lower than in the *diran*.

Ecological constraints on the agropastoral system of the Shuwa

Since the ancestors of the Shuwa originated in a sahel habitat, they had been fully adjusted to the conditions of this semi-arid environment. In their economy they had been dependent to a considerable extent on the keeping of camels, a fact which also dominated their concepts of value. It can therefore be assumed that their establishment in one of the most humid habitats of the savanna implied an enormous challenge to their cultural traditions. In order to survive in their new environment the ancestors of the Shuwa had to modify their Baggara type of agropastoralism based on two pillars, cattle and *Pennisetum* millet, according to the particular ecological conditions of the Chad Basin.

The chromic vertisols of the Chad formation along the shores of the lake are seasonally flooded. Swamps and pools of flat water cover the ground, which is composed of black clay materials (locally called *firki*), sometimes for months during and after the rainy season (roughly, June – September). Therefore, the villages of the Shuwa (and other inhabitants of the area such as the Kanuri, Kanembu and Kotoko) are constructed on aeolian sand dunes. Rain-fed agriculture, particularly the cultivation of *Pennisetum*, is practised on sandy elevations (Ar.: *qoz*) that are not exposed to inundation. The temporarily flooded vertisols are utilized for the cultivation of *masakwa*, a term which refers to a "dwarf" variety of "guinea corn" (*Sorghum*) as well as to the special technique of its tillage. Rain water has to cover the surface of *firki* soil completely for at least ten days. The fields are usually surrounded by earth walls in order to facili-

tate the storage of water. After all the liquid is absorbed into the ground, the farmers make holes in the wet earth with large digging-sticks at a distance of about 80 to 120 centimeters and put three seedlings of *masakwa* in each of them. This type of *sorghum* can then be harvested after four months.

The cultivation of *masakwa* in combination with rain-fed agriculture reveals a high degree of adaptation to the local environment which the Shuwa Arabs most probably learned from the long-established Kanuri peasants of the Chad Basin. It neither demands advanced agricultural equipment, such as the plough, nor sophisticated methods of irrigation, and it meets the conditions of a temporarily inundated habitat perfectly.⁴ However, it implies a sedentary life in villages – at least for a part of the population – during the months of agricultural activities such as sowing, planting, weeding and harvesting. This necessity has essentially rendered the patterns of Shuwa agropastoralism different from the rest of the Baggara.⁵

Another important distinction is caused by the special conditions of grazing resources in the Chad Basin. Seasonal inundation reduces the pastures considerably during some months of the year and, at the same time, results in the proliferation of insects harmful to domesticated animals and humans alike. Although the area is outside of the line demarcating the northern limit of the spread of *trypanosomiasis* in the Sudan belt, the *tsetse* fly (*Glossina morsitans*; Ar.: *tayr al-bagger* = 'cattle bird') is virulent at times in the humid surroundings of the lake.⁶ For pastoralists there are two ways of reacting to these natural constraints:

1. to establish specific facilities and means which permit remaining in the region even during the dangerous periods; and

2. to leave the respective areas temporarily.

The measures employed to keep part of the herds of cattle, sheep and goats in temporarily inundated regions of the Chad Basin will be described at first. The second practice will then be analysed in the chapter dealing with the patterns of transhumance.

Special measures of keeping livestock in flooded areas

The breed of cattle which the Shuwa traditionally keep, a short-horned zebu called *wadará* or *guddali*, is not resistant to *trypanosomiasis*. It has also never reached the high degree of adaptation to an aquatic habitat which distinguishes the long-horned humpless cattle of *Bos primigenius* origin, locally called *kuri*, that have been kept by the Yedina (Buduma) people of the islands of Lake Chad over a period of, presumably, many centuries.⁷ Shuwa who remain with their herds in potentially *tsetse*-infested areas during and for some time after the rainy season, carefully take note of the breeding pattern of these insects.

Glossina species, like gadflies (Shuwa: *amm-gaddum*), are active only in daylight. In order to protect their cattle against *tsetse* and other harmful insects, the Shuwa keep them from morning to evening in houses whose roofs and walls are carefully secured with mats and plasters of cow dung so that the flies cannot enter. For this purpose, the Shuwa houses are considerably larger than the houses of neighbouring ethnic groups with negligible property in cattle. These circular buildings with conical roofs are usually some eight meters in diameter. Up to 40 cattle can be kept in such a house around a cubic platform (*zigafa*) serving as a habitation for men and look-

ing in many respects similar to the tent which the nomadic Shuwa use. Sheep and goats, particularly the lambs and kids, have their favourite place underneath this shelter. Their local breeds are negatively affected by rain and excessive dampness. As an additional protection against insects, fires of dung are burnt. Under these conditions it is advantageous that *wadará* cattle have short or medium-sized horns and are relatively patient and gentle. Shuwa informants are convinced that their manner of stabling animals could not be achieved with the restless long-horned "Red Bororo" (Shuwa: *arbore*) breed of the Fulbe.

During the night the animals are taken out for grazing. However, since much of the land is either covered by crops or inundated by this time, the grazing resources are usually not sufficient. Additional fodder must, therefore, come from stalks of sorghum (*dalda*), cereal chaff (*kamfut*), peanut shells (*angaloli*), bean pods (*hutab al-libia*), small amounts of dried grass (*awish*) and fresh water plants of high nutritional value. At the climax of the dry season, villagers and mobile herdsmen alike are often forced to buy such materials from Kanuri and other farmers in order to overcome shortages of natural pasture.

The practice of restricting grazing to the hours of darkness is mostly employed between August and October when the threat to domestic animals by *Glossina* species is highest. Although this system, which enables the Shuwa to keep cattle in widely inundated regions throughout the year, was already referred to by the traveller Gustav Nachtigal (1879/89, II: 510 sq., 756 sq.), it has not yet been documented in detail. This practice is almost unparalleled among African livestock breeders – certain similarities can be found among some ethnic groups of the Nilotic Sudan⁸ – and it reveals an extraordinary knowl-

edge of adaptation to ecological constraints. During the last three decades improved veterinary services have, however, reduced the necessity of stabling cattle in the manner described. For example, informants in Kamzamo, a typical Shuwa village of the vertisol plains of the Chad Basin, reported in 1993 that they practised this system last in 1988, a year of abundant rainfall.⁹

Night grazing (*surba*) is extremely arduous work for the *hallal*, the village herdsmen, because the soil is muddy and they have to be very careful to prevent animals from entererung cultivated fields and gardens. It demands an extraordinarily precise knowledge of the topography and a special capacity for orientation in darkness. As long as beasts of prey such as lions, leopards and hyenas existed in the region, domestic animals had mostly to be kept during the night either in houses or in enclosures (*zeraib*; sg. *zeribe*) surrounded by high thorn fences. These necessities and conditions, according to my Shuwa informants, resulted in relatively low cattle herds in former times.¹⁰ After the complete eradication of these carnivores in the 1950s, grazing during the night could then be carried out without too much risk. It has in the meantime become common practice in the mobile camps of the Shuwa and has attained a much higher economic status there than among the herdsmen who spend most of their time in permanent villages.

When the soil of the *firki* plains has dried up, the threat from the *tsetse* diminishes and cattle can be taken for grazing in daytime. There are various categories of pasture which are used by the Shuwa pastoralists, be they village herdsmen or people from mobile camps, at different times of the year.

The nature and use of grazing resources

In the Chad Basin (as in most parts of the African savanna) the dramatic increase in population and the simultaneously growing proportion of farmland is steadily diminishing the grazing reserves (Shuwa: *farsha*). At the same time, the shrinking of Lake Chad due to a complex mixture of natural and man-made causes – from the early 1960s to the mid 1990s the area permanently covered by water has been reduced from c. 20,000 km² to c. 3,000 km² – is temporarily providing new pastures. The Shuwa have to share them, however, with Fulbe cattle breeders who have partly immigrated from the west in recent years. For example, a breed of white short-horned Fulbe cattle called *bokoloji* from the area of Sokoto in northwestern Nigeria had never been seen by the indigenous inhabitants of the Chad Basin before the early 1980s.

The utilization of pastures is dependent on particular geological conditions and on the seasons of the year: the rainy season (*kharif*) from June to September, (*darrat*) a period of ca. six weeks after the end of the rainy season from September to November, the cool dry season (*shite*) from November to March, and the hot dry season (*sef*) from March to June.

In the regions inhabited by the Shuwa Arabs of Borno the following types of grazing-area can be differentiated (see map):

1. pastures on *firki* soils which, as already mentioned, are usually inundated for some time during the rainy season and which are largely used for cultivation, particularly for the growing of *masakwa* ;

2. pastures on sandy elevations (*qoz*) within the Chad Basin, which are partly cultivated with *Pennisetum* ;

3. pastures in the delta of the Yedseram whose waters have stopped reaching the lake in the 1960s. This area, used by Kanuri peasants to grow rice, is called Al-Fada;

4. dry season pastures along the western shores of the Shari and the northern slopes of the Mandara mountains in Cameroon;

5. pastures in the interior of the Chad Basin consisting of fluvial and lacustrine sediments and inundated for several months of the year. The Shuwa simply call them "Chad";

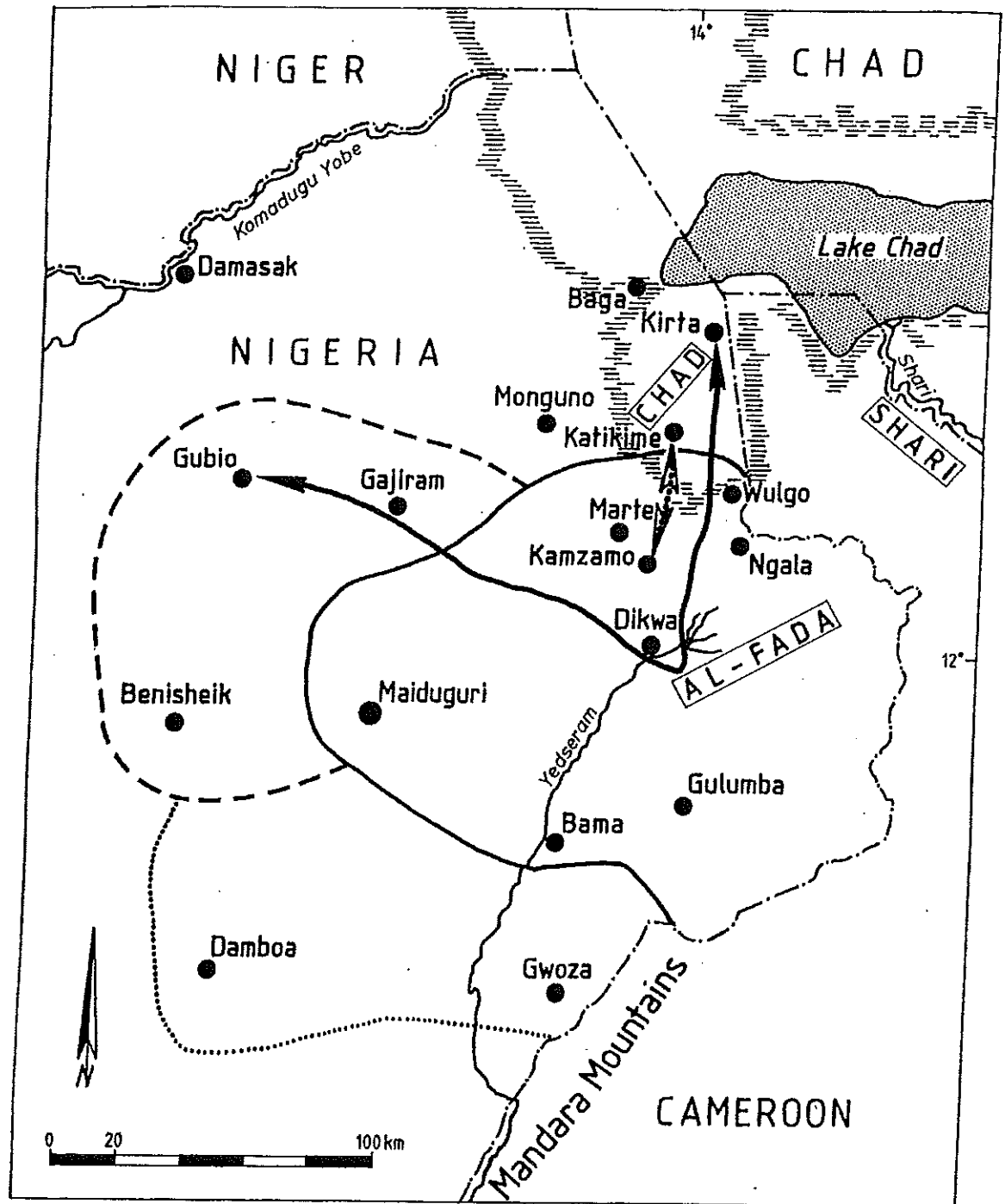
6. rainy season pastures at some distance west of the Basin in the region of Gajiram, Gubio, Auno, etc.; and

7. pastures south of the *firki* plains in the territories of the Marghi. In the 1930s some Shuwa factions, mainly members of the Awlad Ghanim clan, established their *diran* in the area of Damboa. They became more or less isolated from the rest of their people and have meanwhile abandoned their rainy season transhumance for the Magumeri area in the north. Instead, they undertake brief pastoral migrations to the southeast in the direction of the Mandara Mountains. Uncultivated bushland has become scarce, and incessant disputes with Marghi peasants and the harsh competition of Fulbe nomads have made the situation of the Shuwa pastoralists extremely difficult.

The seven categories of grazing-areas mentioned above represent individual ecosystems with varying natural potential and possibilities of utilization. Their characteristics will be outlined briefly.

Vertisols of the *firki* soils cannot be used as pastures when they are extremely muddy or even flooded. Grazing is, therefore, not possible until the water has completely receded from the surface some weeks after the end of the rains. On the dark clay soils only a limited number of plants, such as the annual

Grazing Systems of Shuwa Arabs in Nigeria



- National boundaries
- Shores of Lake Chad ca. 1960
- Approximate area of extension of Shuwa villages
- Approximate area of extension of the most frequented rainy season pastures
- Approximate area of extension of permanently utilised pastures in the south
- CHAD** Major areas of dry season pastures
- Route of transhumance of Abakr Adam's camp
- Route of transhumance of the villagers of Kamzamo

grass *Panicum laetum*, are fully adapted to the seasonal inundation. Apparently they are of high nutritional value for the animals, but they are normally not available as green fodder for more than two months. Those parts of the *firki* plains that are cultivated with sorghum of the *masakwa* type in October can be used as pastures after the harvest in February. The cattle can browse for some weeks on the plant stalks left in the fields. From the 1970s onwards additional pastures have been provided in the vast scheme of the "Chad Basin Development Authority" which was established for the irrigated cultivation of wheat. After the harvest in May the herds of cattle, sheep and goats of the surrounding Shuwa and Kanuri villages can be driven to those fields and browse on the herbs which benefited from the fertilizer for the crops. In such a way, different types of grazing grounds can be used in sequence. *Firki* pastures are mainly situated in more or less intensively cultivated areas and are therefore predominantly exploited by the herds of the *hallal* people, the Shuwa villagers. The animals, browsing on the plant stalks of the fields, increase the fertility of the soil by producing dung. There are farmers, mostly Kanuri, who regularly pay a certain amount of money or grain to pastoralists, who make intensive use of their harvested fields.

Whereas the vertisols become muddy and partly flooded after the beginning of the wet season, grass starts to grow quickly on the sandy soils, into which rain water penetrates rapidly and deeply. The villagers then take their cattle to the *qoz* pastures within the reach of their settlements. The herdsmen from the *firki* plains start around seven o'clock in the morning and return shortly before sunset moving within a diameter of approximately eight kilometers around their respective villages. The inhabitants

of the *qoz* are very near their pastures by this time, but they have to overcome longer distances when the season of grazing on the vertisols starts. Pastures on the sandy soil are only briefly available, because immediately after the first rainfalls *Pennisetum* millet is sown there. Although domestic animals never eat its young green leaves because of its extremely bitter taste, the herdsmen have to be very careful that no harm is caused to the fields. It is a time of *ti'ib* ("tire-someness") which means arduous work for all the pastoralists of the *Baggara Belt*. Destruction of crops by animals, which leads to (mostly exaggerated) demands of compensation from the part of the farmers, is a permanent source of dispute in the Chad Basin.

It must be kept in mind that this area ranks among the most densely populated regions of the *Baggara Belt* (ca. 50 inhabitants per km²). At the beginning of the 1990s the density of cattle in Borno State amounted to 23,5 per km² (Nigerian Livestock Resources 1992, II, 27, 34), and in the Chad Basin it is certainly higher. However, the carrying capacity of livestock in the Shuwa areas does not yet seem to have exceeded its ordinary limits. Destabilized dunes as indicators for a degradation of land through overgrazing have so far become evident only in the Sahelian areas of Borno north of Gudumbali (cf. Land Resource Study 9, 4, 1972: 52).

The delta of the Yedseram (al-Fada) provides dry season pastures almost exclusively for the *nas al-diran*, the people of the mobile cattle camps. They are utilized by the Shuwa pastoralists after the local Kanuri peasants have harvested their wet rice in January/February and until the beginning of the rainy season, when the delta becomes swampy and in many parts inaccessible.

The natural conditions offered by the shores of the Shari river are in many re-

spects comparable to those of Al-Fada. However, to reach these dry season pastures the Nigerian Shuwa have to enter Cameroonian territory. This fact is confronting the herdsmen with annoying organizational and financial obligations that have more and more restricted their movements across international borders (see below). At present, only some *diran* of Nigerian citizens, for example from the Dagana, Kurata and Assal'e clans, are regularly pursuing the traditional custom of spending the hot dry season on the western shores of the Shari near Logone Birni or along the northern fringes of the Mandara mountains.

The "Chad" pastures are covered with different species of grass and reed adapted to the aquatic habitat. Major species of this area are for example *Epinochla* spp., *Panicum* spp., *Maerua oblongifolia*, *Grewia* spp. and *Brachiaria brizantha* (cf. Land Resource Study 9 (4) 1972: 44 ff.). The Shuwa pastoralists usually evacuate the "Chad" pastures when the soil becomes muddy after the first rains. Some groups of unmarried males (*azaba*), however, stay behind with some of the strongest bulls and cows until the soil is covered with shallow water. For two or three weeks, the *azaba* herdsmen feed themselves almost exclusively on milk. They rest and sleep on small sandy dunes called *gore* or *dabba*. These elevations of usually not more than two meters altitude are covered with *Calotropis procera*, a plant avoided by cattle. Its stems can however be used by the *azaba* herdsmen as fuel and for building flat shelters. By this time the threat from *tsetse* flies is low, because they do not breed before the end of the rains. After the evacuation by the Shuwa herdsmen Yedina pastoralists from the east occupy the flooded plains with their *kuri* cattle which are almost perfectly adapted to living in shallow water. This shifting system guarantees an optimal grazing of

territories which could hardly be utilized in any other way. In the 1990s, however, the *azaba* grazing is more and more being abandoned. Since the "Chad" pastures between Firka and Wulgo are situated in close proximity to the Cameroonian border and sometimes beyond, any conflicts along the international boundaries (which have in fact escalated between Nigeria and Cameroon since 1993) inevitably affect the transhumance of mobile pastoralists.

The regions where the majority of Shuwa mobile camps spend about two months during the rainy season (mid-July to mid-September) offer a type of pasture which is in some respects similar to the grazing grounds on the *qoz* dunes. These pastures west of the Chad Basin are predominately situated on cambic arenosols in the districts of Gajiram, Gubio and Magumeri, which are free of *tsetse* and gadflies. Most of the Shuwa nomads used to pay their cattle tax (*jangali*) to the authorities in these areas. Pastures there are however dwindling considerably, because they have been limited by some forest reserves (e.g. in the region of Auno, west of the Borno capital Maiduguri) and the density of the Kanuri peasant population is steadily increasing.

These last mentioned problems are even more serious in the Damboa region of Marghiland where the remaining Shuwa *diran* are more and more "bottled up" in farmlands and are hardly able to carry out seasonal transhumance of even very limited range. Cattle are increasingly fed on agricultural products, and the tradition of mobile pastoralism will most probably be abandoned within the next few years.

Patterns of transhumance

According to the most widely accepted definition, transhumance is a type of spatial differentiation, or seasonal migration, carried out by pastoralists as a temporary strategic response mainly to climatic and geo-medical factors. In the savannas of the Sudanic zone it may be seen both as exploitation of seasonal grazing reserves and avoidance of harmful insects causing sicknesses, such as the so-called *nagana* type of *trypanosomiasis*. Transhumance is, at the same time, a chance to redress the man-and-environment imbalance by eliminating human pressure.

The evacuation of draught-affected zones by pastoralists lies outside the ordinary type of migratory drifts that are labelled transhumance. Such an event is reported in Shuwa traditions, e.g. for the "drought of Mandara" (*dju hanna Mandara*) of 1913/14, when many cattle owners tried to save their herds by taking them southwards to savanna areas with higher rainfall, such as the Mandara mountains. When this natural catastrophe was over – more or less similar draughts occurred roughly half a dozen times during the 20th century – people returned to their country.

The necessity of transhumance relates to both major factions of the Shuwa, to the *diran* people as well as – but a lesser extent – to the *hallal*. Some of the villagers either participate in the pastoral migrations themselves or they entrust part of their cattle to the mobile herdsman. The latter usually have relatives in villages who take care of their crops and who share the surplus of their agricultural yield with them. This type of symbiosis guarantees an efficient division of labour and it reduces the risks to livelihood in times of economic crisis.

The major movements in transhumance are undertaken by the

(semi-)nomads regularly every year: migrations to the dry season pastures (*madaali*) and to the wet season pastures (*madalii*). In principle, the routes and cycles of transhumance have been more or less strictly maintained for generations, but they are occasionally changed to some extent in accordance with variations in rainfall and geo-medical factors. Additionally, there are political factors that have exerted a growing impact on the mobility of Shuwa pastoralists over the past decades. The dry season pastures of many Nigerian Shuwa were originally situated in Cameroonian territory in the plains of the lower Shari, particularly in Iyare and Kulbuwaji near Logone Birni. However, measures of administrative control are more and more discouraging transhumance across international boundaries. Moreover, the *per capita* fees for livestock, which are demanded by Cameroonian authorities at the border, can hardly be afforded any longer by many Nigerian herd owners since the dramatic devaluation of their currency *Naira* in the 1980s. Another reason why the Shari region became less frequented was the threat from armed bandits (partly as a result of the Chadian civil war) since the late 1960s and violent clashes of Shuwa Arabs with Kotoko peasants in the 1990s.

The highly diversified transhumance network will be exemplified in this context only by the sample from the camp of Abakr Adam, the chief (*sid al-dor*) of a camp, which usually consists of six tents with the same number of herds. The Shuwa use the Kanuri word *turbo* (*túrwo*) to signify the routes and the daily stages of transhumance as well as the cattle tracks.¹¹ The sequence of the stations of the transhumance routes and the composition of the *diran* are to some extent flexible and can be altered more or less spontaneously because of natural conditions and/or internal disagree-

Name of the place	Duration of <i>turbo</i>	Duration of stay
Tob'oli (near Kirta)	1 hour	6-8 weeks
Waza-Sagger	3 hours	1 night
Kaya-Kura	5 hours	1 night
Manawashi	5 hours	3-5 days
Knemubago	6 hours	1-2 days
Logomani	5 hours	1 night
Gajibu	6 hours	1 night
Nega'a	4 hours	1 night
Mida	6 hours	1 night
Daboa	5-6 hours	1 night
Umm-Kumbulla	6-7 hours	1 night
Masfa	6 hours	1 night
Herenyua	2-3 hours	4-5 days
Abungaji	3 hours	1 night (if not enough pasture, <i>turbo</i> via Tanga-Langa)
Gilgilla	7 hours	1-2 days
Barka-Jamal	3 hours	3-4 days
Al-Rizab	3 hours	until end of rainy season, if enough pasture; otherwise <i>turbo</i> continues
Daburda	4 hours	1 night
Doya	5 hours	1-2 days
Bam (near Gubio)		c. 2 months; until end of rainy season

ments among the members of the camps.

Normally, the stages between the dry season pastures in the interior of the Chad Basin at Firka/Sagger near the Cameroonian border and the rainy season pastures ca. 150 kilometers straight to the west of this place on the cambic arenosols of Gubio are as shown above. The camp of Abakr does not, however, spend the height of the hot dry season (*sef*) in the interior of the Chad Basin every year. For example, when information reached the district of Al-Fada in March 1992 that there was a cattle disease in the area of the "Chad" pastures, Abakr and several other Shuwa herdsmen did not proceed there with their yearly transhumance. If sufficient grazing seems available in the delta of the Yedseram, he and other camp leaders may decide more or less spontaneously to stay in that region until the beginning of the rains. In years of sufficient pasture

Abakr's camp spends the *kharif* in the region of Gajiram; otherwise it proceeds to Bam.

Beside the interior of the Chad Basin and the region of Al-Fada, another concentration of Shuwa dry season camps on Nigerian territory is found in the Gulumba region of eastern Borno. Shuwa semi-nomads in the districts of Damboa and Bama usually direct their rainy season *turbo* to Magumeri northwest of Maiduguri or to the forest reserve of Auno.

Thus, all *diran* of the Shuwa Arabs have their individual cycles of transhumance which are slightly varied according to the respective climatic, geo-medical, economic and political conditions. Their mobility has increasingly been affected and circumscribed by the establishment of international borders, at first between European colonies and then between the states of Nigeria,

	<i>diran</i> herdsmen	<i>hallal</i> herdsmen
rainy season (<i>kharif</i>)	stay in wet season camps on sandy areas outside the Chad Basin	stay in villages; mainly grazing on <i>qoz</i> pastures
season of <i>darrat</i>	transhumance from <i>kharif</i> pastures in direction of the Basin	cattle stabled in houses; night grazing mainly on <i>firki</i> soil
cold dry season (<i>shite</i>)	camps in regions at the periphery of Lake Chad; grazing mainly on harvested fields	grazing on harvested fields; at first <i>Pennisetum</i> then <i>sorghum</i> (<i>masakwa</i>)
hot dry season (<i>sef</i>)	transhumance to dry season camps in Chad Basin; alternatively, in Al-Fada, Gulumba or valley of the Shari	grazing on harvested fields; additional fodder of crops; part of the cattle to <i>diran</i> in "Chad" etc.

Cameroon and Chad. However, the *turbos*, the ways and passages, which lead through the areas of cultivation, have been fixed for generations by traditional law. If they are blocked by the peasants, this will inevitably provoke conflicts.¹²

Whereas the *diran* people are spending most of their time in mobile camps, the Shuwa *hallal* remain in their villages as long as agricultural work demands their presence, usually until the crops are harvested in January/February. When, during the *sef*, pasture becomes too scarce to feed all their animals they have to take some of them to grazing reserves outside the reach of their settlements. They build dry season camps consisting of cupola-shaped huts covered with grass which look very similar to those of the nomads. Since the beginning of the 1990s, the inhabitants of Kamzamo, for example, have established a temporary settlement at Katikime ca. 40 kilometers northeast of their permanent village, in which almost half of their people and most of their animal property spend the months from March to June. In this temporarily flooded area they also cultivate

maize, which has to be harvested before the ground is covered by shallow water during the rainy season.

If we compare the grazing system and the spatial mobility of the Shuwa *diran* with those of the villagers the distinctive characteristics can be found listed above.

The pastoral systems of the Shuwa Arabs in nomadic camps and permanent villages thus show remarkable differences. It has already been pointed out, however, that they do not imply a strict separation but rather a division of labour which fits the economic needs and demands of both groups. As indicated before, their interrelations are intensive. There is in fact a continuous interchange of people spending part of their time in camps or in villages. However, men who are known for their particular capacity in mobile livestock-rearing, such as Abakr Adam, rarely participate in ordinary agricultural work, which Shuwa people regard as demanding a less advanced specialization of knowledge.

Prices of livestock have risen enormously in Nigeria since the 1980s, and

the cash which can be gained from the yearly increase of a herd of cattle is usually much higher than the income from the surplus of agricultural production. Obviously, the Shuwa have in common with all Baggara Arabs a "mercenary attitude" concerning their cattle. They regularly sell a certain percentage of their herds and are the most active agents of livestock trade in north-eastern Nigeria.¹³ Cattle property is of course highly prestigious, but it is predominantly considered in terms of economic rationality.

Prospects of development for Shuwa Arab pastoralism

By combining mobile livestock-rearing and cultivation in an agropastoral system the Shuwa have acquired a fairly high degree of stability, enabling them to withstand crises of production in each of the two sectors. It is, however, facing serious challenges from the growing density of population on the one hand and from a policy which considers non-sedentary livestock-breeding an inappropriate and undesirable economic activity. Most of the Chad Basin, unlike semi-arid sahel regions where an economic alternative to mobile pastoralism hardly exists, is suitable for the production of crops. The territories of the former lake have even become one of the most booming agricultural zones of Nigeria. These factors are inevitably exerting their impact on the traditional patterns of Shuwa agropastoralism.

The Shuwa Arabs of Borno have obviously started reacting to the massive administrative, demographic and ecological challenges with strategies of change such as a stricter separation of economic activities in the permanent villages and in the cattle camps. It can be observed that *diran* people tend to be-

come more and more specialized as nomads who live in their camps throughout the year. They thus gain a more advanced expertise in the techniques of rearing than mixed farmers or agropastoralists usually possess. They can fully concentrate on the demands of their animals, optimize the conditions of transhumance and systematically search for ecological niches. In this way many Shuwa have attained a standard in the herding and breeding of cattle which is similar to the level of the Fulbe, the pastoralists *par excellence* of the Sudanic zone.

The village dwellers, on the other hand, can efficiently invest all their efforts in specialized cultivation activities. In such a way, the agropastoral complex of the Shuwa seems to approach a separation into two more and more independently acting factions: on the one hand, the majority of villagers who abandon the practice of transhumance and keep a limited amount of livestock in their settlements; on the other hand, a small minority of specialized nomads who spend all their life in mobile camps and take care also of part of the cattle property of the sedentary peasants as well as of town dwellers who decide to invest capital in livestock.

Notes

(1) For historical data cf. Braukämper 1993. Fieldwork for this study was carried out in Darfur (Sudan) in the 1980s and in Borno (Nigeria) in the context of a joint project of the universities of Frankfurt am Main and Maiduguri between 1990 and 1995. I am grateful to all my informants and to the German Research Foundation (DFG) for its financial support.

(2) The state of information on the Nigerian Shuwa Arabs has hitherto been very limited, whereas more materials have been published on their groups in the frankophone areas of Chad and Cameroon (cf. Le Rouvreur 1962, Zeltner 1970).

(3) If not specified by a particular ethnonym, all indigenous words mentioned in this text are terms of the Shuwa dialect of "Sudan Arabic", which is influenced in its vocabulary by Kanuri and other local languages.

(4) However, the *masakwa* type of cultivation does not seem to have been a prerequisite for the occupation of the Chad region by peasant populations, because the existence of *sorghum* varieties has so far not been proved in the hitherto excavated settlement mounds mostly dating back to the first millennium B.C. Cf. Gronenborn, van Neer, Skorupinski 1995: 36, *passim*.

(5) For information concerning economic/ecological strategies and patterns of transhumance of the Shuwa Arabs I am specially indebted to Danna Allamein (Maiduguri), Abakr 'Ali (Kirenowa), Muhammad Abakr (Kamzamo) and Abakr Adam (mobile camp of the Awlad 'Imer).

(6) For the spread of *trypanosomiasis* in Nigeria cf. Fricke 1976: 140 ff., Nigerian National Livestock report, Section II, 1992: 25 ff., Land Resource Study, No. 9, Vol. 2, 1970.

(7) According to the present state of archaeological findings breeding of cattle and sheep became known in the Chad Basin ca. 1000 B.C. (Gronenborn, Van Neer, Skorupinski 1995: 38; personal communication by Peter Breunig). It can be assumed that this early breed of cattle was derived from *Bos primigenius* and not from *Bos indicus* (zebu), which was not introduced from western Asia into Egypt before the end of the second millennium B.C.

(8) Personal communications and observations in 1984; cf. Born 1965: 217. Unlike the Shuwa practice of installing their animals in hermetically closed houses, Nilotic-speaking herdsmen such as the Dinka employ the less efficient technique of building open hangars under which dung fires are lit.

(9) In Kamzamo, a village of ca. 300 inhabitants in the Marte District of Borno State, I collected most of my data on the cultural patterns of semi-sedentary Shuwa between 1992 und 1995.

(10) Salih Danna, around whom many songs and legends of the Shuwa Arabs revolve, was regarded in the 1920s, with his herd of ca. 40 cattle as an exceptionally wealthy person. Today there are many Shuwa who possess hundreds of cattle.

(11) The proper Arabic equivalent for *turbo* is *murhal* (pl. *marahil*). I collected information on the patterns of transhumance when I participated in a number of *turbos* in the camp of the Awlad 'Imer clan headed by Abakr Adam between 1990 and 1993. For the study of transhumance in the Baggara regions of Darfur (Sudan) cf. Braukämper 1992, chapter 3.3.3.2.

(12) A dispute of this type was occurring in 1992/93, when the peasants of the Kanuri village Ala started limiting the cattle passage leading from the Shuwa village of Kamzamo to the northwest by planting *sorghum* on the *turbo*. This case

was finally settled by the local political authorities in favour of the maintenance of the *turbo*.

(13) Cf. Cunnison 1966:138 for the Humr in Kordofan (Sudan). My own observations in Darfur and in Borno support this view. A "cattle complex" of the East African type with all its well-known emotional implications has never played a role among the Baggara who did not adopt cattle breeding before the 17th century, under serious economic constraints.

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Resumé

Les Shuwa du Lac Tchad représentent le groupe le plus occidental des Arabes Baggara, pasteurs-agriculteurs répartis dans tout le Soudan oriental. Après leur émigration du Sahel il y a 200 ans, ils furent obligés de s'adapter à l'habitat humide et d'effectuer des changements importants dans leur pratiques de production pastorale, à savoir protéger une partie des animaux pendant la saison des pluies dans des maisons hermétiquement calfeutrées contre les parasites actifs le jour (en particulier la mouche tsé-tsé) et de les mettre au pâturage la nuit avec un supplément de fourrage. La plus part des boeufs cependant sont menés dans des pâturages plus élevés et exempts de mouches tsé-tsé au-delà du bassin du Lac Tchad. Au paroxysme de la période sèche les pasteurs Shuwa suivent l'eau du lac en retrait vers l'intérieur du bassin. Cette étude analyse notamment la transhumance conditionnée par les particularités climatiques et écologiques de l'habitat. Jusqu'alors en grande partie semi-nomades, les Shuwa ont tendance aujourd'hui à adopter un système de division du travail plus stricte: la majorité reste de façon permanente dans les villages pour exécuter le travail des champs tandis qu'une minorité mène une existence de nomades pasteurs dans les campements.

Resumen

Los Shuwa de la región del lago Chad constituyen el grupo más occidental de los árabes Baggara agro-pastoriles distribuidos en todo el Sudán occidental. Cuando inmigraron hace alrededor de 200 años del Sahél, tuvieron que adaptarse a las condiciones del hábitat húmedo y modificar enormemente sus prácticas pastoriles. Estas consistían y consisten en guardar parte de los animales durante la época de lluvia en casas selladas herméticamente para protegerlos de parásitos activos durante el día (en especial la mosca Tsetse). Alimentan a estos animales con forraje y los llevan durante la noche a las pasturas. La mayoría de los rebaños, en cambio, son arreados durante este tiempo a terrenos más altos fuera de la cuenca del Chad, en los que no hay moscas Tsetse. Durante el clímax de la sequía los pastores Shuwa siguen al agua retrocediente del lago, moviéndose hacia el centro de la cuenca. Una de las metas principales del presente estudio es el análisis de los ciclos de transhumancia, determinados por las particularidades climáticas y ecológicas del hábitat. Se perfila una transformación del semi-nomadismo de la economía Shuwa hacia una mayor división del trabajo. Mientras que la mayor parte de la población permanece hoy en día en el pueblo para cultivar plantas, una minoría vive como nómades.