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# LIVESTOCK MOVEMENTS

**M.O.EL SAMMANI**

Both camel and cattle owning groups have alternating patterns of dry and wet season grazing within the vast pastoral zone that extends from 10°N to 18°N.

In the wet season almost all the nomadic tribes remain with their herds in their tribal areas of *"dar"*. During the dry season they move towards the south, the speed of this movement being governed by the rate at which the northern areas dry out. In the recent past, as drought has become a common occurrence, there has been a tendency to settlement in the south and towards the assumption of a transhumant way of life.

Livestock are moved along old-established routes and are herded in a traditional manner which involves little or no capital cost. Impediments to these age-old movements have become more common in recent years as the infrastructure related to large scale mechanized and rainfed agricultural schemes has been developed. Changes in traditional routes resulting from these causes increase risk through animals having to travel longer distances or because new routes traverse areas occupied by hostile tribes. In years of good rainfall opportunistic short distance movements are more common.

In the wet season some major factors affecting decisions on movement are:

. traditional sub-tribal allegiances and rights to land;

. accessibility to arable land for those sections which cultivate;

. the common grazing rights of groups not of the same sub-tribe, campments being founded on *"awlad rajil"* or extended family lines;

. the necessity of leaving a part of the household in the *"dar"* area to deal with cultivation and to look after some sedentary cattle and the goats;

. the differing requirements for grazing of each animal species in the herd, with decisions on this aspect being made directly by the head of the household;

. the need to avoid, especially for the Baqqara groups, areas of waterlogged soils and those where biting flies are present;

. the need to avoid extensively cultivated areas and to use corridors through mechanized farming areas.

In the dry season a different set of factors needs to be taken into account, including:

. the need to stay near the areas of cultivation so that male household members can help with harvesting (although towards the end of harvest some animals with some men will move away);

. the necessity of using areas of established rights;

. the availability of water;

. kinship ties, especially with settlers on the large irrigated schemes (New Halfa, Gash, Rahad, Baraka), which facilitate early access to cotton stubbles;

. being in a position close to the boundaries of dryland mechanized schemes for early access to sorghum stubbles.

## The *"dar"*

Wet season grazing used by all tribes lies wholly or partially within the *"dar"*, which is the traditional homeland. Grazing in the dry season is usually outside the *"dar"*. With few exceptions the *"dar"* area lies to the north or north-east of the dry season area, that is, in areas where rainfall is normally higher.

Within each *"dar"*, grazing is organized on a sub-tribal basis, each sub-tribe or group of sub-tribes having rights over particular domains. Boundaries were more rigidly adhered to in the past when human and livestock pressures were less and when physical security could have posed problems if grazing was practised outside the traditional areas.

Outside the *"dar"* areas grazing rights are regulated by convention between the involved groups and by gradual acquisition of usufruct. Conflicts arising from these practices are usually resolved by intertribal meetings, held every two years or more frequently if there is need. Consequent on conventional agreements several major areas of the country are open to common grazing or at least to a large number of tribes. These areas include:

. the Butana plain, open to all tribes in Eastern, Central, Northern and Khartoum Regions during the rainy season;

. a buffer zone in the north-central parts of Kordofan and Darfur used by the Kababish, Kawahla, Hawawir and Zayadiya during the *'shogara'* (early wet) and *"darat"* (early dry) seasons;

. the *"gizu"* north of the Meidob hills and to the Sudan-Libya-Chad border, which is available in some years at the end of the rains and well in to the winter dry season, for all Northern Kordofan and Northern Darfur pastoralists;

. the Kajamir area of sandy soils along the White Nile from Kosti south to Renk and used during the wet season by the Blue and White Nile tribes (including Rufa'a el Hoi, Kenana, Kibeishab, Ahamda and Manza);

. the riparian lands of the upper White Nile, the Bahr el Ghazal and the Bahr el Arab which are used in common by the Baqqara groups (Awlad Humeid, Hawazma, Messeriya, Rizeiqat, Habbaniya, Beni Halba, Fellata and Ta'aisha) of the north and the Nilotic tribes (Shilluk, Dinka and Nuer) of the south;

. the swamps or *'toich'* grazing of the Bahr el Jebel which are also used by the Nilotic tribes in the dry season.

Within the *"dar"* areas, ownership of the infrastructure of wells and of cultivable areas is vested in the sub-tribe. This, along with the pressures that kinship can bring to bear on market, administrative and other government services, are responsible for sub-tribal dominance in and gives to an area its special characteristics. Within the *"dar"* there are certain established principles:

. reserved grazing is not grazed out of the season of its reserved use;

. trees in wadi beds are not cut down as they provide valuable dry season browse for camels and goats;

. water from all wells, whether of the deep bore type provided by government, owned by a kinship group, or owned individually, is freely available to all for household use;

. water for livestock is available to non-native groups only after the needs of all animals of the owning sub-group are satisfied;

. livestock are watered on a rotational basis by group members, the frequency of visits being

determined by the facilities and yield of the source (note that some large capacity water sources such as deep bores, *"hafir"* and high-yield open-shaft wells are not always welcomed by some owning groups (such as the Hadendowa) for fear that they will lead to incursions of external groups, and note also that some Kababish chiefs have appropriated priority to themselves at some government-provided facilities where non previous traditional rights existed :

. digging and ownership of water sources by external groups is not usually allowed, especially by the Hadendowa;

. *"hafirs"* that are individually or communally developed by the Shukriya in the Butana give the owners access to settlements and to grazing and cultivating rights (note also that *"hafir"* development along the Kassala to Port Sudan road during its construction have allowed the Rashaida to settle previously unusable tracts of land);

. cultivable land is used first by the owning sub-tribe and allocations to other groups are made only when local needs have been met (an in the case of the Hadendowa such allocations are for one year only in order to limit acquisition of long term rights);

. traditional holds on acquired rights and prohibitions against their being acquired are strengthened by agnatic (cross-cousin) marriages of the offspring of full brothers.

In spite of established custom there is evidence of erosion of these traditional rights to *"dar"* areas. Appropriation of priority at government bores is one example and the digging of wells and settlement by sedentary people in nomadic areas is another. The reasons for this do not relate solely to pressure on the land but are also related to a decline in the political influence that the nomadic tribes have enjoyed since the time of the Mahdiya.

## Migratory patterns

The movement of livestock to the south generally starts in November but is earlier during years of poor rainfall and later in wetter years. Conflicts often arise in dry years as pastoralists invade the farm areas of the sedentary cultivators before the harvest is complete. The return to the north, particularly by camel and sheep groups, is usually in June-July but an early start of the rains engenders an early return. Not all animals make the regular seasonal treks. If movement is merely local within a season then it is easier for all animals to move as a group.

Most camels make the trek to the south in the dry season but some are left in the *"dar"* to provide milk for the old and young family members who also remain behind. A similar strategy is adopted for sheep where these are owned by the same people as camels. The cattle owning groups tend to have more permanent settlements than the more nomadic camel owners and a larger proportion of the family over a wide range of ages is more or less sedentary. More cattle are therefore left behind in the village to supply its needs. Similar proportions of sheep are left behind as cattle, especially if these are used to provide milk or if a major Muslim feast is imminent. Most goats remain in the village and, in any case, largely fend for themselves. Donkeys are taken on transhumance or left at the camp according to the needs for transport of household water and market goods of each unit.

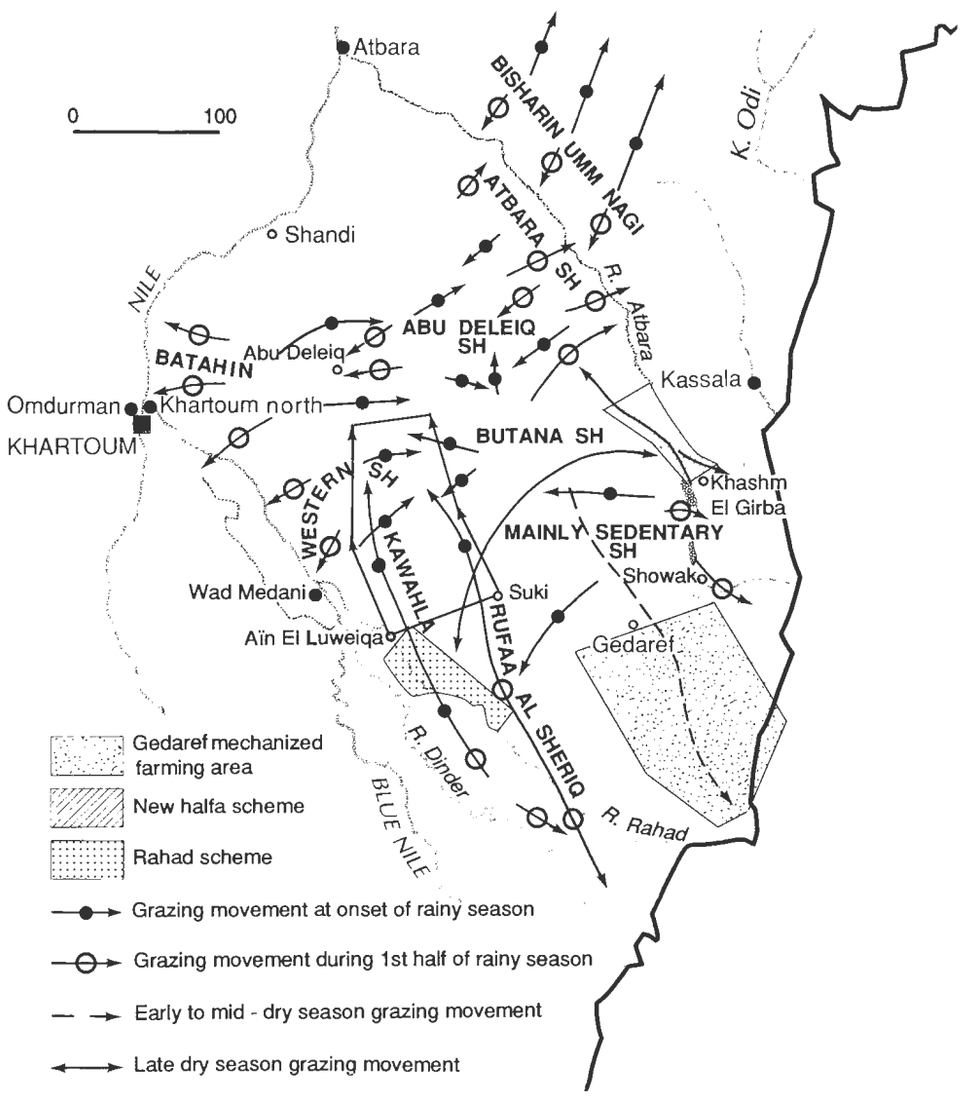
The pattern of movement is complex and sometimes opportunistic. Each tribe or group of tribes has its own movement pattern **(Table 1)**. The relation ships between one tribe and the neighbours which surround have always involved complicated agreements to share resources and these may have become more labyrinthine in recent years, as for example in the case of the Shukriya **(Figure1)** as a result of the proliferation of large scale agriculture.

**Table 1 - Some examples of tribal annual grazing patterns**

| Tribe or Group | Season | | | |
|---|---|---|---|---|
| | Early wet | Wet | Early dry | Dry |
| Shukriya | July-October<br>Butana Plain<br>'Hafir' and natural ponds govern distribution | | November-February<br>New Halfa-Rahad<br>irrigated and mechanized schemes | March-June<br>Rahad-New Halfa<br>mainly cotton stubbles |
| Rashaida | June-December<br>Kassala-Qoz Rajab and Gash Delta scheme[a] | | | January-May<br>Atbara River-Siteit |
| Kababish, Kawahla, Hawawir[b] | June<br>Central Kordofan (En Nahud)<br>Eastern Darfur (Umm Keddada) | July-October<br>'dar' Kababish (Soderi)<br>Northen Darfur (Mellit and Kutum[c] | November-December<br>'dar' Kababish (Soderi)<br>Central Kordofan (En Nahud and Bara) | May-July<br>Central and Southern Kordofan (En Nahud, Bara, Umm Ruwaba, Rashad, Dilling, Rugel El-Fula and Kadugli) |
| Meidob | June<br>Eastern and Central Darfur (Mellit and El Fasher) | July-October<br>Northern and Eastern Darfur (Mellit, Kutum, Umm Bayoda, Meidob Hills | November-December<br>Northern and Central Darfur (Mellit and El Fasher) | March-June<br>Eastern and Southern Darfur (Umm Keddada, El Fasher, Ed Dain, Buram, Idd el Ghanam and Zalingei)[d] |
| Zayadia | June<br>Eastern and Central Darfur (Umm Keddada and El Fasher) | July-October<br>Northern Darfur (Mellit and Kutum and Northwards) | November-February<br>Northern and Central Darfur (Mellit and El Fasher) | March-June<br>Eastern and Southern Darfur (Umm Keddada, El Fasher, Ed Dain. Buram, Idd el Ghanam and Zalingei)[e] |
| Zaghawa | June<br>Eastern and Central Darfur (Umm Keddada and El Fasher) | July-October<br>Northern Darfur (Mellit and Kutum and Northwards) | November-February<br>Northern and Central Darfur (Mellit and El Fasher) | March-June<br>Eastern and Southern Darfur (Umm Keddada, El Fasher, Ed Dain, Buram, Idd el Ghanam and Zalingei)[f] |
| Hadendowa | Rains differ, falling in two periods in Summer (July-October) and Winter (March-July)<br>Summer migration to "oleib' in Red Sea Hills, to Eritrea and Gash and Baraka Deltas<br>Winter migration to 'gunub' on coastal plain<br>Supplementary migrations all year along line of rail between Haya and Dordeib | | | |

Notes : (a) This current pattern differs from earlier one when rainy season was spent between Khasm el Girba and Gash schemes and area between Atbara River and Butana, and dry season in Atbara and Siteit Rivers and into Eritrea
(b) Seasonal movements are known by these tribes and by Shukriya as 'shogara', 'nishooq', 'dar'at' and 'damar'
(c) 'gizu' grazing far to the north is used in years it is present
(d) Northern Darfur tribes occupy parts of Southern Darfur in severe droughts
(e) Travel less far south in years of better rainfall

## Fig 1 - Shukriya grazing area and regional relations with production schemes




Source : Adapted from Lebon J. H. G, Land Use Of The Sudan. 1965

## Species movements

### Camels

Camels cover more distance in the regular seasonal migrations than any other species and is always found farther north in the dry season. Camels go less far south in the wet season although they now graze much farther south of their traditional areas than they did previously.

### Cattle

Owners who depend largely on livestock for their subsistence move over greater distances than those who are largely agropastoral and derive much of their livelihood from crop production.

Major wet season movements are undertaken from south to north across the whole central pastoral belt from Southern Darfur situated in the west, Southern Kordofan, White Nile, Blue Nile and to Kassala Provinces in the east. Such movements are always, however, within the confines of the homeland. Animals and herders return to the cropped areas around, for example, South Kordofan, Dali and Ge'dar'ef in the dry season. Some traditional tribal areas in the east extend into Ethiopia.

Shorter distances are travelled by cattle of the agropastoralists in the southern parts of Kassala and Blue and White Nile Provinces and those of the Nuba mountains. The Beja and Butana tribes that own cattle move around the Atbara river area and the Blue and White Nile tribes move to the *"dahara"* lands away from the river. Reverse movements take place as the rains finish, back to the cropped areas and the permanent water sources.

### Sheep

Pastoralists mainly trek their sheep with their camels or cattle. The Beja of the Red Sea hills move between the upland pastures, the coastal plain and the flood plains of the Gash and Baraka deltas. Some travel as far as the Atbara river to the New Halfa irrigated scheme and others to the mechanized sorghum schemes in the Gedaref area. In Darfur and Kordofan wet season grazing is to the north of each *"dar"* while dry season grazing may be outside the traditional homeland, far to the south.

## Dry season concentrations

### The Nuba Mountains

Some 315,000 herders are estimated to move in to the Nuba mountains on their south in the dry season. They bring with them a total of 2.53 million cattle and more than 950,000 sheep. They belong principally to the Southern Kordofan Arab tribes: the Messeriya Zuruq, the Messeriya Humr, Hawazma, Awlad Humeid, and many smaller groupings. The proportion of herders staying longer and longer, even year round, is increasing and leading to more and more conflicts with the native Nuba tribes.

### The Bahr el Arab

Even more herders spend the dry season around the Bahr el Arab than in the Nuba mountains. These are mainly of the Rizeiqat, Habbaniya,Taisha, Beni Hallba, Ma'aliya and Beni Hussein tribes. The estimated number of herders is 480,000 with almost 5 million cattle and 1.4 million sheep. As in the Nuba mountains there is a tendency to settle because of the relatively abundant feed and the permanent availability of water. Conflicts with the Dinka, when the Arab tribes cross the Bahr to the south, are not uncommon.

### The Gum belt

The central zone of the Sudan, being the transition from the dry north to the humid south, is dominated by *"Hashab"* and the main production area for gum arabic, the vernacular name being used for the tree *Acacia senegal* from which the gum is harvested. The zone is also heavily populated and densely cultivated by sedentary farmers. Enormous numbers of livestock are found in this area in the dry season as nomadic herders move in to augment the already large numbers of local and permanent animals. More animals come from the north, mainly camels and sheep. As elsewhere when farmers and herders meet and compete for the same area of land, originally for different use but now often for the same use (whether that be for stock or crops) the numbers of conflicts are increasing rapidly.

**Large scale agriculture**

The development of irrigated and mechanized rainfed agricultural schemes has provided a large quantity of crop by-products where previously there was little or even nothing for animals to eat. Water is also usually adequate in the case of irrigated agricultural schemes.

## Factors influencing migratory patterns

Migration cycles and patterns evolved steadily over hundreds or possibly thousands of years. For long periods there was little other than minor change in the pattern and timing of movements. In the last half century, however, there has been a rapid evolution in the patterns of movement due to a variety of reasons.

**Agricultural development**

The first large scale agricultural development took place in the Gezira as early as the 1920s. More recently the establishment of the New Halfa scheme consequent on the flooding of Lake Nubia in 1960-1966, and the Rahad scheme in the mid 1970s, have exerted a profound influence on livestock movements over wide areas. In the central belt from Darfur to Kassala the mechanized rainfed schemes have also affected the timing and extent of movement.

The effects have been of two kinds. The agricultural schemes have taken over vast tracts of traditional grazing land and rendered them unavailable to livestock for a considerable part of the year. They have, however, also provided large amounts of dry season feed in the form of crop residues and by-products. In many instances it cannot be doubted that the quantity and quality of these new feed resources is superior to that which was there before.

This notwithstanding, there is reason for continued concern at the planned and unplanned expansion of large scale agriculture. As early as 1948 in the Butana a "Grazing Line" was established, north of which no cultivation was to be allowed. Over the years respect for this line has lapsed and many unplanned (and therefore illegal) schemes have developed. Many of the transgressors are themselves Shukriya or members of other pastoral tribes who have become rich in commerce and invest in agriculture for personal rather than for community gain.

**Range degradation**

Increases in human populations have led to concomitant increases in livestock numbers. Increases in livestock have resulted from the need for more animals to provide protein for people. The build up of the herds has largely been possible because of improvements in the ability of government services to combat animal disease, especially the major epidemics such as rinderpest.

More livestock, with few exceptions, have not been accompanied by similar increases in feed availability. Indeed much former rangeland (in addition to that taken by large scale development which, it is estimated, is reducing the range area by 2-4% per year) has been pre-empted to agricultural production by sedentary farmers who, becoming livestock owners themselves, reserve crop residues for their own use. The result is plain to see: vast areas are denuded of vegetation, with the more palatable species disappearing first, and subject to sheet and gully erosion.

In the pre-independence period and for some time afterwards local authorities were responsible for fire control and many hundreds of kilometres of fire lines were established. These were maintained and burnt early in the dry season to prevent the spread of wild fires. Lax administration and lack of finance have resulted in a discontinuation of this important practice. Further reduction of feed resources by uncontrolled fires raging over, often, many hundreds of square kilometres is the result.

The increase in sources of permanent water, often made available against the advice of range scientists but at the demand of livestock owners, has often done nothing to relieve the processes of degradation. In many cases it has served to exacerbate them by allowing areas that were formerly only available for seasonal use to be continuously occupied. Large numbers of stock.

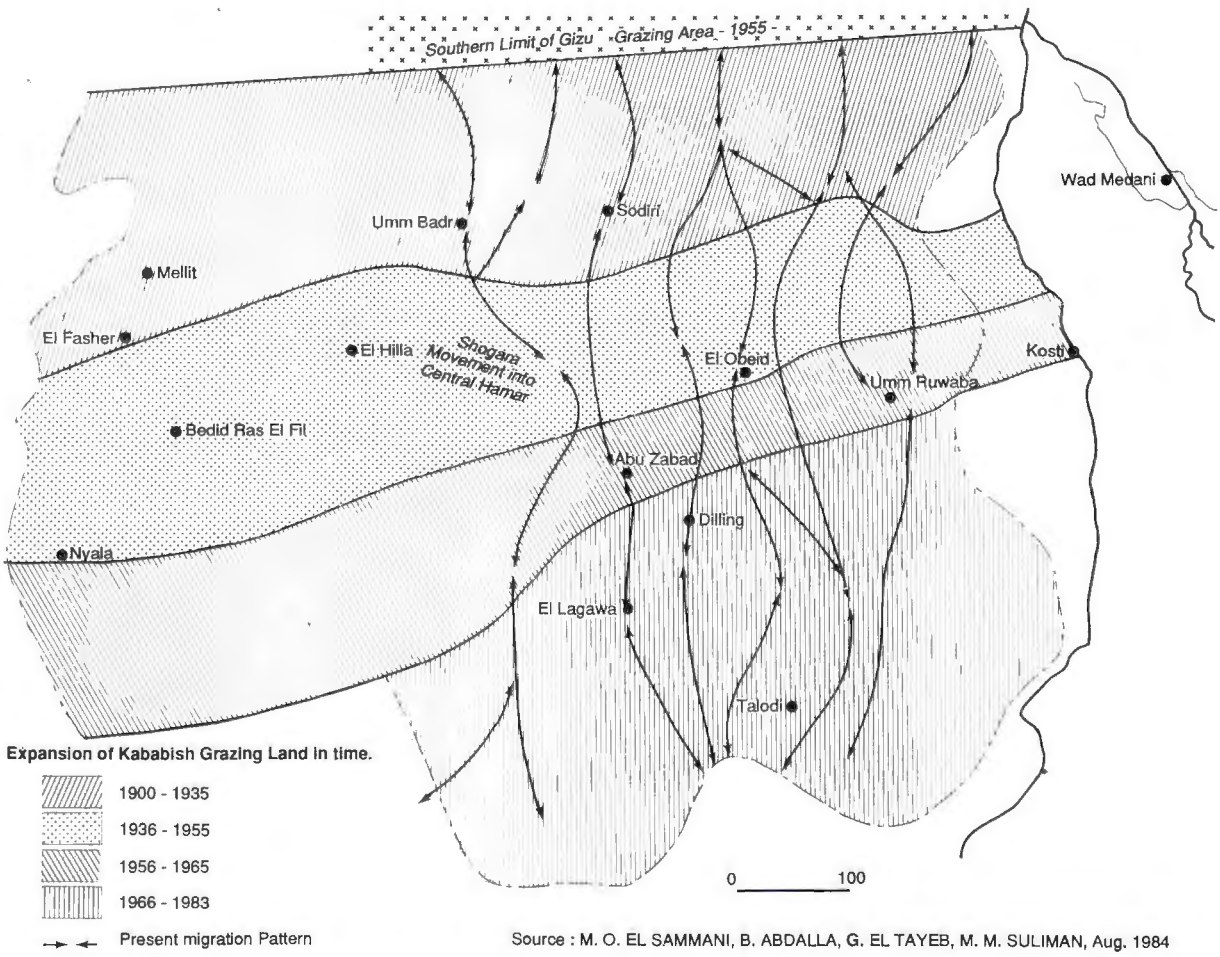
permanently present, have wreaked havoc with the fragile ecosystems.

Man made disasters have been compounded by natural and unusually severe and prolonged drought over the last 20 years.

In most *"dar"* areas there is now insufficient grazing for the animals the tribe owns. The natural solution is to seek feed elsewhere, with all the problems this entails in conflict with individuals and with the traditional administrative system which has always to some extend controlled grazing times and nomadic movements. Attempts to provide solutions to these problems include enclosure (often by thorns cut from trees, thus further reducing feed resources) and the imposition of grazing or watering fees on animals that lack traditional rights of use. So far attempts to solve these problems by these means have met with little success and in some cases have led to additional problems.

Internecine struggles, sometimes amounting to full scale conflict and the intervention of the security forces, have resulted from *"abbala"* or camel owners moving south to occupy and to attempt to usurp the lands of the *'baqqara'* or cattle people. These struggles are due in part to a gradual expansive drift southwards, as exemplified by the Kababish during the course of the 20th century **(Figure 2)**, but much more to massive and rapid invasions during the last decade over a wide front.

**Fig 2 - Kababish expansion of grazing land over - time**




Source : M. O. EL SAMMANI, B. ABDALLA, G. EL TAYEB, M. M. SULIMAN, Aug. 1984

**Civil unrest in the south of the country**

The northern tribes, particularly the Baqqara, have always crossed the notional boundary between the "north" and the "south" of the Sudan in search of dry season grazing. In the last two decades this has happened more and more. Northerners have always faced hostility from southerners because of this practice but have been able to continue, largely as a result of political dominance. Full scale civil unrest in the south has resulted in the loss of much of this political support and a practice that was previously somewhat risky has now become positively dangerous.

**Sedanterization of pastoralists**

In addition to an expansion of cultivation by sedentary tribes, many pastoralists are themselves settling to cultivate their own crops. This transforms them to, at best, transhumants, willing only to move their stock over much shorter distances and for shorter periods than heretofore. The trend to settlement is due to a number of factors that may be associated with a modern lifestyle:

. physical separation of the household from the herd;

. provision of permanent water by local authorities;

. initiation and adoption of farming practices, both rainfed and irrigated;

. the search for improved quality of life, including access to human and animal health services and to education.

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